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Part 2 of 2

For part 1, see barcode 0000170785

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

SUSAN BITTER SMITH, Chairman
BOB STUMP
BOB BURNS
DOUG LITTLE
TOM FORESE

EXHIBIT
A-2
ADMITTED

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN, AND FOR RELATED APPROVALS.

DOCKET NO. E-01575A-15-0312

PRE-FILED DIRECT TESTIMONY OF CREDEN W. HUBER

ON BEHALF OF

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

AUGUST 31, 2015

INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Creden W. Huber. My business address is 350 N. Haskell Avenue, Willcox, Arizona 85643.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am the Chief Executive Officer ("CEO") of Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or the "Cooperative").

Q. HOW LONG HAVE YOU BEEN THE CEO OF SSVEC?

A. I have held the CEO position since June 1, 1995.

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. I have a Bachelor of Science in Business Administration from Black Hills State University, Spearfish, South Dakota, and a Masters of Business Administration from the University of South Dakota, Vermillion, South Dakota. I have over 36 years' experience working with electric cooperatives. I started in the cooperative program in April 1979 as an accountant at Butte Electric Cooperative and advanced to General Manager/Executive Vice President of Black Hills Cooperative in Custer, South Dakota, in 1990. For the last 20 years, I have served as the CEO of SSVEC. I have served on numerous cooperative boards including the Southwest Transmission Cooperative, Sierra Southwest Cooperative, and Federated Rural Electric Insurance Exchange, a national cooperative insurance association.

Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES AS CEO OF SSVEC?

A. SSVEC has over 58,000 electric services, approximately 190 employees, and annual revenues of approximately $100 million. As CEO, I am responsible for all aspects of the Cooperative's operations including generation, transmission, distribution, customer service and general administrative functions. I report directly to–and work very closely with–SSVEC's 10-person Board of Directors ("Board") in setting Cooperative policy, and it is my responsibility to carry out such policy. I have been authorized by the Board to

take such actions as I deem appropriate in managing the business of the Cooperative in implementing the Board's policies. I am also responsible for the SSVEC Foundation, a charitable foundation for youth-related activities, and for the SSVEC Trust that operates Operation Roundup. Operation Roundup is a program that helps individuals and organizations in the Cooperative's service territory.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE ARIZONA CORPORATION COMMISSION ("COMMISSION")?

A. Yes. I testified in SSVEC's last general rate case in Docket E-01575A-08-0328.[1] I have also appeared before the Commission numerous times at Open Meetings.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to provide a general overview of the rate application ("Application") that is being filed by SSVEC and to summarize the primary issue that led the Cooperative to the decision to file the Application. I will provide the Commission with information concerning SSVEC, its membership structure, its Board, and the Application.

Q. IS SSVEC SUBMITTING OTHER PRE-FILED TESTIMONY IN SUPPORT OF ITS APPLICATION?

A. Yes. In addition to my Pre-Filed Direct Testimony, which is attached to the Application as Attachment 1, SSVEC is filing the Pre-Filed Direct Testimony David W. Hedrick and the Pre-Filed Direct Testimony of Judy K. Lambert, attached to the Application as Attachments 2 and 3, respectively. Mr. Hedrick and Ms. Lambert will address the following subject areas:

David W. Hedrick

- SSVEC's Objectives and Overview of Rate Case Filing
- Development of the Revenue Requirement
- Impact of Distributed Generation and Net Metering

[1] The Cooperative's last rate case was processed under the Commission's rule for filing streamlined rate cases for cooperatives (A.A.C. R14-2-107) and it did not require testimony by witnesses. That case used a 2012 test year and was approved by the Commission on March 19, 2014 in Decision 74381 (Docket E-01575A-13-0296).

- Rate Design and its Impact on Customers

Judy K. Lambert

- Income Statement and Adjustments
- Cost of Service Study

I note also that the Application is supported by the rate analysis schedules and cost of service study required in Arizona Administrative Code ("A.A.C.") R14-2-103 for a Class An electric utility, which are attached to the Application as Attachment 5. In addition, the Cooperative has submitted its proposed Standard Offer Tariff which is attached as Attachment 4 to the Application.

Q. ARE MR. HEDRICK AND MS. LAMBERT AUTHORIZED TO TESTIFY ON BEHALF OF SSVEC?

A. Yes. Mr. Hedrick and Ms. Lambert work for Guernsey Engineers, Architects and Consultants ("Guernsey") which provides consulting services to SSVEC. The Cooperative has used Guernsey for this rate case and the last two rate cases filed in 2008 and 2013. The details of SSVEC's Application in this docket are set forth in the pre-filed direct testimonies of Mr. Hedrick and Ms. Lambert.

BACKGROUND

Q. MR. HUBER, PLEASE DESCRIBE SSVEC.

A. SSVEC is a member-owned non-profit rural electric distribution cooperative headquartered in Willcox, Arizona. The Rural Electrification Administration ("REA") was created in 1935 by President Franklin Roosevelt. Under the REA program, SSVEC was incorporated in 1938 and the Cooperative began providing power to rural areas of southeast Arizona in 1940. Today, SSVEC serves most of Cochise County and portions of Santa Cruz, Pima and Graham counties, including the communities of Sierra Vista, Huachuca City, Patagonia, Elfrida, Benson, St. David, Bowie, San Simon, Willcox, Sonoita and Pearce-Sunsites. SSVEC provides electricity to more than 58,000 electric services including residential (approximately 41,500), small business, large commercial and irrigation spread over 5,700 square miles served by over 4,100 miles of energized

lines. The Cooperative maintains offices in Willcox, Sierra Vista, Benson, Elfrida and Patagonia.

Q. HOW IS THE COOPERATIVE GOVERNED?

A. SSVEC has a Board of Directors comprised of 10 directors elected by the members of the Cooperative to serve three-year terms. The Board meets monthly to review Cooperative operations and to determine the direction and long-range plans of the Cooperative and approves the annual operating budget. Our vision is that SSVEC will always be a financially strong organization with stable rates, reliable service, and will continue to have customer-focused employees who display outstanding performance in their areas of expertise.

Q. DOES SSVEC GENERATE ITS OWN ELECTRICITY?

A. SSVEC is a Class A member of Arizona Electric Power Cooperative, Inc. ("AEPCO"). AEPCO generates or purchases electric power and then provides that power to its members on a wholesale basis. SSVEC's power costs constitute about 58% of the Cooperative's total costs. On January 1, 2008, SSVEC converted its membership in AEPCO from an All Requirements Member ("ARM") to a Partial Requirements Member ('PRM") pursuant to Commission Decision No. 70105 (December 21, 2007). Thus, SSVEC may purchase a portion of its electric power from the lowest cost sources available. I would note also that SSVEC owns and operates two solar fields adjacent to SSVEC distribution substations. The San Simon site has 1.2 megawatts of solar and the Alamo site has 258 kilowatts of solar.

Q. WHAT IS THE DIFFERENCE BETWEEN AN ARM AND A PRM?

A. As the name implies, an All Requirements Member, or ARM, has a contract with AEPCO which requires it to buy–and AEPCO to plan for and to furnish–all of the ARM's present and future electric power requirements. In contrast, a Partial Requirements Member, or PRM, has a contract with AEPCO to furnish only a portion of its electric power requirements. A PRM is obligated to plan for and secure the balance of its power needs from other sources, which may or may not be AEPCO. In other words, SSVEC may

purchase a portion of its electric power from the lowest cost source available at the time of purchase. SSVEC purchases approximately 80%-90% of its resource needs from AEPCO, depending upon SSVEC load.

Q. WHEN WAS THE LAST TIME THAT THE COMMISSION APPROVED A RATE INCREASE FOR THE COOPERATIVE?

A. The Cooperative's last rate application used a 2012 test year and was approved by the Commission on March 19, 2014 in Decision 74381 (Docket E-O1575A-13-0296). That rate case was processed under the Commission's rule for filing streamlined rate cases for cooperatives (A.A.C. R14-2-107).

Q. WHY DID SSVEC ELECT TO FILE A RATE CASE AT THIS TIME?

A. While SSVEC is seeking a modest 3.17% increase in its annual revenue requirement, the principal reason for filing this rate case at this time is to make critical changes to the Cooperative's rate design that will enable the Cooperative to better cover the fixed costs associated with providing electric service. In Decision 70567 (October 23, 2008), the Commission approved new net metering rules (the "Net Metering Rules") which became effective on May 23, 2009. As required by the Net Metering Rules, SSVEC submitted a Net Metering Tariff Schedule NM which was approved by the Commission in Decision 71463 (January 26, 2010). Like other electric utilities in Arizona, since implementing its Net Metering Tariff Schedule NM, SSVEC has experienced a dramatic increase in the number of customers installing rooftop solar photovoltaic ("PV") systems, the most common form of distributed generation ("DG"). The proliferation of PV systems in SSVEC's service territory has caused a large increase in unrecovered fixed costs attributable to the Cooperative's net metered members. The estimated annual lost fixed costs attributable to the 1,013 net metered members at the end of the 2014 test year under the existing residential rate is $1,139,013. The problem of unrecovered fixed costs is further discussed in the Pre-Filed Direct Testimony of David W. Hedrick attached to the Application as Attachment 2.

Q. WHY DON'T NET METERED MEMBERS COVER THE FIXED COSTS ASSOCIATED WITH THEIR USE OF THE ELECTRIC SYSTEM?

A. Mr. Hedrick provides a very detailed response to this question in his direct testimony, but I would also like to say a few words. SSVEC and other electric cooperatives have historically recovered the fixed costs of providing service through a combination of the monthly service charge and the kilowatt hour ("kWh") charge. In the case of SSVEC, approximately $0.05 of each kWh charge covers fixed costs and the balance of the fixed costs are covered through the monthly service charge. This rate structure works where all of the customers being served in the residential class are similar consuming customers who do not have net metering. However, a customer who installs a DG system and generates electricity reduces the kilowatt hours that are purchased from the Cooperative and thereby avoids paying that portion of the fixed costs that is imbedded in the kWh charge. Thus, the current rate structure does not provide for a full recovery of the fixed costs of providing service to DG customers who have net metering and generate all or a portion of their own needs.

Q. IS THIS HAVING A NEGATIVE FINANCIAL IMPACT ON THE COOPERATIVE?

A. Yes. At the end of the 2014 test year, SSVEC provided service to 1,013 residential members with DG. As discussed by Mr. Hedrick in his direct testimony, SSVEC's unrecovered fixed costs due to net metering for these customers totaled $1,139,013 during the test year. Given that the number of net metered customers has grown since the end of the test year, the current level of unrecovered fixed costs is even higher. Thus, the problem of unrecovered net costs from net metered customers is growing larger over time.

Q. WHAT IS THE SOLUTION TO THE PROBLEM OF UNRECOVERED FIXED COSTS?

A. The solution is to increase the monthly service availability charge so that more of the fixed costs of providing service to members is covered in that monthly charge. The kWh charge can then be reduced accordingly as the fixed cost component is reduced.

Q. IS THAT WHAT SSVEC IS PROPOSING IN THIS CASE?

A. Yes. Mr. Hedrick addresses all of the changes that the Cooperative is proposing to its rate and charges in his direct testimony, which are further detailed in the proposed Standard Offer Tariff attached to the Application as Attachment 4. However, I would like to highlight the most significant changes to SSVEC's rate structure. SSVEC is proposing:

- To increase the monthly service availability charge in the standard residential rate from the existing $10.25 to $25.00 in four steps over four years. This change will allow for a greater recovery of fixed customer-related costs through the fixed charge and thus help to reduce subsidies between members within the rate class. This will also help stabilize our member's bills, lessening the swings due to higher kWh charges during unusually cold or unusually hot weather.
- To introduce a new Residential Service with Distributed Generation-Existing ("R–DG E") rate for existing net metered customers who connected or reserved their DG system on or before April 15, 2015. This rate includes a higher monthly service availability charge that increases from the existing $10.25 to $50.00 in four steps over four years. This rate would be administered in conjunction with a revised Net Metering Tariff Schedule NM-1 which: (i) grandfathers existing net metered customers under the existing net metering policy for a period of twenty years from the date the customer's DG system is installed (limited to the original installation site and original equipment but available to subsequent owners of the original installation site); (ii) compensates the customer for DG energy at the full retail rate; and (iii) allows banking of excess kilowatt hours from month-to-month with an annual true-up at the Cooperative's Annual Average Avoided Cost, as defined in Net Metering Tariff Schedule NM-1. The kWh charge in the R-DG E rate will be fixed at the existing Residential kWh charge with Wholesale Power Cost Adjustment re-basing.
- To introduce a new Residential Service with Distributed Generation ("R-DG") rate for net metering customers who connect after April 15, 2015. This rate reflects a

higher monthly service availability charge that increases from the existing $10.25 to $50.00 in four steps over four years. The kWh charge is reduced in each phase-in to correspond with the increase in the monthly service availability charge. The R-DG rate will be administered in conjunction with a new Distributed Generation Tariff Schedule DG which will compensate all excess distributed generation energy at the Cooperative's Annual Average Avoided Cost, as defined in Net Metering Tariff Schedule NM-1.

Q. DOESN'T SSVEC HAVE AN APPLICATION PENDING IN DOCKET E-01575A-15-0127 TO MODIFY ITS EXISTING NET METERING TARIFF AND TO ADOPT A NEW NET METERING TARIFF?

A. Yes. On April 14, 2015, SSVEC filed an application in Docket E-01575A-15-0127 requesting: (i) to modify and rename Net Metering Tariff Schedule NM; (ii) to add a new Net Metering Tariff Schedule NM-2; and (iii) for a related waiver of the Net Metering Rules. The objective of that net metering application was to attempt to immediately arrest the growing problem of unrecovered fixed costs related to the installation of DG systems. The net metering application was the first step in correcting the under collection problem. The changes requested in Docket E-01575A-15-0127 were limited to the net metering policy itself and did not include any proposed changes to the Cooperative's rate structure. SSVEC had hoped for an expeditious ruling on its net metering application which would have allowed additional time to consider more comprehensive resolution to the problem of unrecovered fixed costs. However, Utilities Division Staff and other parties in the net metering docket strongly advocated that the Cooperative file a rate case to address the unrecovered costs of net metering. Ultimately, SSVEC made the decision to file this Application, which is the second step in the process to resolve the under collection problem. While SSVEC is not withdrawing its application in Docket E-01575A-15-0127 at this time, the new net metering tariff and tariff revisions proposed in the Application supersede and replace the net metering tariff revision and proposed new net metering tariff in Docket E-01575A-15-0127.

Q. WHAT HAS SSVEC DONE TO EDUCATE ITS MEMBERS REGARDING THE IMPACT OF NET METERING ON FIXED COSTS?

A. SSVEC understands the importance of educating its members regarding the equitable recovery of fixed costs and the need to make structural changes to the Cooperative's rate design. Since 2014, SSVEC has been educating its members on DG, net metering and the fast-growing problem of under-recovery of fixed costs. We have conducted a number of town-hall style meetings with members, we have provided information in a multi-part series in the Cooperative's newsletter *Currents*, we have included bill inserts, we have included information on the Cooperative's website, and we have provided a letter mailed to all members as recently as April 2015 regarding the net metering docket I discussed earlier. A copy of the April letter is attached hereto as Attachment CWH-1. An article from the May & June edition of *Currents* entitled "*Does SSVEC Benefit from Solar*" is attached hereto as Attachment CWH-2. In addition to these educational efforts, the Cooperative has more presentations to the membership planned for the future.

Q. HAS SSVEC NOTIFIED ITS MEMBERS OF THIS RATE APPLICATION?

A. Yes. Attached hereto as Attachment CWH-3 is a copy of the notice letter that is being mailed to all members of SSVEC in conjunction with the filing of the Application. In addition, we will provide such additional notice of the Application as the Commission may require.

Q. MR HUBER, DOES SSVEC SUPPORT THE DEVELOPMENT OF RENEWABLE ENERGY?

A. Absolutely. SSVEC has had a renewable energy program since 2005 and an approved Renewable Energy Standard and Tariff ("REST") plan since the inception of the Commission's REST rules. SSVEC demonstrated an early and strong commitment to the development of renewable energy resources within its service territory. As evidence of this, the Solar Electric Power Association, a not-for-profit educational and research organization focused on helping utilities integrate solar into their operations, recognized SSVEC as the top utility in the nation in increased use of solar power based on watts-per-

customer during 2009. Since 2009, SSVEC has consistently placed in the top 10 electric cooperatives nationwide for increased use of solar power based on watts-per-customer. SSVEC currently has approximately 1.5 megawatts of solar installed at two of its substations, and the Cooperative has installed solar panels at 41 public schools.

Q. HOW IS SSVEC DOING IN MEETING ITS REST PLAN GOALS?

A. SSVEC is well ahead of the goals of its REST plan and recently finalized a purchase power agreement for a new utility-scale solar project that will provide approximately 20 megawatts of additional solar power in the last quarter of 2016 for the benefit of all Cooperative members at an economical price. With this project, SSVEC will reach over 95% of its 2025 REST goal by the end of 2016. This solar power will benefit all of the Cooperative's members as compared to distributed rooftop solar which primarily benefits those who have the financial means to purchase a system or the requisite credit to lease a system.

Q. HAVE THE COOPERATIVE'S MEMBERS EXPRESSED A PREFERENCE FOR UTILITY SCALE SOLAR PROJECTS?

A. Yes. SSVEC's members have clearly expressed a preference for utility-scale solar projects that benefit all members. As a result, when SSVEC filed its 2015 REST Implementation Plan in Docket E-01575A-14-0271, it included a request to form a Future Large Scale Project Fund to pay for future large scale SSVEC-owned renewable projects without having to incur financing costs. In Decision 74870, the Commission approved $900,000 in the 2015 Rest Implementation Plan for the Future Large Scale Project Fund. When SSVEC recently filed its proposed 2016 REST Implementation Plan, the Cooperative budgeted an additional $1,500,000 for future large scale solar projects.

OVERVIEW OF APPLICATION

Q. DID SSVEC'S BOARD APPROVE THIS RATE CASE FILING?

A. Yes. The Board approved the filing of the rate case at its meeting on July 29, 2015.

Q. WHAT IS THE TEST YEAR FOR THE RATE CASE?

A. The test year is the year ended December 31, 2014.

Q. PLEASE SUMMARIZE THE OBJECTIVES OF SSVEC'S RATE REQUEST.

A. Mr. Hedrick and Ms. Lambert will testify in greater detail concerning the specifics of the SSVEC's request. However, the Cooperative's primary objectives in filing this rate case are as follows:

- Increase the total system revenue requirement by $3,101,498 which is a modest 3.17% increase. The proposed increase will allow the Cooperative to meet its financial objectives with regard to equity, capital credit retirements and cash levels.
- Increase the monthly service availability charge in the residential rate to reflect the customer component of cost. The increase in the monthly service availability charge is proposed to be accomplished in four steps over four years.
- Implement a new Residential Service with Distributed Generation rate for new customers connected after April 15, 2015. This rate would be administered in conjunction with a new Distributed Generation Tariff Schedule DG that compensates excess distributed generation energy at avoided cost rather than the full retail rate. The monthly service availability charge in the new rate recovers the customer component of cost and the system demand component of cost. The increase in the monthly service availability charge for this new rate is proposed to be accomplished in four steps over four years.
- Implement a new Residential Service with Distributed Generation-Existing rate for existing customers connected or reserved on or before April 15, 2015. This rate would be administered in conjunction with the revised Net Metering Tariff Schedule NM-1, and it would: (i) grandfather existing net metered customers under the existing net metering policy for a period of twenty years from the date the customer's DG system is installed (limited to the original installation site and original equipment but available to subsequent owners of the original installation site); (ii) compensate the customer for DG energy at the full retail rate; and (iii) allow banking of excess kilowatt hours from month-to-month with an annual true-up at the Cooperative's Annual Average Avoided Cost, as defined in Net

Metering Tariff Schedule NM-1. The kWh charge in the R-DG E rate will be fixed at the existing Residential kWh charge with Wholesale Power Cost Adjustment re-basing. The monthly service availability charge for this new rate would be increased in four steps over four years.

- Eliminate certain rate schedules and make revision to other rate schedules, all as described in the Pre-Filed Direct Testimony of David W. Hedrick and the proposed Standard Offer Tariff attached to the Application as Attachments 2 and 4, respectively.
- Re-base the Wholesale Power Cost Adjustment to reflect the current cost of purchased power.

Q. WHAT WERE THE BOARD'S OBJECTIVES IN DEVELOPING THE REVENUE REQUIREMENT AND PROPOSED RATES AND CHARGES IN THIS RATE CASE?

A. The Board approved the proposed rates and charges with the following objectives:

- Grow equity as a percent of assets to the 40%-50% range with projected total system plant additions averaging $16,899,000 per year.
- Increase the Cooperative's cash position from $5.9 million or 25 days of cash to $9 million or 38 days of cash over a 3-year period.
- Maintain capital credit retirements of approximately $300,000 per year.
- Maintain adequate Times Interest Earned Ratios and Debt Service Coverage Ratios.

CONCLUSION

Q. MR. HUBER, DO YOU BELIEVE THAT APPROVAL OF THE COOPERATIVE'S APPLICATION IS IN THE PUBLIC INTEREST?

A. Yes. The proposed revenue increase will allow SSVEC to meet its financial objectives and maintain its financial integrity, which is certainly in the public interest. Moreover, the proposed increase is a modest 3.17% overall increase, which strikes the proper balance between maintaining the financial health of the Cooperative and limiting the impact on

members. The proposed structural changes to the Cooperative' rate design are necessary to address the growing problem of unrecovered fixed costs arising from the proliferation of DG systems installed following implementation of the Cooperative's Net Metering Tariff Schedule NM. Finally, I note that the Application was approved by the member-elected Board of Directors. For all of these reasons, I submit that approval of SSVEC's Application is in the public interest.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

ATTACHMENT CWH-1

Sulphur Springs Valley Electric Cooperative, Inc.
A Touchstone Energy® Cooperative

IMPORTANT NOTICE TO SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE MEMBERS

We want you to know where Sulphur Springs Valley Electric Cooperative (SSVEC) is heading on the Net Metering issue. Net Metering is regulated by the Arizona Corporation Commission (ACC), the part of state government that oversees the utility industry. We're going to file an official request to be exempted from some of the rules effective as of April 15, 2015.

In order to remain under the current rules or tariff, SSVEC members' PV systems must have been installed or have a signed "request for interconnection and reservation agreement" at one of the SSVEC offices by the close of business on April 14, 2015.

FAIRNESS TO ALL MEMBERS IS OUR GOAL

Before we get into the specifics, we want to clarify a few things. We are pro-solar. In fact, we are in the process of evaluating final bids on a 20 MW Purchase Power Agreement. This solar field will cover more than 100 acres. This is an addition to our 41 school community solar projects (in 2009) and two other large solar projects; one in San Simon and the other in Sonoita (in 2012).

Please also keep in mind as you consider this issue, we are a not-for-profit utility whose only purpose is to serve our members, 100% of whom are voting members of SSVEC because it is a cooperative. As a not-for-profit organization, we routinely return capital credits to our members/owners. Since SSVEC was founded in 1938, we have returned over $17 million to our members. The point is that we are not motivated to enrich distant stockholders. We are 100% locally owned and controlled. Unlike huge for-profit utilities, we don't pay executive bonuses or provide stock options (although we do have a modest annual safety bonus awarded to employees who consistently use safe work practices).

SSVEC is attempting to maintain a fair playing field for all of our members. As a not-for-profit member-owned cooperative, SSVEC is governed by a member-elected board of directors and subject to the oversight of the Arizona Corporation Commission's rules and regulations. SSVEC exists to do one thing: provide reliable electric service to its members at the best possible price. We have successfully done that since 1938. You (our member/owners) continue to tell us that we are exceeding your expectations; in fact, our member satisfaction rate is among the highest in the nation when compared against our peers.

WHAT IS THE NET METERING ISSUE ALL ABOUT?

The tariff definition is "The ability to connect a customer's alternative power-generating system to a public utility's power grid to offset the cost of power drawn by the customer from the grid."

Since 1938, we have invested millions of dollars to build electrical transmission and distribution lines and substations throughout our service territory. Prior to 2009, our rates were designed to make sure that everyone who used those facilities paid their fair share of the cost. As you might have guessed from that last sentence, things have changed. Today, not everyone is paying their fair share, which is why it is important to discuss this net metering issue.

Under the current ACC net metering rules that were intended to promote more solar power (a goal with which we agree), we are required to pay retail prices for wholesale power sold to us by members who have solar installations. In other words, most people selling us solar power are paying little or nothing for the use of the poles and wire and the cost of operating and maintaining the system (even though they use that system whenever they are not generating enough solar power to meet all their needs). That amounts to a subsidy paid by our non-solar members. The 2% of our members who currently have solar units are being subsidized by the other 98%. The percentage of solar units is only going to grow larger.

DID SSVEC DO ANYTHING WHEN THE RULES WERE PASSED AND WHY WAIT UNTIL NOW?

Prior to 2009, when the net metering rule was in development by the ACC, SSVEC, along with the other electric cooperatives in Arizona, joined with for-profit electric utilities because we all objected to the way parts of the rule was written. Perhaps you have read in the news about Arizona utilities' struggle on this issue and the flurry of recent filings.

It now appears that if the rule stands as is, the subsidy will become so big that it will be unfair to all non-solar members. That's why we are asking the ACC to grant us a waiver on the net metering rules.

WHAT IS SSVEC ASKING FOR?

SSVEC currently pays residential solar unit owners our current retail rate of 12.6 cents per kilowatt-hour when they sell solar power to us. We are asking the ACC to allow us to lower that amount to 3.07 cents per kilowatt-hour. That's how much we pay on average when we buy the power elsewhere. In other words, the ACC net metering rule requires us to pay over 4 times more than we otherwise would for the power that our non-solar customers use.

WHY IS SSVEC ASKING FOR THIS WAIVER?

Net metering, in its current form, results in cost shifts from those with solar to those who do not have solar or can't afford solar or can't install solar (renters).

SSVEC is a not-for-profit electric cooperative that it owned by its members whom we provide electric service. We have no shareholders who are expecting dividends. Any profits or margins at the end of the year are allocated to our members and eventually they are paid to them. Hence, SSVEC has no profit motive and our sole goal is provide reliable electricity and the lowest possible price.

Net metering creates a subsidy for customers who receive net metering. The cooperative and its members have incurred the cost of a transmission and distribution system to serve all member/customers.

A customer that is net metered avoids paying the full cost of those facilities and yet receives a full retail rate for power generated by the customer. The other members will eventually be forced to pay higher rates to subsidize these costs that are not being paid by net metered customers. In addition, as a result of the high cost of Distributed Generation ("DG") systems, affluent member/customers will be installing DG at the expense of less affluent member/customers.

IS IT TRUE THAT THOSE ROOFTOP SOLAR UNITS ACTUALLY SAVE SSVEC MONEY?

No, it's not true for SSVEC. The typical residential solar system produces power, on average, for about 6 hours per day. Shorter winter days, rain, clouds, haze, dawns, and dusks reduce the amount of energy those solar panels can produce. Since there is at present no affordable battery system for homeowners to store solar power, it means that, on average, those solar homes are using the SSVEC wires and poles (infrastructure) 18 hours a day. The trouble is, we have to pay for the infrastructure no matter how many hours it's used. It's like buying a car: you have to make the monthly payment no matter how many miles you drive it.

Because SSVEC does not own any conventional generation facilities, the power we purchase at 3:00pm costs the same as power purchased at 3:00am. To keep within the car analogy, it doesn't matter what time of day we buy our gas.

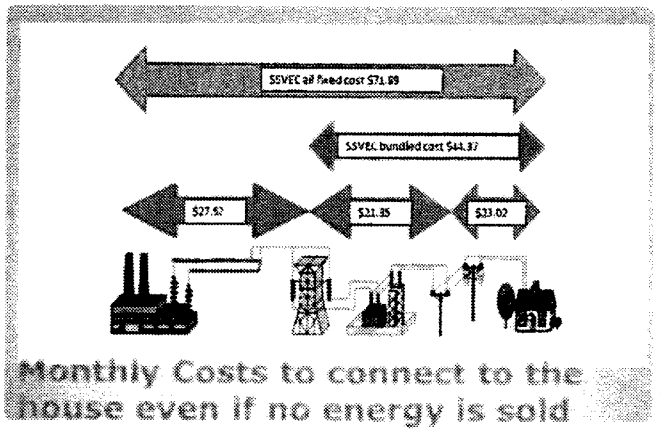
HOW MUCH DOES IT COST TO SERVE A RESIDENTIAL MEMBER PER MONTH?

Traditionally, SSVEC and many other electric utilities charged a fixed monthly fee for those facilities that was well below the actual cost – and made up the difference in what they charged for the energy itself per kilowatt-hour. This has kept the cost of energy high so other energy sources looked like they were more competitive in pricing.

SSVEC is currently allowed by the ACC to charge $10.25 per month for the cost of the infrastructure (the cost of building, maintaining, and operating the system of poles, wires, and substations that brings power to your home). As you can see in

the chart below, those things actually cost more. Our study shows it costs $23.02 per month for the facilities to connect your home to the nearest transformer. It costs another $21.35 to connect that transformer to the nearest substation, and it costs $27.52 to connect that substation to the power plants. Added up, it costs $71.89 per month to build and operate the physical system that brings power to your house – no matter how much power you use!

Here's the problem: under the current rules we are allowed to charge solar customers only the



same $10.25 monthly facility charge that everyone else pays, even though the actual cost is $71.89 per month. So, they're getting a subsidy of $61.64 per month from the non-solar customers when they sell us wholesale power at retail rates. A little of that was probably OK to get the ball rolling on solar, but now we have reached a point where it will be unfairly expensive to non-solar customers to continue under the original ACC rules.

WHAT ARE OTHER UTILITIES DOING?

SSVEC is not alone in seeking a change. Last year, the ACC allowed an adder to Arizona Public Service (APS) for solar customers. The Salt River Project (SRP) board of directors just voted to charge new net metering customers a demand charge that will average $50 about a month (SRP is not under the jurisdiction of the ACC). Tucson Electric Project (TEP) and Unisource just petitioned the ACC for a waiver to the net metering rules similar to what SSVEC is proposing. TRICO, our sister cooperative in Tucson, also is requesting a similar waiver.

I BOUGHT OR LEASE A SOLAR SYSTEM. WHAT HAPPENS TO ME?

If you installed a system or submitted an interconnection request prior to April 15, 2015, SSVEC is proposing that these systems be grandfathered for 20 years from the date of activation. So you keep the deal you now have.

WHY DID SSVEC SELECT A 20 YEAR GRANDFATHER DATE?

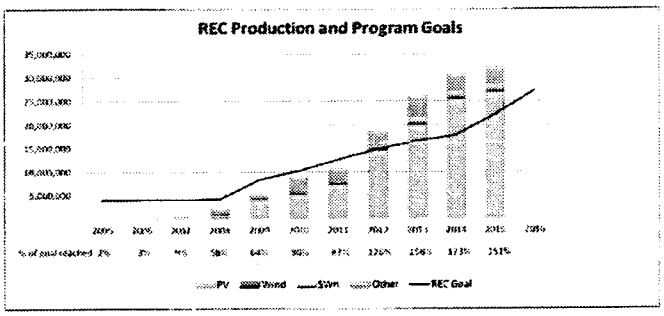
We considered a variety of options ranging from no grandfather date to an unlimited one. We considered leaving the grandfathering in place if solar unit owners sold their house, or not. After looking at many variations, SSVEC's board of directors, considering the impact to both solar and non-solar members, voted for a 20 year grandfather from the date of activation of the system for the system itself (and not limit it to just the current owner). Some of the main reasons that 20 year grandfather term was chosen include:

- ✓ If a member purchased a system, the payback period to recover the investment ranges largely in the 6 to 10 year period. Therefore over 20 years, a member would easily recover their investment with another decade to spare.
- ✓ 20 years is the top end of the scale on virtually all leasing models. Thus a member who has chosen a leasing model will be able to fulfill the lease obligations under the program that they signed up with.
- ✓ An unlimited or forever option places no end period for a purchased or lease systems. Consequently, all of our members would be forced to subsidize another member's system forever. This is not fair to the members who do not have a PV system.
- ✓ A 20 year term also removes uncertainty and questions that may arise in the future. Unlimited and forever leaves a number of questions requiring interpretation. A finite term of 20 years solves the problem.
- ✓ 20 years from the date of installation gives everyone 20 years. 20 years from the adoption of the exemption would give some more than 20 years. The same time period to everyone is the fairest way to handle it.

Sulphur Springs Valley Electric Cooperative, Inc.
A Touchstone Energy® Cooperative

THIS SOUNDS A LITTLE ANTI SOLAR. IS SSVEC DOING ANYTHING IN TERMS OF RENEWABLE ENERGY?

SSVEC is pro-solar and pro-member. For the past 4 years (and through at least 2016), SSVEC has been ahead of the goals set in our ACC-mandated renewables program as seen below:



As we mentioned earlier, we are in the final review of bids for a Purchased Power Agreement (PPA) for a utility scale solar project that will provide 20 megawatts of solar power to SSVEC members at an extremely attractive price. We installed 41 school community solar projects and we have two other large solar projects, one in San Simon and the other in Sonoita. This is solar power that will benefit SSVEC's entire membership versus individual solar which only benefits those who have the means/credit and home ownership to acquire solar. If this negotiation is successful, and our board of directors and the ACC approve, this project will put SSVEC at over 95% of its 2025 goal by the end of 2017.

SENATE BILL 1465 (MANDATORY DISCLOSURE FOR SOLAR PURCHASES AND LEASES)

Due to an increase in complaints from citizens in Arizona who have purchased or leased systems, the legislature approved and the governor has signed Senate Bill 1465 into law. It will be effective on January 1, 2016. Even before the law takes effect, you ought to be asking these questions and get responses back in writing.

- ✓ You should have a 3 day period to change your mind. Important financial decisions like this should have some thought time and the ability to change your mind.
- ✓ Make sure you understand how much this system will cost over the life of the lease. Understand any interest or fees to be paid. Total number of payments and due dates.
- ✓ Who has the tax obligations, including the increase in property values?
- ✓ Ensure they write down any tax incentives and rebates you might be eligible for and who will be getting them.
- ✓ How and can the warranty or maintenance obligations be sold or transferred to anyone else?
- ✓ What happens if you sell your home (what happens to the lease)?
- ✓ What is the energy output over the life of the system?
- ✓ What are the folks selling you using for Projection of future electric rates?
- ✓ What is the combination of lease costs and electric bills and what are you paying now.

Remember, our State Legislature and Governor would not have passed this bill if there weren't a lot of complaints from citizens.

Feel free to direct your questions or concerns to:

Jack Blair
Chief of Member Services
520-515-3470
jblair@ssvec.com

or

David Bane
SunWatts Program Manager
520-515-3472
dbane@ssvec.com

ATTACHMENT CWH-2

2014 SSVEC ELECTION RESULTS

The Member Credentials and Election Committee counted director election and bylaws ballots on Wednesday, April 23, the day prior to the cooperative's 76th annual meeting.

The Committee was composed of cooperative members from districts not holding director elections this year. Members included Carol Dunagan and Kathy Klump from Willcox, Arlene Larsen and Albert Fernandez from Benson, and Josetta Hallford and Yukio Otsuka from Sierra Vista. Carol Dunagan, Kathy Klump, Arlene Larsen, Albert Fernandez, Josetta Hallford, and Yukio Otsuka. Carol Dunagan, Kathy Klump, Arlene Larsen, Albert Fernandez, Josetta Hallford, and Yukio Otsuka.

Incumbent Directors Ed Molina of Sierra Vista and Curtis Nolan of the Stewart District were re-elected to the Board. Incumbent Director Pat English was elected to a newly combined district that includes Elfrida, McNeal, Double Adobe, San Bernardino, Pearce-Sunsites, Dragoon, Cochise and Kansas Settlement. Thomas Goodman was elected to a newly combined district of St. David, Huachuca City, Elgin, Sonoita and Patagonia.

The official size of the Board of Directors is now "10."

The bylaws proposal passed with 3,312 "yes" votes, 457 "no" votes and 24 voids.

Directors conduct regular monthly meetings alternating among Willcox, Benson and Sierra Vista. Meetings begin at 9:30 a.m. There is a "Call to Members" on each regular meeting agenda at 9:35 a.m.

Following are dates and locations for upcoming meetings.

- **May 21** 311 E. Wilcox Drive in Sierra Vista
- **June 18** 1557 Cooperative Way in Benson
- **July 16** 350 N. Haskell Avenue in Willcox
- **Aug. 20** 311 E. Wilcox Drive in Sierra Vista

Thank you for a great 76 years!

CREDEN W. HUBER

This year marks our 76th anniversary. I would like to thank all the members who joined us in Benson for our 76th annual meeting: we appreciate your support.

One of the direct benefits of being a member of a cooperative is the ability to vote for the Directors that govern SSVEC and to vote on proposed Bylaws changes.

BYLAWS ELECTION

Bylaws are the governing document of the cooperative and we thank you for the support of this year's proposed changes. The changes allow for a more consistent Election and Credentials Committee throughout the director nomination and voting process. A second change includes the provision for electronic voting. The Board will review this process in the future. Let me assure you that if and when electronic voting would be implemented, it would be on a volunteer basis and any member who wishes to participate will have to select that option. Those who do not want to participate would receive a paper ballot.

Another area of changes in the Bylaws dealt with the responsibilities of and qualifications to be a Director. We researched provisions that appear in other bylaws of cooperatives around the country.

DIRECTOR ELECTIONS

At this year's annual meeting a bylaws change you approved years ago had an impact on the size of the Board of Directors. The membership approved changes in the bylaws in 2008 to downsize the Board of Directors from 13 Directors to nine Directors. With this annual meeting we have downsized to 10 Directors and in the future will combine two more districts into one district to reach a Board size of nine. This is a result of your vote!

I thank all the members who have participated in the Nominating Committees and Election Committees over the years. In addition, I would like to thank all the members who have shown the interest to run for the Board and participate in your cooperative.

COMMUNICATING WITH OUR MEMBERS

Our employees participate in the community and are available to speak to student or adult groups about topics ranging from electrical safety to careers in the electric utility field to the history of the cooperative. We speak to community leaders every fall to meet with, inform, and take questions from community decision makers. We established a Facebook page to share events and programs about the cooperative as well as providing another way to inform members about planned outages. We offer these speaking services at no charge to our members (including free energy audits).

After 76 years our employees are still dedicated to providing you outstanding service and living the cooperative principles. Although a lot has changed over 76 years, our commitment to you has not.

After 76 years our employees are still dedicated to providing you outstanding service and living the cooperatives principles. Although a lot has changed over 76 years, our commitment to you has not. Thanks for 76 great years!

SOLAR BASICS

Does SSVEC benefit from Solar?

BY DAVID BANE
SUNWATTS PROGRAM MANAGER

This is a sensitive topic because everyone has an opinion on how PV helps. But let's just look at how it helps from the Co-op's perspective. The solar industry claims that PV delays the building of power plants, transmission lines, and infrastructure by the electric utility and offsets the need to buy energy use at the most expensive time of the day. Portions of this may be true for large electric utilities that own generation plants and transmission lines but not necessarily for member owned Co-ops such as SSVEC.

SSVEC does not directly own any generation assets. Our power contract with Arizona Electric Power Cooperative (AEPCO) where we get 80 percent of our annual energy needs does not include a "time based" pricing component. So the cost of a kWh to the Co-op (and you the member) is the same at 3 a.m. as it is at 3 p.m. The other 20 percent of our annual needs (mostly in the summer months) are also fixed price contracts and in the past few years have cost us less per kWh than what we buy from AEPCO.

When it comes to lowering system costs for SSVEC, that doesn't work out either. PV is what is considered non-firm power, which means it may not be there when we need it. In our long range planning and power purchases we have to assume that the PV is not even there. As a regulated utility we are required by Federal and State laws to be prepared to meet the peak power needs as they happen. The peak power needs can happen when the PV systems are not producing energy (like on cloudy days at night). There are no measurable savings for SSVEC by you having a PV system on your home.

Environmental savings is an even more controversial discussion, which we might come back to in future articles. One interesting "factoid" I found during my research comes from the Department of Energy. The first two years of energy produced by a PV panel is equal to the amount of energy it took to manufacturer the panel.

ATTACHMENT CWH-3

IMPORTANT EARLY NOTICE TO SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE MEMBERS OF CHANGE IN RATES COMING IN 2017

We want to let you know that Sulphur Springs Valley Electric Cooperative (SSVEC) will be asking the Arizona Corporation Commission (ACC) for an increase and some changes in our rate structures.

Although the amounts will vary by rate category, the overall average increase is 3.17 percent. **We anticipate that these changes will become effective sometime in early 2017, or about a year and a half from now.**

HOW ARE RATES DEVELOPED?

SSVEC rates are developed through a cost of service and rate study by an independent third party. SSVEC uses Guernsey, an independent consulting company based in Oklahoma. Guernsey looks at the financial needs and requirements of SSVEC and balances them against the impact to members. They must ensure that the results of this study are defensible, financially sound, non-discriminatory and fair, and are based on the cost of providing service to each type of rate class.

The process they use is:

- Define how much revenue SSVEC will need in coming years. Does SSVEC need a rate increase and, if so, how much?
- Define revenue requirements for different rate classes – residential, commercial, industrial, etc.
- Review, validate, and update the rate design.
- Monitor and analyze system performance.

SSVEC provides Guernsey the data they need to answer those questions and Guernsey then develops a rate proposal for us.

HISTORY OF SSVEC RATE INCREASES

SSVEC has always strived to maintain the lowest rates possible. Over the years, we have refinanced our debt to take advantage of falling interest rates, made major strides in purchasing efficiency, have modernized our electric grid, and reduced our employee count in 1998 through a voluntary separation program. All of those things have reduced costs. Over the last two years, we have reduced our employee levels by 12 percent as our workload has declined. Despite all these cost-savings programs, costs continue to increase and revenue decrease, requiring us to increase our rates. Below you will find our recent rate increase history.

YEARS	PERCENT INCREASE
1992	5.90
1993-2007	0.00
2008-2014	8.19
2014-2016	4.49
2017-2022 (estimated)	3.17

In plain English, in the 30 year period of 1992 to 2022 (the forecasted year of our next rate increase), our electric costs have averaged less than a 1% increase per year (0.73% to be precise). That is FAR lower than most electric utilities.

IS EVERYONE'S BILL GOING UP 3.17 PERCENT?

No. We are required by Arizona law to break down our rates by rate class to ensure that all members are treated fairly – that they are paying as close as possible to what it actually costs to serve them, so that no one group of members is unfairly subsidizing another. The overall increases by rate class are:

CLASS	PERCENT INCREASE
Residential	3.81
General Service	6.61
Large Power	2.49
Irrigation	1.02
Security Lighting	6.54
Street Lighting	3.27

So, our "average" residential members will see an increase of $3.22 per month in their electric bill starting in early 2017.

TECHNOLOGY IS FORCING CHANGES

The methods SSVEC use to determine rates haven't changed much in the past 50 years. But over the last 10 years, there have been tremendous changes in the industry. We need to make sure that the method by which rates are designed is keeping pace with those changes. SSVEC is not alone in this - virtually every electric utility in the US is moving in this direction.

So what has changed? Metering technology and distributed generation (DG), or solar and wind, are the two major changes. Fifty years ago when rates were designed, we read your meter every 25-35 days and sent you a monthly bill. Regulators like the ACC wanted to keep the base charge (monthly minimum) low and have the electric utilities recover most of the their fixed costs in Kilowatt-hour rates for the energy used. Twenty years ago, solar energy and similar options were expensive and not too reliable, and the meters were unable to give us hourly or daily usage information. Today DG (wind and solar) are less expensive and more reliable. SSVEC has more than 1200 rooftop solar systems connected to our grid! In a nutshell, these systems are being subsidized by other members and that just isn't fair.

HOW HAVE THESE CHANGES AFFECTED RATE DESIGN?

Distributed generation (DG) systems when properly designed and installed can create a home with a net zero energy usage as measured over the course of a year. Sometimes during the year they're taking power from the grid and sometimes they are putting it back on the grid. Over the course of a year, the solar home might well put as much onto the grid as it takes off it – in other words, on the net they are using zero energy from the grid.

Members may claim that since their net power flow is zero that they are not using the grid, but this is simply not true. First of all, those with DG systems don't produce power all of the time so when

they are producing, they are sending the excess to SSVEC and we are storing it until the sun isn't shining (using the SSVEC system as a gigantic battery). The grid provides much more than power. The grid services that SSVEC and other utilities provide include reliability, reserves, frequency control, voltage control, and redundancy as physical quantities flowing through the grid. Members may have net zero power flows but reliability is flowing into the member and none is flowing out: not a net zero. Voltage control is flowing into the member and none is flowing out: not a net zero. Frequency control is consumed by the member and none is provided by the member: not a net zero. Unit dispatchability is consumed by the member and is not provided by the member: again, not a net zero. In short, while members may have reached a "net zero" threshold on energy (kWh's), they are a large net negative on very expensive grid services that everyone else has to pay for.

Stating you don't use the grid because you are net zero is like saying, "I drive the same road to and from work each day so I net zero mileage on the road and therefore I don't use the road."

The issue is that the existing rate structures were designed so that most of the "fixed costs" would be collected on the sale of electricity (kilowatt-hours) and very little in the monthly base charge.

What that means now is that when someone installs a "net zero system," they are still using the electric grid most of the time but is paying only a very small portion of their fair share of the cost to keep the grid up and running. Those non-recovered fixed costs are absorbed by other members that do not own distributed generation (solar or wind systems). This results in members with DG being subsidized by the remaining members. While SSVEC encourages the development of renewable energy, this subsidy issue is fundamentally unfair.

At SSVEC, about two percent of our members have installed such solar systems that are "net zero" users. This has resulted in well over a million dollars in lost revenue annually to keep our grid up and running and reliable. We have been passing that cost on to the other members, and the question is where to draw the line to be as fair as possible to everyone. That's what has led us to ask the ACC to allow us to change our rate structure in 2017.

Changing a rate structure is not simple or painless. You've seen a good example in the cell phone business. Remember back when you paid a low monthly minimum fee but a lot for the minutes you used? Now you pay a higher monthly fee and the minutes are free. For better or for worse, that is where the nation's electric utilities are headed.

OUR PLAN

We understand that we can't simply make this change overnight. We feel it would be an easier adjustment and more reasonable for our members if we phased it in over a number of years.

For residential customers, SSVEC is proposing to increase the monthly minimum charge over a four-year period. And each year, with each of the increases, the kWh energy charges will decrease accordingly. These two changes offset each other so there is no increase in the revenue to SSVEC after the first year. This change will enable SSVEC to continue to provide reliable power at a price that is fair to everyone and has everyone paying for their fair share, while more and more people add solar energy.

For residential members, here is what we think our proposed plan will look like, based on what we know today and on the plan we are submitting:

Basic residential service. Residential members will see their monthly minimum increase over 4 years from $10.25 to $25.00, or just over $3.50 a year. The energy charge will decrease from 12.6 cents to 10.2 cents.

New residential DG (distributed generation - solar and wind). New members in this category will see their monthly minimum increase over 4 years from $10.25 to $50.00 and their energy charge decrease from 12.5 cents to 7.12 cents per kWh. They will also be credited with "avoided cost," currently 2.58 cents per kWh, for any power generated and not immediately consumed.

Grandfathered residential (existing or reserved as of April 15, 2015) DG systems. Monthly minimum will rise from the current $10.25 to $50.00 over the 4 year phase-in period. For these members, we will honor the current net metering formula for 20 years from the date the system was activated. The energy charge will remain fixed at the current level and will not be changed. You will still receive the "avoided" cost for excess power generated over the year as you currently receive.

Members in our other rate classes will also see an increase in the monthly minimum, phased in over 4 years, along with a corresponding decrease in kWh energy charges.

These changes reflect the changing world in the electric utility business. As members provide more and more of their own electricity, SSVEC is being transformed into more of a delivery company and less of an energy sales company. We don't make any money on the energy we purchase for members, but we still have to cover our costs and make sure that every class of ratepayers is paying their fair share, as nearly as possible.

WARNING TO THOSE CONSIDERING INSTALLING DG SYSTEMS

If you are considering installing any type of DG system, SSVEC strongly suggests that you incorporate the new rate structure into your decision-making process. SSVEC is proposing that for DG systems not reserved before April 15, 2015, the "new DG" rate will apply. If approved, this proposal would result in a $50.00 monthly minimum and well as payment for power not immediately consumed not at retail rates, but at "avoided cost," which is currently 2.58 cents.

SSVEC CAN HELP YOU REDUCE THE IMPACT

Although these changes won't take effect until early 2017, we encourage you to investigate the many tools SSVEC offers to reduce your costs and manage your monthly bill. They include free residential and business energy audits, zero percent interest loans to improve energy efficiencies, and 101 no-cost or low-cost tips to reduce energy consumption. You can schedule a free energy audit by calling SSVEC at 520-515-3497 or emailing energyaudits@ssvec.com.

If you have any questions, please contact us at 2017rates@ssvec.com.

Thank you!

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

DOUG LITTLE, Chairman
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN

EXHIBIT
A-3
ADMITTED

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN, AND FOR RELATED APPROVALS.

DOCKET NO. E-01575A-15-0312

REJOINDER TESTIMONY OF CREDEN W. HUBER

ON BEHALF OF

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

MAY 13, 2016

INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Creden W. Huber. My business address is 350 N. Haskell Avenue, Willcox, Arizona 85643.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am the Chief Executive Officer ("CEO") of Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or the "Cooperative").

Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY IN THIS DOCKET?

A. Yes. I filed direct testimony with the rate case application on August 31, 2015.

Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY?

A. The purpose of my Rejoinder Testimony is to respond to statements contained in the Surrebuttal Testimonies of Eric Van Epps, Crystal Brown and Julie McNeely-Kirwan.

NET METERING STATUS QUO

Q. HOW DO YOU RESPOND TO THE FOLLOWING RECOMMENDATION SET FORTH AT PAGE 5, LINES 10-15, OF MR. VAN EPPS' SURREBUTTAL TESTIMONY:

> **STAFF RECOMMENDS THAT THE STATUS QUO FOR NET METERING BE MAINTAINED IN SSVEC'S SERVICE TERRITORY UNTIL SUCH TIME AS A DECISION HAS BEEN MADE IN THE VALUE AND COST OF DG DOCKET. FURTHER, STAFF RECOMMENDS THAT SSVEC'S RATE CASE BE HELD OPEN FOR 12-MONTHS TO ADDRESS ANY FUTURE CHANGES TO THE NET METERING TARIFF. STAFF RECOMMENDS THAT SUCH CHANGES TO NET METERING BE MADE BY THE COMPANY BY FILING THE APPROPRIATE REQUEST, AND PERFORMING THE APPROPRIATE ANALYSIS WITHIN 3 MONTHS OF THE CONCLUSION OF THE VALUE OF DG DOCKET.**

A. Staff's change of course is both stunning and disappointing. Starting in 2014, SSVEC began to recognize the extent to which it was under-recovering fixed costs due to the proliferation of rooftop solar distributed generation ("DG") systems in

its service territory. By the end of 2014, SSVEC provided service to 1,013 residential members with DG. The Cooperative's unrecovered fixed costs due to net metering for those customers totaled $1,139,013 in 2014, a number which has been confirmed by Mr. Van Epps in his testimony. The number of net metered customers has grown since the end of 2014 and the current level of unrecovered fixed costs is even higher. Thus, the problem of unrecovered net costs from net metered customers is growing larger over time.

Recognizing this quickly growing financial threat to the Cooperative, SSVEC filed an application in Docket E-01575A-15-0127 (the "Net Metering Docket") on April 14, 2015 requesting: (i) to modify and rename its current Net Metering Tariff Schedule NM; (ii) to add a new Net Metering Tariff Schedule NM-2; and (iii) for related waivers of provisions of the Commission's Net Metering Rules. The objective of that net metering application was to attempt to immediately arrest the growing problem of unrecovered fixed costs related to the installation of DG systems.

Q. DID THE COMMISSION ACT UPON SSVEC'S APPLICATION IN THE NET METERING DOCKET?

A. No. The application was dismissed at the request of Staff. In its brief filed July 31, 2015, Staff stated:

> Staff believes that the issues raised by the Company in its Application are best addressed in a rate case, in part because the Application appears to exclude several key issues. While the Company's requested relief may not require a rate case *per se*, processing the Application outside of a rate case may foreclose the Commission from developing an effective and fair solution to all aspects of the problem, not just those emphasized by the Company. Simply stated, the Company is proposing a short-term, specific, narrow solution to its problem that would be more effectively addressed through a combination of thoroughly evaluated solutions.[1]

[1] Staff's Brief Pursuant to July 10, 2015 Procedural Order (Docket E-01575A-15-0127) at 3, lines 4-10.

Q. DID ANY OTHER PARTY JOIN STAFF IN ARGUING THAT SSVEC'S NET METERING APPLICATION SHOULD BE DISMISSED AND THE ISSUES RAISED IN A RATE CASE?

A. Yes. The Alliance for Solar Choice ("TASC") argued in its brief filed July 31, 2015, that "Arizona's Constitution is clear that the Application must be heard in the context of a full rate proceeding,"[2] adding:

> The Commission should deal with this issue in a forum that allows it to truly consider and implement any and all options it deems appropriate after reviewing the mater. The **only forum** that permits that process is a general rate case.[3]

I would note that at least three of the members of TASC are also members of the Energy Freedom Coalition of America which is an intervenor in this docket, including SolarCity Corporation, Silevo, LLC, and Zep Solar, LLC.

Q. NOW THAT SSVEC HAS FILED A RATE CASE, WHAT IS YOUR RESPONSE TO STAFF'S RECOMMENDATION THAT THE COMMISSION MAINTAIN THE *STATUS QUO* FOR NET METERING IN SSVEC'S SERVICE TERRITORY UNTIL SUCH TIME AS A DECISION HAS BEEN MADE IN THE VALUE AND COST OF DG DOCKET?

A. I feel like we are shooting at a constantly moving target, which may be Staff's attempt to delay a decision addressing the under-recovery of the Cooperative's fixed costs and the cost shift associated with net metering and DG. Mr. Van Epps acknowledges in his Surrebuttal Testimony that "[t]he Company supported its contention that is has experienced an under-recovery associated with the proliferation of DG systems that equated to $1,139,013." Yet, SSVEC is now being told once again that it must wait for the results of the cost and value of DG docket and that its rate case may be held upon for 12 months to address future changes to its net metering tariff. SSVEC filed its application in the net metering docket in

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[2] Alliance for Solar Choice Brief (Docket E-01575A-15-0127) at 2, lines 9-10.

[3] *Id.* at 10, lines 13-16 (emphasis added).

good faith and then spent considerable time and money on that application, only to have Staff short circuit the effort. Then, the Cooperative filed this rate case in good faith, only to have Staff once again seek to delay our efforts to address the DG cost shift. As I discuss later in my testimony, SSVEC will spend in excess of $400,000 on outside consultants and attorneys in this rate case. Now, Staff is advocating further delay. That is not right. The Commission should hear the case we filed based upon the evidence presented in this docket. Everything that the Commission needs to decide this case is in the docket.

Q. DO YOU KNOW WHETHER OR NOT THE VALUE AND COST OF DG DOCKET WILL PROVIDE THE GUIDANCE THAT STAFF IS SEEKING?

A. No, and neither does Staff nor anyone else at this point. The evidentiary portion of that case has not even concluded and we do not know when a decision may be rendered or if that decision will be appealed. More importantly, we do not know what the decision might say with regard to the value and cost of DG. The appropriate venue for dealing with the specific issues affecting SSVEC is in this rate case now and without further delay. Chairman Little expressed his view regarding the irreplaceability of rate cases in addressing the issues raised in the Value and Cost of DG Docket in a December 22, 2015 letter to the other commissioners and interested parties:

> Since the specifics of each rate case are different and can vary widely for each utility and service area, the methodology [from the Value and Cost of DG Docket] would not assign specific values, but rather provide guidance as to how values would be determined in the context of an individual rate case.
>
> [T]he hearing [in the Value and Cost of DG Docket] should be thought of more in the context of a precursor to "rulemaking" instead of "ratemaking" and should not be thought of as having any direct impact on rates for any participating utility.

Q. HOW DO YOU RESPOND TO STAFF'S PROPOSAL TO LEAVE THE SSVEC RATE CASE OPEN FOR A YEAR?

A. There is an old maxim which says that "justice delayed is justice denied." SSVEC has identified a serious problem associated with the proliferation of DG in its service territory. We filed an application to address the problem in the Net Metering Docket but that effort was halted by Staff. We then filed a rate application in this docket and now Staff is recommending further delays. The time is now to address the legitimate issues that have been raised in SSVEC's application.

Q. YOU MENTIONED BEFORE THAT STAFF'S CHANGE OF COURSE IS DISAPPOINTING. WHAT DO YOU MEAN?

A. In my opinion, Staff applied a heavy hand to try to pressure SSVEC into agreeing to wait for a final resolution of the Value and Cost of DG Docket to fully address the net metering issues raised in this rate case and in the net metering case before that. Staff went so far as to threaten to delay the hearing in this case and to add a new witness at the eleventh hour before backing off. SSVEC has always tried to work cooperatively with Staff. I have been disappointed that that cooperation has not been reciprocated on this issue.

Q. WILL A DELAY IN REACHING A FINAL RESOLUTION IN THE RATE CASE HARM THE COOPERATIVE?

A. Yes. SSVEC will be harmed by a delay in the issuance of a decision resolving the issues in this case. In its rate application, SSVEC explained the serious problem it is facing as a result of unrecovered fixed costs resulting from net metering:

> The principal reasons for filing this Application at this time is to make critical changes to SSVEC's rate design which will enable the Cooperative to better recover the fixed costs associated with providing service to its members. *** Since implementing Net Metering Tariff Schedule NM, SSVEC has experienced a dramatic increase in the number of customer installing roof solar photovoltaic ("PV") systems, the most common form of distributed generation ("DG"). The proliferation of PV systems in SSVEC's service territory has caused

> a large increase in unrecovered fixed costs attributable to the 1,013 net metered members. The estimated annual lost fixed costs attributable to the 1,013 net metered members at the end of the 2014 test year under the existing residential rate is $1,139,013....

I would also like to point out that under A.A.C. R14-2-103(B)(11)(d), the Commission must issue a final order in a rate case within 360 days of the date of sufficiency, or by September 24, 2016 in this case. I do not believe that this requirement will be met if the case is left open for a year as Staff recommends.

SERVICE CHARGES

Q. AT PAGE 3 OF STAFF WITNESS JULIE MCNEELY-KIRWAN'S SURREBUTTAL TESTIMONY, SHE RECOMMENDS AGAINST APPROVING REVISIONS TO SSVEC'S SERVICE CONDITIONS PERTAINING TO CUSTOMER CHARGES FOR METER SOCKET ENCLOSURES, METER TEST SWITCHES, AND METER SOCKETS ON THE GROUNDS THAT SSVEC PROVIDED INSUFFICIENT EXPLANATION AND DOCUMENTATION TO JUSTIFY THE PROPOSED CHARGES. HOW DO YOU RESPOND?

A. SSVEC did try to explain and document its rationale behind the changes to the Service Conditions. In its response to Staff Data Requests JMK 7.1, the Cooperative stated as follows:

> Exhibit C #4 (regarding Meter Socket Enclosures), Exhibit D #5, Exhibit D #6, and Exhibit E #13B and 13C – Meter Test Switches and Meter Sockets. These items are used in conjunction with each other and/or individually depending on the service type. The proposed changes remedy a subsidy that exists today for a small number of services. Other types of services are required to provide this equipment. Another reason for the change is that when SSVEC provides the equipment, there can be coordination issues with the members' electricians or contractors that can cause problems with completing the work. The cost shift associated with these issues is estimated to be $21,000 and affects approximately 80 members annually. Thus, the financial impact to a customer would be approximately $262.50 on average. The proposed changes would result in a $21,000 reduction to SSVEC's expenses.

Q. CAN YOU PROVIDE ANY ADDITIONAL EXPLANATION TO ADDRESS MS. MCNEELEY-KIRWAN'S COMMENTS?

A. Yes. SSVEC provides meter bases, sockets and test switches for only certain types of installations which include large commercial, agricultural services and, on rare occasion, a very large residential service. Historically, SSVEC has provided this equipment to ensure compatibility with its own metering equipment. However, over the years, the need for SSVEC to provide the equipment has been eliminated and depending on the design of the service entrance the member may already be required to provide this equipment. The revisions to the service conditions ensure that all members are treated the same. The provision of this equipment to a relatively few customers (approximately 80 annually) effectively creates a subsidy for those customers in the amount of approximately $21,000, or approximately $262.50 per customer. This change to the Service Conditions eliminates that subsidy.

In addition, it should be noted that Arizona Administrative Code ("A.A.C.") R14-2-206(B)(1)(a) states that "[e]ach applicant for services shall be responsible for all insider wiring including the service entrance and meter socket." Thus, the Commission's rules specifically provide that the customer must pay for the meter socket. For the reasons that I have discussed, SSVEC believes that the requested revisions to the Service Conditions are appropriate and should be approved.

Finally, I would also point out that SSVEC previously removed any free distance or free equipment allowance from its line extension policy thereby eliminating those subsidies. The meter bases, sockets and test switches are the last items of free equipment remaining and we are trying to correct that oversight.

Q. MS. MCNEELEY-KIRWAN ALSO RECOMMENDS THAT SECTION 4.4 OF THE SERVICE CONDITIONS BE AMENDED TO INCLUDE A TABLE LISTING THE COSTS RELATING TO DESIGN ESTIMATES, INCLUDING THE APPROXIMATE COSTS OF EXTRA SITE VISITS

THAT MAY BE REQUIRED FOR SOME DESIGN ESTIMATES. DO YOU AGREE WITH THIS RECOMMENDATION?

A. No. The intent behind the revisions to Section 4.4 was to provide the Cooperative with greater flexibility in addressing a wide range of line extension situations. When SSVEC designs a line extension, the cost of the design has very little to do with the customer's rate classification and everything to do with the complexity and size of the line extension. We have seen residential jobs that cost $50,000 and commercial jobs that cost $3,000. Under the current version of Section 4.4, the Cooperative charges a $100 design fee for residential and a $1,000 fee for commercial. However, we don't think it is reasonable or appropriate to charge fixed rates when there is so much room for variability. For example, the current provision which allows us to collect only a $100 deposit for a residential design leaves SSVEC vulnerable to spreading unnecessary costs to other Cooperative members when we spend time and money designing a large project that does not get built. That is the basis for the proposed revisions to Section 4.4. Including a table of estimated costs works against the very flexibility we are seeking.

In preparing the revision, we were trying to get away from the "one-size-fits-all" table and calculate a separate fee for each job. We surveyed what other electric utilities in the state are doing and tried to pattern our provision after theirs. In addition, we attempted to closely follow the language in A.A.C. R14-2-207(A)(3). We believe that the proposed revision to Section 4.4 is a reasonable and balanced approach to line extension estimates and is fair to all of the Cooperative's members.

ADDITIONAL RATE CASE EXPENSE

Q. **AT PAGES 25-26 OF MR HEDRICK'S REBUTTAL TESTIMONY, HE TESTIFIES THAT THROUGH MARCH 2016, SSVEC HAD INCURRED OUTSIDE LEGAL AND CONSULTING SERVICES FOR THE RATE CASE TOTALLING $309,770, WHEREAS, THE COOPERATIVE HAD**

INCLUDED ONLY $200,000 IN RATE CASE EXPENSE IN ITS RATE APPLICATION. MR. HEDRICK FURTHER TESTIFIED THAT SSVEC ANTICIPATES AN ADDITIONAL $100,000 IN RATE CASE EXPENSE TO COMPLETE THE CASE FOR A TOTAL ESTIMATED COST OF $409,770. MR. HEDRICK TESTIFIED THAT RECOVERY OF THE ADDITIONAL RATE CASE EXPENSE IN RATES IS APPROPRIATE. HAS SSVEC PROVIDED DOCUMENTATION TO STAFF SUPPORTING THE ADDITIONAL REQUESTED RATE CASE EXPENSE?

A. Yes. In Staff Data Request CSB 15.1, Staff asked SSVEC to provide invoices and a detailed schedule to support the $309,770 in actual rate case expense through the end of March 2016 as discussed in Mr. Hedrick's Rebuttal Testimony. SSVEC responded to Staff's data request on May 11, 2016, by providing hard copies of invoices (excluding legal invoices)[4] totaling $320,511.41 in actual rate case expense. The Cooperative also provided two detailed schedules showing total rate case expenses generally and total rate case expenses broken down by vendor. In addition, invoices for rate case legal expenses totaling $102,484.29 through March 2016 and totaling $40,954.02 for April and May 2016 were made available for inspection at our attorney's office in Phoenix, and Ms. Crystal Brown from Staff reviewed those legal invoices on May 11, 2016. On May 12, 2016, SSVEC supplemented its response to Staff by providing an additional invoice from Mr. Hedrick's firm for April time in the amount of $12,167.61. Thus, SSVEC provided invoices (or Staff reviewed invoices in the case of the legal bills) totaling $373,633.04.

[4] Because the legal invoices contain information that is subject to attorney-client privilege, copies were made available for review by Staff but Staff was not allowed to keep a copy of the invoices.

Q. DO YOU EXPECT THAT SSVEC WILL INCUR ADDITIONAL EXPENSES FOR OUTSIDE LEGAL AND CONSULTING SERVICES IN ORDER TO COMPLETE THE RATE CASE?

A. Yes. We still have a hearing to complete, post-hearing briefing, possible exceptions, and Open Meeting. SSVEC will easily surpass the estimated rate case expense of $409,770 in Mr. Hedrick's Rebuttal Testimony.

Q. TO BE CLEAR, WHAT AMOUNT IS SSVEC SEEKING FOR RATE CASE EXPENSE?

A. SSVEC is seeking $409,770 in rate case expense amortized over a three-year period.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

SUSAN BITTER SMITH, Chairman
BOB STUMP
BOB BURNS
DOUG LITTLE
TOM FORESE

EXHIBIT
A-4
ADMITTED

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN, AND FOR RELATED APPROVALS.

DOCKET NO. E-01575A-15-0312

PRE-FILED DIRECT TESTIMONY OF JUDY K. LAMBERT

ON BEHALF OF

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

AUGUST 31, 2015

INDEX TO PRE-FILED DIRECT TESTIMONY OF JUDY K. LAMBERT

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BACKGROUND AND PURPOSE

Q. PLEASE STATE YOUR NAME AND EMPLOYER.

A. My name is Judy K. Lambert and I am employed by Guernsey - Engineers, Architects and Consultants.

Q. PLEASE STATE YOUR BUSINESS ADDRESS.

A. My business address is 5555 North Grand Boulevard, Oklahoma City, Oklahoma 73112-5507.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. I have earned a Bachelor of Science degree from Oklahoma State University and an M.B.A. degree from Oklahoma City University. My resume is attached hereto as Exhibit JKL-1.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS MATTER?

A. I am testifying on behalf of Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or the "Cooperative").

Q. ARE YOU AUTHORIZED TO TESTIFY ON BEHALF OF THE SSVEC?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I am sponsoring the schedules developing the financial adjustments in Section C of the Rate Application Filing Package attached at Attachment 5 to the rate application filed by SSVEC in this docket and the cost of service study found in Section G of the Rate Application Filing Package.

Q. WERE THE SCHEDULES PREPARED BY YOU OR UNDER YOUR SUPERVISION?

A. Yes.

Q. WHO SUPPLIED THE DATA USED IN DEVLOPING THE SCHEDULES THAT YOU ARE SPONSORING?

A. All of the data was supplied by SSVEC.

Q. WHAT IS THE TEST YEAR IN THIS PROCEEDING?

A. The test year is the twelve months ended December 31, 2014.

INCOME STATEMENT AND ADJUSTMENTS

Q. PLEASE EXPLAIN SECTION C OF SSVEC'S RATE APPLICATION FILING PACKAGE.

A. Schedule C-1.0 is the Income Statement for the test year showing:

- Actual Test Year
- Adjustments to the Test Year
- Adjusted Test Year (Actual Test Year Plus Adjustments)

Adjustments described below correspond to adjustment amounts shown in the "Adjustments" column.

Q. PLEASE EXPLAIN THE ADJUSTMENTS SHOWN ON SCHEDULE C-1.0.

A. Adjustments are summarized on Schedule C-2.0. Schedules C-2.1 through C-2.5 show adjustments to specific O&M accounts while Schedules C-2.6 through C-2.17 show development of adjustments.

Operating Revenue (Schedule C-2.6). Calculation of revenue shown on this schedule is developed on Schedule E-7.5. This schedule calculates the revenue by applying the existing rates (effective April 1, 2014) to adjusted test year billing

units. The consumer and kWh billing units are found on schedules E-7.1 and E-7.2, respectively. The adjustment to base revenue is an increase of $1,463,170. This adjustment recognizes a full twelve months of billing under existing rates.

A revenue adjustment was made to restate the WPCA revenue based on the adjusted power cost (Schedule E-7.7). The adjusted WPCA revenue reflects the full amount of WPCA revenue that SSVEC is entitled to recover. The adjusted WPCA of ($4,724,035) is calculated on Schedule E-7.5.1.

Since the WPCA revenue has been adjusted to reflect the precise recovery of power cost allowed by the WPCA mechanism, an adjustment has been made to eliminate the fuel bank charges. This adjustment increases test year revenue by $769,750.

Sales for Resale revenue of $5,342,435 has been eliminated. This adjustment is necessary to reflect that the change in wholesale generation resources at AEPCO will eliminate the ability for off-system sales that have previously provided a source of revenue for SSVEC.

The total revenue adjustments result in a decrease to revenue of $4,262,632.

Purchased Power (Schedule C-2.7). A detailed calculation of the adjusted purchased power expense is shown on Schedule E-7.7. The adjustment to purchased power is mainly the removal of the purchased power costs associated with Resale. The adjustment to purchased power is a reduction of $4,455,507.

Bad Debt Expense (Schedule C-2.8). An adjustment has been made to increase the bad debt expense to reflect the five year average bad debt ratio reflected on Schedule C-2.8.1. The adjustment increases expense by $77,946.

Payroll (Schedule C-2.9). The adjustment to payroll expense totals $15,563. Adjusted payroll was calculated based upon 184 full-time employees and 9 part-time employees using 2015 wage levels. The adjusted test year payroll amount has been increased by overtime wages, double time wages and miscellaneous pay amounts including bonuses, retro pay, safety performance pay and PTO buyout.

The overtime, double time and miscellaneous amounts were calculated based on the test year ratio for these items multiplied times the adjusted test year payroll. The adjusted test year payroll expense was calculated using the test year actual payroll expense ratio multiplied times the total adjusted wages. The historical payroll ratios are shown on Schedule C-2.9.1. The test year expense by account and distribution of the payroll adjustment by account is shown on Schedule C-2.2.

Employee Benefits (Schedule C-2.10). The adjustment to benefits expense totals $108,469. Expenses associated with employee benefits were restated to 2015 levels. The Cooperative's portion of the adjusted test year amount for each benefit was computed. The adjusted benefits expense was calculated by applying the test year benefits expense ratio to the total cooperative portion of the employee benefits cost. The test year expense by account and distribution of the payroll adjustment by account is shown on Schedule C-2.3.

The adjusted test year medical insurance cost is a combination of the self-funded medical costs and the plan administration costs. The self-funded costs is the average of the cost for 2013, 2014 and projected 2015 multiplied times the test year ratio of the Cooperative's portion.

Rate Case Expense (Schedule C-2.11). An adjustment to recognize expense associated with development, filing and support of the rate case has been made. The estimated cost of $200,000 is intended to reflect cost of outside legal and consulting services. This amount is amortized over a 3-year period, resulting in an adjustment of $66,667. Actual rate case expense will only be known at the time of the hearing/settlement. SSVEC proposes to provide rate case information to ACC Staff and in hearing/settlement testimony as the case proceeds.

Depreciation (Schedule C-2.12). Annual depreciation rates were applied to December 31, 2014 plant balances for production, transmission and distribution plant to determine adjusted depreciation expense for these plant categories. For General Plant accounts, depreciation expense for the month of January 2015 was

annualized to determine the adjusted depreciation expense. The adjusted test year depreciation expense of $10,857,764 results in an adjustment of $164,830.

Property Taxes (Schedule C-2.13). The adjusted test year property tax amount is $3,600,000. The adjustment is a reduction of $1,123,616.

Payroll Taxes (Schedule C-2.14). Adjusted payroll-related taxes for FICA and Federal and State Unemployment were calculated by applying the applicable tax rate to adjusted wages subject to payroll taxes. The test year payroll tax expense ratio of 62.427% was applied to total adjusted payroll taxes amount to calculate adjusted payroll taxes expensed. The adjustment is an increase to test year expense of $46,043. The test year expense by account and distribution of the adjustment by account is shown on Schedule C-2.4.

Franchise Tax (Schedule C-2.15). An adjustment has been made to eliminate the Franchise Tax expense of $366,804. Effective April 1, 2014, franchise tax expenses are now surcharged directly to consumers.

Donations (Schedule C-2.16). An adjustment was made to remove donations and lobbying activities totaling $277,344 from the test year. This adjustment results in a reduction to other deductions on the income statement.

Interest Expense (Schedule C-2.17). The adjusted interest on long-term debt of $6,028,981 shown on Schedule D-2.0 was calculated by applying the applicable interest rate to the principal outstanding as of 12/31/2014 and including $3,000,000 of long-term debt that was incurred after the test year. The adjustment increases interest on long-term debt expense by $984,725.

Q. ARE THE ADJUSTMENTS THAT HAVE BEEN MADE TO THE TEST YEAR RELATED TO ACTIVITIES THAT ARE KNOWN, MEASURABLE AND OF A CONTINUING NATURE?

A. Yes. The adjustments that have been made are intended to provide an accurate reflection of the Cooperative's known and measurable revenues and expenses on an on-going basis and that should be recovered in rates.

Q. WHAT IS THE OVERALL IMPACT OF THE ADJUSTMENTS MADE TO THE TEST YEAR?

A. The overall impact of the revenue and expense adjustments is to increase the operating margin by $496,395 as reflected in column (b) of Schedule C-1.0. The adjusted test year Operating TIER is 1.69, the ODSC is 1.70, and the rate of return on fair value rate base is 4.92% as reflected in column (c) of Schedule C-1.0.

COST OF SERVICE STUDY

Q. WHAT IS THE PURPOSE OF THE COST OF SERVICE STUDY?

A. The cost of service study assigns the plant investment, operating expenses and revenue associated with providing service to each customer class. When the total system revenue requirement has been identified, the assignment of plant investment and operating expenses to each class provides the basis for assigning the revenue requirement to each class. The assignment of the class revenue requirement is generally done based on the class' contribution to the system's overall return or margin. The cost of service study identifies the revenue deficiencies and subsidies that exist between rate classes.

In addition to determining the cost of providing service and the appropriate revenue requirement for each class, the cost of service study also provides important information with regard to the unbundled cost components that comprise the cost to serve. These unbundled cost components can be used to develop rate designs,

which more accurately reflect the cost causation, giving the consumer a better price signal with regard to the cost of electric service. The unbundled cost components also provide the necessary information to appropriately price those services, which have been deemed competitive in Arizona. Those services are Metering, Meter Reading and Customer Billing.

Q. HAS THE COST OF SERVICE BEEN DEVELOPED USING A METHODOLOGY THAT HAS BEEN ACCEPTED BY THE COMMISSION?

A. Yes. The cost of service study uses the same program and methodology that has been utilized by SSVEC previously and by TRICO Electric Cooperative, Navopache Electric Cooperative and Mohave Electric Cooperative in their most recent rate filings. The Commission and Utilities Division Staff deemed the methodology to be reasonable and appropriate in each of these prior cases.

Q. PLEASE DESCRIBE THE GENERAL PROCESS INVOLVED IN THE ALLOCATION OF PLANT INVESTMENT AND EXPENSES TO THE VARIOUS CUSTOMER CLASSES.

A. The plant investment and operating expenses are first separated into functional categories such as Transmission Plant, Distribution Plant, Distribution Operations and Maintenance Expenses, Customer Accounting Expenses, etc. The plant investment and operating expenses are further classified according to the unbundled cost component that is appropriate. This allows the identification of the make-up of the costs that are being incurred such as Transmission-Demand, Substation-Demand, Purchased Power-Capacity, Purchased Power-Energy, Meter Reading, etc.

If a plant investment amount or operating expense can be identified as directly assignable to a particular rate class, then a direct assignment of the

investment or expense is made to that class. For all other plant investment and expense amounts that are not directly assignable, an allocation factor based on demand, energy, or number of customers is developed to assign a portion of that investment and expense to the various rate classes. These allocation factors vary based on the type of investment or expense being allocated. For example, Transmission plant is considered as totally demand related, therefore the allocation factor used to assign Transmission plant is the twelve month sum of the demand for those classes utilizing the Transmission system. The energy component of purchased power is allocated using an allocation factor based on each class' kWh purchased from the wholesale supplier. Meter reading expenses are considered a customer-related cost and are allocated based on a customer allocation factor.

Composite allocation factors are also created as subtotals of various plant accounts and expenses are made within the cost of service study. These composite allocation factors are used to allocate other related plant and expense items. For example, Account 583–Overhead Line Expense is allocated by a subtotal of Account 364/365–Overhead Line Investment, ensuring that the expense is assigned to the same classes as the investment.

Q. PLEASE EXPLAIN THE GENERAL DEVELOPMENT OF THESE ALLOCATION FACTORS?

A. Schedule G-7.0 provides a summary of the initial allocation factors.

Schedule G-7.1 (25 pages) shows the development of the initial allocation factors used in the cost of service study. Additional allocation factors are developed as subtotals in the cost of service study.

Schedule G-7.1, page 1, shows the development of the energy allocation. The appropriate loss factor has been calculated using the kWh sales information by class and the purchased kWh data. The overall line loss for the system is

6.827274%. The energy allocation factor is used to assign the purchased power energy costs.

The demand allocation factors are developed on Schedule G-7.1, pages 2-10. Allocation Factor #2 on Schedule G-7.1, page 2 of 25, is the demand allocation used to assign costs for the purchased power capacity expense. This allocation factor is based on each class' contribution to the monthly system peak demand. The allocation factor is developed on Schedule G-7.2.2 with supporting Schedule G-7.2.2.2. Allocation Factor #3 on Schedule G-7.1, page 3 of 25, is the demand allocation factor used to assign purchased power delivery costs. This factor is also based on each class' contribution to the monthly system peak demand.

Allocation Factor #4 on Schedule G-7.1, page 4 of 25, is the allocation factor for generation plant. This factor is developed based on kWh sold to each class. The generation plant is solar facilities. The energy provided by these facilities is delivered onto the distribution system and utilized by all rate classes.

Allocation Factor #5 on Schedule G-7.1, page 5 of 25, is the allocation factor for transmission plant. This factor is developed based on each class' contribution to the monthly non-coincident peak demand. The allocation factor is developed on Schedule G-7.2.1 with supporting Schedule G-7.2.1.2.

Allocation Factor #6 on Schedule G-7.1, page 6 of 25, is the allocation factor used to assign distribution substation investment in Account 362. This factor is also developed based on each class' contribution to the monthly non-coincident peak demand.

Allocation Factor #7 on Schedule G-7.1, page 7 of 25, is the allocation factor is used to directly assign substation investment to the contract customer class.

Allocation Factor #8 on Schedule G-7.1, page 8 of 25, is the allocation factor used to allocate the investment in Backbone Distribution line in Accounts 364 and 365. Schedule G-7.3.1 provides detail on the development of the investment in backbone investment to be allocated.

Allocation Factor #9 on Schedule G-7.1, page 9 of 25, reflects the number of single-phase customers in each class and is used for the allocation of single-phase overhead line investment in Accounts 364 and 365. Schedule G-7.2.5 shows the consumers by phase/service level.

Allocation Factor #10 on Schedule G-7.1, page 10 of 25, reflects the number of three-phase customers in each class and is used for the allocation of three-phase overhead extension investment in Accounts 364 and 365. Schedule G-7.2.5 shows the consumers by phase/service level.

Allocation Factors #11 and #12, Schedule G-7.1, pages 11 and 12 of 25, are used to assign the customer-related and demand-related investment associated with account 368 – Transformers. The supporting Schedules G-7.3.3 and G-7.3.3.1 show the development of these allocation factors.

Allocation Factor #13 on Schedule G-7.1, page 13 of 25, shows the average number of consumers by class and a weighting factor for each class reflecting the relative cost for each class of providing the investment in account 369 – Services. The supporting Schedule G-7.3.4 shows the development of this factor.

Allocation Factor #14 on Schedule G-7.1, page 14 of 25, shows the average number of customers by class and the average cost of providing a meter for each class. This factor is used to assign the investment in account 370 – Meters. The supporting Schedule G-7.3.5 shows the development of this factor.

Allocation Factors #15 and #16, Schedules G-7.1, pages 15 and 16 of 25, provide direct allocation factors for investment and costs related to security lighting and street lighting.

Allocation Factors #17, #18 and #19 utilize the average number of customers by rate class and a weighting factor to assign the costs for Meter Reading, Billing and Records and Customer Service activities. The weighting factors represent the relative cost to perform those activities for each rate class.

Allocation Factor #20 on Schedule G-7.1, page 20 of 25, is based on the average number of customers and is used to assign Other Revenue.

Allocation Factor #21 on Schedule G-7.1, page 21 of 25, is based on kWh sold and was originally developed to assign sales for resale revenue. This factor is not utilized.

Allocation Factor #22 on Schedule G-7.1, page 22 of 25, is based on consumers and was developed to assign rate base deduction. This factor is not utilized.

Allocation Factor #23 on Schedule G-7.1, page 23 of 25, is the allocation factor used to directly assign revenues and expenses to Ft. Huachuca.

Allocation Factor #24 on Schedule G-7.1, page 24 of 25, is the direct allocation of base revenue which is calculated on Schedule E-7.5.

Allocation Factor #25 on Schedule G-7.1, page 25 of 25, is the direct allocation of power cost adjustment revenue which is calculated on Schedule E-7.5.1.

Q. PLEASE DESCRIBE THE COST OF SERVICE ALLOCATION SCHEDULES IN SECTION G.

A. Schedule G-1.0 is the summary results of the cost of service allocation under existing rates. Schedule G-1.1 is the allocation of revenue under existing rates. Schedule G-2.0 is the summary results of the cost of service allocation under proposed rates.

Schedule G-3.1 shows the allocation of plant investment to the rate classes. The first column indicates the test year plant balance. The second column indicates the allocation factor used and the remaining columns show the allocated amount to each class of customer.

Schedule G-4.0 shows the allocation of operating expenses by account to the rate classes. The allocation of expenses generally follows the allocation of plant

investment. The transmission O&M expenses are all allocated by the subtotal of transmission plant. The various distribution O&M accounts are allocated in a manner consistent with the allocation of the plant account or activity to which the expense is associated. For example, the overhead line expense in Account 583 is allocated based on the sum of Accounts 364/365.

Schedule G-4.1 is the allocation of payroll expenses to the rate classes.

Schedule G-4.2 is the allocation of interest expenses to the rate classes.

Q. PLEASE DESCRIBE THE UNBUNDLED COST COMPONENT SCHEDULES.

A. Schedule G-5.0 shows the classification of rate base allocated to each of the cost components.

Schedule G-5.1 show the classification of plant allocated to each of the cost components.

Schedule G-5.2 provides the components of rate base allocated to each rate class.

Schedule G-6.0 is the classification of expenses showing the allocation to each cost component.

Schedule G-6.1 is the classification of payroll expense showing the allocation to each cost component.

Schedule G-6.2 is the classification of the return component of cost allocated to each cost component.

Schedule G-6.3 is the summary of the components of expense allocated to each rate classes. Schedule G-6.3, page 4, shows a consolidation of the components of expense into the four major cost categories for the rate classes. The total customer-related cost of providing service to the Residential class reflected on this schedule is $25.36 per customer per month. This represents the customer-related

costs that SSVEC incurs to provide distribution wires service to the customer exclusive of any capacity or energy costs.

Q. PLEASE SUMMARIZE THE RESULTS OF THE COST OF SERVICE STUDY.

A. Schedule G-1.0 shows the results of the cost of service study under the existing rates. This schedule shows the allocated rate base, operating revenues, operating expenses, resulting return, interest, resulting operating margin, and the calculated revenue deficiencies for each rate class. Schedule G-2.0 is the summary of the cost of service study under proposed rates.

The revenue requirement for each class under the proposed rates was determined based on the following criteria:

(a) The recovery of the total system increase in a manner that recognizes the magnitude of the rate change indicated by the cost of service; and

(b) The impact of the proposed rate change upon the class.

The rates proposed in the filing reflect SSVEC'S consideration of these criteria. The rate of return on rate base has been calculated for the total SSVEC system and for each of the rate classes in the cost of service study to be used as a measure of each rate class' ability to recover costs in comparison with the total system. The proposed rates are generally designed to move the individual class rates of return closer to the system average where possible. The relative rate of return provides a measure of how each class' rate of return changes under the proposed rates. The following table summarizes the relative rate of return under existing rates for each rate class on Schedule G-1.0 and the relative rate of return under proposed rates as shown on Schedule G-2.0:

	Existing RROR	Proposed RROR
Residential	0.730	0.791
General Service	(1.048)	(0.524)
Large Power	1.003	0.932
Irrigation	4.643	3.820
Lighting	(0.192)	0.003
Total System	1.000	1.000

As indicated by the above table, the relative rates of return under proposed rates move closer to 1.000 for all classes of the system except Large Power, indicating a movement toward rates which more closely reflect cost. The relative rate of return for the Large Power class moves only very slightly away from 1.000 but the class rate of return remains very close to the system average. The rates of return earned by the application of the proposed rates on each class are simply a fall-out of the allocation of costs to the total system rate classes. The Cooperative believes that the results of the cost of service comparing existing and proposed rates supports the reasonableness of the proposed rates given the objectives of this rate filing.

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes, it does.

EDUCATION:

M.B.A., Oklahoma City University, 1979
B.S., Oklahoma State University, 1971

EMPLOYMENT HISTORY:

1973-Present - C. H. Guernsey & Company, Oklahoma City, Okla.

PERTINENT EXPERIENCE:

Ms. Lambert has experience with rural electric cooperatives and municipal systems in the areas of allocation of capital credits, financial forecasts and rate analysis, rate design, cost of service, and the preparation of filing requirements before state regulatory agencies.

Ms. Lambert has testified before regulatory commissions in the states of Arizona, Arkansas, Colorado, Kansas, Oklahoma, Texas and Wyoming.

Ms. Lambert developed the CoOPTIONS:© family of computer software programs for financial forecasts, cost of service studies, and financial performance analysis.

SPECIFIC CONSULTING EXPERIENCE:

Cost of Service and Rates for Electric and Water

Ms. Lambert has prepared or directed the preparation of Cost of Service studies for numerous electric distribution cooperatives. She developed the CoOPTIONS:® Cost of Service software used in the preparation of the studies. Many studies were filed with state regulatory commissions and were prepared to fulfill specific filing requirements. Studies have been prepared for clients in Arizona, Arkansas, Colorado, Florida, Georgia, Iowa, Kansas, Oklahoma, South Dakota, Texas, and Wyoming. She has testified before state regulatory commissions in support of Cost of Service studies.

Ms. Lambert has designed bundled and unbundled general application electric rates as well as special contract rates. Emphasis is placed on designing cost-based rates with consideration of consumer impact and revenue stability.

Financial Forecasting and Analysis

She has prepared numerous financial forecast studies, including sensitivity cases to support loan applications, to analyze merger and consolidations, and to analyze and define financial goals and objectives. She has also prepared operating budgets, including pro forma cash flow statements.

Strategic Planning and Analysis

Ms. Lambert provides analysis and forecasting of special contracts and projects. She has developed presentations of rate and cost of service concepts and methodologies used for training client staff and directors.

Ms. Lambert has developed contract rates and contract terms for large industrial and specialized loads to appropriately recover costs and margins while providing protection from risk of termination of the load.

Acquisition, Consolidation, and Valuation Analysis

Ms. Lambert has prepared cost-benefit analysis, consolidated financial statements and pro forma financial statements, and financial forecast cases for acquisitions, consolidations, or mergers of rural electric systems.

Expert Witness

Ms. Lambert has testified in rate and cost of service filings before regulatory commissions in Arizona, Arkansas, Colorado, Kansas, Oklahoma, Texas, and Wyoming. Her testimony has been in support of development of revenue requirements, margin requirements, rate design, and cost of service.

Software Sales and Support

Ms. Lambert developed the CoOPTIONS:• software programs, wrote the User's Manuals and supervises all upgrades to the software. The CoOPTIONS:• programs include Cost of Service, Financial Performance Analysis, and Ten-Year Financial Forecast.

Education and Training

Ms. Lambert has presented workshops and seminars on Rate Design and Cost of Service issues and methodologies as well as on Financial Forecasts.

Publications and Presentations:

"Knowledge is Power: Financial Forecasting" has been presented yearly in GUERNSEY's offices in Oklahoma City, Okla., since 2006. Ms. Lambert has been a presenter for this seminar numerous times.

"Knowledge is Power: Understanding Rates and Cost of Service" has been presented several times each year since 2005, in Oklahoma City, Okla., as well as in other locations. Ms. Lambert has been a presenter for this seminar several times each year.

"Rate Workshop," Co-presenter with Rod Crile and William K. Edwards. CFC Independent Borrower Executive Summit, Tucson, Ariz., November 2009.

"Why Financial Forecasting is More Important than Ever," NRECA 2009 Accounting, Finance and Tax Conference. Co-Presenter with Mike Searcy. Minneapolis, Minn., July 2009.

"Preparing for Upcoming Changes Through a Rate Analysis and Cost of Service Study," co-presenter with Mike Searcy. NRECA 2009 Accounting, Finance, and Tax Conference, Minneapolis, Minn., July 2009.

"Understanding Rates and Cost of Service," Southwest Accountants Association, Albuquerque, N.Mex., April 2009.

"Financial Forecasts," presentation to Southwest Accountants Association, Albuquerque, N.Mex., April 2009.

"Energy Efficiency, Conservation and Margins: Catch 22 Rate Design" co-authored with Michael Moore and Mike Searcy. NRECA's Management Quarterly, Fall 2007 Edition, pp. 26-47.

"Cooperative Financial Management" presentation to Texas Electric Cooperatives' Non-Accountants Workshop in Austin, Texas; November 30-December 1, 2005.

"Ten-Year Financial Forecast Interpretation," presented at NRECA 2004 Accounting, Finance, and Tax Conference; San Diego, California, July 25, 2004.

"Retail Rates Session 1" and "Retail Rates Session 2," presentation to Texas Electric Cooperatives' Marketing Member Services, and Communications Conference; San Antonio, Texas; May 21, 2003.

"Wires Cost for Distribution Cooperatives" and "Competitive Issues Regarding Wires Rates," presented at "Positioning The Member Distribution Cooperative to Deal with a Customer Choice Environment," Brazos Electric Cooperative's Strategic Planning Workshop; Waco, Texas; October 5, 2001.

"Rate Design in a Restructured Environment," presentation to Texas Electric Cooperatives Accountants Association, Austin, Texas; April 19, 2000.

"Rate Design and Financial Strategy Issues for Cooperatives," presentation to South Dakota Rural Electric Office Managers and Accountants Association; Huron, S.Dak.; April 27, 1995.

"Understanding the Financial Forecast," presentation to NRECA Management Internship Program; The University of Nebraska - Lincoln; October and December 1987; and at NRECA's Accounting and Finance Conference; Lexington, Ky.; September 10, 1987.

Assisted with "Course 495.3 - Rate Issues and Philosophies," NRECA's Summer School; Lake of the Ozarks, Mo.; July 20-22, 1987.

Assisted with "Rate Issues and Philosophies," NRECA's Management Internship Program; The University of Nebraska - Lincoln; April and May 1987.

Presentation to Texas Electric Cooperatives' Accountants Meeting; Lubbock, Texas; April 23, 1987.

Assisted with "Course 495.2 - Rate Issues and Philosophies," NRECA's Summer Schools; Myrtle Beach, S.C.; Nashville, Tenn.; and Taos, N.Mex.; July 1986.

"Personal Computer Applications," presentation to Texas Electric Cooperatives' Accountants Association; April 1986.

List of Rate and Cost of Service Studies Performed:

Arizona (Arizona Corporation Commission)

- Navopache Electric Cooperative, Inc.

Arkansas (Arkansas Public Service Commission)

- First Electric Cooperative Corporation
- Ouachita Electric Cooperative Corporation, Docket Nos. 96-043-U and 99-238-U
- Ozarks Electric Cooperative Corporation

Colorado (Colorado Public Utilities Commission)

- Delta-Montrose Electric Association
- Empire Electric Association, Inc., Case Nos. 1312, 1479, 6366
- Highline Electric Association
- Intermountain Rural Electric Association, Case No. 1396
- K.C. Electric Association, Inc.
- La Plata Electric Association, Inc., Case No. 1395
- Morgan Country Rural Electric Association
- Mountain Parks Electric Inc.
- Poudre Valley Rural Electric Association, Inc., Case No. 6044
- San Isabel Electric Services, Case Nos. 1144, 1508
- San Luis Valley Rural Elec. Coop., Inc., Case Nos. 1308, 1461
- Sangre de Cristo Electric Cooperative, Inc.
- Y-W Electric Association, Inc.

Georgia

- GreyStone Power Cooperative
- Jackson Electric Membership Corporation

Illinois

- Egyptian Electric Cooperative Assn.
- SouthEastern Illinois Electric Cooperative
- Southern Illinois Electric Cooperative

Indiana (Indiana Public Service Commission)

- Clark County Rural Electric Membership Corporation

Iowa

- Harrison County Rural Electric Cooperative
- Iowa Lakes Electric Cooperative
- Nishnabotna Valley Rural Electric Cooperative
- Western Iowa Power Cooperative

Kansas (Kansas Corporation Commission)

- Sumner-Cowley Electric Cooperative, Inc.

Minnesota

- Minnesota Valley Cooperative Light & Power Association

Missouri

- M & A Electric Power Cooperative
- Platte-Clay Electric Cooperative, Inc.

Montana

- Beartooth Electric Cooperative
- Sun River Electric Cooperative, Inc.

New Mexico

- Central New Mexico Electric Cooperative
- Central Valley Electric Cooperative
- Lea County Electric Cooperative

Oklahoma (Oklahoma Corporation Commission)

- Grand River Dam Authority (Wholesale)
- KAMO Electric Cooperative, Inc.
- Kiwash Electric Cooperative, Inc.
- Oklahoma Electric Cooperative

South Dakota

- Lacreek Electric Association, Inc.
- Moreau-Grand Electric Cooperative, Inc.
- West Central Electric Cooperative, Inc.
- West River Electric Association, Inc.

Texas (Public Utility Commission of Texas)

- Bailey County Electric Cooperative Association, Dockets 2915, 5003, and 7900
- Bandera Electric Cooperative, Inc., Docket Nos. 2786, 4279, 10438, and 39542.
- Big Country Electric Cooperative, Inc.
- Bluebonnet Electric Cooperative, Inc., Docket Nos. 4070, 7415, 9976, 10435, 11274, and 39032
- Central Texas Electric Cooperative, Inc., Docket Nos. 3170, 6363, 10325, and 40029
- Cherokee County Electric Cooperative Association
- Coleman County Electric Cooperative, Inc., Docket No. 4875
- Comanche County Electric Cooperative, Inc., Docket Nos. 5272 and 8272
- Concho Valley Electric Cooperative, Inc., Docket Nos. 6540 and 9056
- Cooke County Electric Cooperative Assn., Docket No. 9240
- CoServ Electric, Docket No. 9892
- Deaf Smith Electric Cooperative, Inc., Docket Nos. 4481 and 8354
- Fannin County Electric Cooperative, Inc., Docket No. 4940 and 9992
- Farmers Electric Cooperative, Inc., Docket Nos. 3780, 4422, 6475

- Fort Belknap Electric Cooperative, Inc., Docket Nos. 4396, 6558, 9944
- Golden Spread Electric Cooperative, Inc., Docket No. 39024
- Grayson-Collin Electric Cooperative, Inc., Docket Nos. 3945, 6510
- Greenbelt Electric Cooperative, Inc., Docket No. 9930
- Guadalupe Valley Electric Coop., Inc., Docket Nos. 3397, 4516, 6338, 7550
- Hamilton County Electric Cooperative Association, Docket No. 5971
- Heart of Texas Electric Cooperative
- HILCO Electric Cooperative, Inc., Docket Nos. 7154 and 10841
- Jackson Electric Cooperative, Inc., Docket Nos. 2753, 4710
- Karnes Electric Cooperative, Inc.
- Lamb County Electric Cooperative, Inc., Docket No. 3270
- Lighthouse Electric Cooperative, Inc., Docket Nos. 2995, 4612 and 8097
- Lyntegar Electric Cooperative, Inc., Docket Nos. 2988, 4564, 42326, 44818
- Magic Valley Electric Coop., Inc., Dockets 1991, 3212, 5477, 6460, 9516, and 10820
- Medina Electric Cooperative, Inc., Docket No. 4113
- Navarro County Electric Cooperative, Inc., Docket No. 3116
- Navasota Valley Electric Cooperative, Inc., Docket Nos. 7355 and 11650
- North Plains Electric Cooperative, Inc., Docket No. 4958
- Nueces Electric Cooperative, Inc., Docket Nos. 3936, 5203
- Pedernales Electric Cooperative, Inc.
- Rayburn Country Electric Cooperative, Inc., Docket No. 7361
- Rita Blanca Electric Cooperative, Inc., Docket No. 2527
- Rusk County Electric Cooperative, Inc., Docket No. 3383
- San Bernard Electric Coop., Inc., Docket Nos. 2699, 3692, 4534, 5467, 6218, 10432, 10549
- San Miguel Electric Cooperative, Inc., Docket No. 5351
- Seguin (City of), Electric Department
- South Plains Electric Cooperative, Inc., Docket Nos. 2936, 4822, 6598
- Southwest Texas Electric Cooperative, Inc., Docket Nos. 5335, 8102, 11777
- Swisher Electric Cooperative, Inc., Docket Nos. 3062 and 6796
- Taylor Electric Cooperative, Inc., Docket Nos. 5767, 9159, and 39861
- Texas Utilities Electric Company, Docket No. 9300
- Tri-County Electric Cooperative, Inc.
- Trinity Valley Electric Cooperative
- United Cooperative Services
- Victoria County Electric Cooperative Company, Docket Nos. 3949 and 6680
- Wharton County Electric Cooperative, Inc., Docket Nos. 4541 and 6685
- Wise Electric Cooperative, Inc., Docket No. 11502
- Modification of PCA Clause, Docket No. 4679
    - Coleman County EC
    - Concho Valley EC
    - Southwest Texas EC
    - Taylor EC

Wyoming (Wyoming Public Service Commission)

Rate Studies

- Big Horn Rural Electric Cooperative
- Bridger Valley Electric Association, Inc.
- Carbon Power & Light, Inc.
- Garland Light & Power Company
- High Plains Power, Inc.
- Niobrara Electric Association, Inc.
- Powder River Energy Corporation, Inc.
- Wheatland Rural Electric Association
- Wyrulec Company

Flow-Throughs

- Big Horn Rural Electric Cooperative
- City of Torrington
- Carbon Power & Light, Inc.
- Garland Light & Power Co.
- Niobrara Electric Association, Inc.
- Wyrulec Company
- City of Torrington

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

SUSAN BITTER SMITH, Chairman
BOB STUMP
BOB BURNS
TOM FORESE
DOUG LITTLE

EXHIBIT
A-5
ADMITTED

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN, AND FOR RELATED APPROVALS.

DOCKET NO. E-01575A-15-0312

PRE-FILED DIRECT TESTIMONY OF DAVID HEDRICK

ON BEHALF OF

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

AUGUST 31, 2015

INDEX TO TESTIMONY OF DAVID W. HEDRICK

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BACKGROUND AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is David W. Hedrick and my business address is 5555 North Grand Boulevard, Oklahoma City, Oklahoma 73112-5507.

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am employed by Guernsey Engineers, Architects and Consultants. I am Senior Vice-President and Manager of the Analytical Services group.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A, I have earned a Bachelor of Science degree from the University of Central Oklahoma in mathematics and a M.B.A degree from Oklahoma City University. I have been employed with Guernsey since 1981. My primary area of responsibility is rate analysis and cost of service work for electric distribution cooperatives and electric generation/transmission cooperatives. Attached hereto as Exhibit DWH-1 is my resume with a listing of the projects and clients with which I have been involved.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE REGULATORY COMMISSIONS?

A. Yes. I have testified before the Arizona Corporation Commission, the Arkansas Public Service Commission, the Colorado Corporation Commission, the Oklahoma Corporation Commission, the Public Utility Commission of Texas and the Wyoming Public Service Commission.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS MATTER?

A. I am testifying on behalf of Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or the "Cooperative").

Q. ARE YOU AUTHORIZED TO TESTIFY ON BEHALF OF SSVEC?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony will provide the following:

a. A discussion of SSVEC's objectives in this filing and an overview of the rate filing package;

b. A discussion of the development of the revenue requirement for SSVEC;

c. A discussion of the impact of distributed generation and net metering on the Cooperative; and

d. A discussion of the proposed rate changes and the impact on members.

SSVEC OBJECTIVES AND OVERVIEW OF RATE FILING

Q. WHAT ARE SSVEC'S OBJECTIVES IN THIS FILING?

A. SSVEC's objectives in this filing are:

a. To increase the total system revenue requirement by $3,101,498 which is a 3.17% increase. The proposed increase will allow the Cooperative to meet its financial objectives with regard to equity, capital credit retirements and cash levels;

b. To the extent that the Commission defers action on SSVEC's request for a waiver of the existing Net Metering Rules in Docket No. E-01575A-15-0127, the Cooperative provides additional support and requests approval of the proposed Net Metering tariffs provided in this filing;

c. To increase the Service Availability Charge in the Residential rate to reflect the customer component of cost. The increase in the Service Availability Charge is proposed to be accomplished in four steps over four years;

d. To implement a new Residential Service with Distributed Generation rate for new customers connected after April 14, 2015. This rate would be administered in conjunction with a new Distributed Generation (DG) tariff that compensates excess distributed generation energy at avoided cost rather than the full retail rate. The Service Availability Charge in the new rate recovers the customer component of cost and the system demand component of cost. The increase in the Service Availability Charge for this new rate is proposed to be accomplished in four steps over four years;

e. To implement a new Residential Service with Distributed Generation rate for existing customers connected on or before April 14, 2015. This rate would be administered in conjunction with a revised Net Metering tariff (NM1). The revised NM1 tariff grandfathers existing net metered customers under the old net metering policy by providing the current retail rate as compensation for distributed generation energy and banking of energy. The Service Availability Charge is increased in four steps over four years.

f. To eliminate some rate schedules and make revision to other rate schedules; and

g. To re-base the Wholesale Power Cost Adjustment to reflect the current cost of purchased power.

Q. HAS THE BOARD OF DIRECTORS OF SSVEC APPROVED THIS RATE FILING BASED ON THESE OBJECTIVES?

A. Yes. The SSVEC Board of Directors approved the filing of the rate case at its meeting on July 29, 2015.

Q. DOES THIS RATE FILING MEET THE REQUIREMENTS AS SET FORTH IN THE COMMISSION'S RULES?

A. SSVEC believes this filing is in compliance with the requirements in A.A.C. R14-2-103 for Class A electric utilities and contains the required schedules and data necessary for the Commission's review and approval of the proposed rates. In addition to its docketed application ("Application"), SSVEC is providing Commission Staff with its work papers and information in electronic form on a flash drive at the time of filing. While not required by Commission rule, SSVEC understands such information, when provided, facilitates Staff's review of the Application. SSVEC appreciates the opportunity it was afforded to meet and discuss the objectives of this filing with Staff prior to the filing of this Application. SSVEC intends to cooperate with Staff throughout the processing of this Application and hopes an expedited and fair final determination can be obtained at a reasonable cost to SSVEC and its members.

Q. WERE THE SCHEDULES THAT ARE INCLUDED AS <u>ATTACHMENT 5</u> TO SSVEC'S RATE APPLICATION PREPARED BY YOU OR UNDER YOUR SUPERVISION?

A. Yes.

Q. WHAT IS THE TEST YEAR IN THIS RATE FILING?

A. The test year is the twelve months ending December 31, 2014.

Q. WHAT ADJUSTMENTS HAVE BEEN PROPOSED TO THE TEST YEAR?

A. SSVEC witness Judy K. Lambert discusses the development of the adjustments to the test year in her testimony which is attached as Attachment 3 to the Application. The adjustments to revenue, operating expenses and interest expense are for changes that are known, measurable and of a continuing nature. The intent was to include those adjustments which would accurately reflect SSVEC's operations on a going forward basis that are reasonable and consistent with the standard rate making process at the Commission.

Q. ARE THERE ANY OUTSTANDING COMPLIANCE ISSUES OF WHICH SSVEC IS AWARE?

A. No.

<u>DEVELOPMENT OF REVENUE REQUIREMENT</u>

Q. WHAT REVENUE REQUIREMENT IS SSVEC PROPOSING?

A. The proposed total system revenue requirement is $100,804,640 as reflected on Schedule A-2.0 to Attachment 5 of SSVEC's Application. The proposed total system

increase necessary to achieve this revenue requirement is $3,101,498 or 3.17% over the adjusted test year revenue. The fair value rate base is $208,373,755 as reflected on Schedule B-2.0 to Attachment 5 of SSVEC's Application.

Q. HOW WAS THE TOTAL SYSTEM PROPOSED REVENUE REQUIREMENT DETERMINED?

A. As a member-owned electric cooperative, SSVEC's revenue requirement is a function of the margins and cash necessary to meet the financial objectives set forth by the Board of Directors. These financial objectives are set in terms of the equity level, the cash general funds level, the capital credit retirement program and the coverage ratios required by the Cooperative's lenders. The Board of Directors has approved the proposed rate changes in this filing with the following objectives:

- Grow equity as a percent of assets to the 40%-50% range with projected total system plant additions averaging $16,899,000 per year.
- Increase the Cooperative's cash position from $5.9 million or 25 days of cash to $9 million or 38 days of cash over a 3-year period.
- Maintain capital credit retirements of approximately $300,000 per year.
- Maintain adequate Times Interest Earned Ratios (TIER) and Debt Service Coverage Ratios (DSC)

These objectives were used as the criteria in determining the sufficiency of the proposed rate increase of $3,101,498. The financial analysis indicates the proposed rate increase amount will allow SSVEC to meet the Board's objectives as set forth above.

Q. PLEASE DESCRIBE THE FINANCIAL ANALYSIS SUPPORTING THE OVERALL SYSTEM RATE CHANGE AND REVENUE REQUIREMENT?

A. Attached to my testimony are exhibits comprising the financial analysis:

- Exhibit DWH-2 shows the system capitalization and the equity as a percent of assets for the test year and the previous five years. The equity has grown from 26.01% in 2009 to 33.72% at the end of the test year. The financial objective of the board is to grow the equity to a level of 40%-50%.
- Exhibit DWH-3 shows the historical and projected plant additions. The plant additions for the next five years are projected to average $16,899,000 per year. This amount reflects the capital additions that will need to be financed through a combination of debt and retained earnings.
- Exhibit DWH-4 shows the capital credits retired since 2004. In accordance with board policy, SSVEC projects capital credit retirements of approximately $300,000 per year.
- Exhibit DWH-5 shows the calculation of desired general funds. The major components making up the annual cash requirement are listed as well as the total plant balance. The estimated general funds at the end of the test year was $5,945,366 which was equivalent to 24.93 days of cash and 1.76% of plant. SSVEC believes that an adequate level of cash would be $9,000,000 which is 37.75 days of cash or 2.55% of plant.
- Exhibit DWH-6 is the ratio summary page from the ten-year financial forecast which includes the proposed rate increase effective beginning in 2017. The equity as a percent of assets is projected to increase from the 33.715% level at the end of 2014 to 38.595% in 2018. The Modified TIER is projected to fall from 1.77 for 2014 to 1.39 in 2016. With the proposed rate increase

effective in 2017, the Modified TIER coverage increases to 1.67 and then begins to fall thereafter.

- Exhibit DWH-7 is the pro forma income statement from the ten year financial forecast case. The forecast reflects that the operating margin is projected to decline from $3,636,984 in 2014 to $2,455,931 in 2016. With the proposed increase effective in 2017, the operating margin is projected to increase to $4,406,781. The forecast case identifies when additional rate increases will be needed to maintain a minimum Modified TIER at a level of 1.40. The forecast indicates that additional rate changes will be required beginning in 2019.
- Schedule A-2.0 of Attachment 5 to the Application shows that the proposed increase will produce an operating margin of $7,234,777 based on the adjusted test year data. This produces an Operating TIER of 2.20. The results of the financial forecast case reflected in Exhibit DWH-6 and DWH-7 indicates that with the proposed increase effective in 2017, SSVEC's equity will continue to increase toward the goal of 40%-50%, cash levels will increase to the desired level and capital credits will be retired. Due to the lag in the implementation of proposed rates, the forecast indicates that while the rates are designed to produce a 2.2 Operating TIER, in reality, the Cooperative will achieve an Operating TIER of roughly 1.7 when rates are implemented and then begin to decline thereafter.

Q. IS THE PROPOSED RATE INCREASE REASONABLE?

A. Yes. The proposed increase will allow SSVEC to meet its financial objectives and maintain its financial integrity. The increase is a modest 3.17% overall increase

which mitigates the impact on members. SSVEC believes that the proposed increase strikes the correct balance between maintaining the financial health of the Cooperative and limiting the impact on members.

THE IMPACT OF DG AND NET METERING ISSUES

Q. PLEASE DESCRIBE THE IMPACT THAT DISTRIBUTED GENERATION INSTALLED BY MEMBER CONSUMERS HAS ON THE COOPERATIVE AND ITS MEMBERS.

A. The rapid growth in solar distributed generation installed by individual residential consumers has caused SSVEC to assess the impact such installations have on the Cooperative's ability to recover the costs of providing service and the subsidies that are created between customers.

The Cooperative delivers electric service to its members using an extensive distribution system. This distribution system consists of electric facilities built to serve the total capacity of the electric load and customer-specific electric facilities that are required to provide service regardless of how much energy is consumed. The capacity-related facilities include substations, a portion of the overhead and underground line and a portion of the transformer. The customer-related facilities include a portion of the overhead and underground line, a portion of the transformer, the service line and the meter. The costs of providing service associated with both the demand and customer-related facilities are fixed in nature. That is, these costs do not vary based on the amount of energy (kWh) consumed.

In addition to the fixed distribution costs of providing service, the Cooperative also incurs fixed wholesale capacity costs to provide electric service to its members from its wholesale power suppliers. These costs are associated with existing generation facilities that ensure the ability to provide continuous service to members. These fixed costs do not vary and are represented in a fixed charge billed by the wholesale supplier.

Historically, SSVEC and other similar cooperatives have recovered the costs of providing service to residential members through rates with a monthly service availability charge and an energy charge applied to the monthly kWh consumption. The monthly service availability charge approved by the Arizona Corporation Commission has historically been an amount that was well below the total justifiable customer-related cost of providing service per customer. The energy charge has historically been designed to recover the remainder of costs to provide service not included in the service availability charge which include a portion of the customer related costs, all of the fixed distribution demand costs, the fixed wholesale demand costs and the variable energy costs. This structure of Residential rate design is common among utilities. This rate design recovers a major portion of the fixed costs in the variable component of the rate. This rate design has functioned well historically for the recovery of costs where all of the customers being served in the Residential rate class were similar consuming entities that did not operate solar distributed generation facilities. However, this rate design does not provide for the appropriate recovery of the costs to provide service to customers that have solar distributed generation facilities.

A customer that installs distributed generation facilities will reduce the energy (kWh) that is purchased from the Cooperative by an amount equal to the generation output of their facility. This reduction in kWh purchased from the cooperative results in a loss of fixed costs being recovered through the energy component of the rate. The fixed distribution demand and customer costs that the Cooperative incurs to provide service are similar for all Residential customers whether they have distributed generation or not. These fixed distribution demand and customer costs incurred by the Cooperative are not reduced as a result of the installation of distributed generation. Yet, because of the existing rate structure and the reduction in kWh purchased by the customer, the fixed costs recovered in the energy component of the rate are not recovered. The existing rate structure was not designed to appropriately recover the costs of providing service from a member with distributed generation. If this situation with the recovery of costs is not addressed, then the lost fixed costs from customers with distributed generation will eventually have to be recognized as a cost to be recovered from all of the remaining customers with consumption. The result is that customers with distributed generation do not pay the appropriate fixed demand and customer costs for the provision of electric service while the remainder of customers pay more than their equitable share of those costs. Without addressing the rate issue, the installation of distributed generation will shift costs from one group of customers to another.

Q. ARE MEMBERS WITH DISTRIBUTED GENERATION CONTINUING TO UTILIZE THE GRID FOR SERVICE?

A. Yes. Members may claim that since their net power flow is zero that they are not using the grid, but this is simply not true. First of all, those with DG systems don't

produce power all of the time. When they are producing in excess of their own needs the excess energy is put back on the grid. The SSVEC system then serves essentially as a battery to provide energy when the DG customer is not producing power sufficient to meet its load requirement. It is important to understand that the grid provides much more than power. The grid services that SSVEC and other utilities provide include reliability, reserves, frequency control, voltage control, and redundancy as physical quantities flowing through the grid. Members may have net zero power flows but reliability is flowing into the member and none is flowing out: not a net zero. Voltage control is flowing into the member and none is flowing out: not a net zero. Frequency control is consumed by the member and none is provided by the member: not a net zero. In short, while members may have reached a "net zero" threshold on energy (kWh), they are a large net negative on very expensive grid services that everyone else has to pay for. Stating that you don't use the grid because you are net zero is like saying, "I drive the same road to and from work each day so I net zero mileage on the road and therefore I don't use the road."

Q. WHAT IS THE MAGNITUDE OF THE LOST FIXED COST THAT RESULTS FROM SERVICE PROVIDED TO MEMBERS WITH DISTRIBUTED GENERATION?

A. Exhibit DWH-8 provides a calculation of the lost fixed cost resulting from service provided to Residential members with distributed generation in conjunction with the Cooperative's existing Net Metering Tariff NM-1. The energy charge in the proposed Residential rate has been separated into three cost components: purchased power demand costs, purchased power energy costs and distribution wires costs. The purchased power demand costs and distribution wires costs are fixed costs that do

not vary based on kWh consumption and are not reduced as a result of the reduced consumption even though these costs are recovered in the energy charge of the rate. Therefore, as energy consumption is reduced due to installed DG, these fixed costs are no longer recovered from these consumers. These costs not recovered from members with distributed generation are defined as lost fixed costs.

At the end of the test year, SSVEC provided service to 1,013 Residential members with distributed generation. The average size of the DG system installed is 5.62 kW (AC) with a capacity factor of approximately 25%. The average monthly production for a unit of this size is 1,026 kWh. As a result of the existing net metering policy, the total production from a DG unit is compensated to the consumer by the cooperative at the full retail rate. As a result, every kWh generated by a consumer's DG unit results in the lost fixed costs identified on Exhibit DWH-8. The average monthly lost fixed costs associated with the purchased power demand costs is $43.85 per customer under the existing residential rate. The average monthly lost fixed costs associated with distribution wires costs is $49.85 per customer under the existing residential rate. The total average monthly lost fixed cost is $93.70 per customer. The estimated lost fixed costs for 1,013 customers for an annual period under the existing residential rate would therefore be $1,139,013.

Q. DID THE NUMBER OF RESIDENTIAL MEMBERS WITH DG INCREASE AFTER THE END OF THE TEST YEAR?

A. Yes, as of August 2015, the number of residential members with DG had increased to 1,214. After the filing of the Net Metering Waiver request in Docket E-01575A-

15-0127 which included the establishment of the April 14 date for grandfathered customers, the rate of growth in members with DG declined substantially.

Q. WHAT IMPACT DOES THE EXISTING NET METERING POLICY HAVE ON THE COOPERATIVE?

A. SSVEC's existing Net Metering Policy is based on the requirements set forth in Arizona Administrative Code ("A.A.C.") R14-2-2306, which provides as follows:

A. On a monthly basis, the Net Metering Customer shall be billed or credited based upon the rates applicable under the Customer's currently effective standard rate schedule and any appropriate rider schedules.

B. The billing period for Net Metering will be the same as the billing period under the Customer's applicable standard rate schedule.

C. If the kWh supplied by the Electric Utility exceeds the electricity supplied by the Electric Utility during the billing period, the Customer shall be billed for the net kWh supplied by the Electric Utility in accordance with the rates and charges under the Customer's standard rate schedule.

D. If the electricity generated by the Net Metering Customer exceeds the electricity supplied by the Electric Utility in the billing period, the Customer shall be credited during the next billing period for the excess kWh generated. That is, the excess kWh during the billing period will be used to reduce the kWh supplied (not kW or kVA demand or customer charges) and billed by the Electric Utility during the following billing period.

E. Customers taking service under time-of-use rates who are to receive credit in a subsequent billing period for excess kWh generated shall receive such

credit during the next billing period during the on- or off-peak periods corresponding to the on- or off-peak periods in which the kWh were generated by the Customer.

F. Once each calendar year the Electric Utility shall issue a check or billing credit to the Net Metering Customer for the balance of any credit due in excess of amounts owed by the Customer to the Electric Utility. The payment for any remaining credits shall be at the Electric Utility's Avoided Cost. That Avoided Cost shall be clearly identified in the Electric Utility's Net Metering tariff.

As discussed in the previous section, a member with installed distributed generation reduces the energy (kWh) purchased from the Cooperative and thereby causes lost fixed costs to be incurred. The existing Net Metering policy exacerbates the loss of fixed costs and creates a significant subsidy by requiring the Cooperative to pay the full retail rate for energy generated by the member, even though the retail rate far exceeds the value of the excess generation. The Cooperative's Avoided Cost rate is the appropriate value for compensation of the excess generation. This over-compensation for the DG energy produced to the net metered customer becomes a cost for all members of the Cooperative to pay. The application of the net metering policy in its current form is not equitable.

Q. WHAT IS SSVEC PROPOSING TO ADDRESS THE ISSUE OF LOST FIXED COST AND SUBSIDIES CREATED FROM SERVING DG CUSTOMERS?

A. To address this issue, SSVEC is proposing the following:

1. To increase the monthly service availability charge in the standard Residential rate from $10.25 to $25.00 in four steps over four years. This change allows for a greater recovery of fixed customer related costs through the fixed charge and thus helps to reduce subsidies between members within the rate class.
2. To introduce a new Residential with Distributed Generation rate (R–DG E) for existing customers connected on or before April 14, 2015. This rate includes a higher monthly service availability charge that increases from the existing $10.25 to $50.00 in four steps over four years. This rate would be administered in conjunction with the revised Net Metering Tariff Schedule NM-1 which grandfathers existing net metered customers under the existing net metering policy which compensates for distributed generation energy at the full retail rate and allows banking of kWh. Since the existing net metered customers will continue to receive the full retail rate for all generation, the energy charge in the R-DG E rate has been fixed at the existing Residential energy charge rate with WPCA rebasing. By fixing the energy charge at the current rate, all existing net metered customers which are grandfathered under the existing net metering policy, will receive the full retail rate as compensation for the distributed energy produced. The customer charge in Phase 4 represents the full customer and demand related distribution cost of providing service. By increasing the customer charge to the full distribution customer and demand cost, the level of lost fixed cost recovery is reduced and the subsidy provided to this class of customers is reduced.
3. To introduce a new Residential with Distributed Generation rate (R-DG) for new customers connected after April 14, 2015. This rate reflects a higher monthly service availability charge that increases from the existing $10.25 to $50.00 in

four steps over four years. The energy charge is reduced in each phase to correspond with the increase in the customer charge. The rate in Phase 4 represents the cost-based rate. The R-DG rate will be administered in conjunction with a new Distributed Generation Tariff Schedule DG which compensates all excess distributed generation energy at the avoided cost rate. This rate is cost-based and when used in conjunction with the new Distributed Generation Tariff Schedule DG significantly reduces the level of lost fixed cost recovery.

4. To introduce a new Distributed Generation Tariff Schedule DG that compensates new distributed generation customers at the avoided cost rate for all excess distributed generation energy produced. New distributed generation customers will continue to be able to offset their load with their distributed generation energy. The new Distributed Generation Tariff Schedule DG will be applied to new Residential and non-Residential net metered customers.
5. Revise the existing Net Metering Tariff NM-1 to be applicable to existing net metered customers only. Existing net metered customers will continue to be eligible to receive full retail rate compensation for all excess distributed generation energy. Existing Residential distributed generation customers will also have the option of taking service under the new Residential Distributed Generation rate and utilizing the new DG tariff for compensation of excess generation.

Q. WHAT IMPACT DO THE PROPOSED RESIDENTIAL DISTRIBUTED GENERATION RATES HAVE ON THE LOST FIXED COST RECOVERY?

A. The intent of the proposed Residential with Distributed Generation rates is to provide a more equitable recovery of distribution costs and a cost-based level of compensation for the energy (kWh) produced by a member's distributed generation resource.

Exhibit DWH-8 shows the calculation of the lost fixed costs associated with member-owned distributed generation under the proposed Residential rate. That is, if no new Residential with Distributed Generation rates were employed and the existing net metering policy were to remain in effect, this is the level of lost fixed cost that would be expected to continue with the service provided under the standard Residential rate. The analysis does not reflect any growth in the number of net metered customers. The analysis shows that the lost fixed costs are reduced somewhat over the four phases of rate change. This is caused by the increase in the standard Residential customer charge from $10.25 to $25.00 and the corresponding reduction in the energy charge. However, the lost fixed cost would remain at a very significant level over $900,000 in Phase 4.

Exhibit DWH-9 shows the calculation of the lost fixed costs associated with member owned distributed generation under the proposed Residential with Distributed Generation rate for existing customers. These customers will be grandfathered under the proposed Net Metering NM-1 tariff and receive the full retail rate as compensation for the distributed generation energy produced. The energy charge under this rate will remain fixed. Because the energy charge remains fixed, line 10

indicates that the lost fixed costs included in the energy charge would remain the same over the course of the four phases. However, SSVEC is proposing to increase the customer charge component of the rate to match the customer charge in the Residential with Distributed Generation rate to new customers. The increase in the customer charge reduces the level of lost fixed cost from existing net metered customers significantly but does not eliminate lost fixed costs completely. SSVEC believes this approach to be a fair and equitable method of mitigating the lost fixed costs and subsidy issue caused by service to this group of members.

Exhibit DWH-10 shows the calculation of the lost fixed costs associated with member-owned distributed generation under the proposed Residential with Distributed Generation rate applicable to new customers. For illustration purposes only, this schedule applies the new rate to the existing number of net metered customers to show what the impact would be if this rate were applied to the existing customer group. The Residential with Distributed Generation rate for new customers has a higher customer charge and a correspondingly lower energy charge which significantly reduces the lost fixed costs. By Phase 4, the Residential with Distributed Generation rate for new customers has eliminated the distribution wires component of lost fixed cost. Only the lost fixed costs associated with the purchased power demand costs remains.

In addition to the reduction in lost fixed cost associated with the increase in customer charge and reduced energy charge, this rate will be administered in conjunction with the proposed Distributed Generation (DG) rate that compensates excess distributed generation energy at avoided cost. This means that a distributed generation customer

will be able to utilize self-generated energy to offset their own consumption needs but all energy produced in excess of the customer's load would be purchased at avoided cost. There will no longer be any banking of kWh. As a result, the amount of distributed generation energy compensated at the full retail rate would be reduced to a level that reflects only what the customer would consume. Based on data maintained by the Cooperative, the total PV system energy has been adjusted to 74% of the total. This reduction in energy compensated at the full retail value will significantly reduce the amount of lost fixed cost for new customers. The Residential with Distributed Generation rate for new net metered customers applies only to those customers that connect after April 14, 2015.

Q. HOW DOES SSVEC'S PROPOSED RATE CHANGES AND NET METERING POLICY REVISIONS IN THIS FILING COMPARE WITH SSVEC'S REQUEST IN DOCKET NO. E-01575A-15-0127?

A. In April of this year, SSVEC filed an application in Docket No. E-01575A-15-0127 requesting 1) approval of a new net metering tariff, 2) approval of revisions to its existing net metering tariff and 3) a partial waiver of the net metering rules. The objective of that filing was to mitigate the negative effects of net metering by requesting approval of a change in the net metering policy. The changes requested in that filing were only related to the net metering policy itself and did not include any proposed changes to the rate schedules. The objective of the net metering policy waiver request was to hopefully implement an immediate change in the policy and practice of the Cooperative.

The current filing includes proposed changes to both the net metering policy itself as well as proposing new rate schedules. The proposals in this rate filing provide a more comprehensive approach to dealing with the lost fixed cost and subsidy issues caused by members with distributed generation.

Q. WHAT IS SSVEC'S POSTION WITH RESPECT TO THE PROVISION OF RENEWABLE ENERGY?

A. SSVEC is a strong supporter of renewable energy. SSVEC has had in place a renewable energy program since 2005 and an approved Renewable Energy Standard and Tariff ("REST) plan since the Commission's REST rules became effective. SSVEC has demonstrated an early and strong commitment to the development of renewable energy resources within its service territory. As evidence of this, the Solar Electric Power Association ("SEPA"), a not for profit educational and research organization focused on helping utilities integrate solar into their operations, recognized SSVEC as the top utility in the nation in increased use of solar power based on watts-per-customer during 2009. Since 2009, SSVEC has consistently placed in the top 10 electric cooperatives nationwide for increased use of solar power based on watts-per-customer.

Today, SSVEC is well ahead of the goals of its REST plan and just finalized a purchase power agreement for a new utility-scale solar project that will provide approximately 20 megawatts of additional solar power for the benefit of all cooperative members at an economical price. With this project, SSVEC will reach 95% of its 2025 REST goal by the end of 2016. This solar power will benefit all of the Cooperative's members as compared to distributed rooftop solar which primarily

benefits those who have the financial means to purchase a system or the requisite credit to lease a system.

Q. ARE THE ISSUES RELATED TO DG CUSTOMERS INCLUDED IN THIS FILING UNIQUE TO SSVEC?

A. No. The problem of utility lost revenues to recover fixed costs due to net metering is not a new or unprecedented problem exclusive to SSVEC. The Commission has also recognized the existence of the cost-shift burden in Decision No. 74202 (December 2013) involving Arizona Public Service Company's application to approve its solution to the net metering cost-shift dilemma. Specifically, the Commission found in Finding of Fact 49 of that decision that the growth of Distributed Generation systems in APS' service territory "results in a cost shift from APS's DG Customers to APS's non DG residential Customers absent significant changes to APS's rate design." For APS, the Commission approved a temporary fix of a $0.70 per kW charge to APS's DG customers through its Lost Fixed Cost Recovery mechanism ("LFCR") to deal with what the Commission saw as "simply unfair for DG customers to contribute less to the recovery of APS's annual LFCR revenue than non-DG customers do."

Q. ARE THE ISSUES RELATED TO DG CUSTOMERS LIMITED ONLY TO ARIZONA?

A. No. The issues related to DG customers and net metering are being addressed across the country. Other state regulatory bodies have developed laws and orders pertaining to the cost issues that are informative. Attached as Exhibit DWH-11 is legislation that was passed in Oklahoma that requires utilities in the state to eliminate subsidies

to customers with distributed generation. Specifically, the law states:

C. No retail electric supplier shall allow customers with distributed generation installed after the effective date of this act to be subsidized by customers in the same class of service who do not have distributed generation.

D. A higher fixed charge for customers within the same class of service that have distributed generation installed after the effective date of this act, as compared to the fixed charges of those customers who do not have distributed generation, is a means to avoid subsidization between customers within that class of service and shall be deemed in the public interest.

Exhibit DWH-12 is legislation that was passed in Arkansas to amend the requirements for utilities to compensate net metering customers. Section 3 of the act directs the Arkansas Public Service Commission to establish rates, terms and conditions for net-metering contracts, including:

(A)(i) A requirement that the rates charged to each net-metering customer recover the electric utility's entire cost of providing service to each net-metering customer within each of the electric utility's class of customers.

(ii) The electric utility's entire cost of providing service to each net metering customer within each of the electric utility's class of customers under subdivision (b)(1)(A)(i) of this section:

(a) Includes without limitation any quantifiable additional cost associated with the net-metering customer's use of the electric utility's capacity, distribution system, or transmission system and any effect on the electric utility's reliability; and

(b) Is net of any quantifiable benefits associated with the interconnection

with and providing service to the net-metering customer, including without limitation benefits to the electric utility's capacity, distribution system or transmission system.

In addition to the legislation passed in Oklahoma and Arkansas, the Wisconsin Public Service Commission has also recently provided comment on DG subsidies. On page 62 of the Order in Docket No. 05-DR-107 (December 23, 2014), the commission states:

> *As Wisconsin courts have long recognized, rate design is a quintessential legislative function firmly left to the discretion of the Commission. Other substantial state and federal programs are designed specifically to support the development and implementation of conservation and renewable energy resources. The Commission is not required to use rate design as a hidden subsidy for these resources. This Commission continues to support customers who want to own their own generation; however, the Commission also has an obligation to those customers who do not want to or who cannot afford to own generation to make sure these customers are not subsidizing the costs for those who choose to and are able to own their own generation.*

Q. WHAT ADDITIONAL INFORMATION HAVE YOU PROVIDED FOR CONSIDERATION WITH REGARD TO THE COST RECOVERY ISSUE FOR DG CUSTOMERS?

A. Attached as Exhibit DWH-13 is an article from the December 2014 Electricity Journal entitled "Valuation of Distributed Solar: A Qualitative View."[1] The article was written by Mr. Ashley Brown, the Executive Director of the Harvard Electricity

[1] 1040-6190/© 2014 Elsevier Inc. All rights reserved., http://dx.doi.org/10.1016/j.tej.2014.11.005

Policy Group, former Commissioner of the Ohio Public Utility Commission and former chairman of NARUC, and Jillian Bunyan, a previous attorney for the United States Environmental Protection Agency's Office of Regional Counsel. The preface to the article provides insight regarding the content of the article:

> *A critical evaluation of the arguments used by solar DG advocates shows that those arguments may often overvalue solar DG. It is time to reassess the value of solar DG from production to dispatch and to calibrate our pricing policies to make certain that our efforts are equitable and carrying us in the right direction.*

All of the examples of legislation, commission orders and the Electricity Journal article confirm the understanding that there are significant cost recovery issues with the provision of service to customers with installed distributed generation and the current use of net metering is not an effective or equitable means to compensate customers for that distributed generation. The proposed Residential DG rates for existing and new customers along with the proposed change in the net metering tariffs and policy in the rate filing provide an effective, equitable and balanced solution for SSVEC and its members.

RATE DESIGN AND IMPACT ON CUSTOMERS

Q. WHAT ARE THE BASIC OBJECTIVES OF THE PROPOSED RATE DESIGN FOR EACH CLASS?

A. The basic objectives of the proposed rate design are:

- Reflect an appropriate recovery of the cost of providing service;
- Reflect the unbundled costs of providing service; and
- Reflect a consideration of the impact of the rate change on the member

Q. WHAT ARE THE PROPOSED REVENUE CHANGES FOR EACH CLASS?

A. The proposed rate change for each rate class is shown on Schedule H-1.0. The overall change is an increase of $3,101,583 or a 3.17% increase. The proposed rates for all four phases for all rate classes is shown on Schedule H-2.1.1. The proposed Phase 1 unbundled rate design for each rate class is shown on Schedule H-2.1.2. The proposed base cost of $0.065857 used in the calculation of the proposed WPCA is shown on Schedule H-2.1.5, Page 2 of 2. The summary of rates is provided on Schedule H-3.0.

Q. PLEASE DESCRIBE THE PROPOSED RATE FOR RESIDENTIAL.

A. The proposed rate for the standard residential class results in an increase of 3.49%. The base charge is increased from $10.50 to $15.00 per month in Phase 1. The proposed change in the customer charge for Phases 2-4 is $3 per month in each phase. The proposed Phase 4 customer charge is $25.00 per month. The customer component of expense for the residential class as reflected on Schedule G-6.3, Page 4, is $25.36 per month. The customer component of expense reflects SSVEC's cost of having the service available before any energy is actually sold to the customer. Costs included in the customer component include the customer component of distribution line expense, a portion of the transformer expense, the meter and service drop expense, meter reading and customer records expense. The increase moves the customer charge up to the level of customer cost reflected in the cost of service study.

The energy charge in the Residential rate for Phase 1 has been set to produce the desired revenue requirement in combination with the increase in the customer charge. The energy charge in the subsequent phases has been reduced in conjunction

with the increase in the customer charge to produce an overall revenue requirement for all of the Residential rate classes that is the same as Phase 1.

The comparison of the existing and proposed residential rate is shown on Schedule H-4.01. As a result of the increase in the customer charge, members with low usage see a higher percentage increase.

Q. PLEASE DESCRIBE THE PROPOSED RATE FOR EXISTING RESIDENTIAL WITH DISTRIBUTED GENERATION CUSTOMERS.

A. A new rate is proposed for existing Residential with Distributed Generation customers. This proposed rate reflects an increase in the customer charge to $25.00 in Phase 1 and additional increases in the customer charge in Phases 2-4. The proposed Phase 4 customer charge is $50.00 per month. The energy charge has been fixed at the existing energy charge for the Residential class including the WPCA. This rate class will be administered in conjunction with the proposed Net Metering Tariff Schedule NM-1 that allows compensation for distributed generation energy at the full retail rate. The billing comparison for this rate class is shown on Schedule H-4.02.

As detailed previously, the recovery of fixed costs for member's with distributed generation is necessary to provide an equitable recovery of both the customer-related and distribution demand-related costs of providing service, reduce the level of lost fixed costs and reduce subsidies between members. Schedule G-6.3, Page 4, shows the customer related costs of providing service to the Residential class is $25.36 per customer per month and the distribution demand related costs are $24.46 per customer per month. The proposed Phase 4 customer charge provides a recovery of

these costs that are incurred to provide service. Due to the distributed generation member's reduced energy consumption, it is very important to increase the fixed charge component of the rate to recover these costs.

Q. PLEASE DESCRIBE THE PROPOSED RATE FOR NEW RESIDENTIAL WITH DISTRIBUTED GENERATION CUSTOMERS.

A. A new rate is proposed for new Residential with Distributed Generation customers. This proposed rate reflects an increase in the customer charge to $25.00 in Phase 1 and additional increases in the customer charge in Phases 2-4. The proposed Phase 4 customer charge is $50.00 per month. The cost justification for the increased customer charge is the same as for the Residential DG rate for existing customers. The energy charge has been set in conjunction with the customer charge to provide a cost-based rate. This rate will be administered in conjunction with the new Distributed Generation (DG) rate which compensates for excess distributed generation energy at the cooperative's avoided cost. This rate is also available to existing customers at their request. A billing comparison is provided at Schedule H-4.03.

Q. HAS SSVEC INCREASED THE CUSTOMER CHARGE IN THE RESIDENTIAL RATE IN PREVIOUS RATE FILINGS?

A. Yes. In SSVEC's last full rate case approved in 2009, the commission approved an increase in the customer charge from the then existing $7.50/month to $8.25/month. SSVEC had requested a customer charge of $12.50. Prior to the 2009 change in rates, SSVEC had not changed its rates in 16 years. In 2013, SSVEC utilized the streamlined rate methodology to increase the customer charge to the current level of

$10.25. This was the maximum increase in the customer charge allowable under the streamlined rules. The reality is that there have not been a sufficient number of opportunities via rate cases nor support by the Commission for significant progress in increasing the fixed charges. SSVEC believes that to effectively deal with the cost recovery issues and subsidies related to distributed generation, more substantial increases in the fixed charges are required.

Q. PLEASE DESCRIBE THE NEW RESIDENTIAL AUXILIARY RATE.

A. This rate was developed to accommodate service provided to auxiliary residential services such as wells, barns and other second services at a residential establishment. These accounts are currently served on the General Service rate and the proposed rate is identical to the proposed General Service Rate. Although these accounts qualify for service under the General Service Rate, they are tied to service provided at a Residential location. In order to be able to transfer an outstanding debt obligation from one account to another, the accounts have to be in the same rate category. Since the wells, barns, etc. accounts are tied to a Residential account, having these accounts classified as a Residential service will facilitate the resolution of billing issues for these services.

Q. PLEASE DESCRIBE THE PROPOSED RATE DESIGN FOR THE GENERAL SERVICE RATES.

A. The proposed increase for the standard General Service rate class is 6.60%. The customer charge is increased from $16.50 to $20.00 in Phase 1. Additional increases in the customer charge are proposed for Phase 2 and Phase 3. The Phase 3 customer charge is $25 per month. The proposed demand charge for the first 3 kW is

$1.50/kW in Phase 1 and increases in Phases 2 and 3. The proposed demand charge for all kW over 3 kW is $8/kW in Phase 1 and increases in Phases 2 and 3. The most significant change in the rate design for this class is the application of a demand charge to all billing kW and a minimum of 3 kW billing demand. The existing rate did not begin charging for demand until the billing demand was in excess of 10 kW. SSVEC has the metering and billing capability to bill for all billing demand. The proposed rate design moves in the direction of recovering distribution fixed costs from all customers within the class. The billing comparison is provided on Schedule H-4.04.

The proposed General Service TOU rate reflects a 2.31% increase. The rate reflects an increase in the customer charge and also the implementation of demand charge based on the metered kW. The increase in the customer charge and the application of the metered demand charge will provide a better recovery of distribution costs.

The General Service RV Park rate is being discontinued. There is no justification for maintaining a separate rate schedule for these customers when the Large Power rate is applicable and very similar. All existing customers on this rate will be transferred to the Large Power rate. The proposed increase for these customer is 2.54%.

General Service customers with net metering are served on the standard General Service Rate.

Q. PLEASE DESCRIBE THE PROPOSED LARGE POWER RATES.

A. The proposed increase for the standard Large Power Service rate is 2.78%. The rate structure remains unchanged. The customer charge has not been changed but the demand charge has been increased from $7.05 per kW to $8.00 per kW to recover more of the fixed costs in the demand charge. The entire rate change for the Large Power rates is accomplished in Phase 1. Schedule H-4.11 provides a billing comparison for the standard Large Power rate.

The Large Power TOU rate structure has also been maintained. The on and off peak demand charges have been revised to reflect a more appropriate recovery of cost. The change for this rate class is a slight reduction of 1.39%. Schedule H-4.12 provides a billing comparison for the Large Power TOU class.

The proposed increase for the Industrial Power Service rate is 1.96%. The rate structure has been maintained with increases in the customer charge component and demand component of the rate. Schedule H-4.13 provides a billing comparison for the Industrial Service class.

The Seasonal Power Service rate is being discontinued. There is no justification for maintaining a separate rate class for these customers. The application of the standard Large Power rate provides these customers a reduction of 9.55%. All of the existing customers on this rate will be transferred to the Large Power rate. Schedule H-4.10 provides a billing comparison for the Seasonal customers moving to the proposed Large Power rate.

Q. PLEASE DESCRIBE THE PROPOSED CHANGES TO THE IRRIGATION RATES.

A. The rate structure for all of the Irrigation rates has been maintained. The overall rate change for all of the Irrigation rates combined is 1.02%. The demand charge in the standard Irrigation rate has been increased from $7.15 per kVA to $8.25 per kVA and the override penalty in the Controlled Irrigation rate has been increased from $19 per kW to $20 per kW. These changes provide for a recovery of more of the fixed costs in the demand charge. All of the customer charges have been maintained at the existing levels. All of the discounts for the control options have also been maintained. The entire amount of the proposed change for the Irrigation rate schedules is accomplished in Phase 1. Schedules H-4.14 through H-4.16 are billing comparisons for the Irrigation rates.

An additional change has been made to the controlled rate tariff for the recovery of costs associated with the control equipment. The existing language states that the Customer will pay the Cooperative the actual costs of the control equipment. SSVEC estimates that the equipment costs for the radio control units is $235 and the labor to install the unit is $192. In addition, SSVEC incurs travel costs for the vehicle and travel time of a 2-man crew. SSVEC estimates this cost to be $4.56/mile. SSVEC is proposing to change the language to require a fee of $425 plus $4.50/mile in travel costs.

Q. PLEASE DESCRIBE THE PROPOSED CHANGES TO THE LIGHTING RATES.

A. The proposed increase for the Security Lighting class is 6.54%. The proposed increase for the Street Lighting class is 3.27%. SSVEC is discontinuing all lighting service offerings related to mercury vapor lights. SSVEC is proposing LED light rates for Security Lighting and Street Lighting.

Q. PLEASE DESCRIBE THE PROPOSED CHANGES TO MISCELLANEOUS SERVICE CHARGES.

A. Schedule H-2.1.7 shows the calculation of the change in other revenue resulting from the proposed revisions to the miscellaneous charges. The most significant change is the reduction of the New & Additional Service (No Field Visit) charge from $50 to $30. The Service Call Back fee is proposed to be increased to $50. The Service Call during Business Hours fee is proposed to be increased to $75 and the Service Call After Hours fee is proposed to be increased to $100. The Non Pay (Field) Collection charge is proposed to be increased to $60. The proposed changes result in an overall reduction of $108,825 in other revenue.

Q. HAVE ALL OF THE RATE DESIGNS BEEN REVISED TO REFLECT THE NEW BASE POWER COST IN THE WHOLESALE POWER COST ADJUSTMENT?

A. Yes. Each proposed rate design reflects the proposed wholesale power cost adjustment calculated using the new base power cost of $0.065857 per kWh sold. The calculation of the proposed WPCA is shown on Schedule H-2.1.5.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

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DAVID W. HEDRICK
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MANAGER, ANALYTICAL SOLUTIONS

EDUCATION:

M.B.A., Oklahoma City University, 1993
B.S., Mathematics, University of Central Oklahoma, 1986

PERTINENT EXPERIENCE FOR THE PROJECT:

Mr. Hedrick specializes in the development of revenue requirements, cost of service, rate design, line extension analysis, special contract development, pole attachment rates, valuation analysis and other financial analysis for electric, water, and wastewater utility systems. He is also responsible for the preparation of rate filings and has presented expert testimony before state regulators, including Arizona, Arkansas, Colorado, Oklahoma, Texas and Wyoming. Mr. Hedrick's clients include both distribution providers and wholesale providers. He was instrumental in the development of the CoOPTIONS: family of computer software for use in unbundled utility cost of service studies and financial forecasting.

As Manager of the Analytical Solutions Group, Mr. Hedrick has oversight of all studies, analyses and filings that are developed by the group. He continues to represent clients before the appropriate regulatory authority and is responsible for the preparation of rate filings and other analytical studies.

SPECIFIC CONSULTING EXPERIENCE:

Acquisitions, Consolidations & Valuation Analysis

Mr. Hedrick has provided analytical support for consolidation studies in Texas and Wyoming. In addition, he has been involved in the valuation analysis of utility assets for purposes of acquisition and determination of fair market value for clients in Oklahoma and Kansas.

Retail Rate Analysis, Cost of Service Studies, and Line Extension Analysis

Mr. Hedrick's rate analysis and cost of service experience includes the following:

Arizona

- Navopache Electric Cooperative, Inc. - Regulated by Arizona Corporation Commission
- Sulphur Springs Valley Electric Cooperative, Inc. - Regulated by Arizona Corporation Comm.
- Trico Electric Cooperative, Inc. - Regulated by Arizona Corporation Commission

Arkansas

- Arkansas Valley Electric Cooperative Corporation - Regulated by Arkansas PSC and Oklahoma Corporation Commission
- Ouachita Electric Cooperative Corporation - Regulated by Arkansas PSC
- Ozarks Electric Cooperative Corporation - Regulated by Arkansas PSC

Colorado

- Colorado Rural Electric Association
- Delta-Montrose Electric Association
- Empire Electric Association, Inc.
- Grand Valley Rural Power Lines
- Holy Cross Electric Association, Inc.
- Mountain Parks Electric, Inc.
- Poudre Valley REA, Inc.
- San Luis Valley Rural Electric Cooperative, Inc.
- Yampa Valley Electric Association, Inc.

Iowa

- Corn Belt Power Cooperative
- Iowa Lakes Electric Cooperative, Inc.
- Midland Power Cooperative, Inc.

Kansas

- Ark Valley Electric Cooperative Association
- Caney Valley Electric Cooperative Association
- CMS Electric Cooperative, Inc.
- Flint Hills Rural Electric Cooperative Association
- Kansas Electric Power Cooperative
- Lyon-Coffey Electric Cooperative, Inc.
- City of Meade
- Ninnescah Rural Electric Cooperative Association, Inc.
- Pioneer Electric Cooperative, Inc.
- Sedgwick County Electric Cooperative Association, Inc.
- Western Cooperative Electric Association, Inc.

Louisiana

- Claiborne Electric Cooperative

Mississippi

- Southern Pine EPA
- Yazoo Valley EPA

Nebraska

- Dawson County Public Power District

New Mexico

- Farmers Electric Cooperative, Inc.
- Lea County Electric Cooperative, Inc.

Oklahoma

- City of Blackwell
- Caddo Electric Cooperative
- Central Rural Electric Cooperative, Inc.

- Choctaw Electric Cooperative, Inc.
- Cimarron Electric Cooperative, Inc.
- Cookson Hills Electric Cooperative, Inc.
- Cotton Electric Cooperative, Inc.
- City of Duncan
- East Central Oklahoma Electric Cooperative
- Indian Electric Cooperative, Inc.
- Kay Electric Cooperative, Inc.
- Kiwash Electric Cooperative, Inc.
- Lake Region Electric Cooperative, Inc.
- City of Mangum
- Northeast Oklahoma Electric Cooperative, Inc.
- Northfork Electric Cooperative
- Northwestern Electric Cooperative, Inc.
- Oklahoma Electric Cooperative, Inc.
- City of Ponca City
- Rural Electric Cooperative, Inc.
- Southeastern Electric Cooperative, Inc.
- Southwest Rural Electric Association
- Tri-County Electric Cooperative, Inc.
- Verdigris Valley Electric Cooperative

Texas

- Bailey County ECA
- Bandera Electric Cooperative, Inc.
- Big Country Electric Cooperative, Inc.
- Bluebonnet Electric Cooperative, Inc.
- Central Texas Electric Cooperative, Inc.
- Concho Valley Electric Cooperative, Inc.
- Cooke County Electric Cooperative Assn.
- CoServ Electric
- Deaf Smith Electric Cooperative, Inc.
- Fannin County Electric Cooperative, Inc.
- Farmers Electric Cooperative, Inc.
- Fort Belknap Electric Cooperative, Inc.
- Grayson-Collin Electric Cooperative, Inc.
- Greenbelt Electric Cooperative, Inc.
- HILCO Electric Cooperative, Inc.
- Jackson Electric Cooperative, Inc.
- Lamar County Electric Cooperative, Inc.
- Lighthouse Electric Cooperative, Inc.
- Lyntegar Electric Cooperative, Inc.
- Magic Valley Electric Cooperative, Inc.
- Medina Electric Cooperative, Inc.
- Navarro County Electric Cooperative, Inc.
- Navasota Valley Electric Cooperative, Inc.
- North Plains Electric Cooperative, Inc.
- Nueces Electric Cooperative, Inc.
- Pedernales Electric Cooperative, Inc.

- Rita Blanca Electric Cooperative, Inc.
- San Bernard Electric Cooperative, Inc.
- South Plains Electric Cooperative, Inc.
- Southwest Rural Electric Association, Inc., Okla.
- Southwest Texas Electric Cooperative, Inc.
- Swisher Electric Cooperative, Inc.
- Taylor Electric Cooperative, Inc.
- Texas Electric Cooperatives, Inc., Statewide Association
- Tri-County Electric Cooperative, Inc.
- Trinity Valley Electric Cooperative, Inc.
- United Cooperative Services
- Wharton County Electric Cooperative, Inc.
- Wise Electric Cooperative, Inc.

Wyoming

- Big Horn REC – Regulated by Wyoming Public Service Commission until 2007
- Carbon Power & Light, Inc. – Regulated by Wyoming Public Service Commission until 2007
- High Plains Power, Inc. – Regulated by Wyoming Public Service Commission until 2007
- Powder River Energy Corporation – Regulated by Wyoming Public Service Commission
- Wyrulec Company – Regulated by Wyoming Public Service Commission until 2007

Wholesale Rate Analysis and Cost of Service Studies

- Corn Belt Power Cooperative, Humboldt, Iowa
- Kansas Electric Power Cooperative, Topeka, Kansas
- Grand River Dam Authority, Vinita, Oklahoma
- Oklahoma Municipal Power Authority, Edmond, Oklahoma
- Western Farmers Electric Cooperative, Anadarko, Oklahoma
- Central Electric Power Cooperative, Columbia, South Carolina
- Piedmont Municipal Power Authority, Greer, South Carolina
- Brazos Electric Cooperative, Waco, Texas
- Golden Spread Electric Cooperative, Amarillo, Texas
- Old Dominion Electric Cooperative, Richmond, Virginia
- Allegheny Electric Cooperative, Harrisburg, Pennsylvania
- South Mississippi Electric Power Association, Hattiesburg, Mississippi
- Minnkota Power Cooperative, Grand Forks, North Dakota
- Rayburn Country Electric Cooperative, Rockwall, Texas

Special Projects

Development of Distributed Generation Procedures and Guidelines Manual:

- Western Farmers Electric Cooperative, Anadarko, Oklahoma
- KAMO Electric, Vinita, Oklahoma
- Texas Electric Cooperatives, Austin, Texas

Energy Policy Act of 2005 / EISA 2007 - Testimony in Support of Cooperative Staff's Position in Consideration of new PURPA Standards:

- Central Rural Electric Cooperative, Stillwater, Oklahoma
- Cotton Electric Cooperative, Walters, Oklahoma
- Farmers Electric Cooperative, Greenville, Texas
- Grand River Dam Authority, Vinita, Oklahoma
- Grayson-Collin Electric Cooperative, Van Alstyne, Texas
- HILCO Electric Cooperative, Itasca, Texas
- Lake Region Electric Cooperative, Hulbert, Oklahoma
- Lyntegar Electric Cooperative, Tahoka, Texas
- Magic Valley Electric Cooperative, Mercedes, Texas
- Northwestern Electric Cooperative, Woodward, Oklahoma
- Oklahoma Electric Cooperative, Norman, Oklahoma
- Tri-County Electric Cooperative, Azle, Texas
- Tri-County Electric Cooperative, Hooker, Oklahoma
- United Electric Co-op Services, Cleburne, Texas

Testimony before Colorado State House and Senate Committees in support of the Colorado Rural Electrification Association with regard to HB1169, Mandating Net Metering for Electric Cooperatives.

The "Fresh Look" review of East Kentucky Power Cooperative on behalf of the cooperative's distribution members as required by the Kentucky Corporation Commission. 2011 - 2012

Education and Training

Mr. Hedrick provides educational seminars and training for cooperative staff and boards of directors, statewide associations, and professional organizations on the topics of Rate Analysis, Cost of Service, Rate Design, Line Extension Policy, and related issues.

Expert Witness

Mr. Hedrick has provided expert testimony related to the development of revenue requirements, cost of service, rate design, and special contract issues in Arizona, Arkansas, Oklahoma, Texas, and Wyoming.

Financial Forecasting & Analysis

Mr. Hedrick prepares and provides training in the development of financial forecast models for electric cooperatives and municipal utility systems.

Software Sales & Support

Mr. Hedrick provided assistance in the development of software for GUERNSEY's 10-year Financial Forecast, Cost of Service, and Financial Performance Analysis programs. Mr. Hedrick is proficient in the use of these software packages and provides support to client users.

Strategic Planning & Analysis

Mr. Hedrick has provided assistance to electric cooperative boards of directors in the development of strategic goals and objectives.

Publications and Presentations:

Articles:

Hedrick, David W. "Retail Rate Development: The Role of the Cooperative Board." *Management Quarterly*, published by NRECA's Education and Training Department. (Spring 2005): 20-35.

Presentations Made by Mr. Hedrick:

"Knowledge is Power: Financial Forecasting." Seminar written and presented by Guernsey personnel annually since 2006 in Oklahoma City, Okla. Mr. Hedrick has been a presenter for this seminar numerous times.

"Knowledge is Power: Understanding Rates and Cost of Service." Seminar written and presented by Guernsey personnel annually since 2005, in Oklahoma City, Okla., as well as other locations. Mr. Hedrick has been a presenter numerous times.

"Distributed Generation Net Metering Issues." Written for and presented at *TEC Engineers Association Annual Meeting.* September 2006.

"Net Metering Issues." Written for and presented at *G&T Planners Association Meeting,* Tucson. Arizona, September 2006.

"Development of Distributed Generation Policies and Procedures." Written and presented for *Texas Electric Cooperatives' Managers Meeting.* San Antonio, Texas, December 2, 2004.

"Rate Design in a Restructured Environment." Written and presented for *Texas Electric Cooperatives Accountants Association*. Austin, Texas, April 19, 2000.

EXPERIENCE RECORD:

1981-Present - C. H. Guernsey & Company, Oklahoma City, Oklahoma

2013 - Senior Vice President, Board of Directors
2008-2013 - Vice President for Guernsey
2005-Present - Manager, Analytical Solutions Group

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

SYSTEM CAPITALIZATION

	2009	2010	2011	2012	2013	Test Year 12/31/2014
Long-Term Debt	$ 139,183,223	$ 147,186,217	$ 162,208,837	$ 168,068,234	$ 169,183,223	$ 168,930,824
Equity	65,917,528	72,867,833	79,480,075	89,362,825	89,164,479	97,115,902
Total Capitalization	$ 205,100,751	$ 220,054,050	$ 241,688,912	$ 257,431,059	$ 258,347,702	$ 266,046,726
Percent Capitalization						
Long-Term Debt	67.86%	66.89%	67.11%	65.29%	65.49%	63.50%
Equity	32.14%	33.11%	32.89%	34.71%	34.51%	36.50%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Total Assets	$ 253,438,830	$ 158,026,052	$ 268,533,993	$ 285,603,446	$ 285,519,336	$ 288,046,908
Equity as % of Total Assets	26.01%	46.11%	29.60%	31.29%	31.23%	33.72%

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

GROWTH RATE IN NET PLANT

	Additions	Retirements	Utility Plant	Accum. Deprec.	Net Plant	Percent Change
December 31, 2004	$ 15,916,172	$ 1,490,890	$ 169,729,049	$ 57,271,438	$ 112,457,611	
December 31, 2005	18,686,136	1,079,632	187,335,553	62,383,094	124,952,459	11.11%
December 31, 2006	23,245,309	2,245,706	208,335,156	67,046,698	141,288,458	13.07%
December 31, 2007	27,779,074	5,555,521	230,558,709	72,528,240	158,030,469	11.85%
December 31, 2008	47,405,914	10,496,950	267,467,673	77,901,755	189,565,918	19.96%
December 31, 2009	41,313,892	22,565,905	286,215,660	84,149,545	202,066,115	6.59%
December 31, 2010	20,896,876	19,002,543	288,109,993	90,544,442	197,565,551	-2.23%
December 31, 2011	19,955,955	5,663,582	302,402,366	97,646,970	204,755,396	3.64%
December 31, 2012	26,271,720	7,188,003	321,486,083	103,579,750	217,906,333	6.42%
December 31, 2013	12,571,392	3,967,881	330,089,594	112,677,533	217,412,061	-0.23%
December 31, 2014	10,931,838	3,061,410	337,960,022	121,553,067	216,406,955	-0.46%
Compound Growth 2004-2014						6.76%
Compound Growth 2009-2014						1.38%
Compound Growth 2011-2014						1.86%
Projected 12/31/2015	$ 16,899,000	$ 4,970,000	$ 349,889,022	$ 128,129,405	$ 221,759,617	2.47%
Projected 12/31/2016	16,899,000	4,970,000	361,818,022	135,099,400	226,718,622	2.24%
Projected 12/31/2017	16,899,000	4,970,000	373,747,022	142,463,052	231,283,970	2.01%
Projected 12/31/2018	16,899,000	4,970,000	385,676,022	150,220,361	235,455,661	1.80%
Projected 12/31/2019	16,899,000	4,970,000	397,605,022	158,371,327	239,233,695	1.60%
Total	$ 84,495,000	$ 24,850,000				
Compound Growth 2014-2017						2.24%
Compound Growth 2014-2019						2.03%

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

CAPITAL CREDITS RETIRED

	General	Special	Total
2004	$ 1,077,153	$ 0	$ 1,077,153
2005	500,001	0	500,001
2006	292,549	0	292,549
2007	249,913	3,413	253,326
2008	249,999	18,879	268,878
2009	250,007	7,472	257,479
2010	412,211	17,007	429,218
2011	715,624	76,768	792,392
2012	421,435	69,083	490,518
2013	249,950	51,392	301,342
2014	250,005	51,770	301,775
Total	$ 4,668,847	$ 295,784	$ 4,964,631

Exhibit DWH-4.0

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

CALCULATION OF DESIRED GENERAL FUNDS

Purchased Power	$ 52,225,663
Payroll	14,290,670
Benefits	6,354,076
Payroll Taxes	1,143,532
Interest	6,028,981
Principal Payments	6,987,062
Total	$ 87,029,984
Plant Balance	$ 337,960,022

Desired General Funds:	**Days**	**Ratio to Plant**	**Amount**
	30	2.12%	$7,153,149
	45	3.17%	$10,729,724
	60	4.23%	$14,306,299
	90	6.35%	$21,459,448
Estimated General Funds as of December 31, 2014	24.93	1.76%	$5,945,366

Exhibit DWH-5.0

SULPHUR SPRINGS VALLEY EC
2015 - 2024
PROPOSED RATES - 1.40 OP TIER FLOOR
Ratio Summary

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Equity as Percent of Total Assets	31.289	31.228	33.715	35.468	36.371	37.728	38.595	39.544	40.531	41.479	42.389	43.262	44.097
Equity as Percent of Capitalization	35.495	35.382	36.475	38.269	39.149	40.505	41.338	42.277	43.261	44.200	45.098	45.956	46.772
Debt Service				2.04422	1.85826	1.99554	1.87434	1.83663	1.82672	1.81547	1.80132	1.80450	1.93189
Times Interest Earned Ratio	1.74199	1.84817	2.62844	2.31987	1.95252	2.23941	2.02201	1.97429	1.98307	1.99258	2.00200	2.01159	2.02192
Average Revenue per kWh Sold	12.85107	12.81305	11.03195	12.37939	12.46931	13.08908	13.29642	13.66493	14.08390	14.51330	14.95883	15.41674	15.89078
Percent Increase in Average Revenue		-0.295	-13.900	12.213	0.726	4.970	1.584	2.771	3.066	3.048	3.069	3.061	3.074
Total Utility Plant per kWh Sold	37.91161	39.79829	36.56481	43.90744	45.18912	46.88265	48.55874	50.28936	52.06172	53.89576	55.80979	57.77646	59.83791
Net General Funds to Total Utility Plant	1.41305	1.43667	1.81581	1.82000	1.81999	2.21999	2.61999	2.62000	2.61999	2.62000	2.61999	2.62000	2.62000
Accum Depreciation to Total Utility	32.22403	34.13543	35.96669	36.48001	37.06366	37.71091	38.41586	39.17332	39.91017	40.62702	41.32442	42.00293	42.66310
Operations & Maint Cost per Consumer	251.95	294.46	294.64	261.40	273.92	282.07	290.78	299.48	308.43	317.64	327.12	336.87	346.92
Admin & General Cost per Consumer	99.53	104.87	110.83	99.36	112.57	115.72	119.29	122.86	126.53	130.31	134.20	138.20	142.32
Plant Revenue Ratio	7.67458	7.52601	7.46302	7.59473	7.96533	7.69937	7.97806	8.06074	8.09034	8.12290	8.15421	8.18501	8.21703
Rate of Return on Rate Base	4.18183	3.38583	4.01148	5.21028	4.04842	4.84733	4.16830	4.00920	3.98316	3.94785	3.91436	3.88061	3.84227
Rate Base (RBF times Net Utility Plant)	217,856,554	217,412,062	216,406,955	222,249,461	227,715,012	232,803,606	237,515,244	241,849,925	246,303,311	250,878,963	255,580,550	260,411,848	265,376,749
Rate Base Factor (RBF) Percent	100.00000	100.00000	100.00000	100.00000	100.00000	100.00000	100.00000	100.00000	100.00000	100.00000	100.00000	100.00000	100.00000
% Inc. Over Present Retail Rates Req				0.00000	0.00000	0.00000	0.00000	1.20809	2.76998	4.36145	6.02081	7.72836	9.50015
Modified Debt Service Coverage				1.76169	1.57420	1.71171	1.59128	1.55455	1.54511	1.53448	1.52146	1.52308	1.62940
Modified TIER	1.37082	1.22248	1.77185	1.77017	1.39562	1.67668	1.45377	1.40000	1.40000	1.40000	1.40000	1.40000	1.40000
Rotation Cycle in Years				323.71	335.30	337.86	345.36	347.59	348.20	348.27	347.83	346.93	345.60
Percent Change in Net Plant		-0.20	-0.46	2.69	2.45	2.23	2.02	1.82	1.84	1.85	1.87	1.89	1.90

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SULPHUR SPRINGS VALLEY EC
2015 - 2024
PROPOSED RATES - 1.40 OP TIER FLOOR
Pro Forma Income Statement

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Accrual Basis													
Revenue from Present Rates	108,958,708	106,272,294	101,965,774	98,648,769	99,838,714	104,345,739	105,606,331	106,829,323	108,122,125	109,453,720	110,797,743	112,203,808	113,606,579
Add'l Revenue Required	0	0	0	0	0	0	0	1,210,327	2,763,107	4,331,795	5,952,505	7,607,107	9,306,332
Total Required Revenue	108,958,708	106,272,294	101,965,774	98,648,769	99,838,714	104,345,739	105,606,331	108,039,651	110,885,233	113,785,515	116,750,248	119,810,916	122,912,911
Cost of Power	67,075,507	62,412,496	56,681,170	52,578,840	54,414,658	55,803,232	57,264,258	58,713,537	60,220,889	61,766,247	63,332,193	64,953,508	66,586,274
Gross Margin	41,883,201	43,859,798	45,284,604	46,069,929	45,424,055	48,542,506	48,342,072	49,326,114	50,664,343	52,019,268	53,418,055	54,857,407	56,326,637
Operations and Maint Expense	12,823,073	14,960,752	15,167,839	13,475,960	14,141,308	14,576,133	15,041,364	15,506,595	15,985,783	16,479,347	16,987,717	17,511,339	18,050,669
Consumer Accounts and Sales	3,763,311	4,431,150	4,297,502	4,435,532	4,408,824	4,469,887	4,608,875	4,751,667	4,898,782	5,051,036	5,207,540	5,369,117	5,535,578
Admin and Gen and Other Deductions	5,065,967	5,328,206	5,705,545	5,122,589	5,811,826	5,979,952	6,170,816	6,361,680	6,558,270	6,760,757	6,969,320	7,184,139	7,405,402
Depreciation and Amort Expense	9,735,488	10,249,609	10,692,934	11,056,493	11,433,449	11,810,405	12,187,362	12,564,318	12,952,583	13,352,496	13,764,407	14,188,675	14,625,670
Tax Expense	997,596	1,186,612	366,804	1,007	0	0	0	0	0	0	0	0	0
Amort Deferred Debits (Non Cash)	0	0	0	0	0	0	0	0	0	0	0	0	0
Amort Deferred Credits (Non Cash)	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest Expense	7,021,028	6,303,001	5,044,256	6,671,113	6,762,944	6,877,984	7,001,063	7,119,068	7,199,394	7,272,219	7,349,750	7,428,340	7,499,758
Interest - Other	387,359	342,255	372,840	398,522	409,772	421,360	433,295	445,588	458,250	471,292	484,725	498,561	512,812
Total Operating Expenses	106,869,329	105,214,081	98,328,890	93,740,057	97,382,782	99,938,957	102,707,036	105,462,455	108,273,954	111,153,397	114,095,654	117,133,680	120,216,166
Operating Margin	2,089,379	1,058,213	3,636,884	4,908,712	2,455,931	4,406,781	2,899,294	2,577,196	2,611,278	2,632,118	2,654,593	2,677,235	2,696,744
Nonoperating Margins	514,180	344,120	256,557	229,199	219,627	247,429	277,617	270,431	268,479	276,769	285,306	294,100	303,158
G&T and Other Capital Credits	2,605,977	3,943,744	4,320,841	3,667,111	3,766,294	3,870,498	3,978,287	4,088,432	4,197,761	4,309,378	4,424,597	4,543,145	4,664,295
Net Margin	5,209,536	5,346,077	8,214,282	8,805,023	6,441,852	8,524,709	7,155,199	6,936,060	7,077,519	7,218,266	7,364,497	7,514,481	7,664,199
Cash Basis													
Operating Cash Before Debt Service				22,865,518	20,871,952	23,342,601	22,365,338	22,531,014	23,031,736	23,533,603	24,054,058	24,588,351	25,125,333
Total Debt Service				12,979,292	13,258,708	13,636,956	14,054,857	14,493,576	14,906,147	15,336,510	15,809,824	16,143,766	15,419,901
Cash Margins After Debt Service				9,886,226	7,613,243	9,705,645	8,310,480	8,037,438	8,125,588	8,197,093	8,244,234	8,444,585	9,705,431

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SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE

CALCULATION OF LOST FIXED COST RECOVERY
AS A RESULT OF MEMBER OWNED DISTRIBUTED GENERATION SERVED ON THE RESIDENTIAL RATE
ADMINISTERED IN CONJUNCTION WITH NET METERING TARIFF NM - 1 (EXISTING POLICY)

			Existing Rates	Phase 1 Rates	Phase 2 Rates	Phase 3 Rates	Phase 4 Rates
1	Total Residential Energy Charge including WPCA	Proposed Tariff	$ 0.119768	0.117518	0.112858	0.106764	0.102038
2	Purchased Power Energy Cost	Schedule G-6.0, Page 4 of 4	$ 0.028414	$ 0.028414	$ 0.028414	$ 0.028414	$ 0.028414
3	Purchased Power Demand Cost	Schedule G-6.0, Page 4 of 4	$ 0.042751	$ 0.042751	$ 0.042751	$ 0.042751	$ 0.042751
4	Remainder: Distribution Wires Component in Residential Energy Charge	L1 - L2 - L3	$ 0.048603	$ 0.046353	$ 0.041693	$ 0.035599	$ 0.030873
	Lost Fixed Cost Calculation:						
5	Total Residential DG Customers at TY End		1,013	1,013	1,013	1,013	1,013
6	Monthly kWh Produced by 5.62 kW AC PV System with 25% Capacity Factor	5.62 kW x 730 Hrs x 25%	1,026	1,026	1,026	1,026	1,026
7	Purch Power Demand Lost Fixed Cost - Monthly	L6 x L3	$ 43.85	$ 43.85	$ 43.85	$ 43.85	$ 43.85
8	Distr. Wires Lost Fixed Cost - Monthly	L6 x L4	$ 49.85	$ 47.54	$ 42.76	$ 36.51	$ 31.66
9	Total Lost Fixed Costs - Monthly	L7 + L8	$ 93.70	$ 91.39	$ 86.61	$ 80.36	$ 75.51
10	Total Lost Fixed Costs Annual	L9 x L5 x 12	$ 1,139,013	$ 1,110,961	$ 1,052,861	$ 976,882	$ 917,959

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE

CALCULATION OF LOST FIXED COST RECOVERY
AS A RESULT OF MEMBER OWNED DISTRIBUTED GENERATION SERVED ON THE PROPOSED RESIDENTIAL DG RATE FOR EXISTING CUSTOMERS
ADMINISTERED IN CONJUNCTION WITH NET METERING TARIFF NM-1 (EXISTING POLICY)

			Existing Rates	Phase 1 Rates	Phase 2 Rates	Phase 3 Rates	Phase 4 Rates
1	Total Residential Energy Charge including WPCA	Proposed Tariff	$ 0.119768	0.119768	0.119768	0.119768	0.119768
2	Purchased Power Energy Cost	Schedule G-6.0, Page 4 of 4	$ 0.028414	$ 0.028414	$ 0.028414	$ 0.028414	$ 0.028414
3	Purchased Power Demand Cost	Schedule G-6.0, Page 4 of 4	$ 0.042751	$ 0.042751	$ 0.042751	$ 0.042751	$ 0.042751
4	Remainder: Distribution Wires Component in Residential Energy Charge	L1 - L2 - L3	$ 0.048603	$ 0.048603	$ 0.048603	$ 0.048603	$ 0.048603
	Lost Fixed Cost Calculation:						
5	Total Residential DG Customers at TY End		1,013	1,013	1,013	1,013	1,013
6	Monthly kWh Produced by 5.62 kW AC PV System with 25% Capacity Factor	5.62 kW x 730 Hrs x 25%	1,026	1,026	1,026	1,026	1,026
7	Purch Power Demand Lost Fixed Cost - Monthly	L6 x L3	$ 43.85	$ 43.85	$ 43.85	$ 43.85	$ 43.85
8	Distr. Wires Lost Fixed Cost - Monthly	L6 x L4	$ 49.85	$ 49.85	$ 49.85	$ 49.85	$ 49.85
9	Total Lost Fixed Costs - Monthly	L7 + L8	$ 93.70	$ 93.70	$ 93.70	$ 93.70	$ 93.70
10	Total Lost Fixed Costs Annual Ex Fixed Cost Change	L9 x L5 x 12	$ 1,139,013	$ 1,139,013	$ 1,139,013	$ 1,139,013	$ 1,139,013
11	Increase in Customer Charge over Existing	Change in Cust Charge		$ 14.75	$ 22.75	$ 29.75	$ 39.75
12	Additional Fixed Cost Revenue Annual	L11 x L6 x 12		$ 179,301	$ 276,549	$ 361,641	$ 483,201
13	Total Lost Fixed Costs Annual Including Fixed Cost Change	L10 - L12		$ 959,712	$ 862,464	$ 777,372	$ 655,812

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE

CALCULATION OF LOST FIXED COST RECOVERY
AS A RESULT OF MEMBER OWNED DISTRIBUTED GENERATION SERVED ON THE PROPOSED RESIDENTIAL DG RATE FOR NEW CUSTOMERS
ADMINISTERED IN CONJUNCTION WITH NEW DISTRIBUTED GENERATION (DG) TARIFF

			Existing Rates	Phase 1 Rates	Phase 2 Rates	Phase 3 Rates	Phase 4 Rates
1	Total Residential Energy Charge including WPCA	Proposed Tariff	$ 0.119768	0.107617	0.095467	0.083316	0.071165
2	Purchased Power Energy Cost	Schedule G-6.0, Page 4 of 4	$ 0.028414	$ 0.028414	$ 0.028414	$ 0.028414	$ 0.028414
3	Purchased Power Demand Cost	Schedule G-6.0, Page 4 of 4	$ 0.042751	$ 0.042751	$ 0.042751	$ 0.042751	$ 0.042751
4	Remainder: Distribution Wires Component in Residential Energy Charge	L1 - L2 - L3	$ 0.048603	$ 0.036452	$ 0.024302	$ 0.012151	$ -
	Lost Fixed Cost Calculation:						
5	Total Residential DG Customers at TY End		1,013	1,013	1,013	1,013	1,013
6	Monthly kWh Produced by 5.62 kW AC PV System with 25% Capacity Factor	5.62 kW x 730 Hrs x 25%	1,026	1,026	1,026	1,026	1,026
7	PV System Energy Consumed by Customer Only	Estimated at 74% of total	759	759	759	759	759
8	Purch Power Demand Lost Fixed Cost - Monthly	L7 x L3	$ 32.45	$ 32.45	$ 32.45	$ 32.45	$ 32.45
9	Distr. Wires Lost Fixed Cost - Monthly	L7 x L4	$ 36.89	$ 27.67	$ 18.44	$ 9.22	$ -
10	Total Lost Fixed Costs - Monthly	L8 + L9	$ 69.34	$ 60.12	$ 50.89	$ 41.67	$ 32.45
11	Total Lost Fixed Costs Annual	L10 x L5 x 12	$ 842,882	$ 730,775	$ 618,677	$ 506,569	$ 394,462

EXHIBIT DWH - 11

An Act

ENROLLED SENATE
BILL NO. 1456

By: Griffin of the Senate

and

Turner, Echols, Jackson, Newell, Schwartz, Murphey, Brumbaugh, Pittman, Rousselot and Fisher of the House

An Act relating to public utilities; amending 17 O.S. 2011, Section 156, which relates to distributed generation costs; defining terms; modifying prohibition relating to recovery of certain fixed costs from electric customers utilizing certain distributed generation; prohibiting subsidization of certain costs among customer class; requiring rate tariff adjustment by certain date; and providing an effective date.

SUBJECT: Electrical power distribution requirements

BE IT ENACTED BY THE PEOPLE OF THE STATE OF OKLAHOMA:

SECTION 1. AMENDATORY 17 O.S. 2011, Section 156, is amended to read as follows:

Section 156. A. As used in this section:

1. "Distributed generation" means:

a. a device that provides electric energy that is owned, operated, leased or otherwise utilized by the customer,

b. is interconnected to and operates in parallel with the retail electric supplier's grid and is in compliance with the standards established by the retail electric supplier,

c. is intended to offset only the energy that would have otherwise been provided by the retail electric supplier to the customer during the monthly billing period,

d. does not include generators used exclusively for emergency purposes,

e. does not include generators operated and controlled by a retail electric supplier, and

f. does not include customers who receive electric service which includes a demand-based charge.

2. "Fixed charge" means any fixed monthly charge, basic service, or other charge not based on the volume of energy consumed by the customer, which reflects the actual fixed costs of the retail electric supplier.

3. "Retail electric supplier" means an entity engaged in the furnishing of retail electric service within the State of Oklahoma and is rate regulated by the Oklahoma Corporation Commission.

B. No ~~public utility~~ retail electric supplier shall increase rates charged or enforce a surcharge ~~on the basis of the use or installation of a solar energy device by a consumer~~ above that required to recover the full costs necessary to serve customers who install distributed generation on the customer side of the meter after the effective date of this act.

C. No retail electric supplier shall allow customers with distributed generation installed after the effective date of this act to be subsidized by customers in the same class of service who do not have distributed generation.

D. A higher fixed charge for customers within the same class of service that have distributed generation installed after the effective date of this act, as compared to the fixed charges of those customers who do not have distributed generation, is a means to avoid subsidization between customers within that class of service and shall be deemed in the public interest.

E. Retail electric suppliers shall implement tariffs in compliance with this act no later than December 31, 2015.

SECTION 2. This act shall become effective November 1, 2014.

EXHIBIT DWH - 11

Passed the Senate the 12th day of March, 2014.

Presiding Officer of the Senate

Passed the House of Representatives the 14th day of April, 2014.

Presiding Officer of the House
of Representatives

OFFICE OF THE GOVERNOR

Received by the Office of the Governor this 15th
day of April, 20 14, at 3:46 o'clock P M.
By: Audrey Rockwell

Approved by the Governor of the State of Oklahoma this 21st
day of April, 20 14, at 3:43 o'clock P M.

Governor of the State of Oklahoma

OFFICE OF THE SECRETARY OF STATE

Received by the Office of the Secretary of State this 21st
day of April, 20 14, at 5:40 o'clock P. M.
By: Chris Benge

Stricken language would be deleted from and underlined language would be added to present law.
Act 827 of the Regular Session

State of Arkansas *As Engrossed: H2/26/15 H3/17/15*
90th General Assembly
Regular Session, 2015

A Bill

HOUSE BILL 1004

By: Representative S. Meeks

For An Act To Be Entitled

AN ACT TO REQUIRE ELECTRIC UTILITIES TO COMPENSATE NET-METERING CUSTOMERS FOR NET EXCESS GENERATION CREDITS IN CERTAIN CIRCUMSTANCES; AND FOR OTHER PURPOSES.

Subtitle

TO REQUIRE ELECTRIC UTILITIES TO COMPENSATE NET-METERING CUSTOMERS FOR NET EXCESS GENERATION CREDITS IN CERTAIN CIRCUMSTANCES.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

SECTION 1. Arkansas Code § 23-18-603(6), concerning a definition used under the Arkansas Renewable Energy Development Act of 2001, is amended to read as follows:

(6) "Net-metering facility" means a facility for the production of electrical energy that:

(A) Uses solar, wind, hydroelectric, geothermal, or biomass resources to generate electricity, including, but not limited to, fuel cells and micro turbines that generate electricity if the fuel source is entirely derived from renewable resources;

(B) Has a generating capacity of not more than:

(i) The greater of twenty-five kilowatts (25 kW) or one hundred percent (100%) of the net-metering customer's highest monthly usage in the previous twelve (12) months for residential use; or ~~three~~

(ii) Three hundred kilowatts (300 kW) for any other

use unless otherwise allowed by a commission under § 23-18-604(b)(5);

(C) Is located in Arkansas;

(D) Can operate in parallel with an electric utility's existing transmission and distribution facilities; and

(E) Is intended primarily to offset part or all of the net-metering customer requirements for electricity; and

SECTION 2. The introductory language of Arkansas Code § 23-18-604(b), concerning the authority of the Arkansas Public Service Commission, is amended to read as follows:

(b) Following notice and opportunity for public comment, ~~the Arkansas Public Service Commission~~ a commission:

SECTION 3. Arkansas Code § 23-18-604(b)(1), concerning the authority of the Arkansas Public Service Commission, is amended to read as follows:

(1) Shall establish appropriate rates, terms, and conditions for net-metering contracts, including ~~a~~:

(A)(i) A requirement that the rates charged to each net-metering customer recover the electric utility's entire cost of providing service to each net-metering customer within each of the electric utility's class of customers.

(ii) The electric utility's entire cost of providing service to each net-metering customer within each of the electric utility's class of customers under subdivision (b)(1)(A)(i) of this section:

(a) Includes without limitation any quantifiable additional cost associated with the net-metering customer's use of the electric utility's capacity, distribution system, or transmission system and any effect on the electric utility's reliability; and

(b) Is net of any quantifiable benefits associated with the interconnection with and providing service to the net-metering customer, including without limitation benefits to the electric utility's capacity, reliability, distribution system, or transmission system; and

(B) A requirement that net-metering equipment be installed to accurately measure the electricity:

~~(A)~~ (i) Supplied by the electric utility to each

net-metering customer; and

~~(B)~~ (ii) Generated by each net-metering customer that is fed back to the electric utility over the applicable billing period;

SECTION 4. Arkansas Code § 23-18-604(b)(5) and (6), concerning the authority of the Arkansas Public Service Commission, are amended to read as follows:

(5) May increase the ~~peak~~ generating capacity limits for individual net-metering facilities if doing so results in distribution system, environmental, or public policy benefits; ~~and~~

(6) Shall provide that:

(A)(i) The net excess generation credit remaining in a net-metering customer's account at the close of ~~an annual~~ a billing cycle~~, up to an amount equal to four (4) months' average usage during the annual billing cycle that is closing, shall be credited to the net-metering customer's account for use during the next annual billing cycle;~~ shall not expire and shall be carried forward to subsequent billing cycles indefinitely.

(ii) However, for net excess generation credits older than twenty-four (24) months, a net-metering customer may elect to have the electric utility purchase the net excess generation credits in the net-metering customer's account at the electric utility's estimated annual average avoided cost rate for wholesale energy if the sum to be paid to the net-metering customer is at least one hundred dollars ($100).

(iii) An electric utility shall purchase at the electric utility's estimated annual average avoided cost rate for wholesale energy any net excess generation credit remaining in a net-metering customer's account when the net-metering customer:

(a) Ceases to be a customer of the electric utility;

(b) Ceases to operate the net-metering facility; or

(c) Transfers the net-metering facility to another person; and

~~(B) Except as provided in subdivision (b)(6)(A) of this~~

~~section, any net excess generation credit remaining in a net-metering customer's account at the close of an annual billing cycle shall expire; and~~

~~(C) Any~~ (B) A renewable energy credit created as the result of electricity supplied by a net-metering customer is the property of the net-metering customer that generated the renewable energy credit~~.~~; and

SECTION 5. Arkansas Code § 23-18-604(b), concerning the authority of the Arkansas Public Service Commission, is amended to add an additional subdivision to read as follows:

(7) May allow a net-metering facility with a generating capacity that exceeds three hundred kilowatts (300 kW) if:

(A) The net-metering facility is not for residential use; and

(B) Allowing an increased generating capacity for the net-metering facility would increase the state's ability to attract businesses to Arkansas.

SECTION 6. Arkansas Code § 23-18-604, concerning the authority of the Arkansas Public Service Commission, is amended to add additional subsections to read as follows:

(c)(1) As used in this section, "avoided costs":

(A) For the Arkansas Public Service Commission, means the same as defined in § 23-3-702; and

(B) For a municipal utility, is defined by the governing body of the municipal utility.

(2) Avoided costs shall be determined under § 23-3-704.

(d)(1) Except as provided in subdivision (d)(2) of this section, an electric utility shall separately meter, bill, and credit each net-metering facility even if one (1) or more net-metering facilities are under common ownership.

(2)(A) At the net-metering customer's discretion, an electric utility may apply net-metering credits from a net-metering facility to the bill for another meter location if the net-metering facility and the separate *meter location are under common ownership within a single electric utility's service area.*

(B) Net excess generation shall be credited first to the

net-metering customer's meter to which the net-metering facility is physically attached.

(C) After applying net excess generation under subdivision (d)(2)(B) of this section and upon request of the net-metering customer under subdivision (d)(2)(A) of this section, any remaining net excess generation shall be credited to one (1) or more of the net-metering customer's meters in the rank order provided by the net-metering customer.

/s/S. Meeks

APPROVED: 03/31/2015

Valuation of Distributed Solar: A Qualitative View

A critical evaluation of the arguments used by solar DG advocates shows that those arguments may often overvalue solar DG. It is time to reassess the value of solar DG from production to dispatch and to calibrate our pricing policies to make certain that our efforts are equitable and carrying us in the right direction.

Ashley Brown and Jillian Bunyan

Ashley Brown *is Executive Director of the Harvard Electricity Policy Group and Of Counsel in the Boston office of the law firm Greenberg Traurig LLP. Mr. Brown is a former Commissioner of the Public Utilities Commission of Ohio and former Chair of the National Association of Regulatory Commissioners Electricity Committee.*

Jillian Bunyan *is an associate in the Philadelphia office of Greenberg Traurig LLP. Prior to joining the firm, Ms. Bunyan was an attorney in the United States Environmental Protection Agency's Office of Regional Counsel in Seattle, Washington.*

I. Assessing the Value of Distributed Solar Generation – An Overview

The purpose of this article is to assess the value of residential distributed generation (DG) solar photovoltaics (PV) and appropriate pricing for its value and output. In particular, the article will address the question of whether retail net metering, the way that it is presently applied in most states, is an equitable way to compensate customers who own or lease solar DG. The article will also critically examine the argument for the "value of solar" approach to compensating residential solar DG customers. The article will conclude that retail net metering and "value of solar" are severely flawed schemes for pricing solar DG.

Retail net metering overvalues both the energy and capacity of solar DG, imposes cross-subsidies on non-solar residential customers, and is socially regressive because it effectively transfers wealth from less affluent to more affluent consumers. The "value of solar" approach being advanced by

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some solar DG advocates subjectively, and often artificially, inflates the value of solar DG and discounts the costs. This article also concludes that proposals for market-based energy prices, as well as demand and fixed charges as applied to solar DG hosts, are reasonable ways to rectify the cross-subsidies in net metering. It suggests that market-based prices for solar DG provide the best incentives for making solar more efficient and economically viable for the long term.

Solar PV has some very real benefits and long-term potential. The marginal costs of producing this energy are zero. If one looks at environmental externalities, then the carbon emissions from the actual process of producing this energy itself, without taking the secondary effects into consideration, are also zero. Significantly, the costs of producing and installing solar PV have declined in recent years, adding to the potential long-term attractiveness of solar. Those are very real benefits that would be valuable to capture. In its current, most common configuration, however, solar DG has some drawbacks that inhibit it from capturing its full value.

Solar PV is intermittent and thus requires backup from other generators and cannot be relied on to be available when called upon to produce energy. Thus, its energy value is entirely dependent on when it is produced and its capacity value is, at best, marginal. To fully develop the resource, therefore, it is imperative to provide pricing that will incent the fulfillment of solar PV's potential, by linking itself to storage, more efficient ways of catching the sun's energy, or with other types of generation (e.g. wind) that complement its availability. Thus, it is critical that prices be set in such a fashion as to provide incentives for productivity and reliability and not to subsidize solar DG at a decidedly low degree of optimization. Currently, rates for most residential consumers are based on volume. That is, residential customers are simply billed based on the number of kilowatt-hours that they consume based on average costs to serve all residential consumers. Solar has huge potential, but to attain it, solar DG needs to receive the price signals to actually fulfill its potential.

In its current, most common configuration, solar DG has some drawbacks that inhibit it from capturing its full value.

Not only does net metering deprive solar PV of the price signals necessary to capture its full value, it also leads the changes in retail pricing that undermine the promotion of energy efficiency. As solar DG becomes more widely deployed, utilities and their regulators will likely become increasingly concerned with diminution of revenues required to support the distribution system that is caused by the use of net metering. That concern will inevitably lead utilities and regulators to recover more of their costs through the fixed, rather than the variable, components of their rates. Thus, the price signal to be more efficient will be substantially diluted.

Many in the solar industry have come to recognize that retail net metering (NEM) is, in this age of smart grid and smart pricing, no longer a defensible method for pricing solar DG. Having recognized the inevitable demise of a pricing system that favors solar DG through cross-subsidization by other customers, many solar DG advocates have shifted to an argument that pricing should be based on consideration of the "value of solar." While the authors do not subscribe to that point of view, as the argument is being included in the national conversation, it seems appropriate to address it.

II. Solar DG and Retail Net Metering – Definition of Terms

Powering your home with clean energy generated from the

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solar panels on your roof, and selling the excess energy to the utility, are appealing prospects to a public increasingly attuned to environmental, energy efficiency, and self-sufficiency considerations. It is not hard to see why solar DG has substantial public appeal.

To begin, it is necessary to note that the terms "net metering," "retail net metering," and "net energy metering" will be used interchangeably and synonymously throughout the article. Net metering refers to when electricity meters run forward when solar DG customers are purchasing energy from the grid. When those customers produce energy and consume it on their premises, the meter slows down and then simply stops, and when the customer produces more energy than is consumed on the premises, the meter runs backwards. Thus, the solar DG customer pays full retail value for all energy taken off the grid, pays nothing for energy or distribution when self-consuming energy produced on the premises, and is paid the fully delivered retail price for all energy exported into the system. At the end of whatever period is specified, the meter is read and the customer either pays the net balance due, or the utility pays the customer for excess energy delivered. The reconciliation is made without regard to when energy is produced or consumed. This is how transactions between owners of residential DG and utilities have traditionally been handled.

There are other forms of net metering such as wholesale net metering, where exports into the system are compensated at the wholesale price, often the local marginal price (LMP). There are other variations as well, but for purposes of the article, when the terms NEM or net metering are used, they refer to the retail variety.

There are, conceptually, four possible approaches to pricing energy produced by solar DG.

There are, conceptually, four possible approaches to pricing energy produced by solar DG. One market-based approach is to set the price to reflect the market clearing price in the wholesale market at the time the energy is produced. A second approach would be a cost-based approach, where the price is set based on a review of the costs or according to standard costing methodology. A third approach, already defined above, would be net metering. Finally, a fourth approach would be to administratively derive a "value of solar" based on analysis of avoided costs and whatever else the evaluators believe to be worthy of measure.

As you will see, while the authors do not believe this fourth approach to be appropriate, analysis of the criteria its advocates believe are important should be conducted and evaluated – not to set the price, but simply to establish the context for evaluating the reasonableness of the pricing methodology approved.

III. 'Value of Solar' vs. Wholistic Analysis

Optimally, prices for electricity are determined by a competitive market or, absent competitive conditions, should be derived from cost-based regulation. In both cases the prices are subjected to an external discipline that should result in efficient resource decisions devoid of arbitrary or "official" biases. Subjective consideration of the "value" of particular technologies and where they may rank in the merit order of "social desirability," effectively removes the discipline that is more likely to produce efficient results. Moreover, even where non-economic externalities are thrown into the valuation mix, the pricing of an energy resource must still be disciplined by examination of the economic merit order in attaining the externality objective. Whereas both the marketplace and transparent cost-based regulation are likely to produce coherent pricing that

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allows us to enjoy a degree of comfort knowing that efficient performance will likely lead to productivity, subjective consideration of soft criteria, like "value of solar," are a step away from economic coherence and efficiency.

Economics are critical and efficiency is of vital importance. There are also other economic values, besides efficiency, including those that go beyond short-term efficiency. Certainly, many people believe that other, non-economic factors need to be considered. Similarly, the fairness of the impact on customers also needs to be factored into any decision. There has, for many years, been a running debate in electricity regulation as to whether externalities ought to be factored into regulatory decisions. This article does not intend to join that debate, nor express any point of view as to what is permissible or impermissible under applicable law. Rather, this article suggests that if externalities are to be considered, then all relevant ones deserve attention, as opposed to "cherry picking" the issues to best protect a particular interest. Further, if non-economic objectives are to be factored into ratemaking, then it is wise to carefully consider the most economically efficient ways of attaining those objectives.

There are a number of criteria that are important to the full valuation of solar PV. One should begin by looking at the cost of producing energy. Beyond that, the criteria would include availability/capacity, reliability, energy value, impact on system operations and dispatch, transmission costs and effects, distribution costs and effects, and hedge value. Solar DG proponents often phrase these issues in terms of avoided costs. In addition to those dimensions, there are also the following: degree of subsidization and cross-subsidization, efficiency considerations, impact on alternative technologies, market price impact, reliability, and social effects including the environmental, customer, and social class impacts. There is also the issue of whether solar DG enhances the level of competition in the industry.

Certainly, many people believe that other, non-economic factors need to be considered.

IV. Net Energy Metering – Why Are We Paying More for Less?

Retail net energy metering, as practiced, does not capture all of the value enumerated above. NEM significantly overvalues distributed solar generation. More specifically, it does the following:

1. Creates a cross-subsidy from non-solar to solar customers;
2. Fails to reflect the inefficiency of small-scale solar PV relative to other forms of generation, including alternative renewable resources;
3. Constitutes price discrimination in favor of an inefficient resource;
4. Significantly overvalues both the capacity and reliability value of solar DG;
5. Adversely impacts the degree of competitiveness in the industry;
6. Artificially inflates the transmission value of solar DG;
7. Fails to account for the fact that the value of energy varies widely depending on when it is actually produced;
8. Distorts price signals for energy efficiency;
9. Causes socially regressive economic impact;
10. Assumes system benefits from solar DG that, in fact, may not exist;
11. Overvalues its contribution to carbon reduction;
12. Vastly inflates its value as a fuel hedge; and
13. Undervalues and underfunds the distribution system.

Despite failing to capture these values, NEM has become the prevalent form of tariff for residential solar DG in

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the United States. This is because NEM was never developed as part of a fully and deliberatively reasoned pricing policy. NEM was simply never a conscious policy decision. It is basically a default product of two (no longer relevant) considerations, one practical and the other technological. The practical reason is that residential distributed generation had such an insignificant presence in the market that its economic impact was marginal at best. Thus, no one was seriously concerned about "getting the prices right." The second, technological reason is that until recently the meters most commonly deployed, especially at residential premises, have had very little capability other than to run forward, backward, and stop. Thus, for technical reasons, NEM was simple to implement and administer and, as a practical matter given the paucity of DG, there was no compelling reason to go to the trouble of remedying a clearly defective pricing regime. Many states have recognized the problems with NEM but, seeing no alternatives, put in place production caps to limit any harm caused by a clearly deficient pricing regime.

V. Residential Retail Net Metering Sets Up Unfair and Counterproductive Cross-Subsidies

Beyond failing to capture the values above, there are other problems with NEM. Under NEM, when DG providers export energy to the system, consumers are required to pay them full retail rates for a wholesale product. What everyone agrees upon is that solar DG provides an energy value, but there is considerable disagreement about what that value is. Solar proponents argue that solar DG has a capacity value as well. That value, if it exists at all, is minimal. While there may well be reasons to treat DG differently with respect to wholesale transmission there is, absent a solar host leaving the grid, absolutely no reason to discriminate between wholesale and DG products with regard to the fixed costs of the distribution system and its operations.

If the costs of the distribution system were variable with energy production, that exemption would be sensible, but they are not.

Under NEM, however, solar DG providers are compensated at full retail prices for what they provide. That includes the not-insignificant cost of services that they do not provide, including distribution costs, administrative, and back office operations. There can be no justification for forcing consumers to pay a provider for service that they not only do not provide but, in fact, have no capability to provide.

Solar DG producers remain connected to the grid and are fully reliant upon it during the many hours of the day when solar energy is not available. Under NEM, that solar DG producer is excused from paying his/her share of the costs of the distribution system when energy is being produced on the premises. If the costs of the distribution system were variable with energy production, that exemption would be sensible, but they are not. Distribution costs are fixed, and do not vary with energy production or consumption. Thus, excusing solar DG customers from paying for their own distribution costs when their solar units are producing energy has no justification in either policy or economics. Making matters worse, the costs solar DG providers do not pay under NEM are either reallocated to non-solar customers or have to be absorbed by the utility. Both outcomes are unacceptable and unjustifiable. There is no reason why solar DG customers should receive free backup service, compliments of either their neighbors or the utility.

Utilities are obliged to provide full requirements service to all of their customers, including, of course, their solar host

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customers. In regard to solar hosts, the utility is obliged, in case the on-premises generation does not cover their full demand, to fill the gap between the full demand and the amount of self-generation. Utilities are also obliged to purchase energy and/or capacity so that solar hosts may rely on the utility when solar units are not generating. Given that solar PV units are intermittent and unpredictable regarding when they will produce, providing that backup is an ongoing responsibility and cost to utilities. Compounding those costs is the fact, as stated elsewhere in the article, peak times of electricity use (i.e. when prices are highest) are trending later in the day, when solar PV does not produce. As such, utilities must provide electricity to solar hosts at times when demand is high and energy prices are high. It would violate a the fundamental principle of regulation that cost causers should pay for the costs they impose, not to recognize the actual costs of that backup service in the rates paid by solar hosts.

Another cross-subsidy relates to the intermittent nature of solar energy. No utility with an obligation to serve can be fully reliant on the availability of solar when it is needed. Indeed, no solar host who values reliability can afford to be dependent on his/her own solar DG unit. While this point will be discussed further *infra* suffice it to say that this gives rise to two types of demand charge related cross-subsidy. The first arises when the distributor relies on the availability of solar for making day-ahead purchases and the other arises when it does not do so. When it does rely on the availability of solar and it turns out that solar energy is not available when called upon, the

utility is compelled to purchase replacement energy in the spot market at the marginal cost, which is almost certainly higher than the price of the solar energy on whose availability it had relied. In notable contrast to what happens in the wholesale market when a supplier who is relied upon fails to deliver, those incremental costs have to be borne by the utility, which passes them on to all customers, as opposed to being borne by the specific solar DG customer whose failure to deliver caused the costs to be incurred.

If the distributor, in recognition of solar's intermittency, instead chooses to hedge against the risk of solar's unavailability, the cost of the hedge is likewise passed on to all customers rather than simply those whose supply unpredictability caused the cost to be incurred. Both of these forms of cross-subsidy violate a bedrock principle of regulation – costs should be allocated to the cost causer. The function of that principle, of course, is to provide price signals to improve performance, but NEM fails to provide such signals and essentially holds solar DG providers harmless for their own very low capacity factors and inefficient performance.

NEM cross-subsidies, in large part, provide short-term benefits to the solar DG industry, but are highly detrimental to the value of solar in the long term. In the short term they constitute a wealth transfer from non-solar customers to the solar industry. In the long term, however, they are actually harmful to solar energy because NEM provides absolutely no incentive to improve the performance of a generating resource that, among renewables, already ranks last in efficiency and in cost effectiveness for reducing carbon emissions. In effect, the solar DG industry is putting its short-term profits ahead of the long-term value of solar energy. If solar DG advocates prevail in seeking to maintain NEM, that victory will be short-lived, because markets, both regulated and unregulated, do not prop up inefficient resources over the long term.

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NEM is also woefully ineffective at providing the appropriate price signals. Electricity prices can be quite volatile over the course of every day and vary seasonally as well. Rather than reflecting those prices, NEM simply treats all energy the same regardless of the time during which it is produced. For example, NEM fails to differentiate between energy produced on-peak and off-peak. In one scenario, it prices off-peak solar DG at a level that is averaged with on-peak prices, thus effectively over-valuing the energy. Conversely, if solar DG were actually produced on-peak, NEM would average that price with off-peak prices, thus undervaluing the energy. Any form of dynamic pricing, ranging from time of use to real-time, could address this issue with more precision than flat, averaged prices. Interestingly, under the first scenario, cross-subsidies would be paid to solar producers, while in the second scenario, solar producers would be cross-subsidizing the other ratepayers. In short, the price signal, and the efficiency that would flow from that, is rendered incoherent.

Some may argue that cross-subsidies are necessary to promote the growth of renewable energy, and certainly that can be debated. However, modernizing NEM to provide appropriate price signals would not remove the tax credits and other government-sanctioned or -sponsored subsidies. The fact that conscious subsidies and/or cross-subsidies are designed to promote a particular technology raises two key issues. First, many would argue that the government, including regulators, should not be picking winners and losers in the marketplace. While there may be merit to that view, it must also be recognized that, there may be

circumstances where, for policy reasons, government might want to provide support for a socially and economically desirable technology and/or assist it with research funding and to get it over the commercialization hump. That leads inexorably to the second and more relevant issue concerning solar DG: namely, that subsidies and cross-subsidies need to be designed as near-term boosts rather than a permanent crutch, and should be transparent. In other words, subsidies/cross-subsidies should be designed to serve as both a stimulus for the designated technology and an incentive to the producers and vendors of the technology to become more efficient. It might also be noted that subsidies from the Treasury are more appropriate for achieving broad social benefits that are cross-subsidies derived from a subset of the full society deriving the benefit.

In the case of solar DG, the objective of a subsidy/cross-subsidy would be to attain grid parity, assuming reasonably efficient operations, with other resources. The objective is to assist a technology to achieve commercial viability. The problem with NEM, of course, is that it is effectively an arbitrary financial boost of potentially endless duration, with absolutely no built-in incentive to increase efficiency and/or to achieve grid parity. In effect it requires non-solar customers to pay more for the least efficient renewable resource in common use and provide the solar industry with no economic incentive to improve its productivity or availability or wean itself off dependence on the cross-subsidy. It also has the effect of putting more efficient resources, particularly other renewables, at a competitive disadvantage. In short, NEM effectively substitutes political judgment for economic efficiency to determining marketplace success.

The reason why solar DG vendors and providers cling to cross-subsidies is because they find more comfort in receiving substantial cross-subsidies than

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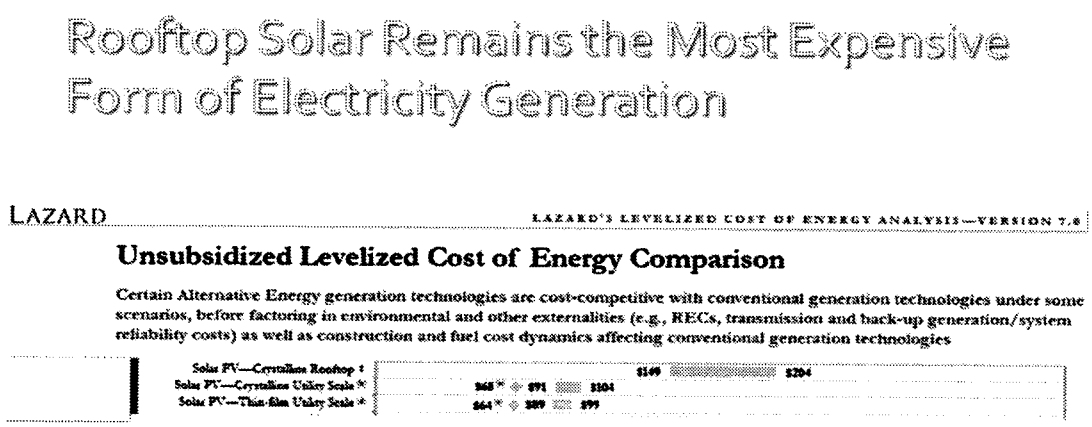

Figure 1: Rooftop Solar Remains the Most Expensive Form of Electricity Generation

they do in the prospect of becoming competitive. Solar DG is the most expensive form of renewable generation that is widely used today (**Figure 1**).

The technological and practical reasons for permitting such incoherent pricing are no longer present in the marketplace. We now have pricing methods that are capable of measuring DG production as well as consumption on a more dynamic basis. In addition, solar DG market penetration has dramatically increased to the point that it can no longer be dismissed as marginal, so appropriate pricing is now a non-trivial issue. In addition, we now have very precise, location-specific energy and transmission price signals that provide a very transparent market price by which one can measure the economic value of distributed generation. These new developments, plus the fact that NEM was put in place on a default basis, mean that it is now time for a full-blown policy consideration of the most appropriate pricing policy for distributed generation.

For all of the reasons noted, NEM pricing results in large cross-subsidies, offers no incentives for efficiency – indeed, may even provide disincentives to invest in efficiency improvements – and results in consumers paying energy prices for solar DG that are far in excess of its market value and not even subject to cost-based oversight. Moreover, its *raison d'être* – inability to more accurately price solar DG facilities and low market penetration by solar energy – no longer exists. Solar energy is penetrating the market in greater numbers and is likely to continue to do so. Secondly, more sophisticated pricing enables us to measure solar energy and customer behavior on a much more efficient, dynamic basis. The fundamental reality is that NEM completely fails to capture the value of the product being priced.

VI. Placing a Value of Solar DG – Pricing and Economic Efficiency

Needless to say, pricing is of critical importance. It is important to address pricing in the context of tangible, enumerated values. Such an analysis is in contrast to certain efforts by solar DG advocates to attach a subjective value to solar and then derive prices from that value. It is preferable to derive prices from the values established by either costs or market, not ephemeral and subjective considerations.

It is worth re-emphasizing just how imperfect NEM actually is. The price of electric energy is not constant. Wholesale markets reflect that reality. Net metering and many forms of incentives do not reflect the values established by the market. Rather, a net metering regime relieves the solar panel host of any obligation to pay for the costs of the distribution system when energy is being produced, even though he/she

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Table 1: Rooftop Solar Subsidies Heavily Utilize Funding from Non-Solar Customers

DTE Energy

Consumers Energy

SolarCurrents and Net Metering funding mechanism for residential customers

	SolarCurrents (Phase 1)	SolarCurrents (Phase 2)	Funding Mechanism
Up-front solar subsidy	$2.40/W	$0.20/W	Renewable Surcharge
On-going solar subsidy	$0.11/kWh	$0.03/kWh	Renewable Surcharge
Net metering subsidy (unrecovered fixed cost)	$0.09/kWh	$0.09/kWh	*Unrecovered fixed costs are funded by non-solar customers
Total SolarCurrents and Net metering subsidy	**$0.20/kWh**	**0.12/kWh**	

remains reliant on it and, when the meter runs backwards, is effectively paid the full retail price for energy exported from the customer's premises. As a point of illustration, see **Table 1** for a funding mechanism for residential customers presented by DTE Energy to the Michigan Public Service Commission. According to DTE, the 9 cent per kilowatt-hour (kWh) net metering credit represents a differential that non-participating customers must pay.

Under NEM, compensation at retail rates is not cost-reflective because net metering means that solar DG energy exported into the distribution network is compensated at the full bundled retail rate rather than at a price based on the unbundled cost of producing the energy. In almost all jurisdictions, that retail rate is flat and constant. Thus, it does not reflect the obvious fact that the energy has greater value at peak demand than it does off-peak. It is a deeply flawed value proposition. The fact is that the wholesale market produces hour-by-hour prices that provide generators, renewable and non-renewable alike, and consumers with important price signals that reflect real-time values. Both generators and demand responders are compensated according to those real-time prices. Solar DG-produced energy, by contrast, is compensated on a basis that lacks a foundation in either market or cost. The compensation is out of market because it is a flat price regardless of when it is produced or, for that matter, fails to reflect that many hours of the day that solar panels produce absolutely nothing. It is hard to avoid the conclusion that on an economic basis, the NEM-derived price paid for solar DG energy completely misses the value of solar during most hours of the day. Interestingly, part of the cause for this incorrect valuation is that rooftop solar units have generally been installed facing south, as opposed to west. Because demand peaks have been trending later in the day (as illustrated in the California and New England figures below), this southern exposure has proven to render peak production for solar even less coincident with demand. Had the appropriate market prices been in effect, it is highly unlikely that such a costly error would have occurred.

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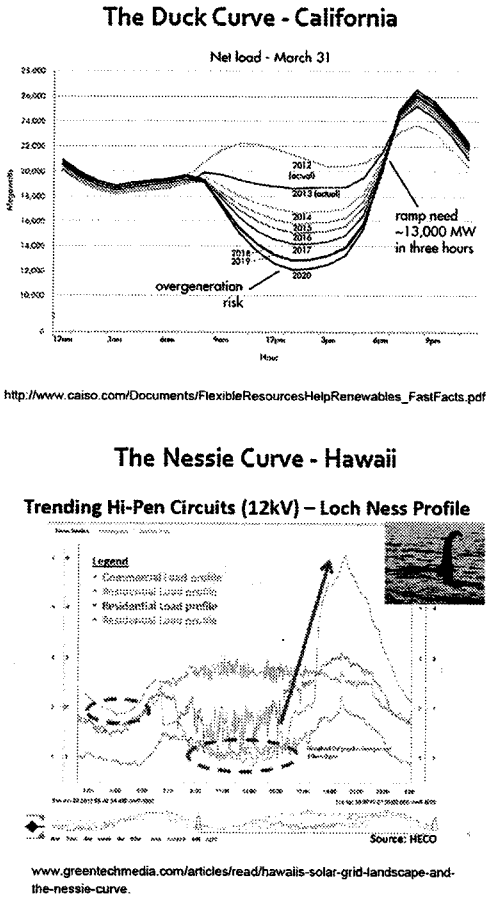

Figure 2: Ramping Needs Increased Due to Lack of Solar Prodution During Peak Demand

As is dramatically illustrated in the graph at left in **Figure 2**, enticed by a number of factors, not the least of which is net metering, substantial investment in the growth of solar capacity in the Golden State has enormously magnified the need for additional fossil plants, operating on a ramping basis, to compensate for the dropoff in solar production at peak. In that context, the absence of any meaningful signal to make solar more efficient (e.g. linking it with storage) is simply something that can no longer be tolerated. Not coincidentally, the charts from both the California and New England ISOs (found further *infra*), as well as that from DTE, illustrate the wisdom of compensating solar DG at LMP, so its price accurately reflects its value at the time of actual production and avoids requiring non-solar customers to pay prices for energy that far exceed its value.

A. Capacity value

The capacity value of a generating asset is derived from its availability to produce energy when called upon to do so. If a generator is not available when needed, it has little or no capacity value. By its very nature, solar DG on its own, without its own backup capacity (e.g. storage), can only produce energy intermittently. It is completely dependent on sunshine. Unless sunshine is guaranteed at all times solar DG is called upon to produce, it cannot be relied upon to always be available when needed. Moreover, even if all days were reliably sunny, the energy derived from the sun is only accessible at certain times of the day. In many jurisdictions, the presence and potency of sunshine is not coincident with peak demand. Frequently, for example, solar DG capacity is greatest in the early afternoon, while peak demand occurs later in the afternoon or in early evening. The two charts in **Figure 3** illustrate the lack of coincidence of solar production and peak demand in New England.[1]

These two charts dramatically demonstrate that, on the days chosen as representative of summer and winter in New England, solar PV is completely absent during the winter peak, reaches its peak production as peak demand is rising in the summertime, and drops off dramatically during almost the entire plateau period when demand is at peak. It should also be noted that on the days chosen, the sun was shining. The graph, of course, would look very different on cloudy days when solar production is virtually nil.

The Electric Power Research Institute (EPRI) graphs in **Figure 4** reveal similar patterns on a national level. The first graph

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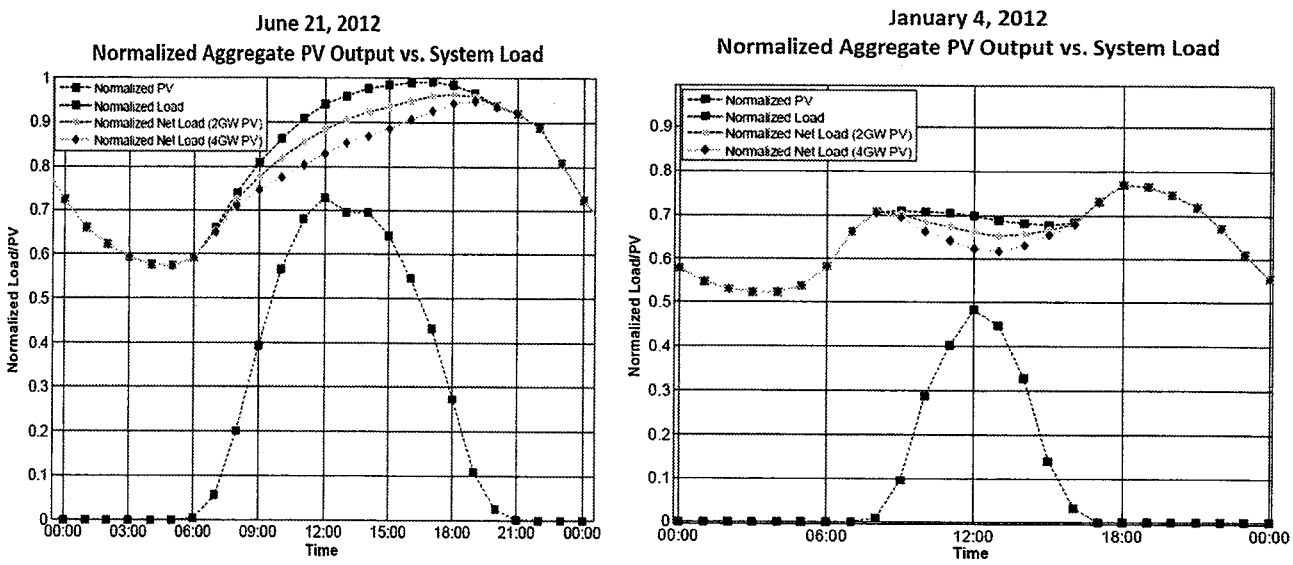

Figure 3: Lack of Coincidence of Solar Production and Peak Demand in New England

depicts the peak load reduction and ramp rate impacts resulting from high penetration of solar PV. The second illustrates the fact that because residential load and PV system output do not match, solar DG hosts use the grid for purchasing or selling energy most of the time.

As noted above, providers of capacity in the wholesale market may also have availability issues. In their case, however, if they are not available when called upon to produce, they are typically obligated to either provide replacement energy or to pay the

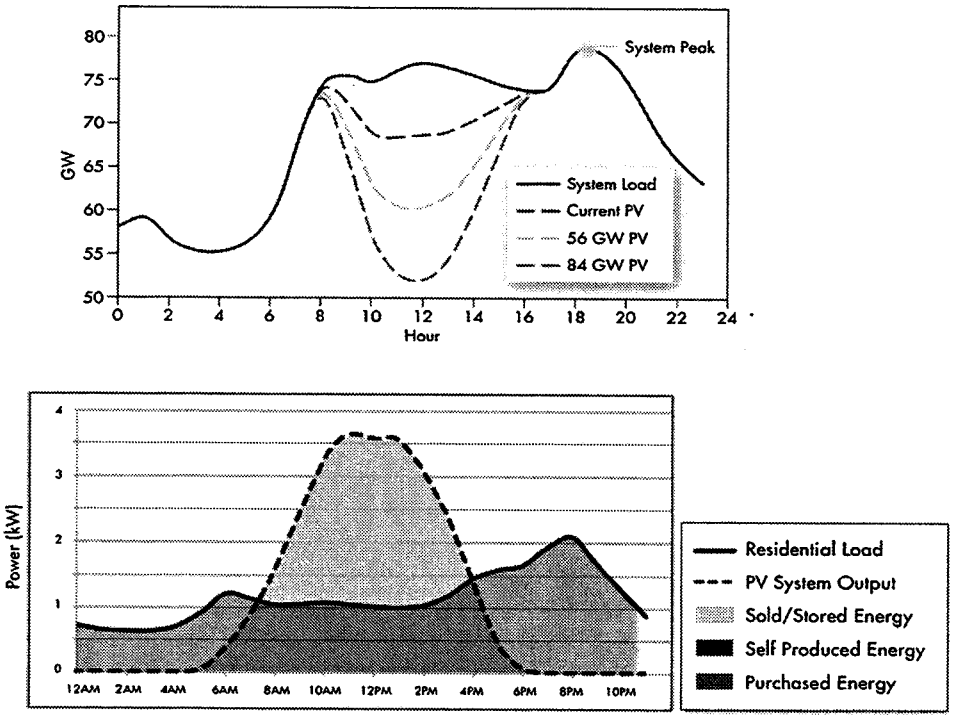

Figure 4: Increased Ramp Rates, Peak Load Reduction and Reliance on the Grid

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marginal cost of energy that they failed to deliver. Unless a similar obligation is imposed on solar DG providers, the capacity value of solar DG is reduced even further. Good pricing policy would suggest that DG prices should be fully reflective of the value of the type of capacity that is actually provided. As currently implemented, net metering does not adequately reflect how the capacity availability measures up to demand.

B. Availability and reliability

Many advocates of solar DG assert that it enhances overall reliability because the units are small, widely distributed but close to load, and not reliant on the high-voltage transmission system. It is argued that they are less impacted by disasters and weather disturbances. At best, these claims are highly speculative and, for the reasons noted below, quite dubious. It would be a mistake to attribute added value to solar DG because of reliability.

Solar DG is subject to disaster as much as any other installations. High winds, for example, can harm rooftop solar as much as any other facility connected or unconnected to the grid. Cloudy conditions can disrupt solar output while not affecting anything else on the grid.

Solar DG has more reliability benefit in some places than others. In Brazil, for instance, a system that largely relies on large hydropower plants with large storage reservoirs, solar has considerable long-term reliability value because whenever it generates energy it conserves water in the reservoirs, thereby adding to the reliability of the system. However, in a thermal-dominated system (like much of the United States), where there is little or no

storage, reliability has to be measured on more of a real-time basis. Therefore, solar's intermittency makes it unable to assure its availability when called upon to deliver energy. Indeed, it is far more likely that a thermal unit will have to provide reliability to back up a solar unit than the other way around.

It is also important to examine rooftop solar reliability issues in two contexts: that of the individual customer and that of the system as a whole. Solar DG vendors, as part of their sales pitch, claim that reliability is increased for a specific customer with a rooftop solar unit because on-site generation provides the possibility of maintaining electric power when the surrounding grid is down. When the sun is shining, this claim may be true. Conversely, without the sun, the claim has no validity. However, that argument only applies to the solar host.

On a technical point, a power inverter is an electronic device or circuitry that changes direct current to alternating current. During a system outage the power inverter is automatically switched off to prevent the backflow of live energy onto the system. That is a universal protocol to prevent line workers and the public from encountering live voltage they do not anticipate. Thus, if a solar DG unit is functioning properly, when the grid is down, the solar DG customer's inverter will also go down, making it impossible to export energy. If the solar DG unit is not functioning properly, then the unit may be exporting, but will do so at considerable risk to public safety and to workers trying to restore service. The result is that the solar panel provides virtually no reliability to anyone other than perhaps to the solar host.

Attributing reliability benefits to an intermittent resource is a stretch. By definition, intermittent resources are supplemental to baseload units. The only possible exceptions to that are, as noted above, where there are individual reliability benefits or where the availability of the unit is

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coincident with peak demand or has the effect of conserving otherwise depletable resources. Absent those circumstances, and absent storage, it is almost certainly the case that the system provides reliability for solar DG, rather than the other way around. That is particularly ironic given that in the context of net metering, solar DG hosts do not pay for that backup service while generating electric energy. In essence, in a net metering context, non-solar customers pay solar DG providers for reliability benefits that solar DG does not provide them, while solar DG customers do not pay for the reliability benefits they actually do receive.

From an investment perspective, solar DG pricing methods, like NEM, which redirect distribution revenues from distributors to solar PV providers who offer no distribution services are detrimental to reliability as they either deprive the sector of capital needed to maintain high levels of service or demand additional revenues from non-solar DG users who would ordinarily not have to pay such a disproportionate share of the costs. For utilities, the diversion of funds leaves them with a Hobson's choice of either delaying maintenance and/or needed investment, or seeking additional funds – in effect, a cross-subsidy from non-solar users. It is also relevant to reliability to again note that the prevalence of intermittent resources on the grid, including solar DG, may well cause new, cleaner, and more efficient generation to appear less attractive to investors. Over the long term, that effect could lead to reliability problems associated with inadequate generating capacity, especially at times of peak demand.

C. Solar DG does not avoid transmission costs

It is nearly impossible to demonstrate that solar DG will obviate the need for transmission, much less quantify the cost savings associated with this purported benefit. Of course, there is a simple way to calculate any actual transmission savings, and that is by compensating solar DG providers in the organized markets at the locational marginal cost of electricity at their location. That compensation model would have the benefit of capturing both the energy value and the demonstrable transmission value of solar DG. Absent that formulation, efforts to calculate actual transmission savings would be a difficult, perhaps entirely academic, task.

Solar DG advocates assert that real transmission savings are achieved through the deployment of DG, especially in systems that use locational marginal cost pricing. The argument is that by producing energy at the distribution level, less transmission service will be required, thereby reducing or deferring the need for new transmission facilities. It is also often contended that DG will reduce congestion costs, and perhaps even provide some ancillary services. All of that is theoretically possible but certainly not uniformly, or even inevitably, true.

Of course it is true that DG, absent any adverse, indirect effect it might have on the operations of the high-voltage grid, does not incur any transmission costs in bringing its energy to market. However, that is quite different than asserting that DG provides actual transmission savings. In fact, it would be incorrect to simply conclude across the board that solar DG will achieve transmission savings. It is possible that there could be transmission savings associated with solar DG deployment, but that can only be ascertained on a fact- and location-specific basis. Such savings would most likely be derived from reducing congestion or providing ancillary services of some kind. It is also theoretically

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possible, but highly unlikely, that massive deployment of solar DG will eliminate (or, more likely, defer) the need to build new transmission facilities. For a variety of reasons, including the complexities of transmission planning, the time horizons involved, the complex interactions of multiple parties, and economies of scale in building transmission, it is improbable that solar DG actually saves any investment in transmission capacity.

Indeed, a mere glance at the California ISO duck graph showing the need for ramping capacity to make up for the intermittent availability of solar DG provides a *prima facie* case for believing that the opposite is true and that solar DG may cause a need for more transmission to be built. These and other charts also show that as long as solar does not reduce peak energy use, transmission is likely needed to serve peak hours. Regardless, it is virtually impossible to demonstrate that, other the possibilities of reducing congestions costs (a value fully captured by LMP), there is very little likelihood of transmission saving being derived from solar DG.

D. Solar DG does not avoid distribution costs

It is more likely that solar DG will cause more distribution costs than it saves. That is because these generation sources could change voltage flows in ways that will require more controls, adjustments, and maintenance. Moving from a one-way to a two-way system will certainly increase the need for technical equipment to manage the reliability of the system. While DG solar may not be the only cause of this move the intermittent nature of solar makes

it particularly difficult to manage. It will also inevitably increase transaction costs for the utility to execute interconnection agreements and do the billing for an inherently more complicated transaction than simply supplying energy to a customer. It is impossible, unless a solar DG host leaves the grid, to envision a circumstance where solar DG would effectuate distribution savings.

Regarding distribution line losses, DG offers value only to DG providers when they consume what they produce because any DG output exported to the system is subject to the same line loss calculations that any other generator experiences. If there were locational prices on the distribution system, there might be line loss benefits that could be captured by DG but, since those price signals do not exist, the argument is purely academic.

VII. Lower Hedge Value

The theory advanced by some solar DG proponents is that because the marginal cost of solar is zero, it serves as a hedge against price volatility. In theory, that might make sense. In reality, however, solar is an intermittent resource that cannot serve as a meaningful hedge unless such zero-cost energy is both sufficiently and timely produced. Thus, solar DG is the equivalent of a risky counterparty whose financial position renders him incapable of assuring payment when required. Moreover, the value of a hedge depends on the amount of money the purchaser of the hedge is obliged to pay for the insurance and the amount and probability of the price he/she seeks to avoid paying. With a NEM system (or the high-priced "value of solar" approach that solar DG advocates seek), the price paid is highly likely to exceed the fuel or energy price most utilities would hedge against. In short, the argument ventures into the realm of the absurd. It amounts to: *Pay me a fixed price that is higher than the price you want to avoid, in order to avoid price volatility.*

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The argument that solar DG provides a valuable hedge function is reduced to virtual absurdity by the fact that the so-called hedge is not callable. In short, if the price rises to the level against which the hedge purchaser wants to be insured against, the solar provider of the hedge is not obliged to pay. That being the case, there is no hedge whatsoever.

VIII. Effects of Solar DG on Other Renewable Resources

A. Impact of a low capacity factor

Since 2008, as **Figure 5** from the United States Energy Information Administration (EIA) points out, solar PV has had the lowest capacity factor of any commonly used renewable energy resource in the U.S. It is also worth noting that while the overall costs of installing solar panels has declined (as noted above) the productivity of solar PV has remained constant at consistently low levels. It should be noted that the chart below compares only "utility-scale" projects. As noted in the Lazard study above, distributed solar is even less cost effective than utility-scale solar, which already occupies last place on the Department of Energy (DOE) ratings.

The stark reality of solar PV's combination of high prices and poor capacity factor carries over into the cost of reducing carbon emissions. An interesting dialog occurred recently between Charles Frank, an economist at the Brookings Institution, and Amory Lovins of the Rocky Mountain Institute.[2] Their dialogue, while contentious on many points, reflects similar views on the realities depicted in the EIA chart. Frank analyzed five non- or low-emitting generation resources by their cost effectiveness in reducing carbon and concluded that nuclear and natural gas, followed by hydro, wind, and solar were, in that order, the most cost-effective types of generators for reducing carbon. Lovins took issue with Frank for using outdated data and for not looking at energy efficiency. He also argued that nuclear ranked last in cost effectiveness, and expressed some reservations about the ranking of natural gas. However, what is significant is that, among renewable resources, Lovins concurred with Frank that solar DG is the least efficient renewable resource for reducing carbon. Thus, in the view of both men – who hold quite divergent views on how best to reduce carbon emissions – not only is solar DG expensive, it is the least cost-effective renewable resource for reducing carbon emissions.

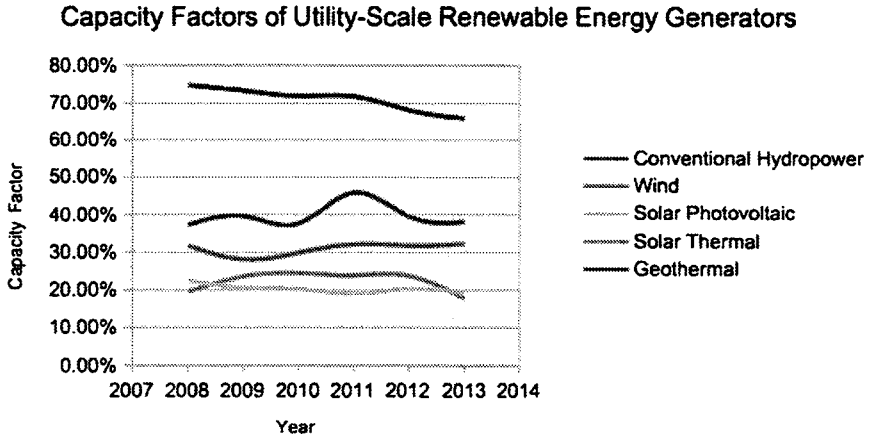

Figure 5: Capacity Factors of Utility-Scale Renewable Energy Generators

B. Impact of higher-than-market price

Higher-than-market prices paid for solar DG has adverse effects on other renewable resources. All wholesale generators, renewable and otherwise, have to incorporate transmission and distribution costs into the price of energy delivered to customers. As mentioned above, it is true that transmission issues play out differently for distributed generation than for wholesale generation. Since DG, by definition, does not rely on transmission capacity, although DG might impact congestion costs in various ways, wholesale energy's delivered cost reflects transmission capacity

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costs while DG's does not. Thus, any competitive advantage for DG on that score is quite natural. However, under the net metering scheme, DG providers also do not have to incorporate distribution costs into their end product, and that results in a serious economic distortion of the generation markets in general as well as specifically in renewable markets. In fact, as noted *supra*, solar DG providers under NEM are actually paid for delivering their energy even though they provide no such service. Wholesale generators, unlike their DG counterparts, enjoy no such comparable enrichment for service they do not provide. The effect of NEM's highly inefficient and non-cost-reflective rates is to distort market prices in ways that reward inefficiency and will likely distort price signals that are essential for an efficient marketplace.

In addition, at a critical mass, artificially elevated solar DG prices are highly likely to create distortions and inefficiencies in the capacity and energy prices found within organized markets. An environment with two parallel pricing regimes, one market- or cost-based, and the other an arbitrary one neither market- nor cost-based, is simply economically incoherent and unsustainable. The overall effect of net metering is to increase the prices consumers pay for energy overall, without any assurance of any long-term benefit. Solar DG is artificially elevated to a preferential position above more-efficient, larger-scale generation, including all other renewables. The disparity in treatment between solar DG and other forms of energy suggests that net metering is not only federal preemption bait (as further discussed below); it is fundamentally anti-competitive as well. Indeed, it compels consumers to both cross-subsidize less efficient producers and to pay higher prices

than necessary for energy. It will also entice investors to allocate their capital to toward more profitable but less efficient generation. In terms of efficiency and public benefit, the incentives inherent in NEM are simply perverse.

Large-scale bulk power renewables (e.g. large-scale wind and solar farms, geothermal) are put at a particular disadvantage by NEM pricing of solar DG independent of costs or market for two basic reasons. First, large-scale renewables are more efficient and more cost-effective than DG, yet net metering provides a subsidy only to the less efficient form of generation. In fact, solar DG providers are compensated for the energy they export at a price that can range from two to six times the market price for energy. Second, in those states with renewable portfolio standards (RPS), the entry of a critical mass of non-cost-justified solar DG units into the market could have the effect of driving more efficient, large-scale renewables out of a fair share of the RPS market. The effect, in a competitive market, is to bias the market to incentivize highly inefficient small-scale solar to the detriment of less costly larger-scale solar.

C. Comprehensive environmental analysis

Any analysis of the environmental impact of the generation mix should include an examination of the least-cost, most efficient ways to get to the desired results. Problematically, the preferential pricing of less efficient solar DG imposes an unnecessarily high-cost approach to reducing carbon. Results such as that cannot be justified on the basis of externalities, which are no different between DG and larger-scale renewables. Indeed, it seems probable that overpayments for DG have the effect of squeezing more efficient forms of renewable energy out of RPS markets by using preferential pricing to grab a disproportionate share of the RPS market and driving up the cost of reducing carbon.

In the long run, of course, the inherent favoritism in pricing DG

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at levels arbitrarily higher than other renewable energy sources does not bode well for either the future of renewables or the objective of efficiently reducing carbon emissions. Discrimination in favor of inefficient resources on a long-term basis is simply not sustainable. The inevitable backlash in both the marketplace and public perception has the potential to sweep away public support for renewable energy and perhaps for strong environmental controls as well, an outcome no one concerned about the environment would want. One of the most notable ironies emanating from the use of net metering to price solar DG is that it will almost certainly lead to changes in retail pricing that will undermine the promotion of energy efficiency. The reason for this is that as solar DG becomes more widely deployed, utilities and their regulators will likely become increasingly concerned with the diminution of revenues required to support the distribution system that is caused by the use of net metering.

Those concerns are derived from the fact that under NEM, when solar DG is being self-consumed at the host premises, no revenues are being paid by that host to the utility for providing what essentially amounts to a battery to supplement their self-generation. Since the costs of the distribution are fixed and not variable with the use of "behind the meter" generation, net metering results in a delta of revenue that is either made up for by non-solar customers or constitutes a loss for the utility. Neither outcome is likely to be satisfactory to either the utility or the regulators. Inevitably there will be ratemaking consequences. That problem is compounded, of course, by the fact that when the excess output of rooftop solar is being exported into the grid the solar provider is

being paid as if he/she was delivering the energy, a service obviously provided by the distribution utility. Thus, not only are solar hosts not paying their fair share of fixed costs, they are, by the operation of net metering, actually taking revenues away from the entity that actually provides the service. From the standpoint of the utility and of the non-solar ratepayers who have to bear the burden of such uneconomic and inequitable revenue allocation, rate design remedies will be sought.

One likely remedy to be proposed is to modify the fixed/variable ratio in rates. While distributions are indisputably fixed costs, regulators have generally divided the recovery of those costs on a different basis. Some have been recovered on a fixed basis, while others have been recovered on a variable, volumetric basis. There are two critical policy reasons why this has been the case. The first is that fixed charges tend to impose a disproportionate burden on low-income households and on customers whose consumption is relatively light. The other reason is that volumetric-based charges send a signal to end users that the more they consume, the more they pay. Stated succinctly, the price signal promotes the efficient use of energy. If the revenue stream to cover distribution costs is diminished through mechanisms like net metering, utilities concerned about revenue requirements and regulators, concerned about reliability will, almost inevitably, shift more costs into non-by passable fixed charges, thus imposing more of a burden on low-income households and, equally important, diluting price signals for energy efficiency. In short, net metering will almost certainly, at some point, serve to both cause cost recovery to be socially regressive, and to discourage energy efficiency. In effect, net metering will likely become a classic case of anti-green pricing.

The anti-green pricing aspect of net metering is also exemplified by the behavioral pattern it incents among solar hosts. As shown on both the California and New England

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graphs above, solar production slacks off and ultimately disappears as demand reaches its peak. Despite that, solar hosts are never signaled through prices that their consumption is no longer being supported by zero-marginal-cost solar production. Indeed, in most cases net metering determines prices on an average-cost basis, even though solar production, even in the best of circumstances, is only available a fraction of the time period used for averaging. Thus, solar hosts are essentially lulled into a pattern induced by low marginal prices, which continue in periods of peak demand, thereby driving the peak demand even higher, a result that is truly perverse, both economically and environmentally. In short, net metering and energy efficiency are simply not compatible.

D. Net metering and energy efficiency are incompatible

Many experts from all facets of the renewable energy discussion will assert that energy efficiency is an important, if not the most important, means to increase carbon reductions. Assuming those experts are correct, it is important to consider the ways in which net metering impacts incentives for energy efficiency. While solar DG and energy efficiency are not inherently anathema, net metering is not compatible with energy efficiency. As discussed above, net metering is a compensation mechanism that causes utilities and regulators to move costs into the fixed category, thereby diluting the price signals that would encourage energy efficiency.

E. Possible federal preemption

State regulators, in setting prices for solar DG, should also be

conscious of the potential for jurisdictional disputes should DG prices cause any dislocation in wholesale markets. Because of the economic distortions caused by NEM, there are some who are calling for DG to be under the control of the Federal Energy Regulatory Commission (FERC) rather than state public utilities commissions' jurisdiction.[3] Unless states begin to remedy the price distortions inherent in net metering, it would be surprising if many aggrieved wholesale generators did not seek relief from FERC. In a somewhat analogous situation, New Jersey and Maryland sought to use state subsidies/mandates to support the construction of new power plants in order to manipulate and/or bypass the PJM capacity market. FERC, in a decision which was later affirmed by the Third Circuit Court of Appeals, struck down the state program by preemption. State commissions that continue to prop up a net metering regime with no basis in either market-based pricing or cost-of-service regulation may well discover the prospect of preemption hanging over them.[4] Further foreshadowing preemption are several other examples of state net metering programs running contrary to federal pricing regimes.

The Public Utility Regulatory Policies Act (PURPA) places an avoided-cost ceiling on power purchases; net metering evades that ceiling. Under net metering arrangements, not only are purchases of excess power mandated at levels well in excess of avoided costs, but they also include a cross-subsidy from non-solar customers for the distribution costs of solar DG providers. Bulk power renewables are subject to all of the rules of the wholesale market, which may include such costs as congestion costs, ancillary services, penalties for no availability, and others. Under net metering, solar DG providers are subject to none of these disciplines. In addition, some wholesale renewable generators complain that the arbitrarily high prices paid under net metering have the effect of attracting enough solar DG providers to fill up the RPS market, so that they

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are being effectively squeezed out of the portfolio entirely.

What is particularly ironic about this effect is that, as noted above, distributed, small-scale solar is the least efficient form of commonly used renewable energy sources in the United States. All of these factors indicate that an increasing number of parties are likely to be motivated to ask FERC to preempt net metering and other state-mandated regimes that allow for unreasonably discriminatory and anti-competitive pricing.

IX. Factors Mitigating Environmental Benefits

Expectations of environmental externality benefits may be the biggest motivator for supporting and subsidizing solar DG. Proponents of solar DG note that solar has zero carbon or other harmful emissions from the process of producing energy. Additionally, to the extent that wide deployment of solar PV avoids the need to invest in technologies that do have carbon and other undesirable emissions, there is an environmental benefit that avoids the social costs associated with pollution. In the absence of legal limits on relevant emissions such costs, solar DG advocates correctly point out, are not captured in the internalized costs of the competing technologies. Therefore, solar DG advocates suggest that regulators and policymakers should take these external social costs into consideration in setting prices for various forms of energy.

The use of external social costs, as opposed to solely the internalized economics of various forms of energy is a controversial subject. Many oppose the use of externalities as a factor in pricing because it distorts the market and makes social judgments economic regulators may not be

empowered to make. In the views of such opponents, the only externalities that ought to be incorporated into pricing are those that are internalized by legal mandate. Proponents of incorporating externalities into rates contend that doing so is the only way to accurately reflect all social costs. They also contend that factoring in environmental externalities is a form of insurance against future regulatory requirements. While this article takes no position as to the merits of incorporating externalities into ratemaking, it will address this issue, on the assumption that at least some regulators and policymakers will look at externalities for purposes of assessing the value of solar DG.

Before delving into this issue any further, it is important to note that the United States Environmental Protection Agency (EPA), whose jurisdiction over carbon emissions has been affirmed by the U.S, Supreme Court,[5] has proposed new rules under Section 111(d) of the Clean Air Act that would, if promulgated, internalize the costs of carbon into electricity ratemaking, so the issue of whether or not to consider the costs of carbon would no longer be debatable. Thus, there is a great deal of uncertainty which, in the short term, effectively strengthens the hand of those who contend consideration of carbon emissions would be a form of insurance against future regulation. In the longer term, however, the likelihood that carbon emissions will be internalized gives rise to very serious questions as to the value of including externalities which, over time may run contrary to the economics of internalized carbon costs. It is also worth noting that there are already several states that have adopted controls on carbon emissions. In those states, it is especially important to make certain that renewable policy and pricing enhances efficiency in compliance, as opposed to confusing means and ends. Regardless, the environmental issue, in terms of solar DG, is

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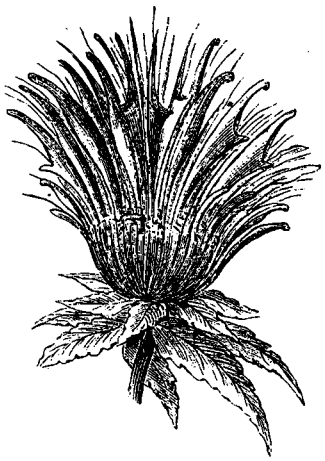
how cost effective such installations are for reducing carbon.

There is little dispute that solar DG is the least efficient of all renewable energy resources in common use in this country. As noted, there is even a consensus, which includes Amory Lovins, that agrees that solar DG is the least efficient renewable resource for reducing carbon. That view is fully supported by the facts in the California duck graph, as well as the ISO-New England and EPRI Value of the Grid data, which demonstrate conclusively that solar DG is consistently off-peak. When priced at net metering levels, it is also the most expensive renewable resource, thereby producing a perverse paradigm that where the least efficient resource costs the most. Therefore, it is evident, without considering any other factors, that solar DG is the least cost-effective use of renewable energy to reduce carbon emissions. There is also the reality that, as a general rule the least efficient and "dirtiest" plants are most likely getting dispatched at times of peak demand. Thus, in the rare instance that solar DG is available at peak in the United States, it is not displacing the most carbon emitting plants. Instead, it is displacing more efficient, less polluting generating units. Moreover, as an intermittent resource, its availability is highly uncertain and fossil plants are often called upon to operate on a less efficient, more carbon-emitting basis than if they were running as pure baseload. Thus solar DG is not only expensive, it is also much more likely to displace low-emitting, more efficient generation than less efficient, dirtier units. In addition, as noted earlier, net metering significantly dilutes the price signals for environmentally benign energy efficiency.



Those conclusions have been borne out by developments in Germany. In that country, where there has been a very dramatic increase in reliance on intermittent energy, prices have risen 37 percent since 2005, and were accompanied by spikes in both carbon emissions and the use of brown coal (lignite). While there are very significant difference between most states and Germany, perhaps most notably that Germany has decided to close down its nuclear plants (although it has replaced much of the domestic nuclear with imported nuclear energy), the experience in that country is very telling.[6] The German example clearly demonstrates that increased dependence on renewable energy resources, particularly intermittent resources, does not, as many solar DG proponents claim, *ipso facto*, mean fewer carbon emissions, and may, in fact, cause the opposite to occur. It also demonstrates that prices will escalate dramatically if the feed in tariffs are as far in excess of market as NEM prices are, as shown by the DTE graph above. The Germans, incidentally, have recognized their miscalculations and are dramatically recalibrating their strategy.

X. Regressive Social Impact

There are social effects beyond the environment that have to be taken into account if externalities are to be factored into ratemaking. Any failure to examine environmental externalities without recognizing that there are other social externalities to be considered as well will yield highly skewed results. Perhaps the most important of those is the social impact.

The social impacts of solar DG are caused by three main factors. First, as noted above, solar DG users have their electricity costs cross-subsidized by their neighbors who completely rely on the grid. Second, some data suggests that solar DG users are unusual electricity users. Third, not everyone can afford to be a solar DG user. To address the second point, unlike typical residential customers, in some regions solar

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DG users use little or no grid power at midday but quickly ramp up demand on peak, when PV production wanes (as is demonstrated by the charts in from the New England and California ISOs). Utilities must be able not only to serve full load on days when solar PV is not performing, but also to ramp up resources quickly to address the peak created by solar DG users. In order to ramp up as needed, utilities will purchase energy at the marginal price and then distribute those costs across all users, not just solar DG users. Thus, users without solar DG may be penalized for the use patterns of their solar DG neighbors. A comparison of residential electricity consumers in the western United States may be found below in **Figure 6**.[7]

Further, the impact of net metering is not simply the creation of a cross-subsidy from non-solar PV customers to solar PV customers but, as has been pointed out in a recent study by E3,[8] it is a cross-subsidy from less affluent households to more affluent ones. Indeed, the average median household income of net energy metering customers in California is 68 percent higher than that of the average household in the state, according to the study. In a recent proceeding, the staff of the Arizona Commerce Commission noted the same consequence.[9] As one wry observer in California noted, net metering is not "Robin Hood" but rather it is "robbin' the hood." In order to install rooftop solar panels, often individuals must be homeowners with high credit ratings or sufficient capital. Leasing arrangements are also widespread, but are generally available only to customers who own their own premises and they require the assignment of most of the rooftop solar benefits to the lessor. Many electricity customers, particularly less affluent ones, do not own homes or lost their homes in the most recent recession. The electricity customers who are unable to afford rooftop solar are forced to subsidize those who are already in a more favorable financial position. Thus, it is entirely fair to characterize NEM as a wealth transfer from less affluent ratepayers to more affluent ones.

Tariffs with a regressive social impact are certainly worthy of consideration from a policy and rate-making perspective. Thus, if externalities are to be weighed in setting pricing for solar DG, then it is important to avoid inordinate cost shifting and, in particular, to avoid adding new burdens to the less affluent in order to provide benefits to those further up on the income scale.

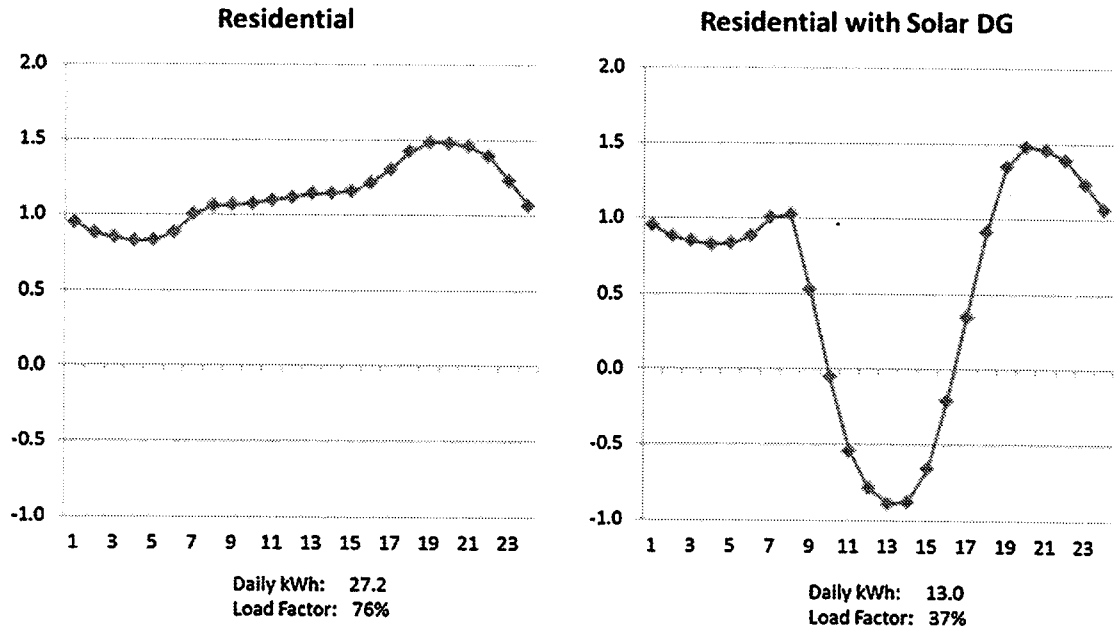

Figure 6: Typical Residential Loads Average Day – Iowa

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XI. Impact on Job Creation

The impact of solar PV on jobs is often cited as an externality benefit. Any analysis of the job impact must be comprehensive and not an effort to cherry pick data. For instance, merely citing the number of solar installers employed does not tell us much. Many aspirations for more jobs manufacturing PV units in the United States have not materialized due to China's capture of the market. Other impacts to be considered are the effect of solar PV on electric rates and the impact of that on the job market, not only in terms of what happens with rates, but also in terms of the rate structure that is implemented as a result of more market penetration by solar DG. For example, it is conceivable that any movements toward more fixed costs could discourage energy efficiency work thus displacing jobs in manufacturing and installing energy efficiency technology.

XII. Conclusion

There is value in solar DG, but that value is severely diminished and placed in peril if its pricing discourages efficiency improvements and distorts critical price signals in the marketplace. It is similarly counterproductive to the future of solar DG if its pricing has socially regressive effects and if it sucks needed revenue away from the essential distribution grid. From an economic point of view solar DG has energy value, the potential for reducing some transmission costs, and perhaps under the right circumstances, some capacity value, and ought to be compensated accordingly. With regard to externalities, it is not entirely clear, when viewed in the entire scope of its impact, that solar DG, has positive environmental value, but it is absolutely

clear that when net metering is deployed, it is simply not a cost-effective means for reducing carbon emissions. In fact, it is possible that solar DG might do more harm than good if it has the effect of removing price incentives for energy efficiency, and if it causes older plants to extend their lives and to operate inefficiently on a ramping basis for which they were not designed. It seems clear that if we are to capture the full value of solar DG, net metering must be discarded and replaced with a market-based pricing system that values the resource appropriately and includes incentives for making it more efficient over the long run.■

Endnotes:

1. Black, John. Update on Solar PV and Other DG in New England. ISO New England (June 2013).

2. *See* Frank, Charles R., Lovins, Amory B., 2014, September. Alternative Energies Debate – The Net Benefits of Low and No-Carbon Electricity Technologies: Better Numbers, Same Conclusions. The Brookings Institution. *See also* Frank, Charles R., 2014. The Net Benefits of Low and No-Carbon Electricity Technologies. The Brookings Institution Global Economy and Development Program, 1939–9383 *see contra* Lovins, Amory B., 2014, July. Sun, wind, and drain. The Economist; Lovins, Amory B., 2014, August. Sowing confusion about renewable energy. Forbes.

3. See e.g. David B. Raskin, The Regulatory Challenge of Distributed Generation, 4 Harv. Bus. L. Rev. Online 38 (2013).

4. 135 FERC 13 61,022, April 12, 2011 *affirmed* New Jersey Board of Public Utilities et al. v. FERC, 744 F.3d 74 (2014).

5. Massachusetts v. U.S. Environmental Protection Agency, 549 U.S. 497 (2007).

6. See Melissa Eddy, *German Energy Push Runs into Problems*. N.Y. Times, March 19, 2014, http://www.nytimes.com/2014/03/20/business/energy-environment/german-energy-push-runs-into-problems.html.

7. Gale, Brent. *A Seven Step Program for Embracing DG/DER*. Berkshire Hathaway Energy (October 2013).

8. Energy and Environmental Economics, Inc. *California Net Metering Draft Cost-Effectiveness Evaluation*. Prepared for California Public Utilities Commission, Energy Division. Sept. 26, 2013.

9. Arizona Commerce Commission. Open Meeting re: Arizona Public Service Company – Application for Approval of Net Metering Cost Shift Solution (Docket No. E-0135A-13-0248). Sept. 30, 2013.

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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

DOUG LITTLE, Chairman
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN

EXHIBIT
A-6
ADMITTED

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN, AND FOR RELATED APPROVALS.	**DOCKET NO. E-01575A-15-0312**

REBUTTAL TESTIMONY OF DAVID W. HEDRICK

ON BEHALF OF

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

APRIL 22, 2016

BACKGROUND AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is David W. Hedrick and my business address is 5555 North Grand Boulevard, Oklahoma City, Oklahoma 73112-5507.

Q. ARE YOU THE SAME DAVID HEDRICK WHO PREVIOUSLY SUBMITTED DIRECT TESTIMONY ON BEHALF OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. ("SSVEC" OR THE "COOPERATIVE") IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. My rebuttal testimony provides the following:

a. A discussion of SSVEC's positions with respect to the recommendations provided by Utilities Division Staff ("Staff") in its direct testimony;

b. A discussion of SSVEC's position with respect to the direct testimony of Mark Fulmer on behalf of The Energy Freedom Coalition of America ("EFCA");

c. A discussion of the reasons why time of use ("TOU") rates are not attractive to SSVEC's customers;

d. A discussion of SSVEC's request for approval of certain revisions to its Service Conditions; and

e. A discussion of SSVEC's request for inclusion of additional rate case expense.

SSVEC'S POSITION REGARDING STAFF'S RECOMMENDATIONS AND RESPONSE TO EFCA

Q. PLEASE LIST THE RECOMMENDATIONS MADE BY STAFF WITH WHICH SSVEC AGREES.

A. There is significant agreement between SSVEC's original proposals as presented in its rate application and Staff's recommendations. The following are the areas of agreement between Staff and the Cooperative:

1. Staff recommends approval of SSVEC's proposed revenue requirement of $100,804,640. The proposed revenue requirement produces an operating margin after interest on long-term debt of $7,234,777, a rate of return of 6.41% on an original cost rate base of $208,373,755 and an Operating Times Interest Earned Ratio of 2.20. The proposed revenue requirement results in an increase in revenue of $3,101,498 or 3.17%.
2. Staff recommends the base power cost be set at $0.065857 per kWh as proposed by SSVEC.
3. SSVEC agrees to ensure that a list of all service charges is located in an easily accessible location on the SSVEC website. In addition, if a service issue occurs due to problems on SSVEC's side of the meter, or due to any maintenance for which SSVEC should be responsible in the normal course of business, the ratepayer should not be charged service charges for any repairs.
4. SSVEC's proposed increases to its Service Charges should be approved.
5. SSVEC's proposed decrease in the New and Additional Service fee should be approved.

6. SSVEC agrees with Staff's recommendation that the Commission accept SSVEC's cost of service study and SSVEC's proposed class revenue allocation. SSVEC accepts Staff's recommendation for future rate cases to include the Residential Auxiliary Rate in the General Service class and the General Service RV Park Rate in the Large Power class.

7. SSVEC agrees with Staff's proposed rates as shown on Exhibit RSP-2 for all rates classes <u>except</u> Residential, Residential TOU, Residential DG, Residential DG-E and Residential Auxiliary.

8. SSVEC agrees with Staff's recommendation to include an annual adjustor reset in its next DSM implementation plan.

9. SSVEC accepts Staff's recommendation to provide a plan of administration for each of its adjustor mechanisms. SSVEC will work with Staff during the period leading up to the hearing and during the compliance period thereafter to review and finalize acceptable plans of administration.

10. SSVEC agrees with Staff's recommendation to approve the implementation of a new Residential Auxiliary rate and that existing customers on the General Service Rate who will be transferred to this new rate be provided a written notice indicating the timing and effects of the change.

11. SSVEC agrees with Staff's recommendation to discontinue the General Service RV rate and transfer those customer to the Large Power rate. SSVEC will provide written notice to all affected customers of the timing and effects of the transition.

12. SSVEC agrees with Staff's recommendation to discontinue the Seasonal Power rate and transfer those customer to the Large Power rate. SSVEC will

provide written notice to all affected customers of the timing and effects of the transition.

13. SSVEC agrees with Staff's recommendation to approve the Large Power rates with the elimination of the language requiring that customers be on the rate for a period of twelve consecutive months.

14. SSVEC agrees with Staff's recommendation that Schedule NM-1 be changed so that it is only available to customers who installed a DG system on or before April 15, 2015 or had an accepted application on file before April 15, 2015. SSVEC agrees that Schedule NM-1 as revised should be frozen. I note that Staff uses a grandfathering date of April 14, 2015 in its testimony, but I believe that is an error. SSVEC requested a grandfathering date of April 15, 2015 in its rate application.

15. SSVEC agrees with Staff's recommendation that the proposed Schedule DG eliminate the banking of kWh, require that energy procured from the grid be compensated for at SSVEC's retail rate, provide a methodology for the treatment of any energy provided or exported by the DG system to the grid and be made available to all eligible DG customers who install a system on or after April 15, 2015.

16. SSVEC agrees with Staff's recommendation not to approve the change in the language in the "Other Conditions" section of the Controlled Irrigation rate. In other words, the language would remain as it is currently.

Q. PLEASE IDENTIFY THE STAFF RECOMMENDATIONS WITH WHICH SSVEC DISAGREES.

A. SSVEC does not agree with Staff's recommendation to deny implementation of separate rate schedules for existing and new DG customers and that all DG customers remain on the standard Residential rate. SSVEC does not agree with Staff's recommendations regarding the proposed rate design for Residential, Residential TOU and Residential Auxiliary rates or the implementation over a two year period. Finally, SSVEC does not agree with Staff's recommendation to set an export rate at a value between the avoided cost as the floor and the retail rate as ceiling.

Q. WHAT POSITIONS DOES SSVEC SUPPORT WITH REGARD TO THESE CONTESTED ISSUES?

A. SSVEC continues to support the following positions:

1. Implementation of separate rate schedules for existing and new DG customers that take partial requirements service from the Cooperative.
2. Implementation of the originally proposed rates for Residential and the separate rate schedules for Residential DG, Residential TOU and Residential Auxiliary.
3. Implementation of the new rates over a four year period instead of the two year period recommended by Staff.
4. Compensation of excess energy at an export rate equal to the Cooperative's avoided cost.

Q. WHAT IS THE PURPOSE OF ESTABLISHING SEPARATE RATE CLASSES?

A. Unique and separate rate classes are established by utilities as a means to fairly and equitably recover the costs of providing service from customer groups for the following reasons:

1. The customers in the group cause costs to be incurred by the utility in a similar manner and the facilities required by the utility to provide service are similar.
2. The consumption characteristics of the customers in the group are similar and require a unique rate design to recover the costs of providing service.

Q. WHY IS SSVEC PROPOSING SEPARATE RATES FOR EXISTING AND NEW DG CUSTOMERS?

A. SSVEC is proposing separate rates to provide a fair and equitable recovery of the cost of providing service from these classes of customer because the consumption characteristics of these customers are such that the standard rate schedule does not provide an appropriate recovery of costs. Residential customers with DG are similar to standard Residential customers with regard to SSVEC's distribution fixed costs of providing service. Residential DG customers incur additional metering costs but otherwise require similar distribution facilities by the Cooperative to provide service. However, since Residential DG customers generate a significant portion of their energy requirements, the level of energy provided by the Cooperative to these customers is significantly less than any other group of residential customers. The result of this significant reduction in energy consumption is an under-recovery from these customers due to the inability to recover the appropriate level of fixed costs

using the standard rate design. A separate rate schedule for customers with DG is necessary to provide the appropriate recovery of costs. A customer who has the resources to generate its own power and is generating its own power is a distinct and separate class of residential consumer.

Q. HAS SSVEC CALCULATED THE FIXED COST OF PROVIDING SERVICE TO ITS RESIDENTIAL CUSTOMERS?

A. Yes. SSVEC included a cost of service study in the rate filing which calculates the fixed costs of providing service to residential customers. Schedule G-6.3 shows that the total fixed costs of providing service for Residential customers is $80.24 per customer per month.

Q. HAS STAFF ACCEPTED THE SSVEC COST OF SERVICE STUDY AND THE CALCULATION OF THE FIXED COSTS OF PROVIDING SERVICE?

A. Yes. Staff witness Ranelle Paladino recommends the Commission accept SSVEC's cost of service study. On page 10 of Ms. Paladino's testimony, she recognizes the fixed costs of providing service calculated in the cost of service study.

Q. HAS SSVEC PROVIDED ADDITIONAL ANALYSIS CALCULATING THE LOST FIXED COSTS ATTRIBUTABLE TO ITS CUSTOMERS WITH DG?

A. Yes. My direct testimony beginning on page 9 and continuing to page 25 discusses the cost impact of DG and net metering. Exhibits DWH-8 through DWH-10 attached to my direct testimony calculate the lost fixed costs attributable to customers with DG.

Q. HAS STAFF ACCEPTED SSVEC'S ANALYSIS OF LOST FIXED COSTS?

A. Yes. Staff witness Eric Van Epps testifies as follows in his direct testimony beginning on page 3, line 12:

Q. Is there evidence that the Company is under-recovering due to current DG installations?

A. Yes. The company has indicated that there was an under-recovery associated with the proliferation of DG systems that equated to $1,139,013 under the existing residential rate in 2014 test year.

Q. Can the aforementioned under-recovery claim be substantiated?

A. Yes. If you were to set aside cross subsidization and the alignment of costs with cost causation then it would be appropriate to assume that under-recovery associated with the proliferation of DG in SSVEC's service territory would be equal to DG production, multiplied by unavoidable fixed costs. For SSVEC, in addition to the total customer costs, the unavoidable fixed costs would be the purchased power demand and the distribution wires portion of the bill.

Q. Can Staff please explain this further?

A. Yes. As I mentioned before, current two-part rates allow for many unintended subsidies. One of the large subsidies in the residential class is the subsidy between high and low usage customers. Because most of the utility's fixed costs are recovered through a volumetric rate, inevitably a larger customer will pay a higher portion of the fixed costs associated with serving all customers. Conversely, a low usage customer will pay less. Given this flaw embedded in two-part rates, DG customers can reduce their usage and avoid paying large portions of their fixed costs. When rates are

set, they are set using a snap shot in time. This snap-shot looks at system wide consumption to determine a rate appropriate for a utility to recover fixed costs based on future consumption. When future consumption is reduced due to installed DG, utilities are left with under-recoveries and are in turn forced to increase rates or find other ways to recover their fixed costs.

This testimony by Mr. Van Epps affirms SSVEC's calculation of lost fixed costs attributable to customers with installed DG.

Q. HAS SSVEC PROVIDED THE NECESSARY COST JUSTIFICATION FOR THE CREATION OF SEPARATE RATE SCHEDULES?

A. Yes. The cost of service study provides the fixed cost data applicable for Residential customers (regardless of whether DG is installed) and the lost fixed cost analysis quantifies the magnitude of the under-recovery from customers with installed DG. As supported by both SSVEC and Staff, there is no question that an under-recovery of fixed costs exists with respect to customers with DG. Moreover, the Commission has also previously found that a cost shift exists as described in Finding of Fact 49 of Decision 74202 (Docket E-01345A-13-0248) which states: "In light of the record before us, we find that the proliferation of DG installations results in a cost shift from APS's DG customers to APS's non DG residential customers absent significant changes to APS's rate design." Thus, SSVEC's proposal to implement separate rates for DG with higher fixed charges is consistent with Staff's testimony in this case that a reasonable remedy would be an increase in rates and with the Commission's previous finding in the APS case that a significant rate design change would be necessary to deal with the cost shift.

Q. THE COST OF SERVICE STUDY INCLUDED IN THE RATE FILING DOES NOT SHOW THE RESULTS FOR THE RESIDENTIAL DG CLASS SEPARATELY. WHAT IS THE REASON FOR THIS?

A. The underlying reality with regard to the cost of providing service to residential customers with or without installed DG is that the costs of providing service are essentially the same, except for additional metering costs and billing costs for customers with DG. Until such time that monthly demand data is available for all customers with installed DG, it was determined that the fixed cost components for the total Residential class would provide the best representation of costs. Therefore the Residential DG group is included as part of the total Residential class for the purpose of defining the costs of providing service. The under-recovery of costs resulting from lost fixed costs from DG is calculated in a separate analysis included in my direct testimony. The combination of the fixed costs of service defined in the cost of service study and the under-recovery of those costs defined in the lost fixed cost analysis provides the basis for SSVEC's analysis supporting separate rate schedules for customers with installed DG.

Q. **IS THE IMPLEMENTATION OF SEPARATE RATES FOR CUSTOMERS WITH INSTALLED DG DISCRIMINATORY OR UNDULY PREJUDICIAL?**

A. Not at all. The decision to implement separate rates for customers with installed DG is not an arbitrary decision but one based on the demonstrated characteristics of the customers and the unique circumstances faced by SSVEC in serving those customers. The specific and unique issues related to the recovery of costs from customers with installed DG has been appropriately documented and consensus

with Staff has been reached on the level of under-recovery and the cause. Staff witnesses Van Epps and Paladino and EFCA witness Fulmer state a concern that since other customers in the residential class exhibit some measure of load reduction, as a result of energy efficiency measures or other reasons, it would be unfair or discriminatory to single out customers with installed DG. However, this concern is unfounded for the following reasons:

1. Customers with installed DG exhibit unique usage characteristics and present unique cost recovery issues that distinguish them from all other customers who reduce their energy consumption through means other than DG. Exhibit DWH-8 attached to my direct testimony shows that the average customer with installed DG produces 1,026 kWh per month. The average kWh consumption for Residential customers without installed DG is 677 kWh per month. However, it would be common for a Residential customer with installed DG to have total load requirements ranging from 800 kWh per month up to 2,000 kWh per month. This means that a customer with installed DG producing 1,026 kWh per month would reasonably be expected to reduce his or her energy consumption from SSVEC by 50% up to 100% of total energy requirements.

   In contrast, a customer participating in energy efficiency measures and demand response programs does not generate its own power and would reasonably expect to reduce consumption by only a small percentage of the customer's total load. For example, in the most recently filed report on DSM activities, SSVEC noted that the average energy savings for a customer participating in the heat pump program

was 57 kWh per month and the savings for a customer participating in the water heater program was 85 kWh per month. Thus, the level of lost kWh sales and the corresponding lost fixed costs is significantly and demonstrably greater for customers with installed DG than the potential lost fixed costs for customer's participating in energy efficiency measures and other demand response programs.

2. The number of customers with installed DG has increased such that the magnitude of the number of customers, coupled with the lost fixed cost problem, has established this as an appropriate stand-alone class of customers. In January 2014, SSVEC had 781 Residential customers with installed DG. By the end of 2014, SSVEC had 1,013 residential customers with installed DG, or growth of approximately 30% in one year. As of April 1, 2016, SSVEC is serving 1,147 residential customers with installed DG. The magnitude of the under-recovery of costs as a result of lost fixed cost from this group of customers is far more significant than any other customer group and will continue to grow under the current conditions.

By way of comparison, during the 2014 test year SSVEC had only 41 customers that participated in the high efficiency heat pump rebate program and only 7 customers that participated in the high efficiency water heater rebate program. Again, there is no other group of customers that is comparable to the customers with installed DG.

3. The load characteristics for customers with installed DG are completely different than for any other customer group. Attached as Rebuttal Exhibit DWH-2 is a load profile graph for a typical

residential customer with and without installed DG. The graph clearly shows the difference between the two customer types. There is a reduction in kWh consumption during the middle hours of the peak day and a secondary peak created in the later hours of the day for the customer with installed DG. This illustrates how markedly different the usage consumption is for this group in comparison to any other customer group.

Customer's employing energy efficiency measures are reducing the level of the customer's energy requirements whereas a customer with installed DG is not reducing the level of the customer's energy requirements but rather is providing another source of power for those energy requirements during a short time period of the day. SSVEC's distribution system facility requirements to provide service are not reduced for a customer with installed DG, yet their usage patterns are fundamentally different. In addition, that usage pattern changes dramatically on a cloudy day or when there is a distributed generation equipment malfunction on the customer's equipment. Sierra Vista averages 284 sunny days a year meaning distributed generation does not operate or only partially operates 81 days a year.

4. The lost fixed cost problem related to customers with installed DG is relative to the existing rates in place and the proliferation of these customers in the past few years. When the existing rates were approved, there were relatively few customers with installed DG. Clearly, there was no anticipation of the level of increase in these customers or the impact they would have on the Cooperative's ability

to recover costs. While SSVEC has consistently requested increases in its fixed charges and, to the extent allowed by the Commission, has implemented those rates, the Commission has preferred a very gradual approach to the increase in customer charges to address the overall recovery of fixed costs. With a gradual growth in customers and consistency with regard to the consumer consumption levels, a gradual approach to deal with the under-recovery of fixed costs issue would be workable. However, that is not the case now for SSVEC. The change in circumstances for SSVEC has rendered the existing residential rate design inadequate in recovering the fixed costs for customers with installed DG. The opportunity to correct the rate design by creating new rate schedules is now. Requiring that customers with installed DG be served on the same rate as other Residential customers only perpetuates the under-recovery of costs and continues an inequitable subsidy that will require a more drastic correction in the future.

5. The DG cost shift has been proven and substantiated by SSVEC and Staff, and has been recognized by the Commission in previous decisions. As I testified earlier, the Commission in Decision 74202 affirmed the cost shift created by customers with installed DG in the APS case. In Decision 73183, the Commission approved a Lost Fixed Cost Recovery Rider ("LFCR") for APS that allowed recovery of unrecovered costs associated with a portion of distribution and transmission costs related to EE programs and DG. The LFCR mechanism is a form of alternate surcharge applied to all customer

bills for the recovery of costs clearly caused by a specific group of customers. In reality, it is a rate mechanism which requires non-DG members to pay a portion of the under-recovered fixed cost caused by customers with installed DG that is discriminatory. The most fair and equitable recovery of costs from customers with installed DG and the method that will most significantly reduce cross subsidies provided by other members is to establish a separate rate schedule for these customers.

Q. DOES SSVEC HAVE SOME PROPOSED REVISIONS TO ITS STANDARD OFFER TARIFF TO ADDRESSE STAFF'S CONCERN REGARDING ESTABLISHING SEPARATE RATE SCHEDULES FOR DG AND NON-DG CUSTOMERS?

A. Yes. Attached as Rebuttal Exhibit DWH-3 is a revised proposed tariff for Phase 1 with separate rate schedules for grandfathered and new partial requirements service. Instead of service availability based on whether a customer has installed DG, the rates are generically available to all customers taking partial requirements service. Based on the justifications previously provided, SSVEC strongly supports the establishment of separate rates for customers with installed DG and/or partial requirements service customers. SSVEC does not believe that the establishment of separate rates for customers with installed DG is in any way discriminatory, but the Cooperative also recognizes that the provisions of these rate schedules would be equally applicable to the group of customers that are partial requirements customers. Thus, to the extent that a broader definition encompassing "partial requirements

service" helps alleviate Staff's concerns, SSVEC is agreeable to the proposed revisions included in Rebuttal Exhibit DWH-3.

Q. WHAT DOES SSVEC RECOMMEND WITH REGARD TO THE EXPORT RATE FOR EXCESS ENERGY PROVIDED BY CUSTOMER WITH INSTALLED DG?

A. SSVEC recommends that the export rate be set at a value equal to the Cooperative's avoided cost. Currently, the Cooperative's avoided cost is equal to only the energy and fuel components of the wholesale rate. SSVEC purchases the majority of its wholesale power requirements from the Arizona Electric Power Cooperative ("AEPCO") under a contract with a fixed charge for production capacity costs. That is, the wholesale demand costs are not avoidable. Additionally, there is no known and measurable reduction in distribution wires costs attributable to customer's with installed DG. This was confirmed by Staff witness Van Epps in his direct testimony on page 3, beginning at line 22:

> *For SSVEC, in addition to the total customer costs, the unavoidable fixed costs would be the purchased power demand costs and the distribution wires portion of the bill.*

Setting an export rate credit at a value greater than SSVEC's avoided cost establishes a payment for excess energy that is greater than its value. This would result in other members of the Cooperative providing a subsidy to customers with installed DG. This increases the costs to non DG customers while providing an unsubstantiated benefit to customers with installed DG. This additional cost to non-DG customers would be unduly discriminatory to those who cannot afford DG or choose not to install DG.

Q. EFCA WITNESS FULMER SUGGESTS THAT THE EXPORT RATE SHOULD BE SET BASED ON A FORWARD LOOKING BASIS CONSIDERING SIX ELEMENTS. DO YOU AGREE?

A. No. The bedrock principle of rate design is that rates must be based on costs that are known, measurable and of a continuing nature. The Commission should not approve rates that are based on unquantifiable future costs or potential benefits. To be consistent, the same principle should apply for the establishment of the export rate. Only those costs and benefits that are known, measurable and of a continuing nature should be considered. Applying this foundational principle, I will address each of the six elements that Mr. Fulmer believes should be considered when compensating DG customers for power that is put back onto the electric grid:

1. Avoided Energy and Fuel. The actual avoided wholesale energy and fuel costs are easily identified from SSVEC's monthly wholesale power bills. The avoided energy and fuel costs are known and measurable and continuing in nature. SSVEC agrees that the actual avoided energy and fuel costs should be included in the export rate. Future avoided energy and fuel costs will include any increased variable costs or benefits of the resources utilized, fuel mix, regulations, etc., that impact those costs. However, it would not be appropriate to establish an export rate credit applied today based on potential future unquantifiable costs and benefits.

2. Avoided Generation Capacity. With minor exceptions, SSVEC does not provide its own generation, but rather contracts with AEPCO and other providers for its wholesale power requirements. These existing contracts, which provide the vast majority of power used to serve the

Cooperative's customers, include a fixed charge payment for the cost of generation capacity. This fixed charge payment is constant and does not vary based on consumption. Thus, SSVEC's wholesale generation capacity costs are not reduced as a result of DG. Because there are no avoided generation capacity costs resulting from DG, there are no avoided generation capacity costs to be included in an export rate credit. I would note also that Mr. Fulmer has not quantified any avoided generation capacity costs of SSVEC in his direct testimony.

3. Avoided Transmission Costs. There is simply no consensus regarding the level of quantifiable demand reduction attributable to installed roof-top DG that would impact transmission investments. Moreover, Mr. Fulmer has not provided any quantification of the alleged avoided transmission costs of SSVEC attributable to DG. Given that there is no known and measurable information, the export rate credit should not include a component for avoided transmission costs.

4. Avoided Distribution Costs. DG does not reduce SSVEC's distribution costs of providing service. Because of the intermittency and lack of reliability of rooftop DG, a customer with rooftop DG must still rely on power provided from the electric grid during times when the DG system is not operating or when the DG system does not provide sufficient generation to serve the customer's entire load. As a result, the size of the facilities required to provide service to a customer with DG is no different than for a standard customer without DG. This means that the meter, transformer and service drop at the

DG customer's service location would be the same as for any other similarly situated customer. The sizing of the Cooperative's substation facilities and overhead/underground primary distribution line facilities are, likewise, unaffected by the presence of rooftop DG. The planning process for construction of distribution facilities is affected by DG only to the extent that additional equipment and devices are required to address operational issues such as circuit loading, voltage regulation, power factor problems and protection coordination. Such equipment could include but is not limited to additional regulators, capacitors, breakers, re-closers and fuses. The need for additional equipment to deal with operational issues becomes more significant as the number of customers with DG on an individual circuit increases. I would also point out that Mr. Fulmer has not quantified any avoided distribution costs of SSVEC attributable to DG.

5. Avoided Greenhouse Gas Emission Costs. These are future assumed costs presumably attributable to CO^2 tax that would increase the avoided energy cost. To the extent that the future avoided cost of energy increases due to any number of factors, the avoided energy rate will include those changes and the export rate will be adjusted accordingly in the future when those changes become known and measurable. Those changes are not known and measurable currently and should not be included in an export rate credit paid in current periods. For planning purposes, if the DG customer feels strongly that the avoided cost of energy will increase significantly in the future due

to carbon taxes and other factors, then those projected increases could be included as a component in the customer's own cost/benefit analysis. However, the projected cost of energy should not be a factor in determining the current export rate credit paid by SSVEC to the customer.

6. Incremental Integration Cost. SSVEC has no data that supports a known and measurable integration cost for ancillary or other services to support solar generation. Moreover, Mr. Fulmer has not quantified any incremental integration costs applicable in the case of SSVEC. Therefore, no additional cost should be included as a component in the calculation of the export credit rate.

Q. **PLEASE PROVIDE SSVEC'S RESPONSE TO MR. FULMER'S CONTENTION THAT SSVEC'S PROPOSED DG RATES ARE INADEQUATE.**

A. Beginning on page 15, line 16, Mr. Fulmer presents an argument that suggests that SSVEC's proposals would increase costs to customers with installed DG such that the lease of solar DG would no longer be economically viable. However, SSVEC's proposal does result in significant increases for customers with installed DG, and in any event, those proposed increases have been justified based on the cost of service analysis which identified SSVEC's fixed costs of providing service and the lost fixed cost analysis which identified the magnitude of the under-recovery of costs by SSVEC from these customers. The Cooperative's rate proposals are not predicated on whether the rates charged and credits provided will ensure the financial success of the business model of unregulated solar companies. Rather, SSVEC's rates are

based on SSVEC's known and measureable costs of providing service. SSVEC's objective is to ensure a fair and equitable recovery of the costs SSVEC incurs in providing service to its member customers.

Q. HAS SSVEC INCLUDED IN ITS PROPOSALS A GRANDFATHERING OF THE NET METERING PROVISION FOR EXISTING DG CUSTOMERS?

A. Yes. SSVEC recognizes that existing customers with installed DG made decisions to invest based on existing rates and credits. SSVEC has proposed to grandfather existing DG customers with respect to the provision of net metering and to hold the existing energy charge constant. This allows existing DG customers to continue to receive the full benefit of net metering and banking in the existing net metering tariff. The proposed Residential DG-E rate does include an increase in the service availability charge to reflect a higher recovery of the fixed costs of providing service to this customer group. It would not be appropriate to grandfather or freeze the service availability component of the rate as this would not allow the Cooperative the ability to recover the increased costs of providing service. It is not appropriate to permanently grandfather any rate or rate class. Rates and rate classes are subject to change as costs change.

Q. ON PAGE 21 OF MR. FULMER'S TESTIMONY, HE STATES THAT THE INCREASE FOR THE AVERAGE EXISTING DG CUSTOMER THROUGH ALL FOUR PHASES IS $49.75 PER MONTH. IS THIS CORRECT?

A. No. While the increase amounts shown for each phase are correct, the sum of those values is $39.75 and not $49.75 as shown in the table. To be clear, the increase for

the average existing residential DG customer over the four year phase-in of the rate is $39.75.

Q. DO THE RENEWABLE ENERGY STANDARDS ("RES") REFERENCED ON PAGE 9 OF MR. FULMER'S DIRECT TESTIMONY APPLY TO SSVEC?

A. No. Pursuant to Arizona Administrative Code ("A.A.C.") R14-2-1814, Arizona's electric power cooperatives can submit an annual RES plan with provisions that, once approved by the Commission, substitute for the renewable energy requirements and distributed renewable energy requirements of A.A.C. R14-2-1804 and 1805, respectively. SSVEC's Commission-approved RES plan targets a renewable energy goal of 3.0 percent of retail sales for 2016 and 3.5 percent of retail sales for 2017. There is no requirement in SSVEC's approved RES plan that any specified percentage of the renewable energy goal come from distributed energy resources.

Q. STARTING AT PAGE 16 OF HIS DIRECT TESTIMONY, MR. FULMER DISCUSSES AN APS SPREADSHEET MODEL THAT WAS INTRODUCED IN THE UNS ELECTRIC RATE CASE (DOCKET E-04204A-15-0142) WHICH HE THEN ATTEMPTS TO USE IN THIS CASE WHILE APLYING A SOLAR PV OUTPUT FOR THE CITY OF BISBEE. DO THE SPREADSHEET MODEL OR THE BISBEE SOLAR PV OUTPUT PROFILE HAVE ANY BEARING OR VALIDITY ON SSVEC'S COSTS IN THIS CASE?

A. No. UNS Electric is an investor owned utility and its cost structure and corporate structure are very different than SSVEC's. Further, Bisbee is served by Arizona Public Service which is also an investor owned utility. Mr. Fulmer is mixing apples and oranges with his analysis.

TIME OF USE RATES

Q. STAFF HAS RECOMMENDED THAT SSVEC FILE AN ANALYSIS OR A LETTER EXPLAINING WHY TIME-OF-USE ("TOU") RATES ARE NOT APPROPRIATE FOR ITS SERVICE TERRITORY. ARE TOU RATES APPROPRIATE FOR SSVEC?

A. No. SSVEC has had little success in engaging its members in participating in TOU rates. Currently, there are 17 customers taking service on the Residential TOU rate, 39 customers taking service on the commercial rate, and 1 customer on the Large Power TOU rate. The primary reason that TOU rates are not attractive to SSVEC's customers is the lack of a meaningful differential between the on-peak and off-peak prices for energy. The primary source of SSVEC's power supply continues to be the Arizona Electric Power Cooperative. The production demand costs from AEPCO are billed to SSVEC in a fixed charge and the energy costs are not time differentiated. The result is a lack of an effective TOU price signal. Without an effective cost basis for offering a TOU rate, the development and provision of a meaningful TOU rate does not exist. Therefore, SSVEC requests that the requirement from its last general rate case that the Cooperative develop a plan to promote TOU rates be eliminated and the existing TOU rates be frozen. SSVEC would continue to serve existing customers on the TOU rate schedules under the proposed TOU rates but the availability would be changed to prevent new customers

from taking service on these rates. SSVEC's elected Board of Directors approved freezing the TOU rate schedules at its April 20, 2016 board meeting.

REVISIONS TO SERVICE CONDITIONS

Q. IS SSVEC PROPOSING ANY REVISIONS TO ITS SERVICE CONDITIONS IN THIS DOCKET?

A. Yes. On February 26, 2016, SSVEC filed in the docket a redlined version of its Service Conditions highlighting certain proposed revisions. Prior to that, SSVEC provided a copy of the redlined Service Conditions to Staff on December 1, 2015, in response to a data request. SSVEC published notice of the proposed revisions to the Service Conditions in the Sierra Vista Herald and the Bisbee Daily Review on March 4, 2016. Attached as Rebuttal Exhibit DWH-1 is a copy of the redlined version of the revised Service Conditions that was filed on February 26, 2016. The proposed revisions to the service conditions do not have any impact on SSVEC's proposed revenue requirement. SSVEC requests that the Commission approve the revisions to the Service Conditions.

UPDATED RATE CASE EXPENSE

Q. WHAT IS SSVEC'S POSITION WITH REGARD TO THE RECOVERY OF RATE CASE EXPENSE INCURRED IN THIS PROCEEDING?

A. In its filing, SSVEC included estimated rate case expense of $200,000 amortized over a three-year period for an annual expense amount of $66,667. Through the end of March 2016, outside services for legal and consulting for the rate case total $309,770 The Cooperative anticipates an additional $100,000 in rate case expense to complete the process for a total estimated cost of $409,770. The additional

amount of $209,770 amortized over a three-year period would result in an increased expense of $69,923. The actual amount of rate case expense will be provided closer to the hearing. SSVEC believes the recovery of the additional rate case expense is appropriate and, therefore, requests that any additional actual rate case expense be allowed and recovered in rates.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

REBUTTAL EXHIBIT DWH-1

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

SERVICE CONDITIONS

Effective: March 16, 2015

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SERVICE CONDITIONS

1. FOREWORD

Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Cooperative") was formed in 1938 as a nonprofit corporation to make Electric Service available at the lowest possible cost for the mutual benefit of all its members. In the continuing spirit of that original objective, these Service Conditions and the accompanying Tariffs are designed to govern the supply and safe use of Electric Service consistent with equitable treatment for individual Customers, the fiscal integrity of SSVEC and efficient management in the best interest of all SSVEC Members.

The following provisions concern policies, regulations, and standards by which SSVEC is committed to render Electric Service to the Customer. Capitalized terms used herein have the meaning set forth under Section 2.1, Definitions. Referenced statutes, rules, regulations and codes herein shall be considered "as may be amended from time to time." Complete copies of SSVEC's Bylaws, Tariffs and these Service Conditions are on file at all SSVEC offices for public inspection.

2. GENERAL CONDITIONS OF SERVICE

2.1 DEFINITIONS

For purposes of these Services Conditions and SSVEC's Tariffs, unless the context otherwise requires, the following key terms shall apply:

(1) **ACC**: The Arizona Corporation Commission, the regulatory authority of the State of Arizona having jurisdiction over public service corporations such as SSVEC operating in Arizona.

(2) **Advances in Aid of Construction**: Funds provided to SSVEC by the Applicant under the terms of a Line Extension Agreement, the value of which may be refundable in part.

(3) **Applicant**: A Person requesting SSVEC to supply Electric Service.

(4) **Application**: A written or oral request to SSVEC for Electric Service, as distinguished from an inquiry as to the availability or charges for Electric Service.

(5) **Billing Month**: The period between any two regular readings of SSVEC's Meters at approximately 30-Day intervals.

(6) **Billing Period**: The interval of approximately 30 Days between successive Meter readings for billing purposes.

(7) **Contributions in Aid of Construction**: Funds provided to SSVEC by the Applicant under the terms of a Line Extension Agreement and/or Service Connection Tariff, the value of which is not refundable.

(8) **Cooperative:** SSVEC, a member-owned Utility whose principal activity is to supply Electric Service under a Certificate of Convenience and Necessity granted by the ACC.

(9) **Cooperative Equipment:** The Service Lines, Meter Installation, structures, devices, apparatus and hardware installed by SSVEC to supply Electric Service to the Customer, and other transmission and distribution facilities on SSVEC's system or property.

(10) **Curtailment:** A temporary reduction of load to the Customer for operational or emergency purposes.

(11) **Curtailment Priority:** The order in which Electric Service is to be ~~Curtailed~~curtailed to various classifications of Customers as set forth in SSVEC's Tariffs.

(12) **Customer:** The Person in whose name Electric Service is rendered, as evidenced by the Application or contract for that service, or by the receipt and/or payment of bills regularly issued in the Customer's name regardless of the identity of the actual user of the Electric Service.

(13) **Customer's Service Entrance:** In general, all conductors, devices, apparatus, and hardware on the Customer's side of the Point of Delivery, except SSVEC's Meter Installation.

(14) **Day(s):** A calendar day (unless otherwise specified).

(15) **Demand:** The rate at which electric Power is delivered during any specified period of time. Demand may be expressed in Kilowatts (kW), Kilovolt-amperes (kVA), or other suitable units of electric Power.

(16) **Distribution Lines:** SSVEC's lines operated at distribution voltage, which are constructed along public roadways or other bona fide rights-of-way, including easements on the Customer's property.

(17) **Elderly:** A Person who is 62 years of age or older.

(18) **Electric Service:** The availability of electric ~~Energy~~energy, metered or otherwise, supplied by SSVEC within established standards of voltage and frequency to the Point of Delivery and all other related services offered by SSVEC to Customers.

(19) **Energy:** Electric Energy, expressed in Kilowatt-hours (kWh), Kilovolt-amperes (kVAh), or other suitable units.

(20) **EUSERC:** The Electric Utility Service Equipment Requirements Committee of which SSVEC is a member. The requirements are intended to promote uniform, safe, and efficient Electric Service requirements for member utilities, manufacturers, engineers, and architects.

(21) **Handicapped:** A Person with a physical or mental condition which substantially contributes to the Person's inability to manage his or her own resources, carry out activities of daily living or protect oneself from neglect or hazardous situations without assistance from others.

(22) **Illness:** A medical ailment or sickness for which a Residential Use Customer obtains a verified document from a licensed medical physician stating the nature of the Illness and that discontinuance of Electric Service would be especially dangerous to the Customer's health.

(23) **Inability to Pay:** Circumstances where a residential Customer:

(a) Is not gainfully employed and unable to pay;

(b) Qualified for government welfare assistance but has not begun to receive assistance on the date that he/she receives his/her bill and can obtain verification of that fact from the government welfare assistance agency;

(c) Has an annual income below the published federal poverty level and can produce evidence of this.

(24) **Interruptible or Controlled Electric Service:** Electric Service that is subject to controlled interruption as specified in SSVEC's Tariffs. Also referred to as Controlled Electric Service.

(25) **Kilovolt-Amperes (kVA):** A measurement of electric Power.

(26) **Kilowatt (kW):** A unit of Power equal to 1,000 watts.

(27) **Kilowatt-Hour (kWh):** Electric Energy equivalent to the amount of electric Energy delivered in one hour when delivery is at a constant rate of one kilowatt.

(28) **Line Extension:** The lines and equipment necessary to extend the electric distribution system of SSVEC to provide service to additional Customers.

(29) **Master Meter:** A Meter for measuring or recording the flow of electricity that has passed through it at a single location where said electricity is distributed to tenants or occupants for their individual usage.

(30) **Megawatt (MW):** A unit of Power equal to 1,000,000 watts.

(31) **Member:** Any member of the public, including a person, firm, association, corporation, or bodies politic or subdivision thereof, who has qualified for membership with the Cooperative as provided for in the Cooperatives Bylaws.

(32) **Meter:** The instrument for measuring and indicating or recording the flow of electricity that has passed through it using kWh, kW, and/or kVA as units of measure.

(33) **Meter Installation:** The Meter(s) and auxiliary devices and hardware, if any, constituting SSVEC's equipment needed to measure Energy use and/or billing Demand supplied to the Point of Delivery.

(34) **Meter Tampering:** A situation where a Meter has been illegally altered to change the accuracy of the Meter or breaking the security seals of the Meters.

(35) **Minimum Charge:** The amount the Customer must pay for the availability of Electric Service, including an amount of usage, as specified in SSVEC's Tariffs as monthly or annual.

(36) **NEC:** The National Electrical Code, a USA Standard published by the National Fire Protection Association (NFPA), at Boston, Massachusetts, for the prevention of hazards.

(37) **NESC:** The National Electrical Safety Code, an American National Standard published by the Institute of Electrical and Electronics Engineers (IEEE), at New York City, New York, for the safeguarding of Persons from hazards in electric supply lines.

(38) **Notice:** Unless specified otherwise, a written message delivered by first class U.S. mail, electronic medium, or in Person by one party to the other at the recipient's last known physical billing or electronic address, the period of Notice commencing from the date of personal delivery, electronic transmission, or mailing.

(39) **Permanent Customer:** A Customer who is a tenant or owner of a service location who applies for and receives permanent Electric Service.

(40) **Permanent Service:** Service which, in the opinion of SSVEC, is of a permanent and established character. The use of electricity may be continuous, intermittent, or seasonal in nature.

(41) **Person:** Any individual, partnership, corporation, governmental agency, or other organization operating as a single entity.

(42) **Point of Delivery:** In general, the point where SSVEC's Service Lines are attached to the Customer's Service Entrance, where Electric Service supplied by SSVEC is received by the Customer, distinct from SSVEC's Meter Installation, although in some cases adjacent to it.

(43) **Power:** The rate of generating, transferring, and/or using electric Power, usually expressed in Kilowatts (kW).

(44) **Premises:** All of the real property and apparatus employed in a single enterprise or an integral parcel of land undivided by public streets, alleys, or railways.

(45) **Residential Subdivision Development:** Any tract of land which has been divided into four or more contiguous lots with an average size of one acre or less

for use for the construction of residential buildings or permanent mobile homes for either single or multiple occupancy.

(46) **Residential Use:** Service to Customers using electricity for domestic purposes, such as space heating, air conditioning, water heating, cooking, clothes drying, and other Residential Uses and includes use in apartment buildings, mobile home parks, and other multi-unit residential buildings.

(47) **Service Area:** The territory in which SSVEC has been granted a Certificate of Convenience and Necessity and is authorized by the ACC to provide Electric Service.

(48) **Service Availability Charge:** A charge for the purpose of maintaining adequate revenue to cover SSVEC's operating costs as specified in SSVEC's Tariffs.

(49) **Service Connection:** The attachment of Electric Service at the Point of Delivery and/or installation of Meters by SSVEC personnel.

(50) **Service Disconnection:** The detachment of Electric Service at the Point of Delivery and/or removal of Meters by SSVEC personnel, including operation of Customer-owned main disconnect devices, if appropriate for safety reasons.

(51) **Service Establishment Charges:** The charges as specified in SSVEC's Tariffs.

(52) **Service Line:** The line extending from a Distribution Line or transformer to the Customer's Premises or Point of Delivery.

(53) **Service Reconnect Charges:** The charges as specified in SSVEC's Tariffs which must be paid by the Customer prior to re-establishment of Electric Service each time the electricity is disconnected.

(54) **Single Family Dwelling:** A house, an apartment, or a mobile home permanently affixed to a lot or any other permanent residential unit which is used as a permanent home.

(55) **SSVEC:** Sulphur Springs Valley Electric Cooperative, Inc. or Cooperative, a member-owned Utility whose principal activity is to supply Electric Service under a Certificate of Convenience and Necessity granted by the ACC.

(56) **Tariffs:** The documents filed with the ACC which list the services and products offered by SSVEC and which set forth the terms and conditions and a schedule of the rates and charges for those services and products.

(57) **Temporary Service:** Service to Premises or enterprises which are temporary in nature or where it is known in advance that the service will be of limited duration. Service which in the opinion of SSVEC is for operations of a speculative character is also considered Temporary Service.

(58) **Third-Party Notification:** A Notice sent to a Person willing to receive Notice of the pending discontinuance of Electric Service to the Customer of record in order to make arrangements on behalf of the Customer that is satisfactory to SSVEC.

(59) **Utility:** The public service corporation providing Electric Service to the public in compliance with State law.

(60) **Weather Especially Dangerous to Health:** That period of time commencing with the scheduled termination date when the local weather forecast as predicted by the National Oceanographic and Administration Service indicates that the temperature will not exceed 32 degrees Fahrenheit for the next Day's forecast. The ACC may determine that other weather conditions are especially dangerous to health as the need arises.

2.2 APPLICATION FOR MEMBERSHIP

2.2.1 CONDITIONS FOR MEMBERSHIP

A Customer will become a member of SSVEC under the following conditions:

A. An Application for membership shall be made acknowledging the Customer's agreement to comply with and be bound by SSVEC's Articles of Incorporation and Bylaws and any rules and regulations adopted by the Board of Directors. This Application may be made in person, writing, by telephone, fax, or by any other telecommunication means.

B. A membership fee specified in the Bylaws shall be either paid in advance of the Customer's first Service Connection or included on the Customer's first bill. A former Customer who is reapplying for membership shall also pay a membership fee in advance or have the membership fee included on the first billing if it was previously refunded or applied on account.

2.2.2 MEMBERSHIP LIMIT

No Customer may hold more than one membership. A membership shall be held jointly by both husband and wife unless specified to the contrary in writing by either spouse to SSVEC.

2.3 APPLICATION FOR ELECTRIC SERVICE

2.3.1 INDIVIDUAL APPLICATIONS FOR ELECTRIC SERVICE

A Customer may request Electric Service under the following conditions:

An Application for Electric Service shall be made by the Customer, subject to the rates, terms and conditions of the applicable class of service. This Application may be made in person, writing, telephone, fax, or by any other telecommunications or electronic means authorized by the Cooperative. A Customer may authorize another party to make Application by a Power of Attorney. If Electric Service is supplied and used without a signed Application, the Customer is nonetheless subject to SSVEC's Tariffs and Service Conditions and Bylaws.

Acceptance of the Customer's Application by SSVEC constitutes an agreement for Electric Service that shall continue in force until cancelled by at least three (3) business days' Notice by either party to the other unless a different period of Notice or minimum obligation is specifically provided in the Service Termination Policy (Section 2.20), or the particular schedule or contract under which the Customer receives Electric Service.

A. SSVEC may obtain the following information from each new Applicant for service:

(1) Name or names of Applicant(s) and social security number(s), driver's license number(s) or other form of identification acceptable to SSVEC.

(2) Service address including street or rural address.

(3) Billing address and telephone number.

(4) Address where service was provided previously.

(5) Name and telephone number of employer.

(6) Name and address of relative.

(7) Date Applicant will be ready for service.

(8) Indication of whether Premises has previously received Electric Service from SSVEC.

(9) Purpose for which Electric Service is to be used and SIC (Standard Industrial Code), if applicable.

(10) Indication of whether Applicant is owner or tenant of or agent for the Premises.

(11) Information on the Energy and Demand requirements of the Customer.

(12) Type and kind of life-support equipment, if any, used by the Customer.

(13) Email Address.

(14) Verification of Legal Age.

B. Customer-specific information shall not be released without prior written Customer authorization unless the information is requested by a law enforcement or other public agency through a court order, is requested by the ACC, reasonably required for legitimate account collection activities or is necessary to provide safe and reliable service to the Customer.

C. SSVEC may require a new Applicant for Electric Service to appear at SSVEC's designated place of business to produce proof of identity and sign SSVEC's Application form if applicable.

D. Where Electric Service is requested by two or more individuals, SSVEC shall have the right to collect the full amount owed to SSVEC from any one of the Applicants.

2.3.2 ASSOCIATIONS, CORPORATIONS AND PARTNERSHIPS

An association, corporation, partnership, or similar organization shall also meet the following requirements when applying for Electric Service:

A. Establish the names and mailing addresses of the principal parties in the organization (e.g., officers, partners, local representative, etc.) and the name and relationship of the Person(s) requesting service;

B. Provide proof of the legal existence of the organization (e.g., certificate of incorporation, newspaper publication of the articles of incorporation, or other suitable legal references); and,

C. In the case of a corporation, evidence indicating the state in which it is incorporated.

2.3.3 PAYMENT OF DELINQUENT DEBTS AND LIABILITIES

All delinquent debts and liabilities of the Customer to SSVEC shall be paid before new or additional service can be made available.

2.3.4 IDENTIFICATION OF RESPONSIBLE PARTY

Any Person responsible for accounts in the name of any Customer shall be established in a manner acceptable to SSVEC. Any Person applying for Electric Service to be connected in the name of or in care of another Customer shall furnish to SSVEC notarized written approval from the Customer guaranteeing payment of all bills under the account. Application for service for a minor shall be allowed when payment is assured by a written guarantee from a responsible adult Customer. The Customer is responsible in all cases for service supplied to the Premises until SSVEC has received three (3) business days' Notice of the effective date of any change in the service Agreement. The Customer shall also promptly notify SSVEC of any change in billing or mailing address.

2.3.5 IDENTIFICATION OF LOAD AND PREMISES

The electric loads (see Section 2.11 Rates) and Premises to be served by SSVEC shall be clearly identified by the Customer at the time of Application. If the service address is not recognized in terms of a commonly used identification system, the Customer may be required to provide specific written directions before SSVEC shall act on a request for Electric Service.

2.3.6 PROVISIONS FOR LANDLORD AGREEMENTS

SSVEC will work with landlords to avoid disconnecting Electric Service from rental properties when tenants request disconnections. SSVEC will require the landlord to enter into a written agreement whereby the landlord agrees to pay to SSVEC any kWh, applicable taxes and services charges to maintain Electric Service at the required address during the vacancy period. SSVEC will read the Meter for the prior tenant's disconnect/final bill and bill the landlord accordingly until new Electric Service is requested in the name of the new tenant for the rental property. In the case of tenant non-pay disconnects, it shall be the landlord's responsibility to request that Electric Service remain active to avoid reconnection charges.

2.4 CREDIT POLICY

SSVEC shall extend credit for Electric Service when the Customer meets the criteria established for the applicable class of service as set forth in this Section.

2.4.1 RESIDENTIAL SERVICE

Except as set forth in Section 2.4.4 below, SSVEC shall extend credit to a new Applicant for residential service if the Applicant is able to meet any of the following requirements:

A. The Applicant has had service of a comparable nature with SSVEC at another service location within the past two (2) years and was not delinquent in payment more than twice during the last 12 consecutive months or disconnected for nonpayment.

B. The Applicant can produce a letter regarding credit or verification from an electric Utility where service of a comparable nature was received within the last two (2) years which states Applicant was not delinquent in payment more than twice during the last 12 consecutive months.

C. Payment of a deposit as hereinafter provided.

2.4.2 MUNICIPAL SERVICE

The sole requirement for extension of credit to any municipal body, improvement or service district, county government, the State of Arizona, the United States government or other political subdivision shall be that the authorized executive official(s) of that agency requests Electric Service.

2.4.3 ALL OTHER SERVICE

Except as set forth in Section 2.4.4 below, SSVEC shall extend credit to a new Applicant for service if the Applicant is able to meet any of the following requirements:

A. The Applicant has had service of a comparable nature with SSVEC at another service location within the past two (2) years and was not delinquent in payment more than twice during the last 12 consecutive months or disconnected for nonpayment.

B. In lieu of a deposit, a new Applicant may provide an irrevocable letter of credit from a bank or financial institution and acceptable to SSVEC or a surety bond as security for SSVEC.

C. Payment of a deposit as hereinafter provided.

2.4.4 EXCEPTIONS APPLICABLE TO SECTIONS 2.4.1 AND 2.4.3

SSVEC may still require the Customer to pay a cash deposit in lieu of any other evidence of satisfactory credit to establish, reestablish or maintain Electric Service if any of the following circumstances apply:

A. The Customer's account subsequently becomes delinquent more than two times within any 12-month consecutive period.

B. Service to the Customer is subsequently terminated for nonpayment of a delinquent account within the last 12 months.

2.4.5 DEPOSIT PROCEDURES

When SSVEC requires a cash deposit from a Customer, an SSVEC receipt shall be the primary record of the deposit. Verification of the existence of and right to a deposit may also include appropriate SSVEC records. Arrangements acceptable to SSVEC may be made for payment of cash deposits.

SSVEC shall refund residential deposits with accrued interest after twelve 12 months of service if the Customer has not been delinquent more than twice in the payment of the utility bills. Non-residential account deposits with accrued interest, surety bonds or irrevocable letters of credit shall be refunded or released after 24 months of service if the Customer has not been delinquent more than twice in the payment of the utility bills unless otherwise specified in the contract for Electric Service.

2.4.6 SCHEDULE OF DEPOSITS

A. Residential Service. Deposits shall not exceed two times that Customer's average monthly bill for the previous year, except where greater use is estimated for electric heating, water heating or other major Energy requirements.

B. Nonresidential Service. Deposit shall not exceed 2.5 times that Customer's estimated maximum monthly bills.

C. Adjustment of Deposits. SSVEC may review the Customer's usage after service has been connected and adjust the deposit amount based upon the Customer's actual usage. Deposits are subject to refund upon the establishment of credit with SSVEC. A separate deposit may be required for each Meter installed.

2.4.7 INTEREST ON DEPOSITS

SSVEC shall annually pay simple interest on a Customer's required deposit equivalent to the passbook rate of interest of SSVEC's banking institution as of January 1st of

each year. Interest shall accrue until SSVEC refunds the deposit or at its discretion applies the deposit to the Customer's unpaid account for Electric Service. Annual interest on deposits shall generally be applied to the Customer's account on the Customer's bill following the anniversary date of the deposit. When a Customer terminates service, annual interest shall be prorated to the nearest full month following the anniversary date of the deposit. In no event shall interest accrue after a final bill for service is rendered

2.4.8 GROUNDS FOR REFUSAL OF SERVICE

SSVEC may refuse to establish Electric Service if any of the following conditions exist:

A. The Applicant has an outstanding balance for the same class of Electric Service with SSVEC, and the Applicant is unwilling to make arrangements with SSVEC for payment.

B. A condition exists which, in SSVEC's sole judgment, is unsafe or hazardous to the Applicant, the general public or SSVEC's personnel, property or facilities.

C. The refusal by the Applicant to provide SSVEC with a deposit when the Customer has failed to meet SSVEC's Credit Policy herein.

D. Customer is known to be in violation of SSVEC's Tariffs or Service Conditions.

E. Failure of the Customer to furnish such funds, service, equipment, and/or rights-of-way necessary to serve the Customer which has been specified by SSVEC as a condition for providing Electric Service.

F. Applicant falsifies his or her identity for the purpose of obtaining Electric Service.

G. SSVEC may refuse to provide Electric Service until the Customer has obtained all required permits and/or inspections which indicate that the Customer's facilities comply with local construction and safety standards.

2.5 PROVISION OF ELECTRIC SERVICE

2.5.1 RESPONSIBILITY OF SSVEC

Prompt, reliable Electric Service is SSVEC's primary responsibility to the Customer. In general, there is no charge to the Customer for service calls related to voltage problems, malfunction of SSVEC equipment and other errors for which SSVEC is responsible, but service calls relating to malfunction of Customer equipment will be charged at Schedule SC Tariff rate. SSVEC shall use reasonable diligence to supply continuous service but does not guarantee Electric Service against interruptions. SSVEC is not liable to the Customer for damages resulting from interruptions beyond its control.

A. SSVEC shall be responsible for the safe transmission and distribution of electricity until it passes the Point of Delivery to the Customer.

B. SSVEC shall be responsible for maintaining in safe operating condition all Meters, equipment and fixtures installed on the Customer's facilities by SSVEC for the purpose of delivering Electric Service to the Customer.

2.5.2 RESPONSIBILITY OF CUSTOMER

A. Each Customer shall be responsible for maintaining all Customer facilities on the Customer's side of the Point of Delivery in safe operating condition.

B. Each Customer shall be responsible for safeguarding all SSVEC property and equipment installed in or on the Customer's Premises for the purpose of supplying SSVEC Electric Service to that Customer.

C. Each Customer shall exercise all reasonable care to prevent loss or damage to SSVEC property, excluding ordinary wear and tear. The Customer shall be responsible for loss of or damage to SSVEC property on the Customer's Premises arising from neglect, carelessness, or misuse and shall reimburse SSVEC for the cost of necessary repairs or replacements.

D. Each Customer shall be responsible for payment for any equipment damage and/or estimated unmetered usage resulting from unauthorized breaking of seals, interfering, tampering or bypassing the SSVEC Meter.

E. Each Customer shall be responsible for notifying SSVEC of any equipment failure identified as SSVEC's equipment.

2.5.3 MINIMUM CUSTOMER INFORMATION REQUIREMENTS

A. Information for residential Customers.

(1) SSVEC shall make available upon Customer request not later than 15 Days from the date of request a concise summary of the rate schedule applied for by such Customer.

The summary shall include the following:

(a) The monthly Minimum Charge or other Customer charge, identifying the amount of the charge and the specific amount of usage included in the Minimum Charge, where applicable.

(b) Rate blocks, where applicable.

(c) Any adjustment factor(s) and method of calculation.

(2) SSVEC shall, to the extent practical, identify the Tariff most advantageous to the Customer and notify the Customer of such prior to commencement of Electric Service.

(3) SSVEC shall make available upon Customer request, but not later than 60 Days from the date of commencement of Electric Service, a concise summary of SSVEC's Tariffs or the ACC rules and regulations concerning:

(a) Deposits

(b) Termination of Electric Service

(c) Billing and collection

(d) Customer complaints

(4) SSVEC, upon request of a Customer, shall transmit a written statement of actual consumption by such Customer for each billing period during the prior 12 months unless such data is not reasonably ascertainable.

(5) SSVEC shall inform all new Customers of their right to obtain the information specified above.

B. Information required due to changes in Tariffs.

(1) SSVEC shall transmit to affected Customers a concise summary of any change in SSVEC's Tariffs affecting those Customers.

(2) The above information shall be transmitted to the affected Customer within 60 Days of the effective date of the change.

2.5.4 <u>CONTINUITY OF SERVICE</u>

SSVEC shall make reasonable efforts to supply a satisfactory and continuous level of Electric Service. However, SSVEC shall not be responsible for any damage or claim of damage attributable to any interruption or discontinuation of Electric Service resulting from:

A. Any cause against which SSVEC could not have reasonably foreseen or made provision for, e.g., force majeure (Act of God), interruption of wholesale power supply, etc.

B. Scheduled Electric Service interruptions to make repairs or perform routine maintenance.

C. Curtailment.

D. Interruptible Service.

2.5.5 ELECTRIC SERVICE INTERRUPTIONS

A. SSVEC shall make reasonable efforts to reestablish Electric Service within the shortest possible time when Electric Service interruptions occur.

B. SSVEC shall make reasonable provisions to meet emergencies resulting from failure of Electric Service, and SSVEC shall issue instructions to its employees covering procedures to be followed in the event of emergency in order to prevent or mitigate interruption or impairment of Electric Service.

C. In the event of a national emergency or local disaster resulting in disruption of normal Electric Service, SSVEC may, in the public interest, interrupt Electric Service to other Customers to provide necessary service to civil defense or other emergency service agencies on a temporary basis until normal Electric Service to these agencies can be restored.

D. When SSVEC plans to interrupt Electric Service for more than four (4) hours to perform necessary repairs or maintenance, SSVEC shall attempt to inform affected Customers verbally or through effective media at least 24 hours in advance of the scheduled date and estimated duration of the Electric Service interruption. Such repairs shall be completed in the shortest possible time and in accordance with proper electrical and safety standards in order to minimize the inconvenience to the Customers of SSVEC. In case of emergency conditions, SSVEC may suspend Electric Service without prior Notice to affected Customers.

E. Interruptible or Controlled Service under an approved Tariff shall not be considered an Electric Service interruption for purposes of this Section.

2.5.6 SERVICE CALLS DURING REGULAR BUSINESS HOURS

Service charges as provided in SSVEC's approved Tariffs shall be imposed for service calls performed during regular business hours for one of the following reasons:

A. Interruptions caused by the Customer's negligence or failure of Customer-owned equipment. Reasonable efforts will be made to advise the Customer about the responsibility for such charges before the service call starts.

B. Reconnection of Electric Service to any Customer previously disconnected for unlawful use of service (including tampering or theft), misrepresentation to SSVEC, unsafe conditions, threats to SSVEC personnel or property, failure to permit safe access, detrimental effects of Customer loads on SSVEC's system, or failure to establish credit and/or follow procedures to establish Electric Service.

C. Premises visits regarding action associated with disconnection of Electric Service for non-payment of a delinquent bill (whether or not service is actually disconnected as a result of such visit) or for reconnection of Electric Service that has previously been disconnected for non-payment. The service charge may be applied in the case of reconnections effectuated through remote metering when the Customer has been disconnected for non-payment of a delinquent bill.

D. Meter testing performed at the written request of the Customer. However, if SSVEC's test shows that the Meter is inaccurate by more than three (3) percent, the service charge will be waived or refunded to the Customer.

2.5.7 SERVICE CALLS AFTER REGULAR BUSINESS HOURS

Service charges as provided in SSVEC approved Tariffs shall be imposed for a service call after regular business hours for one of the following reasons:

A. Interruptions caused by the Customer's negligence or failure of Customer-owned equipment, even though SSVEC is unable to perform any work beyond the Point of Delivery. The Customer shall be advised about the responsibility for such charges before the service call starts.

B. Reconnection of Electric Service to any Customer previously disconnected for unlawful use of service (including tampering or theft), misrepresentation to SSVEC, unsafe conditions, threats to SSVEC personnel or property, failure to permit safe access, detrimental effects of Customer loads on SSVEC's system, or failure to establish credit and/or sign an agreement for service. Such work will be performed only when requested and agreed to by the Customer.

C. Premises visits regarding action associated with disconnection of Electric Service for non-payment of a delinquent bill (whether or not service is actually disconnected as a result of such visit) or for reconnection of Electric Service that has previously been disconnected for non-payment. The service charge may be applied in the case of reconnections effectuated through remote metering when the Customer has been disconnected for non-payment of a delinquent bill.

D. Should Electric Service be established during a period other than regular working hours at the Customer's request, the Customer may be required to pay an after-hour charge for the Service Connection. Where SSVEC scheduling will not permit Service Establishment on the same day requested, the Customer can elect to pay the after-hour charge for establishment that day or his service will be established on the next available normal business day.

E. For the purpose of this Section, the definition of Service Establishments are where the Customer's facilities are ready and acceptable to SSVEC and SSVEC needs only to install a Meter, read a Meter, or turn on Electric Service.

F. Except in emergency situations, as determined by SSVEC in its sole discretion, SSVEC will not make a service call after 9:00 p.m.

2.5.8 CHARGES FOR ELECTRIC SERVICE CONNECTIONS

A. New and Additional Electric Service Connections. Service charges as provided in SSVEC approved Tariffs shall be imposed for new and additional Electric Service or for a change in Electric Service location to a new address.

B. Service Connection Callbacks. Service charges as provided in SSVEC approved Tariffs shall be imposed for a return trip to connect Electric Service if, at the Customer's request, it was previously made available at the Point of Delivery, if an inaccurate service address provided by the Customer results in a Service Connection callback or if the Customer postpones or cancels any service order already completed by SSVEC. Except in emergency situations as determined by SSVEC, SSVEC will not connect Electric Service after 9:00 p.m.

C. Property Damage. The Customer shall be billed for damages to SSVEC equipment or property caused by the Customer or the Customer's employee(s) or agent(s). Such damages and the cost of repair shall be billed at SSVEC's current rates for labor, transportation, equipment, and materials, less appropriate credit for salvage, if any.

2.6 COMPLAINTS

SSVEC shall promptly investigate any legitimate complaint by a Customer about SSVEC's quality of service, charges for service, or other transactions or incidents involving SSVEC personnel.

2.6.1 CUSTOMER SERVICE COMPLAINTS

A. SSVEC shall make a full and prompt investigation of all service complaints made by its Customers.

B. SSVEC shall respond to the complaint within five (5) business Days of its receipt of the complaint as to the status of SSVEC's investigation of the complaint.

C. SSVEC shall notify the complainant of the final disposition of each complaint. Upon request of the complainant SSVEC shall report the findings of its investigation in writing.

D. SSVEC shall inform the Customer of his/her right of appeal to the ACC.

E. SSVEC shall keep a record of all written service complaints received that shall contain, at a minimum, the following data:

(1) Name and address of complainant.

(2) Date and nature of the complaint.

(3) Disposition of the complaint.

(4) A copy of any correspondence between SSVEC, the Customer, and/or the ACC.

This record shall be maintained for a minimum period of one (1) year and shall be available for inspection by the ACC.

2.6.2 CUSTOMER BILL DISPUTES

A. Any SSVEC Customer who disputes a portion of a bill rendered for SSVEC service shall pay the undisputed portion of the bill and notify SSVEC's designated representative that such unpaid amount is in dispute prior to the delinquent date of the bill.

B. Upon receipt of the Customer Notice of dispute, SSVEC shall:

(1) Notify the Customer within five (5) business Days of the receipt of a written dispute Notice.

(2) Initiate a prompt investigation as to the source of the dispute.

(3) Withhold disconnection of service until the investigation is completed and the Customer is informed of the results. Upon request of the Customer, SSVEC shall report the results of the investigation in writing.

(4) Inform the Customer of his/her right of appeal to the ACC.

C. Once the Customer has received the results of SSVEC's investigation, the Customer shall submit payment within five (5) business Days to SSVEC for any disputed amounts. Failure to make full payment shall be grounds for termination of service.

2.6.3 ACC RESOLUTION OF SERVICE AND/OR BILL DISPUTES

A. In the event a Customer and SSVEC cannot resolve a service and/or bill dispute, the Customer shall file a written statement of dissatisfaction with the ACC in accordance with the procedures set forth in Arizona Administrative Code R14-2-212(C), which shall apply to the dispute.

B. SSVEC may implement normal termination procedures if the Customer fails to pay all bills rendered during the resolution of the dispute by the ACC.

C. SSVEC shall maintain a record of written statements of dissatisfaction and their resolution for a minimum of one (1) year and make such records available for ACC inspection.

2.7 CONSTRUCTION STANDARDS AND SAFETY

A. SSVEC shall construct all facilities in accordance with, and otherwise comply with the provisions of, Arizona Administrative Code R14-2-208.F.1.

B. SSVEC shall adopt a standard alternating nominal voltage or standard alternating nominal voltages (as may be required by its distribution system) for its entire Service Area in accordance with, and otherwise comply with the provisions of, Arizona Administrative Code R14-2-208.F.2.

2.8 BILLING POLICY

2.8.1 TAX AND ASSESSMENT CLAUSE

Billing under all schedules and Tariffs will be increased by an amount equal to the sum of all federal, state, county, municipal and other governmental levies, gross receipts, license fees, and other impositions of similar character assessed on the basis of gross revenue of the Cooperative and/or the revenue from the electricity or services sold and/or the Kilowatt-Hours of electricity generated or purchased for sale and/or sold hereunder. In the case of an increase in rates of existing taxes of this character or additional new taxes, licenses or fees based upon generation, distribution, purchase, and/or sale of electric power current or Energy shall be imposed upon or required to be paid by the Cooperative, the rates herein may be increased by a surcharge equal to the amount of the cost per kWh, or per consumer, or per Demand, capacity, or other applicable unit of charge for such new or additional taxes, licenses or fees.

2.8.2 ACC APPROVED RATE ADJUSTMENT FACTORS

SSVEC's rates are subject to the imposition of various adjustment factors established and approved for billing by the ACC from time to time. These rates could include, but are not limited to, purchased power, demand side management, generated power and debt adjustments.

2.8.3 FREQUENCY AND ESTIMATED BILLS

A. SSVEC shall render itemized monthly service bills on a cycle system. Regular Meter readings shall be scheduled for periods of not less than 25 Days or more than 35 Days. In the event a Customer establishes Electric Service within 5 Days prior to the scheduled Meter read date, the usage will be applied to the following billing cycle, and no bill will be rendered to the Customer. In the event a Customer discontinues Electric Service within 5 Days after the scheduled Meter read date, a bill for any usage and other applicable charges will be presented as the closing bill.

B. If SSVEC is unable to read the Meter on or about the scheduled Meter read date, SSVEC will estimate the consumption for the Billing Period giving consideration to the following factors where applicable:

(1) The Customer's usage during the same month of the previous year.

(2) The amount of usage during the preceding month.

(3) In accordance with Schedule EM – Estimation Methodologies

C. After the third consecutive month of estimating the Customer's bill for reasons other than severe weather, SSVEC will attempt to secure an accurate reading of the Meter.

D. Failure on the part of the Customer to comply with a reasonable request by SSVEC for access to its Meter may lead to the discontinuance of Electric Service.

E. Estimated bills will be issued only under the following conditions:

(1) Failure of a Customer who reads his/her own Meter to deliver the Meter reading information to SSVEC in accordance with the requirements of SSVEC billing cycle.

(2) When severe weather conditions which prevent SSVEC from reading the Meter, remote locations which make it uneconomical to read on a monthly basis, emergencies or work stoppage prevent actual Meter readings.

(3) Circumstances that make it dangerous or impossible to read the Meter, including but not limited to: locked gates, blocked Meters, vicious or dangerous animals, etc.

(4) Communications issues with automated metering.

(5) The billing is not the first or final billing for Electric Service.

(6) Due to Customer equipment failure, a one-month estimation will be allowed.

F. Each bill based on estimated usage will indicate that it is an estimated bill.

2.9 METER READING

2.9.1 COMPANY OR CUSTOMER METER READING

A. SSVEC may, at its discretion, allow for Customer reading of Meters.

B. It shall be the responsibility of SSVEC to inform the Customer how to properly read his/her Meter.

C. Where a Customer reads his or her own Meter, SSVEC will read the Customer's Meter at least once every six (6) months.

D. SSVEC shall specify the timing and other requirements for the Customer to submit his or her monthly Meter reading to conform to SSVEC's billing cycle.

E. In the event the Customer fails to submit the reading on time, SSVEC may issue the Customer an estimated bill.

F. Meters shall be read monthly on as close to the same day as practical.

2.9.2 MEASURING OF SERVICE

A. All Energy sold to Customers and all Energy consumed by SSVEC, except that sold according to fixed charge schedules, shall be measured by commercially acceptable measuring devices owned and maintained by SSVEC, except where it is impractical to install Meters, such as street lighting or security lighting, or where otherwise authorized by the ACC.

B. When there is more than one Meter at a location, the metering equipment shall be so tagged or plainly marked as to indicate the circuit metered or metering equipment.

C. Meters which are not direct reading shall have the multiplier plainly marked on the Meter.

D. All charts taken from recording Meters shall be marked with the date of the record, the Meter number, Customer, and chart multiplier.

E. Metering equipment shall not be set "fast" or "slow" to compensate for supply transformer or line losses.

2.9.3 CUSTOMER REQUESTED REREADS

A. SSVEC shall at the request of a Customer reread that Customer's Meter within ten (10) business Days after receiving such request by the Customer.

B. Any Meter reread may be charged to the Customer consistent with the Tariff rate on file and approved by the ACC provided that the original reading was not in error.

2.9.4 RECORD OF CONSUMPTION

The installation and/or registration of SSVEC's Meter at the Customer's point of delivery shall serve as initiation of service and the Meter reading shall serve as evidence of the amount of energy and/or billing demand used by the Customer, except where non-metered service is supplied. However, in the event of failure of SSVEC's Meter or of SSVEC personnel to obtain an actual reading, SSVEC will estimate the usage in accordance with Schedule EM–Estimation Methodologies.

2.9.5 ACCESS TO CUSTOMER PREMISES

SSVEC shall have the right of safe ingress to and egress from the Customer's Premises at all reasonable hours for any purpose reasonably connected with SSVEC's property used in furnishing Service and the exercise of any and all rights secured to it by law or these Service Conditions.

2.10 CHANGE OF OCCUPANCY

A. No less than three (3) business Days' advance Notice must be given in person, in writing, or by telephone at the company's office to discontinue service or to change occupancy.

B. The outgoing Customer shall be responsible for payment for all SSVEC Electric Services provided and/or consumed up to the scheduled turn-off date.

C. The outgoing Customer shall be responsible for providing access to the Meter so that SSVEC may obtain a final Meter reading.

2.11 RATES

SSVEC supplies Electric Service under several rate schedules, and, at the time of Application, selects the most favorable rate for which the Customer is reasonably eligible based upon information available at the time of Application. It shall be the responsibility of the Customer, however, to notify SSVEC and request rate reclassification if eligibility for the assigned rate changes or if the size or character of connected electric load substantially changes. Retroactive billing adjustments for a Customer on an incorrect rate shall be limited to the three (3) immediately previous Billing Periods only, except in cases of misrepresentation by the Customer where adjustment shall be retroactive to the original date of Service Connection.

2.12 BILLING OF LINE EXTENSION CHARGES

The Customer shall be billed the applicable Tariff indicated in the Customer's Application for Service, on the first billing cycle at least thirty (30) Days after Electric Service is installed and connection made regardless of whether the Customer has begun actual Energy use.

2.13 BILLING INFORMATION

All Electric Service bills shall identify the Premises served (by Premise's address, service number, and SSVEC location number, as well as Customer-specific service identifier) and the type of service provided. Other information provided will be as follows:

A. Each Meter at a Customer's Premises will be considered separately for billing purposes, and the readings of two or more Meters will not be combined unless otherwise provided for in SSVEC's Tariffs.

B. Each bill for residential Electric Service will contain the following minimum information:

(1) The beginning and ending Meter readings of the Billing Period, the dates thereof, and the number of Days in the Billing Period.

(2) The date the bill will be considered due.

(3) Billed usage and Demand.

(4) Rate schedule number.

(5) SSVEC's telephone numbers and addresses.

(6) Customer's name and service account number.

(7) Amount due and any previous amount due.

(8) Adjustment factor, where applicable.

(9) Taxes.

(10) The ACC's address and toll-free telephone number.

2.14 CUSTOMER BILLS AND OTHER NOTICES

SSVEC shall mail or electronically transmit (per electronic billing program) Electric Service bills and other important Notices to the last known address provided by the Customer. It is the Customer's responsibility to notify SSVEC about any change in or correction to Customer's billing address. In no case shall failure to receive a bill or other important Notice mailed or transmitted to the Customer's billing address of record relieve or diminish the Customer's obligation to pay for Electric Service.

2.15 TERMS OF PAYMENT

A. All Electric Service bills are due and payable no later than fifteen (15) Days from the date of the bill. Any payment not received within this time-frame shall be considered delinquent and could incur a late payment charge. Electric Service bills for the current Billing Period may be paid in person or by mail at any SSVEC business office, or to any authorized collection agent of SSVEC. Payment of delinquent charges, however, may be limited by SSVEC to a specific method, time, and place under terms of SSVEC's collection policy or a deferred payment agreement.

B. For the purposes of this Section, the date a bill is rendered may be evidenced by:

(1) The postmark date.

(2) The mailing date.

(3) The billing date shown on the bill (however, the billing date shall not differ from the postmark or mailing date by more than two (2) Days).

(4) The transmission date for electronic bills.

C. Failure to receive bills or Notices which have been properly placed in the United States mail or that have been properly transmitted via secure website, shall not prevent such bills from becoming delinquent nor relieve the Customer of his obligations therein.

D. Charges for Electric Service commence when the Service is installed and connection made, whether used or not.

E. A late payment penalty may be added to all past-due balances which remain unpaid for at least fifteen (15) Days beyond the due date in accordance with approved SSVEC Tariffs.

2.16 OPTIONAL PAYMENT PLANS

Eligible Customers may elect the following plans:

2.16.1 BUDGET BILLING

For convenience of SSVEC's residential and small commercial Customers, and at no additional charge, SSVEC may offer a budget billing plan based on 12 months of the Customer's estimated total charges. Budget billing requires sufficient billing history to accurately estimate the Customer's monthly installment. Annually, the plan will have a catch-up time on the anniversary date of initiation. At that time, either credit amounts shall be refunded, debit amounts billed, or, at the discretion of SSVEC, the credit or debit amount rolled into the next year's budget billing plan. SSVEC may adjust the Customer's budget billing amount in the event the estimate of the Customer's usage or cost should vary significantly from the Customer's actual usage or cost. Two consecutive delinquencies will be cause for removal of the Customer from the budget billing plan and all amounts will become due and payable.

2.16.2 SUREPAY AUTOMATIC PAYMENT PLAN

For the convenience of all Customers with appropriate accounts at designated financial institutions and at no additional charge, SSVEC may offer an optional SurePay Automatic Payment Plan under which the Customer's financial institution is authorized to accept the Customer's Electric Service bill as a draft on the Customer's account. An eligible Customer shall acknowledge the terms of the SurePay Automatic Payment Plan before the Plan is effective provided that either party may cancel upon thirty (30) Days' Notice to the other.

2.16.3 PREPAID METERING SERVICES

Pre-paid metering is a payment option that SSVEC may offer to its members. Pre-paid metering provides more payment flexibility to its members and is known to reduce deposits, eliminate late charges and help members better manage bills, and works to reduce administrative and collection costs for the Cooperative. Customers may contact SSVEC offices for additional information.

2.16.4 ELECTRONIC/PAPERLESS BILLING

SSVEC may offer an electronic/paperless billing program. A Customer may elect to receive their Electric Service bill, as well as other SSVEC Notices and Member communications, via an electronic medium such as, but not limited to, web-site and email. A Customer who elects to receive their Electric Service bill electronically, may not receive a paper//hard copy bill or Notices via U.S. mail. A Customer may elect electronic billing through SSVEC's website wherein the Customer shall acknowledge and agree to be bound by the terms and conditions of the program. It is the Customer's responsibility to provide to SSVEC, and to maintain, a current and correct email address. A Customer of the program may discontinue participation under the program upon 30 Days' Notice to SSVEC. SSVEC may discontinue the program at any time upon 30 Days' Notice to Customers.

2.16.5 CREDIT CARD PAYMENT RATE SCHEDULE

A. Type of Service:

SSVEC may accept credit cards for the payment of all Electric Services. Payment by credit card is an alternative and optional method of paying for Electric Services.

B. Availability:

Payment by credit card shall be available to all SSVEC Customers receiving sales and services provided by SSVEC. Only credit cards approved by SSVEC will be accepted.

C. Place of Payment:

Credit card payments may be made as follows:

(1) At any of SSVEC's Customer service offices where payments are accepted.

(2) SSVEC, in its sole discretion, may authorize personnel who are in the field to accept credit card payments.

(3) By telephone.

(4) SSVEC Customers may have their monthly bill automatically charged to their credit card in accordance with the SurePay Automatic Payment Plan.

D. Conditional Acceptance of Payment:

Payment by credit card shall not be deemed accepted by SSVEC unless accepted and paid by the issuing bank. If for any other reason, including, but not limited to, cancellation of the credit card by the Customer or the payment by credit card is dishonored or rejected by the issuing financial institution, the credit card payment shall be treated the same as insufficient funds. In that event, the Customer's status shall be the same as if no payment was tendered, and an insufficient funds charge will be charged to the Customer's SSVEC account in accordance with SSVEC's Tariffs and Service Conditions.

2.17 INSUFFICIENT FUNDS (NSF) OR RETURNED PAYMENTS

A. SSVEC shall be allowed to charge a fee in accordance with its Tariffs for each instance where a Customer tenders payment for Electric Service with a check or other financial instrument (including a credit card) which is returned by the Customer's bank or financial institution for insufficient funds.

B. When SSVEC is notified by the Customer's bank or other financial institution that the check or financial instrument tendered for the Electric Service will not clear, SSVEC may require the Customer to make payment in cash, by money order, certified check, or other means which guarantees the Customer's payment to SSVEC.

C. A Customer who tenders an insufficient check or financial instrument shall in no way be relieved of the obligation to render payment to SSVEC under the original terms of the bill nor does it defer SSVEC's ability to terminate Electric Service for nonpayment of bills.

D. SSVEC may require guaranteed funds (cash, money order, certified check or credit card) from a Customer who has paid with an insufficient check or financial instrument three (3) or more times within a twelve (12) month period.

2.18 COLLECTION POLICY

It is the responsibility of SSVEC to initiate collection action on delinquent accounts in order to protect its fiscal integrity and the interest of all Members. SSVEC may institute collection action on any account which has been disconnected (on either a seasonal or permanent basis) where an outstanding balance has remained unpaid for thirty (30) Days after issuance of the final bill. At the discretion of SSVEC, a collection action may be instituted through a collection agency retained by SSVEC or by any means legally permissible.

2.19 PAYMENT OF BILLS AND DELINQUENT BILLS

2.19.1 NOTICE OF DELINQUENT STATUS

All bills for Electric Services are due and payable no later than fifteen (15) Days from the date of the bill. Any payment not received by SSVEC within fifteen (15) Days shall be considered delinquent and is subject to a late charge in accordance with SSVEC's Tariffs. The Customer shall be notified of a delinquent account by first class U.S. mail, by personal delivery, or by electronic notification (if applicable) at least five (5) Days before a scheduled disconnection. A delinquent account may include past-due amounts transferred from other inactive accounts held by the Customer for the same class of service.

2.19.2 DEFERRED PAYMENT PLAN

SSVEC may, prior to termination of Electric Service, offer to qualifying residential Customers a deferred payment plan for the Customer to retire unpaid electric bills. Each deferred payment agreement entered into by SSVEC and the Customer shall provide that service will not be disconnected if:

A. The Customer agrees to pay a reasonable amount of the outstanding bill at the time of entering into the deferred payment plan.

B. The Customer agrees to pay all future bills for Electric Service in accordance with the billing and collection Tariffs of SSVEC.

C. The Customer agrees to pay a reasonable portion of the remaining outstanding balance in installments over a period not to exceed six (6) months.

D. For the purposes of determining a reasonable installment payment schedule of a deferred payment plan, SSVEC and the Customer shall give consideration to the following details:

E. Size of the delinquent account.

F. Customer's ability to pay.

G. Customer's payment history.

H. Length of time that the debt has been outstanding.

I. Circumstances which resulted in the debt being outstanding.

J. Any other relevant factors related to the circumstances of the Customer.

Customers desiring to enter into a deferred payment plan (if offered by SSVEC) shall establish such agreement prior to SSVEC's scheduled termination date for nonpayment of bills. The Customer's failure to execute such an agreement prior to the termination date will not prevent SSVEC from disconnecting service for nonpayment.

Deferred payment plans may be in writing and may be signed by the Customer and an authorized SSVEC representative.

A deferred payment plan may include an ACC-approved finance charge.

If the Customer has not fulfilled the terms of a deferred payment plan, SSVEC may disconnect service pursuant to the termination of service rules and SSVEC will not be required to offer subsequent negotiation of a deferred payment plan prior to disconnection.

2.20 TERMINATION OF ELECTRIC SERVICE

2.20.1 NON-PERMISSIBLE REASONS TO DISCONNECT ELECTRIC SERVICE

SSVEC may not disconnect Electric Service for any of the reasons stated below:

A. Delinquency in payment for Electric Services rendered to a prior Customer at the Premises where service is being provided, except in the instance where the prior Customer continues to reside on the Premises.

B. Failure of the Customer to pay for Electric Service or equipment which is not regulated by the ACC.

C. Nonpayment of a bill related to another class of Electric Service.

D. Failure to pay for a bill to correct a previous under-billing due to an inaccurate Meter or Meter failure if the Customer agrees to pay over a reasonable period of time.

E. SSVEC shall not terminate residential Electric Service where the Customer has an Inability to Pay and:

(1) The Customer can establish through medical documentation that, in the opinion of a licensed medical physician, termination would

be especially dangerous to the Customer's, or a permanent resident residing on the Customer's Premises, health;

(2) Life supporting equipment used in the home that is dependent on SSVEC Electric Service for operation of such apparatus; or

(3) Where weather will be especially dangerous to health as defined herein or as determined by the ACC.

F. Residential Electric service to ill, Elderly, or Handicapped Persons who have an Inability to Pay will not be terminated until all of the following have been attempted:

(1) The Customer has been informed of the availability of funds from various government and social assistance agencies of which SSVEC is aware.

(2) A third party previously designated by the Customer (if applicable) has been notified and has not made arrangements to pay the outstanding SSVEC bill.

G. A Customer utilizing the provisions of Paragraphs E or F above may be required to enter into a deferred payment agreement with SSVEC within ten (10) Days after the scheduled termination date.

H. Failure to pay the bill of another Customer as guarantor thereof.

I. Disputed bills where the Customer has complied with the ACC's rules on Customer bill disputes.

2.20.2 <u>TERMINATION OF ELECTRIC SERVICE WITHOUT NOTICE</u>

A. SSVEC's Electric Service may be disconnected without advance written Notice under the following conditions:

(1) The existence of an obvious hazard to the safety or health of the Customer or the general population or SSVEC's personnel or facilities;

(2) SSVEC has evidence of Meter Tampering or fraud; or

(3) Failure of a Customer to comply with the Curtailment procedures imposed by SSVEC during supply shortages.

B. SSVEC shall not be required to restore Electric Service until the conditions which resulted in the termination have been corrected to the satisfaction of SSVEC.

C. SSVEC shall maintain a record of all terminations of Electric Service without Notice. This record shall be maintained for one (1) year and available for ACC inspection.

2.20.3 TERMINATION OF ELECTRIC SERVICE WITH NOTICE

A. SSVEC may disconnect Electric Service to any Customer for any reason stated below provided SSVEC has met the Notice requirements established by the ACC with the exception of those items referenced in Section 2.20.1 of the SSVEC Service Conditions:

(1) Customer violation of any of SSVEC's Tariffs.

(2) Failure of the Customer to pay a delinquent bill for SSVEC Service.

(3) Failure to meet or maintain SSVEC's deposit requirements.

(4) Failure of the Customer to provide SSVEC reasonable access to its equipment and property.

(5) Customer breach of contract for Electric Service between SSVEC and Customer.

(6) When necessary for SSVEC to comply with an order of any governmental agency having such jurisdiction.

B. SSVEC shall maintain a record of all terminations of Electric Service with Notice. This record shall be maintained for one (1) year and available for ACC inspection.

2.20.4 TERMINATION NOTICE REQUIREMENTS

A. SSVEC shall not terminate Electric Service to any of its Customers without providing advance written Notice to the Customer of SSVEC's intent to disconnect Electric Service, except under those conditions specified where advance written Notice is not required.

B. Such advance written Notice shall contain, at a minimum, the following information:

(1) The name of the Person whose Electric Service is to be terminated and the address where Electric Service is being rendered.

(2) SSVEC Tariff that was violated and explanation thereof or the amount of the bill which the Customer has failed to pay in accordance with the payment policy of SSVEC, if applicable.

(3) The date on or after which Electric Service may be terminated.

(4) A statement advising the Customer to contact SSVEC at a specific address or phone number for information regarding any deferred payment or other procedures which SSVEC may offer or to work out some other mutually agreeable solution to avoid termination of the Customer's Electric Service.

(5) A statement advising the Customer that SSVEC's stated reason for the termination of Electric Services may be disputed by contacting SSVEC at a specific address or phone number, advising SSVEC of the dispute and making arrangements to discuss the cause for termination with a responsible employee of SSVEC in advance of the scheduled date of termination. The responsible employee shall be empowered to resolve the dispute and SSVEC shall retain the option to terminate Electric Service after affording this opportunity for a meeting and concluding that the reason for termination is just and advising the Customer of his right to file a complaint with the ACC.

C. Where applicable, a copy of the termination Notice will be simultaneously forwarded to designated third parties.

2.20.5 <u>TIMING OF TERMINATIONS WITH NOTICE</u>

A. SSVEC shall give at least five (5) Days' advance written Notice prior to the termination date.

B. Such Notice shall be considered to be given to the Customer when a copy thereof is left with the Customer or posted first class in the United States mail, addressed to the Customer's last known address or electronically transmitted via secure web server, if applicable.

C. After the period of time allowed by the Notice has elapsed, if the delinquent account has not been paid nor arrangements made with SSVEC for the payment thereof or in the case of a violation of SSVEC's rules, the Customer has not satisfied SSVEC that such violation has ceased, SSVEC may then terminate Electric Service on or after the day specified in the Notice without giving further Notice.

D. Electric Service may be disconnected in conjunction with a personal visit to the Premises by an authorized representative of SSVEC or remotely.

E. SSVEC shall have the right (but not the obligation) to remove any or all of its property installed on the Customer's Premises upon the termination of Electric Service.

2.20.6 <u>LANDLORD/TENANT RULE</u>

A. In situations where Service is rendered at an address different from the mailing address of the bill or where SSVEC knows that a landlord/tenant relationship exists and that the landlord is the Customer of SSVEC, and where the landlord as a Customer would otherwise be subject to disconnection of service, SSVEC may not disconnect service until the following actions have been taken:

B. Where it is feasible to so provide Electric Service, SSVEC, after providing Notice, as required in these Service Conditions, shall offer the occupant the opportunity to subscribe for Electric Service in his or her own name. If the occupant then declines to so subscribe, SSVEC may disconnect Electric Service in accordance with these Service Conditions.

C. SSVEC shall not attempt to recover from a tenant any outstanding bills or other charges due upon the outstanding account of the landlord.

2.21 SERVICE TERMINATION PROCEDURE

After SSVEC delivers the required Electric Service termination Notice, it shall observe the following procedure:

A. In the case of a delinquent account only, and except for remote metered services, the SSVEC employee assigned to disconnect Electric Service shall make reasonable efforts before termination to identify themselves as SSVEC personnel to the Customer, describe the purpose of their presence at the Customer's Premises, and advise the Customer that payment of the total amount due can be accepted in the field to prevent termination.

B. In the case of a delinquent account only, the Customer may pay the total amount due to authorized SSVEC personnel assigned to terminate Electric Service, including a service charge as provided in SSVEC's Tariffs. If the Customer does not pay the total amount due, Electric Service may be disconnected. SSVEC may require that the payment be made by cash, credit card, money order, or cashier's check in lieu of a personal check.

2.22 NON-LIABILITY

The Cooperative shall not be liable to the Customer or any third party for any loss, injury, death, or damage to property resulting from the Customer's use of his/her equipment or from the use of Electric Service beyond the Point of Delivery. It is the Customer's responsibility to provide adequate protective equipment to protect the Customer's equipment from high or low voltage, phase reversals, or single-phasing conditions.

2.23 UNLAWFUL USE OF ELECTRIC SERVICE

When accepting service, the Customer agrees that only authorized SSVEC representatives shall be allowed to remove or replace any Cooperative equipment installed on the Customer's property. The Customer will be held responsible for any broken seals, tampering or interfering with the Cooperative's Meter(s), equipment, or property installed on the Customer's premises. In cases where SSVEC has evidence of Meter Tampering or theft of Electric Service, the Electric Service shall be subject to immediate disconnection. SSVEC shall not be required to restore Electric Service until the conditions which resulted in the termination have been corrected to the satisfaction of SSVEC. SSVEC shall be entitled to collect the applicable rate and Energy usage not recorded on the Meter as a result of the Meter Tampering or theft of Electric Service, as well as all applicable services charges, expenses incurred by SSVEC for property damage, investigation of the illegal act, and any legal expenses and court costs. The Customer should be aware it is a felony to tamper with the property of a utility per A.R.S. 13-1602.

2.24 THREATS TO SSVEC PERSONNEL OR PROPERTY

Threats to SSVEC personnel or property shall not be tolerated and Electric Service to the threatening party may be discontinued until such action has been taken that SSVEC is assured that it may serve the threatening party without danger to SSVEC personnel or property. The

Customer shall pay the applicable service charge for reconnection before Electric Service will be restored.

2.25 FAILURE TO PERMIT SAFE ACCESS

Any barrier or obstacle preventing safe access to any SSVEC facility or property shall be eliminated at the Customer's expense. The Customer shall provide adequate assurance to SSVEC that reasonable access shall be permitted in the future.

2.26 DETRIMENTAL EFFECTS OF THE CUSTOMER'S EQUIPMENT OR OPERATING PROCEDURES

The Customer shall eliminate or correct the conditions causing detrimental effects on SSVEC equipment or the integrity of its facilities, pay any damages, including repair costs, caused by the Customer, provide adequate assurance to SSVEC that similar conditions shall not occur in the future, and pay any applicable service charges for reconnection.

2.27 USE OF SERVICE

Except in cases of existing Master Metered mobile home parks or multifamily apartments, Electric Service under all rate schedules shall not be resold or shared with others.

3. TECHNICAL STANDARDS AND REQUIREMENTS RELATED TO EXTENSIONS OF ELECTRIC SERVICE

The following provisions ("extension policy") have been adopted to provide service to Customers whose requirements are deemed by SSVEC to be ordinary course in nature. In unusual circumstances, when the application of these provisions are impractical, or in the case of extension of lines to be operated above the specified voltages in the applicable rate schedule, or in case the Customer's requirements exceed 1,000 kVA, SSVEC shall make a study of the conditions to determine the basis on which Electric Service may be rendered. All Line Extensions are made on the basis of proper system integration. Guides are offered below for use in circumstances where new Line Extension feasibility is generally acceptable.

3.1 STANDARD VOLTAGES

The extension shall be designed and constructed for operation at the standard distribution voltages used by SSVEC in the particular area in which the extension is located, but this policy is not applicable to extensions which require the installation of any lines or equipment operating at more than those specified voltages in the applicable rate schedule or demands of greater than 1,000 kVA. In the case of 3-phase service, a Line Extension shall be made under this extension policy where the Customer has installed major 3-phase equipment (single units of 10 HP or more or where total aggregate nameplate horsepower (HP) of all connected 3-phase motors exceed 15 HP). Voltage other than those specified for the various rate classes shall be considered as abnormal voltage and considered under the terms of Section 3.2. Only single phase/three wire or three phase/four wire services shall be provided to normal rate classes. Three phase Delta voltages supplied from an underground primary system shall be considered abnormal and nonstandard. Steady state voltage shall be maintained pursuant to Arizona Administrative Code R14-2-208.F.2.

Standard voltages provided by SSVEC and available to all Customers are:

120/240 volts, single-and three-phase (three-phase is not available from underground primary systems);

240/480 volts, single-phase only;

120/208 volts, single-and three-phase; and

277/480 volts, three-phase.

3.2 ABNORMAL LOADS AND SERVICES

Abnormal loads are those requiring nonstandard voltages or three-phase motors larger than 200 HP, single-phase motors 10 HP and larger, single-phase to three-phase converters, intermittent loads (large welders, electric furnaces, elevators, etc.) or others requiring non-standard service characteristics. SSVEC may, at its option, extend Service to an abnormal load provided the Customer shall advance to SSVEC the entire cost, as a non-refundable Contribution in Aid-of-Construction for all materials, labor, overhead, and any special equipment required to serve the load, plus other costs that may be negotiated in a contract between the Customer and SSVEC. The Customer may buy, install, own, and maintain conversion equipment from SSVEC's standard voltages, currents, or locally available primary system to the Customer's nonstandard utilization form. Standby and/or auxiliary service shall be considered as abnormal. The use of "written pole" motors, when approved by SSVEC, may allow the connection of larger motors.

3.3 OVERHEAD AND UNDERGROUND SERVICE

SSVEC shall provide either overhead or underground Service under the provisions of its extension policy.

3.4 SPECIAL CONSTRUCTION

In all cases, SSVEC construction standards and materials are used as guidelines for SSVEC installations of overhead or underground materials and equipment. Any deviation from these standards is considered special construction and is normally disallowed. Routings other than those selected and preferred by SSVEC shall be considered special construction. The Customer shall pay any additional cost for special construction above normal construction. Special construction shall be provided at the discretion of SSVEC.

3.5 METERING AND SERVICE ENTRANCE REQUIREMENTS

The Cooperative reserves the right to Meter consumer's requirements in the most practical manner, either primary or secondary voltage.

For loads served at transmission voltage (over 15 kV) where the Customer owns the service transformer, SSVEC reserves the right to Meter consumer's requirements at secondary voltage, in which event the kW and kWh will be multiplied by a factor ranging from 1.02

through 1.10 to allow for transformation losses, depending upon the consumer's transformer impedance data.

3.6 METERING AND METER TEST POLICY

It shall be the policy of SSVEC to pursue metering accuracy by every practical method. Meters and metering equipment purchased by SSVEC shall be of good quality and all equipment subject to calibration shall be thoroughly tested by methods and equipment acceptable throughout the electric metering industry before installation. Meters requiring installation of metering transformers and associated wiring shall be installed and checked by trained and competent personnel. Accurate watt hour, voltage, and current measuring standard Meters shall be carefully maintained under controlled conditions and periodically compared with standard instruments traceable to the National Institute of Standards and Technology. Testing, adjustment, and calibration procedures shall be as narrow as practical and generally ~~more strict~~ stricter than the standards under which SSVEC is regulated. The following provisions of compliance meet or exceed regulatory requirements and guidelines:

3.6.1 STANDARDS FOR ACCURACY

SSVEC shall comply with accuracy requirements of the ACC for revenue metering. SSVEC shall also comply with ANSI C12 Code for electric metering, Section 8, Arizona Administrative Code R14-2-209.E, which prescribes standards for Meters in service performance, Meter testing, required accuracy, etc.

3.6.2 PERIODIC TESTING PROGRAM

The test program used shall be Periodic Test Schedule 8.1.8.4., which requires that all SSVEC Meters having surge-proof magnets shall be tested at least every sixteen (16) years, and Schedule 8.2.3.1., which requires that block interval Demand Meters be tested at least every twelve (12) years, and lagged Demand Meters at least every eight (8) years.

3.6.3 METER ERROR CORRECTIONS

Any Customer may request a test on a Meter that is in the Customer's name and billed to the Customer. Test request forms are available at each SSVEC office which the Customer shall sign. The applicable service charge and Meter test charge for Service calls during regular business hours shall also be made in accordance with SSVEC's Tariffs.

If the Meter is more than 3% inaccurate, averaged between light and heavy load tests, tests slow or has stopped, all applicable Meter test and service charges shall be waived and the correction of previous bills will be made under the following terms:

A. If the date of the Meter error can be definitely fixed, SSVEC shall adjust the Customer's billings back to that date. If the date of the Meter error cannot be determined, adjustments to that Customer's bills will be limited to three months for residential Customers and six months for non-residential Customers. No such limitations shall apply to overbilling. If the Customer has been under-billed, SSVEC will allow the Customer to repay the difference over an equal length of time that the under-billings occurred. The Customer shall be allowed to pay the

back bill without late payment penalties, unless there is evidence of Meter tampering or energy diversion.

B. If it is determined that the Customer has been over-billed and there is no evidence of Meter tampering or energy diversion, SSVEC will make prompt refunds in the difference between the original billings and the corrected billings.

C. No adjustment shall be made by SSVEC except to the Customer last served by the Meter tested.

The Meter shall be tested in the Meter shop before any adjustments are made, and if practical, before the Meter cover is removed. The Customer or a Customer representative may be present when the Meter is tested, but this must be stated in writing at the time the test request is made. If requested to do so, SSVEC personnel shall attempt to arrange a test during regular business hours with the Customer present. If, 30 Days after Meter removal, SSVEC has been unable to arrange such a test because of failure on the Customer's part to attend the test, SSVEC shall test the Meter without the Customer being present. The Customer shall be notified of the results of the test by mail within a reasonable time after the test has been completed.

3.7 CUSTOMER SERVICE ENTRANCE POLICY

Customer Service Entrances shall be in compliance with applicable current SSVEC Customer Service Entrance requirements before being energized by SSVEC. If the Customer elects to increase the Customer Service Entrance ampacity, and this requires increasing the conductor size, the Meter base ampacity or the Service disconnect ampacity, the Customer Service Entrance shall be brought up to current SSVEC requirements before being reconnected. Exhibits of Customer Service Entrance requirements are attached to these Service Conditions.

3.8 MINIMUM SAFETY STANDARDS

If the Meter is removed by Customer request or for nonpayment or other cause, the Customer Service Entrance shall be brought up to minimum safety requirements in accordance with SSVEC Customer Service Entrance requirements, as well as the NEC, NESC, EUSERC, and all local codes and various inspection authorities before being reconnected. If the existing Customer Service Entrance cannot be brought up to these minimum standards due to the poor condition of components or location impracticality, it shall be replaced with a new installation that is in compliance with the applicable codes and requirements.

3.9 UNSAFE CONDITIONS

If it comes to the attention of SSVEC that the Customer's Service Entrance is in such a condition that it is very likely to cause death or serious injury, SSVEC shall accept no liability and shall endeavor to notify the Customer of the unsafe condition. If immediate action is not taken by the Customer, SSVEC shall disconnect the Customer Service Entrance until the above minimum safety requirements are met.

3.10 SAFE ACCESS

SSVEC personnel shall have safe access to the Customer Service Entrance and metering equipment at all reasonable times. Upon denial of safe access, or if such access is made hazardous by the presence of dangerous animals or other obstructions, Electric Service may be terminated until such safe access is provided.

4. CONDITIONS FOR EXTENSION OF SERVICE FACILITIES

4.1 CONDITIONS FOR ESTABLISHMENT OF PERMANENT SERVICE

Permanent Service can be established upon compliance with all applicable provisions of these Service Conditions.

4.2 AVAILABILITY OF SERVICE FACILITIES

Electric Service is available to all Customers and potential Customers located along existing Distribution Lines within the boundaries of the certificated area in which SSVEC operates. Electric Service requiring Line Extensions is also available to any Customer or potential Customer located any place within SSVEC's certificated area in accordance with the provisions of this Section 4.

4.3 OWNERSHIP

SSVEC shall own all materials, equipment, and structures that it furnishes and installs. Lines and other Service facilities for which the Customer pays Advance-in-Aid-of-Construction, or Contribution-in-Aid-of-Construction shall be owned by SSVEC. Equipment, materials, or facilities furnished to SSVEC specifications by the Customer for its use shall be owned by Customer. Transformers and facilities for Electric Service provided under schedules SP and P for abnormal loads shall be owned by the Customer. Where individual or unusual substation installations are required to serve the Customer, SSVEC reserves the right to require the Customer to make (at the Customer's expense) the necessary, complete installation (consisting of transformer, structure, protective devices, etc.) required to provide adequate Electric Service to the Customer, and, in such event, the Customer will own, operate, and maintain said installation but will benefit by incurring a savings of capacity charges as part of the rate.

4.4 DISTRIBUTION LINE EXTENSION ESTIMATES AND FEES

A. Upon request by an Applicant for a Line Extension, SSVEC shall prepare, without charge, a preliminary sketch and rough estimate of the construction costs to be paid by the applicant. The estimate will be prepared in the office and not include a site visit. The rough estimate could change significantly after the full engineering and design work is completed as described in C below.

B. An application for a Line Extension requesting SSVEC to prepare detailed plans, specifications, or design estimates will be required to pay SSVEC a NONREFUNDABLE design fee. The design fee cost shall be based on the estimate of the costs to be incurred by SSVEC for preparing the detailed plans and estimate.

After the Applicant has: submitted the request, provided all required documents as described in Section 4.6.1 below, and paid the NONREFUNDABLE design fee, SSVEC shall provide plans, specifications, and design estimates of the proposed Line Extension to the Applicant within (90) days. The design fee shall be nonrefundable. Any charges anticipated to be paid for by the Applicant for the construction of the Line Extension shall be provided in the design estimate. This includes but is not limited to: Design Fees, Right of Way Charges, Permits, Labor, Material, Transportation and Equipment usage fees. Before construction of the Line Extension is scheduled, the entire estimated cost of construction must be paid. (This payment is considered Contribution in Aid of Construction and covered in Section 4.7.1 below.) Engineering design estimates shall be valid for ninety (90) Days from the date of issuance. If the Applicant does not enter into a Line Extension agreement and pay the entire estimated cost of construction within this ninety (90) Day period, then thereafter, at the discretion of SSVEC, a new application for engineering design services shall be initiated and subject to a design fee assessment as described above. Fees collected by SSVEC for the original engineering design estimates are nonrefundable and will not be applied to any subsequent reapplication. If the Applicant proceeds with the construction of the line extension, the design fee paid will be credited towards the cost of construction. The cost of construction will include all design fee costs incurred,

At the sole discretion of SSVEC, the design fee may be waived if it is determined no site visit, as described in Section (C) below, is needed because of the adequacy of the plans delivered to SSVEC with the initial Line Extension application. (The fee waiver is generally reserved for professional residential property developers with consistent history of building Line Extensions with SSVEC.)

C. To ascertain field conditions prior to finalizing a design estimate, it will be necessary to survey the route of the line extension while in the field. The design fee cost, as described above, includes ONE field visit for the purposes of conducting the engineering survey. The costs for any additional engineering survey work which is required as the result of changes requested by the Applicant after completion of the initial survey may, at the discretion of SSVEC, be billed to the Applicant at SSVEC's current rates for labor, transportation, equipment, and materials. Before any visit which will require additional fees, SSVEC will contact the Applicant and provide the cost of the additional fee which will be charged. This fee is also NONREFUNDABLE. This fee must be paid before SSVEC will make the additional field visit.

D. Subdivisions providing SSVEC with approved final plat plans shall be provided with line extension plans and/or design estimates within forty-five (45) days after receipt of the application design fee and any required design information as described in Section 4.6.1 below.

~~4.4 DISTRIBUTION LINE EXTENSION ESTIMATES AND FEE SCHEDULES~~

~~. Upon request by an applicant for a Line Extension, SSVEC shall prepare, without charge, a preliminary sketch and rough estimate of the construction costs to be paid by the applicant.~~

~~. An applicant for a Line Extension requesting SSVEC to prepare detailed plans, specifications, or design estimates may be required to pay SSVEC an amount equal to the estimated cost of preparation. Upon submission of a written request for a Line Extension, SSVEC shall make available, within ninety (90) Days after receipt of all necessary documentation and the design fee, such plans, specifications, or design estimates of the proposed Line Extension. The design fee shall be nonrefundable. Any charges to the Customer shall be provided in the design estimate. Engineering design estimates shall be valid for ninety (90) Days from the date of issuance. If the Customer or prospective Customer does not enter into a Line Extension agreement with SSVEC for Electric Service within this ninety (90) Day period, then thereafter, a new request for engineering design services shall be initiated and subject to a fee assessment as set forth herein. Monies collected by SSVEC for the original engineering design estimates are non-refundable.~~

~~. To ascertain field conditions prior to finalizing a design estimate, it will be necessary to survey the route to the field. The Customer shall be given at no cost one engineering survey with engineering design services provided by SSVEC. The cost of any additional engineering survey performed as the result of changes requested by the Customer after completion of the initial survey may, at the discretion of SSVEC, be billed to the Customer at SSVEC's current rates for labor, transportation, equipment, and materials.~~

~~. Subdivisions providing SSVEC with approved final plans shall be provided with plans and/or design estimates within forty-five (45) Days after receipt of the application design fee and any required design information.~~

~~. Applicants requesting engineering design estimates for new Electric Service or service upgrades will be charged the following fees:~~

~~Type of Service~~	~~No. Lots/Service(s)~~	~~Fee~~
~~Residential/GS~~	~~1 lot~~	~~$100~~
~~Subdivision~~	~~2 or more lots~~	~~$1,000 plus $10 per lot in excess of 10 lots~~
~~Commercial (OH & UG)~~	~~1 to 3 buildings~~	~~$1000 plus $100 per building in excess of 3~~
~~Main Distribution~~		~~$0.25 per foot~~

~~. Each and every request for an engineering design estimate and each and every alteration to all initial requests for engineering design services will be considered as an individual request and assessed a fee assessment as set forth above.~~

~~. All design fees shall be paid to SSVEC by the Customer or prospective Customer prior to SSVEC engaging in engineering design estimates as requested by the Customer or prospective Customer.~~

~~. Engineering design estimates shall be valid for ninety (90) Days from the date of issuance. If the Customer or prospective Customer does not enter into a Line Extension agreement with SSVEC for service within this ninety (90) Day period, then thereafter, a new request for engineering design services shall be initiated and subject to a fee assessment as set forth above.~~

~~4.34~~4.5LINE EXTENSIONS TO RESIDENTIAL AND COMMERCIAL CUSTOMERS

Subject to the availability of adequate capacity and suitable character of service at the point of beginning for an extension, SSVEC shall extend its facilities to residential and commercial Customers on the following basis (For subdivisions, see Section 4.9):

A. Any Permanent Customer shall be eligible for a Line Extension.

B. A standard Line Extension may be any combination of overhead or underground, single-phase or three-phase, primary or secondary as the situation warrants and as SSVEC system requirements permit.

C. Before an extension is constructed to a well, documentation that the well is capable of producing an adequate quality and quantity of water for the intended purpose may be required by SSVEC.

D. All required easements shall be furnished by the Customer at no cost to SSVEC.

E. Any underground extensions will be at the sole discretion of SSVEC. If underground facilities are installed, the Customer shall provide all necessary trenching and select backfill where required, conduit, backfilling, compaction, and all concrete work to the specifications of SSVEC and applicable local codes, at the Customer's expense.

~~4.34.1~~4.5.1 STREET LIGHT EXTENSIONS

The Customer shall be charged for the entire cost of each street light installation. The Customer will then be subject to the lower monthly rate in Schedule S. Street light extensions are applicable only to municipalities and or agencies governing public rights-of-way. Non-standard installations are not permitted.

~~4.34.2~~4.5.2 SECURITY LIGHT EXTENSIONS

Customers shall be charged for the entire cost of security light installations. (See Schedule SL.) Security lights shall be mounted only on poles or other equipment owned by SSVEC.

~~4.34.3~~4.5.3 LINE EXTENSION ROUTING

Construction shall normally be permitted only along the shortest practical route to the nearest practical Point of Delivery on each Customer's Premises as determined by SSVEC. At the sole discretion of SSVEC, alternative routes may be considered at additional cost to the Customer. If there is a mutual benefit to SSVEC, SSVEC in its sole judgment will determine the credit to be given to the Customer for said benefit. This credit will be applied when determining the cost to the Customer.

~~4.35~~4.6RESPONSIBILITY OF THE CUSTOMER

~~4.35.1~~4.6.1 PROVIDE DEVELOPMENT PLANS, LEGAL DESCRIPTIONS, GRADE CERTIFICATIONS, AND SURVEY CORNERS

The Customer shall provide SSVEC with accurate plans of the Customer's proposed development. Generally, final recorded plats will be required for subdivision estimates in accordance with Section 4.9.1, unless otherwise required by SSVEC. The Customer shall provide a valid written legal description along with a copy of the Customer's property deed. The Customer shall locate and mark any legal survey corners required by SSVEC. For commercial underground installations, a certification, signed by a licensed land surveyor or registered professional engineer, that the established grade is within the six (6) inches of final grade, shall be required by SSVEC for the entire length and width of the proposed service route prior to staking. Normally, SSVEC field technicians will stake the route of the proposed Line Extension and related facilities to serve the Customer's development in relation to the Customer's legal property corners. SSVEC shall stake the line one time, based on the plans submitted by the Customer. If mutually agreeable and at no charge to SSVEC, the developer's surveyor may be used to stake the electric facilities when such action will help expedite the work. In that case, the developer's surveyor will be supplied working plans and close oversight by SSVEC personnel. The cost of any additional engineering, field, or office work performed as the result of changes requested by the Customer after completion of an initial engineering staking shall be billed to the Customer at SSVEC's current rates for labor, transportation, equipment, and materials as described in Section 4.4 C above.

~~4.35.2~~4.6.2 USE SERVICE PROVIDED

The Customer shall be expected to begin using on a permanent basis, any and all service facilities extended within the first year of construction, or reimburse SSVEC for the cost of service facilities, plus the cost of their removal, with credit given for salvage, if any. (For subdivisions, see Section 4.9.4.)

~~4.35.3~~4.6.3 OUTAGE AND HAZARD NOTIFICATION

The Customer shall notify SSVEC immediately of outages and hazardous conditions which require prompt attention.

~~4.35.4~~4.6.4 PROVIDE RIGHT-OF-WAY

Easements may be required for any new, existing, or future Line Extensions as determined by SSVEC for reliability and cost considerations. All easements or rights-of-way required by SSVEC for the Line Extension, or any part thereof, on the Customer's Premises, as well as other private property or public land, shall be furnished or secured by the Customer without cost to SSVEC. Although the Customer is primarily responsible for securing necessary easements, SSVEC may choose to process easement or right-of-way documents as a convenience to Customers. Any costs incurred for acquiring right of way shall be paid by the Customer as it is part of the cost of the Line Extension construction. The Customer shall also provide an acceptable property description to SSVEC from a deed or other legal document. Developers shall be required to provide SSVEC with a final plat of the subdivision in electronic form with a follow-up hard copy as recorded and approved by the county or municipality having jurisdiction.

~~4.35.5~~4.6.5 PROVIDE TRENCH AND CONDUIT FOR UNDERGROUND

The Customer shall provide trenching, select back fill where required, backfilling, compaction and all concrete work to the applicable specifications of SSVEC and/or local codes for underground primary or secondary Line Extensions at the Customer's expense. Generally, the Customer is responsible for supplying and installing all conduits on underground projects. However, at its sole discretion, SSVEC may elect to furnish and install conduit or CIC when SSVEC decides such action will be beneficial and expeditious to the project. Any costs incurred by SSVEC for providing trenching or conduit shall be paid by the Customer as it is part of the cost of the Line Extension construction. SSVEC reserves the right to reject any request for underground extensions in areas not covered by Arizona Administrative Code R14-2-207.E if its effect would be to create an irregular pattern of mixed construction modes or encumber the efficiency of future repair and maintenance operations.

~~4.36~~4.7 CONTRIBUTIONS IN AID OF CONSTRUCTION AND SERVICE AVAILABILITY CHARGES FOR LINE EXTENSIONS

~~4.36.1~~4.7.1 CONTRIBUTIONS IN AID OF CONSTRUCTION

All applicable estimated charges and credits for the cost of construction of the Line Extension shall be made available and paid by the Customer prior to the beginning of construction. The payment is treated as a Contribution in Aid of Construction to SSVEC. Contributions in Aid of Construction are non-refundable~~,~~; however, any ~~pre-paid~~ Contribution in Aid of Construction exceeding the actual cost of construction will be refunded to the Customer. Any written Line Extension agreement shall also be executed by both parties prior to construction.

~~4.36.2~~4.7.2 OPTIONAL COMBINATION CHARGES

SSVEC's Line Extension policy is designed to recover the cost of construction, operation, and maintenance. A Line Extension may result in inadequate revenue to cover these costs. In these situations, the Cooperative will enter into a separate contract with the Customer to address the inadequate revenue situation.

~~4.37~~4.8RECORDS OF SURVEY DEVELOPMENTS

Developments involving multiple large parcels (typically 10 – 40 acre parcels) which are not platted as subdivisions and are not subject to the standard city/county/state subdivision development process, are referred to as "Records of Survey."

A. The developer shall submit a complete copy of the final recorded Record of Survey.

B. The developer shall submit a complete copy of the registered Arizona Board of Real Estate Public Report for the development.

C. The developer shall provide all applicable easements, rights-of-way, and/or permits for improvements within the Record of Survey.

D. SSVEC will normally regard Records of Survey projects as one development and not as phases to a development, to determine the impact to the electric system and to determine costs. The developer/owner will be responsible for all costs associated with feeder build out and/or upgrades required to bring adequate Power to the site for present and future needs.

E. The developer/owner will be responsible for the cost of design and installation primary distribution facilities to each hot line within the development. These charges are not subject to refund.

Subsequent splits of parcels within the development, as well as Electric Service to the interior of said parcels~~,~~ will be subject to SSVEC's standard Line Extension policy based on requests by individual property owners.

~~4.38~~4.9SUBDIVISION DEVELOPMENT

The following rules and procedures are established to eliminate many of the common problems associated with the complex task of developing a new subdivision. "Subdivision" is as defined by the applicable plat review process of municipal and county planning and zoning ordinances.

~~4.38.1~~4.9.1 LINE EXTENSION TO SUBDIVISIONS

A. The developer shall submit a complete set of improvement plans as required which have been approved by the appropriate planning and zoning commission and engineer.

B. The developer shall submit a copy of the recorded final plat. Any lesser version or approved plat can be submitted with special permission and at the sole discretion of SSVEC. A design of the final plat shall normally be provided in AutoCAD format or other approved electronics form for preliminary electrical design.

C. Copies of the plans of all utilities to be installed shall be submitted and coordinated to eliminate conflicts of location.

D. Adequate easements for lines for the complete build-out to the subdivisions shall be provided. Easements for locating special equipment away from rights-of-way and hazardous locations may also be required.

E. All terrain where underground cable and equipment is to be installed shall be within six inches of final grade prior to staking. Certification of established grades by a registered professional engineer or licensed land surveyor shall be required by SSVEC for the entire length and width of the proposed service route prior to construction.

~~4.38.2~~4.9.2 INSTALLATION PROCEDURES FOR SUBDIVISIONS

A. Underground facilities are required by State regulations and SSVEC in subdivisions and mobile home parks with lots of one acre or less, recreational parks, airports, and other areas where overhead lines are unacceptable.

B. The developer shall be responsible for and provide accurately located survey markers and offset stakes to facilitate SSVEC's staking of electrical facility locations. If mutually agreeable and at no charge to SSVEC, the developer's surveyor may be used to stake the electric facilities when such action will help expedite the work. In that case, the developer's surveyor will be supplied working plans and close oversight by SSVEC personnel.

C. The developer or SSVEC, at the developer's expense, shall supply all necessary trenching, conduit, select backfill where requested, back filling, compaction, and concrete work, paving and re-paving, to SSVEC's specifications and applicable local codes pursuant to the installation of the electrical equipment and lines. This will be accomplished in conjunction with close oversight and inspection by SSVEC personnel. The developer shall obtain all permits required for construction and trenching in public rights-of-way. All necessary occupancy permits shall be provided to SSVEC before Permanent Service is connected.

D. Installation of water, sewer lines, and storm drains prior to excavation of the trench for electric lines is advisable and may be required by SSVEC.

E. The developer shall keep all easements and roads free of debris and obstacles during the construction period in order to avoid unnecessary delays in construction. Spoil piles from trenches shall be situated in such a manner as to allow safe passage by SSVEC equipment and personnel.

F. Any costs resulting from damages to SSVEC facilities caused by contractors and/or crews working for the developer, including changes in grade or dig-ins, shall be paid for by the developer. When excavating around SSVEC underground facilities, hand

digging shall be utilized in accordance with Arizona Blue Stake laws. Once installed, any relocation of SSVEC facilities will be at the expense of the developer.

~~4.38.3~~4.9.3 CONTRIBUTIONS IN AID OF CONSTRUCTION FOR RESIDENTIAL SUBDIVISIONS

A. When extension of underground service is desired to a subdivision, the developer shall pay a non-refundable Contribution in Aid of Construction to SSVEC covering the total cost of the installed facilities within the subdivision, excluding transformers.

B. The developer is also responsible for the full cost of any Line Extensions from existing SSVEC facilities to a duly recorded subdivision, but located outside the subdivision boundary.

~~4.38.4~~4.9.4 SUBDIVISION ABANDONMENT

If the subdivision, or any portion of the subdivision, fails to develop any Permanent Customers within a period of five (5) years from the date construction was completed, SSVEC may thereafter elect to remove or abandon its unused facilities unless the developer shall pay an annual service availability charge of 10 percent per year of the value of the unused facilities where the developer has supplied the construction capital.

~~4.39~~4.10 MOBILE HOME PARK DEVELOPMENT

A. Electric Service to all new and/or expanding permanent residential mobile home parks shall be individually metered by SSVEC. Line Extensions and Service Connections shall be governed by SSVEC's Tariffs and terms of extension agreed upon in a Line Extension agreement. Permanent residential mobile home parks for the purpose of this Section shall mean mobile home parks where, in the opinion of SSVEC, the average length of stay for an occupant is a minimum of six (6) months.

B. All facilities within the park shall be installed underground. The Developer shall be responsible for complying with all applicable Service Conditions for Line Extensions contained herein.

C. In addition to the Contribution in Aid of Construction, the Developer shall guarantee an annual minimum equal to 10% of the cost of the installed facilities which will be included in the contract for service. Under the applicable Tariff, this amount will be reduced by all revenues derived from the sale of electricity excluding wholesale power fuel adjustment and taxes received by SSVEC for sales made within the park.

~~4.40~~4.11 RESIDENTIAL APARTMENT COMPLEXES, CONDOMINIUMS, AND OTHER MULTI-UNIT RESIDENTIAL BUILDINGS

Master Metering shall not be allowed for new construction of apartment complexes and condominiums unless deemed feasible by SSVEC, at the sole discretion of SSVEC.

~~4.41~~4.12 RECREATIONAL VEHICLE PARK (RV) DEVELOPMENT

RV parks will be considered similar to other commercial development. They will typically be Master Metered. Primary metering will be allowed at SSVEC's sole discretion. Unless otherwise specified by contract, SSVEC will install, own, and maintain all primary voltage equipment on the Customer's property regardless of Meter location. The Customer shall install, own, and maintain all secondary facilities beyond SSVEC's point of secondary termination.

~~4.42~~4.13 DOUBTFUL PERMANENCY

SSVEC reserves the right to refuse to extend its facilities to any Customer not meeting the definition of "Permanent Customer" unless the Customer agrees to pay for the extension in accordance with Section 4.14 regarding Temporary Service.

SSVEC's opinion regarding permanency shall be based on the following criteria:

A. The Customer who requests service owns the lot on which Electric Service is required.

B. A substantial investment has been made in improvements on the parcel to increase the probability that electric Power will be used on a long-term basis. For example, at a residence, footings would be expected to be poured and work actively proceeding on completion of an adequate dwelling.

C. Evidence is produced that the proper permits have been acquired.

D. Water service is available on the parcel by means of an individual well with pump, lines have been extended from a reliable community water system or other permanently installed water storage and distribution system of sufficient capacity, which in the opinion of SSVEC is adequate to assure continued permanent occupancy of the site.

E. Sewer service is available on the parcel by means of a septic tank or other local jurisdiction approved septic system or connection is made to a central sewage system.

F. To be considered permanent, a mobile home must also:

(1) The mobile home must be permanently secured to the ground.

(2) The dimensions of the mobile home are at least 8 feet by 40 feet.

(3) The home is in basic livable condition as determined by SSVEC.

G. The permanency of extensions to mining or other material retrieval processes shall be considered doubtful.

H. Recreational vehicle type travel trailers or motor homes are not considered permanent.

~~4.43~~4.14 TEMPORARY SERVICE

Any Customer unable or unwilling to meet the requirements for permanency shall be considered temporary. In that case, SSVEC shall require the total cost of providing service, plus the cost of removal to be paid as a nonrefundable Contribution in Aid of Construction prior to the establishment of Electric Service. In all cases, an Applicant for Temporary Service shall comply with all Service Conditions and Tariffs that apply to Permanent Service. When the duration of Electric Service is to be less than one month, the Applicant may be required to advance a sum of money equal to the estimated bill for Service. When the duration of Electric Service is to exceed one month, the Applicant will also be required to meet the deposit requirements set forth in these Service Conditions. If, within six (6) months of establishing Service, the character of a temporary Customer's operations changes so that in the sole opinion of SSVEC, the Customer is classified as permanent, the terms of SSVEC's Line Extension policies shall apply and the Customer may petition SSVEC for a refund of the retirement charge.

~~4.44~~4.15 NONSTANDARD SERVICES

Electric Services at voltages, currents, phases, frequency, or grounding arrangements other than those specified in Section 3 of these Service Conditions shall be considered "nonstandard."

~~4.45~~4.16 METERING

The Customer shall pay the cost of nonstandard metering facilities and shall provide, own, and maintain the supports and accessories to the metering. SSVEC shall own, install, and maintain the metering instruments.

~~4.46~~4.17 PROTECTIVE EQUIPMENT

The Customer shall buy, own, and maintain such protective equipment as SSVEC deems necessary to assure isolation of the service from SSVEC's system due to abnormal load or fault conditions in the service.

~~4.47~~4.18 CONVERSION OF OVERHEAD TO UNDERGROUND ELECTRIC FACILITIES WITHIN A PETITIONED SERVICE AREA

~~4.47.1~~4.18.1 PETITIONS FOR UNDERGROUND SERVICE.

At least sixty (60%) percent of the owners of contiguous real property within a reasonably compact area of reasonable size within SSVEC's Service Area may formally request that SSVEC convert overhead Distribution Line service to underground service by filing a petition with the Cooperative that complies with the provision of A.R.S. §40-342.

~~4.47.2~~4.18.2 FORMAL PETITIONS FOR AN OVERHEAD TO UNDERGROUND CONVERSION.

A Customer, as agent for the petitioned area, may request that SSVEC convert overhead Distribution Line service to underground service. As part of such request, the Customer shall agree to the following:

A. The Customer shall provide all necessary easements, if any, at no cost to SSVEC.

B. The Customers shall provide all trenching, select backfill where required, conduit, compaction and all concrete work according to the specifications of SSVEC and/or local codes and ordinances and shall perform all street, curb and sidewalk repairs at the Customer's expense.

C. The Customer shall pay SSVEC, prior to the start of construction, a nonrefundable Contribution in Aid of Construction equal to the estimated cost of the underground facilities, less credit for salvage of the existing overhead Distribution Lines at present value, if any, plus retirement cost.

D. The Customer shall sign any additional agreements as required by SSVEC.

E. The area to be converted from overhead to underground shall cover a reasonable area which will allow orderly, once only, construction with design toward a loop-feed system. The SSVEC Engineering Department shall determine what constitutes a reasonable conversion area.

F. Nothing herein shall be construed to prevent SSVEC from converting selected overhead distribution areas to underground areas when, in the sole judgment of SSVEC, such conversion is necessary or desirable and economically feasible. In such cases the total cost of the conversion shall be borne by SSVEC.

G. The Customer or agent who petitioned SSVEC shall be responsible for securing the agreement of all other Customers involved in the conversion. SSVEC shall not be responsible for any modifications required to the Customers' Service Entrance in the underground conversion area.

~~4.48~~4.19 RELOCATIONS AND CONVERSIONS FOR INDIVIDUAL CUSTOMERS

When SSVEC is requested to relocate or convert its facilities for the benefit and/or convenience of a Customer, the Customer shall reimburse SSVEC for the total cost of the work to be performed prior to the start of construction, plus the cost of any unexpired service life of the property removed, except when said relocation or conversion is also in the best interest of SSVEC, because of safety or convenience. This will be at the sole discretion of SSVEC.

~~4.49~~4.20 HAZARDOUS SERVICE CONDITIONS

Whenever SSVEC has actual knowledge that a hazardous condition exists or a hazardous condition may occur or be created, SSVEC may take any appropriate action (including temporary suspension of Electric Service) and further may submit charges to the party or parties responsible for the hazard.

~~4.50~~4.21 UNUSED FACILITIES OWNED BY SSVEC

Any facilities owned and installed by SSVEC, which have been disconnected from a Meter or have remained idle and unused for more than one (1) year, may be removed from any property, public or private, with or without the consent of the property owner, at the sole discretion of SSVEC. Once a Power line has been removed, a new Service Application will be required, along with proof of permanency, in order to re-establish the line in accordance with current Line Extension policies and practices.

EXHIBIT A

GENERAL SPECIFICATION (0-3000 amperes / 0-600 volts)

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
SERVICE ENTRANCE REQUIREMENTS
GENERAL SPECIFICATION
0 THROUGH 3000 AMPERES
0 TO 600 VOLTS

1. **SCOPE OF SPECIFICATION**: This specification shall apply to all service entrances 0 through 3000 amperes inclusive, 0 to 600 volts. This general specification is not complete in itself. A complete service entrance specification shall consist of this General Specification Exhibit A along with an Exhibit B, C, D, or E that applies to a specific size and type of service.

2. **GENERAL**: The Customer or contractor should consult qualified SSVEC personnel before starting work on any service entrance, to determine which specification applies, type of service available, permissible service entrance location, etc. The SSVEC Engineering Service Representatives in Willcox and Sierra Vista are qualified to answer questions regarding service entrances.

When an inspection certificate is required by local authority, SSVEC will not connect the service entrance until an inspection certificate is obtained.

3. **INTENT OF SPECIFICATION**: SSVEC's intent in issuing this specification is to require the design, materials, and workmanship of all service entrances to meet or exceed the requirements of the latest editions of the National Electrical Code (NEC) and the National Electrical Safety Code (NESC). Any item not specifically mentioned shall meet or exceed the requirements of these two codes.

SSVEC is a member of the Electric Utility Service Equipment Requirements Committee (EUSERC). The standards for equipment design established by this group of utilities are the basis of SSVEC's requirements. Equipment shall be listed by a nationally recognized testing laboratory (e.g. UL) and shall be so labeled.

4. **ENFORCEMENT OF SPECIFICATIONS**: SSVEC will generally accept a certified approval by a qualified governmental official (inspector) only for the purposes of code (NEC / NESC) compliance, unless clear violations have evidently been missed and are identified incidentally by SSVEC personnel conducting their authorized company business. Only SSVEC can inspect and approve service entrances in regard to compliance with specific filed SSVEC Service Entrance Specification requirements, which may at times exceed general safety codes and vague national equipment standards; SSVEC seeks compliance with EUSERC equipment standards as elsewhere defined.

4.1 SSVEC Inspections: Every service entrance location is not within the jurisdiction of an official governmental inspector, so SSVEC will seek to verify basic safety code compliance and compliance with all applicable SSVEC Service Entrance Specifications for the

purposes of -protecting SSVEC's employees, the electric system integrity, and the general public nearby. SSVEC does not accept complete safety code compliance responsibilities, because sufficient personnel can neither be available nor trained to detect and enforce every safety code provision. Whenever SSVEC personnel inspect any service entrance or any associated customer equipment and electric connections, SSVEC is only inspecting for the limited concerns of the Serving Electric Utility, not for every possible concern of the Customer or the general public. The Customer or his licensed engineer or electrician has the ultimate responsibility for safety code compliance and for meeting the ACC-filed SSVEC Service Entrance Requirements. SSVEC accepts neither responsibility nor liability for safety code compliance or suitability of Customer installations except as mandated by law or by the ACC.

4.2 Every initial service entrance connection and any subsequent reconnection shall include a simple inspection by SSVEC Operations personnel to verify basic compliance with SSVEC specifications and the most basic safety code provisions. For special or unusual situations a more technical and complete inspection by SSVEC's personnel is sometimes required to ensure compliance with specifications and that no clearly unsafe installation is connected to SSVEC's electric system.

4.2.1 As long as obvious violations of safety code provisions or any non-compliance with applicable SSVEC Service Entrance Specification is evident to an appropriate SSVEC employee, the service entrance will neither be connected nor energized for any purpose. If earlier versions of SSVEC specifications have been previously met and a service entrance being considered for a reconnection remains safe and only minor non-compliance of a new specification is evident, it will not always be refused reconnection for a minor violation of newer SSVEC specifications, if qualified SSVEC personnel decide no material problem is being introduced by allowing the reconnection of the safe service entrance equipment. Significant compliance failures will always result in refusal to reconnect.

4.3 **VARIANCE FROM SPECIFICATIONS**: No new service entrance that does not comply with all provisions of applicable specifications nor an existing service entrance found to be in material non-compliance shall be connected unless permission for a variance is recommended by appropriate SSVEC technical employees and a specific variance is granted in writing by the SSVEC Manager of Engineering or designated Engineer. No unwritten variance may be accepted by SSVEC Operations personnel. SSVEC Managers may override or suspend general specifications during extreme emergency situations.

5. **SERVICE ENTRANCE AND METER LOCATION**: Service entrances shall be locations approved by SSVEC. Meters should face an approved direction in which they can be read safely with binoculars from a vehicle, preferably a dedicated public road, street, or alley. Service entrances shall not be installed under carports or open porches or similar places subject to future enclosure nor shall they be enclosed or obstructed later. Service entrances enclosed or obstructed after Service Connection so that the Meters cannot be read in the normal manner, shall be re-established in an outside location approved by SSVEC, or such obstruction shall be removed. Failure to comply with this rule, within a reasonable time after notification by SSVEC, shall be grounds for Service Disconnection.

Buildings being served from or accessed from the roadway or drive shall have Meters mounted on the front wall facing the street or access on the side wall within six (6) feet of the

front wall of the building. Meters on the side of the building shall not be placed behind a fence or any obstacle which will prevent SSVEC personnel from having free access to the Meter. At the Customer's option, the use of an approved EUSERC Meter pedestal, if it is appropriate for the size of service needed, installation on the lot line at the street is acceptable. Contact SSVEC Service Engineering Representatives in Willcox or Sierra Vista for complete specifications.

6. CLEARANCES: All electrical facilities shall be installed and maintained to the applicable clearances as defined by the National Electrical Safety Code (NESC) and/or the National Electrical Code (NFPA 70) as appropriate.

6.1 Clearance from Building Openings. ~~NEC Article 230-9.~~ Service conductors shall comply with NEC Article 230-9 and have a clearance of not less than three (3) feet from windows that are designed to be opened, doors, porches, fire escapes or similar locations.

Exception: Conductors run above the top level of a window shall be permitted to be less than the three (3) feet requirement above.

6.2 Clearance from Swimming Pools: Service conductor clearance over or close to swimming pools shall comply with NEC Article 680-8 and other appropriate sections of the National Electrical Code. The Customer or contractor may contact qualified Engineering Department personnel for advice on clearances from swimming pools.

7. SERVICE ENTRANCE CONDUCTORS:

7.1 General. The Customer or contractor shall not reroute any metered conductor through the meter socket enclosure, metering compartment, raceways or other security sealed areas.

Because of high ambient temperatures likely to be encountered in outdoor service entrances, no conductor with insulation rated lower than 75 degrees C. shall be used. All service entrance conductors shall be stranded. Manufactured service entrance equipment shall be listed by a nationally recognized testing laboratory and the factory installed conductors shall be accepted at nameplate rating of the unit.

Service entrance conductor ampacity shall be determined from appropriate tables of the latest edition of the NEC and shall have sufficient ampacity to carry the load as determined by the appropriate bus rating and service disconnect ampacity.

7.2 Overhead Service Conductors. Service entrance conductors for overhead services, including conductors installed from the load side of CT section to the disconnect device, shall be furnished and installed by the Customer or contractor. No conductor larger than 1000 kcmil, no more than four conductors per phase and no conduit larger than six inch trade size shall be used. For services requiring larger conductors or conduit, approved bus duct shall be used. The conductors will exit the upper end of a rigid steel conduit through an approved weatherhead. Overhead services using bus duct shall have entrance heads conforming to EUSERC requirements.

7.3 Underground Service Conductors. Service entrance conductors and connectors for underground service up to and including 800 amperes will be furnished and installed by

SSVEC. Conductors for services larger than 800 amperes shall be furnished and installed by the Customer or contractor. All trenching and backfilling shall be done by the Customer or contractor. SSVEC will furnish and install connectors at the transformer. SSVEC will also connect the service lateral conductors up to and including 800 amps to the landing lugs at the Customer's Meter base or termination section. SSVEC will not furnish, install or assume responsibility for conductors under or to the inside of any building, except to terminate the service lateral conductors at the main switch gear.

Customers will be responsible for providing all service conductors for services exceeding 800 amps. No conductor larger than 750 kcmil, no more than six copper conductors per phase or seven aluminum conductors per phase, and no conduit larger than six inch trade size shall be used without special review and prior approval by qualified SSVEC personnel. For services requiring larger conductor or conduit, approved bus duct shall be used.

Unless otherwise directed by SSVEC, the Customer will be responsible for supplying and installing underground Schedule 40 PVC conduit for underground services. The Customer shall also furnish all necessary trenching, select backfill, warning tape, compaction, and concrete work to the specifications of the Cooperative and other local codes.

7.4 Residential Service Entrance Conductor Ampacity. Table 310-1-5 (B, 16, or equivalent) of the latest edition of the National Electrical Code shall be used to determine allowable ampacities for residential service entrance conductors, the ampacity shown in the column under the selected insulation temperature rating may be used directly from the table for "not more than three conductors in a raceway or cable or earth (directly buried) based on ambient temperature of 30 degrees C. (86 degrees F)", of the latest edition of the National Electrical Code. For residential services, instead of derating conductors for ambient temperature, SSVEC does not allow use of Table 310.15 (B, 7, or equivalent).

7.5 Commercial or Other Non-Residential Service Entrance Conductor Ampacity. To determine conductor ampacity for non-residential overhead service entrances, the ampacity shown in the column under the selected conductor insulation temperature in NEC Table 310-1-5 (B, 2, or equivalent) shall be multiplied by the appropriate factor of an ambient temperature range of 96-104 degrees Fahrenheit (36-40 Centigrade). Non-residential underground service entrance conductors may be sized directly from the table.

For overhead or underground services where more than three current-carrying conductors are in a raceway or cable, the allowable ampacity shall be further reduced as shown in NEC Table 310.15 (B, 2, b, or equivalent). Derating factors shall not apply to conductors in nipples having a length not exceeding 24 inches. Derating factors shall not apply to underground conductors entering or leaving an outdoor trench if those conductors have physical protection in the form of rigid metal conduit having a length not exceeding 10 feet above grade and the number of conductors does not exceed four.

8. GROUNDED (NEUTRAL) CONDUCTOR: All service entrances shall have a grounded neutral conductor run in the same raceway with the ungrounded conductors. If copper, it may be bare. It may not be reduced in size from the ungrounded conductors.

9. RIGID CONDUIT: The overhead service entrance conductors for overhead services shall be installed in rigid or intermediate metallic conduit (IMC) no smaller than is permitted by

the NEC for the size and number of conductors used. The conduit shall be factory stamped with the words RIGID or IMC. No electrical metallic tubing (EMT) or other thin wall conduit shall be accepted.

Intermediate metallic conduit (IMC) may not be used as the overhead service drop attachment where it would have to support the span tension of the service drop conductors.

The overhead service entrance conduit shall be run to a point within one foot of the center of the point of attachment of SSVEC's service drop conductors. It shall be capped by an approved service entrance weatherhead and the service entrance conductors shall be left extending from it a minimum of three (3) feet. If the service drop is open wire (wires not wrapped together), a minimum of five feet of conductor shall extend from the service entrance head.

The service entrance conduit for underground services shall be rigid or IMC metallic conduit and shall be run to a point not less than 12 inches or more than 18 inches below finished grade and a threaded PVC adapter shall be installed on the end.

Rigid metallic conduits and fittings installed underground or in concrete shall be protected against corrosion by half-wrapping with an approved plastic tape or by a coating of an approved corrosion-resistant material as stated in ~~-~~NEC 300-6.

10. METERING PROVISION: The Customer or contractor shall provide for metering with an approved meter socket enclosure, current transformer enclosure or service entrance metering section as specified in each of the Exhibits.

Meter sockets shall be listed and labeled by a nationally recognized testing laboratory. Individually metered residential Service Entrances with 100 ampere main disconnects may use 100 ampere sockets rated for general duty. Individually metered residential service entrances with 125 ampere main disconnects may use 100 amp sockets rated for continuous duty or 125 ampere sockets rated for general duty.

Individually metered residential Service Entrances with 200 ampere main disconnects may use 200 ampere sockets rated for general duty.

For other than individually metered residential Service Entrances, only sockets rated for continuous duty with a minimum ampacity of the required ampacity of the service entrance will be accepted.

11. MAIN SERVICE DISCONNECT: All service entrances shall be equipped with a main service disconnect switch or circuit breaker. They shall be raintight and of a type approved for service equipment, in compliance with the NEC and shall disconnect all loads from the ungrounded conductors.

The main Service disconnect shall be plainly and permanently labeled with the word "MAIN". The emergency equipment disconnect (if any) shall be plainly and permanently labeled with the word "MAIN" and its emergency function such as "PUMP" or "EMERGENCY LIGHTS", etc. The disconnect device shall be located outside, in a place accessible to SSVEC personnel at all times, or shall be operable to an open position from an outside location

accessible to SSVEC personnel at all times. It shall not be locked except by an arrangement agreeable to the Customer and SSVEC.

The main service disconnect(s) shall be connected on the load side of the Meter.

Except for motor load services and services over 400 amps, the nameplate ampacity of the main service disconnect determines the ampacity of the service entrance. If more than one main disconnect is allowed, the sum of the ampacities shall determine the ampacity of the service entrance for services larger than 400 amps or, at the discretion of SSVEC, the rating of the bus will be used to determine the ampacity of the service.

The Service Entrance ampacity of a circuit breaker type of main disconnect shall be determined by the nameplate ampacity of the circuit breaker(s) but may not be greater than the rating of the Service Entrance equipment.

The Service Entrance ampacity of a fused-switch type of main disconnect shall be determined by the nameplate ampacity of the switch regardless of the fuse size installed.

12. **OVERCURRENT PROTECTION**: A fuse or circuit breaker shall be in series with each ungrounded conductor to provide overload protection.

13. **INTERRUPTING RATING**: The Customer shall install Service Entrance equipment and protective devices capable of interrupting and withstanding available short-circuit current. All service disconnect devices (i.e. fused switch or circuit breaker) shall have a minimum interrupting capacity (AIC) of 10,000 amps. Higher AIC ratings may be required at locations with higher available fault currents (NEC 110.9). Consult qualified SSVEC Engineering Department personnel for the available fault current for multiple services and for service from large transformers. When available fault current exceeds 10,000 amps (as calculated by SSVEC), the Customer shall provide equipment to meet the expected maximum fault current (see NEC 110.9 and 230, section VII). The Customer has the option of providing service equipment with an increased AIC rating or installing equipment with current limiting fuses which would limit the maximum fault current to less than 10,000 amps.

14. **GROUNDING**: An unspliced bonding jumper no smaller than #6 AWG copper shall be used to connect the metering device enclosure (Meter socket, current transformer, service entrance section, etc.) to the grounded conductor. An unspliced bonding jumper shall be used to connect the service disconnect enclosure to the grounded conductor. The bonding jumper may be wire, bus, screw or similar suitable conductor. If wire is used, it shall be no smaller than #6 AWG copper. A bus or strap shall be no smaller than the equivalent of #6 AWG copper wire.

A copper grounding electrode conductor (ground wire) shall be connected on the supply side in the service disconnect enclosure to the grounded conductor and run in approved conduit to a grounding electrode. The grounding electrode conductor shall be no smaller than #4 AWG and no smaller than allowed by the NEC for the size of service connected.

A grounding electrode shall have a resistance to ground of 25 ohms or less, as measured by SSVEC. Electrodes shall be added until the combined electrodes have a resistance to ground of 25 ohms or less as measured by SSVEC.

A current transformer enclosure with multiple switches comprising the service disconnect may have the grounding electrode conductor connect to the grounded conductor in the current transformer enclosure.

The grounding electrode shall be a metal underground water pipe if available within 25 feet. The water pipe electrode shall be supplemented with one or more 5/8 inch by eight-foot copper or copperweld ground rods driven vertically into the ground. Other electrodes as specified in the National Electrical Code will be accepted only if previous arrangement has been made with SSVEC to permit inspection before cover up, etc.

The grounding electrode conductor clamp assembly, including bolts or screws, shall be solid brass, bronze or stainless steel, to prevent failure by corrosion.

The grounding electrode conductor shall be enclosed in Schedule 80 sunlight resistant PVC (preferred) or rigid or intermediate metallic conduit factory stamped with the words RIGID or IMC. Metallic conduit must be bonded at both ends. Electrical metallic tubing (EMT) or other thin wall conduit is not acceptable.

It is desirable to have the grounding electrode conductor connection to the grounding electrode buried. If the grounding electrode is a ground rod, the upper end of a ground rod shall be driven to a point at least six inches below finished grade and, after inspection by SSVEC, shall be covered. If the ground rod is driven through a small hole in concrete or asphalt the connection may be left exposed.

15. <u>MOUNTING AND FASTENING</u>: All parts of pole or wall hung service entrance equipment including conduit, metering socket/enclosure, disconnect device, etc., shall be securely and permanently fastened in a safe and workmanlike manner so the Meter will remain level and plumb. Nails are not acceptable fasteners for conduit. Conduit straps shall be two-hole type and properly sized for the conduit. No run of conduit shall have less than two straps nor have straps more than 5 feet apart. If conduit must be spaced out from the support, suitable spacers and fasteners shall be used. Wooden blocks and plumbers tape are not suitable. Fasteners shall be galvanized, coated or painted to withstand exposure to weather. Conduit or other equipment coating damaged by welding, cutting, etc., shall be coated or painted to restore corrosion resistance. No more than two (2) riser conduits shall be mounted on a service pole.

Service entrances mounted on a wall, pole or other surface shall be no more than six (6) feet and no less than five (5) feet above finished grade to the center of the Meter socket. Mobile home type Meter pedestals shall be no more than five (5) feet and no less than three (3) feet above finished grade to the center of the Meter socket.

Nipples connected to the Meter base shall not be shorter than 3 inches or longer than 6 inches. Holes made in Meter bases, disconnect enclosures, etc., shall be made in a neat and workmanlike manner, and unused holes shall be covered with suitable raintight metallic covers. Damage to the finish, paint, galvanizing, etc., of all exposed ferrous metal parts shall be touched up with paint or a suitable coating to restore corrosion resistance. Poorly painted, ungalvanized or rusty steel enclosures shall be painted to provide corrosion resistance.

16. TEMPORARY SERVICE ENTRANCES: The Customer is responsible to verify with SSVEC any restrictions applicable to a temporary service prior to installing any such installation. Temporary service entrances shall meet the same requirements as permanent service entrances.

17. TEMPORARY SERVICE ENTRANCE CHARGES: The Customer or contractor shall pay in advance the estimated installation and removal cost (up and down charge) for each specific temporary service connection.

18. TEMPORARY OVERHEAD SERVICES: Temporary overhead service entrances may be mounted on a substantial support approved by SSVEC. The service drop attachment point shall be sufficiently high to provide clearances specified by SSVEC. If allowed by SSVEC, a wooden timber or pole furnished by the Customer shall have sufficient strength, be set deep enough and be adequately backfilled to withstand the span tension of the service drop as determined by qualified SSVEC personnel. The wood shall be treated by an approved butt treatment method to retard deterioration.

19. TEMPORARY UNDERGROUND SERVICES: The preferred temporary underground service equipment is an approved mobile home type meter pedestal. (~~see~~See EUSERC drawing #307). All standard conditions shall apply. Trench shall be furnished by the Customer or contractor. The conductors may be direct buried and shall not be less than twenty-four (24) inches underground.

Unless otherwise approved, SSVEC will furnish and install the conductors from the transformer or secondary power pedestal and make connection to the terminals in the Customer or contractor furnished meter pedestal. The meter pedestal should be within five (5) feet of the transformer or power pedestal.

20. FURNISHED BY CUSTOMER: All parts of the Service Entrance shall be furnished and installed by the Customer or contractor unless the specification states that it will be furnished or installed by SSVEC. All parts of the service entrance that are furnished by the Customer shall remain the property of the Customer, but all Meters, metering transformers, enclosures, poles, etc., that are furnished by SSVEC, shall remain the property of SSVEC.

21. IDENTIFICATION OF SERVICE ENTRANCE CONDUCTORS:

GROUNDED NEUTRAL CONDUCTOR: The grounded conductor in all Service Entrances shall be clearly identified. Number 6 AWG copper conductors shall have a permanent outer identification of white or gray or shall be bare. Grounded conductors larger than #6 AWG shall be clearly identified at both ends. Tape, paint, or the use of bare copper conductors is acceptable identification. No bare aluminum conductor shall be used in service entrances.

21.1 Ungrounded single phase conductors: The ungrounded conductors in a three wire single phase service with only one conductor per leg need no identification. Single-phase three wire service entrances with two or more conductors per leg shall have all the ungrounded conductors of each leg clearly identified.

21.2 Ungrounded three phase conductors: The ungrounded conductors of three phase services shall be clearly identified at both ends. The Power leg (highest voltage to ground)

on three phase 4 wire delta services shall be clearly identified by an outer finish that is orange in color or by other effective means per NEC Article 230-56.

22. **PROTECTION AGAINST UNUSUAL LINE CONDITIONS**: SSVEC strongly recommends that the Customer install devices to protect equipment from high or low voltage, phase loss or reversal or imbalance. SSVEC shall not be liable to the Customer for any loss, injury or damage resulting from the Customer's use of his/her equipment or from the use of the Energy from SSVEC or beyond the point of connection of SSVEC wires or other conductors and equipment with the Customer's wires or other conductors and equipment.

IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE ADEQUATE PROTECTIVE EQUIPMENT TO PROTECT THE CUSTOMER'S EQUIPMENT FROM HIGH OR LOW VOLTAGE, PHASE LOSS OR REVERSAL OR ANY UNUSUAL CONDITION.

23. **SIGNAL DISTORTION**: In general the operations of any electrical device or system should not cause excessive distortion of the utility voltage waveform or result in excessive injection of harmonic currents into the utility system to the detriment of SSVEC, its Customers, or other electric utilities. **SSVEC requires that all installations comply with IEEE 519 guidelines at the owner's expense.** SSVEC reserves the right to test and monitor the equipment to ensure compliance to these guidelines. SSVEC reserves the right to require remedial action be taken by the owner at the owner's expense.

Even though equipment may be found to be in compliance with these guidelines, if it can be shown that said equipment is the source of problems for other Customers, for SSVEC or for other utilities within the interconnected power system, SSVEC reserves the right to require that remedial action be taken by the owner at the owner's expense.

EXHIBIT B

COMMERCIAL & RESIDENTIAL (0-200 amperes / 0-600 volts)

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
SERVICE ENTRANCE REQUIREMENTS
COMMERCIAL AND RESIDENTIAL
0 THROUGH 200 AMPERES
0 TO 600 VOLTS

1. **SCOPE OF SPECIFICATION**: This specification is supplementary to general specification Exhibit A and is not a complete specification.

This specification shall apply to commercial and residential service entrances 0 through 200 amperes inclusive, 0 to 600 volts.

2. **DETERMINATION OF SERVICE ENTRANCE AMPACITY**: The service entrance ampacity shall be the ampacity of the single main service disconnect device. It shall not be larger than 200 amperes for this specification.

3. **SERVICE DISCONNECT**: A main service disconnect shall consist of a single fused switch or circuit breaker.

Exception: Emergency equipment such as a water pump that may be used for firefighting, or emergency lighting, or exit lights, etc. may be connected through one additional main disconnect in addition to the single main service disconnect required in this specification through which only the emergency equipment may be supplied. The additional disconnect shall not affect the required service entrance ampacity, provided the service entrance would be adequate if the emergency equipment were connected through the main service disconnect.

4. **MINIMUM DISCONNECT AMPACITY**: Minimum disconnect ampacity shall be 60 amperes except by written variance by the Engineering Manager. Minimum disconnect ampacity for individually metered dwellings, including mobile homes, shall be 100 amperes unless otherwise allowed by the NEC.

5. **METER SOCKET**: An SSVEC approved Meter socket and enclosure shall be furnished and installed by the Customer or contractor. For single phase underground services an SSVEC approved Meter socket enclosure with single main disconnect and built in pull space shall be used. This enclosure shall conform to EUSERC residential combination Meter panel drawing #301. A mobile home type Meter pedestal manufactured according to EUSERC requirements is acceptable for underground services.

A three phase underground Service Entrance may be constructed upon a suitable permanent wall or frame as follows:

6. **SERVICES UP TO 200 AMPS SHALL USE A METER BASE WITH A BOTTOM-FEED TERMINATION SECTION**: Landing lugs shall accommodate aluminum conductors and have a range up to 250 kcmil. Services other than residential shall use Meter sockets rated

for continuous duty. The continuous duty ampacity shall not be smaller than that of the service disconnect ampacity. The recommended minimum ampacity for all residential and commercial Applications is 200 amps. Commercial installations shall be equipped with a lever type bypass (equivalent to a Milbank U7423-RXL).

7. **POSITION OF POWER LEG**: On three phase four wire delta services, the power leg shall be connected to the right hand Meter base terminals.

8. **POWER LEG CONDUCTOR SIZE**: The power leg (the phase with the highest voltage to ground) conductor, on three phase four wire delta services, shall not be reduced in size from that of the other ungrounded conductors using the manufacturer's neutral provisions.

9. **GROUNDED (NEUTRAL) CONDUCTOR**: The grounded conductor for this specification shall not be reduced in ampacity from that of the ungrounded conductors. The grounded conductor shall be run through and bonded to the Meter socket without a splice, except for underground service entrances.

10. **MULTIPLE SELF-CONTAINED SERVICE ENTRANCES**: "Multiple service" implies more than one Customer (or account) served through separate Meters supplied by common service entrance conductors. A "self-contained" Meter is capable of carrying the total current of the service supplied to the Customer and of being directly connected to the line voltage of the service. Self-contained services do not require external current or potential (voltage) transformers. Therefore, a multiple self-contained service is one serving more than one Customer (or account) through more than one Meter without the use of current or potential transformers.

Multiple self-contained services through a common service entrance conduit or wireway to a suitable manufactured raintight modular-type multi-Meter pack and then to separate Meters and disconnect devices~~,~~ shall be permitted. This type of service shall consist of not more than six (6) disconnects (one per Meter) and no disconnect larger than 200 amperes nor smaller than 60 amperes. All equipment through which unmetered conductors pass shall have provision for SSVEC to apply a wire security seal(s).

Multiple services consisting of more than six individual services, with a total service ampacity greater than 800 amps, or requiring a disconnect larger than 200 amperes, shall be served through an approved service entrance section manufactured to EUSERC specifications. In these cases, a single main disconnect ahead of the Meters (cold sequence) is also required. The Customer or contractor should contact SSVEC Engineering before constructing a multiple service.

EXHIBIT C

COMMERCIAL & RESIDENTIAL (201-400 amperes / 0-600 volts)

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
SERVICE ENTRANCE REQUIREMENTS
COMMERCIAL AND RESIDENTIAL
201 THROUGH 400 AMPERES
0 TO 600 VOLTS

1. **SCOPE OF SPECIFICATION**: This specification is supplementary to general specification Exhibit A, and is not a complete specification.

This specification shall apply to commercial and residential service entrances rated 201 through 400 amperes inclusive, 0 to 600 volts. Exception: See Paragraph No. 5.

2. **DETERMINATION OF SERVICE ENTRANCE AMPACITY**: A single main disconnect is normally required. If more than one disconnect is allowed (such as the 320 amp Meter described below), the service entrance ampacity shall be the sum of the ampacity of the main service disconnect(s) devices. It shall not be larger than 400 amperes for this specification. The nameplate ampacity of a fused main switch determines the disconnect ampacity regardless of the fuse size installed. In a circuit breaker type service disconnect, the nameplate ampacity of the main circuit breaker determines the disconnect ampacity. The sum of ratings of the main fused switches or circuit breakers shall not be permitted to exceed the ampacity of any main bus or the manufacturer's equipment rating label.

3. **CURRENT TRANSFORMER ENCLOSURE**: For service entrances of 201 to 400 amperes, as determined by the sum of the nameplate ampacity of the service disconnect(s), a raintight current transformer enclosure, with an approved mounting base for bar-type current transformers shall be used. The enclosure shall be furnished and installed by the Customer or contractor. An approved free-standing service entrance section (see Exhibit D) conforming to EUSERC requirements may be used as an alternative.

For three-wire services, single phase or three phase, the enclosure shall be equivalent or superior to a Circle A W Products 20" x 36" x 11." the Customer will supply the mounting base for the CT's, equivalent to a Beeline 6019-A, and bi-metal supply termination lugs with an upward range to 350 MCM.

For four-wire services, delta (such as 120/240 volt) or wye (such as 120/208 or 277/480 volt), the enclosure shall be equivalent or superior to Circle A W or Milbank Products, 36" x 42" x 11" N3R CT, with a Beeline mounting base 6067HA, or equivalent, installed along with the appropriate termination lugs as noted above. Please note that a 3" hub is the largest factory type hub available for both of these enclosures. Where a larger hub is needed, a knockout type raintight hub shall be used.

When served by underground service entrance conductors, the current transformer enclosure shall be equipped with a neutral deadend block.

4. **METER SOCKET ENCLOSURES**: Meter socket enclosures~~, and potential transformer enclosure~~ if needed, will be furnished and installed by ~~SSVEC~~the customer or contractor. The Meter socket(s) shall be installed not more than 25 lineal feet (50 circuit feet) from the current transformers.

5. **SINGLE PHASE SELF-CONTAINED 320 AMPERE METERS**: A self-contained Meter is capable of carrying the total current of the service supplied to the Customer and of being directly connected to the line voltage of the service. Single phase self-contained 320 ampere Meter socket enclosures which have been tested, listed and labeled by a nationally recognized testing laboratory may be used under certain conditions. When such a socket is used, the preceding paragraphs related to CT installation do not apply. Bolt-in type 400 ampere Meter sockets are not acceptable.

Individually metered residential services may use an approved 320 Meter socket enclosure if the disconnect ampacity does not exceed 400 amperes. The 320 amp Meter socket is not approved for use on commercial installments. Overhead may use either the recommended Meter/main enclosure or a separate Meter socket and disconnect. Services from an underground lateral shall use only the combination Meter/main. A 3" conduit shall be used for the underground riser.

The socket and other service equipment shall be furnished and installed by the Customer or contractor.

6. **POSITION OF POWER LEG**: On three phase, four wire delta services, the power leg shall be installed in the right hand position.

7. **INSTRUMENT TRANSFORMER METERING**: Instrument transformers are used when the current or voltage of a service is too great for a self-contained Meter installation. Current and potential (voltage) transformers, where required, and all associated Meter circuit wiring will be furnished and installed by SSVEC at the time of Service Connection.

8. **GROUNDED (NEUTRAL) CONDUCTOR SIZE**: The grounded conductor for this specification shall not be reduced in ampacity from that of the ungrounded conductors.

EXHIBIT D

COMMERCIAL & RESIDENTIAL (401-3000 amperes / 0-600 volts)

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
SERVICE ENTRANCE REQUIREMENTS
COMMERCIAL AND RESIDENTIAL
401 THROUGH 3000 AMPERES
0 TO 600 VOLTS

1. SCOPE OF SPECIFICATION: This specification is supplementary to the General Specification Exhibit A, and is not a complete specification.

This specification shall apply to residential and commercial service entrances of 401 to 3000 amperes, 0 to 600 volts. Service entrance sections as outlined in this specification shall be permitted, with appropriate design changes, on services of 0 to 3000 amperes.

2. DETERMINATION OF SERVICE ENTRANCE AMPACITY: A single main disconnect is required. The service entrance ampacity shall be the ampacity rating of the bus. It shall not be larger than 3000 amperes for this specification. Customers requiring more than 3000 amperes shall consult the SSVEC Engineering Department for special design requirements.

3. SERVICE ENTRANCE SECTION: A free-standing service entrance section, conforming to EUSERC specifications, mounted on a concrete pad or floor shall be furnished and installed by the Customer or contractor on all services from 801 to 3000 amperes. A free-standing service entrance section is preferred, but not required, for services rated 401 to 800 amperes.

4. SERVICE ENTRANCE SECTION LOCATION: Service entrance sections shall be permitted to be located inside buildings only under the following conditions:

4.1 SSVEC personnel shall be permitted to have access to the service entrance at all reasonable times.

4.2 The main disconnect device shall be operable to an open position (shunt trip) from an outside location accessible to SSVEC personnel at all times.

4.3 The Customer or contractor shall run separate conduits for the metering circuit (1" RIGID minimum) and for remote operation of the main disconnect (1" rigid minimum) a distance not to exceed 25 lineal feet (50 circuit feet) to an approved outside location accessible to SSVEC personnel at all times. Any change in direction of the metering and remote circuits shall be accomplished with an electrical sweep.

4.4 If any of the above conditions is not met, the service entrance section shall be located outside in a place accessible to SSVEC employees at all times, and shall not be locked except by an arrangement agreeable to both the Customer and SSVEC.

If located outside, the service entrance section shall be raintight (NEMA 3R).

5. **METER SOCKETS**: For outside service entrances, Meter sockets, enclosures, meter test switches and panels, per EUSERC drawings, shall be furnished and installed by the Customer or contractor in the manufactured service entrance section. When the service entrance equipment is located inside with metering conduit run outside or, if a wall-mounted CT cabinet is allowed, Meter sockets, meter test switches, and enclosures will be furnished and installed by ~~SSVEC~~the customer and contractor. Any change in direction of the metering conduit shall be accomplished with an electrical sweep.

6. **CURRENT AND POTENTIAL TRANSFORMERS**: Current transformers, ~~Meter test switches~~ and potential transformers, if required, will be furnished and installed at the time of service connection by SSVEC personnel in the space provided by the Customer.

7. **DRAWING SUBMITTAL**: To avoid costly changes, the Customer or contractor shall have the manufacturer submit service entrance section drawings to SSVEC for review and approval by Engineering before the equipment is manufactured. Faxed submittals are not acceptable for approval purposes.

8. **GROUNDED (NEUTRAL) CONDUCTOR SIZE**: The grounded conductor for this specification shall not be reduced in ampacity from that of the ungrounded conductors.

EXHIBIT E

GENERAL MOTOR LOAD (0-500 HORSEPOWER / 0-600 volts)

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
SERVICE ENTRANCE REQUIREMENTS
GENERAL MOTOR LOAD
0 THROUGH 500 HORSEPOWER
0 TO 600 VOLTS

1. **SCOPE OF SPECIFICATION**: This specification is supplementary to General Specification Exhibit A, and is not a complete specification.

This specification applies to service entrances that are predominately motor loads, usually single motor loads, 0 through 500 horsepower inclusive, 0 to 600 volts.

Before any motor installation larger than 50 HP is planned, qualified personnel in the Engineering Department should be consulted.

- To assure all Customers of uniform, well regulated service, it is necessary that the following motor requirements and general information be adhered to for installations on SSVEC lines.

- Abnormal loads are those requiring non-standard voltages, or three phase motors 200 HP or larger, or single phase motors larger than 10 HP or single phase to three phase converters, or intermittent loads (large welders, electric furnaces, elevators), or other requiring non-standard service characteristics. SSVEC may at its option extend service to an abnormal load.

- Motors and equipment can have special load requirements that cause excessive voltage/current and harmonic changes to SSVEC's system. When SSVEC must install special equipment to protect against SSVEC system problems caused by the Customer's equipment, the Customer shall pay the excess costs.

- SSVEC reserves the right to inspect and test all motors and other devices and equipment which are owned by the Customer and which are, or shall be, connected to SSVEC's lines.

2. **PROTECTION OF MOTORS AND OTHER EQUIPMENT**:

- Under/Over voltage, overload, phase failure (single phasing), phase reversal, Power interruptions and short circuit protection is strongly recommended for each motor installation.

- It is the Customer's responsibility to provide adequate protective equipment to protect the Customer's equipment from high or low voltage, phase loss or reversal or any unusual condition.

- SSVEC will not be responsible in any way for damage to Customer's equipment due to failure of the Customer to provide adequate protective devices, or due to any failure of such devices.

3. VOLTAGE FLUCTUATION LIMITS:

- High starting (locked-rotor) currents create voltage dip which may cause objectionable light flicker and problems operating other equipment. The voltage dip shall not exceed 4% and must be maintained within tolerable limits.

- Voltage caused by the Customer's equipment in excess of these limits may require SSVEC to disconnect the Customer's service until corrective action is taken by the Customer to the satisfaction of SSVEC.

- In addition to complying with starting requirements, running motors with fluctuating loads shall not cause excessive voltage fluctuations.

4. MOTOR STARTING:

Single Phase Motors:

- BELOW 10 HP: CAN BE STARTED ACROSS-THE-LINE.

- 10 HP or Larger: Considered an abnormal load and may be extended service at SSVEC's option. SSVEC engineering will determine on a case by case basis if motor may be extended service.

- Written Pole Motors up to 60 HP: Reduced voltage/current starting limits current at no more than 50% of locked rotor values. SSVEC engineering will need to determine if motor may be extended service.

- Will be limited to 60 HP maximum on SSVEC service.

Three Phase Motors:

- Up to 60 HP: Can be started across-the-line.

- 61 – 150 HP: Reduced Starting Requirements (Use one of the following starting methods)

  - Primary Resistor or Reactor: For resistor starting, register shall be sized to limit starting currents to no more than 60% of locked-rotor current.

  - Autotransformer: Required 50% tap.

- Wye-Delta Start.
- Solid State (soft start): Required 50% or less of starting current setting.
- Part Winding motor may be considered if starting current is limited to 60% (typical range is 60% - 75%) of locked-rotor. SSVEC engineering will determine if service can be extended on a case by case basis.

• 151 – 499 HP: Solid State Start with 50% or less of normal starting current is required. An SSVEC engineering study may be conducted to determine expected voltage dip and determine if alternate settings will be required. Motors 200 hp or larger are considered abnormal loads and may be extended service at SSVEC's option.

• 500 HP or larger Customer will need to provide engineered design. Design should include at a minimum a one-line diagram, load information, and motor starting information.

Engineered design must be signed by an Electrical Engineer with a P.E. license.

Design must be approved by SSVEC engineering before Customer can proceed with project.

If after installation, voltage dip limits are exceeded, the service will be disconnected until corrective action is taken by Customer to the satisfaction of SSVEC.

5. VARIABLE FREQUENCY DRIVES & SINGLE PHASE TO THREE PHASE CONVERTER REQUIREMENTS:

Variable Frequency Drives and Single Phase to Three Phase Converters are considered abnormal loads and may be extended service at SSVEC's option.

The Customer's load shall not exceed the Power quality impact described in IEEE-519, Recommended Practices and Requirements for Harmonic Control in Electric Power Systems. SSVEC reserves the right to test and monitor equipment to ensure compliance to these guidelines. SSVEC reserves the right to require that remedial action be taken by the owner at the owner's expense.

At SSVEC's request, the Customer shall provide an engineered design. Design should include at a minimum a one-line diagram, load information, motor starting information and equipment specifications.

6. AIR-CONDITIONING UNITS (COMPRESSOR MOTORS):

• The high starting (locked-rotor) currents of the compressor motor may cause objectionable light flicker seen by the Customer. In the case of Customer complaints, a three-wire Hardstart kit will be required by SSVEC. The Hardstart or Kickstart kit's installation and costs are the Customer's responsibility. Customers may check with a local HVAC dealer for information on Hardstart or Kickstart kits.

- If light flicker still persists after the Hardstart or Kickstart installations, SSVEC will take corrective action if the voltage at the Customer's Meter extends into Range B voltage, set forth by ANSI/IEEE standards.

7. INFORMATION NEEDED FROM CUSTOMER:

Motor Nameplate information

A. HP- Horsepower

B. RPM - Speed

C. DES – Design Letters (describes motor torque characteristics)

(1) A for low

(2) B for medium

(3) C for special

(4) D for high with high slip

D. CODE – NEMA locked-Rotor Code letter. Ex: G is for KVA/HP 5.6 to 6.3

E. VOLT – Voltage rating. Ex: 208-230/460

F. FLA. – Full load Amp rating. Ex: 24-21.6/10.8

G. FLEF – Full load efficiency

H. FLPF – Full load Power factor

8. DETERMINATION OF SERVICE ENTRANCE AMPACITY:

The service entrance ampacity shall be 125% of the single motor ampacity determined from the National Electrical Code (NEC) but not less than 60 amperes.

To determine the service entrance ampacity of multiple motor loads, see the NEC Article 430. The service disconnect(s) may be larger, but not smaller than the required minimum ampacity.

9. OVER-CURRENT PROTECTION:

All installations under this specification shall have a running overload protection device such as a trip coil, relay or thermal cutout installed in all ungrounded conductors unless there is such a device integral with the motor being protected.

10. METERING REQUIREMENTS:

A. **METER GROUNDING**: All motor frames shall be grounded by a copper equipment grounding conductor, run in the same raceway with the non-grounded conductors. The equipment grounding conductor shall be connected to the grounded conductor and shall be no smaller than allowed by the National Electrical Code.

The point that the equipment grounding conductor fastens to the motor frame shall be visible without removing any part of the equipment. The connection shall be made with a connector designed and suitable for the purpose.

All installations under this specification shall have a running overload protection device such as a trip coil, relay or thermal cutout installed in all ungrounded conductors unless there is such a device integral with the motor being protected.

11. PROTECTION AGAINST UNUSUAL LINE CONDITIONS: SSVEC strongly recommends that the Customer install devices to protect equipment from high or low voltage, phase loss or reversal or imbalance. SSVEC shall not be liable to the Customer for any loss, injury or damage resulting from the Customer's use of his/her equipment or from the use of the Energy from SSVEC or beyond the point of connection of SSVEC wires or other conductors and equipment with the Customer's wires or other conductors and equipment.

IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE ADEQUATE PROTECTIVE EQUIPMENT TO PROTECT THE CUSTOMER'S EQUIPMENT FROM HIGH OR LOW VOLTAGE, PHASE LOSS OR REVERSAL OR ANY UNUSUAL CONDITION.

12. METER GROUNDING: All motor frames shall be grounded by a copper equipment grounding conductor, run in the same raceway with the nongrounded conductors. The equipment grounding conductor shall be connected to the grounded conductor and shall be no smaller than allowed by the National Electrical Code.

The point that the equipment grounding conductor fastens to the motor frame shall be visible without removing any part of the equipment. The connection shall be made with a connector designed and suitable for the purpose.

13. MOTOR LOADS CLASSIFIED BY HORSEPOWER:

A. 0 THROUGH 125 HORSEPOWER:

(1) Meter Socket. An SSVEC approved 7 jaw Meter socket with a lever type bypass and continuous ampacity rating at least equal to the ampacity required of the rest of the service entrance, shall be furnished and installed by the Customer or contractor.

(2) Four Wire Service. A four-wire service entrance is required for all three phase applications. On three phase four wire delta services the Power leg shall be connected to the right hand Meter base terminals.

(3) Grounded Conductor Size. The grounded conductor may not be reduced in size from that of the ungrounded conductors.

B. 126 THROUGH 200 HORSEPOWER:

(1) Four Wire Services. A four-wire service entrance is required. Consult SSVEC Engineering for information on approved CT Enclosures.

(2) Grounded (Neutral) Conductor Size. The grounded conductor may not be reduced in size from that of the ungrounded conductors.

(3) Meter Socket and Enclosure. The Meter socket and enclosure will be furnished and installed by the customer or contractor. ~~and~~ The potential transformer enclosure (if required) will be furnished and installed by SSVEC. The Meter base and potential transformer enclosure shall be installed within 50 (fifty) circuit feet of the current transformer enclosure.

C. 201 THROUGH 500 HORSEPOWER:

(1) Four Wire Services. A four-wire three phase service entrance is required. Consult SSVEC Engineering for information on approved CT Enclosures.

(2) Meter Socket and Enclosure will be furnished and installed by the customer or contractor. The ~~Meter socket and~~ potential transformer enclosure (if required) will be furnished and installed by SSVEC.

(3) Grounded (Neutral) Conductor Size. The grounded conductor may not be reduced in size from that of the ungrounded conductors.

D. MOTOR LOADS LARGER THAN 500 HORSEPOWER:

Special Case. Motor loads larger than 500 horsepower may be served on a special case basis. The Customer shall consult qualified personnel in the Engineering Department before designing the installation.

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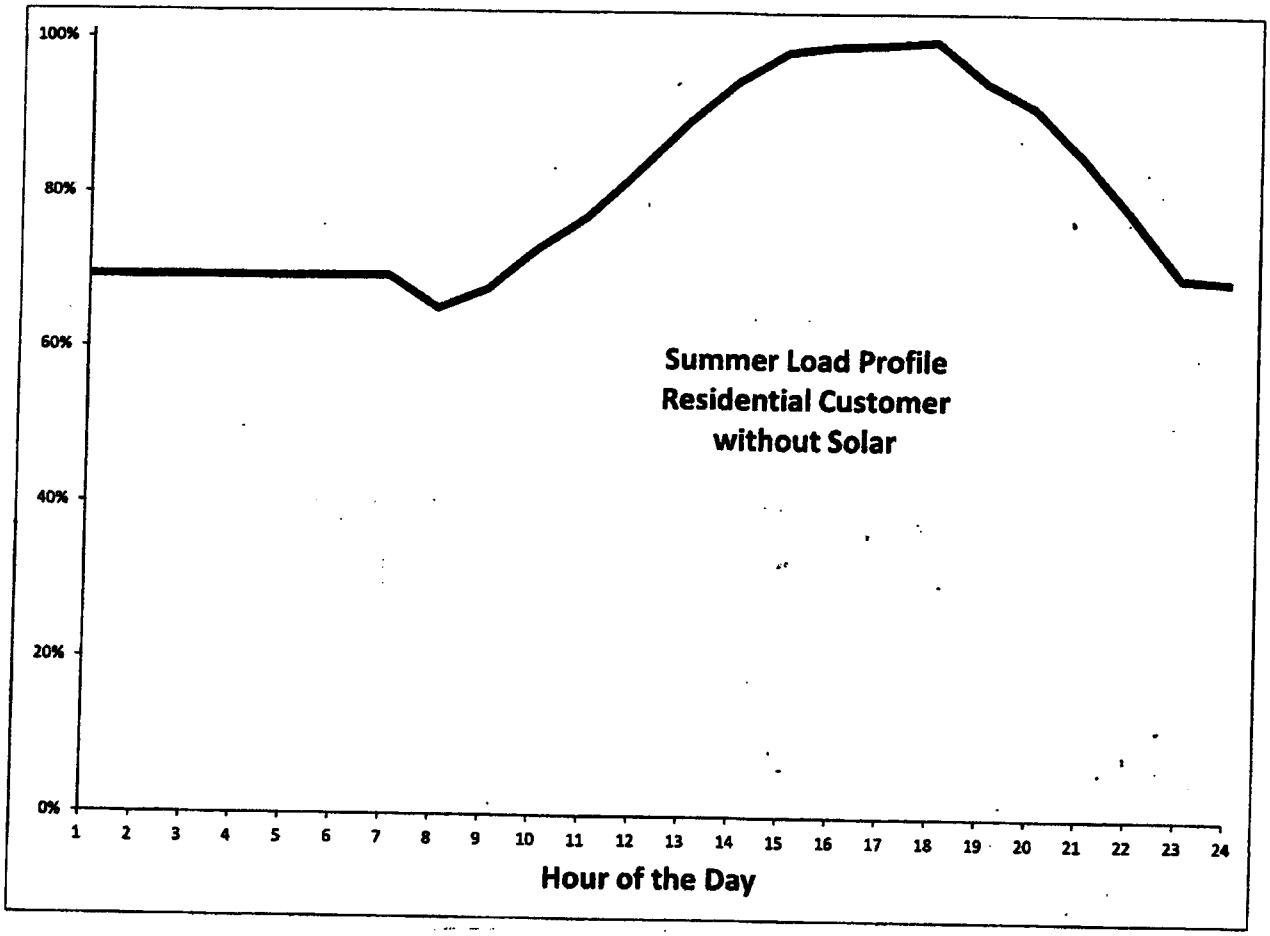
REBUTTAL EXHIBIT DWH-2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Summer Load Profile
Residential Customer
without Solar
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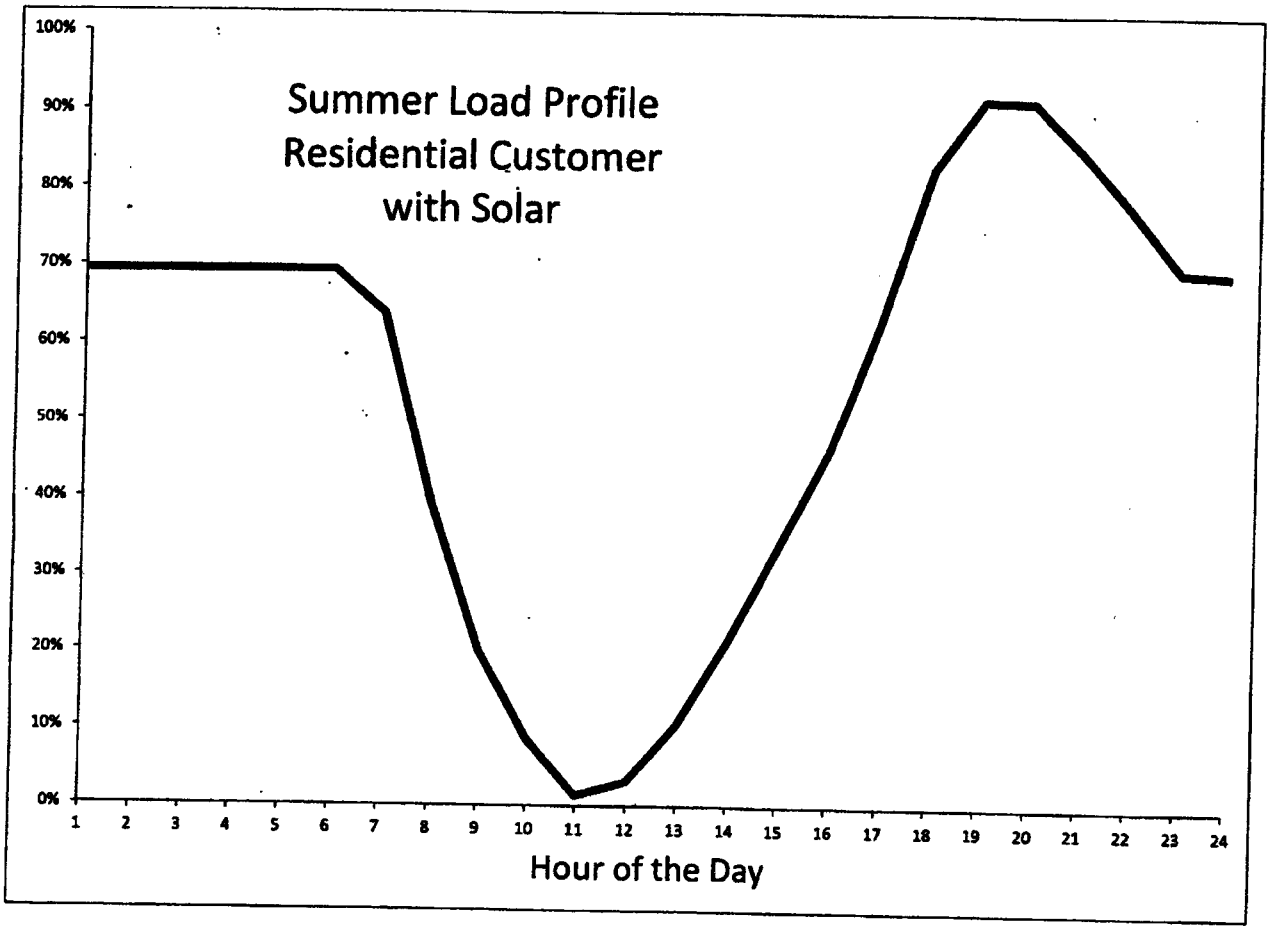
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Summer Load Profile
Residential Customer
with Solar
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Hour of the Day

REBUTTAL EXHIBIT DWH-3

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

Willcox, Arizona

STANDARD OFFER TARIFF

Effective

January 1, 2017
Conformed for Compliance January 1, 2017

Decision _____ on MM/DD/YYYY

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85643

STANDARD OFFER TARIFF

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STANDARD OFFER TARIFF

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SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85643

STANDARD OFFER TARIFF

RATE CLASSIFICATION AND ASSIGNMENT

Rate Classification and Assignment

Rate classification and assignment shall be made by the Cooperative in accordance with the application and type of service provisions in its rate schedules. Rate schedules have been developed for the standard types of service provided by the Cooperative. If Customer's request for Electric Service involves unusual circumstances, usage, or load characteristics not regularly encountered by the Cooperative, the Cooperative may assign a suitable rate classification or enter into a special contract.

Key terms are capitalized in this Standard Offer Tariff manual. The definitions of key terms are provided in the Cooperative's Service Conditions.

ELECTRIC RATES

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85643

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

RESIDENTIAL SERVICE
SCHEDULE R

Availability

Available for Residential use throughout the Cooperative's Service Area where the facilities of the Cooperative are of adequate capacity subject to the Cooperative's Service Conditions.

Applicability

To all Single Family Dwellings when all service is supplied at one Point of Delivery through a single Service Line and Energy is metered through one Meter. Service is limited to individual motors of 10 HP or less that will not cause excessive voltage fluctuations.

Not applicable for resale, breakdown, or standby auxiliary service.

Monthly Rate

STANDARD RATE R							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.57	$0.49	$6.16	$3.78	$15.00	$15.00
Energy Charge ($/kWh/Month) All kWh	$0.071165				$0.046353	$0.046353	$0.117518

RESIDENTIAL SERVICE
SCHEDULE R

Monthly Minimum Charge

The monthly Minimum Charge shall be the greater of the following:

1. The Service Availability Charge; or
2. The amount specified in a written contract between the Cooperative and the Customer.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85643

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

RESIDENTIAL PARTIAL REQUIRMENTS SERVICE, STANDBY SERVICE, BACKUP SERVICE ~~WITH DISTRIBUTED GENERATION~~

ON OR BEFORE APRIL 14, 2015
SCHEDULE R-~~DG~~ PR E

Availability

Available for Residential use for customers ~~with distributed generation connected~~who purchase partial requrements energy service (less than 100% of their electrical requriements), or standby service, or backup service on or before April 14, 2015, throughout the Cooperative's Service Area where the facilities of the Cooperative are of adequate capacity subject to the Cooperative's Service Conditions. This rate is administered in conjunction with "Net Metering Tariff Schedule NM-1," This rate also includes a portion of the distribution wires (acess) cost not included in the kWh charge. This rate includes generation and transmission services including: FERC Mandatory Services of Scheduling, System Control and Dispatch Services; Reactive Supply and Voltage Control.; Regulation and Frequency Response Services; Energy Imbalance Services; Operating Reserve – Spinning Reserve Services; and Operating Reserve – Supplemental Reserve Services.

Per Net Metering Tariff Schedule NM-1 this rate is rescinded after 20 years. As each member reaches their 20 year maximum their service will be transferred to **RESIDENTIAL PARTIAL REQUIREMENTS, STANDBY SERVICE, BACKUP SERVICE AFTER APRIL 14, 2015 SCHEDULE R-PR.**

Applicability

To all Single Family Dwellings when all service is supplied at one Point of Delivery through a single Service Line and Energy is metered through one Meter. Service is limited to individual motors of 10 HP or less that will not cause excessive voltage fluctuations.

Not applicable for resale, breakdown, or standby auxiliary service.

Monthly Rate

STANDARD RATE R-~~DG~~ PR E							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	

Service Availability Charge ($/Customer/Mo)		$4.57	$0.49	$6.16	$13.78	$25.00	$25.00
Energy Charge ($/kWh/Month) All kWh	$0.071165				$0.048603	$0.048603	$0.119768

RESIDENTIAL SERVICE WITH DISTRIBUTED GENERATION
ON OR BEFORE APRIL 14, 2015
SCHEDULE R-~~DG~~ PR E

Monthly Minimum Charge

The monthly Minimum Charge shall be the greater of the following:

1. The Service Availability Charge; or
2. The amount specified in a written contract between the Cooperative and the Customer.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85643

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

RESIDENTIAL PARTIAL REQUIREMENTS SERVICE, STANDBY SERVICE, BACKUP SERVICE ~~WITH DISTRIBUTED GENERATION~~ AFTER APRIL 14, 2015 SCHEDULE R-~~DG~~PR

Availability

Available for Residential use for customers ~~with distributed generation connected~~ who purchase partial requrements energy service (less than 100% of their electrical requriements), or standby service, or backup service after April 14, 2015 throughout the Cooperative's Service Area where the facilities of the Cooperative are of adequate capacity subject to the Cooperative's Service Conditions. This rate also includes a portion of the distribution wires (acess) cost not included in the kWh charge. This rate includes generation and transmission services including: FERC Mandatory Services of Scheduling, System Control and Dispatch Services; Reactive Supply and Voltage Control.; Regulation and Frequency Response Services; Energy Imbalance Services; Operating Reserve – Spinning Reserve Services; and Operating Reserve – Supplemental Reserve Services.

This rate is administered in conjunction with "Parital Requirements Service, Standy Service, Backup Serivce PR-1~~Distributed Generation Tariff DG~~."

Applicability

To all Single Family Dwellings when all service is supplied at one Point of Delivery through a single Service Line and Energy is metered through one Meter. Service is limited to individual motors of 10 HP or less that will not cause excessive voltage fluctuations.

Not applicable for resale, breakdown, or standby auxiliary service.

Monthly Rate

STANDARD RATE R-~~DG~~PR							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.57	$0.49	$6.16	$13.78	$25.00	$25.00
Energy Charge	$0.071165				$0.036452	$0.036452	$0.107617

($/kWh/Month) All kWh							

RESIDENTIAL SERVICE WITH DISTRIBUTED GENERATION AFTER APRIL 14, 2015
SCHEDULE R-~~DG~~PR

Monthly Minimum Charge

The monthly Minimum Charge shall be the greater of the following:

1. The Service Availability Charge; or
2. The amount specified in a written contract between the Cooperative and the Customer.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85643

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

RESIDENTIAL TIME-OF-USE SERVICE
SCHEDULE RT

Availability

Available for Residential Use throughout the Cooperative's Service Area where the facilities of the Cooperative are of adequate capacity subject to the Cooperative's Service Conditions. Billing under this rate schedule shall become effective beginning with the next regular Meter reading after the Customer has requested service under this schedule and after the Cooperative has installed the appropriate Meter.

Applicability

To all Single Family Dwellings when all service is supplied at one Point of Delivery through a single Service Line and Energy is metered through one Meter. Service is limited to individual motors of 10 HP or less that will not cause excessive voltage fluctuations.

Not applicable for resale, breakdown, or standby auxiliary service.

Monthly Rate

STANDARD RATE RT							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.57	$0.49	$6.16	$5.28	$16.50	$16.50
Energy Charge ($/kWh/Month)							
All On-Peak kWh	$0.173210				$0.046353	$0.046353	$0.219563
All Off-Peak kWh	$0.036580				$0.046353	$0.046353	$0.082933

RESIDENTIAL TIME-OF-USE
SCHEDULE RT

Summer Hours beginning April 16 and continuing through October 15

On-Peak hours shall be 1 p.m. through 7 p.m., Monday through Saturday.

All hours not specified as On-Peak shall be Off-Peak.

Winter Hours beginning October 16 and continuing through April 15

On-Peak hours shall be 6:00 a.m. through 9 a.m. and 6 p.m. through 9:00 p.m., Monday through Saturday. All other hours shall be Off-Peak.

Monthly Minimum Charge

The monthly Minimum Charge shall be the greater of the following:

1. The Service Availability Charge; or
2. The amount specified in a written contract between the Cooperative and the Customer.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

ELECTRIC RATES

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
P.O. Box 820
Willcox, Arizona 85644-0820
Filed by: Creden Huber
Title: CEO/General Manager

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

RESIDENTIAL PREPAID SERVICE
SCHEDULE RPS

Availability

Available, on a voluntary basis, to customers in the territory served by the Cooperative for Residential Use throughout the Cooperative's Service Area where the facilities of the Cooperative are of adequate capacity subject to the Cooperative's Service Conditions.

Schedule RPS is not available at locations where the Customer is enrolled in the Cooperative's Critical Load Program, or with Invoice Groups which include Loans or Special Billings. Participation allowed under this tariff shall be determined by the Cooperative. Customers specified under Arizona Administrative Code R14-2-211.A.5 shall not be eligible for Schedule RPS. These Customers include, but are not limited to, those where termination of service would be especially dangerous to the health of the customer, as determined by a licensed medical physician; those customers where life supporting equipment used in the home is dependent on utility service; and those customers where weather would be especially dangerous to health.

Applicability

Applicable, by request of the customer, to a customer otherwise served under the Cooperative's Rate Schedule R for all Single Family Dwellings when all service is supplied at one Point of Delivery through a single Service Line and Energy is metered through one Meter.

Not applicable to customers that are on Schedule R03 (3-phase), Schedule R-DG E, Schedule R-DG, Schedule NM1, Schedule DG, Customers on Budget Billing, or for resale purposes.

STANDARD OFFER TARIFF

RESIDENTIAL PREPAID SERVICE
SCHEDULE RPS

Service Availability Charge, kWh Rates, and REST Surcharge

RATE RPS							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Day)		$0.150247	$0.016110	$0.202521	$0.124273	$0.493151	$0.493151
Energy Charge ($/kWh/Month) All kWh	$0.071165				$0.046353	$0.046353	$0.117518

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. DSM Adjustment, Schedule BA
4. REST Surcharge as follows:

   The RPS tariff is subject to the REST Surcharge on a per kWh basis as all other SSVEC rates, but with the use of a daily (rather than monthly) REST Surcharge CAP. The methodology for calculating a daily REST surcharge CAP is based on the following formula; the Monthly Residential Rest Surcharge CAP × 12 months ÷ 365 days rounded to nearest mill (1/10 of a penny).

Service Conditions

The following Service Conditions of the Cooperative (based on ARS R14-2 -201 to 213)), on file with the ACC, shall **NOT** apply to this schedule;

1) Section 2.4.1 Credit Policy Residential Service
2) Section 2.4.4 Exceptions Applicable to Sections 2.4.1 and 2.4.3
3) Section 2.4.5 Deposit Procedures
4) Section 2.4.6 Schedule of Deposits
5) Section 2.4.7 Interest on Deposits
6) Section 2.8.3 Frequency and Estimated Bills
7) Section 2.13 Billing information
8) Section 2.15 Terms of Payments
9) Section 2.16.1 Budget Billing
10) Section 2.16.2 Surepay Automatic Payments
11) Section 2.19.1 Notice of Delinquent Status
12) Section 2.20.4 Termination Notice Requirements

STANDARD OFFER TARIFF

RESIDENTIAL PREPAID SERVICE
SCHEDULE RPS

13) Section 2.20.5 Timing of Termination with Notice
14) Section 2.21 Service Termination Procedure

Experimental Service Conditions Applicable to Prepaid Metering Service Only:

2.28 Prepaid Electric Service

A. Availability: The Prepaid Electric Service is available only to new or existing residential members with the following exceptions:

(1) Residential critical load members are excluded from the prepaid electric service program.

(2) Customers identified under A.A.C. R14-2-211.A.5 and those customers under appropriate circumstances but beyond the scope of A.A.C. R14-211.A.5 are not eligible for this rate.

(3) Invoice groups which include loans or special billings.

(4) Customer must have a valid e-mail account and phone capable of receiving the messages and low balance alerts.

B. Enrollment: Member must make a request and complete a Prepaid Electric Service Application.

(1) In addition to the information provided in section 2.3.1, the prepaid applicant is encouraged to provide the following:

a. Secondary e-mail address.

b. Cell phone number with text capability and/or second phone number.

c. Other approved method of communications other than US Postal Mail.

(2) The Cooperative will allow enrollment into prepaid service if the customer meets the eligibility requirements.

a. The Customer must pay all applicable fees prior to commencement of service.

b. Once a $50.00 credit balance has been established the account will be activated.

STANDARD OFFER TARIFF

RESIDENTIAL PREPAID SERVICE
SCHEDULE RPS

C. Billing, Payments, and Information: Paper statements will not be provided under the prepaid program. Billing information, as well as payment and account information can be obtained at:

(1) SSVEC business offices during normal business offices.

(2) Integrated Voice Recognition (IVR) at (520) 458-4691.

(3) Online at www.ssvec.org 24 hours a day.

D. Estimating Prepaid Electric Balances and Customer Notices:

(1) As energy is consumed, the credit balance is reduced until either the balance is exhausted or additional payments are added to the balance. Balances can be checked online at www.ssvec.org at any time.

(2) SSVEC's web interface can provide an estimate of how long the prepaid credit will last according to current usage.

(3) Customers can be notified of their estimated balance by e-mail, and/or other electronic means if customer provides the necessary contact information.

a. The notice will be generated daily when the Customers credit balance is less than their current daily average usage times 4. The daily average usage will be calculated using up to the previous 30 days of consumption history.

b. These estimates are based on the historic information available but can be affected by changes in the customer's usage or needs. The member is responsible for ensuring that a credit balance is maintained on the account.

E. Transfers and optional Debt Recovery for Outstanding Balances:

(1) Accounts that are on existing post paid electric service may be converted to pre paid electric service.

(2) When existing customers that convert from post paid residential service the existing deposit, if any, is applied toward any outstanding balance of the post paid account with the remaining credit applied to prepaid service.

STANDARD OFFER TARIFF

RESIDENTIAL PREPAID SERVICE
SCHEDULE RPS

(3) All post paid fees and unbilled energy charges must be paid in full except for the provisions below:

a. Prepaid accounts are not eligible for payment arrangements. However, there is a debt recovery feature available within limits to recover amounts due from the prior post paid account, when applying for prepaid service. A percentage (20% to 50%) of each prepaid electric service payment can be applied to an outstanding debt up to $400.

b. Outstanding amounts over $400.00 must be paid down to the $400.00 level prior to being eligible for prepaid electric service program.

c. The Customer agrees to make prepaid payments of sufficient amounts to pay down the outstanding amounts in no more than 4 months.

d. If the Customer fails to pay the outstanding balance within the 4 months allowed, SSVEC has the right to disconnect the prepaid service until the outstanding balance has been paid in full.

(4) SSVEC will transfer the existing membership fee on the post paid to the new account where the member will not be required to make an additional payment.

(5) The customer may elect to convert from prepaid electrical service back to post paid service. At which time, the Cooperative may require full payment of the deposit to continue service. Customers who cancel their Pre-paid Accounts may not re-apply for a new Pre-paid Account at the same location for 6 month period.

F. Terminating and Restoring Prepaid Electric Service: Prepaid meters are equipped to allow remote disconnection / reconnection of service.

(1) Service terminated at the request of the member will receive a refund of any remaining credit on the account after all final bill amounts have been calculated.

(2) Electric service may be subject to immediate disconnection any time the account does not have a credit balance.

(3) Following a disconnect because the account does not have a credit balance, the member must pay any unpaid balance from the result of energy consumption from the time the account has reached a zero balance and when the Cooperative issued the disconnection command,

STANDARD OFFER TARIFF

RESIDENTIAL PREPAID SERVICE
SCHEDULE RPS

plus purchase a minimum of $20.00 prepaid electric service, before service is reconnected.

(4) If an account is disconnected because the account does not have a credit balance and does not become current after 10 days, the account will be considered closed and the Cooperative will mail a final bill to the last known address on file for all unpaid charges.

(5) Extreme Weather Events: Service will not be disconnected when the local weather forecast as predicted by the National Oceanographic and Administration Service indicates that the temperature will not exceed 32 degrees for the next Day's forecast. The ACC may determine that other weather conditions are especially dangerous to health as the need arises.

(6) The Cooperative shall not disconnect a prepaid customer due to a negative account balance based on an estimated read that has not been trued up with an actual read.

ELECTRIC RATES

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
P.O. Box 820
Willcox, Arizona 85644-0820
Filed by: Creden Huber
Title: CEO/General Manager

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

RESIDENTIAL AUXILIARY SERVICE
SCHEDULE RA

Availability

Available to Customers taking service under the Residential Service or Residential Time-of-Use Service tariffs for individually metered water wells, shops, and barns requiring less than 50 kVA transformer capacity as determined by the Cooperative and located along the existing Distribution Lines of the Cooperative for single- and/or three-phase service. Single-phase motors will be limited to 10 HP and of a type which will not cause excessive voltage fluctuations.

Applicability

This schedule is applicable for individually metered auxiliary residential service such as; individual or shared water wells, shops and barns and other non-commercial users.

This schedule is not applicable for resale, breakdown, or standby service.

Monthly Rate

STANDARD RATE RA							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.62	$0.49	$6.23	$8.66	$20.00	$20.00
Demand Charge ($/kW/Month) First 3 kW, per kW	$0.00				$1.50	$1.50	$1.50
Demand Charge ($/kW/Month) Over 3 kW, per kW	$6.50				$1.50	$1.50	$8.00
Energy Charge ($/kWh/Month) All kWh	$0.085089				$0.025570	$0.025570	$0.110659

ELECTRIC RATES

RESIDENTIAL AUXILIARY SERVICE
SCHEDULE RA

Monthly Minimum Charge

The monthly Minimum Charge shall be the highest of the following:

1. The Service Availability Charge plus the Demand Charges; or

2. The amount specified in a written contract between the Cooperative and the Customer.

Determination of Billing Demand

The billing Demand shall be the highest 15 minute kW or kVA Demand determined to the nearest 1/10 of a KW or kVA by means of suitable metering equipment, but not less than 3 kW or kVA.

Whenever the power factor at time of maximum capacity is less than 90% or for 3-phase service, the billing capacity may be determined on the basis of kVA capacity instead of kW capacity.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85643

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

GENERAL SERVICE
SCHEDULE GS

Availability

Available to all Customers who generally require less than 50 kVA transformer capacity as determined by the Cooperative and located along the existing Distribution Lines of the Cooperative for single- and/or three-phase service for commercial lighting, small power, other commercial or business uses, farm use, water pumps such as individually metered domestic and stock wells, and all public buildings. This rate schedule is an optional schedule for irrigation and commercial water service for all pumps requiring less than 50 kVA of transformer capacity. Single-phase motors will be limited to 10 HP and of a type which will not cause excessive voltage fluctuations.

Applicability

This schedule is applicable for commercial use which includes service used by retail or wholesale business, small manufacturing or processing establishments, tourist or trailer camps, motels, stores, restaurants, service stations, professional offices, public buildings, churches, seasonal farm uses such as feed grinders, etc., optional for smaller pumps used for irrigation purposes, domestic and stock wells, sewage pump stations, apartments, where more than one unit is served from an individual meter, and other nonresidential uses under conditions provided in the preceding paragraph.

Except in cases of existing Master-Metered mobile home parks, service under this schedule shall not be resold or shared with others.

All service shall be delivered at one Point of Delivery through a single Service Line and Energy is metered through one Meter.

Normally only single phase service is available by the Cooperative and all motors shall be for single-phase operation. Service will not be furnished where individual single-phase motors in excess of 10 HP are installed except where written permission is granted by the Cooperative.

The Cooperative furnishes three-phase service (normally where motors larger than 10 HP are required) only where such service is already available immediately adjacent to service after giving consideration to the investment required and probable use of three-phase service by the Customer.

GENERAL SERVICE
SCHEDULE GS

Monthly Rate

STANDARD RATE GS							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.62	$0.49	$6.23	$8.66	$20.00	$20.00
Demand Charge ($/kW/Month) First 3 kW, per kW	$0.00				$1.50	$1.50	$1.50
Demand Charge ($/kW/Month) Over 3 kW, per kW	$6.50				$1.50	$1.50	$8.00
Energy Charge ($/kWh/Month) All kWh	$0.085089				$0.025570	$0.025570	$0.110659

Monthly Minimum Charge

The monthly Minimum Charge shall be the highest of the following:

1. The Service Availability Charge plus the Demand Charges; or

2. The amount specified in a written contract between the Cooperative and the Customer.

Determination of Billing Demand

The billing Demand shall be the highest 15 minute kW or kVA Demand determined to the nearest 1/10 of a KW or kVA by means of suitable metering equipment, but not less than 3 kWor kVA.

Whenever the power factor at time of maximum capacity is less than 90%, and on all 3-phase services the billing capacity may be determined on the basis of kVA capacity instead of kW capacity.

GENERAL SERVICE
SCHEDULE GS

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85644-0820

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

GENERAL SERVICE & SMALL POWER TIME-OF-USE SINGLE- AND THREE-PHASE SERVICE SCHEDULE GT

Availability

Available to Customers who generally require less than 50 kVA transformer capacity as determined by the Cooperative and located along the existing Distribution Lines of the Cooperative for single- and/or three-phase service for commercial lighting, small power, other commercial or business uses, farm use, water pumps such as individually metered domestic and stock wells, and all public buildings. This rate schedule is an optional schedule for irrigation and commercial water service for all pumps requiring less than 50 kVA of transformer capacity.

Single-phase motors shall be limited to 10HP and of a type that will not cause excessive voltage fluctuations.

Billing under this rate schedule shall become effective beginning with the next regular Meter reading after the Customer has requested service under this schedule and after the Cooperative has installed the appropriate Meter.

Applicability

Applicable for commercial use including service used by retail or wholesale business, small manufacturing or processing establishments, tourist or trailer camps, motels, stores, restaurants, service stations, professional offices, public buildings, churches, seasonal farm uses such as feed grinders, etc., optional for smaller pumps used for irrigation purposes, domestic and stock wells, sewage pump stations, apartments where more than one unit is served from an individual Meter, and other nonresidential uses under conditions provided in the preceding section.

Except in cases of existing Master-Metered mobile home parks, service under this schedule shall not be resold or shared with others.

All service shall be delivered at one Point of Delivery through a single Service Line and Energy is metered through one Meter.

Service will not be furnished where individual single-phase motors in excess of 10HP are installed except where written permission is granted by the Cooperative.

GENERAL SERVICE & SMALL POWER TIME-OF-USE
SINGLE- AND THREE-PHASE SERVICE
SCHEDULE GT

The Cooperative furnishes three-phase service (normally where motors larger than 10 HP are required) only where such service is already available immediately adjacent to service after giving consideration to the investment required and probable use of three-phase service by the Customer.

Monthly Rate

STANDARD RATE GT							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.62	$0.49	$6.23	$10.66	$22.00	$22.00
Demand Charge ($/kW/Month	$0.00				$1.50	$1.50	$1.50
On-Peak Capacity Charge ($/kW of Billing Capacity)	$18.50				$0.00	$0.00	$18.50
Energy Charge ($/kWh/Month) All kWh	$0.034292				$0.025570	$0.025570	$0.059862

Billing under this rate shall be the sum of the following:

1. The Service Availability Charge
2. The Demand Charge
3. The On Peak Capacity Charge
4. The Energy Charge
5. Any applicable billing adjustments

Summer Hours beginning April 16 and continuing through October 15

On-Peak hours shall be 1 p.m. through 7 p.m., Monday through Saturday.

All hours not specified as On-Peak shall be Off-Peak.

Winter Hours beginning October 16 and continuing through April 15

On-Peak hours shall be 6:00 a.m. through 9 a.m. and 6 p.m. through 9:00 p.m., Monday through Saturday. All other hours shall be Off-Peak.

GENERAL SERVICE & SMALL POWER TIME-OF-USE
SINGLE- AND THREE-PHASE SERVICE
SCHEDULE GT

Determination of Billing Demand

The billing Demand shall be the highest 15 minute kWor kVA Demand determined to the nearest 1/10 of a KW or kVA by means of suitable metering equipment, but not less than 3 kW or kVA. Whenever the power factor at time of maximum capacity is less than 90% or for all 3-phase services, the billing capacity may be determined on the basis of kVA capacity instead of kW capacity.

Determination of Billing Capacity

The monthly Demand capacity shall be based on the highest 15 minute kW Demand determined using suitable metering equipment. All capacities determined to the nearest 1/10 of a kW or kVA. Whenever the power factor at the time of maximum capacity is less than ninety percent (90%) or for all 3-phase services, the billing capacity may be determined on the basis of kVA capacity instead of kW capacity.

Monthly Minimum Charge

The monthly Minimum Charge for any period that service is established shall apply for a period of not less than four consecutive months where only single-phase service is supplied and for not less than six consecutive months (or longer as may be specified in Cooperative's service agreement) where three-phase service is supplied. The monthly Minimum Charge may, at the option of the Cooperative, be determined on a separately metered basis for both single- and three-phase service but shall in no event be less than the highest minimum charge when computed or determined by any of the following methods. The monthly Minimum Charge shall not include any billings made under the Billing Adjustments.

(1) The Service Availability Charge plus the Demand Charges; or

(2) Special installations: Where installations are of unusual character as to electric usage requirements and/or investments, the monthly Minimum Charge will be determined by the Cooperative and set forth in the service Application with the Customer.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

GENERAL SERVICE & SMALL POWER TIME-OF-USE
SINGLE- AND THREE-PHASE SERVICE
SCHEDULE GT

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85644-0820

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

GENERAL POWER SERVICE RV PARKS
SCHEDULE PRV

DISCONTINUED

Customers taking service under this tariff transferred to Large Power Service.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85644-0820

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

SECURITY LIGHTING
SCHEDULE SL

Availability

Available for security lighting service to all Cooperative Customers located along existing Distribution Lines of the Cooperative. Lighting service for state, county, city, town, political subdivision, homeowners associations, improvement district, or a responsible person or persons for unincorporated communities shall not be served under this rate schedule but shall be served under rate Schedule S.

Applicability

The Cooperative will install and maintain an un-metered shielded 100 Watt High Pressure Sodium, "Security Lamp" or similar fixture controlled by photo-electric cell on any suitable existing pole when a three-year contract for the initial installation of the security light has been executed and accepted by the Cooperative. All lighting installed will be subject to meeting municipal or county lighting ordinances. The Customer shall pay the cost of facilities in accordance with the Line Extension provisions in the Service Conditions.

Monthly Rate

STANDARD RATE SL					
Cooperative-Owned and Maintained Lighting Service	Power Supply	Distribution			Total Rate
		Billing	Access	Total	
100 Watt HPS on Existing Pole	$1.50		$10.24	$10.24	$11.74
35 Watt LP on Existing Pole **	$2.16		$9.58	$9.58	$11.74
35 to 75 Watt LED on Existing Pole	$0.90		$9.58	$9.58	$10.48
Additional Poles for Security Lights			$2.15	$2.15	$2.15

** Applies only to lights presently installed. No additional 35 Watt LP will be installed.

SECURITY LIGHTING
SCHEDULE SL

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Termination of Contract

A contract may be terminated prior to the expiration of three years if the Customer agrees to pay the Cooperative the original installation cost plus the cost of removal, or payment of balance of the contract, whichever is less.

The Cooperative reserves the right to remove the security light and related equipment at any time in the event more than two service calls in a twelve month period become necessary due to vandalism or other causes over and above the regular maintenance required unless the Customer agrees to pay for the additional calls and related cost incurred.

Other Provisions

All security light facilities, installed by the Cooperative, shall be owned, operated and maintained by the Cooperative. All facilities installed on the Customer's Premises shall be the property of the Cooperative. Security light installations may be made on a temporary basis in accordance with the Service Conditions covering Temporary Service.

Security light installations shall be controlled by light sensitive photo electric cells.

It shall be the Customer's responsibility to notify the Cooperative of any security light maintenance which may be required. Security light installations and maintenance shall be done only during normal business hours.

The Cooperative reserves the right to disapprove the installation of a security light for Customers with an unsatisfactory credit rating or upon leased or rented property or for any other safety or operational reason.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85644-0820

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

STREET LIGHTING
SCHEDULE S

Availability

Available for lighting public streets, alleys, thoroughfares, public parks and playgrounds by use of Cooperative's standard facilities where such service is contracted for under this rate schedule by the state, county, city, town, political subdivision, homeowners associations, improvement district, or a responsible person or persons for unincorporated communities. This service is not available to individuals.

Service is from dusk to dawn and Cooperative will own, operate, and maintain the street light system including lamps and globe replacements. New service under this rate schedule will be provided only under the table titled Customer-Provided Facilities and Cooperative Owned and Maintained Lighting Service.

Character of Service

Multiple or series street lighting system provided at the option of Cooperative.

Monthly Rate

COOPERATIVE PROVIDED FACILITIES AND COOPERATIVE OPERATED/MAINTAINED LIGHTING SERVICE					
Type of Fixture and Pole	Power Supply	Distribution			Total Rate
		Billing	Access	Total	
70 Watt HPS	$1.50		$11.66	$11.66	$13.16
100 Watt HPS – Single/Wood	$2.16		$9.72	$9.72	$11.88
100 Watt HPS – Single/Steel	$2.16		$14.90	$14.90	$17.06
100 Watt HPS – Double/Wood	$4.32		$17.61	$17.61	$21.93
100 Watt HPS – Double/Steel	$4.32		$20.11	$20.11	$24.43
35 to 75 Watt LED - Single/Wood	$1.50		$10.38	$10.38	$11.88
35 to 75 Watt LED - Single/Steel	$1.50		$15.56	$15.56	$17.06
35 to 75 Watt LED - Double/Wood	$3.00		$18.93	$18.93	$21.93
35 to 75 Watt LED - Double/Steel	$3.00		$21.43	$21.43	$24.43
150 Watt HPS - Single/Wood	$3.24		$12.32	$12.32	$15.56
150 Watt HPS - Single/Steel	$3.24		$15.56	$15.56	$18.80

STREET LIGHTING SERVICE
SCHEDULE S

COOPERATIVE PROVIDED FACILITIES AND COOPERATIVE OPERATED/MAINTAINED LIGHTING SERVICE					
Type of Fixture and Pole	Power Supply	Distribution			Total Rate
		Billing	Access	Total	
150 Watt HPS - Double/Wood	$6.48		$22.73	$22.73	$29.21
150 Watt HPS - Double/Steel	$6.48		$25.44	$25.44	$31.92
76 to 125 Watt LED - Single/Wood	$2.52		$13.04	$13.04	$15.56
76 to 125 Watt LED - Single/Steel	$2.52		$16.28	$16.28	$18.80
76 to 125 Watt LED - Double/Wood	$5.04		$24.17	$24.17	$29.21
76 to 125 Watt LED - Double/Steel	$5.04		$26.88	$26.88	$31.92
250 Watt HPS - Single/Wood	$5.40		$16.28	$16.28	$21.68
250 Watt HPS - Single/Steel	$5.40		$19.25	$19.25	$24.65
250 Watt HPS - Double/Wood	$10.80		$30.52	$30.52	$41.32
250 Watt HPS - Double/Steel	$10.80		$32.68	$32.68	$43.48
126 to 175 Watt LED - Single/Wood	$3.48		$18.20	$18.20	$21.68
126 to 175 Watt LED - Single/Steel	$3.48		$21.17	$21.17	$24.65
126 to 175 Watt LED - Double/Wood	$6.96		$34.36	$34.36	$41.32
126 to 175 Watt LED - Double/Steel	$6.96		$36.52	$36.52	$43.48
176 to 225 Watt LED - Single/Wood	$4.50		$19.70	$19.70	$24.20
176 to 225 Watt LED - Single/Steel	$4.50		$22.67	$22.67	$27.17
176 to 225 Watt LED - Double/Wood	$9.00		$37.36	$37.36	$46.36
176 to 225 Watt LED - Double/Steel	$9.00		$39.52	$39.52	$48.52

CUSTOMER PROVIDED FACILITIES AND COOPERATIVE OPERATED/MAINTAINED LIGHTING SERVICE					
Type of Fixture and Pole	Power Supply	Distribution			Total Rate
		Billing	Access	Total	
100 Watt HPS - Single/Wood	$2.16		$6.94	$6.94	$9.10
100 Watt HPS - Single/Steel	$2.16		$8.64	$8.64	$10.80
100 Watt HPS - Double/Wood	$4.32		$13.13	$13.13	$17.45
100 Watt HPS - Double/Steel	$4.32		$14.22	$14.22	$18.54
35 to 75 Watt LED - Single/Wood	$1.50		$7.60	$7.60	$9.10
35 to 75 Watt LED - Single/Steel	$1.50		$9.30	$9.30	$10.80
35 to 75 Watt LED - Double/Wood	$3.00		$14.45	$14.45	$17.45
35 to 75 Watt LED - Double/Steel	$3.00		$15.54	$15.54	$18.54
150 Watt HPS - Single/Wood	$3.24		$8.92	$8.92	$12.16

STREET LIGHTING SERVICE
SCHEDULE S

CUSTOMER PROVIDED FACILITIES AND COOPERATIVE OPERATED/MAINTAINED LIGHTING SERVICE					
Type of Fixture and Pole	Power Supply	Distribution			Total Rate
		Billing	Access	Total	
150 Watt HPS - Single/Steel	$3.24		$10.62	$10.62	$13.86
150 Watt HPS - Double/Wood	$6.48		$16.70	$16.70	$23.18
150 Watt HPS - Double/Steel	$6.48		$17.99	$17.99	$24.47
76 to 125 Watt LED - Single/Wood	$2.52		$9.64	$9.64	$12.16
76 to 125 Watt LED - Single/Steel	$2.52		$11.34	$11.34	$13.86
76 to 125 Watt LED - Double/Wood	$5.04		$18.14	$18.14	$23.18
76 to 125 Watt LED - Double/Steel	$5.04		$19.43	$19.43	$24.47
250 Watt HPS - Single/Wood	$5.40		$12.29	$12.29	$17.69
250 Watt HPS - Single/Steel	$5.40		$13.78	$13.78	$19.18
250 Watt HPS - Double/Wood	$10.80		$23.54	$23.54	$34.34
250 Watt HPS - Double/Steel	$10.80		$24.16	$24.16	$34.96
126 to 175 Watt LED - Single/Wood	$3.48		$14.21	$14.21	$17.69
126 to 175 Watt LED - Single/Steel	$3.48		$15.70	$15.70	$19.18
126 to 175 Watt LED - Double/Wood	$6.96		$27.38	$27.38	$34.34
126 to 175 Watt LED - Double/Steel	$6.96		$28.00	$28.00	$34.96
176 to 225 Watt LED - Single/Wood	$4.50		$15.38	$15.38	$19.88
176 to 225 Watt LED - Single/Steel	$4.50		$16.87	$16.87	$21.37
176 to 225 Watt LED - Double/Wood	$9.00		$29.72	$29.72	$38.72
176 to 225 Watt LED - Double/Steel	$9.00		$30.34	$30.34	$39.34

All new street lighting installed shall be H.P. Sodium or LED. All fixtures installed shall be subject to meeting municipal or county lighting ordinances.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

STREET LIGHTING SERVICE
SCHEDULE S

Special Facilities

Historical or decorative street lighting is considered non-standard and is not provided by the Cooperative. The Cooperative will not provide maintenance on customer-owned special facilities except by a separate maintenance contract. Any existing special facilities will continue to be billed by the standard applicable rate in this Tariff. Any new special facilities will be assigned an appropriate metered Tariff.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

Other Provisions

Street light facilities may be fed from existing primary, secondary, overhead, or underground systems. If the Customer is to be billed under the table headed "Customer Provided Facilities", the Customer must install the system at its own expense in accordance with the Cooperative's specifications and approvals, or make a contribution in aid of construction to cover the Cooperative's cost of installing the system. The Cooperative will maintain and operate the system except in the case of a special facility installation where there is no maintenance contract.

All street lighting covered by this tariff will be installed and maintained by a separate agreement. Except for normal maintenance, the costs for any changes to a light or street light system after installation will be charged to the customer requesting the changes. In such a case, the old contract is voided and a new agreement executed.

The Customer will provide all easements necessary, if any, at no cost to the Cooperative.

The Customer will make payment to the Cooperative prior to the start of construction as a nonrefundable Contribution in Aid of Construction.

For underground extensions, the Customer will provide all trenching, backfilling, compaction and concrete work according to the Cooperative's specifications at no cost to the Cooperative.

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ELECTRIC COOPERATIVE, INC.
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Effective Date: January 1, 2017

STANDARD OFFER TARIFF

SEASONAL POWER SERVICE
SCHEDULE SP

DISCONTINUED

Customers taking service under this tariff transferred to Large Power Service.

SULPHUR SPRINGS VALLEY
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STANDARD OFFER TARIFF

LARGE POWER SERVICE
SCHEDULE P

Availability

Available to all Customers located along existing Distribution Lines of the Cooperative, requiring single or three phase service and who demonstrate or elect to pay a monthly billing minimum of 50 KVA. Service is not available to irrigation customers.

Applicability

All service shall be delivered at one Point of Delivery through a single Service Line and Energy is metered through one Meter.

Except in cases of existing Master-Metered mobile home parks, service shall not be resold by the Customer or shared with others.

Monthly Rate

STANDARD RATE P							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.57	$0.50	$6.31	$43.62	$55.00	$55.00
Demand Charge ($/kVA of Billing Capacity)	$4.00				$4.00	$4.00	$8.00
Energy Charge ($/kWh/Month) All kWh	$0.056274				$0.016746	$0.016746	$0.073020

LARGE POWER SERVICE
SCHEDULE P

Primary Service Discount

For customers who own and maintain the distribution transformer, a discount of $1.00 per kVA of billing capacity will be applied.

Determination of Demand Capacity

The monthly Demand capacity shall be based on the highest 15 minute kVA Demand determined by suitable metering equipment. All capacities determined to the nearest 1/10 of a kVA.

The monthly billing capacity shall be on the kVA capacity as determined above, but in no event shall the billing capacity be less than 50 kVA. For services with dedicated transformers with a transformer capacity specifically requested by the Customer, above those normally used by the Cooperative, the minimum demand shall be 60% of the requested transformer capacity.

Monthly Minimum Charge

The monthly Minimum Charge under this schedule shall be the sum of the above service availability, capacity and Energy charges but not less than $515.00 per month for Customer owned facilities and $565.00 for Cooperative owned facilities. The monthly Minimum Charge shall not include any billing made under the Billing Adjustments.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

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Effective Date: January 1, 2017

STANDARD OFFER TARIFF

LARGE POWER SERVICE TIME OF USE
SCHEDULE PT

Availability

Available to Customers located along existing Distribution Lines of the Cooperative who require single- or three-phase service and who demonstrate or elect to pay a monthly billing capacity as specified by the service Application of more than 50 kVA.

Billing under this rate schedule shall become effective beginning with the next regular Meter reading after the Customer has requested service under this schedule and after the Cooperative has installed the appropriate Meter.

Applicability

Where only single-phase service is supplied, this schedule is an optional schedule available to a Customer upon his or her written request. This rate is not available for irrigation Customers.

Except for existing Master Metered mobile home or RV parks, this service shall not be resold by the Customer or shared with others.

Monthly Rate

STANDARD RATE PT							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.57	$0.50	$6.31	$43.62	$55.00	$55.00
On-Peak Capacity Charge $/kVA On-Peak Billing Capacity	$20.00				$0.00	$0.00	$20.00
Off-Peak Capacity Charge $/kVA Off-Peak	$0.00				$4.00	$4.00	$4.00

LARGE POWER SERVICE TIME OF USE
SCHEDULE PT

STANDARD RATE PT							
	Power	Distribution Charges					Total
Billing Capacity							
Energy Charge ($/kWh/Month) All kWh	$0.030300				$0.016746	$0.016746	$0.047046

Billing under this rate shall be the sum of the following:

1. The Service Availability Charge;
2. The On-Peak Capacity Charge;
3. The Off-Peak Capacity Charge;
4. The Energy Charge;
5. Any applicable billing adjustments.

Primary Service Discount

For customers who own and maintain the distribution transformer, a discount of $1.00 per kVA of billing capacity will be applied.

Determination of On-Peak, Near Peak and Off-Peak Billing Capacity

The On-Peak Monthly Billing Capacity and Off-Peak Billing Capacity shall be determined by means of a suitable kVA demand meter. On-Peak and Off-Peak hours shall be determined as follows:

Summer Hours beginning April 16 and continuing through October 15

On-Peak hours shall be 1 p.m. through 7 p.m., Monday through Saturday.

All hours not specified as On-Peak shall be Off-Peak.

Winter Hours beginning October 16 and continuing through April 15

On-Peak hours shall be 6:00 a.m. through 9 a.m. and 6 p.m. through 9:00 p.m., Monday through Saturday. All other hours shall be Off-Peak.

Monthly Minimum Charge

The monthly Minimum Charge under this schedule shall be the sum of the above service availability, capacity and Energy charges but not less than $251.95 per month for Customer owned facilities and $301.95 for Cooperative owned facilities, nor less than the Minimum Charge specified in Customer's service Application with the Cooperative. The monthly Minimum Charge shall not include any billing made under the Billing Adjustments.

LARGE POWER SERVICE TIME OF USE
SCHEDULE PT

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

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STANDARD OFFER TARIFF

INDUSTRIAL POWER SERVICE
SCHEDULE IP

Availability

Available to all Customers located along existing Distribution Lines of the Cooperative, requiring single- or three-phase service and can demonstrate or elect a minimum billing capacity of 500 kVA. Service under this schedule shall be furnished in accordance with the Cooperative's Service Conditions. Where only single-phase service is supplied, this schedule is an optional schedule available to the Customer upon written request for periods of not less than twelve (12) consecutive months.

Applicability

This service shall not be available for RV Parks. This service shall not be resold by the Customer or shared with others.

Monthly Rate

STANDARD RATE IP							
		Distribution Charges					
	Power Supply	Metering	Meter Reading	Billing	Access	Total	Total Rate
Service Availability Charge ($/Customer/Mo)		$4.57	$0.50	$6.31	$388.62	$400.00	$400.00
Demand Charge ($/kVA of Billing Capacity)	$4.00				$3.00	$3.00	$7.00
Energy Charge ($/kWh/Month)							
First 400 kWh/kVA	$0.056389				$0.016746	$0.016746	$0.073135
Excess kWh/kVA	$0.030000				$0.016746	$0.016746	$0.046746

INDUSTRIAL POWER SERVICE
SCHEDULE IP

Primary Service Discount

For customers who own and maintain the distribution transformer, a discount of $0.50 per kVA of billing capacity will be applied.

Determination of kVA Billing Capacity

The monthly kVA billing capacity shall be the highest 15-minute kVA Demand as determined by means of suitable kVA Demand metering.

The monthly billing capacity shall be the kVA capacity as determined above, but in no event shall the billing capacity be less than:

(1) 500 kVA, nor less than
(2) 60% of the installed dedicated transformer capacity used to supply the Customer's requirements, nor less than
(3) The minimum kVA billing capacity specified in the Customer's service Application or contract with the Cooperative.

Monthly Minimum Charge

The monthly Minimum Charge shall be the sum of the Service Availability Charge and the Capacity Charge. The monthly Minimum Charge shall not include any billing made under the Billing Adjustments.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Furnishing of Service Transformer and Associated Equipment

Where individual or unusual substation installations are required to serve the Customer, the Cooperative reserves the right to require the Customer to make, at the Customer's expense, the necessary, complete installation (consisting of transformer, structure, protective devices, etc.) required to provide adequate service to the Customer, and in such event the Customer will own, operate and maintain said installation but will benefit by making a savings of capacity charges as provided in the rate above.

INDUSTRIAL POWER SERVICE
SCHEDULE IP

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

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STANDARD OFFER TARIFF

IRRIGATION SERVICE
SCHEDULE IS

Availability

Available to irrigation, commercial and municipal water systems throughout the Cooperative's service area where the facilities of the Cooperative are of adequate capacity and are adjacent to the premises. Customers will be required to take service under this rate schedule for a twelve month period before being eligible for provision of service under another rate schedule.

Applicability

Electric Service to irrigation pumps and pump-back systems used only for irrigating land used for agricultural purpose and pumps used for commercial and municipal water systems, single-phase motors will be limited to 10 HP and of a type which will not cause excessive voltage fluctuations. The Cooperative may limit the maximum horsepower rating of motors where such may cause interference to other Customers. Normally motors over 10 HP will be three-phase.

Monthly Rate

STANDARD RATE IS							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.60	$0.49	$6.21	$18.70	$30.00	$30.00
Capacity Charge April – Oct $/kVA of Billing Capacity)	$6.75				$1.50	$1.50	$8.25
Energy Charge ($/kWh) April-Oct All kWh	$0.037100				$0.045402	$0.045402	$0.082502
Energy Charge ($/kWh) Nov-Mar First 300 kWh/kVA Excess kWh/kVA	$0.050600 $0.035600				$0.057684 $0.045598	$0.057684 $0.045598	$0.108284 $0.081198

IRRIGATION SERVICE
SCHEDULE IS

Optional Irrigation Load Factor Rate I-L

STANDARD RATE I-L							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.60	$0.49	$6.21	$23.70	$35.00	$35.00
Energy Charge ($/kWh/Month) All kWh	$0.074500				$0.013631	$0.013631	$0.088131

This rate option is available only upon written agreement with individual Customers who are willing to guarantee minimum monthly load factor usage. Customer must be connected for at least five (5) consecutive months.

Determination of Billing Capacity

The monthly kVA Demand capacity shall be based on the highest 15 minute period during the billing cycle by using appropriate metering equipment.

Annual Minimum Charge

The Minimum Charges for each twelve (12) month period or less an irrigation service is connected shall be not less than $345.00, or $35.00 per kVA of Customer's highest monthly kVA billing demand, whichever is greater. Total billings made as normal Service Availability Charge, demand and Energy charges or monthly minimums shall apply to this minimum charge. Any amount billed as wholesale power rate adjustments and as sales tax shall not apply to the minimum. If Electric service is disconnected prior to utilizing the established minimum, or if the minimum has not been used by the end of twelve (12) consecutive monthly billing cycles, whichever occurs first, the remaining amount due as minimum charges shall be due and payable. In no case shall the Minimum Charge be less than established in the contract for service.

Monthly Minimum Charge

The monthly Minimum Charge shall be Service Availability Charge for rate IS. The monthly minimum charge shall be $28.75 per kVa of billing capacity for rate IL. The minimum charge shall not include any billing made under the Billing Adjustments.

IRRIGATION SERVICE
SCHEDULE IS

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

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STANDARD OFFER TARIFF

CONTROLLED IRRIGATION SERVICE
SCHEDULES CD, CBW & CW

Availability

Available for service to Customers with an installed capacity of 10 HP or greater provided by contract. Service will be initiated only after the contract has been fully executed, returned to and accepted by the Cooperative. Service will be interrupted by use of radio controlled switch equipment. Each installation will be metered to record demand if service is used during a Cooperative peak control time period. Service under this rate schedule is limited to the amount of load that the Cooperative can effectively control for operational purposes. Electric Service under this rate schedule is limited to areas served by SSVEC's control signal. The amount of load served on this rate schedule shall be determined by the Cooperative.

Applicability

Electric Service to irrigation pumps and pump-back systems used only for irrigating land used for agricultural purpose and pumps used for commercial and municipal water systems. The Cooperative may limit the maximum horsepower rating of motors where such may cause interference to other Customers. Normally motors over 10 HP will be three-phase.

Monthly Rate

STANDARD RATE CD, CBW & CW							
		Distribution Charges					
	Power Supply	Metering	Meter Reading	Billing	Access	Total	Total Rate
Service Availability Charge ($/Customer/Mo)		$4.60	$0.49	$6.21	$18.70	$30.00	$30.00
Override Penalty ($/kW of Override Capacity)	$20.00				$0.00	$0.00	$20.00
Energy Charge ($/kWh)							
First 300 kWh/kW	$0.031340				$0.073704	$0.073704	$0.105044
Excess kWh/kW	$0.031340				$0.046317	$0.046317	$0.077657

CONTROLLED IRRIGATION SERVICE
SCHEDULES CD, CBW, & CW

Determination of Billing Demand

The billing Demand to be used in the calculation of the billing shall be the highest 15 minute kW Demand determined to the nearest 1/10 of a KW by means of suitable metering equipment.

Determination of Override Capacity

The over-ride penalty is applicable if controls are overridden during a peak period. The override capacity shall be the highest 15 minute kW demand established during a peak period when controls are overridden as measured by using appropriate metering equipment.

Rate CW

For accounts which are subject to weekly control, the amount billed for first 300 kWh per kW will be reduced 5% each month if kWh usage exceeds 300 kWh per kW and controls are not overridden during a "cut off" period. The discount does not apply to the Service Availability Charge or kWh billed over 300 kWh per kW.

Rate CBW

For accounts which are subject to twice-weekly control, amount billed for first 300 kWh per kW will be reduced 10% each month if kWh usage exceeds 300 kWh per kW and controls are not overridden during a "cut off" period. The discount does not apply to the Service Availability Charge or kWh billed over 300 kWh per kW.

Rate CD

For accounts which are subject to daily control, amount billed for first 300 kWh per kW will be reduced 17% each month if kWh usage exceeds 300 kWh per kW and controls are not overridden during a "cut off" period. The discount does not apply to the Service Availability Charge or kWh billed over 300 kWh per kW.

Other Conditions

The Customer will pay the Cooperative a one time charge of $425 (for the cost of the necessary control equipment which includes materials, equipment and labor) and a mileage fee of $4.50/mile for the service vehicle use and servicemen travel time. A additional service call charge shall be required when the Customer requests a change in service requiring Cooperative personnel to make a trip to the Customer's service location in order to affect such change. The Cooperative reserves the right to utilize the CW, CBW and CD rates for purposes of emergency load Curtailment should conditions warrant.

The Cooperative reserves the right to assign the Day(s) of control and to make periodic reassignments if necessary for all accounts served as "weekly control or twice-weekly control". The Cooperative will initiate control at its discretion on any day in accordance with the provisions in the agreement with the Customer.

CONTROLLED IRRIGATION SERVICE
SCHEDULES CD, CBW, & CW

The Cooperative reserves the right to cancel service, provided under its controlled irrigation rates, if the Customer overrides the load control equipment two or more times in a twelve (12) month period, and/or if the annual kWh usage indicates the service has an annual load factor less than 10% a calendar year.

Minimum Charge

The Minimum Charge for each twelve (12) month period or less an irrigation service is connected shall be not less than $345.00 or $35.00 per kW of Customer's highest monthly kW billing demand, whichever is greater. Total billings made as normal service availability charge, demand and Energy charges or monthly minimums shall apply to this Minimum Charge. If Electric service is disconnected prior to utilizing the established minimum, or if the minimum has not been used by the end of twelve (12) consecutive monthly billing cycles, whichever occurs first, the remaining amount due as minimum charges shall be due and payable. The monthly Minimum Charge shall be the Service Availability Charge. In no case shall the Minimum Charge be less than established in the contract for service.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

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Effective Date: January 1, 2017

STANDARD OFFER TARIFF

INTERRUPTIBLE SERVICE
SCHEDULE CD-LARGE

Availability

Available to irrigation, commercial, and municipal systems throughout the Cooperative's service area with installed capacity of 100 HP or greater (must include at least one individual motor rated and loaded at 100 HP), subject to daily control, where the facilities of the Cooperative are of adequate capacity and are adjacent to the premises. Service under this rate schedule is limited to the amount of load that the Cooperative can effectively control for peak shaving purposes. Electric Service under this rate is limited to areas served by SSVEC's control signal. The amount of load served on this rate schedule shall be determined by the Cooperative.

Applicability

Electric Service to irrigation pumps and directly associated water delivery loads connected to the same meter used only for irrigating land used for agricultural purposes and pumps used for commercial and municipal water systems. Subject to all terms and conditions contained in this rate schedule and the Cooperatives Service Conditions.

Monthly Rate

STANDARD RATE CD-LARGE							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.60	$0.49	$6.21	$18.70	$30.00	$30.00
Override Penalty ($/kW of Override Capacity)	$20.00				$0.00	$0.00	$20.00
Energy Charge ($/kWh/Month) All kWh	$0.031340				$0.050388	$0.050388	$0.081728

INTERRUPTIBLE SERVICE
SCHEDULE CD-LARGE

Determination of Override Capacity

The over-ride penalty is applicable if controls are overridden during a peak period. The Override Capacity shall be the highest 15 minute kW Demand established during a peak period when controls are overridden as measured by using appropriate metering equipment.

Other Conditions

Service under this schedule will be offered only by contract and will be initiated only after the contract has been fully executed, returned to and accepted by the Cooperative. Service will be interrupted by use of radio-controlled switch equipment. Each installation will be metered to record demand if service is used outside the established time period. If a Demand is recorded, then an additional charge of $20.00 per kW will be billed in addition to the other charges due for that billing period.

The Customer will pay the Cooperative the actual cost of the necessary control equipment including materials, equipment and labor. The Cooperative reserves the right to utilize the CD-Large rate for purposes of emergency load curtailment should conditions warrant.

Determination of Billing Capacity

The kW of billing capacity will be established by contractual agreement based upon 85% of the pump horsepower.

Monthly Minimum Charge

The Minimum Monthly Charge shall be the Service Availability Charge plus the Energy Charge and appropriate Billing Adjustments. The minimum annual kWh sales under this Tariff will be equal to 2000 hours multiplied by the KW of billing capacity. In no case shall the Minimum Charge be less than established in the contract for service.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

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STANDARD OFFER TARIFF

CONTRACT POWER SERVICE
SCHEDULE CP

Availability

Available to Customers within the Cooperative's service area who require more than 1000 kVA of capacity on a twelve (12) month, non-seasonal basis, in accordance with terms and conditions negotiated with the Customer. Contracts are subject to approval by the ACC.

Applicability

This schedule is applicable for all Customers requiring in excess of 1000 kVA non-seasonal electric service. Individual contracts shall include facilities charges as required, demand charges as determined by the Customer's monthly load factor and power factor, Energy charges, margin, wholesale power adjustment, and applicable taxes and governmental assessments. Other billing features such as time of use charges may be negotiated.

The primary voltage required for service will be determined by the Cooperative taking into consideration the Customer's capacity requirements.

Service shall not be resold by the Customer or shared with others.

Monthly Rate

The monthly billing shall be the sum of the Service Availability Charge (1), the Capacity Charge (2), the Energy Charge (3), and Other Charges (4):

(1)	Service Availability Charge	As set forth in the Contract for Service.
(2)	Capacity (Demand) Charge	As set forth in the Contract for Service.
(3)	Energy Charge	As set forth in the Contract for Service.
(4)	Other Charges	As set forth in the Contract for Service

Determination of Billing Capacity

The monthly kVA billing capacity shall be determined in the contract for service.

CONTRACT POWER SERVICE
SCHEDULE CP

Monthly Minimum Charge

The monthly Minimum Charge shall be the sum of the Service Availability Charge and the Capacity Charge. The monthly Minimum Charge shall not include any billing made under the Billing Adjustments. In no case shall the Minimum Charge be less than established in the contract for service.

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Furnishing of Service Transformer and Associated Equipment

Where individual or unusual substation installations are required to serve the Customer, the Cooperative reserves the right to require the Customer to make, at the Customer's expense, the necessary, complete installation (consisting of transformer, structure, protective devices, etc.) Required to provide adequate service to the Customer and in such event the Customer will own, operate and maintain said installation but will benefit by incurring a savings of capacity charges as part of the contract rate.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

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STANDARD OFFER TARIFF

UNMETERED SERVICE
SCHEDULE UM

Availability

Available to Customers served by the Cooperative at all points where facilities of adequate capacity and the required phase and suitable voltage are adjacent to the Premises served.

Applicability

To Electric Service where the monthly demand and Energy requirements are constant, subject to the limitations set forth in the Special Provisions of this schedule. Billing quantities must be subject to accurate determination without the use of metering equipment, and service must be supplied at one Point of Delivery.

Not applicable to temporary, breakdown, standby, supplementary, residential, or resale service.

Monthly Rate

STANDARD RATE UM							
	Power Supply	Distribution Charges					Total Rate
		Metering	Meter Reading	Billing	Access	Total	
Service Availability Charge ($/Customer/Mo)		$4.57	$0.49	$6.16	$13.28	$24.50	$24.50
Energy Charge ($/kWh/Month) All kWh	$0.071165				$0.025570	$0.025570	$0.096735

Monthly Minimum Charge

The monthly Minimum Charge for any period that service is established shall be the Service Availability Charge. The monthly Minimum Charge shall not include any billing made under the Billing Adjustments.

UNMETERED SERVICE
SCHEDULE UM

Billing Adjustments

This rate schedule is subject to the following billing adjustments:

1. Wholesale Power and Fuel Cost Adjustment, Schedule BA.
2. Tax Adjustment, Schedule BA.
3. REST Adjustment, Schedule BA.
4. DSM Adjustment, Schedule BA.

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals, terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

Special Provisions

(1) This rate schedule is applicable only to loads where monthly Demand (kW) and Energy (kWh) requirements remain constant. Monthly Demand may not exceed 1.5 kW for each delivery point. Determination of fixed monthly Energy usage will be based on an average 730 hour month.

(2) Prior written approval by an authorized Cooperative representative is required before service is implemented under this rate schedule.

(3) Prior written approval by an authorized Cooperative representative is required for any change in loads. Unauthorized load change will automatically disqualify Customer from service under this rate schedule.

(4) The Cooperative shall have the right to inspect Customer's load facilities at any time to assure compliance with all provisions of this rate schedule.

(5) Service Disconnection shall conform to same specifications as if service had standard metering.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85644-0820

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

SCHEDULE OF SERVICE CHARGES
SCHEDULE SC

This schedule sets the amount of various service charges and other miscellaneous charges which have been authorized in the Cooperative's Service Conditions.

1. CHARGES FOR ELECTRIC SERVICE CONNECTIONS.

   a. NEW AND ADDITIONAL SERVICE. A non-refundable service charge of $50.00 plus applicable taxes, shall be imposed for each of the following:

      1) A new or additional Electric Service Connection;

      2) A former Customer reapplying for Electric Service;

      3) For a location change in Electric Service location to a new service address.

   b. SERVICE CONNECTION CALLBACKS. A nonrefundable service charge of $50.00, plus applicable sales tax, shall be imposed for a return trip to connect Electric Service if, at the Customer's request, it was previously made available at the Point of Delivery, if an inaccurate service address provided by the Customer results in a service connection callback, or if the Customer postpones or cancels any service order already completed by the Cooperative. Except in emergency situations, as determined by the Cooperative in its sole discretion, the Cooperative will not connect Electric Service after 9:00 p.m.

   c. PROPERTY DAMAGE. The Customer shall be billed for damages to the Cooperative's equipment or property caused by the Customer or the Customer's employee(s) or agent(s). Such damages and the cost of repair shall be billed at the Cooperative's current rates for labor, transportation, equipment, and materials, less appropriate credit for salvage, if any.

2. SERVICE CALLS DURING REGULAR BUSINESS HOURS.

   A service charge of $75.00, plus applicable sales tax, plus mileage at the applicable IRS rate per mile for the current year will be imposed for a service call performed during regular business hours for one of the following reasons:

   a. Interruptions caused by the Customer's negligence or failure of Customer-owned equipment, even though the Cooperative is unable to perform any work beyond the Point of Delivery. Reasonable efforts will be made to advise the Customer about the responsibility for such charges before the service call starts.

b. Reconnection of Electric Service to any Customer previously disconnected for unlawful use of service (including tampering or theft), misrepresentation to the Cooperative, unsafe conditions, threats to Cooperative personnel or property, failure to permit safe access, detrimental effects of Customer loads on the Cooperative's system, or failure to establish credit and/or follow procedures to establish Electric Service.

c. Premises visits regarding action associated with disconnection of Electric Service for non-payment of a delinquent bill (whether or not service is actually disconnected as a result of such visit) or for reconnection of Electric Service that has previously been disconnected for non-payment. The service charge may be applied in the case of reconnections effectuated through remote metering when the Customer has been disconnected for non-payment of a delinquent bill.

d. Meter testing performed at the written request of the Customer. However, if SSVEC's test shows that the Meter is inaccurate by more than three (3) percent, the service charge will be waived or refunded to the Customer.

3. **NON-PAYMENT COLLECTION FEE DURING REGULAR BUSINESS HOURS.**

A non-refundable charge of $60.00, plus applicable sales tax, shall be imposed each time an SSVEC employee must make a visit to the Premises regarding action associated with disconnection of Electric Service for non-payment of a delinquent bill or for reconnection of Electric Service that has previously been disconnected for non-payment. This charge shall also apply to reconnections effectuated through remote metering when the Customer has been disconnected for non-payment of a delinquent bill.

4. **SERVICE CALLS AFTER REGULAR BUSINESS HOURS.**

A service charge of $100.00, plus applicable sales tax, plus mileage at the applicable IRS rate per mile for the current year will be imposed for a service call after regular business hours for one of the following reasons:

a. Interruptions caused by the Customer's negligence or failure of Customer-owned equipment, even though the Cooperative is unable to perform any work beyond the Point of Delivery. Reasonable efforts will be made to advise the Customer about the responsibility for such charges before the service call starts.

b. Reconnection of Electric Service to any Customer previously disconnected for unlawful use of service (including tampering or theft), misrepresentation to the Cooperative, unsafe conditions, threats to Cooperative personnel or property, failure to permit safe access, detrimental effects of Customer loads on the Cooperative's system, or failure to establish credit and/or follow procedures to establish Electric Service. Such work will be performed only when requested and agreed to by the Customer.

c. Premises visits regarding action associated with disconnection of Electric Service for non-payment of a delinquent bill (whether or not service is actually disconnected as a result of such visit) or for reconnection of Electric Service that has previously been

SCHEDULE OF SERVICE CHARGES
SCHEDULE SC

disconnected for non-payment. The service charge may be applied in the case of reconnections effectuated through remote metering when the Customer has been disconnected for non-payment of a delinquent bill.

d. Where SSVEC scheduling will not permit Service Establishment on the same day requested, the Customer can elect to pay the after-hour charge for establishment that day or his service will be established on the next available normal business day.

For the purposes of the Section, the definition of Service Establishment is where the Customer's facilities are ready and acceptable to the Cooperative and Cooperative needs only to install a Meter, read a Meter, or turn on Electric Service. Except in emergency situations, as determined by the Cooperative in its sole discretion, the Cooperative will not make a service call after 9:00 p.m.

5. METER TEST.

A service charge of $50.00 plus a meter test charge of $50.00 plus applicable sales tax shall be imposed for meter testing performed at the written request of the Customer. However, if the Cooperative's test shows that the meter is inaccurate by more than 3%, the service charge and the meter test charge will be waived or refunded to the Customer and Energy charges will be adjusted accordingly for the three (3) immediately previous Billing Periods only.

6. INSUFFICIENT FUNDS (NSF) OR RETURNED PAYMENTS.

A service charge of $25.00 per NSF or returned payment plus a late payment charge (if applicable) of 1.5 percent per month on the unpaid, delinquent balance plus any applicable sales tax, shall be imposed for each collection action taken by the Cooperative, exclusive of collection charges.

7. METER REREADS.

A service charge of $50.00 shall be charged for rereads, provided that the original reading was not in error.

8. LATE PAYMENT CHARGE.

A late payment charge of 1.5 percent per month shall be charged on all outstanding balances which remain unpaid as of each new monthly billing date.

9. PUMP AND EQUIPMENT TESTS.

Pump and equipment tests conducted by large power, water pumping, irrigation, and general service Customers shall be billed under the GS rate. No discounts will be provided for pump and equipment tests.

Billing under this schedule will be increased by an amount equal to the sum of all Federal, State, County, Municipal and other governmental levies.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
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Effective Date: January 1, 2017

STANDARD OFFER TARIFF

BILLING ADJUSTMENTS
SCHEDULE BA

1. Wholesale Power and Fuel Cost Adjustment

The Cooperative shall, if purchased power or owned generation fuel costs are increased or decreased above or below the base power cost of $0.065857 per kWh sold, flow through such increases or decreases to all applicable rate classes. Purchased power costs and owned generation fuel costs are defined to include all costs recorded in FERC Accounts 501, 518, 547, 555 and 565.

2. Tax and Assessment Clause

To the charges computed in the rate schedule, including all billing adjustments, shall be added the applicable proportionate part of any taxes or government impositions which are or may in the future be assessed on the basis of gross revenue of the Cooperative and/or the price or revenue from the electric Energy or service sold and/or the volume of Energy purchased for sale and/or sold.

3. REST Adjustment

To the charges computed in the rate schedule shall be added the applicable rate as shown in the Renewable Energy Surcharge Tariff.

4. Demand-Side Management (DSM) Adjustment

The Cooperative shall recover its costs for ACC pre-approved DSM programs through a separate DSM adjustment mechanism which shall provide for a separate and specific accounting for pre-approved DSM costs. The DSM Surcharge is set at $0.00027 per kWh per ACC Decision 73930.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85644-0820

Effective Date: October 25, 2013 with Decision 74158

STANDARD OFFER TARIFF

RENEWABLE ENERGY SURCHARGE TARIFF
SCHEDULE REST

Effective: For electrical usage beginning on or about November 1, 2013 and billed beginning with the December 2013 cycle billings. Decision 74158

Applicability

The Renewable Energy Surcharge Tariff is applicable to all consumers located along existing electric distribution lines of the Cooperative, who use the Cooperative's standard service for single- or three-phase service. Surcharges under this schedule will be in accordance with the Cooperative's general rules, terms and conditions, available at the Cooperative's office, which general rules or subsequent revisions thereof are a part of the schedule as if fully written herein.

Rate

$0.00988 per kWh provided by the Cooperative

Subject to the following maximum per month:

Residential Consumers (Rates R, RT)	$ 3.49
General Service (Rates GS, GT, non-residential rates not listed below)	$ 85.00
Irrigation Customers (Rates CD, CW, CD-Large, IL, IS)	$ 50.00
Commercial & Industrial (Rates P, IP, PRV, PT)	$200.00
Industrial (Demand over 3MWs)	$300.00

For Rate RPS only the daily REST CAP shall be $0.115 per day

Schedule of fee's for SunWatts inspections:

1st inspection	no charge
2nd inspection (if needed*)	$ 75.00
3rd and subsequent inspections (if needed*)	$150.00 ea.

* additional inspections charges are billed to the installation contractor as required when violations of the inter-connection requirements, the National Electric Code, or safety issues are found during the current inspection that cannot be corrected during the first or subsequent inspection. Inspection fees to be returned to the REST funds.

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Effective Date: April 1, 2014 for billing in May 2014 from Decision 74381

STANDARD OFFER TARIFF

OPTIONAL ELECTRIC SERVICE FOR QUALIFIED COGENERATION AND SMALL POWER PRODUCTION FACILITIES OVER 100 KW SCHEDULE COGEN - 1

Availability

In all territory served by the Cooperative where facilities of adequate capacity and suitable voltages are adjacent to the premises served and when all applicable provisions described herein have been met.

Application

The Optional Electric Service for Qualified Cogeneration and Small Power Production Facilities over 100 kW Rate (COGEN-1) is applicable to customers of the Cooperative that own and operate qualified cogeneration and small power production facilities of 100 kW or more that meet qualifying status as defined under 18 CFR, Chapter 1, Part 292, Subpart B of the Federal Energy Regulatory Commission's regulations and pursuant to the Arizona Corporation Commission's Decision No. 52345. The facility's generator(s) and customer's load must be located at the same premise.

The owner of the Qualifying Facility (QF)shall enter into a contract pertaining to the operation of the QF by the QF owner with the Cooperative, the Cooperative's primary power supplier, Arizona Electric Power Cooperative, Inc. (AEPCO), and the Cooperative's transmission provider, Southwest Transmission Cooperative, Inc. (SWTC), to implement this schedule COGEN-1 consistent with the terms and conditions set forth herein.

Supplementary Power

A. Definition of Supplementary Power
Supplementary power is the kW capacity and related kWh energy purchased by the QF in excess of the production capability of the QF's generating equipment.

B. Rates
The rates charged for supplementary power shall be the appropriate standard offer retail Tariff of the Cooperative which is applicable to the QF's class of service or any new retail rate agreed to by the parties and approved by the Arizona Corporation Commission.

C. Determination of Supplementary Energy
Supplementary energy shall be equal to the metered kWh being supplied to the QF, less any kWh billed as standby or maintenance energy.

OPTIONAL ELECTRIC SERVICE FOR QUALIFIED COGENERATION
AND SMALL POWER PRODUCTION FACILITIES
SCHEDULE COGEN - 1

D. Determination of Supplemental Demand
Supplemental demand shall be the greater of:

i. The metered demand, measured in accordance with the Cooperative's appropriate standard offer retail rate schedule, less any standby and maintenance demand; or
ii. The minimum supplemental billing demand specified in the QF's contract.

Standby and Maintenance Power

A. Definition of Standby - Maintenance Power
Standby and maintenance power is the kW capacity and related kWh supplied by the Cooperative attributable to forced or scheduled outages by the QF, respectively.

B. Rates
Reservation/Capacity Charge
The reservation/capacity charge for standby and maintenance power shall be the sum of the distribution billing demand charge in the applicable retail rate schedule plus the applicable demand charges in AEPCO's Tariff and SWTC's Tariff each month, multiplied by the contract Standby Capacity, as determined in Section E. of this section.

Energy Charge
The rate applicable to standby and maintenance energy shall be the sum of the distribution energy charge in the applicable direct access retail rate schedule plus the current energy rate from AEPCO multiplied by the sum of the Standby Energy and maintenance Energy as determined in Sections C and D of this section.

C. Determination of Standby Energy
Standby energy is defined as electric energy supplied by the Cooperative to replace power ordinarily generated by the customer's generation facility during unscheduled full and partial outages of said facility. Standby energy is equal to the difference between the maximum energy output of the customer's generator(s) and the energy measured on the customer's generator meter(s) for the billing period, except those periods where energy supplied by the Cooperative is zero.

D. Determination of Maintenance Energy
Maintenance energy is defined as energy supplied to the customer to a maximum of the Contract Standby Capacity times the hours in the Scheduled Maintenance period. Maintenance periods shall not exceed 30 days and must be scheduled during off peak months. Customer shall supply the Cooperative with

OPTIONAL ELECTRIC SERVICE FOR QUALIFIED COGENERATION
AND SMALL POWER PRODUCTION FACILITIES
SCHEDULE COGEN - 1

a maintenance Schedule for a 12-month period at least 60 days prior to the beginning of that period, which is subject to the Cooperative's approval. Energy used in excess of a 30-day period of unauthorized maintenance energy shall be billed on the Supplemental Power Rate as specified in this Schedule.

E. Contract Standby Capacity kW
Contract Standby Capacity kilowatt (kW) amount is the amount of cogeneration or self-generation capacity for which the customer contracts with the Cooperative for Standby Service. If the contract Standby Capacity is exceeded and not covered by the Supplementary Power provisions of this tariff, then the contract standby capacity is automatically increased to the new level. The Contract Standby Capacity kW cannot exceed the maximum net output rating(s) of the connected generator(s).

Basic Service Charge

The monthly basic service charge shall be the service charge contained in the Cooperative's current applicable retail rate schedule.

Conditions of Service

Scheduled outages for maintenance by the QF shall be submitted each December to AEPCO for the next coming year for its approval. Scheduled outages will not be permitted during the months of April through October.

Interconnection Charge

The QF shall pay all costs associated with any and all additions, modifications or alterations to SWTC's or TRICO Electric Cooperative's electric system necessitated or incurred in the establishment and operation of the interconnection with the QF, including but not limited to any and all modifications required for the metering of power and energy or for the efficient, safe and reliable operation of the QF's facilities with SWTC's electric system or the Cooperative's electric system.

Facility Charge on Dedicated Facilities

The QF shall be required to pay to the Cooperative a monthly facilities charge to recover all related costs of any dedicated facilities constructed to serve the QF on a firm power and energy basis.

Billing Adjustments

This rate shall be subject to all applicable billing adjustments listed on Schedule BA.

OPTIONAL ELECTRIC SERVICE FOR QUALIFIED COGENERATION
AND SMALL POWER PRODUCTION FACILITIES
SCHEDULE COGEN - 1

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

Contract Period

As provided in the Cooperative's agreement for service with the customer.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85644-0820

Effective Date: April 1, 2014

STANDARD OFFER TARIFF

COGENERATION QUALIFYING FACILITIES
SCHEDULE QF-1

Availability

In the Cooperative's Certificated Area where its facilities are of adequate capacity and the required phase and suitable voltage are in existence and are adjacent to the premises served.

Application

The Co-Generation Qualifying Facilities Rate (QF-1) is applicable to owners of co-generation qualifying facilities and small power production facilities under 100 kW who are retail customers and who enter into a written contract with the Cooperative with respect to such service. Service shall be supplied at one point of delivery where part or all of the electrical requirements of the customer can be supplied from a source or sources, owned by the customer, and where such sources are connected for parallel operation of the customer's system with the system of the Cooperative. Customer sources may include but are not limited to windmills, water wheels, solar conversion and geothermal devices, each of which is capable of generating less than 100 kW.

Type of Service

The type of service furnished the customer pursuant to this rate tariff shall be determined in the reasonable discretion of the Cooperative.

Monthly Rate

All purchases from the Cooperative and sales to the Cooperative shall be treated separately. For capacity and energy supplied by the Cooperative to the customer, the applicable rate shall apply. For energy supplied by the customer to the Cooperative, the rates shall be as follows:

> For non-firm power the purchase rate will be the sum of the wholesale energy and fuel charges from the Cooperative's wholesale power supplier. For firm service the purchase rate will be the non-firm purchase rate plus ten percent (10%).

Billing Adjustments

This rate shall be subject to all applicable billing adjustments listed on Schedule BA.

COGENERATION QUALIFYING FACILITIES
SCHEDULE QF - 1

Service Conditions

The Service Conditions of the Cooperative, on file with the ACC, shall apply to this schedule. Cooperative policy regarding Meter reading intervals terms of payments, extended billing periods and collection policy, as filed and approved by the ACC, are stated and published in the Cooperative's Service Conditions.

Contract Period

As provided in the Cooperative's agreement for service with the customer.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85643

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

NET METERING TARIFF
SCHEDULE NM-1

Availability

Net Metering service under Schedule NM-1 is an option for all customers of the Cooperative with a qualifying Net Metering Facility installed on or before April 14, 2015, or for Customers who had an accepted SunWatts Incentive/Interconnection application on file with the Cooperative on or before April 14, 2015. This tariff is only available for 20 years (240 months) from the date of install and is limited to the original installation site and original equipment. After 20 years this rate is rescinded. As each member reaches their 20 year maximum their service will be transferred to **RESIDENTIAL PARTIAL REQUIREMENTS, STANDBY SERVICE, BACKUP SERVICE AFTER APRIL 14, 2015 SCHEDULE R-PR.** Rights to the use of this Schedule NM-1 are available to the current and subsequent owners of the qualifying Net Metering facility during the 20-year (240 month) period. Participation under this schedule is subject to availability of enhanced metering and billing system upgrades. The electric energy generated by or on behalf of the member from a qualifying Net Metering Facility and delivered to the Cooperative's distribution facilities may be used to offset electric energy provided by the Cooperative during the applicable billing period.

Net Metering Facility means a facility for the production of electricity that:

a. Is operated by or on behalf of the customer and is located on the customer's premises;
b. Is intended to provide part or all of the customer's requirements for electricity;
c. Uses Renewable Resources, a Fuel Cell or CHP (as defined below);
d. Has a generating capacity less than or equal to 125% of the customer's total connected load, or in the absence of customer load data, capacity less than or equal to the customer's electric service drop capacity; and
e. Is interconnected with and can operate in parallel in phase with the Cooperative's existing distribution system.

Service under this tariff is available provided the rated capacity of the customer's Net Metering Facility does not exceed the Cooperative's service capacity. The customer shall comply with all of the Cooperative's interconnection standards. The customer is also required to sign and complete the Net Metering Application prior to being provided Net Metering Service. This service is also referred to as Partial Requirements Service.

Metering

NET METERING TARIFF
SCHEDULE NM-1

Metering installed for the service provided under this tariff shall be capable of registering and accumulating the kilowatt-hours (kWh) of electricity flowing in both directions in a billing period.

The customer requesting Net Metering shall pay for the incremental cost difference of the bi-directional meter required for Net Metering and the standard meter, with a monthly fee of $2.70.

Monthly Billing

If the kWh supplied by the cooperative exceeds the kWh that are generated by the customer's Net Metering Facility and delivered back to the cooperative during the billing period, the customer shall be billed for the net kWh supplied by the Cooperative in accordance with the rates and charges under the customer's standard rate schedule.

If the electricity generated by the customer's Net Metering Facility exceeds the electricity supplied by the Cooperative in the billing period, the customer shall be credited during the next billing period for the excess kWh generated. That is, the excess kWh during the billing period will be used to reduce the kWh supplied (not kW or kVA demand or customer charges) and billed by the Cooperative during the following billing period.

Customers taking service under time-of-use rates who are to receive credit in a subsequent billing period for excess kWh generated shall receive such credit during the next billing period during the on- or off- peak periods corresponding to the on- or off- peak periods in which the kWh were generated by the Customer.

As of January 1, 2015, the "true up" month to meet the requirements of R14-2-2306 (F) will be September only. In the "true up" month or when the account is closed, the Cooperative shall issue a check or billing credit to customers with Net Metering Facilities for the balance of any credit due in excess of amounts owed by the customer to the Cooperative for Non-Firm Power. The payment for any remaining credits shall be at the Cooperative's Annual Average Avoided Cost which is $0.0258 per kWh. Amounts over $100.00 will be paid by check lesser amounts will be a billing credit. The Customer may also elect to donate the payment to the SSVEC Foundation or Operation RoundUP. Any payment for Firm Power will be pursuant to a separate contract.

NET METERING TARIFF
SCHEDULE NM-1

Definitions

1. Annual Average Avoided Cost is defined as the average wholesale fuel and energy cost per kWh charged by the Cooperative's wholesale power supplier(s) during the previous 12 months calculated with the receipt of the May wholesale power bills. The Annual Average Avoided Cost will then be applied in the September or March* "true up" period or when a NET Meter Account is closed during the Net Metering Calendar Year. SSVEC will submit an updated NET Meter tariff prior to July 1st to the ACC for approval of the Average Avoided Cost and post the updated value to the SSVEC website and copies of the NET Metering tariff are available at any Cooperative office.

   ** For those Customers who are "grandfathered" using the March "true up"*

2. Calendar Year: For the purpose of determining the billing credit for the balance of any credit due in excess of amounts owed by the customer to the Cooperative, the Calendar Year for NET Metering is defined as September 1 through August 31 (September billing cycle).
3. Renewable Resource means natural resources that can be replenished by natural processes, including Biomass, Biogas, Geothermal, Hydroelectric, Solar or Wind as defined in A.A.C. R14-2-2302(2) &(3).
4. Combined Heat and Power or CHP (also known as cogeneration) means a system that generates electricity and useful thermal energy in a single, integrated system such that the useful power output of the facility plus one-half the useful thermal energy output during any 12-month period must be no less than 42.5 percent of the total energy input of fuel to the facility.
5. Fuel Cell means a device that converts the chemical energy of a fuel directly into electricity without intermediate combustion or thermal cycles. The source of the chemical reaction must be from Renewable Resources.
6. Determining the customers 125% capacity from load data:
   a. In the absence of demand data (for residential and small business) the highest 12 months (calendar year) kWh consumption in the previous three years, will be divided by 2190 (average annual PV production hours) to determine the 100% capacity level in kW which will achieve a "net zero" home or business. To which the 125% will be applied
   b. For customers with a demand history it will be 125% of the highest demand in the most current 12 month period. Demand history can be obtained by a billing meter with a demand register or demand data acquired by the Automatic Meter Reading (AMR) system.
7. Partial Requirements Services- Electric service provided to a customer that has an interconnected Net Metering Facility whereby the output form its electric generator(s) first supplies its own electric requirements and any excess energy (over and above its own requirements at any point in time) is then provided to the Company. The Company supplies the customer's supplemental electric requirements (those not met by their own

NET METERING TARIFF
SCHEDULE NM-1

generation facilities). This configuration may also be referred to as the "parallel mode" of operation.

8. Non-Firm Power- Electric power which is supplied by the Customer's generator at the Customer's option, where no firm guarantee is provided, and the power can be interrupted by the Customer at any time.
9. Firm Power- Power available, upon demand, at all times (except for forced outages) during the period covered by the Purchase Agreement from the customer's facilities with an expected or demonstrated reliability which is greater than or equal to the average reliability of the Company's firm power sources.
10. Standard Rate Schedule- Any of the Company's retail rate schedules with metered kWh charges.
11. Time Periods- Mountain Standard Time shall be used in the application of this rate schedule. Because of potential differences of the timing devices, there may be a variation of up to 15 minutes in timing for the pricing periods. On-peak and off-peak time periods will be determined by the applicable Standard Retail Rate Schedule.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85643

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

PARTIAL REQUIREMENTS SERVICE, STANDBY SERVICE, BACKUP SERVICE
~~DISTRIBUTED GENERATION~~ TARIFF
SCHEDULE ~~DG~~PR-1

Availability

Parital Requirements Service, Standby Service, Backup ~~Distributerd Generation~~ service under Schedule ~~DG~~ PR-1 is an option for all customers of the Cooperative who purchase partial requrements energy service (less than 100% of their electrical requriements), or standby service, or backup service~~with~~ ~~a qualifying Distributed Generation Facility installed~~ after April 14, 2015, or who submitted an accepted SunWatts Incentive/Interconnection application after April 14, 2015. Participation under this schedule is subject to availability of enhanced metering and billing system upgrades. The electric energy generated by or on behalf of the member from a qualifying Distributed Generation Facility and delivered to the Cooperative's distribution facilities may be used to offset electric energy provided by the Cooperative during the applicable billing period.

Distributed Generation Facility means a facility for the production of electricity that:

a. Is operated by or on behalf of the customer and is located on the customer's premises;
b. Is intended to provide part or all of the customer's requirements for electricity;
c. Uses Renewable Resources, a Fuel Cell or CHP (as defined below);
d. Has a generating capacity less than or equal to 125% of the customer's total connected load, or in the absence of customer load data, capacity less than or equal to the customer's electric service drop capacity; and
e. Is interconnected with and can operate in parallel in phase with the Cooperative's existing distribution system.

Service under this tariff is available provided the rated capacity of the customer's Distributed Generation Facility does not exceed the Cooperative's service capacity. The customer shall comply with all of the Cooperative's interconnection standards. The customer is also required to sign and complete the Distributed Generation Application prior to being provided Distributed Generation Service. This service is also referred to as Partial Requirements Service.

Metering

STANDARD OFFER TARIFF
PARTIAL REQUIREMENTS, STANDBY SERVICE, BACKUP SERVICE ~~NET METERING~~
TARIFF
SCHEDULE ~~NM-2~~PR-1

Metering installed for the service provided under this tariff shall be capable of registering and accumulating the kilowatt-hours (kWh) of electricity flowing in both directions in a billing period.

PARTIAL REQUIREMENTS SERVICE, STANDBY SERVICE, BACKUP SERVICE~~NET METERING~~ TARIFF
SCHEDULE ~~DG~~PR-1

The customer requesting Distributed Generation service shall pay for the incremental cost difference of the bi-directional meter required for Distributed Generaton service and the standard meter, with a monthly fee of $2.70.

Monthly Billing

All kWh delivered by SSVEC to the Customer will be billed on the rate charged to the Customer under the applicable Standard Rate Schedule.

All kWh received from Customer (Customer produced excess energy) will be credited on a monthly basis by SSVEC to the Customer at the ACC approved Annual Average Avoided Cost per kWh as stated in Schedule NM-1. Customer excess energy cannot be "banked," "saved," or "rolled forward" for use in a future month.

There is no Annual True-Up month under this Schedule DG as the accounts are trued-up monthly.

Definitions

1. Annual Average Avoided Cost is defined as the average wholesale fuel and energy cost per kWh charged by the Cooperative's wholesale power supplier(s) during the previous 12 months calculated with the receipt of the May wholesale power bills. SSVEC will submit an updated Net Metering tariff (Schedule NM-1) prior to July 1st to the ACC for approval of the Average Avoided Cost and post the updated value to the SSVEC website. Copies of the Net Metering NM-1 tariff are available at any Cooperative office.
2. Renewable Resource means natural resources that can be replenished by natural processes, including Biomass, Biogas, Geothermal, Hydroelectric, Solar or Wind as defined in A.A.C. R14-2-2302(2) &(3).
3. Combined Heat and Power or CHP (also known as cogeneration) means a system that generates electricity and useful thermal energy in a single, integrated system such that the useful power output of the facility plus one-half the useful thermal energy output during any 12-month period must be no less than 42.5 percent of the total energy input of fuel to the facility.
4. Fuel Cell means a device that converts the chemical energy of a fuel directly into electricity without intermediate combustion or thermal cycles. The source of the chemical reaction must be from Renewable Resources.

PARTIAL REQUIREMENTS SERVICE, STANDBY SERVICE, BACKUP SERVICE~~NET METERING~~ TARIFF
SCHEDULE ~~DG~~PR-1

5. Determining the customers 125% capacity from load data:
   a. In the absence of demand data (for residential and small business) the highest 12 months (calendar year) kWh consumption in the previous three years, will be divided by 2190 (average annual PV production hours) to determine the 100% capacity level in kW which will achieve a "net zero" home or business. To which the 125% will be applied
   b. For customers with a demand history it will be 125% of the highest demand in the most current 12 month period. Demand history can be obtained by a billing meter with a demand register or demand data acquired by the Automatic Meter Reading (AMR) system.
6. Partial Requirements Services- Electric service provided to a customer that has an interconnected Net Metering Facility whereby the output form its electric generator(s) first supplies its own electric requirements and any excess energy (over and above its own requirements at any point in time) is then provided to the Company. The Company supplies the customer's supplemental electric requirements (those not met by their own generation facilities). This configuration may also be referred to as the "parallel mode" of operation.
7. Non-Firm Power- Electric power which is supplied by the Customer's generator at the Customer's option, where no firm guarantee is provided, and the power can be interrupted by the Customer at any time.
8. Firm Power- Power available, upon demand, at all times (except for forced outages) during the period covered by the Purchase Agreement from the customer's facilities with an expected or demonstrated reliability which is greater than or equal to the average reliability of the Company's firm power sources.
9. Standard Rate Schedule- Any of the Company's retail rate schedules with metered kWh charges.
10. Time Periods- Mountain Standard Time shall be used in the application of this rate schedule. Because of potential differences of the timing devices, there may be a variation of up to 15 minutes in timing for the pricing periods. On-peak and off-peak time periods will be determined by the applicable Standard Retail Rate Schedule.

ELECTRIC RATES

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85643

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

ESTIMATION METHODOLOGIES
SCHEDULE EM

Application

The Estimation Methodologies Rate (EM) is applicable for purposes of bill estimation for all tariffs in the event a valid meter reading cannot be acquired. The Cooperative will make every reasonable attempt to secure an accurate reading of the meter. The Cooperative will make special efforts to secure an accurate reading of the meters for accounts with demand reading.

This rate is not applicable to resale or standby services.

Conditions for Estimated Bills

Estimated bills will be issued only under the following conditions:

A. Labor shortages or work stoppages beyond the control of the Cooperative.
B. Severe weather conditions, emergencies or other causes beyond the Cooperative's control which prevent the Cooperative from reading the meter.
C. Circumstances that make it dangerous or impossible to read the meter, including but not limited to: locked gates, blocked access to meters, threatening or abusive conduct of customers, vicious or dangerous animals or missing meters.
D. Failure of a customer who reads his own meter to deliver his meter reading to the Cooperative in accordance with the requirements of the Cooperative billing cycle.
E. To facilitate timely billing for customers using load profiles.
F. Communications issues with Prepaid Metering (see item H below)

Notice of Estimation

Each bill based on estimated usage will indicate that it is an estimated bill and note the reason for estimation.

NET METERING TARIFF
SCHEDULE EM

Estimation Procedures

SSVEC currently utilizes a customer information system (CIS) and/or billing personnel for billing, bill calculations and bill estimations.

A. Detailed descriptions of estimation procedures for each of the conditions are numbered 1-12 below include but are not limited to:

	Conditions for Estimated Bills	Estimation Procedures
1.	A kWh estimate with at least one year of history for the same customer at same premise or new customer with at least one year of premise history	Estimate using the kWh, same month one year prior and/or the amount of usage during the preceding month, from the same premise.
2.	A kWh estimate with less than 12 months' history for the same customer at same premise.	Estimate using the kWh of the preceding month from the same premise.
3.	A kWh estimate with less than 12 months' history for a new customer but with history on the premise.	Estimate using the kWh of the preceding month from the same premise.
4.	A kWh estimate with no prior consumption history.	Bill the fixed monthly customer charge plus applicable taxes only. The kWh will be billed with the next valid read in accordance with the Arizona Administrative Code.
5.	A kW estimate with a least one year of history for the same customer at same premise or new customer with one year of premise history.	Calculate the estimate using the kW, same month one year prior and/or the preceding month, from the same premise.
6.	A kW estimate with less than 12 months' history for the same customer at same premise.	Calculate the estimate using the kW of the preceding month from the same premise.
7.	A kW estimate with less than 12 months' history for a new customer but with history on the premise.	Calculate the estimate using the kW of the preceding month from the same premise.
8.	A kW estimate with no prior consumption history.	Do not estimate: a service order is issued for a meter technician to obtain a valid read.

NET METERING TARIFF
SCHEDULE EM

9.	Time-of Use estimate with at least one year of history for the same customer at same premise or new customer with at least one year of premise history.	Time-of-Use has two readings, "on-peak" and "off-peak". - Calculate the estimate using the "on peak" and "off-peak" kWh reads, same month one year prior and/or the preceding month from the same premise.
10.	Time-of-Use estimate with less than 12 months' history for the same customer at same premise.	Time-of-Use has two readings, "on-peak" and "off-peak". - Calculate the estimate using the "on peak" and "off-peak" kWh of the preceding month from the same premise.
11.	Time-of-Use estimate with less than 12 months' history for a new customer but with history on the premise.	Time-of-Use has two readings, "on-peak" and "off-peak". - Calculate the estimate using the "on peak" and "off-peak" kWh of the preceding month from the same premise.
12.	Time-of-Use estimate with no prior consumption history for a new customer at new premise.	- Bill the fixed monthly customer charge plus applicable taxes only. The kWh will be billed with the next valid read in accordance with the Arizona Administrative Code.

B. Variance in estimation methods for differing conditions.

Examples of differing causes for estimation include, but are not limited to: tampering, energy diversion, damaged or destroyed meter, partial meter failure, and meter reading equipment failure.

In the event the meter has been tampered with or destroyed, or energy diversion has occurred, the methods referred to in item A. above still apply, prorating the usage if the estimation period is less than a full billing cycle. Examples;

Tampering and/or Energy Diversion:

A valid read was obtained on October 1, Year Two. A tampering or energy diversion is discovered on October 15th, the meter has the same reading from October 1, Year Two. An investigation reveals the service is active and electricity is being consumed. The same service history indicated a kWh usage of 900 kWh for the month of October Year One. A manual estimate will prorate based upon a daily average of the 900 kWh divided by the number of days in the history record the same month (31) for a total of 29 kWh per day times the number of days tampered (15) for a final estimate of 435 kWh.

If the service does not have a 12 month history the same formula is used with the past 3 month average.

NET METERING TARIFF
SCHEDULE EM

In the event the investigation reveals evidence that the tampering or energy diversion occurred for a period exceeding one month, the Cooperative will use the applicable estimation procedure to the point in time that the tampering or energy diversion may be definitely fixed, or 12 months.

Meter Damaged/Destroyed:

The same estimation procedure as described in item A. above is used if it is determined that the damage or destruction is caused by the customer to the point in time that the damage or destruction may be definitely fixed or 12 months.

In the event the damage or destruction is otherwise caused, the estimation procedure is the same as described in item A. above, but the customer responsibility is limited to 3 months for residential customers and 6 months for non-residential customers.

Partial Meter Failure:

If a meter is found to be deficient in recording any portion of the actual usage, the kW and kWh are estimated based on the percentage of deficiency for a period limited to 3 months for residential customers and 6 months for non-residential customers.

C. Conditions when estimations are calculated by the CIS system.

The CIS system calculates the estimate when the meter of a service does not record a valid read for the normal billing cycle for any of the reasons listed under "Conditions for Estimated Bills" above.

D. Conditions when estimations are made manually

The manual estimate is made by SSVEC personnel when there is a partial meter failure, weather related differences (previous years usage is reflective of unseasonable or greatly varied temperatures), or there is tampering, or a damaged/destroyed meter for less than the normal billing cycle and the bill must be prorated.

E. Procedures to minimize the need for using estimated data.

If feasible, the meter reader is asked to return to the service for a valid read. If the service has access problems an Offsite Meter Reading (OMR) or Automated Meter Reading (AMR) device may be installed. However, the Cooperative shall have the right of safe ingress to and egress from the customer's premises at all reasonable hours for any purpose reasonably connected with property used in furnishing service and the exercise to any and all rights secured to it by law or the Arizona Corporation Commission.

NET METERING TARIFF
SCHEDULE EM

F. Procedures for estimating first and final bills.

First and final bills are not estimated unless the meter fails. If the reading is not recorded for the first bill, the first bill is issued for the fixed monthly charges plus applicable taxes only. The total kWh will be billed on the first valid read. The final bill is not issued until such time a valid read is secured.

In the event of metering equipment that is damaged, destroyed or absent for the first or final bill, the estimate is the same as B. and D. above.

In the event of metering equipment failure for the first or final bill, the estimate is the same as B. and D. above.

In the event of metering equipment failure, is damaged, destroyed or absent for an account with a demand reading, for the first or final bill, the kWh and/or kW estimate is based on the connected equipment operating characteristics.

G. Procedure for estimation using customer specific data.

If there is no service history available on which to base an estimate, the kWh and/or kW estimate is based on the connected equipment operating characteristics.

H. Prepaid Electric Service Estimation Methodology.

If there are communication issues that prevent the Cooperative from obtaining a valid daily kWh reading, the kWh consumption will continue to accumulate in the meter. When a valid daily reading results in a negative account balance, the Customer will be notified* that they have 2 business days to replenish the account to avoid disconnection for a negative balance. The web portal will indicate no usage for the days with missing kWh readings.

If after 7 days of no valid kWh readings, the Cooperative will physically check and/or replace the meter, the Customer will be notified* and one of the following actions will be applied to determine or estimate the kWh consumption;

1. If a valid reading can be obtained from the meter and the reading results in a negative account balance, the Customer will have a minimum of *5* business days to bring the account into a positive balance to avoid disconnection for a negative account balance.
2. If the Cooperative cannot obtain a valid reading from the meter, SSVEC will use the last valid 5 day average kWh consumption, to determine the amount of kWh to be applied to the account. If this calculated billing results in the account having a negative account balance the Customer will have a minimum of 5 business days to bring the account into a positive balance to avoid disconnection for a negative account balance.

NET METERING TARIFF
SCHEDULE EM

3. If the Customer does not have any prior consumption history, SSVEC will bill the daily fixed charges, plus applicable taxes only. If this billing results in the account having a negative account balance, the Customer shall have a minimum of 5 business days to bring the account into a positive balance to avoid disconnection.

**Notice given in this order: 1) by phone. 2) voice mail, 3) written letter. or 4) e-mail (if available)*

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

DOUG LITTLE, Chairman
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN

EXHIBIT
A-7
ADMITTED

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN, AND FOR RELATED APPROVALS.	**DOCKET NO. E-01575A-15-0312**

REJOINDER TESTIMONY OF DAVID W. HEDRICK

ON BEHALF OF

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

MAY 13, 2016

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is David W. Hedrick and my business address is 5555 North Grand Boulevard, Oklahoma City, Oklahoma 73112-5507.

Q. ARE YOU THE SAME DAVID HEDRICK WHO PREVIOUSLY SUBMITTED DIRECT AND REBUTTAL TESTIMONY ON BEHALF OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. ("SSVEC" OR THE "COOPERATIVE") IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY?

A. I will respond to the surrebuttal testimony of Mr. Mark Fulmer on behalf of Energy Freedom Coalition of America and Utilities Division Staff ("Staff") witnesses.

Q. MR. FULMER CLAIMS THAT SSVEC'S OWN DATA DEMONSTRATES THAT CUSTOMERS WITH DISTRIBUTED GENERATION ("DG") ARE NO DIFFERENT THAN OTHER RESIDENTIAL CUSTOMERS WITH RESPECT TO CONSUMPTION. IS THIS ACCURATE?

A. Not at all. Mr. Fulmer points to the bill frequency data for SSVEC which shows that the Cooperative does indeed have a significant number of low consumption customers. Mr. Fulmer's premise is that a customer with low use is the same as a DG customer that generates a portion of its own power. They are not the same. The average consumption for a Residential SSVEC customer without installed DG is 677 kWh per month. This represents the energy requirement for the average Residential customer without DG which is purchased from SSVEC. Mr. Fulmer

states that the average consumption for a customer with solar PV is ~~642~~ 218 kWh. This is not accurate and is misleading. A customer with solar PV "purchases" a net ~~642~~ 218 kWh on average from SSVEC. As reflected on Exhibit DWH-8 of my direct testimony, the average customer with installed DG generates 1,026 kWh per month. That indicates that a residential customer with installed DG has an energy requirement in excess of ~~1,600~~ 1,200 kWh per month (~~642~~ 218 kWh + 1,026 kWh = ~~1,668~~ 1,244 kWh) which is much higher than the average residential customer without DG at 677 kWh per month. Thus, the data clearly demonstrates that customers with installed DG are significantly different than the average SSVEC Residential customer.

Q. MR. FULMER AND STAFF CONTEND THAT BECAUSE SSVEC SERVES OTHER LOW USE CUSTOMERS, THERE IS NO BASIS FOR CREATING A SEPARATE PARTIAL REQUIREMENTS RATE FOR CUSTOMERS WITH DG. HOW DO YOU RESPOND?

A. The issue at hand is the inadequacy of the existing rate design to provide an appropriate recovery of SSVEC's fixed costs of providing service to customers with installed DG. Mr. Fulmer and Staff contend that because there is an under-recovery of fixed costs from other low use customers there is no basis for addressing the issue for customers with installed DG. However, there are relevant and meaningful differences with regard to the recovery of costs between customers with installed DG and other low use customers.

SSVEC has historically reflected a significant number of low use customers. Recognizing the need to recover the fixed costs of providing service, SSVEC has

consistently advocated to increase its customer charges to the extent allowed by the Arizona Corporation Commission ("Commission") in previous general rate cases and in accordance with the rules for streamlined rate cases for cooperatives. The point is that there has always been a general recognition that there is mismatch with regard to the recovery of fixed costs because the monthly minimum customer charges are not high enough. The Commission's approach to a resolution of this issue has been to approve gradual increases in the customer charge over time and include the remaining fixed costs in the energy charge of the rate. Thus, while the existing Residential rate structure does not provide a full recovery of the fixed costs through the customer charge, the existing rate does provide for the recovery of all costs through the combination of the customer charge and energy charge <u>for the customer base for which the rate was designed</u>, which did not include the proliferation of customers with DG that has recently occurred in SSVEC's service territory. The existing Residential rate was designed with a knowledge of the number of typical low use customers and how the rate would recover costs from those customers. The gradual approach of increasing customer charges employed by the Commission to address the cost shift for true low use customers without DG provides a slow resolution of the issue but is somewhat more understandable given the Commission's concern regarding customer impact for low use and low income customers. However, given the magnitude of the lost fixed cost recovery for customers with installed DG, a gradual approach to correction of the issue is not appropriate and is not working. A separate rate for partial requirements members provides the mechanism for appropriately addressing the issue.

The magnitude of the lost fixed cost recovery for customers with installed DG is significantly greater than for other low use customers. In my direct testimony, I provide a calculation of the lost fixed costs for customers with installed DG. Again, Staff witness Eric Van Epps confirms that SSVEC has experienced an under-recovery associated with the proliferation of DG systems that equated to $1,139,013 annually. The under-recovery is caused by the loss of kWh sales from the 1,013 customers with DG on SSVEC's system at the end of 2014. This under-recovery has recently become greater due to the rapid growth of this group of customers. The number of customers with installed DG is still a small percentage of the total customers served but the negative impact from such a small group is significant. As reflected on Exhibit DWH-8 of my direct testimony, a typical customer with installed DG generates and thus reduces kWh sales to SSVEC by 1,026 kWh per month, resulting in lost fixed costs of $93.70 per customer per month. The other low use customers served by SSVEC do not demonstrate this level of kWh reduction. As evidence, I included in my rebuttal testimony examples of the level of reduction in kWh sold to customers that participate in SSVEC energy efficiency programs. The monthly kWh reductions for those programs is less than 100 kWh per month. SSVEC has demonstrated that the significant under-recovery for customers with installed DG is caused by a combination of the inadequacy of the existing Residential rate design and the reduction in sales that is specific and unique to the group of customers with installed DG. This under-recovery represents a real and tangible loss of revenue to cover fixed costs, which if not addressed, will require all customers to pay higher rates and require other customers to provide a significant subsidy to this specific identifiable group of customers with installed DG.

Q. STAFF WITNESS TOM BRODERICK CONTENDS THAT SSVEC HAS NOT PERFORMED A COST OF SERVICE STUDY ANALYSIS TO SUPPORT A SEPARATE RATE CLASS WITH A CUSTOMER CHARGE OF $50. HOW DO YOU RESPOND?

A. SSVEC's rate filing includes a cost of service study that has been accepted by Staff. The cost of service study includes a determination of the components of expense for the Residential rate class. SSVEC contends in its filing that the fixed costs of providing service to Residential customers with installed DG is the same as for other Residential customers. This is reflected by the use of the purchased power energy and demand components of expense for Residential from the cost of service study on Exhibit DWH-8 to calculate the lost fixed cost recovery as a result of member owned DG of $1,139,013. Staff testimony confirmed that SSVEC had adequately presented its case that this under-recovery existed based on the data from the cost of service study.

On Schedule G-6.3, page 4 of 4, of the same cost of service study used to develop the lost fixed cost recovery analysis, the fixed components of cost for the Residential class are shown. The customer component of cost is $25.36 per month, the distribution wires component of cost is $24.46 per month and the purchased power demand component of cost is $28.54 per month. The total fixed costs for the Residential class reflected in the cost of service study is $78.36 per month. The sum of only the customer component and the wires demand component is $49.82 per month. The fixed component of costs were subsequently revised by Staff resulting in a total fixed cost of $80.24 per month. The proposed $50 customer charge is a reflection of the customer and wires demand components of cost for the Residential

class. SSVEC has provided a justifiable basis for the proposed customer charge for the Residential DG rate class.

Q. STAFF RECOMMENDS NO CHANGE BE MADE TO THE EXISTING NET METERING POLICY UNTIL THE VALUE COST OF DG PROCEEDING IS CONCLUDED AND A DECISION IS RENDERED. WHAT IS YOUR RESPONSE?

A. SSVEC is disappointed that Staff has reversed its position. SSVEC has presented and supported its case that significant cost recovery issues exist with service provided to customers with installed DG through the application of existing rates and the existing net metering policy. The appropriate venue for dealing with the specific issues affecting SSVEC is in this rate case without further delay. There is no guarantee that a decision in the Value and Cost of DG Proceeding will be forthcoming or provide the direction anticipated by Staff. SSVEC agrees with Staff that the appropriate export rate or payment to customers with installed DG for excess energy generated is the quantifiable, known and measurable avoided cost. This definition provides a method for calculating the export rate based on the avoided cost components that are relevant to not only SSVEC, but to all utilities. SSVEC has demonstrated and supported that the only quantifiable, known and measurable component of avoided cost for SSVEC is the wholesale fuel and energy component of cost. SSVEC has no quantifiable avoided purchased power capacity costs, transmission costs or distribution costs. This definition of the export rate based on the quantifiable, known and measurable avoided cost is in keeping with long-established rate making policies of the Commission.

I note also that Staff pushed for dismissal of SSVEC's application in Docket E-01575A-15-0127 wherein SSVEC was seeking changes to its net metering tariff to address the serious problem of unrecovered fixed costs attributable to net metering. In that case, Staff stated that "**the issues raised in its Application are best addressed in a rate case**" and that "**processing the Application outside of a rate case may foreclose the Commission from developing an effective and fair solution to all aspects of the problem, not just those emphasized by the Company**."

Q. HAS ANY OTHER PARTY IN THIS PROCEEDING PROVIDED A CALCULATION OF THE QUANTIFIABLE AVOIDED COSTS FOR SSVEC?

A. No. Only SSVEC has supported that the quantifiable avoided cost is the wholesale fuel and energy component of cost. Mr. Fulmer references potential unquantifiable future avoided costs and a reference to changes in transmission costs in California attributable to multiple factors. Neither of these references provide any quantifiable, known and measurable data that can be shown to be relevant in this proceeding.

Q. MR. FULMER SUGGESTS THAT SSVEC HAS NOT ADEQUATELY CONSIDERED, QUANTIFIED OR VALUED THE COSTS AND BENEFITS OF DG. HOW DO YOU RESPOND?

A. SSVEC has supported that its quantifiable avoided cost is the wholesale fuel and energy component of cost. SSVEC has further provided testimony that there are no avoided capacity, transmission or distribution costs. SSVEC has further stated that, in keeping with established rate-making principles, it is inappropriate to consider

any future changes in avoided cost in the development of the current export rate. SSVEC is not aware of any potential quantifiable future cost or benefit. The fact that there are no other quantifiable costs or benefits that can be identified does not constitute a lack of analysis. It simply means that other than the avoided wholesale fuel and energy costs, there is no quantifiable data upon which to perform an analysis. SSVEC's analysis is sufficient to determine an appropriate course of action in this case and we need not wait for the outcome of the Value and Cost of DG Proceeding, whenever or whatever that may be.

Q. STAFF WITNESS ERIC VAN EPPS SUGGESTS THAT ADDITIONAL ANALYSIS IS NEEDED TO DETERMINE THE NET METERING POLICY. HOW DO YOU RESPOND?

A. SSVEC has provided analysis and support showing the impact of the existing net metering policy on SSVEC. SSVEC has shown that the only quantifiable component of avoided cost is the wholesale fuel and energy component of cost. To the extent that SSVEC pays more in the export rate than the avoided cost, other members of the Cooperative are providing a subsidy to customers with installed DG. It has been clearly demonstrated that an export rate equal to the full retail rate, as is the case with the existing net metering policy, constitutes a vast over-payment. SSVEC has proposed a net metering policy that eliminates banking and pays avoided cost for excess energy generated in a billing period. Exhibits DWH-8 through DWH-10 of my direct testimony provide the analysis of the change in lost fixed costs that result from the application of the existing net metering policy and proposed net metering policy in conjunction with the proposed rates. The analysis on Exhibit DWH-10 in comparison with the analysis on Exhibits DWH-8 and

DWH-9 shows that the lost fixed costs that result with the application of the new net metering policy in conjunction with the new Residential DG rate are much lower than under the existing net metering policy. The impact on other customers is implicit—a reduction in the lost fixed costs from customers with installed DG results in less of a subsidy provided by other customers and overall lower rates. SSVEC has provided sufficient analysis to support the proposed changes in the net metering policy.

I would add also that there are two methods for recognizing generation exports from customer with installed DG. The first method is to recognize exports in excess of purchases in a monthly billing period. This method allows the customer to utilize the customer's own generation during the billing period. This is the method proposed by SSVEC. The second method is instantaneous recognition of purchases and exports. This method recognizes all energy generated and not consumed by the customer and exported to the grid in real time as the excess. This method does not allow the customer to offset its purchases during the monthly billing period with energy generated at times when there is no load. This method is not being proposed by SSVEC. This second method is more restrictive and results in a lower level of compensation for customers with installed DG. No additional analysis is necessary regarding this method as it has not been proposed and is more restrictive than what SSVEC has proposed.

Q. STAFF WITNESS RANELLE PALADINO RECOMMENDS THAT SSVEC's TIME OF USE ("TOU") RATES NOT BE FROZEN. HOW DO YOU RESPOND?

A. Given the inadequacy of the TOU rates, as recognized by Staff, SSVEC believes that it is inappropriate to offer to its members rates which provide no benefit. In fact, customers could pay more on the TOU rate than on the standard rate. SSVEC recently reviewed the accounts of customers served on the TOU rates and determined that many of those customers would be better off on the standard rate and has subsequently moved those customers. SSVEC would prefer not to offer the TOU rates to its members. With regard to Decision No. 69736, the modified version of the PURPA standard adopted states, "[w]ithin 18 months of Commission adoption of this standard, each electric distribution utility shall offer to appropriate classes…." The reference to "appropriate classes" indicates a measure of flexibility with regard to offering TOU rates. For SSVEC, there are clearly no rate classes for which a TOU rate is appropriate. Therefore, I do not believe that SSVEC would be operating contrary to the provisions in Decision No. 69736 if it no longer offers TOU rates.

Q. HOW DOES THE TESTIMONY OF STAFF WITNESS YUE LIU FACTOR INTO THE DEVELOPMENT OF RETAIL RATES FOR SSVEC?

A. While the testimony is informative, none of the information provided should have any impact on the rates that are designed and approved for SSVEC. In addition, the testimony does not reflect all the years that SSVEC paid 50% of the members' solar system installation costs. The majority of DG customers had SSVEC members pay half of their DG system costs. This makes the existing return substantially higher

and payback substantially shorter. SSVEC's rates are developed to recover the costs of providing service to its members including a reasonable level of margin. Rates are based on known and measurable costs and are designed to be fair and equitable. The primary objective is to provide safe and reliable service to members at the lowest reasonable rates. SSVEC is always concerned about the impact that energy prices have on the personal economics of its members. However, it would be entirely inappropriate for SSVEC or the Commission to include in its criteria for determination of electric rates and credits, whether those rates allow customers with installed DG to earn an acceptable return on their investment. It is not the responsibility of the members of SSVEC or ratepayers of any other utility to subsidize customers with installed DG or to guarantee the rate of return on their investments in DG.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

EXHIBIT
A-8
ADMITTED

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

SERVICE CONDITIONS

Effective: March 16, 2015

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SERVICE CONDITIONS

1. FOREWORD

Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Cooperative") was formed in 1938 as a nonprofit corporation to make Electric Service available at the lowest possible cost for the mutual benefit of all its members. In the continuing spirit of that original objective, these Service Conditions and the accompanying Tariffs are designed to govern the supply and safe use of Electric Service consistent with equitable treatment for individual Customers, the fiscal integrity of SSVEC and efficient management in the best interest of all SSVEC Members.

The following provisions concern policies, regulations, and standards by which SSVEC is committed to render Electric Service to the Customer. Capitalized terms used herein have the meaning set forth under Section 2.1, Definitions. Referenced statutes, rules, regulations and codes herein shall be considered "as may be amended from time to time." Complete copies of SSVEC's Bylaws, Tariffs and these Service Conditions are on file at all SSVEC offices for public inspection.

2. GENERAL CONDITIONS OF SERVICE

2.1 DEFINITIONS

For purposes of these Services Conditions and SSVEC's Tariffs, unless the context otherwise requires, the following key terms shall apply:

(1) **ACC:** The Arizona Corporation Commission, the regulatory authority of the State of Arizona having jurisdiction over public service corporations such as SSVEC operating in Arizona.

(2) **Advances in Aid of Construction:** Funds provided to SSVEC by the Applicant under the terms of a Line Extension Agreement, the value of which may be refundable in part.

(3) **Applicant:** A Person requesting SSVEC to supply Electric Service.

(4) **Application:** A written or oral request to SSVEC for Electric Service, as distinguished from an inquiry as to the availability or charges for Electric Service.

(5) **Billing Month:** The period between any two regular readings of SSVEC's Meters at approximately 30-Day intervals.

(6) **Billing Period:** The interval of approximately 30 Days between successive Meter readings for billing purposes.

(7) **Contributions in Aid of Construction:** Funds provided to SSVEC by the Applicant under the terms of a Line Extension Agreement and/or Service Connection Tariff, the value of which is not refundable.

(8) **Cooperative:** SSVEC, a member-owned Utility whose principal activity is to supply Electric Service under a Certificate of Convenience and Necessity granted by the ACC.

(9) **Cooperative Equipment:** The Service Lines, Meter Installation, structures, devices, apparatus and hardware installed by SSVEC to supply Electric Service to the Customer, and other transmission and distribution facilities on SSVEC's system or property.

(10) **Curtailment:** A temporary reduction of load to the Customer for operational or emergency purposes.

(11) **Curtailment Priority:** The order in which Electric Service is to be ~~Curtailed~~curtailed to various classifications of Customers as set forth in SSVEC's Tariffs.

(12) **Customer:** The Person in whose name Electric Service is rendered, as evidenced by the Application or contract for that service, or by the receipt and/or payment of bills regularly issued in the Customer's name regardless of the identity of the actual user of the Electric Service.

(13) **Customer's Service Entrance:** In general, all conductors, devices, apparatus, and hardware on the Customer's side of the Point of Delivery, except SSVEC's Meter Installation.

(14) **Day(s):** A calendar day (unless otherwise specified).

(15) **Demand:** The rate at which electric Power is delivered during any specified period of time. Demand may be expressed in Kilowatts (kW), Kilovolt-amperes (kVA), or other suitable units of electric Power.

(16) **Distribution Lines:** SSVEC's lines operated at distribution voltage, which are constructed along public roadways or other bona fide rights-of-way, including easements on the Customer's property.

(17) **Elderly:** A Person who is 62 years of age or older.

(18) **Electric Service:** The availability of electric ~~Energy~~energy, metered or otherwise, supplied by SSVEC within established standards of voltage and frequency to the Point of Delivery and all other related services offered by SSVEC to Customers.

(19) **Energy:** Electric Energy, expressed in Kilowatt-hours (kWh), Kilovolt-amperes (kVAh), or other suitable units.

(20) **EUSERC:** The Electric Utility Service Equipment Requirements Committee of which SSVEC is a member. The requirements are intended to promote uniform, safe, and efficient Electric Service requirements for member utilities, manufacturers, engineers, and architects.

(21) **Handicapped:** A Person with a physical or mental condition which substantially contributes to the Person's inability to manage his or her own resources, carry out activities of daily living or protect oneself from neglect or hazardous situations without assistance from others.

(22) **Illness:** A medical ailment or sickness for which a Residential Use Customer obtains a verified document from a licensed medical physician stating the nature of the Illness and that discontinuance of Electric Service would be especially dangerous to the Customer's health.

(23) **Inability to Pay:** Circumstances where a residential Customer:

(a) Is not gainfully employed and unable to pay;

(b) Qualified for government welfare assistance but has not begun to receive assistance on the date that he/she receives his/her bill and can obtain verification of that fact from the government welfare assistance agency;

(c) Has an annual income below the published federal poverty level and can produce evidence of this.

(24) **Interruptible or Controlled Electric Service:** Electric Service that is subject to controlled interruption as specified in SSVEC's Tariffs. Also referred to as Controlled Electric Service.

(25) **Kilovolt-Amperes (kVA):** A measurement of electric Power.

(26) **Kilowatt (kW):** A unit of Power equal to 1,000 watts.

(27) **Kilowatt-Hour (kWh):** Electric Energy equivalent to the amount of electric Energy delivered in one hour when delivery is at a constant rate of one kilowatt.

(28) **Line Extension:** The lines and equipment necessary to extend the electric distribution system of SSVEC to provide service to additional Customers.

(29) **Master Meter:** A Meter for measuring or recording the flow of electricity that has passed through it at a single location where said electricity is distributed to tenants or occupants for their individual usage.

(30) **Megawatt (MW):** A unit of Power equal to 1,000,000 watts.

(31) **Member:** Any member of the public, including a person, firm, association, corporation, or bodies politic or subdivision thereof, who has qualified for membership with the Cooperative as provided for in the Cooperatives Bylaws.

(32) **Meter:** The instrument for measuring and indicating or recording the flow of electricity that has passed through it using kWh, kW, and/or kVA as units of measure.

(33) **Meter Installation:** The Meter(s) and auxiliary devices and hardware, if any, constituting SSVEC's equipment needed to measure Energy use and/or billing Demand supplied to the Point of Delivery.

(34) **Meter Tampering:** A situation where a Meter has been illegally altered to change the accuracy of the Meter or breaking the security seals of the Meters.

(35) **Minimum Charge:** The amount the Customer must pay for the availability of Electric Service, including an amount of usage, as specified in SSVEC's Tariffs as monthly or annual.

(36) **NEC:** The National Electrical Code, a USA Standard published by the National Fire Protection Association (NFPA), at Boston, Massachusetts, for the prevention of hazards.

(37) **NESC:** The National Electrical Safety Code, an American National Standard published by the Institute of Electrical and Electronics Engineers (IEEE), at New York City, New York, for the safeguarding of Persons from hazards in electric supply lines.

(38) **Notice:** Unless specified otherwise, a written message delivered by first class U.S. mail, electronic medium, or in Person by one party to the other at the recipient's last known physical billing or electronic address, the period of Notice commencing from the date of personal delivery, electronic transmission, or mailing.

(39) **Permanent Customer:** A Customer who is a tenant or owner of a service location who applies for and receives permanent Electric Service.

(40) **Permanent Service:** Service which, in the opinion of SSVEC, is of a permanent and established character. The use of electricity may be continuous, intermittent, or seasonal in nature.

(41) **Person:** Any individual, partnership, corporation, governmental agency, or other organization operating as a single entity.

(42) **Point of Delivery:** In general, the point where SSVEC's Service Lines are attached to the Customer's Service Entrance, where Electric Service supplied by SSVEC is received by the Customer, distinct from SSVEC's Meter Installation, although in some cases adjacent to it.

(43) **Power:** The rate of generating, transferring, and/or using electric Power, usually expressed in Kilowatts (kW).

(44) **Premises:** All of the real property and apparatus employed in a single enterprise or an integral parcel of land undivided by public streets, alleys, or railways.

(45) **Residential Subdivision Development:** Any tract of land which has been divided into four or more contiguous lots with an average size of one acre or less

for use for the construction of residential buildings or permanent mobile homes for either single or multiple occupancy.

(46) **Residential Use:** Service to Customers using electricity for domestic purposes, such as space heating, air conditioning, water heating, cooking, clothes drying, and other Residential Uses and includes use in apartment buildings, mobile home parks, and other multi-unit residential buildings.

(47) **Service Area:** The territory in which SSVEC has been granted a Certificate of Convenience and Necessity and is authorized by the ACC to provide Electric Service.

(48) **Service Availability Charge:** A charge for the purpose of maintaining adequate revenue to cover SSVEC's operating costs as specified in SSVEC's Tariffs.

(49) **Service Connection:** The attachment of Electric Service at the Point of Delivery and/or installation of Meters by SSVEC personnel.

(50) **Service Disconnection:** The detachment of Electric Service at the Point of Delivery and/or removal of Meters by SSVEC personnel, including operation of Customer-owned main disconnect devices, if appropriate for safety reasons.

(51) **Service Establishment Charges:** The charges as specified in SSVEC's Tariffs.

(52) **Service Line:** The line extending from a Distribution Line or transformer to the Customer's Premises or Point of Delivery.

(53) **Service Reconnect Charges:** The charges as specified in SSVEC's Tariffs which must be paid by the Customer prior to re-establishment of Electric Service each time the electricity is disconnected.

(54) **Single Family Dwelling:** A house, an apartment, or a mobile home permanently affixed to a lot or any other permanent residential unit which is used as a permanent home.

(55) **SSVEC:** Sulphur Springs Valley Electric Cooperative, Inc. or Cooperative, a member-owned Utility whose principal activity is to supply Electric Service under a Certificate of Convenience and Necessity granted by the ACC.

(56) **Tariffs:** The documents filed with the ACC which list the services and products offered by SSVEC and which set forth the terms and conditions and a schedule of the rates and charges for those services and products.

(57) **Temporary Service:** Service to Premises or enterprises which are temporary in nature or where it is known in advance that the service will be of limited duration. Service which in the opinion of SSVEC is for operations of a speculative character is also considered Temporary Service.

(58) **Third-Party Notification:** A Notice sent to a Person willing to receive Notice of the pending discontinuance of Electric Service to the Customer of record in order to make arrangements on behalf of the Customer that is satisfactory to SSVEC.

(59) **Utility:** The public service corporation providing Electric Service to the public in compliance with State law.

(60) **Weather Especially Dangerous to Health:** That period of time commencing with the scheduled termination date when the local weather forecast as predicted by the National Oceanographic and Administration Service indicates that the temperature will not exceed 32 degrees Fahrenheit for the next Day's forecast. The ACC may determine that other weather conditions are especially dangerous to health as the need arises.

2.2 APPLICATION FOR MEMBERSHIP

2.2.1 CONDITIONS FOR MEMBERSHIP

A Customer will become a member of SSVEC under the following conditions:

A. An Application for membership shall be made acknowledging the Customer's agreement to comply with and be bound by SSVEC's Articles of Incorporation and Bylaws and any rules and regulations adopted by the Board of Directors. This Application may be made in person, writing, by telephone, fax, or by any other telecommunication means.

B. A membership fee specified in the Bylaws shall be either paid in advance of the Customer's first Service Connection or included on the Customer's first bill. A former Customer who is reapplying for membership shall also pay a membership fee in advance or have the membership fee included on the first billing if it was previously refunded or applied on account.

2.2.2 MEMBERSHIP LIMIT

No Customer may hold more than one membership. A membership shall be held jointly by both husband and wife unless specified to the contrary in writing by either spouse to SSVEC.

2.3 APPLICATION FOR ELECTRIC SERVICE

2.3.1 INDIVIDUAL APPLICATIONS FOR ELECTRIC SERVICE

A Customer may request Electric Service under the following conditions:

An Application for Electric Service shall be made by the Customer, subject to the rates, terms and conditions of the applicable class of service. This Application may be made in person, writing, telephone, fax, or by any other telecommunications or electronic means authorized by the Cooperative. A Customer may authorize another party to make Application by a Power of Attorney. If Electric Service is supplied and used without a signed Application, the Customer is nonetheless subject to SSVEC's Tariffs and Service Conditions and Bylaws.

Acceptance of the Customer's Application by SSVEC constitutes an agreement for Electric Service that shall continue in force until cancelled by at least three (3) business days' Notice by either party to the other unless a different period of Notice or minimum obligation is specifically provided in the Service Termination Policy (Section 2.20), or the particular schedule or contract under which the Customer receives Electric Service.

A. SSVEC may obtain the following information from each new Applicant for service:

(1) Name or names of Applicant(s) and social security number(s), driver's license number(s) or other form of identification acceptable to SSVEC.

(2) Service address including street or rural address.

(3) Billing address and telephone number.

(4) Address where service was provided previously.

(5) Name and telephone number of employer.

(6) Name and address of relative.

(7) Date Applicant will be ready for service.

(8) Indication of whether Premises has previously received Electric Service from SSVEC.

(9) Purpose for which Electric Service is to be used and SIC (Standard Industrial Code), if applicable.

(10) Indication of whether Applicant is owner or tenant of or agent for the Premises.

(11) Information on the Energy and Demand requirements of the Customer.

(12) Type and kind of life-support equipment, if any, used by the Customer.

(13) Email Address.

(14) Verification of Legal Age.

B. Customer-specific information shall not be released without prior written Customer authorization unless the information is requested by a law enforcement or other public agency through a court order, is requested by the ACC, reasonably required for legitimate account collection activities or is necessary to provide safe and reliable service to the Customer.

C. SSVEC may require a new Applicant for Electric Service to appear at SSVEC's designated place of business to produce proof of identity and sign SSVEC's Application form if applicable.

D. Where Electric Service is requested by two or more individuals, SSVEC shall have the right to collect the full amount owed to SSVEC from any one of the Applicants.

2.3.2 ASSOCIATIONS, CORPORATIONS AND PARTNERSHIPS

An association, corporation, partnership, or similar organization shall also meet the following requirements when applying for Electric Service:

A. Establish the names and mailing addresses of the principal parties in the organization (e.g., officers, partners, local representative, etc.) and the name and relationship of the Person(s) requesting service;

B. Provide proof of the legal existence of the organization (e.g., certificate of incorporation, newspaper publication of the articles of incorporation, or other suitable legal references); and,

C. In the case of a corporation, evidence indicating the state in which it is incorporated.

2.3.3 PAYMENT OF DELINQUENT DEBTS AND LIABILITIES

All delinquent debts and liabilities of the Customer to SSVEC shall be paid before new or additional service can be made available.

2.3.4 IDENTIFICATION OF RESPONSIBLE PARTY

Any Person responsible for accounts in the name of any Customer shall be established in a manner acceptable to SSVEC. Any Person applying for Electric Service to be connected in the name of or in care of another Customer shall furnish to SSVEC notarized written approval from the Customer guaranteeing payment of all bills under the account. Application for service for a minor shall be allowed when payment is assured by a written guarantee from a responsible adult Customer. The Customer is responsible in all cases for service supplied to the Premises until SSVEC has received three (3) business days' Notice of the effective date of any change in the service Agreement. The Customer shall also promptly notify SSVEC of any change in billing or mailing address.

2.3.5 IDENTIFICATION OF LOAD AND PREMISES

The electric loads (see Section 2.11 Rates) and Premises to be served by SSVEC shall be clearly identified by the Customer at the time of Application. If the service address is not recognized in terms of a commonly used identification system, the Customer may be required to provide specific written directions before SSVEC shall act on a request for Electric Service.

2.3.6 PROVISIONS FOR LANDLORD AGREEMENTS

SSVEC will work with landlords to avoid disconnecting Electric Service from rental properties when tenants request disconnections. SSVEC will require the landlord to enter into a written agreement whereby the landlord agrees to pay to SSVEC any kWh, applicable taxes and services charges to maintain Electric Service at the required address during the vacancy period. SSVEC will read the Meter for the prior tenant's disconnect/final bill and bill the landlord accordingly until new Electric Service is requested in the name of the new tenant for the rental property. In the case of tenant non-pay disconnects, it shall be the landlord's responsibility to request that Electric Service remain active to avoid reconnection charges.

2.4 CREDIT POLICY

SSVEC shall extend credit for Electric Service when the Customer meets the criteria established for the applicable class of service as set forth in this Section.

2.4.1 RESIDENTIAL SERVICE

Except as set forth in Section 2.4.4 below, SSVEC shall extend credit to a new Applicant for residential service if the Applicant is able to meet any of the following requirements:

A. The Applicant has had service of a comparable nature with SSVEC at another service location within the past two (2) years and was not delinquent in payment more than twice during the last 12 consecutive months or disconnected for nonpayment.

B. The Applicant can produce a letter regarding credit or verification from an electric Utility where service of a comparable nature was received within the last two (2) years which states Applicant was not delinquent in payment more than twice during the last 12 consecutive months.

C. Payment of a deposit as hereinafter provided.

2.4.2 MUNICIPAL SERVICE

The sole requirement for extension of credit to any municipal body, improvement or service district, county government, the State of Arizona, the United States government or other political subdivision shall be that the authorized executive official(s) of that agency requests Electric Service.

2.4.3 ALL OTHER SERVICE

Except as set forth in Section 2.4.4 below, SSVEC shall extend credit to a new Applicant for service if the Applicant is able to meet any of the following requirements:

A. The Applicant has had service of a comparable nature with SSVEC at another service location within the past two (2) years and was not delinquent in payment more than twice during the last 12 consecutive months or disconnected for nonpayment.

B. In lieu of a deposit, a new Applicant may provide an irrevocable letter of credit from a bank or financial institution and acceptable to SSVEC or a surety bond as security for SSVEC.

C. Payment of a deposit as hereinafter provided.

2.4.4 EXCEPTIONS APPLICABLE TO SECTIONS 2.4.1 AND 2.4.3

SSVEC may still require the Customer to pay a cash deposit in lieu of any other evidence of satisfactory credit to establish, reestablish or maintain Electric Service if any of the following circumstances apply:

A. The Customer's account subsequently becomes delinquent more than two times within any 12-month consecutive period.

B. Service to the Customer is subsequently terminated for nonpayment of a delinquent account within the last 12 months.

2.4.5 DEPOSIT PROCEDURES

When SSVEC requires a cash deposit from a Customer, an SSVEC receipt shall be the primary record of the deposit. Verification of the existence of and right to a deposit may also include appropriate SSVEC records. Arrangements acceptable to SSVEC may be made for payment of cash deposits.

SSVEC shall refund residential deposits with accrued interest after twelve 12 months of service if the Customer has not been delinquent more than twice in the payment of the utility bills. Non-residential account deposits with accrued interest, surety bonds or irrevocable letters of credit shall be refunded or released after 24 months of service if the Customer has not been delinquent more than twice in the payment of the utility bills unless otherwise specified in the contract for Electric Service.

2.4.6 SCHEDULE OF DEPOSITS

A. Residential Service. Deposits shall not exceed two times that Customer's average monthly bill for the previous year, except where greater use is estimated for electric heating, water heating or other major Energy requirements.

B. Nonresidential Service. Deposit shall not exceed 2.5 times that Customer's estimated maximum monthly bills.

C. Adjustment of Deposits. SSVEC may review the Customer's usage after service has been connected and adjust the deposit amount based upon the Customer's actual usage. Deposits are subject to refund upon the establishment of credit with SSVEC. A separate deposit may be required for each Meter installed.

2.4.7 INTEREST ON DEPOSITS

SSVEC shall annually pay simple interest on a Customer's required deposit equivalent to the passbook rate of interest of SSVEC's banking institution as of January 1st of

each year. Interest shall accrue until SSVEC refunds the deposit or at its discretion applies the deposit to the Customer's unpaid account for Electric Service. Annual interest on deposits shall generally be applied to the Customer's account on the Customer's bill following the anniversary date of the deposit. When a Customer terminates service, annual interest shall be prorated to the nearest full month following the anniversary date of the deposit. In no event shall interest accrue after a final bill for service is rendered

2.4.8 GROUNDS FOR REFUSAL OF SERVICE

SSVEC may refuse to establish Electric Service if any of the following conditions exist:

A. The Applicant has an outstanding balance for the same class of Electric Service with SSVEC, and the Applicant is unwilling to make arrangements with SSVEC for payment.

B. A condition exists which, in SSVEC's sole judgment, is unsafe or hazardous to the Applicant, the general public or SSVEC's personnel, property or facilities.

C. The refusal by the Applicant to provide SSVEC with a deposit when the Customer has failed to meet SSVEC's Credit Policy herein.

D. Customer is known to be in violation of SSVEC's Tariffs or Service Conditions.

E. Failure of the Customer to furnish such funds, service, equipment, and/or rights-of-way necessary to serve the Customer which has been specified by SSVEC as a condition for providing Electric Service.

F. Applicant falsifies his or her identity for the purpose of obtaining Electric Service.

G. SSVEC may refuse to provide Electric Service until the Customer has obtained all required permits and/or inspections which indicate that the Customer's facilities comply with local construction and safety standards.

2.5 PROVISION OF ELECTRIC SERVICE

2.5.1 RESPONSIBILITY OF SSVEC

Prompt, reliable Electric Service is SSVEC's primary responsibility to the Customer. In general, there is no charge to the Customer for service calls related to voltage problems, malfunction of SSVEC equipment and other errors for which SSVEC is responsible, but service calls relating to malfunction of Customer equipment will be charged at Schedule SC Tariff rate. SSVEC shall use reasonable diligence to supply continuous service but does not guarantee Electric Service against interruptions. SSVEC is not liable to the Customer for damages resulting from interruptions beyond its control.

A. SSVEC shall be responsible for the safe transmission and distribution of electricity until it passes the Point of Delivery to the Customer.

B. SSVEC shall be responsible for maintaining in safe operating condition all Meters, equipment and fixtures installed on the Customer's facilities by SSVEC for the purpose of delivering Electric Service to the Customer.

2.5.2 RESPONSIBILITY OF CUSTOMER

A. Each Customer shall be responsible for maintaining all Customer facilities on the Customer's side of the Point of Delivery in safe operating condition.

B. Each Customer shall be responsible for safeguarding all SSVEC property and equipment installed in or on the Customer's Premises for the purpose of supplying SSVEC Electric Service to that Customer.

C. Each Customer shall exercise all reasonable care to prevent loss or damage to SSVEC property, excluding ordinary wear and tear. The Customer shall be responsible for loss of or damage to SSVEC property on the Customer's Premises arising from neglect, carelessness, or misuse and shall reimburse SSVEC for the cost of necessary repairs or replacements.

D. Each Customer shall be responsible for payment for any equipment damage and/or estimated unmetered usage resulting from unauthorized breaking of seals, interfering, tampering or bypassing the SSVEC Meter.

E. Each Customer shall be responsible for notifying SSVEC of any equipment failure identified as SSVEC's equipment.

2.5.3 MINIMUM CUSTOMER INFORMATION REQUIREMENTS

A. Information for residential Customers.

(1) SSVEC shall make available upon Customer request not later than 15 Days from the date of request a concise summary of the rate schedule applied for by such Customer.

The summary shall include the following:

(a) The monthly Minimum Charge or other Customer charge, identifying the amount of the charge and the specific amount of usage included in the Minimum Charge, where applicable.

(b) Rate blocks, where applicable.

(c) Any adjustment factor(s) and method of calculation.

(2) SSVEC shall, to the extent practical, identify the Tariff most advantageous to the Customer and notify the Customer of such prior to commencement of Electric Service.

(3) SSVEC shall make available upon Customer request, but not later than 60 Days from the date of commencement of Electric Service, a concise summary of SSVEC's Tariffs or the ACC rules and regulations concerning:

(a) Deposits

(b) Termination of Electric Service

(c) Billing and collection

(d) Customer complaints

(4) SSVEC, upon request of a Customer, shall transmit a written statement of actual consumption by such Customer for each billing period during the prior 12 months unless such data is not reasonably ascertainable.

(5) SSVEC shall inform all new Customers of their right to obtain the information specified above.

B. Information required due to changes in Tariffs.

(1) SSVEC shall transmit to affected Customers a concise summary of any change in SSVEC's Tariffs affecting those Customers.

(2) The above information shall be transmitted to the affected Customer within 60 Days of the effective date of the change.

2.5.4 CONTINUITY OF SERVICE

SSVEC shall make reasonable efforts to supply a satisfactory and continuous level of Electric Service. However, SSVEC shall not be responsible for any damage or claim of damage attributable to any interruption or discontinuation of Electric Service resulting from:

A. Any cause against which SSVEC could not have reasonably foreseen or made provision for, e.g., force majeure (Act of God), interruption of wholesale power supply, etc.

B. Scheduled Electric Service interruptions to make repairs or perform routine maintenance.

C. Curtailment.

D. Interruptible Service.

2.5.5 ELECTRIC SERVICE INTERRUPTIONS

A. SSVEC shall make reasonable efforts to reestablish Electric Service within the shortest possible time when Electric Service interruptions occur.

B. SSVEC shall make reasonable provisions to meet emergencies resulting from failure of Electric Service, and SSVEC shall issue instructions to its employees covering procedures to be followed in the event of emergency in order to prevent or mitigate interruption or impairment of Electric Service.

C. In the event of a national emergency or local disaster resulting in disruption of normal Electric Service, SSVEC may, in the public interest, interrupt Electric Service to other Customers to provide necessary service to civil defense or other emergency service agencies on a temporary basis until normal Electric Service to these agencies can be restored.

D. When SSVEC plans to interrupt Electric Service for more than four (4) hours to perform necessary repairs or maintenance, SSVEC shall attempt to inform affected Customers verbally or through effective media at least 24 hours in advance of the scheduled date and estimated duration of the Electric Service interruption. Such repairs shall be completed in the shortest possible time and in accordance with proper electrical and safety standards in order to minimize the inconvenience to the Customers of SSVEC. In case of emergency conditions, SSVEC may suspend Electric Service without prior Notice to affected Customers.

E. Interruptible or Controlled Service under an approved Tariff shall not be considered an Electric Service interruption for purposes of this Section.

2.5.6 SERVICE CALLS DURING REGULAR BUSINESS HOURS

Service charges as provided in SSVEC's approved Tariffs shall be imposed for service calls performed during regular business hours for one of the following reasons:

A. Interruptions caused by the Customer's negligence or failure of Customer-owned equipment. Reasonable efforts will be made to advise the Customer about the responsibility for such charges before the service call starts.

B. Reconnection of Electric Service to any Customer previously disconnected for unlawful use of service (including tampering or theft), misrepresentation to SSVEC, unsafe conditions, threats to SSVEC personnel or property, failure to permit safe access, detrimental effects of Customer loads on SSVEC's system, or failure to establish credit and/or follow procedures to establish Electric Service.

C. Premises visits regarding action associated with disconnection of Electric Service for non-payment of a delinquent bill (whether or not service is actually disconnected as a result of such visit) or for reconnection of Electric Service that has previously been disconnected for non-payment. The service charge may be applied in the case of reconnections effectuated through remote metering when the Customer has been disconnected for non-payment of a delinquent bill.

D. Meter testing performed at the written request of the Customer. However, if SSVEC's test shows that the Meter is inaccurate by more than three (3) percent, the service charge will be waived or refunded to the Customer.

2.5.7 SERVICE CALLS AFTER REGULAR BUSINESS HOURS

Service charges as provided in SSVEC approved Tariffs shall be imposed for a service call after regular business hours for one of the following reasons:

A. Interruptions caused by the Customer's negligence or failure of Customer-owned equipment, even though SSVEC is unable to perform any work beyond the Point of Delivery. The Customer shall be advised about the responsibility for such charges before the service call starts.

B. Reconnection of Electric Service to any Customer previously disconnected for unlawful use of service (including tampering or theft), misrepresentation to SSVEC, unsafe conditions, threats to SSVEC personnel or property. failure to permit safe access, detrimental effects of Customer loads on SSVEC's system, or failure to establish credit and/or sign an agreement for service. Such work will be performed only when requested and agreed to by the Customer.

C. Premises visits regarding action associated with disconnection of Electric Service for non-payment of a delinquent bill (whether or not service is actually disconnected as a result of such visit) or for reconnection of Electric Service that has previously been disconnected for non-payment. The service charge may be applied in the case of reconnections effectuated through remote metering when the Customer has been disconnected for non-payment of a delinquent bill.

D. Should Electric Service be established during a period other than regular working hours at the Customer's request, the Customer may be required to pay an after-hour charge for the Service Connection. Where SSVEC scheduling will not permit Service Establishment on the same day requested, the Customer can elect to pay the after-hour charge for establishment that day or his service will be established on the next available normal business day.

E. For the purpose of this Section, the definition of Service Establishments are where the Customer's facilities are ready and acceptable to SSVEC and SSVEC needs only to install a Meter, read a Meter, or turn on Electric Service.

F. Except in emergency situations, as determined by SSVEC in its sole discretion, SSVEC will not make a service call after 9:00 p.m.

2.5.8 CHARGES FOR ELECTRIC SERVICE CONNECTIONS

A. New and Additional Electric Service Connections. Service charges as provided in SSVEC approved Tariffs shall be imposed for new and additional Electric Service or for a change in Electric Service location to a new address.

B. Service Connection Callbacks. Service charges as provided in SSVEC approved Tariffs shall be imposed for a return trip to connect Electric Service if, at the Customer's request, it was previously made available at the Point of Delivery, if an inaccurate service address provided by the Customer results in a Service Connection callback or if the Customer postpones or cancels any service order already completed by SSVEC. Except in emergency situations as determined by SSVEC, SSVEC will not connect Electric Service after 9:00 p.m.

C. Property Damage. The Customer shall be billed for damages to SSVEC equipment or property caused by the Customer or the Customer's employee(s) or agent(s). Such damages and the cost of repair shall be billed at SSVEC's current rates for labor, transportation, equipment, and materials, less appropriate credit for salvage, if any.

2.6 COMPLAINTS

SSVEC shall promptly investigate any legitimate complaint by a Customer about SSVEC's quality of service, charges for service, or other transactions or incidents involving SSVEC personnel.

2.6.1 CUSTOMER SERVICE COMPLAINTS

A. SSVEC shall make a full and prompt investigation of all service complaints made by its Customers.

B. SSVEC shall respond to the complaint within five (5) business Days of its receipt of the complaint as to the status of SSVEC's investigation of the complaint.

C. SSVEC shall notify the complainant of the final disposition of each complaint. Upon request of the complainant SSVEC shall report the findings of its investigation in writing.

D. SSVEC shall inform the Customer of his/her right of appeal to the ACC.

E. SSVEC shall keep a record of all written service complaints received that shall contain, at a minimum, the following data:

(1) Name and address of complainant.

(2) Date and nature of the complaint.

(3) Disposition of the complaint.

(4) A copy of any correspondence between SSVEC, the Customer, and/or the ACC.

This record shall be maintained for a minimum period of one (1) year and shall be available for inspection by the ACC.

2.6.2 CUSTOMER BILL DISPUTES

A. Any SSVEC Customer who disputes a portion of a bill rendered for SSVEC service shall pay the undisputed portion of the bill and notify SSVEC's designated representative that such unpaid amount is in dispute prior to the delinquent date of the bill.

B. Upon receipt of the Customer Notice of dispute, SSVEC shall:

(1) Notify the Customer within five (5) business Days of the receipt of a written dispute Notice.

(2) Initiate a prompt investigation as to the source of the dispute.

(3) Withhold disconnection of service until the investigation is completed and the Customer is informed of the results. Upon request of the Customer, SSVEC shall report the results of the investigation in writing.

(4) Inform the Customer of his/her right of appeal to the ACC.

C. Once the Customer has received the results of SSVEC's investigation, the Customer shall submit payment within five (5) business Days to SSVEC for any disputed amounts. Failure to make full payment shall be grounds for termination of service.

2.6.3 ACC RESOLUTION OF SERVICE AND/OR BILL DISPUTES

A. In the event a Customer and SSVEC cannot resolve a service and/or bill dispute, the Customer shall file a written statement of dissatisfaction with the ACC in accordance with the procedures set forth in Arizona Administrative Code R14-2-212(C), which shall apply to the dispute.

B. SSVEC may implement normal termination procedures if the Customer fails to pay all bills rendered during the resolution of the dispute by the ACC.

C. SSVEC shall maintain a record of written statements of dissatisfaction and their resolution for a minimum of one (1) year and make such records available for ACC inspection.

2.7 CONSTRUCTION STANDARDS AND SAFETY

A. SSVEC shall construct all facilities in accordance with, and otherwise comply with the provisions of, Arizona Administrative Code R14-2-208.F.1.

B. SSVEC shall adopt a standard alternating nominal voltage or standard alternating nominal voltages (as may be required by its distribution system) for its entire Service Area in accordance with, and otherwise comply with the provisions of, Arizona Administrative Code R14-2-208.F.2.

2.8 BILLING POLICY

2.8.1 TAX AND ASSESSMENT CLAUSE

Billing under all schedules and Tariffs will be increased by an amount equal to the sum of all federal, state, county, municipal and other governmental levies, gross receipts, license fees, and other impositions of similar character assessed on the basis of gross revenue of the Cooperative and/or the revenue from the electricity or services sold and/or the Kilowatt-Hours of electricity generated or purchased for sale and/or sold hereunder. In the case of an increase in rates of existing taxes of this character or additional new taxes, licenses or fees based upon generation, distribution, purchase, and/or sale of electric power current or Energy shall be imposed upon or required to be paid by the Cooperative, the rates herein may be increased by a surcharge equal to the amount of the cost per kWh, or per consumer, or per Demand, capacity, or other applicable unit of charge for such new or additional taxes, licenses or fees.

2.8.2 ACC APPROVED RATE ADJUSTMENT FACTORS

SSVEC's rates are subject to the imposition of various adjustment factors established and approved for billing by the ACC from time to time. These rates could include, but are not limited to, purchased power, demand side management, generated power and debt adjustments.

2.8.3 FREQUENCY AND ESTIMATED BILLS

A. SSVEC shall render itemized monthly service bills on a cycle system. Regular Meter readings shall be scheduled for periods of not less than 25 Days or more than 35 Days. In the event a Customer establishes Electric Service within 5 Days prior to the scheduled Meter read date, the usage will be applied to the following billing cycle, and no bill will be rendered to the Customer. In the event a Customer discontinues Electric Service within 5 Days after the scheduled Meter read date, a bill for any usage and other applicable charges will be presented as the closing bill.

B. If SSVEC is unable to read the Meter on or about the scheduled Meter read date, SSVEC will estimate the consumption for the Billing Period giving consideration to the following factors where applicable:

(1) The Customer's usage during the same month of the previous year.

(2) The amount of usage during the preceding month.

(3) In accordance with Schedule EM – Estimation Methodologies

C. After the third consecutive month of estimating the Customer's bill for reasons other than severe weather, SSVEC will attempt to secure an accurate reading of the Meter.

D. Failure on the part of the Customer to comply with a reasonable request by SSVEC for access to its Meter may lead to the discontinuance of Electric Service.

E. Estimated bills will be issued only under the following conditions:

(1) Failure of a Customer who reads his/her own Meter to deliver the Meter reading information to SSVEC in accordance with the requirements of SSVEC billing cycle.

(2) When severe weather conditions which prevent SSVEC from reading the Meter, remote locations which make it uneconomical to read on a monthly basis, emergencies or work stoppage prevent actual Meter readings.

(3) Circumstances that make it dangerous or impossible to read the Meter, including but not limited to: locked gates, blocked Meters, vicious or dangerous animals, etc.

(4) Communications issues with automated metering.

(5) The billing is not the first or final billing for Electric Service.

(6) Due to Customer equipment failure, a one-month estimation will be allowed.

F. Each bill based on estimated usage will indicate that it is an estimated bill.

2.9 METER READING

2.9.1 COMPANY OR CUSTOMER METER READING

A. SSVEC may, at its discretion, allow for Customer reading of Meters.

B. It shall be the responsibility of SSVEC to inform the Customer how to properly read his/her Meter.

C. Where a Customer reads his or her own Meter, SSVEC will read the Customer's Meter at least once every six (6) months.

D. SSVEC shall specify the timing and other requirements for the Customer to submit his or her monthly Meter reading to conform to SSVEC's billing cycle.

E. In the event the Customer fails to submit the reading on time, SSVEC may issue the Customer an estimated bill.

F. Meters shall be read monthly on as close to the same day as practical.

2.9.2 MEASURING OF SERVICE

A. All Energy sold to Customers and all Energy consumed by SSVEC, except that sold according to fixed charge schedules, shall be measured by commercially acceptable measuring devices owned and maintained by SSVEC, except where it is impractical to install Meters, such as street lighting or security lighting, or where otherwise authorized by the ACC.

B. When there is more than one Meter at a location, the metering equipment shall be so tagged or plainly marked as to indicate the circuit metered or metering equipment.

C. Meters which are not direct reading shall have the multiplier plainly marked on the Meter.

D. All charts taken from recording Meters shall be marked with the date of the record, the Meter number, Customer, and chart multiplier.

E. Metering equipment shall not be set "fast" or "slow" to compensate for supply transformer or line losses.

2.9.3 CUSTOMER REQUESTED REREADS

A. SSVEC shall at the request of a Customer reread that Customer's Meter within ten (10) business Days after receiving such request by the Customer.

B. Any Meter reread may be charged to the Customer consistent with the Tariff rate on file and approved by the ACC provided that the original reading was not in error.

2.9.4 RECORD OF CONSUMPTION

The installation and/or registration of SSVEC's Meter at the Customer's point of delivery shall serve as initiation of service and the Meter reading shall serve as evidence of the amount of energy and/or billing demand used by the Customer, except where non-metered service is supplied. However, in the event of failure of SSVEC's Meter or of SSVEC personnel to obtain an actual reading, SSVEC will estimate the usage in accordance with Schedule EM–Estimation Methodologies.

2.9.5 ACCESS TO CUSTOMER PREMISES

SSVEC shall have the right of safe ingress to and egress from the Customer's Premises at all reasonable hours for any purpose reasonably connected with SSVEC's property used in furnishing Service and the exercise of any and all rights secured to it by law or these Service Conditions.

2.10 CHANGE OF OCCUPANCY

A. No less than three (3) business Days' advance Notice must be given in person, in writing, or by telephone at the company's office to discontinue service or to change occupancy.

B. The outgoing Customer shall be responsible for payment for all SSVEC Electric Services provided and/or consumed up to the scheduled turn-off date.

C. The outgoing Customer shall be responsible for providing access to the Meter so that SSVEC may obtain a final Meter reading.

2.11 RATES

SSVEC supplies Electric Service under several rate schedules, and, at the time of Application, selects the most favorable rate for which the Customer is reasonably eligible based upon information available at the time of Application. It shall be the responsibility of the Customer, however, to notify SSVEC and request rate reclassification if eligibility for the assigned rate changes or if the size or character of connected electric load substantially changes. Retroactive billing adjustments for a Customer on an incorrect rate shall be limited to the three (3) immediately previous Billing Periods only, except in cases of misrepresentation by the Customer where adjustment shall be retroactive to the original date of Service Connection.

2.12 BILLING OF LINE EXTENSION CHARGES

The Customer shall be billed the applicable Tariff indicated in the Customer's Application for Service, on the first billing cycle at least thirty (30) Days after Electric Service is installed and connection made regardless of whether the Customer has begun actual Energy use.

2.13 BILLING INFORMATION

All Electric Service bills shall identify the Premises served (by Premise's address, service number, and SSVEC location number, as well as Customer-specific service identifier) and the type of service provided. Other information provided will be as follows:

A. Each Meter at a Customer's Premises will be considered separately for billing purposes, and the readings of two or more Meters will not be combined unless otherwise provided for in SSVEC's Tariffs.

B. Each bill for residential Electric Service will contain the following minimum information:

(1) The beginning and ending Meter readings of the Billing Period, the dates thereof, and the number of Days in the Billing Period.

(2) The date the bill will be considered due.

(3) Billed usage and Demand.

(4) Rate schedule number.

(5) SSVEC's telephone numbers and addresses.

(6) Customer's name and service account number.

(7) Amount due and any previous amount due.

(8) Adjustment factor, where applicable.

(9) Taxes.

(10) The ACC's address and toll-free telephone number.

2.14 CUSTOMER BILLS AND OTHER NOTICES

SSVEC shall mail or electronically transmit (per electronic billing program) Electric Service bills and other important Notices to the last known address provided by the Customer. It is the Customer's responsibility to notify SSVEC about any change in or correction to Customer's billing address. In no case shall failure to receive a bill or other important Notice mailed or transmitted to the Customer's billing address of record relieve or diminish the Customer's obligation to pay for Electric Service.

2.15 TERMS OF PAYMENT

A. All Electric Service bills are due and payable no later than fifteen (15) Days from the date of the bill. Any payment not received within this time-frame shall be considered delinquent and could incur a late payment charge. Electric Service bills for the current Billing Period may be paid in person or by mail at any SSVEC business office, or to any authorized collection agent of SSVEC. Payment of delinquent charges, however, may be limited by SSVEC to a specific method, time, and place under terms of SSVEC's collection policy or a deferred payment agreement.

B. For the purposes of this Section. the date a bill is rendered may be evidenced by:

(1) The postmark date.

(2) The mailing date.

(3) The billing date shown on the bill (however, the billing date shall not differ from the postmark or mailing date by more than two (2) Days).

(4) The transmission date for electronic bills.

C. Failure to receive bills or Notices which have been properly placed in the United States mail or that have been properly transmitted via secure website, shall not prevent such bills from becoming delinquent nor relieve the Customer of his obligations therein.

D. Charges for Electric Service commence when the Service is installed and connection made, whether used or not.

E. A late payment penalty may be added to all past-due balances which remain unpaid for at least fifteen (15) Days beyond the due date in accordance with approved SSVEC Tariffs.

2.16 OPTIONAL PAYMENT PLANS

Eligible Customers may elect the following plans:

2.16.1 BUDGET BILLING

For convenience of SSVEC's residential and small commercial Customers, and at no additional charge, SSVEC may offer a budget billing plan based on 12 months of the Customer's estimated total charges. Budget billing requires sufficient billing history to accurately estimate the Customer's monthly installment. Annually, the plan will have a catch-up time on the anniversary date of initiation. At that time, either credit amounts shall be refunded, debit amounts billed, or, at the discretion of SSVEC, the credit or debit amount rolled into the next year's budget billing plan. SSVEC may adjust the Customer's budget billing amount in the event the estimate of the Customer's usage or cost should vary significantly from the Customer's actual usage or cost. Two consecutive delinquencies will be cause for removal of the Customer from the budget billing plan and all amounts will become due and payable.

2.16.2 SUREPAY AUTOMATIC PAYMENT PLAN

For the convenience of all Customers with appropriate accounts at designated financial institutions and at no additional charge, SSVEC may offer an optional SurePay Automatic Payment Plan under which the Customer's financial institution is authorized to accept the Customer's Electric Service bill as a draft on the Customer's account. An eligible Customer shall acknowledge the terms of the SurePay Automatic Payment Plan before the Plan is effective provided that either party may cancel upon thirty (30) Days' Notice to the other.

2.16.3 PREPAID METERING SERVICES

Pre-paid metering is a payment option that SSVEC may offer to its members. Pre-paid metering provides more payment flexibility to its members and is known to reduce deposits, eliminate late charges and help members better manage bills, and works to reduce administrative and collection costs for the Cooperative. Customers may contact SSVEC offices for additional information.

2.16.4 ELECTRONIC/PAPERLESS BILLING

SSVEC may offer an electronic/paperless billing program. A Customer may elect to receive their Electric Service bill, as well as other SSVEC Notices and Member communications, via an electronic medium such as, but not limited to, web-site and email. A Customer who elects to receive their Electric Service bill electronically, may not receive a paper//hard copy bill or Notices via U.S. mail. A Customer may elect electronic billing through SSVEC's website wherein the Customer shall acknowledge and agree to be bound by the terms and conditions of the program. It is the Customer's responsibility to provide to SSVEC, and to maintain, a current and correct email address. A Customer of the program may discontinue participation under the program upon 30 Days' Notice to SSVEC. SSVEC may discontinue the program at any time upon 30 Days' Notice to Customers.

2.16.5 CREDIT CARD PAYMENT RATE SCHEDULE

A. Type of Service:

SSVEC may accept credit cards for the payment of all Electric Services. Payment by credit card is an alternative and optional method of paying for Electric Services.

B. Availability:

Payment by credit card shall be available to all SSVEC Customers receiving sales and services provided by SSVEC. Only credit cards approved by SSVEC will be accepted.

C. Place of Payment:

Credit card payments may be made as follows:

(1) At any of SSVEC's Customer service offices where payments are accepted.

(2) SSVEC, in its sole discretion, may authorize personnel who are in the field to accept credit card payments.

(3) By telephone.

(4) SSVEC Customers may have their monthly bill automatically charged to their credit card in accordance with the SurePay Automatic Payment Plan.

D. Conditional Acceptance of Payment:

Payment by credit card shall not be deemed accepted by SSVEC unless accepted and paid by the issuing bank. If for any other reason, including, but not limited to, cancellation of the credit card by the Customer or the payment by credit card is dishonored or rejected by the issuing financial institution, the credit card payment shall be treated the same as insufficient funds. In that event, the Customer's status shall be the same as if no payment was tendered, and an insufficient funds charge will be charged to the Customer's SSVEC account in accordance with SSVEC's Tariffs and Service Conditions.

2.17 INSUFFICIENT FUNDS (NSF) OR RETURNED PAYMENTS

A. SSVEC shall be allowed to charge a fee in accordance with its Tariffs for each instance where a Customer tenders payment for Electric Service with a check or other financial instrument (including a credit card) which is returned by the Customer's bank or financial institution for insufficient funds.

B. When SSVEC is notified by the Customer's bank or other financial institution that the check or financial instrument tendered for the Electric Service will not clear, SSVEC may require the Customer to make payment in cash, by money order, certified check, or other means which guarantees the Customer's payment to SSVEC.

C. A Customer who tenders an insufficient check or financial instrument shall in no way be relieved of the obligation to render payment to SSVEC under the original terms of the bill nor does it defer SSVEC's ability to terminate Electric Service for nonpayment of bills.

D. SSVEC may require guaranteed funds (cash, money order, certified check or credit card) from a Customer who has paid with an insufficient check or financial instrument three (3) or more times within a twelve (12) month period.

2.18 COLLECTION POLICY

It is the responsibility of SSVEC to initiate collection action on delinquent accounts in order to protect its fiscal integrity and the interest of all Members. SSVEC may institute collection action on any account which has been disconnected (on either a seasonal or permanent basis) where an outstanding balance has remained unpaid for thirty (30) Days after issuance of the final bill. At the discretion of SSVEC, a collection action may be instituted through a collection agency retained by SSVEC or by any means legally permissible.

2.19 PAYMENT OF BILLS AND DELINQUENT BILLS

2.19.1 NOTICE OF DELINQUENT STATUS

All bills for Electric Services are due and payable no later than fifteen (15) Days from the date of the bill. Any payment not received by SSVEC within fifteen (15) Days shall be considered delinquent and is subject to a late charge in accordance with SSVEC's Tariffs. The Customer shall be notified of a delinquent account by first class U.S. mail, by personal delivery, or by electronic notification (if applicable) at least five (5) Days before a scheduled disconnection. A delinquent account may include past-due amounts transferred from other inactive accounts held by the Customer for the same class of service.

2.19.2 DEFERRED PAYMENT PLAN

SSVEC may, prior to termination of Electric Service, offer to qualifying residential Customers a deferred payment plan for the Customer to retire unpaid electric bills. Each deferred payment agreement entered into by SSVEC and the Customer shall provide that service will not be disconnected if:

A. The Customer agrees to pay a reasonable amount of the outstanding bill at the time of entering into the deferred payment plan.

B. The Customer agrees to pay all future bills for Electric Service in accordance with the billing and collection Tariffs of SSVEC.

C. The Customer agrees to pay a reasonable portion of the remaining outstanding balance in installments over a period not to exceed six (6) months.

D. For the purposes of determining a reasonable installment payment schedule of a deferred payment plan, SSVEC and the Customer shall give consideration to the following details:

E. Size of the delinquent account.

F. Customer's ability to pay.

G. Customer's payment history.

H. Length of time that the debt has been outstanding.

I. Circumstances which resulted in the debt being outstanding.

J. Any other relevant factors related to the circumstances of the Customer.

Customers desiring to enter into a deferred payment plan (if offered by SSVEC) shall establish such agreement prior to SSVEC's scheduled termination date for nonpayment of bills. The Customer's failure to execute such an agreement prior to the termination date will not prevent SSVEC from disconnecting service for nonpayment.

Deferred payment plans may be in writing and may be signed by the Customer and an authorized SSVEC representative.

A deferred payment plan may include an ACC-approved finance charge.

If the Customer has not fulfilled the terms of a deferred payment plan, SSVEC may disconnect service pursuant to the termination of service rules and SSVEC will not be required to offer subsequent negotiation of a deferred payment plan prior to disconnection.

2.20 TERMINATION OF ELECTRIC SERVICE

2.20.1 NON-PERMISSIBLE REASONS TO DISCONNECT ELECTRIC SERVICE

SSVEC may not disconnect Electric Service for any of the reasons stated below:

A. Delinquency in payment for Electric Services rendered to a prior Customer at the Premises where service is being provided, except in the instance where the prior Customer continues to reside on the Premises.

B. Failure of the Customer to pay for Electric Service or equipment which is not regulated by the ACC.

C. Nonpayment of a bill related to another class of Electric Service.

D. Failure to pay for a bill to correct a previous under-billing due to an inaccurate Meter or Meter failure if the Customer agrees to pay over a reasonable period of time.

E. SSVEC shall not terminate residential Electric Service where the Customer has an Inability to Pay and:

(1) The Customer can establish through medical documentation that, in the opinion of a licensed medical physician, termination would

be especially dangerous to the Customer's, or a permanent resident residing on the Customer's Premises, health;

(2) Life supporting equipment used in the home that is dependent on SSVEC Electric Service for operation of such apparatus; or

(3) Where weather will be especially dangerous to health as defined herein or as determined by the ACC.

F. Residential Electric service to ill, Elderly, or Handicapped Persons who have an Inability to Pay will not be terminated until all of the following have been attempted:

(1) The Customer has been informed of the availability of funds from various government and social assistance agencies of which SSVEC is aware.

(2) A third party previously designated by the Customer (if applicable) has been notified and has not made arrangements to pay the outstanding SSVEC bill.

G. A Customer utilizing the provisions of Paragraphs E or F above may be required to enter into a deferred payment agreement with SSVEC within ten (10) Days after the scheduled termination date.

H. Failure to pay the bill of another Customer as guarantor thereof.

I. Disputed bills where the Customer has complied with the ACC's rules on Customer bill disputes.

2.20.2 TERMINATION OF ELECTRIC SERVICE WITHOUT NOTICE

A. SSVEC's Electric Service may be disconnected without advance written Notice under the following conditions:

(1) The existence of an obvious hazard to the safety or health of the Customer or the general population or SSVEC's personnel or facilities;

(2) SSVEC has evidence of Meter Tampering or fraud; or

(3) Failure of a Customer to comply with the Curtailment procedures imposed by SSVEC during supply shortages.

B. SSVEC shall not be required to restore Electric Service until the conditions which resulted in the termination have been corrected to the satisfaction of SSVEC.

C. SSVEC shall maintain a record of all terminations of Electric Service without Notice. This record shall be maintained for one (1) year and available for ACC inspection.

2.20.3 TERMINATION OF ELECTRIC SERVICE WITH NOTICE

A. SSVEC may disconnect Electric Service to any Customer for any reason stated below provided SSVEC has met the Notice requirements established by the ACC with the exception of those items referenced in Section 2.20.1 of the SSVEC Service Conditions:

(1) Customer violation of any of SSVEC's Tariffs.

(2) Failure of the Customer to pay a delinquent bill for SSVEC Service.

(3) Failure to meet or maintain SSVEC's deposit requirements.

(4) Failure of the Customer to provide SSVEC reasonable access to its equipment and property.

(5) Customer breach of contract for Electric Service between SSVEC and Customer.

(6) When necessary for SSVEC to comply with an order of any governmental agency having such jurisdiction.

B. SSVEC shall maintain a record of all terminations of Electric Service with Notice. This record shall be maintained for one (1) year and available for ACC inspection.

2.20.4 TERMINATION NOTICE REQUIREMENTS

A. SSVEC shall not terminate Electric Service to any of its Customers without providing advance written Notice to the Customer of SSVEC's intent to disconnect Electric Service, except under those conditions specified where advance written Notice is not required.

B. Such advance written Notice shall contain, at a minimum, the following information:

(1) The name of the Person whose Electric Service is to be terminated and the address where Electric Service is being rendered.

(2) SSVEC Tariff that was violated and explanation thereof or the amount of the bill which the Customer has failed to pay in accordance with the payment policy of SSVEC, if applicable.

(3) The date on or after which Electric Service may be terminated.

(4) A statement advising the Customer to contact SSVEC at a specific address or phone number for information regarding any deferred payment or other procedures which SSVEC may offer or to work out some other mutually agreeable solution to avoid termination of the Customer's Electric Service.

(5) A statement advising the Customer that SSVEC's stated reason for the termination of Electric Services may be disputed by contacting SSVEC at a specific address or phone number, advising SSVEC of the dispute and making arrangements to discuss the cause for termination with a responsible employee of SSVEC in advance of the scheduled date of termination. The responsible employee shall be empowered to resolve the dispute and SSVEC shall retain the option to terminate Electric Service after affording this opportunity for a meeting and concluding that the reason for termination is just and advising the Customer of his right to file a complaint with the ACC.

C. Where applicable, a copy of the termination Notice will be simultaneously forwarded to designated third parties.

2.20.5 TIMING OF TERMINATIONS WITH NOTICE

A. SSVEC shall give at least five (5) Days' advance written Notice prior to the termination date.

B. Such Notice shall be considered to be given to the Customer when a copy thereof is left with the Customer or posted first class in the United States mail, addressed to the Customer's last known address or electronically transmitted via secure web server, if applicable.

C. After the period of time allowed by the Notice has elapsed, if the delinquent account has not been paid nor arrangements made with SSVEC for the payment thereof or in the case of a violation of SSVEC's rules, the Customer has not satisfied SSVEC that such violation has ceased, SSVEC may then terminate Electric Service on or after the day specified in the Notice without giving further Notice.

D. Electric Service may be disconnected in conjunction with a personal visit to the Premises by an authorized representative of SSVEC or remotely.

E. SSVEC shall have the right (but not the obligation) to remove any or all of its property installed on the Customer's Premises upon the termination of Electric Service.

2.20.6 LANDLORD/TENANT RULE

A. In situations where Service is rendered at an address different from the mailing address of the bill or where SSVEC knows that a landlord/tenant relationship exists and that the landlord is the Customer of SSVEC, and where the landlord as a Customer would otherwise be subject to disconnection of service, SSVEC may not disconnect service until the following actions have been taken:

B. Where it is feasible to so provide Electric Service, SSVEC, after providing Notice, as required in these Service Conditions, shall offer the occupant the opportunity to subscribe for Electric Service in his or her own name. If the occupant then declines to so subscribe, SSVEC may disconnect Electric Service in accordance with these Service Conditions.

C. SSVEC shall not attempt to recover from a tenant any outstanding bills or other charges due upon the outstanding account of the landlord.

2.21 SERVICE TERMINATION PROCEDURE

After SSVEC delivers the required Electric Service termination Notice, it shall observe the following procedure:

A. In the case of a delinquent account only, and except for remote metered services, the SSVEC employee assigned to disconnect Electric Service shall make reasonable efforts before termination to identify themselves as SSVEC personnel to the Customer, describe the purpose of their presence at the Customer's Premises, and advise the Customer that payment of the total amount due can be accepted in the field to prevent termination.

B. In the case of a delinquent account only, the Customer may pay the total amount due to authorized SSVEC personnel assigned to terminate Electric Service, including a service charge as provided in SSVEC's Tariffs. If the Customer does not pay the total amount due, Electric Service may be disconnected. SSVEC may require that the payment be made by cash, credit card, money order, or cashier's check in lieu of a personal check.

2.22 NON-LIABILITY

The Cooperative shall not be liable to the Customer or any third party for any loss, injury, death, or damage to property resulting from the Customer's use of his/her equipment or from the use of Electric Service beyond the Point of Delivery. It is the Customer's responsibility to provide adequate protective equipment to protect the Customer's equipment from high or low voltage, phase reversals, or single-phasing conditions.

2.23 UNLAWFUL USE OF ELECTRIC SERVICE

When accepting service, the Customer agrees that only authorized SSVEC representatives shall be allowed to remove or replace any Cooperative equipment installed on the Customer's property. The Customer will be held responsible for any broken seals, tampering or interfering with the Cooperative's Meter(s), equipment, or property installed on the Customer's premises. In cases where SSVEC has evidence of Meter Tampering or theft of Electric Service, the Electric Service shall be subject to immediate disconnection. SSVEC shall not be required to restore Electric Service until the conditions which resulted in the termination have been corrected to the satisfaction of SSVEC. SSVEC shall be entitled to collect the applicable rate and Energy usage not recorded on the Meter as a result of the Meter Tampering or theft of Electric Service, as well as all applicable services charges, expenses incurred by SSVEC for property damage, investigation of the illegal act, and any legal expenses and court costs. The Customer should be aware it is a felony to tamper with the property of a utility per A.R.S. 13-1602.

2.24 THREATS TO SSVEC PERSONNEL OR PROPERTY

Threats to SSVEC personnel or property shall not be tolerated and Electric Service to the threatening party may be discontinued until such action has been taken that SSVEC is assured that it may serve the threatening party without danger to SSVEC personnel or property. The

Customer shall pay the applicable service charge for reconnection before Electric Service will be restored.

2.25 FAILURE TO PERMIT SAFE ACCESS

Any barrier or obstacle preventing safe access to any SSVEC facility or property shall be eliminated at the Customer's expense. The Customer shall provide adequate assurance to SSVEC that reasonable access shall be permitted in the future.

2.26 DETRIMENTAL EFFECTS OF THE CUSTOMER'S EQUIPMENT OR OPERATING PROCEDURES

The Customer shall eliminate or correct the conditions causing detrimental effects on SSVEC equipment or the integrity of its facilities, pay any damages, including repair costs, caused by the Customer, provide adequate assurance to SSVEC that similar conditions shall not occur in the future, and pay any applicable service charges for reconnection.

2.27 USE OF SERVICE

Except in cases of existing Master Metered mobile home parks or multifamily apartments, Electric Service under all rate schedules shall not be resold or shared with others.

3. TECHNICAL STANDARDS AND REQUIREMENTS RELATED TO EXTENSIONS OF ELECTRIC SERVICE

The following provisions ("extension policy") have been adopted to provide service to Customers whose requirements are deemed by SSVEC to be ordinary course in nature. In unusual circumstances, when the application of these provisions are impractical, or in the case of extension of lines to be operated above the specified voltages in the applicable rate schedule, or in case the Customer's requirements exceed 1,000 kVA, SSVEC shall make a study of the conditions to determine the basis on which Electric Service may be rendered. All Line Extensions are made on the basis of proper system integration. Guides are offered below for use in circumstances where new Line Extension feasibility is generally acceptable.

3.1 STANDARD VOLTAGES

The extension shall be designed and constructed for operation at the standard distribution voltages used by SSVEC in the particular area in which the extension is located, but this policy is not applicable to extensions which require the installation of any lines or equipment operating at more than those specified voltages in the applicable rate schedule or demands of greater than 1,000 kVA. In the case of 3-phase service, a Line Extension shall be made under this extension policy where the Customer has installed major 3-phase equipment (single units of 10 HP or more or where total aggregate nameplate horsepower (HP) of all connected 3-phase motors exceed 15 HP). Voltage other than those specified for the various rate classes shall be considered as abnormal voltage and considered under the terms of Section 3.2. Only single phase/three wire or three phase/four wire services shall be provided to normal rate classes. Three phase Delta voltages supplied from an underground primary system shall be considered abnormal and nonstandard. Steady state voltage shall be maintained pursuant to Arizona Administrative Code R14-2-208.F.2.

Standard voltages provided by SSVEC and available to all Customers are:

120/240 volts, single-and three-phase (three-phase is not available from underground primary systems);

240/480 volts, single-phase only;

120/208 volts, single-and three-phase; and

277/480 volts, three-phase.

3.2 ABNORMAL LOADS AND SERVICES

Abnormal loads are those requiring nonstandard voltages or three-phase motors larger than 200 HP, single-phase motors 10 HP and larger, single-phase to three-phase converters, intermittent loads (large welders, electric furnaces, elevators, etc.) or others requiring non-standard service characteristics. SSVEC may, at its option, extend Service to an abnormal load provided the Customer shall advance to SSVEC the entire cost, as a non-refundable Contribution in Aid-of-Construction for all materials, labor, overhead, and any special equipment required to serve the load, plus other costs that may be negotiated in a contract between the Customer and SSVEC. The Customer may buy, install, own, and maintain conversion equipment from SSVEC's standard voltages, currents, or locally available primary system to the Customer's nonstandard utilization form. Standby and/or auxiliary service shall be considered as abnormal. The use of "written pole" motors, when approved by SSVEC, may allow the connection of larger motors.

3.3 OVERHEAD AND UNDERGROUND SERVICE

SSVEC shall provide either overhead or underground Service under the provisions of its extension policy.

3.4 SPECIAL CONSTRUCTION

In all cases, SSVEC construction standards and materials are used as guidelines for SSVEC installations of overhead or underground materials and equipment. Any deviation from these standards is considered special construction and is normally disallowed. Routings other than those selected and preferred by SSVEC shall be considered special construction. The Customer shall pay any additional cost for special construction above normal construction. Special construction shall be provided at the discretion of SSVEC.

3.5 METERING AND SERVICE ENTRANCE REQUIREMENTS

The Cooperative reserves the right to Meter consumer's requirements in the most practical manner, either primary or secondary voltage.

For loads served at transmission voltage (over 15 kV) where the Customer owns the service transformer, SSVEC reserves the right to Meter consumer's requirements at secondary voltage, in which event the kW and kWh will be multiplied by a factor ranging from 1.02

through 1.10 to allow for transformation losses, depending upon the consumer's transformer impedance data.

3.6 METERING AND METER TEST POLICY

It shall be the policy of SSVEC to pursue metering accuracy by every practical method. Meters and metering equipment purchased by SSVEC shall be of good quality and all equipment subject to calibration shall be thoroughly tested by methods and equipment acceptable throughout the electric metering industry before installation. Meters requiring installation of metering transformers and associated wiring shall be installed and checked by trained and competent personnel. Accurate watt hour, voltage, and current measuring standard Meters shall be carefully maintained under controlled conditions and periodically compared with standard instruments traceable to the National Institute of Standards and Technology. Testing, adjustment, and calibration procedures shall be as narrow as practical and generally ~~more strict~~ stricter than the standards under which SSVEC is regulated. The following provisions of compliance meet or exceed regulatory requirements and guidelines:

3.6.1 STANDARDS FOR ACCURACY

SSVEC shall comply with accuracy requirements of the ACC for revenue metering. SSVEC shall also comply with ANSI C12 Code for electric metering, Section 8, Arizona Administrative Code R14-2-209.E, which prescribes standards for Meters in service performance, Meter testing, required accuracy, etc.

3.6.2 PERIODIC TESTING PROGRAM

The test program used shall be Periodic Test Schedule 8.1.8.4., which requires that all SSVEC Meters having surge-proof magnets shall be tested at least every sixteen (16) years, and Schedule 8.2.3.1., which requires that block interval Demand Meters be tested at least every twelve (12) years, and lagged Demand Meters at least every eight (8) years.

3.6.3 METER ERROR CORRECTIONS

Any Customer may request a test on a Meter that is in the Customer's name and billed to the Customer. Test request forms are available at each SSVEC office which the Customer shall sign. The applicable service charge and Meter test charge for Service calls during regular business hours shall also be made in accordance with SSVEC's Tariffs.

If the Meter is more than 3% inaccurate, averaged between light and heavy load tests, tests slow or has stopped, all applicable Meter test and service charges shall be waived and the correction of previous bills will be made under the following terms:

A. If the date of the Meter error can be definitely fixed, SSVEC shall adjust the Customer's billings back to that date. If the date of the Meter error cannot be determined, adjustments to that Customer's bills will be limited to three months for residential Customers and six months for non-residential Customers. No such limitations shall apply to overbilling. If the Customer has been under-billed, SSVEC will allow the Customer to repay the difference over an equal length of time that the under-billings occurred. The Customer shall be allowed to pay the

back bill without late payment penalties, unless there is evidence of Meter tampering or energy diversion.

B. If it is determined that the Customer has been over-billed and there is no evidence of Meter tampering or energy diversion, SSVEC will make prompt refunds in the difference between the original billings and the corrected billings.

C. No adjustment shall be made by SSVEC except to the Customer last served by the Meter tested.

The Meter shall be tested in the Meter shop before any adjustments are made, and if practical, before the Meter cover is removed. The Customer or a Customer representative may be present when the Meter is tested, but this must be stated in writing at the time the test request is made. If requested to do so, SSVEC personnel shall attempt to arrange a test during regular business hours with the Customer present. If, 30 Days after Meter removal, SSVEC has been unable to arrange such a test because of failure on the Customer's part to attend the test, SSVEC shall test the Meter without the Customer being present. The Customer shall be notified of the results of the test by mail within a reasonable time after the test has been completed.

3.7 CUSTOMER SERVICE ENTRANCE POLICY

Customer Service Entrances shall be in compliance with applicable current SSVEC Customer Service Entrance requirements before being energized by SSVEC. If the Customer elects to increase the Customer Service Entrance ampacity, and this requires increasing the conductor size, the Meter base ampacity or the Service disconnect ampacity, the Customer Service Entrance shall be brought up to current SSVEC requirements before being reconnected. Exhibits of Customer Service Entrance requirements are attached to these Service Conditions.

3.8 MINIMUM SAFETY STANDARDS

If the Meter is removed by Customer request or for nonpayment or other cause, the Customer Service Entrance shall be brought up to minimum safety requirements in accordance with SSVEC Customer Service Entrance requirements, as well as the NEC, NESC, EUSERC, and all local codes and various inspection authorities before being reconnected. If the existing Customer Service Entrance cannot be brought up to these minimum standards due to the poor condition of components or location impracticality, it shall be replaced with a new installation that is in compliance with the applicable codes and requirements.

3.9 UNSAFE CONDITIONS

If it comes to the attention of SSVEC that the Customer's Service Entrance is in such a condition that it is very likely to cause death or serious injury, SSVEC shall accept no liability and shall endeavor to notify the Customer of the unsafe condition. If immediate action is not taken by the Customer, SSVEC shall disconnect the Customer Service Entrance until the above minimum safety requirements are met.

3.10 SAFE ACCESS

SSVEC personnel shall have safe access to the Customer Service Entrance and metering equipment at all reasonable times. Upon denial of safe access, or if such access is made hazardous by the presence of dangerous animals or other obstructions, Electric Service may be terminated until such safe access is provided.

4. CONDITIONS FOR EXTENSION OF SERVICE FACILITIES

4.1 CONDITIONS FOR ESTABLISHMENT OF PERMANENT SERVICE

Permanent Service can be established upon compliance with all applicable provisions of these Service Conditions.

4.2 AVAILABILITY OF SERVICE FACILITIES

Electric Service is available to all Customers and potential Customers located along existing Distribution Lines within the boundaries of the certificated area in which SSVEC operates. Electric Service requiring Line Extensions is also available to any Customer or potential Customer located any place within SSVEC's certificated area in accordance with the provisions of this Section 4.

4.3 OWNERSHIP

SSVEC shall own all materials, equipment, and structures that it furnishes and installs. Lines and other Service facilities for which the Customer pays Advance-in-Aid-of-Construction, or Contribution-in-Aid-of-Construction shall be owned by SSVEC. Equipment, materials, or facilities furnished to SSVEC specifications by the Customer for its use shall be owned by Customer. Transformers and facilities for Electric Service provided under schedules SP and P for abnormal loads shall be owned by the Customer. Where individual or unusual substation installations are required to serve the Customer, SSVEC reserves the right to require the Customer to make (at the Customer's expense) the necessary, complete installation (consisting of transformer, structure, protective devices, etc.) required to provide adequate Electric Service to the Customer, and, in such event, the Customer will own, operate, and maintain said installation but will benefit by incurring a savings of capacity charges as part of the rate.

4.4 DISTRIBUTION LINE EXTENSION ESTIMATES AND FEES

A. Upon request by an Applicant for a Line Extension, SSVEC shall prepare, without charge, a preliminary sketch and rough estimate of the construction costs to be paid by the applicant. The estimate will be prepared in the office and not include a site visit. The rough estimate could change significantly after the full engineering and design work is completed as described in C below.

B. An application for a Line Extension requesting SSVEC to prepare detailed plans, specifications, or design estimates will be required to pay SSVEC a NONREFUNDABLE design fee. The design fee cost shall be based on the estimate of the costs to be incurred by SSVEC for preparing the detailed plans and estimate.

After the Applicant has: submitted the request, provided all required documents as described in Section 4.6.1 below, and paid the NONREFUNDABLE design fee, SSVEC shall provide plans, specifications, and design estimates of the proposed Line Extension to the Applicant within (90) days. The design fee shall be nonrefundable. Any charges anticipated to be paid for by the Applicant for the construction of the Line Extension shall be provided in the design estimate. This includes but is not limited to: Design Fees, Right of Way Charges, Permits, Labor, Material, Transportation and Equipment usage fees. Before construction of the Line Extension is scheduled, the entire estimated cost of construction must be paid. (This payment is considered Contribution in Aid of Construction and covered in Section 4.7.1 below.) Engineering design estimates shall be valid for ninety (90) Days from the date of issuance. If the Applicant does not enter into a Line Extension agreement and pay the entire estimated cost of construction within this ninety (90) Day period, then thereafter, at the discretion of SSVEC, a new application for engineering design services shall be initiated and subject to a design fee assessment as described above. Fees collected by SSVEC for the original engineering design estimates are nonrefundable and will not be applied to any subsequent reapplication. If the Applicant proceeds with the construction of the line extension, the design fee paid will be credited towards the cost of construction. The cost of construction will include all design fee costs incurred.

At the sole discretion of SSVEC, the design fee may be waived if it is determined no site visit, as described in Section (C) below, is needed because of the adequacy of the plans delivered to SSVEC with the initial Line Extension application. (The fee waiver is generally reserved for professional residential property developers with consistent history of building Line Extensions with SSVEC.)

C. To ascertain field conditions prior to finalizing a design estimate, it will be necessary to survey the route of the line extension while in the field. The design fee cost, as described above, includes ONE field visit for the purposes of conducting the engineering survey. The costs for any additional engineering survey work which is required as the result of changes requested by the Applicant after completion of the initial survey may, at the discretion of SSVEC, be billed to the Applicant at SSVEC's current rates for labor, transportation, equipment, and materials. Before any visit which will require additional fees, SSVEC will contact the Applicant and provide the cost of the additional fee which will be charged. This fee is also NONREFUNDABLE. This fee must be paid before SSVEC will make the additional field visit.

D. Subdivisions providing SSVEC with approved final plat plans shall be provided with line extension plans and/or design estimates within forty-five (45) days after receipt of the application design fee and any required design information as described in Section 4.6.1 below.

~~4.4 DISTRIBUTION LINE EXTENSION ESTIMATES AND FEE SCHEDULES~~

~~. Upon request by an applicant for a Line Extension, SSVEC shall prepare, without charge, a preliminary sketch and rough estimate of the construction costs to be paid by the applicant.~~

~~. An applicant for a Line Extension requesting SSVEC to prepare detailed plans, specifications, or design estimates may be required to pay SSVEC an amount equal to the estimated cost of preparation. Upon submission of a written request for a Line Extension, SSVEC shall make available, within ninety (90) Days after receipt of all necessary documentation and the design fee, such plans, specifications, or design estimates of the proposed Line Extension. The design fee shall be nonrefundable. Any charges to the Customer shall be provided in the design estimate. Engineering design estimates shall be valid for ninety (90) Days from the date of issuance. If the Customer or prospective Customer does not enter into a Line Extension agreement with SSVEC for Electric Service within this ninety (90) Day period, then thereafter, a new request for engineering design services shall be initiated and subject to a fee assessment as set forth herein. Monies collected by SSVEC for the original engineering design estimates are non-refundable.~~

~~. To ascertain field conditions prior to finalizing a design estimate, it will be necessary to survey the route to the field. The Customer shall be given at no cost one engineering survey with engineering design services provided by SSVEC. The cost of any additional engineering survey performed as the result of changes requested by the Customer after completion of the initial survey may, at the discretion of SSVEC, be billed to the Customer at SSVEC's current rates for labor, transportation, equipment, and materials.~~

~~. Subdivisions providing SSVEC with approved final plans shall be provided with plans and/or design estimates within forty-five (45) Days after receipt of the application design fee and any required design information.~~

~~. Applicants requesting engineering design estimates for new Electric Service or service upgrades will be charged the following fees:~~

~~Type of Service~~	~~No. Lots/Service(s)~~	~~Fee~~
~~Residential/GS~~	~~1 lot~~	~~$100~~
~~Subdivision~~	~~2 or more lots~~	~~$1,000 plus $10 per lot in excess of 10 lots~~
~~Commercial (OH & UG)~~	~~1 to 3 buildings~~	~~$1000 plus $100 per building in excess of 3~~
~~Main Distribution~~		~~$0.25 per foot~~

~~. Each and every request for an engineering design estimate and each and every alteration to all initial requests for engineering design services will be considered as an individual request and assessed a fee assessment as set forth above.~~

~~. All design fees shall be paid to SSVEC by the Customer or prospective Customer prior to SSVEC engaging in engineering design estimates as requested by the Customer or prospective Customer.~~

~~. Engineering design estimates shall be valid for ninety (90) Days from the date of issuance. If the Customer or prospective Customer does not enter into a Line Extension agreement with SSVEC for service within this ninety (90) Day period, then thereafter, a new request for engineering design services shall be initiated and subject to a fee assessment as set forth above.~~

~~4.34~~4.5LINE EXTENSIONS TO RESIDENTIAL AND COMMERCIAL CUSTOMERS

Subject to the availability of adequate capacity and suitable character of service at the point of beginning for an extension, SSVEC shall extend its facilities to residential and commercial Customers on the following basis (For subdivisions, see Section 4.9):

A. Any Permanent Customer shall be eligible for a Line Extension.

B. A standard Line Extension may be any combination of overhead or underground, single-phase or three-phase, primary or secondary as the situation warrants and as SSVEC system requirements permit.

C. Before an extension is constructed to a well, documentation that the well is capable of producing an adequate quality and quantity of water for the intended purpose may be required by SSVEC.

D. All required easements shall be furnished by the Customer at no cost to SSVEC.

E. Any underground extensions will be at the sole discretion of SSVEC. If underground facilities are installed, the Customer shall provide all necessary trenching and select backfill where required, conduit, backfilling, compaction, and all concrete work to the specifications of SSVEC and applicable local codes, at the Customer's expense.

~~4.34.14~~4.5.1 STREET LIGHT EXTENSIONS

The Customer shall be charged for the entire cost of each street light installation. The Customer will then be subject to the lower monthly rate in Schedule S. Street light extensions are applicable only to municipalities and or agencies governing public rights-of-way. Non-standard installations are not permitted.

~~4.34.2~~4.5.2 SECURITY LIGHT EXTENSIONS

Customers shall be charged for the entire cost of security light installations. (See Schedule SL.) Security lights shall be mounted only on poles or other equipment owned by SSVEC.

~~4.34.3~~4.5.3 LINE EXTENSION ROUTING

Construction shall normally be permitted only along the shortest practical route to the nearest practical Point of Delivery on each Customer's Premises as determined by SSVEC. At the sole discretion of SSVEC, alternative routes may be considered at additional cost to the Customer. If there is a mutual benefit to SSVEC, SSVEC in its sole judgment will determine the credit to be given to the Customer for said benefit. This credit will be applied when determining the cost to the Customer.

~~4.35~~4.6 RESPONSIBILITY OF THE CUSTOMER

~~4.35.1~~4.6.1 PROVIDE DEVELOPMENT PLANS, LEGAL DESCRIPTIONS, GRADE CERTIFICATIONS, AND SURVEY CORNERS

The Customer shall provide SSVEC with accurate plans of the Customer's proposed development. Generally, final recorded plats will be required for subdivision estimates in accordance with Section 4.9.1, unless otherwise required by SSVEC. The Customer shall provide a valid written legal description along with a copy of the Customer's property deed. The Customer shall locate and mark any legal survey corners required by SSVEC. For commercial underground installations, a certification, signed by a licensed land surveyor or registered professional engineer, that the established grade is within the six (6) inches of final grade, shall be required by SSVEC for the entire length and width of the proposed service route prior to staking. Normally, SSVEC field technicians will stake the route of the proposed Line Extension and related facilities to serve the Customer's development in relation to the Customer's legal property corners. SSVEC shall stake the line one time, based on the plans submitted by the Customer. If mutually agreeable and at no charge to SSVEC, the developer's surveyor may be used to stake the electric facilities when such action will help expedite the work. In that case, the developer's surveyor will be supplied working plans and close oversight by SSVEC personnel. The cost of any additional engineering, field, or office work performed as the result of changes requested by the Customer after completion of an initial engineering staking shall be billed to the Customer at SSVEC's current rates for labor, transportation, equipment, and materials as described in Section 4.4 C above.

~~4.35.2~~4.6.2 USE SERVICE PROVIDED

The Customer shall be expected to begin using on a permanent basis, any and all service facilities extended within the first year of construction, or reimburse SSVEC for the cost of service facilities, plus the cost of their removal, with credit given for salvage, if any. (For subdivisions, see Section 4.9.4.)

~~4.35.3~~4.6.3 OUTAGE AND HAZARD NOTIFICATION

The Customer shall notify SSVEC immediately of outages and hazardous conditions which require prompt attention.

~~4.35.4~~4.6.4 PROVIDE RIGHT-OF-WAY

Easements may be required for any new, existing, or future Line Extensions as determined by SSVEC for reliability and cost considerations. All easements or rights-of-way required by SSVEC for the Line Extension, or any part thereof, on the Customer's Premises, as well as other private property or public land, shall be furnished or secured by the Customer without cost to SSVEC. Although the Customer is primarily responsible for securing necessary easements, SSVEC may choose to process easement or right-of-way documents as a convenience to Customers. Any costs incurred for acquiring right of way shall be paid by the Customer as it is part of the cost of the Line Extension construction. The Customer shall also provide an acceptable property description to SSVEC from a deed or other legal document. Developers shall be required to provide SSVEC with a final plat of the subdivision in electronic form with a follow-up hard copy as recorded and approved by the county or municipality having jurisdiction.

~~4.35.5~~4.6.5 PROVIDE TRENCH AND CONDUIT FOR UNDERGROUND

The Customer shall provide trenching, select back fill where required, backfilling, compaction and all concrete work to the applicable specifications of SSVEC and/or local codes for underground primary or secondary Line Extensions at the Customer's expense. Generally, the Customer is responsible for supplying and installing all conduits on underground projects. However, at its sole discretion, SSVEC may elect to furnish and install conduit or CIC when SSVEC decides such action will be beneficial and expeditious to the project. Any costs incurred by SSVEC for providing trenching or conduit shall be paid by the Customer as it is part of the cost of the Line Extension construction. SSVEC reserves the right to reject any request for underground extensions in areas not covered by Arizona Administrative Code R14-2-207.E if its effect would be to create an irregular pattern of mixed construction modes or encumber the efficiency of future repair and maintenance operations.

~~4.36~~4.7 CONTRIBUTIONS IN AID OF CONSTRUCTION AND SERVICE AVAILABILITY CHARGES FOR LINE EXTENSIONS

~~4.36.1~~4.7.1 CONTRIBUTIONS IN AID OF CONSTRUCTION

All applicable estimated charges and credits for the cost of construction of the Line Extension shall be made available and paid by the Customer prior to the beginning of construction. The payment is treated as a Contribution in Aid of Construction to SSVEC. Contributions in Aid of Construction are non-refundable~~,~~; however, any ~~pre-paid~~ Contribution in Aid of Construction exceeding the actual cost of construction will be refunded to the Customer. Any written Line Extension agreement shall also be executed by both parties prior to construction.

~~4.36.2~~4.7.2 OPTIONAL COMBINATION CHARGES

SSVEC's Line Extension policy is designed to recover the cost of construction, operation, and maintenance. A Line Extension may result in inadequate revenue to cover these costs. In these situations, the Cooperative will enter into a separate contract with the Customer to address the inadequate revenue situation.

~~4.37~~4.8RECORDS OF SURVEY DEVELOPMENTS

Developments involving multiple large parcels (typically 10 – 40 acre parcels) which are not platted as subdivisions and are not subject to the standard city/county/state subdivision development process, are referred to as "Records of Survey."

A. The developer shall submit a complete copy of the final recorded Record of Survey.

B. The developer shall submit a complete copy of the registered Arizona Board of Real Estate Public Report for the development.

C. The developer shall provide all applicable easements, rights-of-way, and/or permits for improvements within the Record of Survey.

D. SSVEC will normally regard Records of Survey projects as one development and not as phases to a development, to determine the impact to the electric system and to determine costs. The developer/owner will be responsible for all costs associated with feeder build out and/or upgrades required to bring adequate Power to the site for present and future needs.

E. The developer/owner will be responsible for the cost of design and installation primary distribution facilities to each hot line within the development. These charges are not subject to refund.

Subsequent splits of parcels within the development, as well as Electric Service to the interior of said parcels~~,~~ will be subject to SSVEC's standard Line Extension policy based on requests by individual property owners.

~~4.38~~4.9SUBDIVISION DEVELOPMENT

The following rules and procedures are established to eliminate many of the common problems associated with the complex task of developing a new subdivision. "Subdivision" is as defined by the applicable plat review process of municipal and county planning and zoning ordinances.

~~4.38.1~~4.9.1 LINE EXTENSION TO SUBDIVISIONS

A. The developer shall submit a complete set of improvement plans as required which have been approved by the appropriate planning and zoning commission and engineer.

B. The developer shall submit a copy of the recorded final plat. Any lesser version or approved plat can be submitted with special permission and at the sole discretion of SSVEC. A design of the final plat shall normally be provided in AutoCAD format or other approved electronics form for preliminary electrical design.

C. Copies of the plans of all utilities to be installed shall be submitted and coordinated to eliminate conflicts of location.

D. Adequate easements for lines for the complete build-out to the subdivisions shall be provided. Easements for locating special equipment away from rights-of-way and hazardous locations may also be required.

E. All terrain where underground cable and equipment is to be installed shall be within six inches of final grade prior to staking. Certification of established grades by a registered professional engineer or licensed land surveyor shall be required by SSVEC for the entire length and width of the proposed service route prior to construction.

~~4.8.2~~4.9.2 INSTALLATION PROCEDURES FOR SUBDIVISIONS

A. Underground facilities are required by State regulations and SSVEC in subdivisions and mobile home parks with lots of one acre or less, recreational parks, airports, and other areas where overhead lines are unacceptable.

B. The developer shall be responsible for and provide accurately located survey markers and offset stakes to facilitate SSVEC's staking of electrical facility locations. If mutually agreeable and at no charge to SSVEC, the developer's surveyor may be used to stake the electric facilities when such action will help expedite the work. In that case, the developer's surveyor will be supplied working plans and close oversight by SSVEC personnel.

C. The developer or SSVEC, at the developer's expense, shall supply all necessary trenching, conduit, select backfill where requested, back filling, compaction, and concrete work, paving and re-paving, to SSVEC's specifications and applicable local codes pursuant to the installation of the electrical equipment and lines. This will be accomplished in conjunction with close oversight and inspection by SSVEC personnel. The developer shall obtain all permits required for construction and trenching in public rights-of-way. All necessary occupancy permits shall be provided to SSVEC before Permanent Service is connected.

D. Installation of water, sewer lines, and storm drains prior to excavation of the trench for electric lines is advisable and may be required by SSVEC.

E. The developer shall keep all easements and roads free of debris and obstacles during the construction period in order to avoid unnecessary delays in construction. Spoil piles from trenches shall be situated in such a manner as to allow safe passage by SSVEC equipment and personnel.

F. Any costs resulting from damages to SSVEC facilities caused by contractors and/or crews working for the developer, including changes in grade or dig-ins, shall be paid for by the developer. When excavating around SSVEC underground facilities, hand

digging shall be utilized in accordance with Arizona Blue Stake laws. Once installed, any relocation of SSVEC facilities will be at the expense of the developer.

~~4.38.3~~4.9.3 CONTRIBUTIONS IN AID OF CONSTRUCTION FOR RESIDENTIAL SUBDIVISIONS

A. When extension of underground service is desired to a subdivision, the developer shall pay a non-refundable Contribution in Aid of Construction to SSVEC covering the total cost of the installed facilities within the subdivision, excluding transformers.

B. The developer is also responsible for the full cost of any Line Extensions from existing SSVEC facilities to a duly recorded subdivision, but located outside the subdivision boundary.

~~4.38.4~~4.9.4 SUBDIVISION ABANDONMENT

If the subdivision, or any portion of the subdivision, fails to develop any Permanent Customers within a period of five (5) years from the date construction was completed, SSVEC may thereafter elect to remove or abandon its unused facilities unless the developer shall pay an annual service availability charge of 10 percent per year of the value of the unused facilities where the developer has supplied the construction capital.

~~4.39~~4.10 MOBILE HOME PARK DEVELOPMENT

A. Electric Service to all new and/or expanding permanent residential mobile home parks shall be individually metered by SSVEC. Line Extensions and Service Connections shall be governed by SSVEC's Tariffs and terms of extension agreed upon in a Line Extension agreement. Permanent residential mobile home parks for the purpose of this Section shall mean mobile home parks where, in the opinion of SSVEC, the average length of stay for an occupant is a minimum of six (6) months.

B. All facilities within the park shall be installed underground. The Developer shall be responsible for complying with all applicable Service Conditions for Line Extensions contained herein.

C. In addition to the Contribution in Aid of Construction, the Developer shall guarantee an annual minimum equal to 10% of the cost of the installed facilities which will be included in the contract for service. Under the applicable Tariff, this amount will be reduced by all revenues derived from the sale of electricity excluding wholesale power fuel adjustment and taxes received by SSVEC for sales made within the park.

~~4.40~~4.11 RESIDENTIAL APARTMENT COMPLEXES, CONDOMINIUMS, AND OTHER MULTI-UNIT RESIDENTIAL BUILDINGS

Master Metering shall not be allowed for new construction of apartment complexes and condominiums unless deemed feasible by SSVEC, at the sole discretion of SSVEC.

~~4.41~~4.12 RECREATIONAL VEHICLE PARK (RV) DEVELOPMENT

RV parks will be considered similar to other commercial development. They will typically be Master Metered. Primary metering will be allowed at SSVEC's sole discretion. Unless otherwise specified by contract, SSVEC will install, own, and maintain all primary voltage equipment on the Customer's property regardless of Meter location. The Customer shall install, own, and maintain all secondary facilities beyond SSVEC's point of secondary termination.

~~4.42~~4.13 DOUBTFUL PERMANENCY

SSVEC reserves the right to refuse to extend its facilities to any Customer not meeting the definition of "Permanent Customer" unless the Customer agrees to pay for the extension in accordance with Section 4.14 regarding Temporary Service.

SSVEC's opinion regarding permanency shall be based on the following criteria:

A. The Customer who requests service owns the lot on which Electric Service is required.

B. A substantial investment has been made in improvements on the parcel to increase the probability that electric Power will be used on a long-term basis. For example, at a residence, footings would be expected to be poured and work actively proceeding on completion of an adequate dwelling.

C. Evidence is produced that the proper permits have been acquired.

D. Water service is available on the parcel by means of an individual well with pump, lines have been extended from a reliable community water system or other permanently installed water storage and distribution system of sufficient capacity, which in the opinion of SSVEC is adequate to assure continued permanent occupancy of the site.

E. Sewer service is available on the parcel by means of a septic tank or other local jurisdiction approved septic system or connection is made to a central sewage system.

F. To be considered permanent, a mobile home must also:

(1) The mobile home must be permanently secured to the ground.

(2) The dimensions of the mobile home are at least 8 feet by 40 feet.

(3) The home is in basic livable condition as determined by SSVEC.

G. The permanency of extensions to mining or other material retrieval processes shall be considered doubtful.

H. Recreational vehicle type travel trailers or motor homes are not considered permanent.

~~4.43~~4.14 TEMPORARY SERVICE

Any Customer unable or unwilling to meet the requirements for permanency shall be considered temporary. In that case, SSVEC shall require the total cost of providing service, plus the cost of removal to be paid as a nonrefundable Contribution in Aid of Construction prior to the establishment of Electric Service. In all cases, an Applicant for Temporary Service shall comply with all Service Conditions and Tariffs that apply to Permanent Service. When the duration of Electric Service is to be less than one month, the Applicant may be required to advance a sum of money equal to the estimated bill for Service. When the duration of Electric Service is to exceed one month, the Applicant will also be required to meet the deposit requirements set forth in these Service Conditions. If, within six (6) months of establishing Service, the character of a temporary Customer's operations changes so that in the sole opinion of SSVEC, the Customer is classified as permanent, the terms of SSVEC's Line Extension policies shall apply and the Customer may petition SSVEC for a refund of the retirement charge.

~~4.44~~4.15 NONSTANDARD SERVICES

Electric Services at voltages, currents, phases, frequency, or grounding arrangements other than those specified in Section 3 of these Service Conditions shall be considered "nonstandard."

~~4.45~~4.16 METERING

The Customer shall pay the cost of nonstandard metering facilities and shall provide, own, and maintain the supports and accessories to the metering. SSVEC shall own, install, and maintain the metering instruments.

~~4.46~~4.17 PROTECTIVE EQUIPMENT

The Customer shall buy, own, and maintain such protective equipment as SSVEC deems necessary to assure isolation of the service from SSVEC's system due to abnormal load or fault conditions in the service.

~~4.47~~4.18 CONVERSION OF OVERHEAD TO UNDERGROUND ELECTRIC FACILITIES WITHIN A PETITIONED SERVICE AREA

~~4.47.1~~4.18.1 PETITIONS FOR UNDERGROUND SERVICE.

At least sixty (60%) percent of the owners of contiguous real property within a reasonably compact area of reasonable size within SSVEC's Service Area may formally request that SSVEC convert overhead Distribution Line service to underground service by filing a petition with the Cooperative that complies with the provision of A.R.S. §40-342.

~~4.47.2~~4.18.2 FORMAL PETITIONS FOR AN OVERHEAD TO UNDERGROUND CONVERSION.

A Customer, as agent for the petitioned area, may request that SSVEC convert overhead Distribution Line service to underground service. As part of such request, the Customer shall agree to the following:

A. The Customer shall provide all necessary easements, if any, at no cost to SSVEC.

B. The Customers shall provide all trenching, select backfill where required, conduit, compaction and all concrete work according to the specifications of SSVEC and/or local codes and ordinances and shall perform all street, curb and sidewalk repairs at the Customer's expense.

C. The Customer shall pay SSVEC, prior to the start of construction, a nonrefundable Contribution in Aid of Construction equal to the estimated cost of the underground facilities, less credit for salvage of the existing overhead Distribution Lines at present value, if any, plus retirement cost.

D. The Customer shall sign any additional agreements as required by SSVEC.

E. The area to be converted from overhead to underground shall cover a reasonable area which will allow orderly, once only, construction with design toward a loop-feed system. The SSVEC Engineering Department shall determine what constitutes a reasonable conversion area.

F. Nothing herein shall be construed to prevent SSVEC from converting selected overhead distribution areas to underground areas when, in the sole judgment of SSVEC, such conversion is necessary or desirable and economically feasible. In such cases the total cost of the conversion shall be borne by SSVEC.

G. The Customer or agent who petitioned SSVEC shall be responsible for securing the agreement of all other Customers involved in the conversion. SSVEC shall not be responsible for any modifications required to the Customers' Service Entrance in the underground conversion area.

~~4.48~~4.19 RELOCATIONS AND CONVERSIONS FOR INDIVIDUAL CUSTOMERS

When SSVEC is requested to relocate or convert its facilities for the benefit and/or convenience of a Customer, the Customer shall reimburse SSVEC for the total cost of the work to be performed prior to the start of construction, plus the cost of any unexpired service life of the property removed, except when said relocation or conversion is also in the best interest of SSVEC, because of safety or convenience. This will be at the sole discretion of SSVEC.

~~4.49~~4.20 HAZARDOUS SERVICE CONDITIONS

Whenever SSVEC has actual knowledge that a hazardous condition exists or a hazardous condition may occur or be created, SSVEC may take any appropriate action (including temporary suspension of Electric Service) and further may submit charges to the party or parties responsible for the hazard.

~~4.50~~4.21 UNUSED FACILITIES OWNED BY SSVEC

Any facilities owned and installed by SSVEC, which have been disconnected from a Meter or have remained idle and unused for more than one (1) year, may be removed from any property, public or private, with or without the consent of the property owner, at the sole discretion of SSVEC. Once a Power line has been removed, a new Service Application will be required, along with proof of permanency, in order to re-establish the line in accordance with current Line Extension policies and practices.

EXHIBIT A

GENERAL SPECIFICATION (0-3000 amperes / 0-600 volts)

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
SERVICE ENTRANCE REQUIREMENTS
GENERAL SPECIFICATION
0 THROUGH 3000 AMPERES
0 TO 600 VOLTS

1. **SCOPE OF SPECIFICATION**: This specification shall apply to all service entrances 0 through 3000 amperes inclusive, 0 to 600 volts. This general specification is not complete in itself. A complete service entrance specification shall consist of this General Specification Exhibit A along with an Exhibit B, C, D, or E that applies to a specific size and type of service.

2. **GENERAL**: The Customer or contractor should consult qualified SSVEC personnel before starting work on any service entrance, to determine which specification applies, type of service available, permissible service entrance location, etc. The SSVEC Engineering Service Representatives in Willcox and Sierra Vista are qualified to answer questions regarding service entrances.

When an inspection certificate is required by local authority, SSVEC will not connect the service entrance until an inspection certificate is obtained.

3. **INTENT OF SPECIFICATION**: SSVEC's intent in issuing this specification is to require the design, materials, and workmanship of all service entrances to meet or exceed the requirements of the latest editions of the National Electrical Code (NEC) and the National Electrical Safety Code (NESC). Any item not specifically mentioned shall meet or exceed the requirements of these two codes.

SSVEC is a member of the Electric Utility Service Equipment Requirements Committee (EUSERC). The standards for equipment design established by this group of utilities are the basis of SSVEC's requirements. Equipment shall be listed by a nationally recognized testing laboratory (e.g. UL) and shall be so labeled.

4. **ENFORCEMENT OF SPECIFICATIONS**: SSVEC will generally accept a certified approval by a qualified governmental official (inspector) only for the purposes of code (NEC / NESC) compliance, unless clear violations have evidently been missed and are identified incidentally by SSVEC personnel conducting their authorized company business. Only SSVEC can inspect and approve service entrances in regard to compliance with specific filed SSVEC Service Entrance Specification requirements, which may at times exceed general safety codes and vague national equipment standards; SSVEC seeks compliance with EUSERC equipment standards as elsewhere defined.

4.1 SSVEC Inspections: Every service entrance location is not within the jurisdiction of an official governmental inspector, so SSVEC will seek to verify basic safety code compliance and compliance with all applicable SSVEC Service Entrance Specifications for the

purposes of -protecting SSVEC's employees, the electric system integrity, and the general public nearby. SSVEC does not accept complete safety code compliance responsibilities, because sufficient personnel can neither be available nor trained to detect and enforce every safety code provision. Whenever SSVEC personnel inspect any service entrance or any associated customer equipment and electric connections, SSVEC is only inspecting for the limited concerns of the Serving Electric Utility, not for every possible concern of the Customer or the general public. The Customer or his licensed engineer or electrician has the ultimate responsibility for safety code compliance and for meeting the ACC-filed SSVEC Service Entrance Requirements. SSVEC accepts neither responsibility nor liability for safety code compliance or suitability of Customer installations except as mandated by law or by the ACC.

4.2 Every initial service entrance connection and any subsequent reconnection shall include a simple inspection by SSVEC Operations personnel to verify basic compliance with SSVEC specifications and the most basic safety code provisions. For special or unusual situations a more technical and complete inspection by SSVEC's personnel is sometimes required to ensure compliance with specifications and that no clearly unsafe installation is connected to SSVEC's electric system.

4.2.1 As long as obvious violations of safety code provisions or any non-compliance with applicable SSVEC Service Entrance Specification is evident to an appropriate SSVEC employee, the service entrance will neither be connected nor energized for any purpose. If earlier versions of SSVEC specifications have been previously met and a service entrance being considered for a reconnection remains safe and only minor non-compliance of a new specification is evident, it will not always be refused reconnection for a minor violation of newer SSVEC specifications, if qualified SSVEC personnel decide no material problem is being introduced by allowing the reconnection of the safe service entrance equipment. Significant compliance failures will always result in refusal to reconnect.

4.3 **VARIANCE FROM SPECIFICATIONS**: No new service entrance that does not comply with all provisions of applicable specifications nor an existing service entrance found to be in material non-compliance shall be connected unless permission for a variance is recommended by appropriate SSVEC technical employees and a specific variance is granted in writing by the SSVEC Manager of Engineering or designated Engineer. No unwritten variance may be accepted by SSVEC Operations personnel. SSVEC Managers may override or suspend general specifications during extreme emergency situations.

5. **SERVICE ENTRANCE AND METER LOCATION**: Service entrances shall be locations approved by SSVEC. Meters should face an approved direction in which they can be read safely with binoculars from a vehicle, preferably a dedicated public road, street, or alley. Service entrances shall not be installed under carports or open porches or similar places subject to future enclosure nor shall they be enclosed or obstructed later. Service entrances enclosed or obstructed after Service Connection so that the Meters cannot be read in the normal manner, shall be re-established in an outside location approved by SSVEC, or such obstruction shall be removed. Failure to comply with this rule, within a reasonable time after notification by SSVEC, shall be grounds for Service Disconnection.

Buildings being served from or accessed from the roadway or drive shall have Meters mounted on the front wall facing the street or access on the side wall within six (6) feet of the

front wall of the building. Meters on the side of the building shall not be placed behind a fence or any obstacle which will prevent SSVEC personnel from having free access to the Meter. At the Customer's option, the use of an approved EUSERC Meter pedestal, if it is appropriate for the size of service needed, installation on the lot line at the street is acceptable. Contact SSVEC Service Engineering Representatives in Willcox or Sierra Vista for complete specifications.

6. CLEARANCES: All electrical facilities shall be installed and maintained to the applicable clearances as defined by the National Electrical Safety Code (NESC) and/or the National Electrical Code (NFPA 70) as appropriate.

6.1 Clearance from Building Openings. ~~NEC Article 230-9.~~ Service conductors shall comply with NEC Article 230-9 and have a clearance of not less than three (3) feet from windows that are designed to be opened, doors, porches, fire escapes or similar locations.

Exception: Conductors run above the top level of a window shall be permitted to be less than the three (3) feet requirement above.

6.2 Clearance from Swimming Pools: Service conductor clearance over or close to swimming pools shall comply with NEC Article 680-8 and other appropriate sections of the National Electrical Code. The Customer or contractor may contact qualified Engineering Department personnel for advice on clearances from swimming pools.

7. SERVICE ENTRANCE CONDUCTORS:

7.1 General. The Customer or contractor shall not reroute any metered conductor through the meter socket enclosure, metering compartment, raceways or other security sealed areas.

Because of high ambient temperatures likely to be encountered in outdoor service entrances, no conductor with insulation rated lower than 75 degrees C. shall be used. All service entrance conductors shall be stranded. Manufactured service entrance equipment shall be listed by a nationally recognized testing laboratory and the factory installed conductors shall be accepted at nameplate rating of the unit.

Service entrance conductor ampacity shall be determined from appropriate tables of the latest edition of the NEC and shall have sufficient ampacity to carry the load as determined by the appropriate bus rating and service disconnect ampacity.

7.2 Overhead Service Conductors. Service entrance conductors for overhead services, including conductors installed from the load side of CT section to the disconnect device, shall be furnished and installed by the Customer or contractor. No conductor larger than 1000 kcmil, no more than four conductors per phase and no conduit larger than six inch trade size shall be used. For services requiring larger conductors or conduit, approved bus duct shall be used. The conductors will exit the upper end of a rigid steel conduit through an approved weatherhead. Overhead services using bus duct shall have entrance heads conforming to EUSERC requirements.

7.3 Underground Service Conductors. Service entrance conductors and connectors for underground service up to and including 800 amperes will be furnished and installed by

SSVEC. Conductors for services larger than 800 amperes shall be furnished and installed by the Customer or contractor. All trenching and backfilling shall be done by the Customer or contractor. SSVEC will furnish and install connectors at the transformer. SSVEC will also connect the service lateral conductors up to and including 800 amps to the landing lugs at the Customer's Meter base or termination section. SSVEC will not furnish, install or assume responsibility for conductors under or to the inside of any building, except to terminate the service lateral conductors at the main switch gear.

Customers will be responsible for providing all service conductors for services exceeding 800 amps. No conductor larger than 750 kcmil, no more than six copper conductors per phase or seven aluminum conductors per phase, and no conduit larger than six inch trade size shall be used without special review and prior approval by qualified SSVEC personnel. For services requiring larger conductor or conduit, approved bus duct shall be used.

Unless otherwise directed by SSVEC, the Customer will be responsible for supplying and installing underground Schedule 40 PVC conduit for underground services. The Customer shall also furnish all necessary trenching, select backfill, warning tape, compaction, and concrete work to the specifications of the Cooperative and other local codes.

7.4 **Residential Service Entrance Conductor Ampacity.** Table 310-1-5 (B, 16, or equivalent) of the latest edition of the National Electrical Code shall be used to determine allowable ampacities for residential service entrance conductors, the ampacity shown in the column under the selected insulation temperature rating may be used directly from the table for "not more than three conductors in a raceway or cable or earth (directly buried) based on ambient temperature of 30 degrees C. (86 degrees F)", of the latest edition of the National Electrical Code. For residential services, instead of derating conductors for ambient temperature, SSVEC does not allow use of Table 310.15 (B, 7, or equivalent).

7.5 **Commercial or Other Non-Residential Service Entrance Conductor Ampacity.** To determine conductor ampacity for non-residential overhead service entrances, the ampacity shown in the column under the selected conductor insulation temperature in NEC Table 310-1-5 (B, 2, or equivalent) shall be multiplied by the appropriate factor of an ambient temperature range of 96-104 degrees Fahrenheit (36-40 Centigrade). Non-residential underground service entrance conductors may be sized directly from the table.

For overhead or underground services where more than three current-carrying conductors are in a raceway or cable, the allowable ampacity shall be further reduced as shown in NEC Table 310.15 (B, 2, b, or equivalent). Derating factors shall not apply to conductors in nipples having a length not exceeding 24 inches. Derating factors shall not apply to underground conductors entering or leaving an outdoor trench if those conductors have physical protection in the form of rigid metal conduit having a length not exceeding 10 feet above grade and the number of conductors does not exceed four.

8. **GROUNDED (NEUTRAL) CONDUCTOR**: All service entrances shall have a grounded neutral conductor run in the same raceway with the ungrounded conductors. If copper, it may be bare. It may not be reduced in size from the ungrounded conductors.

9. **RIGID CONDUIT**: The overhead service entrance conductors for overhead services shall be installed in rigid or intermediate metallic conduit (IMC) no smaller than is permitted by

the NEC for the size and number of conductors used. The conduit shall be factory stamped with the words RIGID or IMC. No electrical metallic tubing (EMT) or other thin wall conduit shall be accepted.

Intermediate metallic conduit (IMC) may not be used as the overhead service drop attachment where it would have to support the span tension of the service drop conductors.

The overhead service entrance conduit shall be run to a point within one foot of the center of the point of attachment of SSVEC's service drop conductors. It shall be capped by an approved service entrance weatherhead and the service entrance conductors shall be left extending from it a minimum of three (3) feet. If the service drop is open wire (wires not wrapped together), a minimum of five feet of conductor shall extend from the service entrance head.

The service entrance conduit for underground services shall be rigid or IMC metallic conduit and shall be run to a point not less than 12 inches or more than 18 inches below finished grade and a threaded PVC adapter shall be installed on the end.

Rigid metallic conduits and fittings installed underground or in concrete shall be protected against corrosion by half-wrapping with an approved plastic tape or by a coating of an approved corrosion-resistant material as stated in NEC 300-6.

10. METERING PROVISION: The Customer or contractor shall provide for metering with an approved meter socket enclosure, current transformer enclosure or service entrance metering section as specified in each of the Exhibits.

Meter sockets shall be listed and labeled by a nationally recognized testing laboratory. Individually metered residential Service Entrances with 100 ampere main disconnects may use 100 ampere sockets rated for general duty. Individually metered residential service entrances with 125 ampere main disconnects may use 100 amp sockets rated for continuous duty or 125 ampere sockets rated for general duty.

Individually metered residential Service Entrances with 200 ampere main disconnects may use 200 ampere sockets rated for general duty.

For other than individually metered residential Service Entrances, only sockets rated for continuous duty with a minimum ampacity of the required ampacity of the service entrance will be accepted.

11. MAIN SERVICE DISCONNECT: All service entrances shall be equipped with a main service disconnect switch or circuit breaker. They shall be raintight and of a type approved for service equipment, in compliance with the NEC and shall disconnect all loads from the ungrounded conductors.

The main Service disconnect shall be plainly and permanently labeled with the word "MAIN". The emergency equipment disconnect (if any) shall be plainly and permanently labeled with the word "MAIN" and its emergency function such as "PUMP" or "EMERGENCY LIGHTS", etc. The disconnect device shall be located outside, in a place accessible to SSVEC personnel at all times, or shall be operable to an open position from an outside location

accessible to SSVEC personnel at all times. It shall not be locked except by an arrangement agreeable to the Customer and SSVEC.

The main service disconnect(s) shall be connected on the load side of the Meter.

Except for motor load services and services over 400 amps, the nameplate ampacity of the main service disconnect determines the ampacity of the service entrance. If more than one main disconnect is allowed, the sum of the ampacities shall determine the ampacity of the service entrance for services larger than 400 amps or, at the discretion of SSVEC, the rating of the bus will be used to determine the ampacity of the service.

The Service Entrance ampacity of a circuit breaker type of main disconnect shall be determined by the nameplate ampacity of the circuit breaker(s) but may not be greater than the rating of the Service Entrance equipment.

The Service Entrance ampacity of a fused-switch type of main disconnect shall be determined by the nameplate ampacity of the switch regardless of the fuse size installed.

12. OVERCURRENT PROTECTION: A fuse or circuit breaker shall be in series with each ungrounded conductor to provide overload protection.

13. INTERRUPTING RATING: The Customer shall install Service Entrance equipment and protective devices capable of interrupting and withstanding available short-circuit current. All service disconnect devices (i.e. fused switch or circuit breaker) shall have a minimum interrupting capacity (AIC) of 10,000 amps. Higher AIC ratings may be required at locations with higher available fault currents (NEC 110.9). Consult qualified SSVEC Engineering Department personnel for the available fault current for multiple services and for service from large transformers. When available fault current exceeds 10,000 amps (as calculated by SSVEC), the Customer shall provide equipment to meet the expected maximum fault current (see NEC 110.9 and 230, section VII). The Customer has the option of providing service equipment with an increased AIC rating or installing equipment with current limiting fuses which would limit the maximum fault current to less than 10,000 amps.

14. GROUNDING: An unspliced bonding jumper no smaller than #6 AWG copper shall be used to connect the metering device enclosure (Meter socket, current transformer, service entrance section, etc.) to the grounded conductor. An unspliced bonding jumper shall be used to connect the service disconnect enclosure to the grounded conductor. The bonding jumper may be wire, bus, screw or similar suitable conductor. If wire is used, it shall be no smaller than #6 AWG copper. A bus or strap shall be no smaller than the equivalent of #6 AWG copper wire.

A copper grounding electrode conductor (ground wire) shall be connected on the supply side in the service disconnect enclosure to the grounded conductor and run in approved conduit to a grounding electrode. The grounding electrode conductor shall be no smaller than #4 AWG and no smaller than allowed by the NEC for the size of service connected.

A grounding electrode shall have a resistance to ground of 25 ohms or less, as measured by SSVEC. Electrodes shall be added until the combined electrodes have a resistance to ground of 25 ohms or less as measured by SSVEC.

A current transformer enclosure with multiple switches comprising the service disconnect may have the grounding electrode conductor connect to the grounded conductor in the current transformer enclosure.

The grounding electrode shall be a metal underground water pipe if available within 25 feet. The water pipe electrode shall be supplemented with one or more 5/8 inch by eight-foot copper or copperweld ground rods driven vertically into the ground. Other electrodes as specified in the National Electrical Code will be accepted only if previous arrangement has been made with SSVEC to permit inspection before cover up, etc.

The grounding electrode conductor clamp assembly, including bolts or screws, shall be solid brass, bronze or stainless steel, to prevent failure by corrosion.

The grounding electrode conductor shall be enclosed in Schedule 80 sunlight resistant PVC (preferred) or rigid or intermediate metallic conduit factory stamped with the words RIGID or IMC. Metallic conduit must be bonded at both ends. Electrical metallic tubing (EMT) or other thin wall conduit is not acceptable.

It is desirable to have the grounding electrode conductor connection to the grounding electrode buried. If the grounding electrode is a ground rod, the upper end of a ground rod shall be driven to a point at least six inches below finished grade and, after inspection by SSVEC, shall be covered. If the ground rod is driven through a small hole in concrete or asphalt the connection may be left exposed.

15. <u>MOUNTING AND FASTENING</u>: All parts of pole or wall hung service entrance equipment including conduit, metering socket/enclosure, disconnect device, etc., shall be securely and permanently fastened in a safe and workmanlike manner so the Meter will remain level and plumb. Nails are not acceptable fasteners for conduit. Conduit straps shall be two-hole type and properly sized for the conduit. No run of conduit shall have less than two straps nor have straps more than 5 feet apart. If conduit must be spaced out from the support, suitable spacers and fasteners shall be used. Wooden blocks and plumbers tape are not suitable. Fasteners shall be galvanized, coated or painted to withstand exposure to weather. Conduit or other equipment coating damaged by welding, cutting, etc., shall be coated or painted to restore corrosion resistance. No more than two (2) riser conduits shall be mounted on a service pole.

Service entrances mounted on a wall, pole or other surface shall be no more than six (6) feet and no less than five (5) feet above finished grade to the center of the Meter socket. Mobile home type Meter pedestals shall be no more than five (5) feet and no less than three (3) feet above finished grade to the center of the Meter socket.

Nipples connected to the Meter base shall not be shorter than 3 inches or longer than 6 inches. Holes made in Meter bases, disconnect enclosures, etc., shall be made in a neat and workmanlike manner, and unused holes shall be covered with suitable raintight metallic covers. Damage to the finish, paint, galvanizing, etc., of all exposed ferrous metal parts shall be touched up with paint or a suitable coating to restore corrosion resistance. Poorly painted, ungalvanized or rusty steel enclosures shall be painted to provide corrosion resistance.

16. TEMPORARY SERVICE ENTRANCES: The Customer is responsible to verify with SSVEC any restrictions applicable to a temporary service prior to installing any such installation. Temporary service entrances shall meet the same requirements as permanent service entrances.

17. TEMPORARY SERVICE ENTRANCE CHARGES: The Customer or contractor shall pay in advance the estimated installation and removal cost (up and down charge) for each specific temporary service connection.

18. TEMPORARY OVERHEAD SERVICES: Temporary overhead service entrances may be mounted on a substantial support approved by SSVEC. The service drop attachment point shall be sufficiently high to provide clearances specified by SSVEC. If allowed by SSVEC, a wooden timber or pole furnished by the Customer shall have sufficient strength, be set deep enough and be adequately backfilled to withstand the span tension of the service drop as determined by qualified SSVEC personnel. The wood shall be treated by an approved butt treatment method to retard deterioration.

19. TEMPORARY UNDERGROUND SERVICES: The preferred temporary underground service equipment is an approved mobile home type meter pedestal. (~~see~~See EUSERC drawing #307). All standard conditions shall apply. Trench shall be furnished by the Customer or contractor. The conductors may be direct buried and shall not be less than twenty-four (24) inches underground.

Unless otherwise approved, SSVEC will furnish and install the conductors from the transformer or secondary power pedestal and make connection to the terminals in the Customer or contractor furnished meter pedestal. The meter pedestal should be within five (5) feet of the transformer or power pedestal.

20. FURNISHED BY CUSTOMER: All parts of the Service Entrance shall be furnished and installed by the Customer or contractor unless the specification states that it will be furnished or installed by SSVEC. All parts of the service entrance that are furnished by the Customer shall remain the property of the Customer, but all Meters, metering transformers, enclosures, poles, etc., that are furnished by SSVEC, shall remain the property of SSVEC.

21. IDENTIFICATION OF SERVICE ENTRANCE CONDUCTORS:

GROUNDED NEUTRAL CONDUCTOR: The grounded conductor in all Service Entrances shall be clearly identified. Number 6 AWG copper conductors shall have a permanent outer identification of white or gray or shall be bare. Grounded conductors larger than #6 AWG shall be clearly identified at both ends. Tape, paint, or the use of bare copper conductors is acceptable identification. No bare aluminum conductor shall be used in service entrances.

21.1 Ungrounded single phase conductors: The ungrounded conductors in a three wire single phase service with only one conductor per leg need no identification. Single-phase three wire service entrances with two or more conductors per leg shall have all the ungrounded conductors of each leg clearly identified.

21.2 Ungrounded three phase conductors: The ungrounded conductors of three phase services shall be clearly identified at both ends. The Power leg (highest voltage to ground)

on three phase 4 wire delta services shall be clearly identified by an outer finish that is orange in color or by other effective means per NEC Article 230-56.

22. <u>PROTECTION AGAINST UNUSUAL LINE CONDITIONS</u>: SSVEC strongly recommends that the Customer install devices to protect equipment from high or low voltage, phase loss or reversal or imbalance. SSVEC shall not be liable to the Customer for any loss, injury or damage resulting from the Customer's use of his/her equipment or from the use of the Energy from SSVEC or beyond the point of connection of SSVEC wires or other conductors and equipment with the Customer's wires or other conductors and equipment.

IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE ADEQUATE PROTECTIVE EQUIPMENT TO PROTECT THE CUSTOMER'S EQUIPMENT FROM HIGH OR LOW VOLTAGE, PHASE LOSS OR REVERSAL OR ANY UNUSUAL CONDITION.

23. <u>SIGNAL DISTORTION</u>: In general the operations of any electrical device or system should not cause excessive distortion of the utility voltage waveform or result in excessive injection of harmonic currents into the utility system to the detriment of SSVEC, its Customers, or other electric utilities. **SSVEC requires that all installations comply with IEEE 519 guidelines at the owner's expense.** SSVEC reserves the right to test and monitor the equipment to ensure compliance to these guidelines. SSVEC reserves the right to require remedial action be taken by the owner at the owner's expense.

Even though equipment may be found to be in compliance with these guidelines, if it can be shown that said equipment is the source of problems for other Customers, for SSVEC or for other utilities within the interconnected power system, SSVEC reserves the right to require that remedial action be taken by the owner at the owner's expense.

EXHIBIT B

COMMERCIAL & RESIDENTIAL (0-200 amperes / 0-600 volts)

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
SERVICE ENTRANCE REQUIREMENTS
COMMERCIAL AND RESIDENTIAL
0 THROUGH 200 AMPERES
0 TO 600 VOLTS

1. **SCOPE OF SPECIFICATION**: This specification is supplementary to general specification Exhibit A and is not a complete specification.

This specification shall apply to commercial and residential service entrances 0 through 200 amperes inclusive, 0 to 600 volts.

2. **DETERMINATION OF SERVICE ENTRANCE AMPACITY**: The service entrance ampacity shall be the ampacity of the single main service disconnect device. It shall not be larger than 200 amperes for this specification.

3. **SERVICE DISCONNECT**: A main service disconnect shall consist of a single fused switch or circuit breaker.

Exception: Emergency equipment such as a water pump that may be used for firefighting, or emergency lighting, or exit lights, etc. may be connected through one additional main disconnect in addition to the single main service disconnect required in this specification through which only the emergency equipment may be supplied. The additional disconnect shall not affect the required service entrance ampacity, provided the service entrance would be adequate if the emergency equipment were connected through the main service disconnect.

4. **MINIMUM DISCONNECT AMPACITY**: Minimum disconnect ampacity shall be 60 amperes except by written variance by the Engineering Manager. Minimum disconnect ampacity for individually metered dwellings, including mobile homes, shall be 100 amperes unless otherwise allowed by the NEC.

5. **METER SOCKET**: An SSVEC approved Meter socket and enclosure shall be furnished and installed by the Customer or contractor. For single phase underground services an SSVEC approved Meter socket enclosure with single main disconnect and built in pull space shall be used. This enclosure shall conform to EUSERC residential combination Meter panel drawing #301. A mobile home type Meter pedestal manufactured according to EUSERC requirements is acceptable for underground services.

A three phase underground Service Entrance may be constructed upon a suitable permanent wall or frame as follows:

6. **SERVICES UP TO 200 AMPS SHALL USE A METER BASE WITH A BOTTOM-FEED TERMINATION SECTION**: Landing lugs shall accommodate aluminum conductors and have a range up to 250 kcmil. Services other than residential shall use Meter sockets rated

for continuous duty. The continuous duty ampacity shall not be smaller than that of the service disconnect ampacity. The recommended minimum ampacity for all residential and commercial Applications is 200 amps. Commercial installations shall be equipped with a lever type bypass (equivalent to a Milbank U7423-RXL).

7. **POSITION OF POWER LEG**: On three phase four wire delta services, the power leg shall be connected to the right hand Meter base terminals.

8. **POWER LEG CONDUCTOR SIZE**: The power leg (the phase with the highest voltage to ground) conductor, on three phase four wire delta services, shall not be reduced in size from that of the other ungrounded conductors using the manufacturer's neutral provisions.

9. **GROUNDED (NEUTRAL) CONDUCTOR**: The grounded conductor for this specification shall not be reduced in ampacity from that of the ungrounded conductors. The grounded conductor shall be run through and bonded to the Meter socket without a splice, except for underground service entrances.

10. **MULTIPLE SELF-CONTAINED SERVICE ENTRANCES**: "Multiple service" implies more than one Customer (or account) served through separate Meters supplied by common service entrance conductors. A "self-contained" Meter is capable of carrying the total current of the service supplied to the Customer and of being directly connected to the line voltage of the service. Self-contained services do not require external current or potential (voltage) transformers. Therefore, a multiple self-contained service is one serving more than one Customer (or account) through more than one Meter without the use of current or potential transformers.

Multiple self-contained services through a common service entrance conduit or wireway to a suitable manufactured raintight modular-type multi-Meter pack and then to separate Meters and disconnect devices, shall be permitted. This type of service shall consist of not more than six (6) disconnects (one per Meter) and no disconnect larger than 200 amperes nor smaller than 60 amperes. All equipment through which unmetered conductors pass shall have provision for SSVEC to apply a wire security seal(s).

Multiple services consisting of more than six individual services, with a total service ampacity greater than 800 amps, or requiring a disconnect larger than 200 amperes, shall be served through an approved service entrance section manufactured to EUSERC specifications. In these cases, a single main disconnect ahead of the Meters (cold sequence) is also required. The Customer or contractor should contact SSVEC Engineering before constructing a multiple service.

EXHIBIT C

COMMERCIAL & RESIDENTIAL (201-400 amperes / 0-600 volts)

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
SERVICE ENTRANCE REQUIREMENTS
COMMERCIAL AND RESIDENTIAL
201 THROUGH 400 AMPERES
0 TO 600 VOLTS

1. **SCOPE OF SPECIFICATION**: This specification is supplementary to general specification Exhibit A, and is not a complete specification.

This specification shall apply to commercial and residential service entrances rated 201 through 400 amperes inclusive, 0 to 600 volts. Exception: See Paragraph No. 5.

2. **DETERMINATION OF SERVICE ENTRANCE AMPACITY**: A single main disconnect is normally required. If more than one disconnect is allowed (such as the 320 amp Meter described below), the service entrance ampacity shall be the sum of the ampacity of the main service disconnect(s) devices. It shall not be larger than 400 amperes for this specification. The nameplate ampacity of a fused main switch determines the disconnect ampacity regardless of the fuse size installed. In a circuit breaker type service disconnect, the nameplate ampacity of the main circuit breaker determines the disconnect ampacity. The sum of ratings of the main fused switches or circuit breakers shall not be permitted to exceed the ampacity of any main bus or the manufacturer's equipment rating label.

3. **CURRENT TRANSFORMER ENCLOSURE**: For service entrances of 201 to 400 amperes, as determined by the sum of the nameplate ampacity of the service disconnect(s), a raintight current transformer enclosure, with an approved mounting base for bar-type current transformers shall be used. The enclosure shall be furnished and installed by the Customer or contractor. An approved free-standing service entrance section (see Exhibit D) conforming to EUSERC requirements may be used as an alternative.

For three-wire services, single phase or three phase, the enclosure shall be equivalent or superior to a Circle A W Products 20" x 36" x 11." the Customer will supply the mounting base for the CT's, equivalent to a Beeline 6019-A, and bi-metal supply termination lugs with an upward range to 350 MCM.

For four-wire services, delta (such as 120/240 volt) or wye (such as 120/208 or 277/480 volt), the enclosure shall be equivalent or superior to Circle A W or Milbank Products, 36" x 42" x 11" N3R CT, with a Beeline mounting base 6067HA, or equivalent, installed along with the appropriate termination lugs as noted above. Please note that a 3" hub is the largest factory type hub available for both of these enclosures. Where a larger hub is needed, a knockout type raintight hub shall be used.

When served by underground service entrance conductors, the current transformer enclosure shall be equipped with a neutral deadend block.

4. **METER SOCKET ENCLOSURES**: Meter socket enclosures~~, and potential transformer enclosure~~ if needed, will be furnished and installed by ~~SSVEC~~the customer or contractor. The Meter socket(s) shall be installed not more than 25 lineal feet (50 circuit feet) from the current transformers.

5. **SINGLE PHASE SELF-CONTAINED 320 AMPERE METERS**: A self-contained Meter is capable of carrying the total current of the service supplied to the Customer and of being directly connected to the line voltage of the service. Single phase self-contained 320 ampere Meter socket enclosures which have been tested, listed and labeled by a nationally recognized testing laboratory may be used under certain conditions. When such a socket is used, the preceding paragraphs related to CT installation do not apply. Bolt-in type 400 ampere Meter sockets are not acceptable.

Individually metered residential services may use an approved 320 Meter socket enclosure if the disconnect ampacity does not exceed 400 amperes. The 320 amp Meter socket is not approved for use on commercial installments. Overhead may use either the recommended Meter/main enclosure or a separate Meter socket and disconnect. Services from an underground lateral shall use only the combination Meter/main. A 3" conduit shall be used for the underground riser.

The socket and other service equipment shall be furnished and installed by the Customer or contractor.

6. **POSITION OF POWER LEG**: On three phase, four wire delta services, the power leg shall be installed in the right hand position.

7. **INSTRUMENT TRANSFORMER METERING**: Instrument transformers are used when the current or voltage of a service is too great for a self-contained Meter installation. Current and potential (voltage) transformers, where required, and all associated Meter circuit wiring will be furnished and installed by SSVEC at the time of Service Connection.

8. **GROUNDED (NEUTRAL) CONDUCTOR SIZE**: The grounded conductor for this specification shall not be reduced in ampacity from that of the ungrounded conductors.

EXHIBIT D

COMMERCIAL & RESIDENTIAL (401-3000 amperes / 0-600 volts)

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
SERVICE ENTRANCE REQUIREMENTS
COMMERCIAL AND RESIDENTIAL
401 THROUGH 3000 AMPERES
0 TO 600 VOLTS

1. SCOPE OF SPECIFICATION: This specification is supplementary to the General Specification Exhibit A, and is not a complete specification.

This specification shall apply to residential and commercial service entrances of 401 to 3000 amperes, 0 to 600 volts. Service entrance sections as outlined in this specification shall be permitted, with appropriate design changes, on services of 0 to 3000 amperes.

2. DETERMINATION OF SERVICE ENTRANCE AMPACITY: A single main disconnect is required. The service entrance ampacity shall be the ampacity rating of the bus. It shall not be larger than 3000 amperes for this specification. Customers requiring more than 3000 amperes shall consult the SSVEC Engineering Department for special design requirements.

3. SERVICE ENTRANCE SECTION: A free-standing service entrance section, conforming to EUSERC specifications, mounted on a concrete pad or floor shall be furnished and installed by the Customer or contractor on all services from 801 to 3000 amperes. A free-standing service entrance section is preferred, but not required, for services rated 401 to 800 amperes.

4. SERVICE ENTRANCE SECTION LOCATION: Service entrance sections shall be permitted to be located inside buildings only under the following conditions:

4.1 SSVEC personnel shall be permitted to have access to the service entrance at all reasonable times.

4.2 The main disconnect device shall be operable to an open position (shunt trip) from an outside location accessible to SSVEC personnel at all times.

4.3 The Customer or contractor shall run separate conduits for the metering circuit (1" RIGID minimum) and for remote operation of the main disconnect (1" rigid minimum) a distance not to exceed 25 lineal feet (50 circuit feet) to an approved outside location accessible to SSVEC personnel at all times. Any change in direction of the metering and remote circuits shall be accomplished with an electrical sweep.

4.4 If any of the above conditions is not met, the service entrance section shall be located outside in a place accessible to SSVEC employees at all times, and shall not be locked except by an arrangement agreeable to both the Customer and SSVEC.

If located outside, the service entrance section shall be raintight (NEMA 3R).

5. **METER SOCKETS**: For outside service entrances, Meter sockets, enclosures, meter test switches and panels, per EUSERC drawings, shall be furnished and installed by the Customer or contractor in the manufactured service entrance section. When the service entrance equipment is located inside with metering conduit run outside or, if a wall-mounted CT cabinet is allowed, Meter sockets, meter test switches, and enclosures will be furnished and installed by ~~SSVEC~~the customer and contractor. Any change in direction of the metering conduit shall be accomplished with an electrical sweep.

6. **CURRENT AND POTENTIAL TRANSFORMERS**: Current transformers, ~~Meter test switches~~ and potential transformers, if required, will be furnished and installed at the time of service connection by SSVEC personnel in the space provided by the Customer.

7. **DRAWING SUBMITTAL**: To avoid costly changes, the Customer or contractor shall have the manufacturer submit service entrance section drawings to SSVEC for review and approval by Engineering before the equipment is manufactured. Faxed submittals are not acceptable for approval purposes.

8. **GROUNDED (NEUTRAL) CONDUCTOR SIZE**: The grounded conductor for this specification shall not be reduced in ampacity from that of the ungrounded conductors.

EXHIBIT E

GENERAL MOTOR LOAD (0-500 HORSEPOWER / 0-600 volts)

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
SERVICE ENTRANCE REQUIREMENTS
GENERAL MOTOR LOAD
0 THROUGH 500 HORSEPOWER
0 TO 600 VOLTS

1. SCOPE OF SPECIFICATION: This specification is supplementary to General Specification Exhibit A, and is not a complete specification.

This specification applies to service entrances that are predominately motor loads, usually single motor loads, 0 through 500 horsepower inclusive, 0 to 600 volts.

Before any motor installation larger than 50 HP is planned, qualified personnel in the Engineering Department should be consulted.

- To assure all Customers of uniform, well regulated service, it is necessary that the following motor requirements and general information be adhered to for installations on SSVEC lines.

- Abnormal loads are those requiring non-standard voltages, or three phase motors 200 HP or larger, or single phase motors larger than 10 HP or single phase to three phase converters, or intermittent loads (large welders, electric furnaces, elevators), or other requiring non-standard service characteristics. SSVEC may at its option extend service to an abnormal load.

- Motors and equipment can have special load requirements that cause excessive voltage/current and harmonic changes to SSVEC's system. When SSVEC must install special equipment to protect against SSVEC system problems caused by the Customer's equipment, the Customer shall pay the excess costs.

- SSVEC reserves the right to inspect and test all motors and other devices and equipment which are owned by the Customer and which are, or shall be, connected to SSVEC's lines.

2. PROTECTION OF MOTORS AND OTHER EQUIPMENT:

- Under/Over voltage, overload, phase failure (single phasing), phase reversal, Power interruptions and short circuit protection is strongly recommended for each motor installation.

- It is the Customer's responsibility to provide adequate protective equipment to protect the Customer's equipment from high or low voltage, phase loss or reversal or any unusual condition.

- SSVEC will not be responsible in any way for damage to Customer's equipment due to failure of the Customer to provide adequate protective devices, or due to any failure of such devices.

3. VOLTAGE FLUCTUATION LIMITS:

- High starting (locked-rotor) currents create voltage dip which may cause objectionable light flicker and problems operating other equipment. The voltage dip shall not exceed 4% and must be maintained within tolerable limits.

- Voltage caused by the Customer's equipment in excess of these limits may require SSVEC to disconnect the Customer's service until corrective action is taken by the Customer to the satisfaction of SSVEC.

- In addition to complying with starting requirements, running motors with fluctuating loads shall not cause excessive voltage fluctuations.

4. MOTOR STARTING:

Single Phase Motors:

- BELOW 10 HP: CAN BE STARTED ACROSS-THE-LINE.

- 10 HP or Larger: Considered an abnormal load and may be extended service at SSVEC's option. SSVEC engineering will determine on a case by case basis if motor may be extended service.

- Written Pole Motors up to 60 HP: Reduced voltage/current starting limits current at no more than 50% of locked rotor values. SSVEC engineering will need to determine if motor may be extended service.

- Will be limited to 60 HP maximum on SSVEC service.

Three Phase Motors:

- Up to 60 HP: Can be started across-the-line.

- 61 – 150 HP: Reduced Starting Requirements (Use one of the following starting methods)

  - Primary Resistor or Reactor: For resistor starting, register shall be sized to limit starting currents to no more than 60% of locked-rotor current.

  - Autotransformer: Required 50% tap.

- Wye-Delta Start.
- Solid State (soft start): Required 50% or less of starting current setting.
- Part Winding motor may be considered if starting current is limited to 60% (typical range is 60% - 75%) of locked-rotor. SSVEC engineering will determine if service can be extended on a case by case basis.

• 151 – 499 HP: Solid State Start with 50% or less of normal starting current is required. An SSVEC engineering study may be conducted to determine expected voltage dip and determine if alternate settings will be required. Motors 200 hp or larger are considered abnormal loads and may be extended service at SSVEC's option.

• 500 HP or larger Customer will need to provide engineered design. Design should include at a minimum a one-line diagram, load information, and motor starting information.

Engineered design must be signed by an Electrical Engineer with a P.E. license.

Design must be approved by SSVEC engineering before Customer can proceed with project.

If after installation, voltage dip limits are exceeded, the service will be disconnected until corrective action is taken by Customer to the satisfaction of SSVEC.

5. VARIABLE FREQUENCY DRIVES & SINGLE PHASE TO THREE PHASE CONVERTER REQUIREMENTS:

Variable Frequency Drives and Single Phase to Three Phase Converters are considered abnormal loads and may be extended service at SSVEC's option.

The Customer's load shall not exceed the Power quality impact described in IEEE-519, Recommended Practices and Requirements for Harmonic Control in Electric Power Systems. SSVEC reserves the right to test and monitor equipment to ensure compliance to these guidelines. SSVEC reserves the right to require that remedial action be taken by the owner at the owner's expense.

At SSVEC's request, the Customer shall provide an engineered design. Design should include at a minimum a one-line diagram, load information, motor starting information and equipment specifications.

6. AIR-CONDITIONING UNITS (COMPRESSOR MOTORS):

• The high starting (locked-rotor) currents of the compressor motor may cause objectionable light flicker seen by the Customer. In the case of Customer complaints, a three-wire Hardstart kit will be required by SSVEC. The Hardstart or Kickstart kit's installation and costs are the Customer's responsibility. Customers may check with a local HVAC dealer for information on Hardstart or Kickstart kits.

- If light flicker still persists after the Hardstart or Kickstart installations, SSVEC will take corrective action if the voltage at the Customer's Meter extends into Range B voltage, set forth by ANSI/IEEE standards.

7. INFORMATION NEEDED FROM CUSTOMER:

Motor Nameplate information

A. HP- Horsepower

B. RPM - Speed

C. DES – Design Letters (describes motor torque characteristics)

(1) A for low

(2) B for medium

(3) C for special

(4) D for high with high slip

D. CODE – NEMA locked-Rotor Code letter. Ex: G is for KVA/HP 5.6 to 6.3

E. VOLT – Voltage rating. Ex: 208-230/460

F. FLA. – Full load Amp rating. Ex: 24-21.6/10.8

G. FLEF – Full load efficiency

H. FLPF – Full load Power factor

8. DETERMINATION OF SERVICE ENTRANCE AMPACITY:

The service entrance ampacity shall be 125% of the single motor ampacity determined from the National Electrical Code (NEC) but not less than 60 amperes.

To determine the service entrance ampacity of multiple motor loads, see the NEC Article 430. The service disconnect(s) may be larger, but not smaller than the required minimum ampacity.

9. OVER-CURRENT PROTECTION:

All installations under this specification shall have a running overload protection device such as a trip coil, relay or thermal cutout installed in all ungrounded conductors unless there is such a device integral with the motor being protected.

10. METERING REQUIREMENTS:

A. **METER GROUNDING**: All motor frames shall be grounded by a copper equipment grounding conductor, run in the same raceway with the non-grounded conductors. The equipment grounding conductor shall be connected to the grounded conductor and shall be no smaller than allowed by the National Electrical Code.

The point that the equipment grounding conductor fastens to the motor frame shall be visible without removing any part of the equipment. The connection shall be made with a connector designed and suitable for the purpose.

All installations under this specification shall have a running overload protection device such as a trip coil, relay or thermal cutout installed in all ungrounded conductors unless there is such a device integral with the motor being protected.

11. PROTECTION AGAINST UNUSUAL LINE CONDITIONS: SSVEC strongly recommends that the Customer install devices to protect equipment from high or low voltage, phase loss or reversal or imbalance. SSVEC shall not be liable to the Customer for any loss, injury or damage resulting from the Customer's use of his/her equipment or from the use of the Energy from SSVEC or beyond the point of connection of SSVEC wires or other conductors and equipment with the Customer's wires or other conductors and equipment.

IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE ADEQUATE PROTECTIVE EQUIPMENT TO PROTECT THE CUSTOMER'S EQUIPMENT FROM HIGH OR LOW VOLTAGE, PHASE LOSS OR REVERSAL OR ANY UNUSUAL CONDITION.

12. METER GROUNDING: All motor frames shall be grounded by a copper equipment grounding conductor, run in the same raceway with the nongrounded conductors. The equipment grounding conductor shall be connected to the grounded conductor and shall be no smaller than allowed by the National Electrical Code.

The point that the equipment grounding conductor fastens to the motor frame shall be visible without removing any part of the equipment. The connection shall be made with a connector designed and suitable for the purpose.

13. MOTOR LOADS CLASSIFIED BY HORSEPOWER:

A. 0 THROUGH 125 HORSEPOWER:

(1) Meter Socket. An SSVEC approved 7 jaw Meter socket with a lever type bypass and continuous ampacity rating at least equal to the ampacity required of the rest of the service entrance, shall be furnished and installed by the Customer or contractor.

(2) Four Wire Service. A four-wire service entrance is required for all three phase applications. On three phase four wire delta services the Power leg shall be connected to the right hand Meter base terminals.

(3) Grounded Conductor Size. The grounded conductor may not be reduced in size from that of the ungrounded conductors.

B. 126 THROUGH 200 HORSEPOWER:

(1) Four Wire Services. A four-wire service entrance is required. Consult SSVEC Engineering for information on approved CT Enclosures.

(2) Grounded (Neutral) Conductor Size. The grounded conductor may not be reduced in size from that of the ungrounded conductors.

(3) Meter Socket and Enclosure. The Meter socket and enclosure will be furnished and installed by the customer or contractor. ~~and~~ The potential transformer enclosure (if required) will be furnished and installed by SSVEC. The Meter base and potential transformer enclosure shall be installed within 50 (fifty) circuit feet of the current transformer enclosure.

C. 201 THROUGH 500 HORSEPOWER:

(1) Four Wire Services. A four-wire three phase service entrance is required. Consult SSVEC Engineering for information on approved CT Enclosures.

(2) Meter Socket and Enclosure will be furnished and installed by the customer or contractor. The ~~Meter socket and~~ potential transformer enclosure (if required) will be furnished and installed by SSVEC.

(3) Grounded (Neutral) Conductor Size. The grounded conductor may not be reduced in size from that of the ungrounded conductors.

D. MOTOR LOADS LARGER THAN 500 HORSEPOWER:

Special Case. Motor loads larger than 500 horsepower may be served on a special case basis. The Customer shall consult qualified personnel in the Engineering Department before designing the installation.

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EXHIBIT
A-9
ADMITTED

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

SYSTEM CAPITALIZATION — REVISED DH

	2009	2010	2011	2012	2013	Test Year 12/31/2014
Long-Term Debt	$ 139,183,223	$ 147,186,217	$ 162,208,837	$ 168,068,234	$ 169,183,223	$ 168,930,824
Equity	65,917,528	72,867,833	79,480,075	89,362,825	89,164,479	97,115,902
Total Capitalization	$ 205,100,751	$ 220,054,050	$ 241,688,912	$ 257,431,059	$ 258,347,702	$ 266,046,726
Percent Capitalization						
Long-Term Debt	67.86%	66.89%	67.11%	65.29%	65.49%	63.50%
Equity	32.14%	33.11%	32.89%	34.71%	34.51%	36.50%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Total Assets	$ 253,438,830	$ 258,026,052	$ 268,533,993	$ 285,603,446	$ 285,519,336	$ 288,046,908
Equity as % of Total Assets	26.01%	28.24%	29.60%	31.29%	31.23%	33.72%

Exhibit DWH-2.0
Revised
DH

EXHIBIT
A-10
ADMITTED

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE

CALCULATION OF LOST FIXED COST RECOVERY
AS A RESULT OF MEMBER OWNED DISTRIBUTED GENERATION SERVED ON THE RESIDENTIAL RATE
ADMINISTERED IN CONJUNCTION WITH NET METERING TARIFF NM - 1 (EXISTING POLICY)

			Existing Rates	Phase 1 Rates	Phase 2 Rates	Phase 3 Rates	Phase 4 Rates
1	Total Residential Energy Charge including WPCA	Proposed Tariff	$ 0.119768	0.117518	0.112858	0.106764	0.102038
2	Purchased Power Energy Cost	Schedule G-6.3, Page 4 of 4	$ 0.028450	$ 0.028450	$ 0.028450	$ 0.028450	$ 0.028450
3	Purchased Power Demand Cost	Schedule G-6.3, Page 4 of 4	$ 0.043493	$ 0.043493	$ 0.043493	$ 0.043493	$ 0.043493
4	Remainder: Distribution Wires Component in Residential Energy Charge	L1 - L2 - L3	$ 0.047825	$ 0.045575	$ 0.040915	$ 0.034821	$ 0.030095
	<u>Lost Fixed Cost Calculation:</u>						
5	Total Residential DG Customers at TY End		1,013	1,013	1,013	1,013	1,013
6	Monthly kWh Produced by 5.62 kW AC PV System with 25% Capacity Factor	5.62 kW x 730 Hrs x 25%	1,026	1,026	1,026	1,026	1,026
7	Purch Power Demand Lost Fixed Cost - Monthly	L6 x L3	$ 44.61	$ 44.61	$ 44.61	$ 44.61	$ 44.61
8	Distr. Wires Lost Fixed Cost - Monthly	L6 x L4	$ 49.05	$ 46.74	$ 41.96	$ 35.71	$ 30.87
9	Total Lost Fixed Costs - Monthly	L7 + L8	$ 93.66	$ 91.35	$ 86.57	$ 80.32	$ 75.48
10	Total Lost Fixed Costs Annual	L9 x L5 x 12	$ 1,138,552	$ 1,110,499	$ 1,052,399	$ 976,420	$ 917,498

Exihibit DWH - 8
(Revised)

EXHIBIT
A-11
ADMITTED

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE

CALCULATION OF LOST FIXED COST RECOVERY
AS A RESULT OF MEMBER OWNED DISTRIBUTED GENERATION SERVED ON THE PROPOSED RESIDENTIAL DG RATE FOR EXISTING CUSTOMERS
ADMINISTERED IN CONJUNCTION WITH NET METERING TARIFF NM-1 (EXISTING POLICY)

			Existing Rates	Phase 1 Rates	Phase 2 Rates	Phase 3 Rates	Phase 4 Rates
1	Total Residential Energy Charge including WPCA	Proposed Tariff	$ 0.119768	$ 0.119768	$ 0.119768	$ 0.119768	$ 0.119768
2	Purchased Power Energy Cost	Schedule G-6.~~0~~3, Page 4 of 4 DH	$ 0.028450	$ 0.028450	$ 0.028450	$ 0.028450	$ 0.028450
3	Purchased Power Demand Cost	Schedule G-6.~~0~~3, Page 4 of 4	$ 0.043493	$ 0.043493	$ 0.043493	$ 0.043493	$ 0.043493
4	Remainder: Distribution Wires Component in Residential Energy Charge	L1 - L2 - L3	$ 0.047825	$ 0.047825	$ 0.047825	$ 0.047825	$ 0.047825
	Lost Fixed Cost Calculation:						
5	Total Residential DG Customers at TY End		1,013	1,013	1,013	1,013	1,013
6	Monthly kWh Produced by 5.62 kW AC PV System with 25% Capacity Factor	5.62 kW x 730 Hrs x 25%	1,026	1,026	1,026	1,026	1,026
7	Purch Power Demand Lost Fixed Cost - Monthly	L6 x L3	$ 44.61	$ 44.61	$ 44.61	$ 44.61	$ 44.61
8	Distr. Wires Lost Fixed Cost - Monthly	L6 x L4	$ 49.05	$ 49.05	$ 49.05	$ 49.05	$ 49.05
9	Total Lost Fixed Costs - Monthly	L7 + L8	$ 93.66	$ 93.66	$ 93.66	$ 93.66	$ 93.66
10	Total Lost Fixed Costs Annual Ex Fixed Cost Change	L9 x L5 x 12	$ 1,138,552	$ 1,138,552	$ 1,138,552	$ 1,138,552	$ 1,138,552
11	Increase in Customer Charge over Existing	Change in Cust Charge		$ 14.75	$ 22.75	$ 29.75	$ 39.75
12	Additional Fixed Cost Revenue Annual	L11 x L6 x 12		$ 179,301	$ 276,549	$ 361,641	$ 483,201
13	Total Lost Fixed Costs Annual Including Fixed Cost Change	L10 - L12		$ 959,251	$ 862,003	$ 776,911	$ 655,351

EXHIBIT
A-12
ADMITTED

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE

CALCULATION OF LOST FIXED COST RECOVERY
AS A RESULT OF MEMBER OWNED DISTRIBUTED GENERATION SERVED ON THE PROPOSED RESIDENTIAL DG RATE FOR NEW CUSTOMERS
ADMINISTERED IN CONJUNCTION WITH NEW DISTRIBUTED GENERATION (DG) TARIFF

			Existing Rates	Phase 1 Rates	Phase 2 Rates	Phase 3 Rates	Phase 4 Rates
1	Total Residential Energy Charge including WPCA	Proposed Tariff DH	$ 0.119768	0.107617	0.095467	0.083316	0.071165
2	Purchased Power Energy Cost	Schedule G-6.~~0~~3, Page 4 of 4	$ 0.028450	$ 0.028450	$ 0.028450	$ 0.028450	$ 0.028450
3	Purchased Power Demand Cost	Schedule G-6.~~0~~3, Page 4 of 4	$ 0.043493	$ 0.043493	$ 0.043493	$ 0.043493	$ 0.043493
4	Remainder: Distribution Wires Component in Residential Energy Charge	L1 - L2 - L3	$ 0.047825	$ 0.035674	$ 0.023524	$ 0.011373	$ (0.000778)
	Lost Fixed Cost Calculation:						
5	Total Residential DG Customers at TY End		1,013	1,013	1,013	1,013	1,013
6	Monthly kWh Produced by 5.62 kW AC PV System with 25% Capacity Factor	5.62 kW x 730 Hrs x 25%	1,026	1,026	1,026	1,026	1,026
7	PV System Energy Consumed by Customer Only	Estimated at 74% of total	759	759	759	759	759
8	Purch Power Demand Lost Fixed Cost - Monthly	L7 x L3	$ 33.01	$ 33.01	$ 33.01	$ 33.01	$ 33.01
9	Distr. Wires Lost Fixed Cost - Monthly	L7 x L4	$ 36.30	$ 27.08	$ 17.85	$ 8.63	$ (0.59)
10	Total Lost Fixed Costs - Monthly	L8 + L9	$ 69.31	$ 60.09	$ 50.86	$ 41.64	$ 32.42
11	Total Lost Fixed Costs Annual	L10 x L5 x 12	$ 842,511	$ 730,404	$ 618,306	$ 506,199	$ 394,092

Exhibit DWH - 10
(Revised)

CONTROLLED IRRIGATION SERVICE
SCHEDULES CD, CBW, & CW

EXHIBIT
A-13
ADMITTED

Determination of Billing Demand

The billing Demand to be used in the calculation of the billing shall be the highest 15 minute kW Demand determined to the nearest 1/10 of a KW by means of suitable metering equipment.

Determination of Override Capacity

The over-ride penalty is applicable if controls are overridden during a peak period. The override capacity shall be the highest 15 minute kW demand established during a peak period when controls are overridden as measured by using appropriate metering equipment.

Rate CW

For accounts which are subject to weekly control, the amount billed for first 300 kWh per kW will be reduced 5% each month if kWh usage exceeds 300 kWh per kW and controls are not overridden during a "cut off" period. The discount does not apply to the Service Availability Charge or kWh billed over 300 kWh per kW.

Rate CBW

For accounts which are subject to twice-weekly control, amount billed for first 300 kWh per kW will be reduced 10% each month if kWh usage exceeds 300 kWh per kW and controls are not overridden during a "cut off" period. The discount does not apply to the Service Availability Charge or kWh billed over 300 kWh per kW.

Rate CD

For accounts which are subject to daily control, amount billed for first 300 kWh per kW will be reduced 17% each month if kWh usage exceeds 300 kWh per kW and controls are not overridden during a "cut off" period. The discount does not apply to the Service Availability Charge or kWh billed over 300 kWh per kW.

Other Conditions

The Customer will pay the Cooperative a one time charge of $425 (for the cost of the necessary control equipment which includes materials, equipment and labor) and a mileage fee of $4.50/mile for the service vehicle use and servicemen travel time. A additional service call charge shall be required when the Customer requests a change in service requiring Cooperative personnel to make a trip to the Customer's service location in order to affect such change. The Cooperative reserves the right to utilize the CW, CBW and CD rates for purposes of emergency load Curtailment should conditions warrant.

The Cooperative reserves the right to assign the Day(s) of control and to make periodic reassignments if necessary for all accounts served as "weekly control or twice-weekly control". The Cooperative will initiate control at its discretion on any day in accordance with the provisions in the agreement with the Customer.

SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC.
350 N. Haskell Ave
Willcox, Arizona 85644-0820

Effective Date: January 1, 2017

STANDARD OFFER TARIFF

SCHEDULE OF SERVICE CHARGES
SCHEDULE SC

This schedule sets the amount of various service charges and other miscellaneous charges which have been authorized in the Cooperative's Service Conditions.

1. CHARGES FOR ELECTRIC SERVICE CONNECTIONS.

   a. NEW AND ADDITIONAL SERVICE. A non-refundable service charge of $50.00 plus applicable taxes, shall be imposed for each of the following:

      1) A new or additional Electric Service Connection;

      2) A former Customer reapplying for Electric Service;

      3) For a location change in Electric Service location to a new service address.

   b. SERVICE CONNECTION CALLBACKS. A nonrefundable service charge of $50.00, plus applicable sales tax, shall be imposed for a return trip to connect Electric Service if, at the Customer's request, it was previously made available at the Point of Delivery, if an inaccurate service address provided by the Customer results in a service connection callback, or if the Customer postpones or cancels any service order already completed by the Cooperative. Except in emergency situations, as determined by the Cooperative in its sole discretion, the Cooperative will not connect Electric Service after 9:00 p.m.

   c. PROPERTY DAMAGE. The Customer shall be billed for damages to the Cooperative's equipment or property caused by the Customer or the Customer's employee(s) or agent(s). Such damages and the cost of repair shall be billed at the Cooperative's current rates for labor, transportation, equipment, and materials, less appropriate credit for salvage, if any.

2. SERVICE CALLS DURING REGULAR BUSINESS HOURS.

   A service charge of $75.00, plus applicable sales tax, plus mileage at the applicable IRS rate per mile for the current year will be imposed for a service call performed during regular business hours for one of the following reasons:

   a. Interruptions caused by the Customer's negligence or failure of Customer-owned equipment, even though the Cooperative is unable to perform any work beyond the Point of Delivery. Reasonable efforts will be made to advise the Customer about the responsibility for such charges before the service call starts.

b. Reconnection of Electric Service to any Customer previously disconnected for unlawful use of service (including tampering or theft), misrepresentation to the Cooperative, unsafe conditions, threats to Cooperative personnel or property, failure to permit safe access, detrimental effects of Customer loads on the Cooperative's system, or failure to establish credit and/or follow procedures to establish Electric Service.

c. Premises visits regarding action associated with disconnection of Electric Service for non-payment of a delinquent bill (whether or not service is actually disconnected as a result of such visit) or for reconnection of Electric Service that has previously been disconnected for non-payment. The service charge may be applied in the case of reconnections effectuated through remote metering when the Customer has been disconnected for non-payment of a delinquent bill.

d. Meter testing performed at the written request of the Customer. However, if SSVEC's test shows that the Meter is inaccurate by more than three (3) percent, the service charge will be waived or refunded to the Customer.

3. NON-PAYMENT COLLECTION FEE DURING REGULAR BUSINESS HOURS.

A non-refundable charge of $60.00, plus applicable sales tax, shall be imposed each time an SSVEC employee must make a visit to the Premises regarding action associated with disconnection of Electric Service for non-payment of a delinquent bill or for reconnection of Electric Service that has previously been disconnected for non-payment. This charge shall also apply to reconnections effectuated through remote metering when the Customer has been disconnected for non-payment of a delinquent bill.

4. SERVICE CALLS AFTER REGULAR BUSINESS HOURS.

A service charge of $100.00, plus applicable sales tax, plus mileage at the applicable IRS rate per mile for the current year will be imposed for a service call after regular business hours for one of the following reasons:

a. Interruptions caused by the Customer's negligence or failure of Customer-owned equipment, even though the Cooperative is unable to perform any work beyond the Point of Delivery. Reasonable efforts will be made to advise the Customer about the responsibility for such charges before the service call starts.

b. Reconnection of Electric Service to any Customer previously disconnected for unlawful use of service (including tampering or theft), misrepresentation to the Cooperative, unsafe conditions, threats to Cooperative personnel or property, failure to permit safe access, detrimental effects of Customer loads on the Cooperative's system, or failure to establish credit and/or follow procedures to establish Electric Service. Such work will be performed only when requested and agreed to by the Customer.

c. Premises visits regarding action associated with disconnection of Electric Service for non-payment of a delinquent bill (whether or not service is actually disconnected as a result of such visit) or for reconnection of Electric Service that has previously been

disconnected for non-payment. The service charge may be applied in the case of reconnections effectuated through remote metering when the Customer has been disconnected for non-payment of a delinquent bill.

d. Where SSVEC scheduling will not permit Service Establishment on the same day requested, the Customer can elect to pay the after-hour charge for establishment that day or his service will be established on the next available normal business day.

For the purposes of the Section, the definition of Service Establishment is where the Customer's facilities are ready and acceptable to the Cooperative and Cooperative needs only to install a Meter, read a Meter, or turn on Electric Service. Except in emergency situations, as determined by the Cooperative in its sole discretion, the Cooperative will not make a service call after 9:00 p.m.

5. METER TEST.

A service charge of $50.00 plus a meter test charge of $50.00 plus applicable sales tax shall be imposed for meter testing performed at the written request of the Customer. However, if the Cooperative's test shows that the meter is inaccurate by more than 3%, the service charge and the meter test charge will be waived or refunded to the Customer and Energy charges will be adjusted accordingly for the three (3) immediately previous Billing Periods only.

6. INSUFFICIENT FUNDS (NSF) OR RETURNED PAYMENTS.

A service charge of $25.00 per NSF or returned payment plus a late payment charge (if applicable) of 1.5 percent per month on the unpaid, delinquent balance plus any applicable sales tax, shall be imposed for each collection action taken by the Cooperative, exclusive of collection charges.

7. METER REREADS.

A service charge of $50.00 shall be charged for rereads, provided that the original reading was not in error.

8. LATE PAYMENT CHARGE.

A late payment charge of 1.5 percent per month shall be charged on all outstanding balances which remain unpaid as of each new monthly billing date.

9. PUMP AND EQUIPMENT TESTS.

Pump and equipment tests conducted by large power, water pumping, irrigation, and general service Customers shall be billed under the GS rate. No discounts will be provided for pump and equipment tests.

Billing under this schedule will be increased by an amount equal to the sum of all Federal, State, County, Municipal and other governmental levies.

EXHIBIT
A-14
ADMITTED

Schedule E-2.0, Corrected 10/08/2015

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.

COMPARATIVE INCOME STATEMENT
DECEMBER 31, 2014

	Test Year 12/31/2012	Test Year 12/31/2013	Test Year 12/31/2014
Operating Revenues			
Base Revenue	$ 99,571,191	$ 98,417,841	$ 97,654,641
PPCA Revenue	2,913,062	(2,488,774)	(3,496,727)
PPCA (Over) Under Recovery	2,607,981	4,614,254	(769,750)
Sales for Resale	140,737	163,168	5,342,435
Unbilled Revenue	0	0	(74,191)
Other	3,725,737	5,565,805	3,309,366
Total	$ 108,958,708	$ 106,272,294	$ 101,965,774
Operating Expenses			
Purchased Power	$ 67,075,507	$ 62,412,496	$ 56,681,170
Transmission O&M	686,877	615,184	777,392
Distribution-Operations	9,178,471	10,825,713	10,680,268
Distribution-Maintenance	2,957,725	3,519,855	3,710,179
Consumer Accounting	2,945,884	3,042,286	3,146,814
Customer Service	594,267	997,786	765,415
Sales	223,160	391,078	385,273
Administrative & General	5,065,967	5,328,206	5,705,545
Depreciation	9,735,488	10,249,609	10,692,934
Tax	997,596	1,186,612	366,804
Total	$ 99,460,942	$ 98,568,825	$ 92,911,794
Return	$ 9,497,766	$ 7,703,469	$ 9,053,980
Interest & Other Deductions			
Interest L-T Debt	$ 7,021,028	$ 6,303,001	$ 5,044,256
Interest-Other	35,355	45,633	8,823
Other Deductions	352,004	296,622	364,017
Total	$ 7,408,387	$ 6,645,256	$ 5,417,096
Operating Margin	$ 2,089,379	$ 1,058,213	$ 3,636,884
Non-Operating Margins			
Interest Income	$ 336,509	$ 175,934	$ 171,224
Other Margins	177,671	168,186	85,333
G&T Capital Credits	1,897,573	3,018,234	4,026,166
Other Capital Credits	708,404	952,510	294,675
Total	$ 3,120,157	$ 4,314,864	$ 4,577,398
Net Margins	$ 5,209,536	$ 5,373,077	$ 8,214,282

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Home Latest Radar & Satellite Severe Weather Forecasts Travel Tools International

Sierra Vista, Arizona, United States (85635)

Lat: 31.55N, Lon: 110.3W
Wx Zone: AZZ507

Local Info | Forecasts | Archives | Averages | Severe | Radar | Satellite | Rivers | Nearby | State | Snow | Solunar | Roads

Weather Archives for Sierra Vista, AZ

NOTE: This archive is for the closest National Weather Service station to Sierra Vista, Fort Huachuca. Information may differ from the station used for current weather conditions.

Click here for recent archive (including rain data)

EXHIBIT
A-15
ADMITTED

July 2 2014 Go

Time	Weather	Temperature	Dewpoint	Humidity	Pressure	Winds	Visibility
12:55AM	Clear	79°F/26°C	34°F/1°C	20%	30.06	WSW 10 MPH	10mi.
1:55AM	Clear	79°F/26°C	34°F/1°C	20%	30.06	WSW 10 MPH	10mi.
2:55AM	Clear	77°F/25°C	36°F/2°C	22%	30.06	W 10 MPH	10mi.
3:55AM	Mostly Clear	73°F/23°C	37°F/3°C	27%	30.06	W 12 MPH	10mi.
4:55AM	Mostly Clear	73°F/23°C	45°F/7°C	36%	30.09	W 13 MPH	10mi.
5:55AM	Mostly Cloudy	72°F/22°C	39°F/4°C	31%	30.12	N 0 MPH	10mi.
6:55AM	Mostly Clear	79°F/26°C	48°F/9°C	34%	30.12	E 3 MPH	10mi.
7:55AM	Mostly Clear	81°F/27°C	52°F/11°C	37%	30.15	W 12 MPH	10mi.
8:55AM	Mostly Clear	84°F/29°C	50°F/10°C	31%	30.15	WNW 9 MPH	10mi.
9:55AM	Mostly Clear	88°F/31°C	45°F/7°C	22%	30.15	N 12 MPH	10mi.
10:55AM	Mostly Clear	90°F/32°C	45°F/7°C	21%	30.15	NE 9 MPH	10mi.
11:55AM	Mostly Clear	91°F/33°C	43°F/6°C	18%	30.12	N 6 MPH	10mi.
12:55PM	Mostly Clear	93°F/34°C	39°F/4°C	15%	30.12	N 8 MPH	10mi.
1:55PM	Partly Cloudy	93°F/34°C	39°F/4°C	15%	30.09	N 9 MPH	10mi.
2:55PM	Partly Cloudy	95°F/35°C	37°F/3°C	13%	30.06	N 7 MPH	10mi.
3:25PM	Scattered Storms	95°F/35°C	39°F/4°C	14%	30.06	NNE 10 MPH	10mi.
3:40PM	Partly Cloudy	97°F/36°C	37°F/3°C	13%	30.03	N 10 MPH	10mi.
3:55PM	Partly Cloudy	97°F/36°C	37°F/3°C	13%	30.03	E 8 MPH	10mi.
4:55PM	Showers Nearby	95°F/35°C	39°F/4°C	14%	30.03	NE 8 MPH	10mi.
5:01PM	Scattered Storms	93°F/34°C	41°F/5°C	16%	30.03	N 10 MPH	10mi.
5:55PM	Scattered Storms	88°F/31°C	45°F/7°C	22%	30.03	WSW 15 MPH	10mi.
6:23PM	Scattered Storms	88°F/31°C	45°F/7°C	22%	30.03	WSW 12 MPH	10mi.
6:55PM	Storms	81°F/27°C	52°F/11°C	37%	30.06	N 21 MPH	10mi.
7:55PM	Light Thunderstorms	70°F/21°C	57°F/14°C	64%	30.15	E 12 MPH	5mi.
8:20PM	Rain Showers	70°F/21°C	61°F/16°C	73%	30.12	S 21 MPH	7mi.
8:55PM	Mostly Cloudy	73°F/23°C	59°F/15°C	61%	30.15	N 3 MPH	10mi.
9:55PM	Cloudy	73°F/23°C		65%	30.15		10mi.

			61°F/16°C			WNW 10 MPH	
10:55PM	Cloudy	75°F/24°C	57°F/14°C	54%	30.18	S 6 MPH	10mi.
11:25PM	Showers	72°F/22°C	63°F/17°C	73%	30.15	N 3 MPH	10mi.
11:43PM	Showers	72°F/22°C	61°F/16°C	69%	30.15	NW 7 MPH	10mi.
11:55PM	Showers	72°F/22°C	61°F/16°C	69%	30.15	W 6 MPH	10mi.

EXHIBIT
A-16
ADMITTED

Table 3

	IRR (%)	
	Average Customer	Large Customer
Existing Schedule R	17.4%	16.8%
Schedule R-DG E	7.9%	9.9%
Schedule R-DG	1.9%	5.0%
Proposed Schedule R	13.3%	12.8%

Table 3: Resulting IRRs

4

	S&P 500	**3-month T-Bill**	**10-year T-Bond**
1928-2015	9.50%	3.45%	4.96%
1966-2015	9.61%	4.92%	6.71%
2006-2015	7.25%	1.14%	4.71%

Table 4: Geometric Averages of the Annual Returns

5

	Mortgage Products		
	30-Yr FRM	15-Yr FRM	5/1-Yr ARM
Average Rate (2005-2015)	4.95%	4.35%	4.25%

Table 5: Average Rates of Three Mortgage Products

SSVEC RATE CASES						
DOCKET	BEFORE	PROPOSED	STAFF	DECISION	INCREASE %	DECISION #
E-01575A-08-0328	$7.50	$12.50	$8.25	$8.25	10.0%	71274
E-01575A-13-0296	$8.25	$10.25		$10.25	24.2%	74381
E-01575A-15-0312	$10.25	$25.00		$25.00	143.9%	

DUNCAN VALLEY RATE CASE						
DOCKET	BEFORE	PROPOSED	STAFF	DECISION	INCREASE %	DECISION #
E-01703A-14-0362	$20	$21		$21	5.0%	75040

GRAHAM COUNTY RATE CASE						
DOCKET	BEFORE	PROPOSED	STAFF	DECISION	INCREASE %	DECISION #
E-01749A-07-0236	$9.00	$9.00	$9.00	$9.00	0.0%	70289

MOHAVE ELECTRIC RATE CASE						
DOCKET	BEFORE	PROPOSED	STAFF	DECISION	INCREASE %	DECISION #
E-01750A-11-0136	$9.50	$16.50	$13.50	$16.50	73.7%	73352

NAVOPACHE RATE CASE						
DOCKET	BEFORE	PROPOSED	STAFF	DECISION	INCREASE %	DECISION #
E-01787A-11-0186	$18.30	$23.25	$19.50	$19.50	6.6%	73255

TRICO RATE CASE						
DOCKET	BEFORE	PROPOSED	STAFF	DECISION	INCREASE %	DECISION #
E-01461A-08-0430	$12.00	$15.00	$13.50	$15.00	25.0%	71230

EXHIBIT
ETCA 1
Judicial Notice

APS RATE CASE						
DOCKET	BEFORE	PROPOSED	STAFF	DECISION	INCREASE %	DECISION #
E-01345A-11-0224	$8.66	$11.86		$8.66	0.0%	75040

TEP RATE CASE						
DOCKET	BEFORE	PROPOSED	STAFF	DECISION	INCREASE %	DECISION #
E-01933A-12-0291	$7.00	$12.00		$10.00	42.9%	70289

UNSE RATE CASE						
DOCKET	BEFORE	PROPOSED	STAFF	DECISION	INCREASE %	DECISION #
E-04204A-12-0504	$8.00			$10.00	25.0%	73352

CURRENT DEMAND CHARGES			
MEDIAN OF CO-OPS	$15.00 / $16.50	SSVEC PROPOSAL	$25.00

CURRENT DEMAND CHARGES			
MEDIAN OF CO-OPS & IOUs	$10.25	SSVEC PROPOSAL	$25.00

DEMAND CHARGES INCREASES			
MEDIAN OF CO-OPS	6.6% / 24.2%	SSVEC PROPOSAL	143.9%

DEMAND CHARGES INCREASES			
MEDIAN OF CO-OPS & IOUs	24.2%	SSVEC PROPOSAL	143.9%

E-01575A-08-0328
E-01575A-13-0296

Schedule H-3.0

SSVEC notes that in its last rate cases, Trico's residential customer charge was increased from $8.00 to $12.00 per month, and Navopache's residential customer charge was increased from $11.25 to $18.30 per month.

RESPONSES OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. TO ENERGY FREEDOM COALITION OF AMERICA'S THIRD SET OF DATA REQUESTS IN DOCKET NO. E-01575A-15-0312

EFCA 3.1 Please provide a list of all solar installation companies that have installed a DG solar system in SSVEC territory over the last 12 months and provide the number of such installations per company.

EXHIBIT
EFCA 3
ADMITTED

Response: The solar installers and numbers of systems installed are:

Installer	Systems
ABCO Solar	3
Cochise Tech & Electric	4
Green Solar Technologies	1
Net Zero Solar	11
New Sun Energies	1
Self Install	2
Solar City	15
Solar Solutions AZ	6
Solar Topps	1
Stronghold Solar	5
Sun Pumps	1
SunDrop Solar	1
The Solar Store	3
Grand Total	54

Response by: David Bane, SunWatts Program Manager
311 E. Wilcox
Sierra Vista, Arizona 85635

1 BEFORE THE ARIZONA CORPORATION COMMISSION

2
IN THE MATTER OF) NO. E-01933A-15-0100
3 TUCSON ELECTRIC POWER)
(E-01933A-15-0100) -)
4 Recommended Order)
Dismissing the) OPEN MEETING
5 Application and)
Administratively Closing)
6 the Docket.)
) AGENDA ITEM NO. 28
7

8 At: Phoenix, Arizona

9 Date: August 18, 2015

EXHIBIT
EFCA 4
ADMITTED

10

11

12 TRANSCRIPT OF PROCEEDINGS

13

14 TRANSCRIBED FROM AN AUDIO RECORDING

15

16 (File: azcc_a4af9510e41-49e7-96f4-e975d7996b81.mp4.)

17

18

19 ARIZONA REPORTING SERVICE, INC.
20 Audio Transcription Specialists
2928 North Evergreen Street
21 Phoenix, Arizona 85014-5508

22

23 Transcribed by:
24 Katherine A. McNally
CERTIFIED TRANSCRIBER
25 CET**D-323

1 BE IT REMEMBERED that a Commission Open Meeting
2 was held at the Arizona Corporation Commission,
3 1200 West Washington Street, First Floor, Hearing
4 Room 1, Phoenix, Arizona, commencing on the 18th day of
5 August 2015.
6
7 BEFORE: SUSAN BITTER SMITH, Chairman
BOB STUMP, Commissioner
8 BOB BURNS, Commissioner
DOUG LITTLE, Commissioner
9 TOM FORESE, Commissioner
10
APPEARANCES:
11
Jane Rodda, Administrative Law Judge
12
For Arizona Corporation Commission:
13
Janice Alward, Chief Counsel, Legal Division
14 Elijah Abinah, Staff for Utilities Division
15 For Tucson Electric Power:
16 Michael W. Patten, Snell & Wilmer
17 For the Residential Utility Consumer Office:
18 Daniel Pozefsky, Chief Counsel
19 For Alliance For Solar Choice:
20 Court Rich, Rose Law Group
21 For the ASDA:
22 Garry Dale Hays II, Law Office of Garry Hays
23 For Solar and Western Resource Advocates:
24 Tim Hogan
25

1 PUBLIC SPEAKERS:

2 Kevin Cook
Greg Darland
3 Ryan Dahl
Kyle Lawrenson
4 Louis Woofenden
Benjamin Bunting
5 Curt Killian
Gregory Moore
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Katherine A. McNally
23 CERTIFIED TRANSCRIBER
CET**D-323
24
25

1 (Commencement of Item Number 28 at 03:54:50.)
2 CHMN. BITTER SMITH: Then let's move on to Item
3 Number 28, Tucson Electric Power Recommended Order
4 Dismissing the Application and Administrative Closure.
5 The parties are reconvening. And I am going to
6 turn to Judge Rodda for a brief overview. As I do that,
7 I am reminded that there were no exceptions filed by the
8 parties to this case. So unless there are objections,
9 I'm not going to ask the parties to spend time running
10 through comments. If you have something you absolutely
11 needed to do, please let me know. But we do have --
12 we're obviously wanting to get on to the final item of
13 the day.
14 So with that, Judge Rodda, just very briefly,
15 Item Number 28.
16 JUDGE RODDA: Thank you. TEP filed an
17 application to modify its net metering tariff.
18 Following oral argument on whether the application
19 should be heard in the context of a rate case, TEP
20 withdrew its application and stated it would seek to
21 have its proposed -- proposal considered in a rate case
22 to be filed in the near future. This order dismisses
23 the application and adopts disclaimer language for
24 distributed generation applications.
25 CHMN. BITTER SMITH: Great. Thank you.

1 And I realize I did not introduce the parties.
2 They are all the -- well, they're not the same. So let
3 me do that very quickly. If there's something you
4 absolutely need to say, do that, but otherwise we have
5 no exceptions and we'd like to move on.
6 Mr. Patten, we know who you are, but for the
7 record, one more time.
8 MR. PATTEN: Thank you. Michael Patten, Snell &
9 Wilmer, on behalf of Tucson Electric Power.
10 CHMN. BITTER SMITH: Mr. Cook.
11 MR. COOK: Kevin Cook, representing myself.
12 Okay. Mr. Pozefsky, you are a new entry.
13 MR. POZEFSKY: Thank you, Chairman,
14 Commissioners, good afternoon. Daniel Pozefsky, chief
15 counsel, RUCO.
16 CHMN. BITTER SMITH: Thank you.
17 Mr. Rich.
18 MR. RICH: Good afternoon, again. Chairman,
19 Commissioners, Court Rich, from the Rose Law Group on
20 behalf of the Alliance For Solar Choice.
21 CHMN. BITTER SMITH: Great. Mr. Hays.
22 MR. HAYS: Garry Hays, ASDA.
23 CHMN. BITTER SMITH: Okay. Mr. Hogan.
24 MR. HOGAN: Tim Hogan, representing both Solar
25 and Western Resource Advocates.

1 CHMN. BITTER SMITH: Okay. And have I missed
2 anyone? I do not see Mr. Hollihan.
3 Okay. It looks like we've got -- we've captured
4 everybody that is here at the table.
5 All right. Again, there were no exceptions, and
6 there are no proposed amendments.
7 Commissioners, any questions for the judge or
8 the parties?
9 If not, Commissioner Stump, if you would like to
10 move Item Number 28, please.
11 COM. STUMP: Thanks, Madam Chair. I move
12 Item 28.
13 CHMN. BITTER SMITH: Oh, do that. And then I've
14 got some speakers. I apologize.
15 COM. STUMP: Okay, yeah. Move Item Number 28.
16 CHMN. BITTER SMITH: Okay. Then I do have a
17 number of people signed in to speak on Item Number 28.
18 Let me quickly call them, and if you would -- because we
19 are moving on to the later in the afternoon, if you are
20 going to duplicate something that someone's already
21 said, please try to be judicious in doing that.
22 Greg Garland -- or excuse, Greg Darland
23 (phonetic). Is Mr. Darland still here?
24 MR. DARLAND: Good afternoon, Commissioners,
25 thank you very much. By continuing to advertise a "yet

1 even to be approved," retroactive, grandfathering date
2 with regards to it's net metering proposal, TEP and
3 other utilities have purposefully created a what-if
4 environment. In the Arizona Daily Star's letter to the
5 editor section on Sunday Joseph Enterex (phonetic), a
6 self-described Tucson citizen who is excited about the
7 opportunity of moving to solar for his home, seeded that
8 he'd been reading about TEP's net metering proposal and
9 that he is, and I quote, now having serious misgivings
10 about the upfront investment into solar.
11 It's simple. When a utility is allowed to
12 create a what-if environment, the outcome seems fairly
13 obvious and a monopoly should not be allowed to use its
14 status for intention -- to intentionally undermine the
15 private sector.
16 I'd also like to draw your attention to Tucson
17 City Councilman Steve Kozachik's recently submitted
18 letter to the Arizona Corporation Commission on
19 July 24th of this year, in which he asks the Commission
20 to -- and again I quote -- send a very public message
21 indicating that the efforts of Tucson Electric Power to
22 make solar rates retroactive will be denied. Please
23 adopt a policy which prohibits utilities from
24 advertising cutoff or grandfathering dates without the
25 established approval of the Corporation Commission.

1 Thank you.
2 CHMN. BITTER SMITH: Thank you. Ryan Dahl
3 (phonetic), filed by Kyle Lawrenson (phonetic).
4 MR. DAHL: Good morning, Commission. My name is
5 Ryan Dahl. I'm a Tucson resident and customer of Tucson
6 Electric Power. I've been looking into putting solar
7 onto my home; and I've done some research and I
8 discovered the net metering proposal that TEP has filed.
9 And I understand that they withdrew that application.
10 What's confusing to me is that though they have
11 withdrawn that application, there's no guarantee that if
12 I decide to go solar that I won't be greatly affected
13 even though this proposal has been withdrawn and hasn't
14 even been reviewed. This is different than staying
15 connected to TEP and seeing a slight increase each year.
16 I don't know if what I pay each month will double after
17 the rate case or only slightly affect me.
18 I request that the ACC pass a policy that rate
19 changes be adopted on an ongoing basis and not on a
20 retroactive basis.
21 CHMN. BITTER SMITH: Thank you.
22 Kyle Lawrenson; followed by Louis Woofenden.
23 MR. LAWRENSON: Thank you for the privilege to
24 speak today. My name is Kyle Lawrenson, and I'm a
25 customer of one of the private solar companies within

1 the territory of TEP.
2 In withdrawing their proposal, TEP should
3 certainly have expected the withdrawal of all aspects of
4 said proposal -- not everything except for the
5 grandfathering clause. The lingering of the
6 grandfathering issue has now created an uncertainty
7 lasting until TEP files a rate case, forcing unnatural
8 marketing conditions and stifling competition, all while
9 TEP coincidentally rules out its own rooftop solar
10 offerings.
11 They've managed to establish an insurmountable
12 barrier to market entry or in this case reentry, the
13 duration of which is essentially being decided by TEP.
14 Tucson council member Mr. Steve Kozachik has filed a
15 letter in this docket in which he urges the ACC, as I
16 do, to consider the effects of the grandfathering issue
17 on the competitive market. As Mr. Kozachik wrote: In a
18 free market buyers must be assured of the costs
19 associated with the purchase of goods and services.
20 The lingering issue of retroactive rate changes
21 for rooftop solar customers is undoubtedly preventing
22 this to occur. Mr. Kozachik continues by stating:
23 Where uncertainty exists the market is hampered and
24 stagnates.
25 Surely this is not only the opinion of

1 Mr. Kozachik, but also an opinion of any basic economic
2 principles. If TEP did not intend to stifle competitive
3 rooftop solar and put thousands of families at serious
4 financial risk, then it should remove the June 1st stop
5 date. There are too many parties held hostage by this.
6 TEP has claimed the stop to mean an emergency measure to
7 halt this so-called cost shift. It argues that those
8 without solar pay more because of solar customers.
9 Should such claims be not thoroughly
10 investigated before the halt of an entire industry is
11 permitted, even implicitly? The view expressed by TEP
12 on this subject is oversimplified and unproven as most
13 independent studies initiated by utility commissions
14 show that solar actually provides long-term benefits to
15 all customers. Most importantly, the alleged cost shift
16 claim is old and outdated.
17 If TEP truly believes that this proposed cost
18 shift situation is now in a state of emergency, then it
19 is due simply to TEP's failure to plan properly for the
20 continuing advancement of the energy industry according
21 to clear economic indicators -- the same indicators
22 realized successfully by countless other companies
23 participating in the industry.
24 These other companies should not be penalized or
25 effectively shut down because of TEP's failure to act.

1 I will go further to say that this has more
2 accurately become a sort of bailout at the expense of
3 TEP's customer base by way of the inability to go solar.
4 Certainly an emergency such as the one claimed
5 by TEP is worthy of a rate case backed with some
6 legitimate research, rather than baseless, unverified
7 claims.
8 TEP's actions are simply a ploy to undermine the
9 authority of the Commission and therefore self-regulate
10 through the creative use of paperwork. So I ask that
11 the Commission addresses retroactive (indiscernible)
12 changes announcements like the one put forth by TEP.
13 (Indiscernible) talk about regulatory certainty and
14 surely no ratepayers have said certainty. However, a
15 nonsolar customer does not contribute energy to the
16 grid. Is there not the same uncertainty to apply to the
17 value of power supplied to the utility from nonsolar
18 customers?
19 CHMN. BITTER SMITH: And Mr. Lawrenson, if you
20 would wrap up, please.
21 MR. LAWRENSON: Absolutely. Thank you.
22 However, a nonsolar ratepayer does at least know how
23 they're getting billed. And that's the certainty I
24 pushed for. Thank you.
25 CHMN. BITTER SMITH: Thank you.

1 Mr. Woofenden, followed by Benjamin Bunting.
2 MR. WOOFENDEN: Good afternoon, Chairman Bitter
3 Smith and Commissioners.
4 CHMN. BITTER SMITH: Good afternoon. And
5 obviously if you can give us new information, that would
6 be helpful.
7 MR. WOOFENDEN: Just a couple pieces.
8 CHMN. BITTER SMITH: Thank you.
9 MR. WOOFENDEN: I do support the Staff
10 recommendation and Judge Rodda's order in this matter as
11 well. I do think again same issues with uncertainty,
12 and I also do want to note that you'll see docketed
13 today a letter from Karin Uhlich who is the vice mayor
14 of Tucson and Councilwoman, substantially similar to
15 Mr. Kozachik's comments.
16 So that's all I have. Thank you.
17 CHMN. BITTER SMITH: Thank you very much.
18 Mr. Bunting, followed by Curt Killian
19 (phonetic).
20 MR. BUNTING: Thank you. In the interest of
21 time and not to be duplicative of everybody else who
22 spoke before me, I'll skip to the basic point.
23 CHMN. BITTER SMITH: Thank you.
24 MR. BUNTING: I represent one of thousands of
25 families who will be unable to risk our family's

1 financial health on a prospective rate change and will
2 thus not be installing solar into my house currently.
3 Whether or not the intention of TEP is to deliberately
4 undermine the solar market and my ability to choose
5 solar energy, it will do just that by injecting
6 uncertainty with the prospective rate change. To
7 preserve the choice of the citizens of Tucson to choose
8 their source of energy, we do ask that you choose and
9 adopt a policy that rate changes are adopted on a
10 going-forward basis. Thank you.
11 CHMN. BITTER SMITH: Great. Thank you.
12 Mr. Killian (phonetic).
13 MR. KILLIAN: Thank you, Commission, for this
14 opportunity. A lot of what I have planned to talk about
15 has already been spoken on, but I just want to make sure
16 that things are clear. I plan on going solar, and no
17 matter what decision is made by the ACC, by the
18 Commission. And I expect that the ACC will do what's
19 right for myself, my family, and the hundreds and
20 thousands of -- you know, hundreds or thousands of
21 customers that choose solar, You know, during -- after
22 June 1st, until that rate case is made.
23 I'm asking if Commission to please adopt a
24 policy regarding rate changes. Please make a
25 standardized -- standardized rule regarding the

1 retroactive dating. If not, TEP and other utilities
2 will continue to undermine the Commission and submit
3 retroactive dates if they do not agree with the
4 decision. Thank you.
5 CHMN. BITTER SMITH: Thank you.
6 And I do have one individual on the phone that
7 wishes to comment. Let's see if I can get them.
8 Mr. Moore (phonetic)?
9 MR. MOORE: Yes.
10 CHMN. BITTER SMITH: Oh, good. Mr. Moore, you
11 have your three minutes of public comment.
12 MR. MOORE: Thank you very much. I am an older
13 builder of apartment projects. And I'm currently in the
14 process of building a 100-unit apartment project that's
15 supposed to be 100 percent solar. Without the ability
16 to bank electricity for the hot times, the project just
17 does not work financially. Going forward, fine;
18 retroactive, it's just unacceptable.
19 THE COURT: Great.
20 MR. MOORE: Those are my comments.
21 CHMN. BITTER SMITH: Thank you, very much.
22 Thank you for your patience. I know you've been on the
23 phone quite some time. I appreciate that. All right.
24 MR. MOORE: Certainly.
25 CHMN. BITTER SMITH: That concludes the public

1 comment that I have. Is there anyone in the room that
2 thought they were signed up to speak but was not called
3 on?
4 MR. RICH: Chairman, I'd like to make one
5 comment based on something that came up in the public
6 comment, if I could.
7 CHMN. BITTER SMITH: Mr. Rich, please.
8 MR. RICH: Thank you.
9 Chairman, Commissioners, I'd like to point out
10 one difference with the grandfathering discussion we
11 just had with Trico that is present in TEP, and someone
12 mentioned it. It's that TEP has been authorized to
13 provide a utility-owned distributed generation --
14 utility-owned rooftop solar product that competes
15 against the private sector.
16 The way that they're offering that product,
17 however, they are offering certainty to their customers.
18 They are offering them a rate that lasts for, I believe
19 it's 20 years, but it's a date certain. And they've
20 promised them that if you all, the Commission, change
21 that rate in a substantial manner that they'll take the
22 solar off their house and give them back the ability to
23 be treated just like every other ratepayer.
24 Well, that works great when you're a monopoly,
25 and when you take that asset down everybody else pays

1 for it. But that doesn't work so well in the private
2 industry. And so I think that's, in particular, a
3 unique scenario in TEP service territory. And they
4 should not be allowed to offer their customers a level
5 of certainty that the private sector is not permitted to
6 offer their customers. Thanks.
7 CHMN. BITTER SMITH: Thank you. Commission
8 Little.
9 COM. LITTLE: Actually a couple of questions for
10 Staff and Legal.
11 To Staff, just a quick question regarding the
12 utility scale -- or excuse me -- the utility-owned
13 rooftop solar that Tucson Electric has.
14 Is that not very limited to a very small number
15 of people?
16 MR. ABINAH: Good afternoon, Chairman,
17 Commission, Elija Abinah for Staff. I don't know the
18 answer right now. I can ask someone to check into it.
19 But I believe there is a limit on what they can do. So
20 subject to check, the answer is yes.
21 COM. LITTLE: Because I -- I'm recalling another
22 proceeding that was going along at about the same time
23 which involved utility-owned rooftop solar for Arizona
24 Public Service. And that was very specifically limited
25 to a certain size community. And I believe, if I

1 remember correctly, the project was characterized as
2 more of a prototype or experimental-type project, which,
3 you know, I think there's ample precedent for the
4 Commission and the Utilities to protect people that are
5 on what are considered to be experimental rates.
6 Is that not your understanding as well?
7 MR. ABINAH: Yes, Chairman and Commissioner
8 Little, again, Elija Abinah, for Staff. Again I believe
9 it's a pilot program, and Commission in the past has
10 approved pilot program for companies. So as to the
11 number, I believe TEP should give you the number of the
12 system that they are allowed to install.
13 So I'll defer to the company on the number of
14 the systems.
15 But yes, the Commission, in the past, as
16 approved pilot programs for companies.
17 COM. LITTLE: Mr. Patten, do you have that
18 information?
19 MR. PATTEN: I do, Commissioner Little. In the
20 Tucson Electric Power Renewable Energy Standard Plan
21 that was approved by the Commission late last year, the
22 Commission approved a $10 million budget for the pilot
23 program. That was estimated to cover up to 600 homes.
24 COM. LITTLE: Okay.
25 And Mr. Rich, what I don't want to do is

1 invalidate anything you just said, because what you said
2 in the classic market sense, if the utility were
3 actually competing directly against rooftop solar in a
4 meaningful way would be absolutely correct. It would be
5 inappropriate.
6 But in a pilot program like this, I think, you
7 know, there are ample protections for the industry to
8 ensure that the utility is not unfairly competing
9 against competitive rooftop solar installations.
10 So I just wanted to clarify that because, you
11 know, this is a very small, little program.
12 And I think the other -- the other thing I
13 wanted to address to Legal -- and this is a newbie
14 question.
15 In your experience, Ms. Alward, how many times
16 has the Commission approved retroactive rate structures?
17 And I'm not looking for a precise number, but is it
18 frequent, infrequent, nearly, nonexistent? What is your
19 assessment?
20 MS. ALWARD: I would have to say in all of the
21 many years probably it's nearly nonexistent.
22 COM. LITTLE: So what you're really saying is,
23 is that there is no precedent for -- there is no
24 meaningful precedent for retroactive rate changes in
25 this Commission?

1 MS. ALWARD: That's true. And typically, the
2 case law across the country, as well as here, would be
3 against retroactive rate making as a rate making
4 principle.
5 COM. LITTLE: It would almost, in fact, be an
6 ex-postfacto type situation, would it not?
7 MS. ALWARD: Yes, it could be viewed that way.
8 COM. LITTLE: Okay. Thank you.
9 CHMN. BITTER SMITH: Thank you, Commissioner
10 Little.
11 Commissioner Burns.
12 COM. BOB BURNS: Just a couple of points to
13 follow up on Commissioner Little's comments.
14 First of all, I don't know that we used -- I
15 don't think we used the word "approve" in that program,
16 TEP program. It wasn't a -- it wasn't a vote to
17 approve, I don't believe. I could be wrong, but I don't
18 believe that was it.
19 The other thing is on the discussion of whether
20 or not the Commission ever does a retroactive rate
21 increase, I agree that it probably doesn't happen even.
22 But the message that gets sent out if the -- if
23 the utility is sending out to their customers a notice
24 that they're going to go into a rate case and they're
25 going to consider asking for a retroactive rate

1 increase, that's a word that everybody -- or a notice
2 that everybody reads and sees. They don't hear and
3 understand that it doesn't really happen at the
4 Commission.
5 I mean, we don't have that newsletter ability, I
6 guess, is what I'm trying to say. So they have a --
7 they have a much -- much easier method of notifying the
8 public, even if it's not something that might come to
9 pass, so --
10 CHMN. BITTER SMITH: Thank you, Commissioner
11 Burns.
12 Commission Little?
13 COM. LITTLE: Yeah, I'd just like to echo the
14 comments of Commissioner Burns.
15 I think, in the absence of any specific
16 rulemaking, I think, you know, I would agree that it is
17 probably inappropriate to have companies putting out
18 grandfather dates that says this is the date we're going
19 to stick in the sand and it's going to be a retroactive
20 increase.
21 And I say that because of precisely what
22 Ms. Alward just shared with us. It's inappropriate to
23 do that because it simply has no precedent at the
24 Commission. And I -- I would strongly encourage all
25 utilities in the state of Arizona, not just the electric

1 utilities, but all utilities to avoid trying to
2 communicate that message to their ratepayers.
3 CHMN. BITTER SMITH: Thank you, Commissioner
4 Little.
5 Seeing no questions, Commission Stump, if you
6 would move Item Number 28, please.
7 COM. STUMP: Thanks, Madam Chair. I move
8 Item 28.
9 CHMN. BITTER SMITH: Any further discussion?
10 Seeing none, Shea?
11 Commissioner Burns aye Commissioner Forese aye,
12 Commissioner Stump aye, Commissioner Little, aye.
13 Chairman Bitter Smith. Aye. By your votes of five
14 ayes, zero nays, you have passed Item Number 28.
15 * * * * *
16 (Conclusion at 04:15:50.)
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1 C E R T I F I C A T E

2

3 I, Katherine McNally, Certified
4 Transcriptionist, do hereby certify that the foregoing
5 pages 1 to 21 constitute a full, true, and accurate
6 transcript, from electronic recording, of the
7 proceedings had in the foregoing matter, all done to the
8 best of my skill and ability.

9

10 SIGNED and dated this 5th day of January 2015.

11

12

13

14 Katherine A. McNally

15

16 Katherine McNally
Certified Electronic Transcriber
CET**D-323

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Consumers Against Unfair Solar Electric Subsidies (CAUSES) (http://cau-ses.com/)

EXHIBIT
EFCA 5
ADMITTED

Tell the ACC you don't want to pay for increased solar subsidies in your monthly electric bill.

Truth was the first casualty in their attack on SSVEC.

They accused SSVEC of proposing rate increases ranging from 143% to 286% — when in truth the average ratepayer's bill will go up only $3.22 a month if SSVEC's new rate proposal is approved by the ACC.

They cooked up those dishonest statistics by leaving out half the story. Yes, SSVEC proposes to raise the monthly residential charges so as to reduce a backdoor subsidy to solar customers. However, SSVEC also proposes to reduce the amount it charges per kilowatt hour of electricity used — and that's something the solar lobby neglected to mention.

Why? Because when you take the two proposed changes together, the average homeowner's monthly bill would go up only $3.22 a month (or 3.8%). That's a far cry from the dishonest scare tactic numbers they want you to believe. SSVEC supports solar energy but opposes compelling ordinary ratepayers to heavily subsidize it.

The proposed changes will be phased in over four years.

All around the US, electric utilities are raising the basic monthly fees to more nearly cover the cost of the poles, wire, and infrastructure required to produce and distribute electricity, so that people who choose to add solar units will still pay their fair share of the cost of keeping the electric grid available for their backup power or as a means to sell their surplus solar power.

Fields marked with an * are required

Your Full Name *

Your Email *

Your Home Address

Your Zip Code

Send

Dear Commissioners,

We support SSVEC's rate proposal to reduce the subsidy given by ordinary ratepayers to solar users.

We understand that this will be accomplished by raising monthly service fees while providing a corresponding reduction in the kilowatt hour rate.

While we support efforts to promote more solar and renewable energy, we believe that requiring unreasonable subsidies paid by one class of ratepayers to another is unfair and counterproductive.

We are aware that SSVEC tried for years in good faith to negotiate a fair deal for all concerned and was rebuffed time and time again by solar industry lobbyists who rejected any reasonable proposal, thus compelling SSVEC to file for these rate adjustments.

We urge you to approve the SSVEC proposal. It is a fair and reasonable approach that will allow solar development to continue without imposing unfair hidden costs on the 97% of ratepayers who do not have solar units on their homes.

CONSUMERS AGAINST UNFAIR SOLAR ELECTRIC SUBSIDIES (CAUSES) IS AN ADVOCATE FOR THE MEMBERS WHO OWN THEIR NOT-FOR-PROFIT ELECTRIC COOPERATIVES LIKE SSVEC.

EXHIBIT
EFCA 6
ADMITTED

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BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE CHAIRMAN	BOB STUMP COMMISSIONER	BOB BURNS COMMISSIONER
TOM FORESE COMMISSIONER	ANDY TOBIN COMMISSIONER	

IN THE MATTER OF THE APPLICAITON OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS.	**DOCKET NO. E-01575A-15-0312** **THE ENERGY FREEDOM COALITION OF AMERICA'S NOTICE OF FILING THE DIRECT TESTIMONY OF MARK FULMER**

The Energy Freedom Coalition of America ("EFCA") hereby submits the Direct Testimony of Mark Fulmer in the above-referenced matter.

Respectfully submitted this 1st day of April, 2016.

Court S. Rich
Rose Law Group pc
Attorney for Intervenor EFCA

Original and 13 copies filed on
This 15 day of April, 2016 with:

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By: _____

1. Introduction

Q: Please state your name and business address.

A: My name is Mark E. Fulmer. I am a Principal and Co-owner at MRW & Associates, LLC (MRW). MRW is an energy consulting firm founded in 1986 that specializes in power and gas market assessments, regulatory matters, litigation support, expert witness testimony, contract review, and negotiations. My business address is 1814 Franklin Street, Suite 720, Oakland, California 94612.

Q: Please summarize your professional and educational background.

A: I have been an energy consultant with MRW since 1999. During that time, I have worked with non-utility retail energy service providers (both gas and electric), independent power producers, municipalities, end-use customers, consumer advocates, trade organizations, and financial institutions on a variety of matters related to natural gas and electric industry regulation and policy, utility ratemaking, price forecasting, demand-side management and asset valuation. Previously, I worked at Daniel, Mann, Johnson, & Mendenhall, where I consulted to utilities and others on energy efficiency. Prior to that, I worked at Tellus Institute in Boston, Massachusetts, where I consulted to numerous state agencies and non-governmental organizations on integrated resource planning and natural gas and electric industry restructuring.

I hold a Master of Science in Engineering from Princeton University and a Bachelor of Science degree in Engineering from the University of California at Irvine.

Q: Have you previously provided expert witness testimony before state public utility commissions?

A: Yes. Here in Arizona, I have provided testimony before the Arizona Corporation Commission (ACC) on behalf of The Alliance for Solar Choice (TASC) in UNS Electric's ongoing rate case, and on behalf of Constellation Energy and Direct Energy on direct access issues. Elsewhere, I have testified before state utility commissions in California, Hawaii, New Mexico, Pennsylvania, Rhode Island, and Washington. Please see Exhibit MEF-1 for my qualifications and a list of my testimonies.

Q: On whose behalf are you testifying?

A: I am testifying on behalf of Energy Freedom Coalition of America (EFCA). EFCA is committed to ensuring that current and prospective rooftop solar customers are not disadvantaged by the implementation of discriminatory and/or unfair rate design, customer classifications, or assessment of fixed charges. EFCA also fully supports retail net energy metering (NEM), which empowers customer choice by providing fair credit to homes, businesses, churches, schools, public agencies, and other neighborhood places when solar systems generate on-site energy. As such, EFCA is interested in ensuring that Sulphur Springs Valley Electric Cooperative (SSVEC or the Coop) residential rate design does not hamper customer choice.

Q: Please summarize your conclusions and recommendations.

A: My conclusions and recommendations are as follows:

1. I agree with ACC Staff that SSVEC should not be permitted to create a separate discriminatory class for customers who use solar distributed generation (DG) with retail net metering.
2. The rates proposed by SSVEC for residential DG customers, be they "grandfathered in" or not, would remove all the economic value from solar DG. This means that customers with existing DG systems would end up paying more on the new DG rate than they otherwise would on full service, and that a customer contemplating a new solar DG system would experience very long payback on their investment, often exceeding the expected 30 year life of the PV system.
3. I agree with ACC Staff that setting the DG "buy-back" rate at a backward looking short run cost of avoided power does not reflect the true avoided cost value provided by solar DG.
4. If the Commission chooses to implement any changes to DG rates, then existing DG customers should be permanently grandfathered into the current rate structure, including with respect to fixed charges.

Q: Please summarize SSVEC's proposal with respect to residential solar DG rates.

A: SSVEG proposes a number of major changes to its rates for residential customers with solar DG, both current and prospective. First, SSVEC proposes to incrementally increase the monthly service availability charge (MSAC) in the standard residential rate (Schedule R) from $10.25 to $25.00, phased in over four years. The Coop would also reduce the energy charges in the four subsequent phases to generate revenues equal to those in Phase 1. Second, SSVEC proposes to institute a new rate (Schedule R-DG E)

for customers with distributed generation (DG) systems in place on or before April 15, 2015. This rate would include a MSAC that increases from $10.25 to $50.00 phased in over four years, and energy charges that would be fixed at the existing Residential (Schedule R) rate, which includes the wholesale power cost adjustment (WPCA)). Third, SSVEC would create a new rate for customers installing DG systems after April 15, 2015 (Schedule R-DG). This rate would include the same MSAC as the Schedule R-DG E rate and include energy charges which would decrease over each phase "to provide a cost-based rate…which compensates for excess distributed generation energy at the cooperative's avoided cost."[1]

The phase-in of these rates is summarized in Tables 1 and 2, below.

Table 1: Proposed Monthly Service Availability Charges ($)

	Existing	Phase 1	Phase 2	Phase 3	Phase 4
Schedule R	10.25	15.00	18.00	22.00	25.00
Sched. R-DG E	10.25	25.00	33.00	40.00	50.00
Sched. R-DG	10.25	25.00	33.00	40.00	50.00

Table 2: Proposed Energy Charges ($/kWh)

	Existing	Phase 1	Phase 2	Phase 3	Phase 4
Standard	0.119768	0.117518	0.112858	0.106764	0.102038
DG - Grandfathered	0.119768	0.119768	0.119768	0.119768	0.119768
DG - New	0.119768	0.107617	0.095467	0.083316	0.071165

[1] Pre-Filed Direct Testimony of David Hedrick on Behalf of Sulphur Springs Valley Electric Cooperative, Inc., August 31, 2015 (Hedrick), at 28

Q: What alternative does the ACC Staff recommend instead of SSVEC's proposed separate Residential and Residential DG rate schedules?

A: The ACC Staff recommends that SSVEC's proposed Schedule R-DG E and R-DG be denied, and that all DG customers remain on Schedule R.[2] The ACC Staff also proposes slightly different final Schedule R rates than SSVEC, as shown in Table 3 below. Note that the proposed rates shown below are the final rates proposed for approval in this proceeding; SSVEC proposes to phase in these rates over four years, while the ACC Staff proposes to phase in these rates over two years.[3]

Table 3: SSVEC and ACC Staff Final Proposed Rates (after full phase-in)[4]

	SSVEC Schedule R	SSVEC Sched. R-DG E	SSVEC Sched. R-DG	ACC Staff
Fixed ($/month)	$25.00	$50.00	$50.00	$27.00
Energy ($/kWh)	$0.102038	$0.119768	$0.071165	$0.100028

2. SSVEC should not treat DG customers as a separate class or as a sub-class

Q: How has SSVEC proposed to classify Residential DG customers in its Rate Application?

A: SSVEC has proposed to introduce a new customer class for Residential Service customers with Distributed Generation.[5]

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[2] Direct Rate Design Testimony of Eric Van Epps (Van Epps) at 8.
[3] Direct Rate Design Testimony of Ranelle Paladino (Paladino) at 11.
[4] Paladino at 11-14.

1 **Q: Why has SSVEC proposed a new Residential DG customer classification?**

2 A: SSVEC states that "since implementing its Net Metering Tariff Schedule NM, SSVEC
3 has experienced a dramatic increase in the number of customers installing rooftop solar
4 photovoltaic (PV) systems, the most common form of distributed generation (DG). The
5 proliferation of PV systems in SSVEC's service territory has caused a large increase in
6 unrecovered fixed costs attributable to the Cooperative's net metered members."[6]

7

8 **Q: Why does SSVEC believe that increasing solar PV adoption in its territory has**
9 **caused a large increase in unrecovered fixed costs?**

10 A: SSVEC witness Hedrick states, "A customer that installs distributed generation facilities
11 will reduce the energy (kWh) that is purchased from the Cooperative by an amount equal
12 to the generation output of their facility. This reduction in kWh purchased from the
13 cooperative results in a loss of fixed costs being recovered through the energy component
14 of the rate."[7]

15

16 **Q: Are distributed generation customers the only residential customer types who may**
17 **use less energy (fewer kWh) than the average residential customer?**

18 A: No. As discussed in more detail below, several customer types exhibit usage
19 characteristics that are similar to customers who install distributed generation.

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[5] Application of Sulphur Springs Valley Electric Cooperative, Inc. for a Hearing to Determine the Fair Value of its Property for Ratemaking Purposes, to Fix a Just and Reasonable Return Thereon, to Approve Rates Designed to Develop Such Return and for Related Approvals (Application), p. 4.
[6] Pre-Filed Direct Testimony of Creden W. Huber on Behalf of Sulphur Springs Valley Electric Cooperative, Inc., August 31, 2015 (Huber), p. 5.
[7] Hedrick at 11.

Q: How would SSVEC's proposed Residential DG classification differentiate these customers from standard Residential customers?

A: SSVEC's proposed Residential Distributed Generation rate classification would introduce new rate schedules, R-DG E and R-DG, which would apply specifically to residential customers who have installed, or in the future install, distributed generation. Customers on these rate schedules would be billed based on different base rates than standard Residential customers, including fixed charges that will ultimately be twice those charged to standard Residential customers.[8] R-DG customers would pay a fixed charge of $50/month compared to standard Residential customers' fixed charge of $25, if SSVEC's new proposed rate schedules and rate increases are fully implemented.[9]

Q: Does SSVEC propose to create a separate rate schedule for any sub-classes of residential customers other than DG?

A: No. Despite the fact that other residential customers take actions that change their demands on the distribution system, SSVEC treats these residential customers as being fundamentally the same. These actions include installing energy efficiency measures, participating in demand response programs, and installing non-electric appliances, or changing life circumstances (e.g., change in job hours, family members leaving, relegating the house to a vacation home, etc). Singling out DG customers by subjecting them to a separate tariff is not reasonable.

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[8] Application, at 4.
[9] Application, at 4.

Q: Has the Arizona Corporation Commission (ACC) staff addressed the differentiation of a sub-set of Residential customers?

A: Yes. The ACC Staff "is very much opposed to a $50 customer charge and does not believe it is necessary to have a separate Schedule for new and existing DG customers."[10]

Q: Does the ACC Staff believe that residential distributed generation customers are the only sub-class of residential customers that may have different usage profiles than the average residential customer?

A: No. The ACC Staff notes that "there are a number of customer segments that operate in a fashion similar to DG customers"[11] and that "[v]ariations in usage among customers in the same class have increased for a number of reasons (including seasonal customers, vacant homes, and distributed generation)."[12] Notably, the ACC Staff further elaborates that, for example, "seasonal customers may only occupy their homes for 2-3 months a year. In this instance, these customers may or may not be covering their fixed costs and may be contributing to the utility's under-recovery."[13]

As I noted above, customers who take significant measures to reduce electricity usage, either by reducing overall energy usage or converting to natural gas appliances similarly may have significantly different usage profiles than SSVEC's average residential customers. Thus, there are variations in electricity usage across the residential

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[10] Van Epps at 8.
[11] Van Epps at 10.
[12] Paladino at 6.
[13] Van Epps at 10.

customer class, and it does not make sense to differentiate a single sub-class with regard to rate design.

3. Should the ACC modify the residential customer classes, grandfathering of DG customers is required

Q: Does SSVEC propose to treat existing DG customers differently that new ones?

A: Yes. SSVEC proposes that any customer whose DG application was filed prior to April 15, 2015 should be allowed to remain on a net metered tariff; i.e., "grandfathered" onto the "R-DG E" tariff.[14] This, along with the revised Net Metering Tariff Schedule NM-1 would grandfather these customers for twenty years from the date of the customers' DG system installation; compensate customers for DG energy at the full retail energy rate; and allow banking of excess kilowatt-hours from month to month with an annual true-up. Any kilowatt-hours remaining at the time of the true-up would be compensated at the Coops Annual Average Avoided cost per Schedule NM-1 (approximately 3¢/kWh).

Q: Should existing DG customers remain on a rate which allows for full retail rate compensation and month-to-month banking?

A: Yes. Arizonans served by SSVEC made substantial investments in solar DG, in part due to the state and Coop's financial encouragement to do so. For example, the Renewable Energy Standard (RES) established in 2007 requires 15 percent of retail energy sales from ACC–regulated electric utilities to come from renewable energy resources by the

[14] Huber at 7.

year 2025. The rules further require that 30 percent of that renewable amount come from distributed energy resources (distributed Energy resources are installed on the customer's premises to offset customer load). Half of the distributed energy or customer–owned requirement must be met by systems among residential customers. In support of this program, the ACC required SSVEC (and other regulated electric utilities) to provide financial incentives to Arizonans who installed solar DG. The State also provides up to $1,000 tax credit on new solar DG installations.

The Commission should recognize that existing NEM customers have made long-term commitments to DG systems in reliance on existing rates and with the encouragement of the State, which requires customers to interconnect under the NEM tariff. The ACC in its only opportunity to date to rule on grandfathering, rejected Arizona Public Service's request to apply new solar fees retroactively, and instead imposed the fees on new solar users starting 30 days after the order was issued.[15]

Q: Do you have any concerns with SSVEC's proposed R-DG E tariff in this regard?

A: Yes. Even though the Coop proposes to continue net metering for existing DG customers, it is proposing to increase the MSAC from the current $10.25 up to $50 in four steps over four years.[16] Besides being inappropriate to charge residential customers with DG a fixed monthly charge twice that of a residential customer with standard Coop serviced (as described in Section 5 of my testimony), it would also have a profoundly negative impact

[15] ACC Decision 74202 at 29.
[16] Hedrick at 16

on the economics of those residential Coop members who have already installed solar DG.

Furthermore, the April 15, 2015 cutoff date is completely arbitrary. SSVEC did not even file its application requesting the new rates until August 31, 2015. Major changes in policies and rates such as the imposition of Schedule R-DG and R-DG E should not be made retroactive. The Commission, with regards to the APS case, was correct when it held off any rate change until after it had fully ruled on the matter. Were the Commission to allow different rates for DG customers, then it should follow its own precedent and grandfather any existing solar DG customers onto standard residential rates.

The bottom line is that it is unreasonable to change price structures and materially harm customers who made good-faith investments in DG, especially since that customer was encouraged to do so by SSVEC and the State of Arizona. I recommend that the ACC reject SSVEC's proposed MSAC under the R-DG tariff and keep DG customers' rates consistent with the standard residential class rate.

Further, while I am not an attorney, EFCA intends in its brief to make a clear case that this proposal violates Section R14-02-2305 of the Commission Rules which prohibits discriminatory charges against net metered customers.

4. The benefits of solar are not considered in proposed export rate

Q: You note that SSVEC proposes to have new residential solar DG customers be compensated for any power exported to the grid at an "export rate" rather than

banked and credited at effectively the retail rate. What specifically does SSVEC propose?

A: The Coop proposes to compensate all excess distributed generation energy at its Annual Average Avoided Cost, as defined in Net Metering Tariff Schedule NM-1.[17]

Q: What is the Annual Average Avoided Cost?

A: The Annual Average Avoided Cost is the "average wholesale fuel and energy cost per kWh charged by the Cooperative's wholesale power supplier(s) during the previous 12 months calculated with the receipt of the May wholesale power bills."[18]

Q: What is the value of the Annual Average Avoided Cost?

A: Per the Application, this Annual Average Avoided Cost for SSVEC would equal $0.0258/kWh.[19]

Q: Is this a reasonable export rate?

A: No. While the export rate is labeled "avoided cost," I do not believe that it is. Avoided cost should be forward looking. Per the Arizona NEM Rules, "Avoided Costs" means the incremental costs to an Electric Utility for electric energy or capacity or both which, but for the purchase from the Net Metering Facility, such utility would generate itself or purchase from another source."[20] Instead, the proposed export rate would be based

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[17] Huber at 8.
[18] Schedule NM-1 (Application attachment)
[19] Schedule NM-1 (Application attachment)
[20] R14-2-2302

backward-looking: the rate charged by the Coop's wholesale provider(s) during the prior 12 months. This clearly is not consistent with the notion of avoided costs.

Second, the proposed avoided cost export rate is very short-sighted and does not reflect the long-run avoided cost—and value—that solar DG provides to SSVEC.

Q: What elements should be considered when compensating solar DG users when they provide power back to the grid?

A: I believe that the utility must consider a full range of costs that can be avoided by solar DG. For example, in the recent UNSE rate case I testified that when I considered the full suite of benefits that solar DG can provide, the proper "avoided cost" or "value of solar" for that utility was on the order of 9.5¢ to 14¢ per kilowatt-hour.[21] In arriving at that value, I considered six elements taken from the 2014 UNS Electric Integrated Resource Plan (IRP):

1. **Avoided energy**: Avoided energy is the variable cost of power plants that is avoided due to the effective load reductions provided by solar DG. They can be calculated assuming a specific proxy power plant (e.g., a combustion turbine) or using forward looking wholesale market prices. This is the only element that SSVEC includes in its avoided cost.
2. **Avoided generation capacity:** Avoided generation capacity cost is value of the forgone or deferred power plants caused by the load reduction provided by solar DG.

[21] Docket No. E-04204A-15-0142, Surrebuttal of Mark Fulmer For The Alliance for Solar Choice, at 30-40.

3. **Avoided transmission costs**: Avoided transmission cost is value of the forgone, deferred or downsized transmission investments caused by the load reduction provided by solar DG.
4. **Avoided distribution costs:** Avoided distribution cost is value of the forgone, deferred or downsized distribution investments caused by the load reduction provided by solar DG.
5. **Avoided greenhouse gas (GHG) emissions costs**: Avoided GHG emissions costs are the emissions associated with the reduced output of the marginal power plants which set the avoided energy cost. These emissions are multiplied by an assumed carbon dioxide (CO_2) cost ($/metric ton) to arrive at the avoided greenhouse gas cost.
6. **Incremental integration costs**: Even with geographic diversity, there is a cost to integrate solar DG into the grid. These integration costs cover the incremental ancillary services to support the added solar generation.

For completeness, I also discussed and provided estimated values for avoided environmental externalities. Like with avoided greenhouse gas emissions costs, solar DG can reduce criteria air pollutant (NO_x, SO_x and fine particulate matter) emissions associated with the reduced output of the marginal power plants which set the avoided energy cost. I also included the estimated marginal cost of water. Given the arid climate of Arizona and the increasing demand for water in the Southwest, including the marginal cost of water (i.e., the cost of water reclamation or desalinization) is appropriate.

Q: What did you conclude from your value of solar analysis?

A: I concluded that the levelized value of solar (9.5-14¢/kWh) "is relatively close to UNSE's average residential rate, indicating that in the long run, full-service customers would be held neutral and, in fact, could even receive a net benefit by continuing current net metering policies."[22]

Q: Do you think this conclusion is applicable here, too?

A: While many details of SSVEC's system differ from UNS electric, I believe that were I to conduct an analogous analysis, my conclusion would be similar.

Q: What does Staff state concerning the export rate?

A: First, ACC Staff opposes annual updates to export rate and instead recommends that it be updated every three years. Second, Staff recommends that export credit rate be higher than utility "avoided cost" but lower than the retail rate. It further recommends that it be based on value of DG docket.

5. SSVEC's proposed DG rates are inadequate

Q: Did you analyze the economic effect of SSVEC's proposed residential rates for DG customers?

A: Yes. I found SVEC's proposal renders solar not cost-effective for residential customers. First, the proposed variable electric rate in Phase 4, 7.1¢/kWh, is lower than the typical solar lease rate of 9¢/kWh. This means that a customer using a no upfront-cost lease

[22] Docket No. E-04204A-15-0142, Surrebuttal of Mark Fulmer For The Alliance for Solar Choice, at 3.

would experience negative cash flow from day one. This is regardless of whether the proposed buyback rate is approved or not; even with simple net metering, it does not work. Second, if a customer purchases a solar system for their home, it would not pay back in a reasonable amount of time. Again, this clearly indicates that the proposed rate will simply not work.

Q: Please describe how you came to this conclusion.

A: In the UNS Electric rate case (Docket No. E-04204A-15-0142), Arizona Public Service introduced a spreadsheet model to evaluate the costs and benefits of rooftop solar from a customer perspective. Various parties, including ACC Staff and TASC, used this model with refined inputs to evaluate UNS's proposal. For my analysis here, I input the proposed Phase 1 and Phase 4 SSVEC rates into the model, along with the solar PV output profile for Bisbee.

Q: What are your basic input assumptions?

A: First, I used the Phase 1 and Phase 4 proposed rates from SSVEC's application for both full service (Schedule R) and those with solar DG (schedules R-DG and R-DG E). Second, I used the solar system size (5.62 kW) and approximate output (1,013 kWh) from Mr. Hedrick's testimony.[23] As noted above, for the alternative I assumed the solar output profile for a south-facing panel in Bisbee, per the National Renewable Energy Laboratory's online tool, PV Watts. These data suggest that the solar output Mr. Hedricks

[23] Hedricks at 9.

used—a capacity factor of 25%[24]—was excessive. That is, he assumed a more efficient solar panel than NREL. I also adjusted the model's default degradation factor (how much output it loses with age) from 0.25% to 0.5%. I also added an annual maintenance cost of $21 per kilowatt per year.[25] Last, I adjusted the assumed cost of the system up from that used by Mr. Liu in the UNSE rate case ($2,750/kW)[26] to the value presented in a recent Lawrence Berkeley National Laboratory (LBNL) study, which I had also used in my UNSE Testimony ($3,600/kW).[27]

These and other assumptions are summarized in Table 4.

Table 4. Assumptions for Economics of Solar DG Analysis

	SSVEC Solar Performance, Staff Costs	Adjusted Solar Performance, Staff Costs	Adjusted Solar Performance, TASC Costs
Location	Bisbee	Bisbee	Bisbee
Average Customer Use, kWh	1,285	1,285	1,285
Solar Size (DC), kW	6.6	7.3	7.3
Solar Size, (AC), kW	5.3	6.3	6.3
Degradation, % per year	0.25%	0.5%	0.5%
Maintenance Cost, $/year	0	$21/kW	$21/kW
Ave. 1st Year monthly solar output	1,028	1,028	1,028
Solar Cost, $/kW DC	$2,750	$2,750	$3,600
Solar Lease Rate, ¢/kWh	9.0[28]	9.0	9.0
SSVEC and Lease rate escalation rate	3.17%	3.17%	3.17%
User discount rate	7.2%	7.2%	7.2%

[24] *Ibid.*
[25] NREL, Distributed Generation Renewable Energy Estimate of Costs, http://www.nrel.gov/analysis/tech_lcoe_re_cost_est.html
[26] E-04204A-15-0142, Yue Liu Subrebuttal Testimony (Liu) at 7
[27] Lawrence Berkeley National Laboratory, Tracking the Sun VIII, August 2016, p. 32
Note also this is consistent with the NREL data source from which I took the operating and maintenance cost.
[28] Liu at 7. Evidence that lease rates are in fact higher than this was presented in E-04204A-15-0142

Q: Why did you use a discounted payback as a metric to evaluate the economics of purchasing a solar system?

A: A discounted payback is the number of years it would take for an investment in solar PV to pay off in comparison to an investment with a return equal to the discount rate. In this way, it accounts for the opportunity cost and time value of money. Thus, if the discounted payback is the life of the asset, approximately 30 years, then the customer would be indifferent between making an investment in solar versus an investment of similar risk with a life of 30 years at the assumed discount rate. If the discounted payback is less than the life of the asset, then compared to the alternative investment, solar is favorable. If not, then the solar investment is not favorable.

Q: What did this analysis find?

A: My analysis is summarized in Table 5. The table shows three columns. The first column shows the results with the SSVEC solar performance assumptions plus the remaining default assumptions made by ACC Staff Liu in the UNSE rate case. The second column shows results with the performance assumption changed I describe above. The third column shows the results with the adjusted solar assumptions plus the higher solar system cost.

The top half of the table shows the results for customers who have existing solar DG systems (i.e., are grandfathered into the current energy rates plus the increasing monthly charge); the bottom half shows the results for customers who might install solar DG in the future.

The results sections show four metrics:

- The annual customer savings with a solar lease of 9¢/kWh.
- The "breakeven" lease rate. That is, the minimum lease rate that would generate positive cash flows.
- The discounted payback for a customer who directly invested in as solar DG system.

As the table shows, the results for grandfathered customers are poor from the start. In the Phase 1 year, a 9¢/kWh lease would still result in a loss of about $90. By the time the Phase 4 rates are in effect, the results are worse: the customer on a 9¢/kWh lease would now be paying $239 more with the solar system per year than on taking full service from SSVEC under the standard Schedule R rate.

As the bottom half of the table (the Schedule R-DG rates) shows, the Phase 1 rates would generate first-year savings of over $500 with the 9¢/kWh lease and a discounted payback of less than 15 years. However, the results change dramatically by the time the Phase 4 rates would be in effect. Leases would have to be offered at 5.6¢/kWh or less in order to be economic, which is well below what solar providers currently offer. If a customer purchases a system, even with the optimistic assumption set (first column) the discounted payback would be greater than the life of the system.

Q: What does your analysis mean for solar customers?

A: First, a customer with an existing solar lease will very likely have higher total electricity bills with the PV than without it. Second, the poor up-front economics will likely dramatically reduce, if not eliminate, future investment in solar DG in the SSVEC territory.

Table 5. Economics of Solar DG Under SSVEC Propsoal

	SSVEC Solar Performance, Staff Costs	Adjusted Solar Performance, Staff Costs	Adjusted Solar Performance, TASC Costs
Grandfathered Results (DG-E)			
Phase 1			
Ave. Annual Savings (cost), Lease*	($89)	($89)	($89)
Break-even lease rate, c/kWh	$0.083	$0.083	$0.083
Phase 4			
Ave. Annual Savings (cost), Lease*	($239)	($239)	($239)
Break-even lease rate, c/kWh	$0.083	$0.071	$0.071
New System Results (DG)			
Phase 1			
Ave. Annual Savings (cost), Lease*	$565	$565	$565
Break-even lease rate, c/kWh	$0.136	$0.136	$0.136
Discounted Payback (years), Purchase	13.2	22.8	>30
Phase 4			
Ave. Annual Savings (cost), Lease*	($423)	($423)	($423)
Break-even lease rate, c/kWh	$0.056	$0.056	$0.056
Discounted Payback (years), Purchase	>30	>>30	>>30

Q: How does SSVEC's proposal impact rates for residential customers with and without solar DG?

A: Table 6 below shows the average bill changes for residential customers, as presented by SSVEC. For those under full service Schedule R rates, the modest 3.5% increase in Phase 1 is followed by negligible decreases in the following phases. For the customers with DG, the increases start at 33.3% or 40.6%, and increase at rates in the double-digits in each of the following phases (but for the DG rate in Phase 3). Not only are the increases for DG customers greater on a percentage basis, but on an absolute basis, too.

The total increase for the average full-service residential customer is (through Phase 4) less than $2.75 per month, while the "grandfathered" DG customer would have an average bill increase of nearly $50. A customer with a new DG system would be paying SSVEC $30 more per month than they would have had the current rates remained in effect. These are obviously very large impacts on a single segment of the residential class. I have difficulty imaging a commission approving a rate change that increase the average residential customer's rates by nearly $600 per year ($50/month), but that is indeed what SSVEC is requesting for customers with solar DG.

Table 6. Comparison of Average Residential Monthly Bill Change from Prior Phases (as presented in SSVEC's application)[29]

	Standard Residential	DG-E (Grandfathered)	DG (New)
Phase 1	+$3.22 (+3.5%)	+$14.75 (+40.6%)	+$12.10 (+33.3%)
Phase 2	-$0.18 (-0.2%)	+$8.00 (+15.6%)	+$5.35 (+11.1%)
Phase 3	-$0.16 (-0.2%)	+$7.00 (+11.8%)	+$4.35 (+8.1%)
Phase 4	-$0.22 (-0.2%)	+$10.00 (+15.1%)	+$7.35 (+12.6%)
Total	+$2.72	+$49.75	+$29.15

Q: Does SSVEC's customer communication on the rate, as presented in CWH-1, confirm these impacts?

A: No. The notification of the proposed rate changes, Attachment CWK-1 to Mr. Huber's testimony, states:

> If you installed a system or submitted an interconnection request prior to April 15, 2015, SSVEC is proposing that these systems be grandfathered

[29] Exhibit H-4.01 to H-4.03.

> for 20 years from the date of activation. **So you keep the deal you now have.** (Emphasis added)

While the per kilowatt-hour charges won't change under SSVEC's proposal, to suggest that existing DG customers will "keep the deal" that they have is not consistent with a nearly $600 per year increase in SSVEC bills.

6. ACC Staff's preference for a three-part rate should be disregarded

Q: What does the ACC Staff say about rate design?

A: Consistent with the testimonies in the UNS Electric Rate Case, the Staff states that it would prefer to implement a mandatory three-part rate for residential and small commercial customers served by SSVEC.[30] Staff does not make that recommendation here because SSVEC lacks the metering infrastructure to implement such a rate.[31]

Q: What is a three-part rate?

A: A three-part rate is one in which a customer is billed on three elements: a fixed, per customer charge analogous to SSVEC's monthly service availability charge; a per kilowatt-hour charge for electricity consumed; and a per kilowatt demand charge based upon the customer's peak usage during a prescribed length of time (e.g., 15 minutes).

Q: Do you agree with Staff's preference for a three-part rate?

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[30] Epps at 3.
[31] Paladino at 7.

1 A: No. While I agree that SSVEC appears to lack the underlying infrastructure to implement
2 a three-part rate, as I testified in the UNS Electric rate case, I cannot recommend it for
3 residential customers even if the technology to do so was in place.
4
5 **Q: Can you summarize your reasons for opposing a three-part rate?**
6 A: Yes. As I noted in my UNSE rate case testimony, a three-part rate is "not ready for prime
7 time." There, I noted the recent Regulatory Assistance Project paper urging "great
8 caution" in designing residential demand charges.[32] In particular, I testified that there is
9 currently no foundation for UNSE to impose a mandatory three-part time-of-use (TOU)
10 rate on residential customers. I pointed out that there has been only a smattering of opt-in
11 pilot programs testing residential customer understanding of and response to demand
12 charges and to my knowledge no utility has yet implemented mandatory residential
13 TOU.[33] No party in that proceeding provided evidence that residential customers
14 generally understand demand charges and will be able be able to react to the "price
15 signals" they send. Additional controlled studies are needed to ascertain how much
16 customers would actually understand about demand charges. Additional affordable tools
17 need to be in place for customers to meaningfully react to demand charges and TOU
18 before the ACC contemplates implementing such a rate.
19 **Q: Does this conclude you direct testimony?**
20 A: Yes.

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[32] Lazar, Jim, November 2015. "Use Great Caution in Design of Residential Demand Charges," Montpelier: Regulatory Assistance Project. Project is a nonprofit that "advises public officials on regulatory and competitive utility policies."
[33] Docket No. E-04204A-15-0142, Fulmer Surrebuttal Testimony at 2.

Exhibit MEF-1

MARK E. FULMER

PROFESSIONAL EXPERIENCE

Principal
MRW & Associates, LLC
(1999 - Present)
Conduct economic and technical studies in support of clients involved in regulatory and legislative proceedings and power project development. Advise clients on the economic issues associated with taking electricity and natural gas service from non-utility sources or self-generating power. Work includes expert testimony on rate matters; economic analysis of end-use energy-efficiency projects, retail rate and wholesale price forecasting, and pro forma analysis of cogeneration and distributed generation facilities.

Project Engineer
Daniel, Mann, Johnson & Mendenhall
(1996 - 1999)
Acted as project manager and technical advisor on energy efficiency projects. Work included management of PG&E program to promote innovative energy efficient technologies for large electricity users. Coordinated the implementation of an intranet-based energy efficiency library. Directed technical and market analyses of small commercial and residential emerging technologies.

Associate
Tellus Institute
(1990-1996)
Advised public utility commissions in five states on electric and gas industry deregulation issues. Submitted testimony on the rate design of a natural gas utility to the Pennsylvania Public Utilities Commission. Testified before the Hawaii PUC on behalf of a gas distribution utility concerning a competing electric utility's demand-side management plan. Analyzed national energy policies for a set of non-governmental agencies, including critiquing the DOE's national energy forecasting model. Developed model to track transportation energy use and emissions and used the model to evaluate state-level transportation policies. Developed model to track greenhouse gas emission reductions resulting from state-level carbon taxes.

Research Assistant
Center for Energy and Environmental Studies, Princeton University
(1988-1990)
Researched the technical and economic viability of gas turbine cogeneration using biomass in the cane sugar and alcohol industries. First researcher to apply "pinch" analysis and a mixed-integer linear programming model to minimize energy use in cane sugar refineries and alcohol distilleries.

EDUCATION

M.S.E., Mechanical and Aerospace Engineering, Princeton University, 1991
B.S., Mechanical Engineering, University of California, Irvine, 1986

SELECTED PUBLICATIONS

1. A Technical and Economic Assessment of the Co-Production of Electricity and Alcohol From Sugar Cane. Presented at the *International Engineering Conference on Energy Conversion (IECEC-90).* American Institute of Chemical Engineers. New York, NY. August 1990. Principal author and presenter.

2. Cogeneration Applications of Biomass Gasifier/Gas Turbine Technologies in the Cane Sugar and Alcohol Industries. Proceedings, *Energy and Environment in the 21st Century*, MIT Press. Cambridge, Massachusetts. 1991. Co-author.

3. The Environmental Impacts of Demand-Side Management. Electric Power Research Institute report TR-101673. 1992. Co-author.

4. The Role of Gas Heat Pumps in Electric DSM. Presented at the 6th National Demand-Side Management Conference. Miami Beach, Florida. March 1993. Principal author and presenter.

5. Applying an Integrated Energy/Environmental Framework to the Analysis of Alternative Transportation Fuels. Invited paper at the European Council for an Energy Efficient Economy (ECEEE) 1993 Summer Study. Principal author.

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16. CPUC Rulemaking 03-10-003
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17. CPUC Rulemaking 04-12-014
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18. CPUC Rulemaking 03-10-003
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Testimony of Mark Fulmer on Behalf of the Alliance for Retail Energy Markets and the Direct Access Customer Coalition Regarding the Rate Treatment of the San Onofre Nuclear Generating Station. September 10, 2013.

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61. Washington Utilities & Transportation Commission Docket UE-140762 ET AL.
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62. CPUC Rulemaking 12-06-013
Rebuttal Testimony of Mark Fulmer on Behalf of the Interstate Renewable Energy Council, Inc. Concerning Residential Electric Rate Design Reform. October 17, 2014.

63. Washington Utilities & Transportation Commission Docket UE-140762 ET AL.
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Testimony of Mark E. Fulmer on SCE's Application to Establish Marginal Costs, Allocate Revenues, Design Rates, and Implement Additional Dynamic Pricing Rates. March 13, 2015.

66. CPUC Application 13-12-013
Testimony of Mark Fulmer on Behalf of the City of Long Beach, Gas & Oil Department. May, 8, 2015.

67. CPUC Application 14-11-003
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Rebuttal Testimony of Mark Fulmer on Behalf of the City of Long Beach, Gas & Oil Department. June 12, 2015.

69. CPUC Application 14-12-017
Testimony of Mark Fulmer on Behalf of the City of Long Beach, Gas & Oil Department. June 22, 2015.

70. CPUC Application 14-12-007
Testimony of Mark Fulmer and Laura Norin on Behalf of the Utility Consumers' Action Network Concerning Risk Assignment of SONGS Decommissioning Costs. July 15, 2015.

71. Federal Energy Regulatory Commission Docket Nos. EL02-60-007, EL02-62-006 (Consolidated)
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76. Arizona Corporation Commission No. E-04204A-15-0142
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    Testimony of Mark Fulmer on Behalf of the City of Long Beach, Gas & Oil Department. March 11, 2016.

EXHIBIT
EFCA 7
ADMITTED

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BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE CHAIRMAN	BOB STUMP COMMISSIONER	BOB BURNS COMMISSIONER
TOM FORESE COMMISSIONER	ANDY TOBIN COMMISSIONER	

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS.	**DOCKET NO. E-01575A-15-0312** **THE ENERGY FREEDOM COALITION OF AMERICA'S NOTICE OF FILING THE SURREBUTTAL TESTIMONY OF MARK FULMER**

The Energy Freedom Coalition of America ("EFCA") hereby submits the Surrebuttal Testimony of Mark Fulmer in the above-referenced matter.

Respectfully submitted this 6th day of May, 2016.

/s/ Court S. Rich
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Rose Law Group pc
Attorney for EFCA

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BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE CHAIRMAN	BOB STUMP COMMISSIONER	BOB BURNS COMMISSIONER
TOM FORESE COMMISSIONER	ANDY TOBIN COMMISSIONER	

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS.	**DOCKET NO. E-01575A-15-0312**

SURREBUTTAL TESTIMONY OF MARK FULMER

I. Introduction and Summary

Q: Please state your name.

A: Mark Fulmer.

Q: Did you provide answering testimony in this proceeding on April 1, 2016 on behalf of Energy Freedom Coalition of America (EFCA)?

A: Yes.

Q: What is the purpose of this surrebuttal testimony?

A: I respond to a number of issues raised by Sulphur Springs Valley Electric Cooperative (SSVEC) witness David Hedrick in his April 22, 2016 rebuttal testimony. My silence on any particular issue should not be construed as agreement or assent.

Q: Please summarize your conclusions.

A: My conclusions are as follows. First, SSVEC's own data refutes Mr. Hedrick's assertion that the usage characteristics of residential customers with distributed generation (DG) resources, such as rooftop solar, differ so much from the rest of the residential class that they constitute a unique rate class. Second, Mr. Hedrick's assertion that rates be based strictly and solely on short-term costs is incorrect and ignores other policy and ratemaking goals. Third, contrary to Mr. Hedrick's testimony, how rates financially impact the opportunity for Arizonans to cost-effectively use solar DG on their own

homes is quite important. Last, I demonstrate that the solar PV financial analysis which I provided in my opening testimony is relevant to this proceeding.

II. Customers with Solar Distributed Generation Should Not be Forced into a Separate Rate Class

Q: SSVEC witness Mr. Hedrick claims that "[c]ustomers with installed DG exhibit unique usage characteristics...that distinguish them from all other customers."[1] Is this accurate?

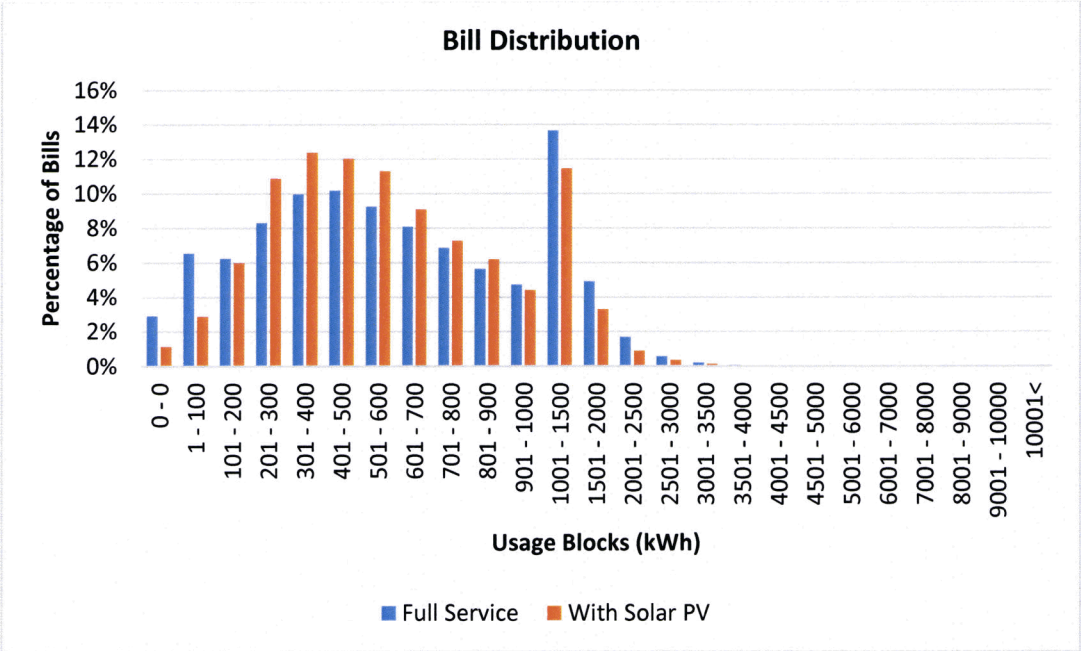
A: No. SSVEC's own data refutes this and illustrates that a DG customer's usage is within the range of a typical SSVEC customer. Schedules H-5.0 and H-5.2 from SSVEC's Application show a residential bill-frequency analysis. That is, these schedules show the number of residential bills with energy usage in different bins, e.g.: 100-200 kWhs, 201-300 kWh, 301-400 kWh etc. Schedules H-5.0 and H-5.2 contain the number of bills divided into 25 such usage bins. For example, in 2014, there were 32,251 full service customer monthly bills that recorded between 1 and 100 kWh. Similarly, there were 317 customer bills with rooftop solar PV that recorded between 1 and 100 kWh. Using this bill frequency data, I generated a figure showing the distribution of bills for both full service residential customers and residential customers with solar PV. The bill counts are shown in a percentage basis by dividing each bin's bill count by the total number of bills for both schedules.

Figure 1 shows the similarity between these two groups. Even the "spike" in bills in the 1,001-1,500 kWh usage block (due to the fact that the bin size when from 100 kWh

[1] Hedrick Rebuttal at 12.

increments to 500 kWh increments) is present in both groups. From this graph, I see no "unique usage characteristics" of solar PV customers which justify moving them to a separate class.

Figure 1

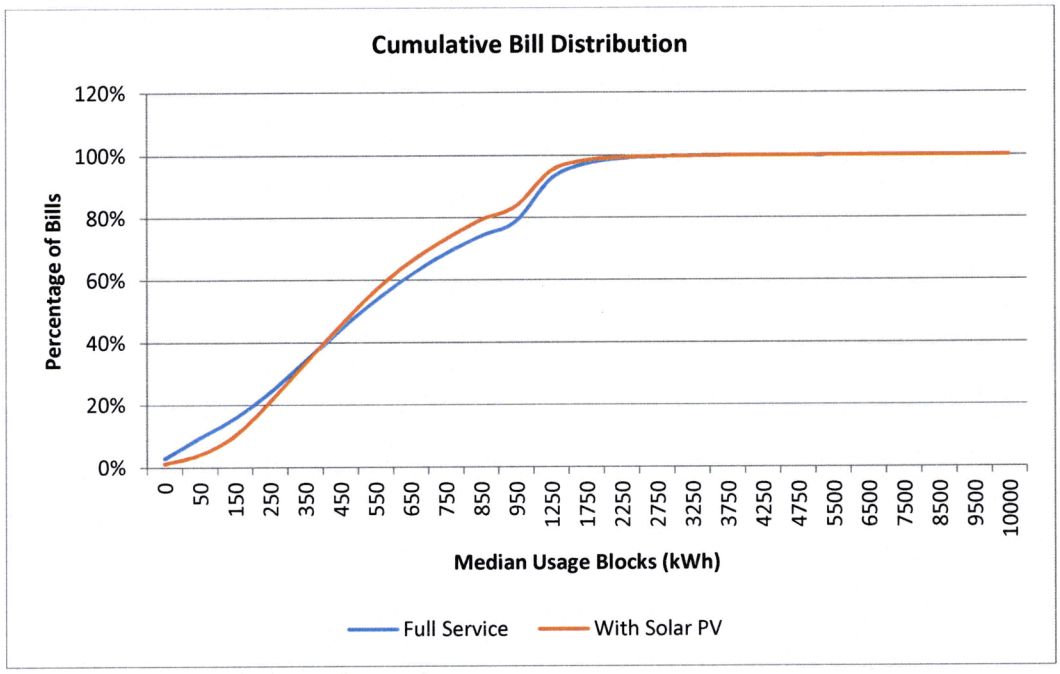


In fact, full service residential customers have a greater impact in the first three lower-usage blocks. For full-service customers 16% of the bills (77,373 total) were for usage less than 200 kWh. For solar PV customers, these very low use customers account for only 10% of bills for customer with solar PV (1,103 total). To state this differently, of the 77,373 bills for use under 200 kWhs, only 1.4% are associated with accounts with solar PV.

To further illustrate this, I generated a cumulative distribution of bills. The blue line, representing full service customers, is higher than the orange line, representing

customers with rooftop solar PV, showing that at these lower usage blocks, residential customers, not solar PV customers, have a larger impact. And, as with Figure 1, the two curves in Figure 2 are not at all as drastically different as Mr. Hedrick implies in his rebuttal testimony.

Figure 2



Q: How else does Mr. Hedrick justify placing solar DG customers into a separate rate class?

A: Mr. Hedrick justifies a new class by the increase of the number of customers with rooftop solar PV: "In January 2014, SSVEC had 781 Residential customers with installed DG. By the end of 2014, SSVEC had 1,013 residential customers with installed DG, or growth of approximately 30% in one year. As of April 1, 2016, SSVEC is serving 1,147

residential customers with installed DG."[2] Notwithstanding that 2014-2016 represented only a 13% increase in solar PV customers, as of December 31, 2014, solar PV customers accounted for 2% of SSVEC's customer class. Nevertheless, Mr. Hedrick contends that "[t]he number of customers with installed DG has increased such that the magnitude of the number of customers, coupled with the lost fixed cost problem, has established this as an appropriate stand-alone class of customers."[3] I find it striking he would assert that such a small percentage of residential customers, whose monthly usage is not materially different than the residential class as a whole, would merit their own class. They clearly do not.

Finally, Mr. Hedrick states that "[t]he average kWh consumption for Residential customers without installed DG is 677 kWh per month"[4] Referencing the same bill frequency data used to generate Figures 1 and 2, the average kWh consumption for customers with solar PV is 642. This consumption level would place full service residential customers and customers with rooftop solar PV in the same usage block, per SSVEC's own usage block delineations. As such, Mr. Hedrick's conclusion that rooftop solar PV customer usage is vastly different than full service customers is not supported by the evidence.

Q: Does Mr. Hedrick compare DG customers' actions to those employing energy efficiency measures?

A: Yes. He states,

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[2] Hedrick Rebuttal at 13.
[3] Hedrick Rebuttal at 13.
[4] Hedrick Rebuttal at 12.

> Customers employing energy efficiency measures are reducing the level of the customer's energy requirements whereas a customer with installed DG is not reducing the level of the customer's energy requirements but rather is providing another source of power for those energy requirements during a short time period of the day.[5]

Q: Do you concur with this differentiation?

A: No, I do not. I find it punitive to subject customers who have chosen to use a particular technology in their home to a different rate schedule. It doesn't matter if they never export power to the grid, they would still be required to take service on a tariff that may not—and likely will not—be in their best interest. In essence, SSVEC is proposing to "look behind the meter" into someone's home (or at minimum on their roof) to see if they are using a particular technology and then force them onto a different rate. This strikes me as unreasonable.[6] SSVEC does not require customers with particularly efficient (or inefficient) appliances to register and be placed on a special rate. Doing so for customers who take a different action that changes their metered electricity profile is not reasonable.

Furthermore, while customers with DG will have a different net load profiles than ones without, customers without DG still place widely-varying loads on the grid. For example, a three-ton air conditioner can use 3.5-4 kW, as does an electric clothes dryer. An electric water heater can draw over 5 kW. These appliances, cycling on and off, also result in large, near-instantaneous changes in residential load, but whose presence does not trigger a new rate class.

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[5] Hedrick Rebuttal at 14.

[6] The exception to this is when something on the customer-side of the meter could affect safety. Hence it is appropriate for interconnection but not for billing.

III. Basing Solar Export Compensation on Forward-Looking Avoided Costs is Reasonable

Q: Mr. Hedrick expresses concern that you recommend that the export rate be based on a forward looking basis. Do you agree with his concerns?

A. No. I stated that compensation provided to customers who provide power to the SSVEC grid should be based upon the value of that power. While in principle I suspect that Mr. Hedrick and I agree on this, we differ markedly on what the value of that power is. Mr. Hedrick takes the narrow view that it be based strictly on the cost of power from AEPCO, $0.0285/kWh. As I expressed in my answering testimony, I believe that this grossly undervalues solar.

Mr. Hedrick states that SSVEC's contracts with AEPCO provide "the vast majority of the power used to serve customers, including a fixed capacity charge." However, the fixed capacity charge is not fixed forever. If SSVEC needs more or less capacity from AEPCO, it will, at certain intervals be able to adjust its agreement. Furthermore, as AEPCO upgrades or replaces equipment for environmental compliance, or simply age, lower demand from SSVEC and other member cooperatives can reduce the capacity needed from AEPCO. Simply because SSVEC's current agreement includes capacity payments, does not mean it cannot change.

Q: Mr. Hedrick also expresses skepticism that demand reduction from rooftop DG would impact transmission investment.[7] Is avoided transmission associated with rooftop solar real?

A: Yes. For example, the California Independent System Operator's (Cal-ISO's) 2015-2016 Transmission Plan calls for canceling 13 sub-transmission projects in the Pacific Gas & Electric (PG&E) Company's service area. This cancelation saves PG&E's customers an investment of $192 million. As noted by PG&E representative Eric Eisenman, these cancellations were made to enable state's implementation of energy efficiency and rooftop solar policies:

> In his remarks to the [Cal-ISO] board, Eric Eisenman, Director of ISO relations and FERC policy for PG&E, conveyed the utility's support for the plan, including the project cancellations.
>
> "The need for those is just not there anymore," he said. "We really appreciate the reappraisal of those projects." Load forecast has flattened in the service area from a combination of energy efficiency and rooftop solar, which eliminates the need for these upgrades, Eisenman said.
>
> The utility plans to work with Cal-ISO on planning to prevent overbuilding and to ensure customers have affordable services.[8]

Thus, not only can rooftop solar contribute to the reduction in transmission investment, it can be good for the utility, too, by preventing overbuilding and contributing to affordable utility services.

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[7] Hedrick Rebuttal at 19.

[8] *California Energy Markets*, No. 1379, page 10. (April 1, 2016). Included as Exhibit_MEF-1.

IV. The Commission Should Consider the Financial Impact on Solar Customers of SSVEC's Rate Proposals

Q: On page 21 of his testimony, Mr. Hedrick states that the rate increases in SSVEC's proposal are justified and that "[its] rate proposals are not predicated on whether the rates charged or credits provided will ensure the financial success of the business model of unregulated solar companies." Do you concur?

A: There are multiple, sometimes conflicting goals, that must be addressed when setting utility rates. While "ensuring the financial success" of a competitor is not one, supporting state policies and not alienating customers are. ACC Decision 74202 notes, "**Once the costs and benefits of DG have been adequately quantified and valued**, the allocation of these [utility fixed costs] and benefits equitably among customers is a matter of rate design." (emphasis added) SSVEC has not adequately considered, quantified, or valued the costs and benefits of DG, and as such, implementing a rate structure that I have demonstrated that would materially harm the economics of rooftop solar would be at odds with ACC policy and Decision 74202.

Q: In your answering testimony, you provided a spreadsheet analysis showing that the rates proposed by SSVEC would result in rooftop solar PV becoming nearly uneconomic. On Pages 23 and 24, Mr. Hedrick asserts that this has no "bearing or validity" in this case. What is the basis for his objections?

A: Mr. Hedrick finds the analysis to be irrelevant for two reasons. First he states the fact that the model I used, which was developed in the UNS Electric rate case, is irrelevant

because "UNS Electric is an investor owned utility and its cost structure and corporate structure are very different that SSVEC's," and that the solar data used in the analysis was based on the climatic conditions in Bisbee, Arizona, which is served Arizona Public Service and not by SSVEC.[9]

Q: Is his objection that you used a model developed in the UNS Electric rate case valid?

A: No. This objection isn't relevant. The model used simply calculates relative bill savings for solar customers under different rate structures. Any utility's rates could be input into the model, generating equally valid results. The fact that it was developed in another docket does not change this. Because I used SSVEC proposed rates in the analysis, the fact that the model was not developed specifically for this proceeding is not relevant.

Q: Why did you use the model from the UNS Electric rate case?

A: I used it because it had been thoroughly vetted. It was used by ACC Staff, UNS Electric and Arizona Public Service in that proceeding. By using a tool that has been validated by parties with very different perspectives, my intent was to avoid any controversy concerning the tool used so that parties and the Commission could focus on the results.

[9] Hedrick Rebuttal at 24.

Q: How did Bisbee enter into your analysis?

A: Where a solar panel is located impacts how much power it can generate and when that power is generated. Besides likely incidences of cloud cover, how far away from the equator a PV system is impacts when it generates. In the US, the further north the generator is, the more hours in the summer it will produce power (as the summer days in the north are longer than in the south). In the winter, this is reversed. Furthermore, "when" a PV system generates power, relative in local time, depends on where geographically it is in the time zone. Because both time-of-use rates and the time at which utility systems peak are measured according to the local time zone, the east-west location of the PV system is also important.

Because the location of a solar panel is important, the National Renewable Energy Laboratory provides researchers and analysts the hourly generation profile for solar panels at selected locations throughout the United States. In performing my analysis, I chose the location that best matched SSVEC's service area in southeastern Arizona, which happened to be Bisbee.

Q: Does the fact that Bisbee isn't in SSVEC's service area invalidate your results?

A: No. The solar data from Bisbee is more than adequate for the analysis that I conducted.

Q: Does the fact that Bisbee is served by Arizona Public Service (APS) matter?

A: No. Nothing about APS's costs, rates or services entered into my analysis. As I've stated previously, the only relevant criterion for choosing Bisbee data was its proximity to SSVEC.

Q: Does any of this change your conclusions?

A: No. I still believe that a customer with an existing solar lease will very likely have higher total electricity bills with the PV than without it under SSVEC's proposal, and that the poor up-front economics will likely dramatically reduce, if not eliminate, future investment in solar DG in the SSVEC territory.

Q: Does this conclude your surrebuttal testimony?

A: Yes.

SURREBUTTAL EXHIBIT – MEF-1

[14.1] Cal-ISO Board Approves Annual Transmission Plan

Thirteen new transmission projects with an estimated $288 million-dollar price tag were approved for construction by the Cal-ISO Board of Governors to ensure continued grid reliability.

According to the ISO's 2015-2016 Transmission Plan, each of the 13 projects costs less than $50 million and two-thirds are high-voltage upgrades needed to address reliability. None of the projects planned are policy- or economically-driven, which means there will be no need to take projects out for competitive bids, according to Cal-ISO, which approved the plan at its March 25 board meeting.

The transmission plan also called for canceling 13 sub-transmission projects in the Pacific Gas & Electric service area valued at $192 million. Some of these projects were originally approved in 2005. Of these, only two needed board approval—the Monta Vista-Wolfe and Newark-Applied Materials substation upgrades. Both 115 kV substation-upgrade projects were valued at $1 million each. However, Neil Millar, executive director of infrastructure development for Cal-ISO, said it is valuable "to get these cleared out of the way to focus on other projects going forward."

'We really appreciate the reappraisal of those projects.'

In his remarks to the board, Eric Eisenman, director of ISO relations and FERC policy for PG&E, conveyed the utility's support for the plan, including the project cancellations.

"The need for those is just not there anymore," he said. "We really appreciate the reappraisal of those projects." Load forecast has flattened in the service area from a combination of energy efficiency and rooftop solar, which eliminates the need for these upgrades, Eisenman said.

The utility plans to work with Cal-ISO on planning to prevent overbuilding and to ensure customers have affordable services. Future surveys, Eisenman said, would need to consider resources in the Oakland-East Bay area, which has an aging generation plant that may go off line. Roughly two-thirds of PG&E's $1 billion transmission budget is used to address maintenance and replacement of aging infrastructure.

This year's Cal-ISO transmission plan is "light" compared to previous plans, noted Steve Berberich, the grid operator's president and CEO, in his comments to the board. The 2012-2013 and 2013-2014 transmission plans were project-heavy to address issues in the PG&E service area and reliability requirements created by the early retirement of Units 2 and 3 of the San Onofre Nuclear Generating Station.

Among the new reliability projects identified in the 2015-2016 transmission plan are seven different projects, at a projected cost of $202 million, in the PG&E service area, including the reconductoring of the Panoche-Ora Loma 115 kV line and the Wilson 115 kV static VAR compensator (SVC) project.

Five projects are in the San Diego Gas & Electric service area and one is in the Southern California Edison service area. There are no projects planned in the Valley Electric Association service area in this planning cycle.

None of the transmission projects address the 2020 or 2030 renewables portfolio standards; however, Millar says there is a pressing need to better manage generation from renewable sources, which creates wider changes in operating conditions. Ultimately, this will require more voltage support across the system. The system operator is seeing "the impacts in real time" and needs to address these and other voltage-control issues, Millar said.

An upgrade to the Lugo-Victorville 500 kV line is needed, Millar and Berberich said, but Cal-ISO is coordinating with the Los Angeles Department of Water & Power on the project. A detailed cost-benefits analysis is needed because it is an interregional project, which pushes it into the 2016-2017 planning cycle. The needs of the Los Angeles Basin and San Diego areas specific to 230 kV loading in the region will also be addressed in that time frame.

Striving to meet the 50 percent RPS may require looking carefully at transmission needs. "As the system is changing in ways we hadn't historically anticipated," said Berberich, "we're going to have to be agile around re-evaluating the transmission system and what's really needed.

"There are lots of moving parts." *–L. D. P.*

[14.2] Cal-ISO Approves Changes to Commitment Cost-Bidding Process

The Cal-ISO Board of Governors on March 25 approved changes to the commitment cost-bidding process after weighing concerns that the proposal might hinder the use of preferred resources and did not adequately address concerns from demand-response providers.

Under the changes, use-limited resources will be eligible for a calculated opportunity cost to include in their daily commitment cost bids, which will allow the market to recognize their use limitations that extend over a longer period of time than the daily markets, such as annual limitations. The move will allow the ISO to eliminate the "registered cost" option for bidding commitment costs, under which a market participant can bid fixed costs for 30 days.

Cal-ISO now has roughly 35,000 MW of use-limited resources available. The goal is to commit these resources when they are of most value to the grid and at maximum profit for the generation owner.

The original language on commitment costs was altered to reflect comments made by CPUC Commissioner Mike Florio.

Florio's changes address concerns related to the use-limited status of preferred resources. This includes giving parties that might be affected—including investor-owned utilities, demand-response and energy-storage providers, and others—more time to better understand and manage the transition to the cost-bidding structure.

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BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS.	)	DOCKET NO. E-01575A-15-0312

DIRECT

TESTIMONY

OF

CRYSTAL S. BROWN

EXECUTIVE CONSULTANT III

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 19, 2016

EXHIBIT
S-1
ADMITTED

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EXECUTIVE SUMMARY
SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01575A-15-0312

Sulphur Springs Valley Electric Cooperative, Inc. ("Sulphur Springs" or "Cooperative") is a certificated Arizona-based non-profit rural electric distribution cooperative. Sulphur Springs provides power and energy to approximately 53,000 customers in most of Cochise County and portions of Santa Cruz, Pima, and Graham counties, Arizona.

Sulphur Springs proposed a $3,101,498, or 3.17 percent, revenue increase from $97,703,142 to $100,804,640. The proposed revenue requirement would produce an operating margin after interest expense on long-term debt of $7,234,777 for a 6.41 percent rate of return on an original cost rate base of $208,373,755 and produces an operating Time Interest Earned Ratio ("TIER") of 2.20.

Staff recommends the same revenue as the Cooperative. Staff recommends total annual operating revenue of $100,804,640. This recommended revenue requirement would produce an operating margin after interest expense on long-term debt of $7,234,777 for a 6.41 percent rate of return on an original cost rate base of $208,373,755 and produces an operating TIER of 2.20 as shown on Schedule CSB-1.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Crystal S. Brown. I am an Executive Consultant III employed by the Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Briefly describe your responsibilities as an Executive Consultant III.

A. I am responsible for the examination and verification of financial and statistical information included in utility rate applications. In addition, I develop revenue requirements, prepare written reports, testimonies, and schedules that include Staff recommendations to the Commission. I am also responsible for testifying at formal hearings on these matters.

Q. Please describe your educational background and professional experience.

A. I received a Bachelor of Science Degree in Business Administration from the University of Arizona and a Bachelor of Science Degree in Accounting from Arizona State University.

Since joining the Commission in August 1996, I have participated in numerous rate cases and other regulatory proceedings involving electric, gas, water, and wastewater utilities. I have testified on matters involving regulatory accounting and auditing. Additionally, I have attended utility-related seminars sponsored by the National Association of Regulatory Utility Commissioners ("NARUC") on ratemaking and accounting designed to provide continuing and updated education in these areas.

Q. What is the scope of your testimony in this case?

A. I am presenting Staff's analysis and recommendations in the areas of rate base, operating revenues and expenses and revenue requirement regarding Sulphur Springs Valley Electric Cooperative, Inc.'s ("Sulphur Springs" or "Cooperative") application for a permanent rate increase.

Q. Who else is providing Staff testimony and what issues will they address?

A. Staff witness Julie McNeely-Kirwan is presenting Staff's base cost of power recommendation. Ms. McNeely-Kirwan is also presenting Staff's recommendation concerning the Cooperative's rules and regulations. Staff witness Ranelle Paladino is presenting Staff's rate design recommendations. Staff witness Ray Williamson is presenting Staff's engineering analysis and recommendations.

BACKGROUND

Q. Please review the background of this application.

A. Sulphur Springs is a certificated Arizona-based non-profit rural electric distribution cooperative. Sulphur Springs provides power and energy to approximately 53,000 customers in most of Cochise County and portions of Santa Cruz, Pima, and Graham counties, Arizona.

Sulphur Springs filed an application for a permanent rate increase on August 31, 2015. On September 30, 2015, Staff notified the Cooperative that its application met the sufficiency requirements. Sulphur Springs' current rates were authorized in Decision No. 74381, dated March 19, 2014.

Q. What is the primary reason for the Cooperative's requested permanent rate increase?

A. According to the Cooperative, the primary reason for the rate increase is to cover fixed costs. The Cooperative is also proposing changes to its rate design.

CONSUMER SERVICES

Q. Please provide a brief history of customer complaints received by the Commission regarding Sulphur Springs.

A. A review of Consumer Services records for the time frame of January 1, 2013, through January 8, 2016, reflects forty one complaints have been filed.

2016 - 0 Complaints
2015 - 8 Complaints
2014 - 8 Complaints
2013 - 25 Complaints

A breakdown of the above listed complaints is listed below as follows:

2015 Complaints	
Billing	4
Construction	1
Deposits	2
Rates & Service	1
Total	8

2014 Complaints	
Admin Question	1
Policy/Procedures	1
Quality of Service	4
Service	2
Total	8

2013 Complaints	
Billing	6
Construction	1
Deposit	3
Disconnect	4
Service	1
Damages/Claims	1
Net Metering	1
R & R's	1

Quality of Service	5
Rules/Tariffs	2
Total	25

Six complaints remain open, all others have been resolved and closed.

PUBLIC NOTICE

Q. Has the Cooperative filed its affidavit of customer notification?

A. Yes, the Cooperative filed its Affidavit of Mailing Customer Notice on December 30, 2015.

SUMMARY OF PROPOSED REVENUES

Q. Please summarize the Cooperative's filing.

A. Sulphur Springs proposed a $3,101,498, or 3.17 percent, revenue increase from $97,703,142 to $100,804,640. The proposed revenue requirement would produce an operating margin after interest expense on long-term debt of $7,234,777 for a 6.41 percent rate of return on an original cost rate base of $208,373,755 and produces an operating Time Interest Earned Ratio ("TIER") of 2.20.

Q. Please summarize Staff's recommended revenue.

A. Staff recommends the same revenue as the Cooperative. Staff recommends total annual operating revenue of $100,804,640. This recommended revenue requirement would produce an operating margin of $7,234,777 after interest expense on long-term debt for a 6.41 percent rate of return on an original cost rate base of $208,373,755 and produces an operating TIER of 2.20 as shown on Schedule CSB-1.

Q. What test year did Sulphur Springs utilize in this filing?

A. Sulphur Springs' rate filing is based on the twelve months ended December 31, 2014 ("test year").

Q. Please summarize the rate base and operating margin recommendations and adjustments addressed in your testimony for Sulphur Springs.

A. Staff made no adjustments to rate base. Staff's adjustment to operating revenue addresses the following issue:

Base Cost of Power and Power Cost Adjustor ("PCA") – This adjustment matches the Base Cost of Power Revenue to the Staff recommended Base Cost of Power Expense and eliminates the PCA revenues from operating revenues. The net result of these adjustments is zero.

RATE BASE

Fair Value Rate Base

Q. Did the Cooperative prepare a schedule showing the elements of Reconstruction Cost New Rate Base?

A. No, the Cooperative did not. The Cooperative's filing treats the original cost rate base the same as the fair value rate base. Staff supports this proposal.

Rate Base Summary

Q. Please summarize Staff's adjustments to Sulphur Springs' rate base shown on Schedules CSB-2 and CSB-3.

A. Staff made no adjustments to rate base. Staff reviewed the Cooperative's filing and found that Sulphur Springs appropriately omitted construction work in progress ("CWIP") from rate base as CWIP is not used and useful. Moreover, the Cooperative appropriately omitted

cash working capital from rate base as the cash working capital was not supported by a lead-lag study.

OPERATING MARGIN

Operating Margin Summary

Q. What are the results of Staff's analysis of test year revenues, expenses and operating margin?

A. As shown on Schedules CSB-4 and CSB-5, Staff's analysis resulted in test year revenues of $97,703,142, expenses of $87,445,386 and operating margin after interest expense of $4,133,279.

Operating Margin Adjustment 1 – Base Cost of Power Revenue and Power Cost Adjustor

Base Cost of Power Revenue

Q. What is the base cost of power ("BCOP") rate and how is it calculated?

A. The BCOP rate is the portion of the base rate that recovers the test year purchased power expense. The BCOP rate is calculated by dividing the test year purchased power expense by the number of kWh's sold in the test year.

Q. For ratemaking purposes, should the revenues generated from the BCOP rate match purchased power expense?

A. Yes, the revenues generated from the BCOP rate ("BCOP revenue") should match the purchased power expense since the BCOP rate is designed to recover the test year level of purchased power expense.

Q. Is the Cooperative proposing to change its base cost of power rate?

A. Yes, the Cooperative is proposing to decrease its base cost of power rate from $0.072127 per kWh to $0.065857 per kWh as discussed in greater detail by Staff witness Julie McNeely-Kirwan.

Q. Did Sulphur Springs make a pro forma adjustment to test year revenues and expenses to match its BCOP revenue to its purchased power expense?

A. Yes. The Cooperative made a pro forma adjustment to decrease actual test year purchased power expense by $4,455,507; from $56,681,170 to $52,225,663. It also made a similar adjustment to reflect $52,226,019 for base cost of power in revenue. The $356 difference ($52,226,019 BCOP revenue - $52,225,663 purchased power expense = $356) is due to rounding as shown on Schedules CSB-5 and CSB-6.

Q. Was Sulphur Springs' pro forma adjustment to match its base cost of power revenue to purchase power expense appropriate?

A. Yes, since the Cooperative has a purchased power adjustor mechanism that facilitates full recovery of purchased power expense.

<u>Power Cost Adjustor Revenues</u>

Q. Explain the purpose of the break-out of the total revenue from sales of electricity into components as shown on Schedules CSB-5 and CSB-6.

A. The purpose is to show the portion of revenue that is generated from base rates separately from revenue that is generated from margin revenue, and the power cost adjustor.

Q. What amount is Sulphur Springs proposing for its power cost adjustor ("PCA") revenue?

A. The Cooperative proposes a negative $4,724,035 for its PCA revenue as shown on Schedules CSB-5 and CSB-6.

Q. Is it appropriate to include monies from the Cooperative's PCA in test year operating revenues for rate making purposes?

A. No, it is not appropriate. The Cooperative's test year base rate revenue is the starting point from which to measure the amount of increase in revenue that is necessary to recover ***all*** of the Cooperative's operating expenses (including the test year purchased power expense of $52,225,663) plus a return on rate base. Consequently, for rate making purposes, the revenue generated by the PCA rate would not reflect recovery of ***any*** expense in the revenue requirement, and therefore, should be eliminated.

Further, the PCA revenues are set using a mechanism that facilitates full recovery of all purchased power costs and is separate from that used to set base rates. The adjustor mechanism ensures that the Cooperative neither over nor under recovers purchased power cost. Moreover, the Cooperative can change the PCA rate without a rate case based on over- or under-collections in the Cooperative's fuel bank. This means that changes in the cost of purchased power do not affect income.

Q. What is Staff recommending?

A. Staff recommends increasing test year revenues by $4,724,035 to eliminate PCA revenues as shown on Schedules CSB-5 and CSB-6.

DEBT SERVICE COVERAGE RATIO ("DSC")

Q. Did the Cooperative calculate the DSC differently than Staff?

A. Yes. The Cooperative calculated a DSC of 1.94 whereas Staff calculated a DSC of 1.85.

Q. How does Sulphur Springs calculate the DSC?

A. Sulphur Springs uses the DSC calculation prescribed by the National Rural Utilities Cooperative Finance Corporation ("CFC"). The CFC includes revenues derived from activities that are not a part of the Cooperative's core electric retail sales business (i.e. non-operating margin interest revenue and cash capital credit revenue). The CFC calculation is as follows:

For any calendar year add (1) Operating Margins, (2) Non-Operating Margins-Interest, (3) Interest Expense on long-term debt, (4) Depreciation and Amortization Expense, and (5) cash received from capital credits. Divide the sum so obtained by the sum of all payments of Principal and Interest on long-term debt.

Q. How does Staff's DSC calculation differ from the Cooperative's?

A. Staff's calculation is similar but excludes non-operating revenue from interest and capital credits.

Q. Why does Staff exclude non-operating revenue in its DSC calculation?

A. Non-operating revenue tends to vary from year to year. Staff's calculation measures the Cooperative's ability to make principal and interest payments based solely on the Cooperative's core operating results. Since operating results are generally more consistent than non-operating results, Staff's calculation provides a more reliable indication of ability to service debt.

Q. Is the lower 1.85 DSC Staff calculates acceptable?

A. Yes, it is.

Q. Does this conclude Staff's direct testimony?

A. Yes, it does.

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Schedule CSB-1

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COOPERATIVE FAIR VALUE	(B) STAFF FAIR VALUE
1	Adjusted Rate Base	$ 208,373,755	$ 208,373,755
2	Margin (Loss) After Interest on L.T. Debt	$ 4,133,279	$ 4,133,279
3	Current Rate of Return (L2 / L1)	1.98%	1.98%
4	Required Rate of Return	6.41%	6.41%
5a	Required Margin (Loss) Before Interest on L.T. Debt (L4 * L1)	$ 13,359,254	$ 13,356,758
5b	Required Margin (Loss) After Interest on L.T. Debt	$ 7,234,777	$ 7,234,777
6	Operating Margin Deficiency (L5b - L2)	$ 3,101,498	$ 3,101,498
7	Gross Revenue Conversion Factor	1.0000	1.0000
8	**Required Revenue Increase/(Decrease) (L7 * L6)**	$ 3,101,498	**$ 3,101,498**
9	Adjusted Test Year Revenue	$ 97,703,142	$ 97,703,142
10	**Proposed Annual Revenue (L8 + L9)**	$ 100,804,640	**$ 100,804,640**
11	Required Increase in Revenue (%)	3.17%	3.17%
12	Depreciation and Amortization Expense	$ 10,857,765	$ 10,857,765
13	Interest Expense on Long-term Debt	$ 6,028,981	$ 6,028,981
14	Interest Income	$ 171,224	$ 171,224
15	Principal Payments	$ 6,987,062	$ 6,987,062
16	Cash Capital Credits	$ 955,159	$ 955,159
17	TIER ((L 5 + L 13) / L 13)	2.20	2.20
18	DSC ((L 5 + L 12 + L 13 + L 14 + L 16) / (L 13 + L 15) - Per Cooperative	1.94	N/A
19	DSC ((L 5 + L 12 + L 13) / (L 13 + L 15) - Per Staff	N/A	1.85

References:
Column (A): Company Schedules A-1, A-2, & B-1
Column (B): Staff Schedule CSB-3

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Schedule CSB-2

RATE BASE - ORIGINAL COST

LINE NO.		[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	Plant in Service	$ 328,798,905	$ -	$ 328,798,905
2	Less: Acc Depreciation & Amortization	(121,553,067)	-	(121,553,067)
3	Net Plant in Service	$ 207,245,838	$ -	$ 207,245,838
	LESS:			
4	Consumer Deposits	$ (2,732,323)	$ -	$ (2,732,323)
5	Consumer Advances	$ (96,781)	$ -	$ (96,781)
6	Deferred Credits	$ -	$ -	$ -
7	Total	(2,829,104)	-	(2,829,104)
	ADD:			
8	Cash Working Capital	$ -	$ -	$ -
9	Materials and Supplies	$ 2,650,491	$ -	$ 2,650,491
10	Prepayments	$ 1,306,530	$ -	$ 1,306,530
11	Total	$ 3,957,021	$ -	$ 3,957,021
12	**Total Rate Base**	$ 208,373,755	$ -	$ 208,373,755

References:
Column [A], Cooperative Schedule B-1
Column [B]: Testimony, CSB
Column [C]: Column [A] + Column [B]

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Schedule CSB-3

SUMMARY OF RATE BASE ADJUSTMENTS

LINE NO.	Acct. No.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] ADJUSTMENTS	[C] STAFF ADJUSTED
		PLANT IN SERVICE:			
1	346	Solar Production Panels and Equipment	$ 5,418,964	$ -	$ 5,418,964
2	350	Transmission Plant - Land and Land Rights	$ 1,051,896	$ -	$ 1,051,896
3	353	Transmission Plant - Station Equipment	$ 1,538,886	$ -	$ 1,538,886
4	355	Transmission Plant - Poles and Fixtures	$ 14,095,714	$ -	$ 14,095,714
5	356	Transmission Plant - OH Conductors	$ 17,438,117	$ -	$ 17,438,117
6	360	Distribution Plant - Land and Land Rights	$ 438,067	$ -	$ 438,067
7	361	Distribution Plant - Structures and Improvements	$ 660,197	$ -	$ 660,197
8	362	Distribution Plant - Substation Equipment	$ 28,609,446	$ -	$ 28,609,446
9	364	Distribution Plant - Poles, Towers, and Fixtures	$ 56,052,611	$ -	$ 56,052,611
10	365	Distribution Plant - Conductors and Devices	$ 37,882,046	$ -	$ 37,882,046
11	366	Distribution Plant - Underground Conduit	$ 24,349,294	$ -	$ 24,349,294
12	367	Distribution Plant - Underground Conductors	$ 40,366,827	$ -	$ 40,366,827
13	368	Distribution Plant - Transformers	$ 55,440,604	$ -	$ 55,440,604
14	369	Distribution Plant - Services	$ 9,931,495	$ -	$ 9,931,495
15	370	Distribution Plant - Meters	$ 20,077,102	$ -	$ 20,077,102
16	371	Distribution Plant - Install. On Customers Premises	$ 2,174,149	$ -	$ 2,174,149
17	373	Distribution Plant - Street Lighting and Signal Syst	$ 3,969,068	$ -	$ 3,969,068
18	389	General Plant - Land and Land Rights	$ 806,591	$ -	$ 806,591
19	390	General Plant - Structures and Improvements	$ 11,434,576	$ -	$ 11,434,576
20	391	General Plant - Office Furniture and Equipment	$ 4,865,525	$ -	$ 4,865,525
21	392	General Plant - Transportation Equipment	$ 5,933,298	$ -	$ 5,933,298
22	393	General Plant - Stores Equipment	$ 211,969	$ -	$ 211,969
23	394	General Plant - Tools, Shop, & Garage Equipment	$ 2,455,903	$ -	$ 2,455,903
24	395	General Plant - Laboratory Equipment	$ 878,967	$ -	$ 878,967
25	396	General Plant - Power Operated Equipment	$ 12,635,559	$ -	$ 12,635,559
26	397	General Plant - Communications Equipment	$ 1,238,456	$ -	$ 1,238,456
27	398	General Plant - Miscellaneous	$ (31,228,238)	$ -	$ (31,228,238)
28	399	General Plant - Contributed dollars	$ 71,817	$ -	$ 71,817
29		Total Plant in Service	$ 328,798,905	$ -	$ 328,798,905
30		Less: Accumulated Depreciation	$ (121,553,067)	$ -	$ (121,553,067)
31		Less: Accumulated Amortization	-	-	$ -
32		Total Accumulated Depreciation & Amortization	$ (121,553,067)	$ -	$ (121,553,067)
33		Net Plant in Service	$ 207,245,838	$ -	$ 207,245,838
		LESS:			
34		Consumer Deposits	$ (2,732,323)	$ -	$ (2,732,323)
35		Consumer Advances	$ (96,781)	$ -	$ (96,781)
36		Deferred Credits	$ -	$ -	$ -
37		Total	$ (2,829,104)	$ -	$ (2,829,104)
		ADD:			
38		Cash Working Capital	$ -	$ -	$ -
39		Materials and Supplies	$ 2,650,491	$ -	$ 2,650,491
40		Prepayments	$ 1,306,530	$ -	$ 1,306,530
41		Total	$ 3,957,021	$ -	$ 3,957,021
42		**Total Rate Base**	$ 208,373,755	$ -	$ 208,373,755

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Schedule CSB-4

OPERATING MARGIN - TEST YEAR AND STAFF PROPOSED

Line No.	DESCRIPTION	[A] COOPERATIVE TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF RECOMMENDED CHANGES	[E] STAFF RECOMMENDED
	REVENUES:					
1	Margin Revenue (Non-Base Cost of Power)	$ 42,173,757	$ -	$ 42,173,757	$ 3,101,498	$ 45,275,255
4						
5	Base Cost of Power Revenue ("BCOP")	$ 57,198,264	$ (4,724,035)	$ 52,474,229	$ -	$ 52,474,229
6	Power Cost Adjustor ("PCA")	$ (4,724,035)	$ 4,724,035	$ -	$ -	$ -
7	To Reconcile to New BCOP	$ (248,210)	$ -	$ (248,210)	$ -	$ (248,210)
8	Subtotal	$ 52,226,019	$ -	$ 52,226,019	$ -	$ 52,226,019
	Rounding	$ -	$ (356)	$ (356)	$ -	$ (356)
9	Base Cost of Power and Adjustor Revenue	$ 52,226,019	$ (356)	$ 52,225,663	$ -	$ 52,225,663
10	**Total Revenue from Sales of Electricity**	**$ 94,399,776**	**$ (356)**	**$ 94,399,420**	**$ 3,101,498**	**$ 97,500,918**
11	Other Revenues	$ 3,303,366	$ -	$ 3,303,366	$ -	$ 3,303,366
12	Rounding	$ -	$ 356	$ 356	$ -	$ 356
13	**Total Revenues**	**$ 97,703,142**	**$ -**	**$ 97,703,142**	**$ 3,101,498**	**$ 100,804,640**
14						
15	*EXPENSES:*					
16	Purchased Power	$ 52,225,663	$ -	$ 52,225,663	$ -	$ 52,225,663
17	Transmission Operation and Maintenance	$ 183,288	$ -	$ 183,288	$ -	$ 183,288
18	Distribution - Operations	$ 6,816,903	$ -	$ 6,816,903	$ -	$ 6,816,903
19	Distribution - Maintenance	$ 3,738,590	$ -	$ 3,738,590	$ -	$ 3,738,590
20	Consumer Accounting	$ 3,188,444	$ -	$ 3,188,444	$ -	$ 3,188,444
21	Customer Service	$ 772,052	$ -	$ 772,052	$ -	$ 772,052
22	Sales	$ 387,186	$ -	$ 387,186	$ -	$ 387,186
23	Administrative and General	$ 5,675,495	$ -	$ 5,675,495	$ -	$ 5,675,495
24	Depreciation and Amortization	$ 10,857,765	$ -	$ 10,857,765	$ -	$ 10,857,765
25	Taxes	$ 3,600,000	$ -	$ 3,600,000	$ -	$ 3,600,000
26	**Total Operating Expenses**	$ 87,445,386	$ -	$ 87,445,386	$ -	$ 87,445,386
27						
28	**Operating Margin Before Interest on L.T.- Debt**	$ 10,257,756	$ -	$ 10,257,756	$ -	$ 13,359,254
29						
30	***INTEREST ON LONG-TERM DEBT & OTHER DEDUCTIONS***					
31	Interest on Long-term Debt	$ 6,028,981	$ -	$ 6,028,981	$ -	$ 6,028,981
32	Interest - Other	$ 8,823	$ -	$ 8,823	$ -	$ 8,823
33	Other Dedcutions	$ 86,673	$ -	$ 86,673	$ -	$ 86,673
34	**Total Interest & Other Deductions**	$ 6,124,477	$ -	$ 6,124,477	$ -	$ 6,124,477
35						
36	***MARGINS (LOSS) AFTER INTEREST EXPENSE***	$ 4,133,279	$ -	$ 4,133,279	$ -	$ 7,234,777
37						
38	***NON-OPERATING MARGINS***					
39	Interest Income	$ 171,224	$ -	$ 171,224	$ -	$ 171,224
40	Other Margins	$ (192,011)	$ -	$ (192,011)	$ -	$ (192,011)
41	G&T Capital Credits	$ 4,026,166	$ -	$ 4,026,166	$ -	$ 4,026,166
42	Other Capital Credits	$ 294,675	$ -	$ 294,675	$ -	$ 294,675
43	**Total Non-Operating Margins**	$ 4,300,054	$ -	$ 4,300,054	$ -	$ 4,300,054
44						
45	***EXTRAORDINARY ITEMS***	$ -	$ -	$ -	$ -	$ -
46						
47	***NET MARGINS (LOSS)***	$ 8,433,333	$ -	$ 8,433,333	$ -	$ 11,534,831
48						
49						
50	References:					
51	Column (A): Cooperative Schedule A					
52	Column (B): Schedule CSB-6					
53	Column (C): Column (A) + Column (B)					
54	Column (D): Schedule CSB-1					
55	Column (E): Column (C) + Column (D)					

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Schedule CSB-5

SUMMARY OF OPERATING MARGIN ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF ADJUSTED
	REVENUES:			
1	Margin Revenue (Non-Base Cost of Power)	$ 42,173,757	$ -	$ 42,173,757
2				
3	Base Cost of Power Revenue ("BCOP")	$ 57,198,264	$ (4,724,035)	$ 52,474,229
4	Power Cost Adjustor ("PCA")	(4,724,035)	4,724,035	-
5	To Reconcile to New BCOP	(248,210)	-	(248,210)
6	Subtotal	52,226,019	-	52,226,019
7	Rounding	-	(356)	(356)
8	Base Cost of Power and Adjustor Revenue	$ 52,226,019	$ (356)	$ 52,225,663
9				
10	Total Revenue from Sales of Electricity	$ 94,399,776	$ (356)	$ 94,399,420
11				
12	Other Revenues	$ 3,303,366	$ -	$ 3,303,366
13	Rounding		356	356
14				
15	**Total Revenues**	**$ 97,703,142**	**$ -**	**$ 97,703,142**
16				
17	***OPERATING EXPENSES:***			
18	Purchased Power	$ 52,225,663	$ -	$ 52,225,663
19	Transmission Operation and Maintenance	183,288	-	$ 183,288
20	Distribution - Operations	6,816,903	-	$ 6,816,903
21	Distribution - Maintenance	3,738,590	-	$ 3,738,590
22	Consumer Accounting	3,188,444	-	$ 3,188,444
23	Customer Service	772,052	-	$ 772,052
24	Sales	387,186	-	$ 387,186
25	Administrative and General	5,675,495	-	$ 5,675,495
26	Depreciation and Amortization	10,857,765	-	$ 10,857,765
27	Taxes	3,600,000	-	$ 3,600,000
28	**Total Operating Expenses**	$ 87,445,386	$ -	$ 87,445,386
29				
30	**Operating Margin Before Interest on L.T.- Debt**	**$ 10,257,756**	**$ -**	**$ 10,257,756**
31				
32	***INTEREST ON LONG-TERM DEBT & OTHER DEDUCTIONS***			
33	Interest on Long-term Debt	$ 6,028,981	$ -	$ 6,028,981
34	Interest - Other	$ 8,823	-	8,823
35	Other Dedcutions	86,673	-	86,673
36	**Total Interest & Other Deductions**	$ 6,124,477	$ -	$ 6,124,477
37				
38	***MARGINS (LOSS) AFTER INTEREST EXPENSE***	**$ 4,133,279**	**$ -**	**$ 4,133,279**
39				
40	***NON-OPERATING MARGINS***			
41	Interest Income	$ 171,224	$ -	$ 171,224
42	Other Margins	$ (192,011)	-	(192,011)
43	G&T Capital Credits	$ 4,026,166	-	4,026,166
44	Other Capital Credits	294,675	-	294,675
45	**Total Non-Operating Margins**	$ 4,300,054	$ -	$ 4,300,054
46				
47	***EXTRAORDINARY ITEMS***	$ -	-	$ -
48				
49	***NET MARGINS (LOSS)***	$ 8,433,333	$ -	$ 8,433,333

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Schedule CSB-6

OPERATING MARGIN ADJUSTMENT NO. 1 - BASE COST OF POWER AND WHOLESALE POWER COST ADJUSTOR

LINE NO.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	***Revenues***			
2	Base Cost of Power Revenue ("BCOP")	$ 57,198,264	$ -	$ 57,198,264
3	To Move Power Cost Adjustor Rev to New BCOP	-	(4,724,035)	(4,724,035)
4	Base Cost of Power Revenue - Company	$ 57,198,264	$ (4,724,035)	$ 52,474,229
5				
6	Power Cost Adjustor Revenue ("PCA")	(4,724,035)	-	(4,724,035)
7	To Eliminate Power Cost Adjustor Revenue	-	4,724,035	4,724,035
8	Total Power Cost Adjustor Revenue	(4,724,035)	4,724,035	-
9				
10	To Reconcile to Recommended BCOP	-	(248,210)	(248,210)
11				
12	Total Base Cost of Power and PCA (L 4 + L 8 + L10)	52,474,229	(248,210)	52,226,019
13				
14	Rounding	-	(356)	(356)
15	Base Cost of Power Revenue - Company	$ 52,474,229	$ (248,566)	$ 52,225,663
16				
17	***Expenses***			
18	Purchased Power Expense (From Sch A-2.0)	$ 52,225,663	$ -	$ 52,225,663
19	Rounding	-	-	-
20		52,225,663	-	52,225,663
21				
22	**Operating Margin (Line 15 - Line 20)**	**$ 248,566**	**$ (248,566)**	**$ 0**
23				
24				
25				Company
26				Proposed &
27		Current BCOP	Difference	Staff Recommended BCOP
28	Test Year Sales (In kWhs)	793,021,534	-	793,021,534
29	Multiplied by: Base Cost of Power per kWh	0.072127000	(0.0062700)	0.065857000
30	Total Base Cost of Power	$ 57,198,264	**$ (4,972,245)**	$ 52,226,019

References:

Column A: Cooperative Schedule A-1
Column B: Testimony, CSB
Column C: Column [A] + Column [B]

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS.	)	DOCKET NO. E-01575A-15-0312

SURREBUTTAL

TESTIMONY

OF

CRYSTAL S. BROWN

EXECUTIVE CONSULTANT III

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

MAY 6, 2016

EXHIBIT
S-2
ADMITTED

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Summary of Rate Base Adjustments	CSB-3
Income Statement – Test Year and Staff Recommended	CSB-4
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EXECUTIVE SUMMARY
SULPHUR SPRINGS VALLEY ELECTRIC, INC.
DOCKET NO. E-01575A-15-0312

Staff recommends the same revenue as Sulphur Springs Valley Electric Cooperative, Inc. ("Sulphur Springs" or "Cooperative"). Staff's surrebuttal testimony responds to the Cooperative's rebuttal testimony regarding an updated rate case expense of $409,770. Staff recommends continued recognition of the Cooperative's original $200,000 for rate case expense but does intend to update its recommendation at the hearing.

Staff would note that while the Cooperative recently increased the level of rate case expense it was seeking to recover, it did not actually revise its requested level of rate increase, or otherwise revise any of its previously docketed schedules.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Crystal S. Brown. I am an Executive Consultant III employed by the Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Are you the same Crystal S. Brown who filed direct testimony in this case?

A. Yes.

PURPOSE OF SURREBUTTAL TESTIMONY

Q. What is the purpose of your surrebuttal testimony in this proceeding?

A. The purpose of my surrebuttal testimony in this proceeding is to respond, on behalf of Staff, to the rebuttal testimony of Mr. David Hedrick, witness for Sulphur Springs Valley Electric Cooperative, Inc. ("Sulphur Springs" or "Cooperative").

Q. What issue will you address?

A. I will address the Cooperative's request for updated rate case expense of $409,770.

RATE CASE EXPENSE

Q. Did Staff review the Cooperative's rebuttal testimony concerning updated rate case expense?

A. Yes. On page 25, beginning at line 19 of Mr. Hedrick's rebuttal testimony, the Cooperative proposes to increase rate case expense by $209,770, from $200,000 to $409,770. The $409,770 is composed of $309,770 in actual rate case expense incurred to date and $100,000 in estimated rate case expense "to complete the process."

Q. Does Staff agree with the Cooperative's proposed $409,770 in rate case expense?

A. No, as Staff has not reviewed the invoices supporting the amount, so its revenue requirement Schedules continue to reflect the original rate case expense estimate. However, Staff reserves the right to update, at the hearing, its recommendation regarding the level of rate case expense to be recovered, after Staff has had a chance to review the supporting documents for the Cooperatives' rate case expense increase.

Q. Does this conclude Staff's surrebuttal testimony?

A. Yes, it does.

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Surrebuttal Schedule CSB-1

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COOPERATIVE FAIR VALUE	(B) STAFF FAIR VALUE
1	Adjusted Rate Base	$ 208,373,755	$ 208,373,755
2	Margin (Loss) After Interest on L.T. Debt	$ 4,133,279	$ 4,133,279
3	Current Rate of Return (L2 / L1)	1.98%	1.98%
4	Required Rate of Return	6.41%	6.41%
5a	Required Margin (Loss) Before Interest on L.T. Debt (L4 * L1)	$ 13,359,254	$ 13,356,758
5b	Required Margin (Loss) After Interest on L.T. Debt	$ 7,234,777	$ 7,234,777
6	Operating Margin Deficiency (L5b - L2)	$ 3,101,498	$ 3,101,498
7	Gross Revenue Conversion Factor	1.0000	1.0000
8	Required Revenue Increase/(Decrease) (L7 * L6)	$ 3,101,498	**$ 3,101,498**
9	Adjusted Test Year Revenue	$ 97,703,142	$ 97,703,142
10	Proposed Annual Revenue (L8 + L9)	$ 100,804,640	$ 100,804,640
11	Required Increase in Revenue (%)	3.17%	3.17%
12	Depreciation and Amortization Expense	$ 10,857,765	$ 10,857,765
13	Interest Expense on Long-term Debt	$ 6,028,981	$ 6,028,981
14	Interest Income	$ 171,224	$ 171,224
15	Principal Payments	$ 6,987,062	$ 6,987,062
16	Cash Capital Credits	$ 955,159	$ 955,159
17	TIER ((L 5 + L 13) / L 13)	2.20	2.20
18	DSC ((L 5 + L 12 + L 13 + L 14 + L 16) / (L 13 + L 15) - Per Cooperative	1.94	N/A
19	DSC ((L 5 + L 12 + L 13) / (L 13 + L 15) - Per Staff	N/A	1.85

[1] The Cooperative's Required Margin After Interest on L.T. Debt does not equal L 1 x L 4.

References:
Column (A): Company Schedules A-1, A-2, & B-1
Column (B): Staff Schedule CSB-3

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Surrebuttal Schedule CSB-2

RATE BASE - ORIGINAL COST

LINE NO.		[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	Plant in Service	$ 328,798,905	$ -	$ 328,798,905
2	Less: Acc Depreciation & Amortization	(121,553,067)	-	(121,553,067)
3	Net Plant in Service	$ 207,245,838	$ -	$ 207,245,838
	LESS:			
4	Consumer Deposits	$ (2,732,323)	$ -	$ (2,732,323)
5	Consumer Advances	$ (96,781)	$ -	$ (96,781)
6	Deferred Credits	$ -	$ -	$ -
7	Total	(2,829,104)	-	(2,829,104)
	ADD:			
8	Cash Working Capital	$ -	$ -	$ -
9	Materials and Supplies	$ 2,650,491	$ -	$ 2,650,491
10	Prepayments	$ 1,306,530	$ -	$ 1,306,530
11	Total	$ 3,957,021	$ -	$ 3,957,021
12	**Total Rate Base**	$ 208,373,755	$ -	$ 208,373,755

References:
Column [A], Cooperative Schedule B-1
Column [B]: Schedules CSB-2 through CSB-7
Column [C]: Column [A] + Column [B]

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Surrebuttal Schedule CSB-3

SUMMARY OF RATE BASE ADJUSTMENTS

LINE NO.	Acct. No.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] ADJUSTMENTS	[C] STAFF ADJUSTED
		PLANT IN SERVICE:			
1	346	Solar Production Panels and Equipment	$ 5,418,964	$ -	$ 5,418,964
2	350	Transmission Plant - Land and Land Rights	$ 1,051,896	$ -	$ 1,051,896
3	353	Transmission Plant - Station Equipment	$ 1,538,886	$ -	$ 1,538,886
4	355	Transmission Plant - Poles and Fixtures	$ 14,095,714	$ -	$ 14,095,714
5	356	Transmission Plant - OH Conductors	$ 17,438,117	$ -	$ 17,438,117
6	360	Distribution Plant - Land and Land Rights	$ 438,067	$ -	$ 438,067
7	361	Distribution Plant - Structures and Improvements	$ 660,197	$ -	$ 660,197
8	362	Distribution Plant - Substation Equipment	$ 28,609,446	$ -	$ 28,609,446
9	364	Distribution Plant - Poles, Towers, and Fixtures	$ 56,052,611	$ -	$ 56,052,611
10	365	Distribution Plant - Conductors and Devices	$ 37,882,046	$ -	$ 37,882,046
11	366	Distribution Plant - Underground Conduit	$ 24,349,294	$ -	$ 24,349,294
12	367	Distribution Plant - Underground Conductors	$ 40,366,827	$ -	$ 40,366,827
13	368	Distribution Plant - Transformers	$ 55,440,604	$ -	$ 55,440,604
14	369	Distribution Plant - Services	$ 9,931,495	$ -	$ 9,931,495
15	370	Distribution Plant - Meters	$ 20,077,102	$ -	$ 20,077,102
16	371	Distribution Plant - Install. On Customers Premises	$ 2,174,149	$ -	$ 2,174,149
17	373	Distribution Plant - Street Lighting and Signal Syst	$ 3,969,068	$ -	$ 3,969,068
18	389	General Plant - Land and Land Rights	$ 806,591	$ -	$ 806,591
19	390	General Plant - Structures and Improvements	$ 11,434,576	$ -	$ 11,434,576
20	391	General Plant - Office Furniture and Equipment	$ 4,865,525	$ -	$ 4,865,525
21	392	General Plant - Transportation Equipment	$ 5,933,298	$ -	$ 5,933,298
22	393	General Plant - Stores Equipment	$ 211,969	$ -	$ 211,969
23	394	General Plant - Tools, Shop, & Garage Equipment	$ 2,455,903	$ -	$ 2,455,903
24	395	General Plant - Laboratory Equipment	$ 878,967	$ -	$ 878,967
25	396	General Plant - Power Operated Equipment	$ 12,635,559	$ -	$ 12,635,559
26	397	General Plant - Communications Equipment	$ 1,238,456	$ -	$ 1,238,456
27	398	General Plant - Miscellaneous	$ (31,228,238)	$ -	$ (31,228,238)
28	399	General Plant - Contributed dollars	$ 71,817	$ -	$ 71,817
29		Total Plant in Service	$ 328,798,905	$ -	$ 328,798,905
30		Less: Accumulated Depreciation	$ (121,553,067)	$ -	$ (121,553,067)
31		Less: Accumulated Amortization	-	-	$ -
32		Total Accumulated Depreciation & Amortization	$ (121,553,067)	$ -	$ (121,553,067)
33		Net Plant in Service	$ 207,245,838	$ -	$ 207,245,838
		LESS:			
34		Consumer Deposits	$ (2,732,323)	$ -	$ (2,732,323)
35		Consumer Advances	$ (96,781)	$ -	$ (96,781)
36		Deferred Credits	$ -	$ -	$ -
37		Total	$ (2,829,104)	$ -	$ (2,829,104)
		ADD:			
38		Cash Working Capital	$ -	$ -	$ -
39		Materials and Supplies	$ 2,650,491	$ -	$ 2,650,491
40		Prepayments	$ 1,306,530	$ -	$ 1,306,530
41		Total	$ 3,957,021	$ -	$ 3,957,021
42		**Total Rate Base**	$ 208,373,755	$ -	$ 208,373,755

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Surrebuttal Schedule CSB-4

OPERATING MARGIN - TEST YEAR AND STAFF PROPOSED

Line No.	DESCRIPTION	[A] COOPERATIVE TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF RECOMMENDED CHANGES	[E] STAFF RECOMMENDED
	REVENUES:					
1	Margin Revenue (Non-Base Cost of Power)	$ 42,173,757	$ -	$ 42,173,757	$ 3,101,498	$ 45,275,255
4						
5	Base Cost of Power Revenue ("BCOP")	$ 57,198,264	$ (4,724,035)	$ 52,474,229	$ -	$ 52,474,229
6	Power Cost Adjustor ("PCA")	$ (4,724,035)	$ 4,724,035	$ -	$ -	$ -
7	To Reconcile to New BCOP	$ (248,210)	$ -	$ (248,210)	$ -	$ (248,210)
8	Subtotal	$ 52,226,019	$ -	$ 52,226,019	$ -	$ 52,226,019
	Rounding	$ -	$ (356)	$ (356)	$ -	$ (356)
9	Base Cost of Power and Adjustor Revenue	$ 52,226,019	$ (356)	$ 52,225,663	$ -	$ 52,225,663
10	**Total Revenue from Sales of Electricity**	**$ 94,399,776**	**$ (356)**	**$ 94,399,420**	**$ 3,101,498**	**$ 97,500,918**
11	Other Revenues	$ 3,303,366	$ -	$ 3,303,366	$ -	$ 3,303,366
12	Rounding	$ -	$ 356	$ 356	$ -	$ 356
13	**Total Revenues**	**$ 97,703,142**	**$ -**	**$ 97,703,142**	**$ 3,101,498**	**$ 100,804,640**
14						
15	*EXPENSES:*					
16	Purchased Power	$ 52,225,663	$ -	$ 52,225,663	$ -	$ 52,225,663
17	Transmission Operation and Maintenance	$ 183,288	$ -	$ 183,288	$ -	$ 183,288
18	Distribution - Operations	$ 6,816,903	$ -	$ 6,816,903	$ -	$ 6,816,903
19	Distribution - Maintenance	$ 3,738,590	$ -	$ 3,738,590	$ -	$ 3,738,590
20	Consumer Accounting	$ 3,188,444	$ -	$ 3,188,444	$ -	$ 3,188,444
21	Customer Service	$ 772,052	$ -	$ 772,052	$ -	$ 772,052
22	Sales	$ 387,186	$ -	$ 387,186	$ -	$ 387,186
23	Administrative and General	$ 5,675,495	$ -	$ 5,675,495	$ -	$ 5,675,495
24	Depreciation and Amortization	$ 10,857,765	$ -	$ 10,857,765	$ -	$ 10,857,765
25	Taxes	$ 3,600,000	$ -	$ 3,600,000	$ -	$ 3,600,000
26	**Total Operating Expenses**	$ 87,445,386	$ -	$ 87,445,386	$ -	$ 87,445,386
27						
28	**Operating Margin Before Interest on L.T.- Debt**	$ 10,257,756	$ -	$ 10,257,756	$ -	$ 13,359,254
29						
30	***INTEREST ON LONG-TERM DEBT & OTHER DEDUCTIONS***					
31	Interest on Long-term Debt	$ 6,028,981	$ -	$ 6,028,981	$ -	$ 6,028,981
32	Interest - Other	$ 8,823	$ -	$ 8,823	$ -	$ 8,823
33	Other Dedcutions	$ 86,673	$ -	$ 86,673	$ -	$ 86,673
34	**Total Interest & Other Deductions**	$ 6,124,477	$ -	$ 6,124,477	$ -	$ 6,124,477
35						
36	***MARGINS (LOSS) AFTER INTEREST EXPENSE***	$ 4,133,279	$ -	$ 4,133,279	$ -	$ 7,234,777
37						
38	***NON-OPERATING MARGINS***					
39	Interest Income	$ 171,224	$ -	$ 171,224	$ -	$ 171,224
40	Other Margins	$ (192,011)	$ -	$ (192,011)	$ -	$ (192,011)
41	G&T Capital Credits	$ 4,026,166	$ -	$ 4,026,166	$ -	$ 4,026,166
42	Other Capital Credits	$ 294,675	$ -	$ 294,675	$ -	$ 294,675
43	**Total Non-Operating Margins**	$ 4,300,054	$ -	$ 4,300,054	$ -	$ 4,300,054
44						
45	***EXTRAORDINARY ITEMS***	$ -	$ -	$ -	$ -	$ -
46						
47	***NET MARGINS (LOSS)***	$ 8,433,333	$ -	$ 8,433,333	$ -	$ 11,534,831
48						
49						
50	References:					
51	Column (A): Cooperative Schedule A					
52	Column (B): Schedule CSB-9					
53	Column (C): Column (A) + Column (B)					
54	Column (D): Schedule CSB-1					
55	Column (E): Column (C) + Column (D)					

Sulphur Springs Valley Electric Cooperative
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Surrebuttal Schedule CSB-5

SUMMARY OF OPERATING MARGIN ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF ADJUSTED
	REVENUES:			
1	Margin Revenue (Non-Base Cost of Power)	$ 42,173,757	$ -	$ 42,173,757
2				
3	Base Cost of Power Revenue ("BCOP")	$ 57,198,264	$ (4,724,035)	$ 52,474,229
4	Power Cost Adjustor ("PCA")	(4,724,035)	4,724,035	-
5	To Reconcile to New BCOP	(248,210)	-	(248,210)
6	Subtotal	52,226,019	-	52,226,019
7	Rounding	-	(356)	(356)
8	Base Cost of Power and Adjustor Revenue	$ 52,226,019	$ (356)	$ 52,225,663
9				
10	Total Revenue from Sales of Electricity	$ 94,399,776	$ (356)	$ 94,399,420
11				
12	Other Revenues	$ 3,303,366	$ -	$ 3,303,366
13	Rounding		356	356
14				
15	**Total Revenues**	**$ 97,703,142**	**$ -**	**$ 97,703,142**
16				
17	*OPERATING EXPENSES:*			
18	Purchased Power	$ 52,225,663	$ -	$ 52,225,663
19	Transmission Operation and Maintenance	183,288	-	$ 183,288
20	Distribution - Operations	6,816,903	-	$ 6,816,903
21	Distribution - Maintenance	3,738,590	-	$ 3,738,590
22	Consumer Accounting	3,188,444	-	$ 3,188,444
23	Customer Service	772,052	-	$ 772,052
24	Sales	387,186	-	$ 387,186
25	Administrative and General	5,675,495	-	$ 5,675,495
26	Depreciation and Amortization	10,857,765	-	$ 10,857,765
27	Taxes	3,600,000	-	$ 3,600,000
28	**Total Operating Expenses**	$ 87,445,386	$ -	$ 87,445,386
29				
30	**Operating Margin Before Interest on L.T.- Debt**	**$ 10,257,756**	**$ -**	**$ 10,257,756**
31				
32	*INTEREST ON LONG-TERM DEBT & OTHER DEDUCTIONS*			
33	Interest on Long-term Debt	$ 6,028,981	$ -	$ 6,028,981
34	Interest - Other	$ 8,823	-	8,823
35	Other Dedcutions	86,673	-	86,673
36	**Total Interest & Other Deductions**	$ 6,124,477	$ -	$ 6,124,477
37				
38	*MARGINS (LOSS) AFTER INTEREST EXPENSE*	**$ 4,133,279**	**$ -**	**$ 4,133,279**
39				
40	*NON-OPERATING MARGINS*			
41	Interest Income	$ 171,224	$ -	$ 171,224
42	Other Margins	$ (192,011)	-	(192,011)
43	G&T Capital Credits	$ 4,026,166	-	4,026,166
44	Other Capital Credits	294,675	-	294,675
45	**Total Non-Operating Margins**	$ 4,300,054	$ -	$ 4,300,054
46				
47	*EXTRAORDINARY ITEMS*	$ -	-	$ -
48				
49	*NET MARGINS (LOSS)*	$ 8,433,333	$ -	$ 8,433,333

Sulphur Springs Valley Electric Cooperative
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Revised Surrebuttal Schedule CSB-1

EXHIBIT
1
S-3
ADMITTED

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COOPERATIVE FAIR VALUE	(B) STAFF FAIR VALUE
1	Adjusted Rate Base	$ 208,373,755	$ 208,373,755
2	Margin (Loss) After Interest on L.T. Debt	$ 4,133,279	$ 4,063,356
3	Current Rate of Return (L2 / L1)	1.98%	1.95%
4	Required Rate of Return	6.41%	6.41%
5a	Required Margin (Loss) Before Interest on L.T. Debt (L4 * L1)	$ 13,359,254	$ 13,356,758
5b	Required Margin (Loss) After Interest on L.T. Debt	$ 7,234,777	$ 7,234,777
6	Operating Margin Deficiency (L5b - L2)	$ 3,101,498	$ 3,171,421
7	Gross Revenue Conversion Factor	1.0000	1.0000
8	Required Revenue Increase/(Decrease) (L7 * L6)	$ 3,101,498	**$ 3,171,421**
9	Adjusted Test Year Revenue	$ 97,703,142	$ 97,703,142
10	Proposed Annual Revenue (L8 + L9)	$ 100,804,640	$ 100,874,563
11	Required Increase in Revenue (%)	3.17%	3.25%
12	Depreciation and Amortization Expense	$ 10,857,765	$ 10,857,765
13	Interest Expense on Long-term Debt	$ 6,028,981	$ 6,028,981
14	Interest Income	$ 171,224	$ 171,224
15	Principal Payments	$ 6,987,062	$ 6,987,062
16	Cash Capital Credits	$ 955,159	$ 955,159
17	TIER ((L 5 + L 13) / L 13)	2.20	2.20
18	DSC ((L 5 + L 12 + L 13 + L 14 + L 16) / (L 13 + L 15) - Per Cooperative	1.94	N/A
19	DSC ((L 5 + L 12 + L 13) / (L 13 + L 15) - Per Staff	N/A	1.85

References:
Column (A): Company Schedules A-1, A-2, B-1, & C-2
Column (B): Staff Schedule CSB-3

Sulphur Springs Valley Electric Cooperative
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Revised Surrebuttal Schedule CSB-2

RATE BASE - ORIGINAL COST

LINE NO.		[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	Plant in Service	$ 328,798,905	$ -	$ 328,798,905
2	Less: Acc Depreciation & Amortization	(121,553,067)	-	(121,553,067)
3	Net Plant in Service	$ 207,245,838	$ -	$ 207,245,838
	LESS:			
4	Consumer Deposits	$ (2,732,323)	$ -	$ (2,732,323)
5	Consumer Advances	$ (96,781)	$ -	$ (96,781)
6	Deferred Credits	$ -	$ -	$ -
7	Total	(2,829,104)	-	(2,829,104)
	ADD:			
8	Cash Working Capital	$ -	$ -	$ -
9	Materials and Supplies	$ 2,650,491	$ -	$ 2,650,491
10	Prepayments	$ 1,306,530	$ -	$ 1,306,530
11	Total	$ 3,957,021	$ -	$ 3,957,021
12	**Total Rate Base**	$ 208,373,755	$ -	$ 208,373,755

References:
Column [A], Cooperative Schedule B-1
Column [B]: Schedules CSB-2 through CSB-7
Column [C]: Column [A] + Column [B]

Sulphur Springs Valley Electric Cooperative
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Revised Surrebuttal Schedule CSB-3

SUMMARY OF RATE BASE ADJUSTMENTS

LINE NO.	Acct. No.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] ADJUSTMENTS	[C] STAFF ADJUSTED
		PLANT IN SERVICE:			
1	346	Solar Production Panels and Equipment	$ 5,418,964	$ -	$ 5,418,964
2	350	Transmission Plant - Land and Land Rights	$ 1,051,896	$ -	$ 1,051,896
3	353	Transmission Plant - Station Equipment	$ 1,538,886	$ -	$ 1,538,886
4	355	Transmission Plant - Poles and Fixtures	$ 14,095,714	$ -	$ 14,095,714
5	356	Transmission Plant - OH Conductors	$ 17,438,117	$ -	$ 17,438,117
6	360	Distribution Plant - Land and Land Rights	$ 438,067	$ -	$ 438,067
7	361	Distribution Plant - Structures and Improvements	$ 660,197	$ -	$ 660,197
8	362	Distribution Plant - Substation Equipment	$ 28,609,446	$ -	$ 28,609,446
9	364	Distribution Plant - Poles, Towers, and Fixtures	$ 56,052,611	$ -	$ 56,052,611
10	365	Distribution Plant - Conductors and Devices	$ 37,882,046	$ -	$ 37,882,046
11	366	Distribution Plant - Underground Conduit	$ 24,349,294	$ -	$ 24,349,294
12	367	Distribution Plant - Underground Conductors	$ 40,366,827	$ -	$ 40,366,827
13	368	Distribution Plant - Transformers	$ 55,440,604	$ -	$ 55,440,604
14	369	Distribution Plant - Services	$ 9,931,495	$ -	$ 9,931,495
15	370	Distribution Plant - Meters	$ 20,077,102	$ -	$ 20,077,102
16	371	Distribution Plant - Install. On Customers Premises	$ 2,174,149	$ -	$ 2,174,149
17	373	Distribution Plant - Street Lighting and Signal Syst	$ 3,969,068	$ -	$ 3,969,068
18	389	General Plant - Land and Land Rights	$ 806,591	$ -	$ 806,591
19	390	General Plant - Structures and Improvements	$ 11,434,576	$ -	$ 11,434,576
20	391	General Plant - Office Furniture and Equipment	$ 4,865,525	$ -	$ 4,865,525
21	392	General Plant - Transportation Equipment	$ 5,933,298	$ -	$ 5,933,298
22	393	General Plant - Stores Equipment	$ 211,969	$ -	$ 211,969
23	394	General Plant - Tools, Shop, & Garage Equipment	$ 2,455,903	$ -	$ 2,455,903
24	395	General Plant - Laboratory Equipment	$ 878,967	$ -	$ 878,967
25	396	General Plant - Power Operated Equipment	$ 12,635,559	$ -	$ 12,635,559
26	397	General Plant - Communications Equipment	$ 1,238,456	$ -	$ 1,238,456
27	398	General Plant - Miscellaneous	$ (31,228,238)	$ -	$ (31,228,238)
28	399	General Plant - Contributed dollars	$ 71,817	$ -	$ 71,817
29		Total Plant in Service	$ 328,798,905	$ -	$ 328,798,905
30		Less: Accumulated Depreciation	$ (121,553,067)	$ -	$ (121,553,067)
31		Less: Accumulated Amortization	-	-	$ -
32		Total Accumulated Depreciation & Amortization	$ (121,553,067)	$ -	$ (121,553,067)
33		Net Plant in Service	$ 207,245,838	$ -	$ 207,245,838
		LESS:			
34		Consumer Deposits	$ (2,732,323)	$ -	$ (2,732,323)
35		Consumer Advances	$ (96,781)	$ -	$ (96,781)
36		Deferred Credits	$ -	$ -	$ -
37		Total	$ (2,829,104)	$ -	$ (2,829,104)
		ADD:			
38		Cash Working Capital	$ -	$ -	$ -
39		Materials and Supplies	$ 2,650,491	$ -	$ 2,650,491
40		Prepayments	$ 1,306,530	$ -	$ 1,306,530
41		Total	$ 3,957,021	$ -	$ 3,957,021
42		**Total Rate Base**	$ 208,373,755	$ -	$ 208,373,755

Sulphur Springs Valley Electric Cooperative
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Revised Surrebuttal Schedule CSB-4

OPERATING MARGIN - TEST YEAR AND STAFF PROPOSED

Line No.	DESCRIPTION	[A] COOPERATIVE TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF RECOMMENDED CHANGES	[E] STAFF RECOMMENDED
	REVENUES:					
1	Margin Revenue (Non-Base Cost of Power)	$ 42,173,757	$ -	$ 42,173,757	$ 3,171,421	$ 45,345,178
4						
5	Base Cost of Power Revenue ("BCOP")	$ 57,198,264	$ (4,724,035)	$ 52,474,229	$ -	$ 52,474,229
6	Power Cost Adjustor ("PCA")	$ (4,724,035)	$ 4,724,035	$ -	$ -	$ -
7	To Reconcile to New BCOP	$ (248,210)	$ -	$ (248,210)	$ -	$ (248,210)
8	Subtotal	$ 52,226,019	$ -	$ 52,226,019	$ -	$ 52,226,019
	Rounding	$ -	$ (356)	$ (356)	$ -	$ (356)
9	Base Cost of Power and Adjustor Revenue	$ 52,226,019	$ (356)	$ 52,225,663	$ -	$ 52,225,663
10	**Total Revenue from Sales of Electricity**	**$ 94,399,776**	**$ (356)**	**$ 94,399,420**	**$ 3,171,421**	**$ 97,570,841**
11	Other Revenues	$ 3,303,366	$ -	$ 3,303,366	$ -	$ 3,303,366
12	Rounding	$ -	$ 356	$ 356	$ -	$ 356
13	**Total Revenues**	**$ 97,703,142**	**$ -**	**$ 97,703,142**	**$ 3,171,421**	**$ 100,874,563**
14						
15	*EXPENSES:*					
16	Purchased Power	$ 52,225,663	$ -	$ 52,225,663	$ -	$ 52,225,663
17	Transmission Operation and Maintenance	$ 183,288	$ -	$ 183,288	$ -	$ 183,288
18	Distribution - Operations	$ 6,816,903	$ -	$ 6,816,903	$ -	$ 6,816,903
19	Distribution - Maintenance	$ 3,738,590	$ -	$ 3,738,590	$ -	$ 3,738,590
20	Consumer Accounting	$ 3,188,444	$ -	$ 3,188,444	$ -	$ 3,188,444
21	Customer Service	$ 772,052	$ -	$ 772,052	$ -	$ 772,052
22	Sales	$ 387,186	$ -	$ 387,186	$ -	$ 387,186
23	Administrative and General	$ 5,675,495	$ 69,923	$ 5,745,418	$ -	$ 5,745,418
24	Depreciation and Amortization	$ 10,857,765	$ -	$ 10,857,765	$ -	$ 10,857,765
25	Taxes	$ 3,600,000	$ -	$ 3,600,000	$ -	$ 3,600,000
26	**Total Operating Expenses**	$ 87,445,386	$ 69,923	$ 87,515,309	$ -	$ 87,515,309
27						
28	**Operating Margin Before Interest on L.T.- Debt**	$ 10,257,756	$ (69,923)	$ 10,187,833	$ -	$ 13,359,254
29						
30	***INTEREST ON LONG-TERM DEBT & OTHER DEDUCTIONS***					
31	Interest on Long-term Debt	$ 6,028,981	$ -	$ 6,028,981	$ -	$ 6,028,981
32	Interest - Other	$ 8,823	$ -	$ 8,823	$ -	$ 8,823
33	Other Dedcutions	$ 86,673	$ -	$ 86,673	$ -	$ 86,673
34	**Total Interest & Other Deductions**	$ 6,124,477	$ -	$ 6,124,477	$ -	$ 6,124,477
35						
36	***MARGINS (LOSS) AFTER INTEREST EXPENSE***	$ 4,133,279	$ (69,923)	$ 4,063,356	$ -	$ 7,234,777
37						
38	***NON-OPERATING MARGINS***					
39	Interest Income	$ 171,224	$ -	$ 171,224	$ -	$ 171,224
40	Other Margins	$ (192,011)	$ -	$ (192,011)	$ -	$ (192,011)
41	G&T Capital Credits	$ 4,026,166	$ -	$ 4,026,166	$ -	$ 4,026,166
42	Other Capital Credits	$ 294,675	$ -	$ 294,675	$ -	$ 294,675
43	**Total Non-Operating Margins**	$ 4,300,054	$ -	$ 4,300,054	$ -	$ 4,300,054
44						
45	***EXTRAORDINARY ITEMS***	$ -	$ -	$ -	$ -	$ -
46						
47	***NET MARGINS (LOSS)***	$ 8,433,333	$ (69,923)	$ 8,363,410	$ -	$ 11,534,831
48						
49						

50 References:
51 Column (A): Cooperative Schedule C
52 Column (B): Schedule CSB-5
53 Column (C): Column (A) + Column (B)
54 Column (D): Schedule CSB-1
55 Column (E): Column (C) + Column (D)

#REF!
#REF!
#REF!

SUMMARY OF OPERATING MARGIN ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENTS	Ref	[C] STAFF ADJUSTED
	REVENUES:				
1	Margin Revenue (Non-Base Cost of Power)	$ 42,173,757	$ -		$ 42,173,757
2					
3	Base Cost of Power Revenue ("BCOP")	$ 57,198,264	$ (4,724,035)	1	$ 52,474,229
4	Power Cost Adjustor ("PCA")	(4,724,035)	4,724,035	1	-
5	To Reconcile to New BCOP	(248,210)	-		(248,210)
6	Subtotal	52,226,019	-		52,226,019
7	Rounding	-	(356)	1	(356)
8	Base Cost of Power and Adjustor Revenue	$ 52,226,019	$ (356)		$ 52,225,663
9					
10	Total Revenue from Sales of Electricity	$ 94,399,776	$ (356)	1	$ 94,399,420
11					
12	Other Revenues	$ 3,303,366	$ -		$ 3,303,366
13	Rounding		356		356
14					
15	**Total Revenues**	**$ 97,703,142**	**$ -**		**$ 97,703,142**
16					
17	*OPERATING EXPENSES:*				
18	Purchased Power	$ 52,225,663	$ -		$ 52,225,663
19	Transmission Operation and Maintenance	183,288	-		$ 183,288
20	Distribution - Operations	6,816,903	-		$ 6,816,903
21	Distribution - Maintenance	3,738,590	-		$ 3,738,590
22	Consumer Accounting	3,188,444	-		$ 3,188,444
23	Customer Service	772,052	-		$ 772,052
24	Sales	387,186	-		$ 387,186
25	Administrative and General	5,675,495	69,923	2	$ 5,745,418
26	Depreciation and Amortization	10,857,765	-		$ 10,857,765
27	Taxes	3,600,000	-		$ 3,600,000
28	**Total Operating Expenses**	$ 87,445,386	$ 69,923		$ 87,515,309
29					
30	**Operating Margin Before Interest on L.T.- Debt**	**$ 10,257,756**	**$ (69,923)**		**$ 10,187,833**
31					
32	*INTEREST ON LONG-TERM DEBT & OTHER DEDUCTIONS*				
33	Interest on Long-term Debt	$ 6,028,981	$ -		$ 6,028,981
34	Interest - Other	$ 8,823	-		8,823
35	Other Dedcutions	86,673	-		86,673
36	**Total Interest & Other Deductions**	$ 6,124,477	$ -		$ 6,124,477
37					
38	*MARGINS (LOSS) AFTER INTEREST EXPENSE*	**$ 4,133,279**	**$ (69,923)**		**$ 4,063,356**
39					
40	*NON-OPERATING MARGINS*				
41	Interest Income	$ 171,224	$ -		$ 171,224
42	Other Margins	$ (192,011)	-		(192,011)
43	G&T Capital Credits	$ 4,026,166	-		4,026,166
44	Other Capital Credits	294,675	-		294,675
45	**Total Non-Operating Margins**	$ 4,300,054	$ -		$ 4,300,054
46					
47	*EXTRAORDINARY ITEMS*	$ -	-		$ -
48					
49	*NET MARGINS (LOSS)*	$ 8,433,333	$ (69,923)		$ 8,363,410

Sulphur Springs Valley Electric Cooperative
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Revised Surrebuttal Schedule CSB-6

OPERATING MARGIN ADJUSTMENT NO. 1 - BASE COST OF POWER AND WHOLESALE POWER COST ADJUSTOR

LINE NO.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	***Revenues***			
2	Base Cost of Power Revenue ("BCOP")	$ 57,198,264	$ -	$ 57,198,264
3	To Move Power Cost Adjustor Rev to New BCOP	-	(4,724,035)	(4,724,035)
4	Base Cost of Power Revenue - Company	$ 57,198,264	$ (4,724,035)	$ 52,474,229
5				
6	Power Cost Adjustor Revenue ("PCA")	(4,724,035)	-	(4,724,035)
7	To Eliminate Power Cost Adjustor Revenue	-	4,724,035	4,724,035
8	Total Power Cost Adjustor Revenue	(4,724,035)	4,724,035	-
9				
10	To Reconcile to Recommended BCOP	-	(248,210)	(248,210)
11				
12	Total Base Cost of Power and PCA (L 4 + L 8 + L10)	52,474,229	(248,210)	52,226,019
13				
14	Rounding	-	(356)	(356)
15	Base Cost of Power Revenue - Company	$ 52,474,229	$ (248,566)	$ 52,225,663
16				
17	***Expenses***			
18	Purchased Power Expense (From Sch A-2.0)	$ 52,225,663	$ -	$ 52,225,663
19	Rounding	-	-	-
20		52,225,663	-	52,225,663
21				
22	**Operating Margin (Line 15 - Line 20)**	**$ 248,566**	**$ (248,566)**	**$ 0**
23				
24				
25				
26				
27		Current BCOP	Difference	Company Proposed & Staff Recommended BCOP
28	Test Year Sales (In kWhs)	793,021,534	-	793,021,534
29	Multiplied by: Base Cost of Power per kWh	0.072127000	(0.0062700)	0.065857000
30	Total Base Cost of Power	$ 57,198,264	**$ (4,972,245)**	$ 52,226,019

References:

Column A: Cooperative Schedule C
Column B: Testimony, CSB
Column C: Column [A] + Column [B]

Sulphur Springs Valley Electric Cooperative
Docket No. E-01575A-15-0312
Test Year Ended December 31, 2014

Revised Surrebuttal Schedule CSB-7

OPERATING MARGIN ADJUSTMENT NO. 2 - RATE CASE EXPENSE

LINE NO.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	Administrative and General Expenses	$ 5,608,828	-	$ 5,608,828
2	Outside Services, Rate Case Expense	$ 66,667	69,923	$ 136,590
3	Total Administrative and General Expenses	$ 5,675,495	69,923	$ 5,745,418

	Normalization of Rate Case Expense		
	Cooperative Direct Testimony	Adjustment	Staff Recommended
	$ 200,000	$ 209,770	$ 409,770
Divided by 3 years	3		3
	$ 66,667	$ 69,923	$ 136,590

References:
Column A: Cooperative Schedule C-2
Column B: Testimony, CSB; Data Request Response CSB 15.1, Hedrick Rebuttal Testimony, p. 25, line 19
Column C: Column [A] + Column [B]

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Interim Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS	)	DOCKET NO. E-01575A-15-0312

DIRECT

TESTIMONY

OF

RAY T. WILLIAMSON

UTILITIES ENGINEER - ELECTRICAL

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 19, 2016

EXHIBIT
S-4
ADMITTED

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Engineering Report 1

EXECUTIVE SUMMARY
SULPHIR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01575A-15-0312

Ray Williamson's testimony presents the results of the Utilities Division Staff's ("Staff") Engineering review of the rate case application ("Application") of Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Cooperative") filed with the Arizona Corporation Commission ("Commission") August 31, 2015, and the results of Staff's evaluation of the Cooperative's electric distribution system in Arizona.

Based on its review of SSVEC's Application, inspection of the Cooperative's electric system, discussions with the Cooperative's Engineering Manager Daniel Wilson and Technical Services Manager Manny Gonzalez, and responses to data requests, Staff's conclusions are as follows:

a. SSVEC is operating and maintaining its electrical system properly.
b. SSVEC is carrying out system improvements, upgrades, and new additions to meet the current and projected load of the Cooperative in an efficient and reliable manner. These improvements, system upgrades and new construction are reasonable and appropriate. The Cooperative's plant in service for the SSVEC service territory is "used and useful."
c. The Cooperative has an acceptable level of system losses, consistent with industry guidelines, and
d. SSVEC has a satisfactory record of service interruptions in the historic period from 2010 through 2014, reflecting satisfactory quality of service.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Ray Thomas Williamson. My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. By whom and in what capacity are you employed?

A. I am employed by the Arizona Corporation Commission ("ACC" or "Commission") as a Utilities Division ("Staff") Engineer.

Q. Please describe your educational background.

A. I have a Bachelor's degree in Engineering, specializing in Nuclear Engineering from the U.S. Military Academy at West Point, New York in 1970. I graduated with a Master of Public Service Degree from Western Kentucky University in 1976. I received an M.B.A. degree specializing in Finance, from Arizona State University in 1982. I received the Certified Energy Manager (C.E.M.) designation from the Association of Energy Engineers in 1984.

Q. Please describe your pertinent work experience.

A. I have worked at the Commission since October 1992 as an Economist, Senior Rate Analyst, Chief of Economics and Research, Acting Director of the Utilities Division, and Utilities Engineer. During this time I have performed engineering analyses for financing and rate cases, conducted analyses of solar and other renewable projects, developed and implemented rule-making programs, reviewed and evaluated energy efficiency and renewable energy projects and programs, and worked with electrical utilities on Renewable Energy Standard and Tariff ("REST") Rules compliance. I acted as the ACC Chairman's representative on the Arizona Power Plant and Transmission Line Siting Committee from 2001-2005.

Prior to working at the Commission, I was employed at the Arizona Energy Office as an Energy Economic Analyst and Manager of the Arizona Solar Energy Office from July 1985 to October 1992. From December 1980 to June 1985, I worked as a Solar Engineering Specialist and Associate Director of the Arizona Solar Energy Commission. In the private sector, I served as a sales engineer for two solar companies: Solaron Corporation and Ramada Energy Systems, Inc. from July 1976 to July 1980.

PURPOSE OF TESTIMONY

Q. As part of your assigned duties at the Commission, did you perform an analysis of the application that is the subject of this proceeding?

A. Yes, I did.

Q. Is your testimony herein based on that analysis?

A. Yes, it is.

Q. What is the purpose of your prefiled testimony?

A. The purpose of my testimony is to present the results of Staff's engineering evaluation of Sulphur Springs Valley Electric Cooperative, Inc.'s ("SSVEC" or "Cooperative") electric distribution system operations and planning in the State of Arizona.

ENGINEERING REVIEW

Q. Did you perform an engineering evaluation of SSVEC's electrical system?

A. Yes, I did. Based on a review of SSVEC's rate application ("Application"), a site visit in which I inspected parts of SSVEC's electric distribution system in Arizona and held discussions with members of SSVEC's staff, and responses to data requests from Staff, I prepared an engineering report presenting my findings.

Q. Is the engineering evaluation report a part of your testimony today?

A. Yes it is. It is attached as Exhibit 1.

CONCLUSIONS

Q. What conclusions did Staff derive based on its engineering evaluation of SSVEC's electric distribution system in Arizona?

A. Staff's conclusions, as described in Staff's Engineering Report (attached) are as follows:

a. SSVEC is operating and maintaining its electrical system properly.

b. SSVEC is carrying out system improvements, upgrades, and new additions to meet the current and projected load of the Cooperative in an efficient and reliable manner. These improvements, system upgrades and new construction are reasonable and appropriate. The Cooperative's plant in service for the SSVEC service territory is "used and useful."

c. The Cooperative has an acceptable level of system losses, consistent with industry guidelines, and

d. SSVEC has a satisfactory record of service interruptions in the historic period from 2010 through 2014, reflecting satisfactory quality of service.

Q. Does this conclude your direct testimony?

A. Yes, it does.

EXHIBIT 1

MEMORANDUM

TO: Julie McNeely-Kirwin
Public Utilities Analyst V
Utilities Division

FROM: Ray Williamson Ray T. Williamson
Utilities Engineer
Utilities Division

THRU: Del Smith
Engineering Supervisor
Utilities Division

DATE: February 19, 2016

RE: STAFF ENGINEERING REPORT – IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS (DOCKET NO. E-01575A-15-0312)

GENERAL

On August 31, 2015, Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC") submitted an application to the Arizona Corporation Commission ("Commission") for a hearing to determine the fair value of its property for ratemaking purposes, to fix a just and reasonable return thereon, to approve rates designed to develop such return and for related approvals.

ENGINEERING EVALUATION

SSVEC is headquartered in Wilcox, Arizona. SSVEC's service area is located primarily in Cochise County, but also serves portions of Santa Cruz, Pima and Graham Counties. SSVEC is a member-owned non-profit electric cooperative. It is governed by a Board of Directors elected by its member-customers. Its 5,700 square miles of service territory encompass parts of four counties in Arizona. SSVEC serves approximately 52,000 members in Arizona.

Site Visit

Staff, represented by Ray T. Williamson, met with SSVEC Staff on November 25, 2015. During the visit, the history of the Cooperative's operations in Arizona and its organization related to customer service, planning, engineering, construction, system operations, meters, rates and maintenance were discussed. Staff met with Daniel Wilson, Engineering Manager, and Manny

Gonzales, Technical Services Manager. Cost, location and reason for major construction projects were discussed as well as points of delivery and source of wholesale power purchases, operations procedures on the electric system, inspection procedures, system characteristics, and potential for growth. Mr. Wilson and Mr. Gonzales then took Staff on an inspection tour of the SSVEC facilities located in the Wilcox area.

Electric System Characteristics

At the end of September 2015, SSVEC served 51,522 customers of which 41,713 were residential, 8,460 were 50 kva or less commercial and industrial customers, 414 were over 50 kva commercial and industrial customers, 889 were irrigation customers, and 46 were public street and highway lighting customers. The number of services in Arizona, including all classes of customers, increased from 51,063 in 2010 to 51,522 in September 2015, an average increase of less than 0.99 percent.

Total Number of Customers – Year-end Values
November 17th, 2015

Revenue Class	2010	2011	2012	2013	2014	2015*
1. Residential (excl seas.)	41,454	41,311	41,091	41,036	41,190	41,713
2. Irrigation	718	783	791	827	852	889
3. Comm, & Ind. -50 kva or less	8,475	8,458	8,485	8,501	8,523	8,460
4. Comm. & Ind. Over 50 kva	370	386	392	396	402	414
5. Public St. & Highway lighting	46	45	46	46	46	46
6. Total Number of Customers (1 thru 5)	51,063	50,983	50,805	50,806	51,013	51,522

*Up to September 2015

Actual system peak demand rose each year from 2010-2013, but fell slightly in 2014. Annual load increased annually from 2010 through 2012, but declined slightly in both 2013 and 2014.

Historical System Characteristics

Year	Actual Peak Demand in MW	Month	Annual Demand Growth (%)	Annual Load (MWH)	Annual Load Growth (%)
2010	192.6	June		819,288	
2011	204.8	June	6.3	835,767	2.01
2012	205.7	June	0.43	847,925	1.45
2013	207.9	June	1.06	829,294	(2.11)
2014	198.6	July	(4.4)	793,046	(4.37)

Annual System Losses

SSVEC's annual system losses were between 5.5 percent and 7.4 percent between 2010 and 2014. Losses were at their lowest levels in 2013 and 2014. These losses are well within the industry guidelines of 10 percent per year for rural electric cooperatives.

SSVEC Line Loss Calculation 2010 to 2014

MWH					
Year	**Purchased**	**Sales**	**Own Use**	**Losses**	**Loss %**
2014	979,247	924,230	1,499	53,518	5.5%
2013	929,466	873,738	1,640	54,088	5.8%
2012	915,201	853,741	1,543	59,917	6.5%
2011	910,114	840,861	1,562	67,691	7.4%
2010	880,283	822,777	1,394	56,112	6.4%

Percentage losses can be described as the losses (in MWH) divided by MWH purchased.

Quality of Service

Outages that occur in a utility's system stem from a variety of causes. The outages are an indicator of the quality of service to customers. Storms are the cause of some of the outages. Other outages are related to equipment failure and planned outages. The historical data relative to SSVEC's distribution system outages are shown in the Service Interruptions table below. The average outage minutes per customer for the years 2010 to 2014 are an indicator of SSVEC's quality of service.

Service Interruptions

	Avg. Minutes per Consumer by Cause	**Avg. Minutes per Consumer by Cause**	**Avg. Minutes per Consumer by Cause**	**Avg. Minutes per Consumer by Cause**	**Total**
	Power Supplier	Major Event	Planned	All Other	
	(a)	(b)	(c)	(d)	(e)
2014	0.00	0.00	8.11	79.89	**88.00**
2013	7.07	22.69	2.66	81.60	**114.02**
2012	2.8	2.39	3.35	58.34	**66.88**
2011	5.41	139.03	5.48	106.53	**256.45**
2010	.013	0	2.52	147.41	**150.06**

The SSVEC outage minutes in all five years are all below the level of concern as outlined in the Rural Utilities Service ("RUS") Bulletins which Staff uses to judge the adequacy of the Cooperative's reliability. Therefore, Staff believes that SSVEC's system reliability and quality of service are satisfactory.

Distribution System Inspection

During Staff's site visit on November 25, 2015, Staff inspected the Willcox substation, and portions of the transmission, sub transmission, and distribution systems including the locations of system improvements and upgrades that have been made in the last few years.

In general, the SSVEC electric system appears to be well planned and maintained. No obvious problems or deficiencies were observed during the inspection tour. SSVEC's routine maintenance program appears to be robust.

Projected System Growth

SSVEC has projected that its peak demand growth will fluctuate from 1.7 percent to 2.5 percent growth annually over the next five-year period.

Projected System Growth

Year	System Peak	Percentage Growth
2015	203 MW*	2.2%
2016	207.1 MW	2.0%
2017	212.4 MW	2.5%
2018	216.0 MW	1.7%
2019	221.5 MW	2.5%

* Actual Peak

CONCLUSIONS

Based on its review of SSVEC's Application, inspection of the Cooperative's electric system, discussions with the Cooperative's Engineering Manager Daniel Wilson and Technical Services Manager Manny Gonzalez, and responses to data requests, Staff's conclusions are as follows:

a. SSVEC is operating and maintaining its electrical system properly.

b. SSVEC is carrying out system improvements, upgrades and new additions to meet the current and projected load of the Cooperative in an efficient and reliable manner. These improvements, system upgrades and new construction are reasonable and appropriate. The Cooperative's plant in service for the SSVEC service territory is "used and useful"

c. The Cooperative has an acceptable level of system losses, consistent with industry guidelines, and

d. SSVEC has a satisfactory record of service interruptions in the historic period from 2010 through 2014 reflecting satisfactory quality of service.

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATE DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS.	)	DOCKET NO. E-01575A-15-0312

DIRECT

TESTIMONY

OF

JULIE MCNEELY-KIRWAN

PUBLIC UTILITIES ANALYST

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 19, 2016

EXHIBIT
5-5
ADMITTED

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SSVEC's Responses to Staff's Fourth Set of Data Requests JMK-1

EXECUTIVE SUMMARY
SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01575A-15-0312

Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC"), filed a rate case on August 31, 2015; Staff's recommendations are the following:

1. The base cost of purchased power should be set at $0.065857 per kWh.

2. SSVEC should inform ratepayers requesting miscellaneous services in advance of the costs they may incur. A current list of all service charges should be available and easily located on the Cooperative's website. In addition, if a service issue occurs due to problems on SSVEC's side of the meter, or due to any maintenance for which SSVEC should be responsible in the normal course of business, the ratepayer should not be charged service charges for any repairs.

3. The SSVEC-proposed increases to its Service Charges should be approved.

4. SSVEC's proposed decrease in the New and Additional Service fee should be approved.

5. If SSVEC dockets proposed changes to its Service Conditions Staff will address the proposed changes in its surrebuttal testimony, or no later than at the hearing.

6. SSVEC should provide the Time of Use analysis ordered in Decision No. 73349 or indicate where this information is located in its case filings.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Julie McNeely-Kirwan. I am a Utilities Analyst V employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Briefly describe your responsibilities as a Senior Rate Analyst.

A. My duties include reviewing and analyzing applications filed with the Commission, and drafting staff reports and proposed orders for Open Meeting. In addition, my duties include performing rate case sufficiency reviews, preparing written testimony in rate cases, and testifying during related hearings. I have also assisted in the management of rate cases.

Q. Please describe your educational background and professional experience.

A. I have a Master's Degree in Political Science from the University of Wisconsin, Madison. Prior to that, I graduated Magna Cum Laude from Arizona State University, with a Bachelor of Arts degree. I have been employed by the Commission as a Utilities Analyst since September of 2006. During that time, I have attended the Annual Regulatory Studies Program, given by the Institute of Public Utilities at Michigan State University, and a number of regulatory courses taught by the New Mexico Center for Public Utilities. In addition, I attend seminars and classes on regulatory issues on an ongoing basis as part of my work for the Commission.

Q. What is the scope of your testimony in this case?

A. I will address the base cost of power, the adjustors, and the Service Charges and Service Conditions of Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Cooperative" or "Company").

Q. Have you reviewed testimony submitted by the Company in this case?

A. Yes. I reviewed the testimony of Creden W. Huber, David W. Hedrick and Judy K. Lambert, particularly as it pertains to the scope of my testimony.

BASE COST OF POWER

Q. What is SSVEC's current base cost of purchased power?

A. Currently, SSVEC has a base cost of power of $0.072127 per kilowatt-hour ("kWh"). This base cost of power was set in Decision No. 71274 (September 9, 2009).

Q. Is SSVEC proposing to change its base cost of purchased power?

A. Yes. SSVEC is proposing to change its base cost of purchased power to $0.065857 per kWh.

Q. What is Staff's recommendation regarding SSVEC's base of purchased power?

A. Staff recommends a base cost of purchased power for SSVEC of $0.065857 per kWh, as proposed by SSVEC. Staff has reviewed the Cooperative's cost of purchased power and the associated adjustments and has concluded that it is reasonable to set the base cost of purchased power at $0.065857 per kWh. A base cost of $0.065857 per kWh represents a decrease in SSVEC's base cost of power and will more closely align with the Company's current cost of power.

Q. Did Staff review the cost of power used by SSVEC in order to calculate its proposed base cost?

A. Yes. Staff compared invoices for SSVEC's power costs to the cost of power reported by SSVEC in its current filing, in addition to reviewing SSVEC's proposed adjustments to the cost of power. In comparing the invoices regarding cost of power to the cost of power reported by SSVEC, Staff found an unreconciled difference that was *de minimis* (less than 1%).

This difference contributes to a slightly lower base cost of power. Staff found the proposed adjustments to the cost of power to be reasonable.

ADJUSTORS

Q. What adjustor mechanisms does SSVEC currently have in place?

A. SSVEC has the following three adjustors currently in place:

- Power Cost Adjustor;
- Renewable Energy Standard Tariff Surcharge Adjustor ("REST Adjustor"); and
- Demand-side Management Surcharge Adjustor ("DSM Adjustor")

Q. What is the purpose of an adjustor mechanism?

A. The purpose of an adjustor mechanism is to recover certain types of costs between rate cases. The Power Cost Adjustor is designed to recover SSVEC's costs associated with power purchases while the REST Surcharge is designed to recover the costs associated with SSVEC's Renewable Energy portfolio, and the DSM Adjustor is designed to recover the costs associated with SSVEC's Demand-Side Management (or Energy Efficiency) portfolio.

Q. Please describe the Power Cost Adjustor mechanism, as revised in Decision No. 73801.

A. Decision No. 73801 (April 5, 2012), changed both the under- and the over-collected thresholds to $3 million. Should either the under-collected or the over-collected threshold be exceeded, SSVEC must adjust the adjustor rate the following month or file with the Commission to explain why a change is not necessary.

Q. Has SSVEC managed the Power Cost Adjustor mechanism in accordance with Decision No. 73801?

A. Yes. Thresholds have generally been below the $3 million thresholds set in Decision No. 73801. The highest bank balance in 2015 was $1.6 million over-collected, while the highest bank balance in 2014 was $2.4 million over-collected. Both of these peak balances were below the $3 million threshold.

The under-collection reached $3.1 million in January of 2014, going over the threshold. In accordance with Decision No. 73801, SSVEC changed the adjustor rate and the bank balance was under the $3.0 million threshold by the following month.

Q. Please describe the DSM adjustor, as ordered in Decision No. 71274.

A. SSVEC's DSM adjustor was to be reset annually, and calculated based on projected costs, adjusted by the previous under- or over-collection, and divided by projected kWh sales for the year in which the DSM adjustor was to be reset.

Q. What is the current status of the SSVEC DSM adjustor?

A. This adjustor mechanism is collecting DSM funds through the adjustor rate. However, it is not currently being used to reset the adjustor rate on an annual basis. Decision No. 73930 (June 27, 2013), ordered that the DSM adjustor rate be set at $0.00027, and that SSVEC "not file its next Energy Efficiency Implementation Plan until further order of the Commission." The adjustor rate has remained at $0.00027 per kWh since that time. Staff believes that it would be beneficial for SSVEC to file a new implementation plan in accordance with R14-2-2418(B), on either June 1, 2017, or earlier if SSVEC so elects. Staff also believes that the SSVEC's next implementation plan should include an adjustor reset.

Q. Please describe the REST Adjustor.

A. Decision No. 71274 approved the establishment of a REST Adjustor for SSVEC. (Previously, SSVEC recovered REST costs through a REST tariff and surcharge.) The annual REST Implementation Plan application was to include any change to the adjustor rate and cap, for approval, disapproval, or modification by the Commission.

Q. Has SSVEC included the adjustor rate and cap in its annual REST plans?

A. Yes. SSVEC has included the adjustor rate and cap in its annual REST plans, even when no change was being requested.

Q. Is SSVEC proposing any changes to any of its adjustor rates in this rate case?

A. No.

Q. Is Staff proposing any changes to the adjustor mechanisms?

A. No. Not to the adjustor mechanisms themselves. But Staff is proposing that the Cooperative file a Plan of Administration ("POA") for each of its adjustor mechanisms.

Q. Why is Staff proposing that the Cooperative file a POA for each of its adjustor mechanisms?

A. With respect to adjustor mechanisms, the purpose of a POA is to create a record describing the intended functioning of the adjustor, including how the adjustor rate is reset. In particular, POAs for adjustor mechanisms should include a specific list of the types of costs permitted to be recovered through each adjustor. This should ensure that no inappropriate costs are recovered through the adjustors.

SERVICE CHARGES

Q. Is the Company proposing any changes to its Service (or Miscellaneous) Charges?

A. Yes. SSVEC is proposing to:

- increase the Service Call During Business Hours charge from $50 to $75;
- increase the Service Call After Hours charge from $75 to $100;
- increase the Non-Pay Collection During Business Hours charge from $40 to $60; and
- increase the Service Connect Callbacks charge from $40 to $50.

Q. Does Staff agree with these proposed changes?

A. Yes. Although still less than the actual cost of providing these services, the new charges proposed by SSVEC would cover more of its costs.

Q. Does Staff believe that these fees should be increased to cover the full cost of these services?

A. In time, yes. A more gradual approach will cover more of the costs, while being less likely to impose rate shock on customers who require these services.

Q. Does Staff have any other recommendations with respect to these increases?

A. Yes. Staff recommends that SSVEC inform ratepayers requesting these services in advance of the costs they are incurring. Staff also recommends that a current list of all service charges be available and easily located on the Cooperative's website. In addition, if a service issue occurs due to problems on SSVEC's side of the meter, or due to any maintenance for which SSVEC should be responsible in the normal course of business, the ratepayer should not be charged service charges for repairs.

Q How many customers will be impacted by these proposed changes?

A. SSVEC noted less than 100 occurrences for each of the services for which it is recommending a fee increase.

Q. Is SSVEC proposing any other changes to its Service (or Miscellaneous) Charges?

A. Yes. SSVEC is proposing a decrease from $50.00 to $30.00 in the fee for New and Additional Service with no field visit. This fee affects many more customers than the four fees listed above, meaning that more SSVEC customers will be affected by this decrease in the Service or Miscellaneous Fees than by the four increases discussed herein.

Q. Why is SSVEC proposing to decrease the fee for New and Additional Service from $50 to $30?

A. Prior to SSVEC's last full rate case, the New and Additional Service fee was $25, and field trips were frequently required. In 2009, this fee was raised to $50. Subsequently, there were complaints about the increase and, since 2009, most of the transfer field trip expenses have been eliminated, lowering the amount SSVEC needs to charge in order to stay whole on this type of service. SSVEC is proposing to lower the fee in order to pass on savings to members and to address complaints about the 2009 increase.

Q. How many SSVEC customers would be affected by the proposed decrease?

A. In the case of New and Additional Services, SSVEC notes approximately 5,700 occurrences, indicating that this is a far more commonly utilized service.

Q. What is Staff's recommendation with respect to the proposed decrease in the New and Additional Service fee?

A. Staff recommends that the Commission approve the proposed decrease in this fee.

CHANGES TO SERVICE CONDITIONS

Q. Have revisions to SSVEC's Service Conditions been recently addressed?

A. Yes. In Docket No. E-01575A-14-0378 (application filed October 31, 2014), SSVEC proposed changes to its Service Conditions. The focus of the application was on changes that would not result in changes to the Cooperative's approved rates and charges for service, or which would be contrary to, or inconsistent with, the Arizona Administrative Code. Decision No. 74992, approving most of SSVEC's proposed changes, was docketed on March 16, 2015.

Q. Did SSVEC file proposed changes to the Service Conditions as part of its current rate case application?

A. No. Review of the SSVEC rate case application indicated no proposed changes to its Service Conditions. The application only proposed changes to the Service Charges, as discussed herein.

Q. Has Staff become aware that SSVEC may be proposing changes to its Service Conditions since the filling of the current rate case application?

A. Yes. In response to data request JKM 4.1 SSVEC (Exhibit JMK-1) SSVEC indicated that it was proposing changes to its Service Conditions in the current rate case. At that time, SSVEC provided a redlined draft to Staff showing the proposed changes.

Q. Has SSVEC filed proposed changes to its Service Conditions in the rate case docket, either as part of an amended application, or as a supplement to the application?

A. No. SSVEC has not filed the proposed changes to Service Conditions in the docket, either as part of the application, or separately.

Q. If SSVEC does, in fact, docket proposed changes, what does Staff propose?

A. If SSVEC dockets a final version of its proposed changes Staff will address the proposed changes in its surrebuttal testimony or no later than at the hearing in this matter..

TIME OF USE ("TOU") STUDY

Q. Do you wish to address anything else in your testimony?

A. Yes, Decision No. 73349 (August 21, 2012), an order amending Decision No. 71274 (September 8, 2009), ordered SSVEC to submit, in its next rate case, an analysis of TOU rates, including a proposal for TOU rates that would maximize customer participation in a fair and reasonable manner. Staff has reviewed the streamlined rate case and the current rate case application and has not identified any analysis that conforms to the requirements of Decision No. 73449.

Q. What does Staff recommend?

A. Staff recommends that SSVEC either file an analysis in this docket or file a letter explaining why TOU rates are not appropriate for its service territory. Staff would consider little to no TOU variation in SSVEC's costs as a basis for Staff's support of eliminating the requirement to file a TOU proposal.

SUMMARY OF STAFF RECOMMENDATIONS

Q. Please summarize Staff's recommendations.

A. Staff's recommendations are the following:

1. The base cost of purchased power should be set at $0.065857 per kWh.

2. SSVEC should inform ratepayers requesting miscellaneous services in advance of the costs they may incur. A current list of all service charges should be available and easily located on the Cooperative's website. In addition, if a service issue occurs due to problems on SSVEC's side of the meter, or due to any maintenance for which SSVEC should be responsible in the normal course of business, the ratepayer should not be charged service charges for any repairs.

3. The SSVEC-proposed increases to its Service Charges should be approved.

4. The decrease in the New and Additional Service fee should be approved.

5. If SSVEC dockets proposed changes to its Service Conditions Staff will address the proposed changes in its surrebuttal testimony, or no later than at the hearing.

6. SSVEC should provide the TOU analysis ordered in Decision No. 73349 or indicate where this analysis is located in its case filings.

Q. Does this conclude your direct testimony?

A. Yes, it does.

ARIZONA CORPORATION COMMISSION
STAFF'S FOURTH SET OF DATA REQUESTS TO
SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01575A-15-0312
NOVEMBER 2, 2015

Subject: All information responses should ONLY be provided in searchable PDF, DOC or EXCEL files via email or electronic media.
***For all data requests for which you do not have the information requested, please state such and skip to the next data request. Also, for responses to data requests that may be voluminous or overly burdensome, please contact the assigned analyst, Julie Mcneely-Kirwan at 602-542-0833 to discuss.

JMK 4.1: Is Sulphur Springs proposing any changes to its Rules and Regulations/Service Conditions in the current rate case, aside from the proposed changes to the service charges (now in the Standard Offer Tariff)? If so, please provide a redline showing any changes to the Rules and Regulations/Service Conditions that Sulphur Springs is proposing as part of the current rate case.

Response: Yes. SSVEC is proposing changes to its Service Conditions in the current rate case. Attached hereto as Attachment JMK 4.1 is a redlined draft of the Service Conditions showing the proposed changes.

Provided by: Lainie Keltner, Manager - Customer Service & Collections, SSVEC

JMK 4.2: Referencing Schedule E-7.6.1, please explain the adjustments to purchased power costs relative to AEPCO. Please include an explanation as to why the second yearly change to the adjustor was used to adjust the purchase power cost, as opposed to using the actuals.

Please provide a calculation showing what the adjusted purchased power cost would be without the adjustment referenced above (second yearly change used, rather than actuals). Please state, also, what the base cost of power would be without this adjustment (Referencing Schedule H-2.1.6).

Response: The response to this data request was previously provided via e-mail on November 2, 2015. A copy of this response is attached hereto as Attachment JMK 4.2.

Provided by: Judy Lambert, Rate Department, Guernsey

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. FOR ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. DEVOTED TO ITS OPERATIONS IN THE STATE OF ARIZONA AND RELATED APPROVALS	)	DOCKET NO. E-01575A-15-0312

SURREBUTTAL

TESTIMONY

OF

JULIE MCNEELY-KIRWAN

PUBLIC UTILITIES ANALYST

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

MAY 6, 2016

EXHIBIT
5-6
ADMITTED

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EXECUTIVE SUMMARY
SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01575A-15-0312

Staff's surrebuttal testimony addresses a time-of-use ("TOU") compliance issue and Sulphur Springs Valley Electric Cooperative's ("SSVEC's") proposed changes to its Service Conditions. Staff's recommendations are as follows:

- Staff supports the elimination of the requirement to file an analysis of TOU rates that would include a proposal for TOU rates designed to maximize customer participation.

- Staff recommends approval of SSVEC's proposed new language in its Service Conditions relating to Line Extension design estimates, but also recommends that Section 4.4 be amended to include a table breaking out costs.

- Staff recommends against approving changes relating to responsibility for Meter Socket Enclosures, Meter Test Switches, and Meter Sockets proposed in SSVEC's Service Conditions.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Julie McNeely-Kirwan. I am a Utilities Analyst V employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Have you previously filed testimony in this docket?

A. Yes. I filed direct testimony in this docket concerning the base cost of power, the adjustors, proposed changes to several service charges, the Service Conditions, and a time-of-use ("TOU") study.

Q. What is the scope of your Surrebuttal testimony?

A. I will address the TOU compliance item and proposed changes to the Service Conditions of Sulphur Springs Valley Electric Company ("SSVEC" or "the Cooperative").

Q. Have you reviewed testimony submitted by the Cooperative in this case?

A. Yes. I reviewed the Rebuttal testimony of David W. Hedrick.

Q. What is the purpose of your Surebuttal testimony?

A. To address a compliance issue related to SSVEC's TOU rates and to address SSVEC's proposed changes to its Service Conditions.

CHANGES TO SERVICE CONDITIONS

Q. Have the proposed changes to the Service Conditions now been filed in the Docket?

A. Yes. SSVEC filed a redline version of its Service Conditions in the docket on February 26, 2016. In communication with Staff, SSVEC has confirmed that the redline version reflects all of SSVEC's proposed changes to its Service Conditions.

Q. Has SSVEC made public its proposed revisions to the Service Conditions?

A. Yes. In addition to filing the proposed revisions in the current docket, as noted herein, SSVEC published notice of the proposed revisions in the *Sierra Vista Herald* and the *Bisbee Daily Review* on March 4, 2016.

Q. What type of changes is SSVEC proposing for its Service Conditions?

A. Many of the changes proposed by SSVEC involve renumbering the sections, correcting typographical or other minor errors, and clarifying or updating existing language. There are some more substantive changes, however. Proposed revisions to the section on *Distribution Line Extension Estimates and Fees* would result in increased costs to customers, as would proposed revisions to the Exhibits regarding responsibility for meter enclosures, switches, and sockets.

Q. Please describe the change to Section 4.4, *Distribution Line Extension Estimates and Fees.*

A. The proposed change to Section 4.4, *Distribution Line Extension Estimates and Fees* would increase costs for customers by approximately $40, affecting approximately 50 customers per year. The purpose of the change is to ensure that the entire cost of any design estimate prepared by SSVEC is covered by the customer, even if the customer opts not to go forward with a project once it has been designed.

Q. What does Staff recommend?

A. Staff is concerned about the proposed deletion of the existing fee table in Section 4.4, which lists the *Type of Service, No. Lots/Service(s), and Fee.* Without this table, Section 4.4 is significantly less clear concerning the costs related to design estimates. Staff recommends approval of the proposed new language relating to Line Extension design estimates, but also recommends that Section 4.4 be amended to include a table breaking out costs. The amended Section 4.4 should include a table listing the costs relating to design estimates, including the approximate cost of extra site visits that may be required for some design estimates.

Q. Please describe the proposed revisions to the Exhibits relative to responsibility for Meter Socket Enclosures, Meter Test Switches, and Meter Sockets.

A. SSVEC has proposed changes to Exhibits relative to Meter Socket Enclosures, Meter Test Switches, and Meter Sockets. These changes would result in increased costs of approximately $279 for single-phase service customers and $464 for three-phase service customers. The $279 increase would impact approximately 76 customers per year, while the $464 increase would impact approximately four customers per year.

Q. Does Staff have concerns relating to SSVEC's proposed cost transfers relating to Meter Sockets, Meter Switches and Meter Enclosures?

A. Yes. There is insufficient explanation and documentation to justify the proposed changes, which would transfer costs for Meter Socket Enclosures, Meter Test Switches, and Meter Sockets from SSVEC to customers. For example, SSVEC states that these changes would remedy an existing subsidy, but does not provide any supporting detail regarding the subsidy. SSVEC also states that another reason for the proposed change is that there can be coordination issues with the members' electricians or contractors when SSVEC provides the

equipment, resulting in problems with completing the work. Staff views this as an insufficient rationale for transferring costs in cases where coordination issues do not exist.

Staff recommends against approving changes relating to responsibility for Meter Socket Enclosures, Meter Test Switches, and Meter Sockets proposed in SSVEC's Service Conditions.

TIME OF USE STUDY

Q. In its direct testimony, what did Staff request with respect to the TOU analysis and rate proposal ordered in Decision No. 73349 (August 21, 2012)?

A. Staff recommended that SSVEC either file an analysis in the current rate case docket or file a letter in the Docket explaining why TOU rates are not appropriate for its service territory. Staff stated that it would consider little or no TOU variation in SSVEC's costs as a basis for Staff's support for eliminating the requirement to file a TOU proposal.

Q. What did SSVEC file in response to Staff's request?

A. SSVEC filed responsive information in its Rebuttal testimony in this Docket.

Q. Did this testimony indicate that there was little or no TOU variation in SSVEC's costs?

A. Yes. SSVEC Witness David W. Hedrick testified that the Arizona Electric Power Cooperative ("AEPCO") was SSVEC's primary source of power and that AEPCO bills SSVEC based on a fixed charge, rather than varying energy charges based on time. Mr. Hedrick explained that, as a result, there is no meaningful difference between the on-peak and off-peak prices, and therefore no effective price signal to make TOU rates attractive to SSVEC customers. In light of this testimony, Staff supports the elimination of the

requirement that SSVEC file an analysis of TOU rates that would include a proposal for TOU rates designed to maximize customer participation.

Q. Did SSVEC make any other requests relating to its TOU rates?

A. Yes. SSVEC requested that the existing TOU rates be frozen.

Q. Do you have a recommendation regarding SSVEC's request to freeze its existing TOU rates?

A. No. My TOU testimony relates to a compliance issue. Staff Witness Ranelle Paladino addresses rates in her testimony, including SSVEC's request to freeze its TOU rates.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS.	)	DOCKET NO. E-01575A-15-0312

DIRECT

RATE DESIGN

TESTIMONY

OF

RANELLE PALADINO

PUBLIC UTILITIES ANALYST IV

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

MARCH 18, 2016

EXHIBIT
S-7
ADMITTED

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EXECUTIVE SUMMARY
SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01575A-15-0312

Ranelle Paladino's testimony presents the results of the Utilities Division Staff's ("Staff") review of the cost of service study ("COSS"), revenue allocation, and rate design proposals in the rate case application of Sulphur Springs Valley Electric Cooperative, Inc.'s ("SSVEC"). The application was filed with the Arizona Corporation Commission ("Commission") on August 31, 2015.

Taking into consideration Staff's recommendation that rate design more closely reflect actual cost of service and with SSVEC's limited ability to implement a three-part rate (customer, demand, and energy) and a lack of time-based costs, Staff is proposing changes to the fixed and variable components of the rate design. Staff's proposal represents movement in the direction of collecting more fixed costs through a fixed charge rather than through a variable rate.

Based on its review of SSVEC's COSS, revenue allocation, and rate design proposals, Staff's conclusions and recommendations are as follows:

CONCLUSIONS

a. Staff concludes that SSVEC has performed the COSS consistent with methodologies generally accepted in the industry, and developed the allocation factors appropriately.

b. Staff further concludes that the application of the COSS model is reasonable with the exception of the customer count adjustment found in Exhibit RSP-1.

c. Staff also concludes that the revenue allocation developed by SSVEC is reasonable.

d. Staff's review of the rate design proposals submitted by SSVEC concludes:

   a. The Residential Service Rate Schedule, Residential Time-of-Use Rate Schedule, Residential Service with Distributed Generation-Existing and Residential Service with Distributed Generation rate design proposals are not reasonable.

   b. The Residential Auxiliary Service Rate Schedule, General Service Rate Schedule, General Service Time-of-Use Rate Schedule, Unmetered Service Rate Schedule, Large Power Rate Schedule, Large Power Time-of-Use Rate Schedule, Industrial Rate Schedule, Irrigation Service Rate Schedule, Irrigation Load Factor Rate Schedule, Controlled Irrigation Rate Schedules (Weekly, Twice-Weekly, and Daily), Interruptible (including Interruptible Irrigation) Rate Schedule, Security and Street Lighting Rate Schedules, and Contract Power Service Rate Schedule rate design proposals are reasonable.

   c. The rate design proposals for General Service Distributed Generation, Large Power Distributed Generation, Irrigation Distributed Generation, and

Irrigation Controlled Distributed Generation should not be separated from the rate design proposals for the General Service Rate Schedule, the Large Power Rate Schedule, the Irrigation Service Rate Schedule, and the Controlled Irrigation Rate Schedule as the rate design proposals are identical.

d. The General Service RV Parks Rate Schedule should be discontinued and any customers on this schedule should be transferred to the Large Power Rate Schedule.

e. The Seasonal Power Service Rate Schedule should be discontinued and any customers on this schedule should be transferred to the Large Power Rate Schedule.

f. The Large Power Rate Schedule should be approved as filed by SSVEC in its application where the language requiring that customers be on the schedule for a period of twelve consecutive months is removed.

e. Staff does not support the creation of rate schedules which single out distributed generation customers.

f. Staff supports gradual movement toward recovering fixed costs based on the cost of serving each class.

g. Staff supports a system-wide reduction in subsidies of one class of customer by other classes of customers.

h. Staff supports the treatment of the residential class on the whole as a class which needs to gradually move toward recovering fixed costs based on the cost to serve the residential customer class.

i. Staff concludes that the currently approved language in the "Other Conditions" section of the Controlled Irrigation Schedule offers more flexibility to SSVEC to recover actual equipment costs compared to the proposed changes and the existing approved language should be retained.

RECOMMENDATIONS

a. Based on the aforementioned conclusions, Staff recommends that the Commission accept SSVEC's COSS for use in this case including the changes included in RSP-1.

b. Staff also recommends the Commission accept the revenue allocation developed by SSVEC; however, in future rate cases, SSVEC needs to make the following two adjustments with regard to revenue and costs for the COSS:

1. Residential Auxiliary Rate Schedule customers should be included as part of the Residential class rather than the General Service class.

2. General Service RV Parks Rate Schedule customers should be included as part of the Large Power class rather than the General Service class.

c. Staff recommends that the proposed Residential Service with Distributed Generation-Existing Rate Schedule and Residential Service with Distributed Generation Rate Schedule not be approved.

d. Staff recommends approval of the Staff-proposed rates found in Exhibit RSP-2 and detailed in this testimony.

e. Staff recommends SSVEC notify in writing customers who will be transferred from the General Service Rate Schedule to the new Residential Auxiliary Rate Schedule. These customers should be informed of the timing and effects of that transition.

f. Staff recommends the discontinuance of the General Service RV Parks Rate Schedule and that customers be transferred to the Large Power Service Rate Schedule.

g. Staff recommends SSVEC notify in writing customers who will be transferred from the General Service RV Parks Rate Schedule to the Large Power Service Rate Schedule. These customers should be informed of the timing and effects of that transition.

h. Staff recommends the discontinuance of the Seasonal Power Service Rate Schedule and customers transferred to the Large Power Service Rate Schedule.

i. Staff recommends SSVEC notify in writing customers who will be transferred from the Seasonal Power Service to the Large Power Service Rate Schedule. These customers should be informed of the timing and implications of that transition.

j. Staff recommends that SSVEC's Large Power Service Rate Schedule be revised to delete the one year service requirement, as SSVEC proposed in its application.

k. Staff recommends that SSVEC's proposal to revise the language in the "Other Conditions" section of the Controlled Irrigation Schedule not be approved.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Ranelle Paladino. I am a Public Utilities Analyst employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Briefly describe your responsibilities as a Public Utilities Analyst.

A. In my capacity as a Public Utilities Analyst, I review and analyze utility applications filed with the Commission, and prepare memoranda and proposed orders for Open Meetings. I also assist in the management of rate cases and track monthly fuel adjustor reports.

Q. Please describe your educational background and professional experience.

A. In 1992, I graduated magna cum laude from Creighton University, receiving a Bachelor of Science degree in Business Administration. In 1999, I received a Master's Degree in Business Administration from Creighton University. I have been employed by the Commission since November of 2011.

Prior to working at the Commission, I was employed by UtiliCorp United, Inc. and Aquila Energy in various departments including the Gas Supply Operations Department and the Gas Accounting Department in both a regulated and non-regulated capacity. After leaving Aquila Energy, I was employed by Northern Natural Gas, an interstate pipeline company, as a Regulatory Analyst and Marketing Analyst.

Q. As part of your employment responsibilities, were you assigned to review matters contained in Docket No. E-01575A-15-0312?

A. Yes.

Q. What is the purpose of your testimony in this case?

A. The purpose of my testimony is to discuss Staff's review of Sulphur Springs Valley Electric Cooperative, Inc.'s ("SSVEC") Cost of Service Study ("COSS") for the rate case, and present the results of this review.

In addition, my testimony also incorporates Staff's recommendations regarding the revenue allocation and the proposed changes to SSVEC's rate design including the elimination of rate schedules and addition of new rate schedules.

Q. Are you addressing net metering in your testimony?

A. No. I am not addressing net metering in my testimony. Net metering will be addressed in the testimony of Eric Van Epps.

COST OF SERVICE STUDY

Q. Has SSVEC provided a COSS?

A. Yes. SSVEC provided a COSS in its rate application based on the Test Year (twelve-month period ended December 31, 2014).[1] The COSS provides the individual class returns for the Company's five major customer classes plus three existing special contracts and Ft. Huachuca.

Q. What is the purpose of preparing a COSS?

A. The purpose of preparing a COSS includes: (1) relating costs to different groups of customers based on which customers caused those costs to occur; (2) determining how to recover costs from customers within each class, (3) calculating costs of services based on how much the utility has to spend on each cost, and (4) separating costs between regulatory

[1] SSVEC Rate Application Filing Schedule G.

jurisdictions if necessary. A complete allocated COSS ultimately tries to determine the specific cost to serve each customer class and subclass.

Q. How will a COSS be used?

A. A fully allocated COSS would be used as a guideline to allocate revenue among classes. The COSS may also be used as a determinant in rate design if the purpose is to design rates based on the costs to serve each customer class.

Q. Is there a standard COSS methodology?

A. No. There is no one right methodology for designing a COSS so the COSS should be used as a guideline for revenue allocation and designing rates.

Q. Have you reviewed the COSS model presented by SSVEC?

A. Yes. The COSS was provided in SSVEC's rate application on Schedules G-1 through G-7. I reviewed the allocations and reviewed SSVEC's answers to Staff's Data Requests. In addition, I reviewed the test year rate base, revenues, and expenses, including the test year adjustments, in the COSS and matched them with the appropriate schedules in the application.

Q. What model was used by SSVEC in developing its COSS?

A. SSVEC utilized the services of Guernsey Engineers, Architects and Consultants ("Consultants"), out of Oklahoma City, Oklahoma. The Consultants prepared the COSS using their in-house model, named CoOPTIONS. This model was used by SSVEC in its last full rate case under Arizona Administrative Code ("A.A.C.") R14-2-103, Decision No. 71274 dated September 8, 2009.

Q. Did SSVEC adjust or normalize its usage or revenues?

A. No. SSVEC utilized a test year ending December 31, 2014, but SSVEC did not adjust or normalize volumes because SSVEC viewed the Test Year volumes as an appropriate representation of billing determinants. The revenues were adjusted by the Consultants to represent a full year of new rates, account for the fuel bank charges during the test year, eliminate Sale for Resale Revenue, and restate the Wholesale Power Cost Adjustor ("WPCA") revenue to allow for the full amount of WPCA revenue.[2]

Q. Did SSVEC make adjustments to the COSS allocation factors from the prior rate case?

A. SSVEC utilized similar demand, energy, and customer-based allocation factors between this COSS and the prior rate case with the exception of the following three items: (1) the allocation of Distribution Underground Line expenses were adjusted with this COSS to match the allocation of Distribution Overhead Line expenses, (2) a minimum cost per mile of single phase line was determined and used in the allocation of both Distribution Underground Line expense and Distribution Overhead Line expense, and (3) the allocation of Account 368 Transformers was split into a Minimum and Remainder designation. Staff considers all three adjustments to be appropriate.

Q. What did Staff determine from its review of the COSS?

A. Staff's review of SSVEC's COSS determined that SSVEC utilized acceptable methods to functionalize, classify, and allocate costs. Staff has determined the COSS model appropriately calculated the components of the rate application. Staff made one change to Schedule G-6.3 from SSVEC's rate application to account for a slight adjustment to customer count for the Residential Class. Exhibit RSP-1 is the Summary of Components of Expenses incorporating Staff's adjustment to Schedule G-6.3.

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[2] Lambert Direct page 3 lines 2-15.

Q. Did the methods used by SSVEC comply with industry standards?

A. SSVEC utilized methodologies that are generally accepted in the utility industry for its COSS. Allocations of plant and operating expenses were assigned to the respective customer classes on the basis of demand, energy and other customer related factors.

Q. Does Staff have a recommendation concerning SSVEC's COSS?

A. Staff recommends the Commission accept SSVEC's COSS in this case, including the changes made in RSP-1.

REVENUE ALLOCATION

Q. Please describe the revenue increase allocation?

A. SSVEC's Application included a request for a revenue increase of $3,101,498. Staff witness Crystal Brown, did not recommend any changes to SSVEC's proposed revenue requirement. The table below details the adjusted test year and Staff proposed revenue increase by customer class (revenue totals include PCA revenue).

SSVEC Customer Class	Test Year Adj. Rev. $*	Staff Proposed Rev. $**	% Increase
Residential	$45,438,233	$47,177,073	3.83%
General Service	$13,950,171	$14,872,397	6.61%
Large Power	$14,180,725	$14,540,169	2.53%
Irrigation	$16,313,056	$16,479,559	1.02%
Lighting	$846,698	$882,397	4.22%
Special Contracts	$3,664,893	$3,664,874	n/a
Other Revenue	$3,309,366	$3,200,541	n/a
Total Revenue	$97,703,142	$100,817,010	3.18%

*Total Adjusted TY Revenue from Schedule E-7.5.
**Staff Proposed Total Revenue from RSP-2.
Staff Proposed Revenue accounts for a correction made to the Seasonal Power Service explained in RSP-2.

SSVEC's COSS study illustrates that, to varying degrees, the Residential, General Service, and Lighting rate classes are paying less than their cost of service. As indicated on Schedule G-1.0, the overall system return is reported to be approximately 4.923 percent. The table above

highlights the greatest percentage increases proposed by Staff are to the residential, general service, and lighting classes.

As can be seen on Schedule G-2.0, after incorporating the proposed revenue increase, the overall system return has increased to 6.411 percent. The proposed revenue increase also led to an improvement of the relative rates of return for the Residential, General Service, and Lighting rate classes. Staff supports moving gradually toward less inter-class subsidies. Staff agrees with the revenue allocation proposed by SSVEC.

RATE DESIGN

Q. Please describe Staff's position on Rate Design?

A. SSVEC's rates, up to this point, have been designed to collect a specific revenue requirement. The breakdown of that revenue requirement by customer class has been split in recovery between a fixed and a variable component for the residential customer class. The large power, general service, and irrigation classes all have an additional billing demand component. The lighting segment has a per-unit rate. Historical rate design, especially for the residential customer class, has allowed recovery of SSVEC's fixed costs partly through a service availability charge and partly through a variable rate or energy charge.

Variations in usage among customers in the same class have increased for a number of reasons (including seasonal customers, vacant homes, and distributed generation). This makes recovery of the revenue requirement difficult with existing rate design. Staff believes that rates should now be more closely based on the actual costs to serve each customer class. However, Staff recognizes that rate design needs to evolve gradually. One option allows for each customer to pay for the level of service they may require at any point in time through a service availability charge, demand charge, and energy charge—in essence, a three-part rate.

However, SSVEC's current system conditions, metering and customer information capabilities, do not allow for the implementation of a real-time three-part rate at this time. Staff is therefore recommending rates which do not require a three-part structure to allow for better recovery of costs to serve each class.

Q. Please describe further the current system conditions that limit the implementation of a three-part rate.

A. While the implementation of a three-part rate allows for recovery of fixed costs and accounts for varying levels of demand within customer classes, a three-part rate requires the use of demand meters, meters which measure demand usage within the billing period, as well as the amount of energy being consumed. Currently, non-residential classes in SSVEC's territory have three-part rates which utilize the peak demand during the month.

Through the discovery process with SSVEC, Staff was able to determine that while current metering capabilities within SSVEC's system can measure the energy being consumed by customers and monthly peak demand, not all of SSVEC's meters provide real time demand data.

Also, through additional discovery, Staff determined that SSVEC may encounter challenges in billing customer demand and making customer demand information available in a timely fashion on its current web portal. SSVEC has not indicated it is unwilling to make the necessary changes, but SSVEC has expressed concerns that the costs of doing so may outweigh the benefits at this point in time.

Q. Please summarize the Company's rate design proposal.

A. SSVEC has indicated in its rate application that the proposed rates are designed to more closely recover the costs of providing service (including the unbundled costs of providing service) while considering the impact of the rate change on its members[3].

Q. What was the Company's primary concern in developing its rate design proposals?

A. SSVEC's application indicates the company has requested a 3.17 percent overall increase in total revenue. SSVEC explains that this increase is necessary to enable SSVEC to better recover fixed costs incurred in serving customers.[4] Specifically, SSVEC's application is proposed to address an issue of unrecovered fixed costs attributable to net metered members.[5]

Q. How does SSVEC propose implementing its rate design changes?

A. SSVEC constructed its proposed rates to be phased in over a four-year period.[6] The 3.17 percent increase in revenue would be reached with the rate changes in the first year. In subsequent years SSVEC would maintain the 3.17 percent increase, but do so through higher service availability charges (and billed demand charges for some customers) and lower variable charges.

Q. Does Staff also propose implementing rate design changes over four years?

A. Staff is proposing a shorter timeframe of two years for implementation of the rate design changes.

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[3] Hedrick Direct page 25 lines 22-24.
[4] Huber Direct page 5 lines 11-14.
[5] Huber Direct page 5 lines 23-24.
[6] Hedrick Direct page 26 lines 3-4.

Q. Why is Staff proposing a shorter implementation timeframe for rate design changes?

A. While Staff understands SSVEC's proposal of phasing in the increase over four years, Staff is concerned that a longer phase-in period would increase customer confusion and that customers may perceive the four phases to be incremental increases rather than one increase phased over four years. Also, Staff is concerned that SSVEC may incur increased communication costs with informing customers of anticipated rate changes as the time nears in each of the four years.

However, Staff recognizes the need to avoid implementing increases all at once and the benefit of spreading the increases over multiple years. To alleviate some of the above concerns, Staff proposes a two-year phase in of new rates. Similar to SSVEC, Staff proposes a service availability charge increase at the same time as the energy charge decreases, thereby minimizing the overall bill impact.

Q. Is SSVEC's cost per customer analysis in Schedule G-6.3 useful in evaluating its proposed service availability charges?

A. Yes. If the goal of a restructuring of rate design is to more accurately recover fixed costs through a service availability charge, Schedule G-6.3 (as can be seen in Exhibit RSP-1) of the COSS is useful. Schedule G-6.3 details the monthly cost per consumer broken down into purchased power demand, purchased power energy, distribution (wires), and total customer costs (which includes such items as billing and metering).

For example, SSVEC has indicated that it incurs $25.97 per month per residential customer in fixed monthly customer costs. Other fixed costs incurred for residential customers include distribution system (wires, poles, etc.) and the fixed portion of purchased power charges paid primarily to Arizona Electric Power Cooperative ("AEPCO"), SSVEC's generation and

transmission provider, on a monthly basis. In a perfect recovery situation, SSVEC would assess a service availability charge which fully recovers its fixed costs as shown in the table below. In a practical application of rates to recover costs, Staff has considered the impact on the consumer of an increased service availability charge and gradual recovery of those fixed costs.

SSVEC's Fixed Costs Categories*	$
Fixed Purchased Power Costs	$29.22
Distribution (Wires) Costs	$25.05
Total Customer Costs	$25.97
TOTAL RESIDENTIAL FIXED COSTS	$80.24

*Detail is also available on Exhibit RSP-1.

RESIDENTIAL

Q. Please describe the Residential Service Rate Schedule.

A. Residential Service in SSVEC's territory is available for residential use to single family dwellings where all service is supplied at one point of delivery through a single line, and where energy is metered through one meter. Service is limited to individual motors of 10 horsepower ("HP") or less

Q. What changes did SSVEC propose for the Residential Service Rate Schedule?

A. For the Residential Service Rate Schedule, SSVEC is requesting an increase in the service availability charge from $10.25 to $15.00 per month in Phase 1. In Phase 2, the service availability charge would increase to $18.00, Phase 3 to $22.00, and Phase 4 to $25.00. The energy charge (the only remaining part of the residential rate structure) is decreased in each phase so that the desired revenue requirement is met with the combination of the new service availability charge and the decreased energy charge. The current energy charge is $0.126038 per kWh. In Phase 1 the energy charge would decrease to $0.117518 per kWh. In Phase 2

the energy charge would decrease to $0.112858, Phase 3 $0.106764 and in Phase 4 the energy charge proposed is $0.102038 per kWh.

Q. Did SSVEC propose any other changes for the Residential Class?

A. Yes. SSVEC proposes a new rate schedule for those residential customers with distributed generation ("DG"). The rate schedule applies to those customers who had DG installed on or before April 14, 2015, which represents the date indicated in the net metering application Docket No. E-01575A-15-0127. These customers would see a change in the service availability charge from $10.25 to $25.00 per month in Phase 1. In Phase 2, the service availability charge would increase to $33.00, Phase 3 to $40.00, and Phase 4 to $50.00. The energy charge will not change throughout the four phases. It is currently $0.126038 per kWh and is proposed to be lowered to $0.119768 per kWh.

SSVEC also proposed a new rate schedule for those residential customers with DG that was installed after April 14, 2015. These customers would see an increase in the service availability charge from $10.25 to $25.00 per month in Phase 1. In Phase 2, the service availability charge would increase to $33.00, Phase 3 to $40.00, and Phase 4 to $50.00. The energy charge would decrease slightly throughout the four phases. It is currently $0.126038 per kWh and is proposed to be lowered to $0.107617 per kWh in Phase 1, $0.095467 per kWh in Phase 2, $0.083316 per kWh in Phase 3, and $0.071165 per kWh in Phase 4.

One other change within the Residential Class is the addition of a new Residential Auxiliary Service. Customers who qualify for this rate schedule are currently General Service customers with individually metered water wells, shops, and barns requiring less than 50 kVA transformer capacity but located on residential properties. SSVEC is proposing to move the General Service customers meeting the above qualifications to the Residential Auxiliary

Service tariff. These customers are currently paying a service availability charge of $16.50. SSVEC is proposing to increase the service availability charge to $20.00 in Phase 1, $23.00 in Phase 2, $25.00 in Phase 3 and 4. The billing demand charge which was previously applicable at the 10 kW level would now be applicable at the 3 kW level with the first 3 kW billed at $3.50 per kW and every kW over 3 kW billed at $10.00 per kW. The energy charge would decrease each year to a level of $0.092420 per kWh in Phase 4.

Q. Please describe the Residential Time-Of-Use ("TOU") Service Rate Schedule.

A. Residential TOU Service in SSVEC's territory is available for residential use of 10 HP or less to single family dwellings where all service is supplied at one point of delivery through a single line and energy is metered through one meter. TOU customers' rates vary for usage during on-peak time versus usage during off-peak time.

Q. What changes did SSVEC propose for the TOU Residential Service Rate Schedule?

A. SSVEC is requesting no change in the service availability charge for the Residential TOU Rate Schedule during Phase 1 (the current service availability charge is $16.50 per month). In Phase 2, the service availability charge would increase to $19.50, Phase 3 to $23.50, and Phase 4 to $26.50. The energy charge has been increased for the on-peak kWh usage from $0.169037 per kWh to $0.219563 in Phase 1, $0.214903 in Phase 2, $0.208809 in Phase 3 and $0.204083 in Phase 4. The off-peak rate has been reduced from $0.101727 currently to $0.082933 in Phase 1, $0.078273 in Phase 2, $0.072179 in Phase 3 and $0.067453 in Phase 4. The revenue requirement is met with the change in Phase 1 rates and each subsequent change is revenue neutral.

Q. What are the Residential Class customer costs?

A. As discussed above, Exhibit RSP-1 illustrates the fixed purchased power costs of $29.22, fixed distribution (wires) costs of $25.05 and fixed customer costs per consumer for the residential class of $25.97.

Q. Does Staff support the changes to the Residential Service Rate Schedule proposed by SSVEC?

A. Staff supports a change to the rates for the Residential Service Rate Schedule but has modified the rates.

- Staff supports a two-year phase in of rate changes (both fixed and variable) as can be seen in Exhibit RSP-2.

- Staff supports reduced subsidization of one class by another class.

- Staff proposes rates that more closely cover fixed costs from the COSS. Staff estimates its proposed rates reduce the subsidy of the residential class by approximately 10 percent.

- Staff does not support a separate rate schedule for customers with DG (no matter whether the installations were on or before April 14, 2015 or after April 14, 2015).
- For the Residential Service Rate Schedule, Staff proposes a change in the rate design. Staff's proposed rates represent a greater collection of fixed costs (as can be seen in Exhibit RSP-3) through the system availability charge, when compared to existing rates, thus leaving less of the fixed costs to be recovered through the variable energy charge. This change provides a greater assurance that a larger portion of fixed costs

(all total customer costs and a portion of the distribution fixed costs from the COSS) will be recovered by SSVEC than in the past.

Given that a three-part rate is not an option for rate design for SSVEC residential customers at this point in time, Staff is proposing an increase in the system availability charge for all residential customers and a decrease in the energy charge at the same time. As indicated on Exhibit RSP-4, the estimated bill impact of this increase for the average usage residential customer using 668 kWh is $3.51 per month. This represents a 3.89 percent increase for the average usage Residential customer.

As can be seen in the table below, Staff is proposing the residential system availability charge increase from $10.25 to $18.25 in year one and an increase to $27.00 in year two. At the same time, Staff's proposed energy charge for Residential customers would decrease from $0.126038 to $0.113053 per kWh in year one and again decrease to $0.100028 per kWh in year two. The proposed revenue requirement for the residential class would be met in year one. The decrease to the energy charge in year two would offset the increase in the service availability charge.

Staff's Proposed Residential Service Rates

	Year One	Year Two
Service Availability Charge	$18.25	$27.00
Energy Charge (per kWh)	$0.113053	$0.100028
Monthly Bill Impact for an Average Residential Customer	**$3.51**	**$0.05**

Q. Does Staff support the changes to the Residential TOU Service Rate Schedule proposed by SSVEC?

A. Staff supports a change to the rates for the Residential Service TOU Rate Schedule but has modified the rates. Staff's proposed rates represent a greater collection of fixed costs through

the service availability charge, thus leaving less of the fixed costs to be recovered through the variable energy charge.

Given that a three-part rate may not be an option for rate design for SSVEC residential TOU customers at this point in time, Staff is proposing an increase in the system availability charge for all residential TOU customers and a decrease to the energy charge at the same time. As indicated on Exhibit RSP-4, the estimated bill impact of this increase for the average usage residential TOU customer is $6.30 per month. This represents a 3.91 percent increase for residential TOU customers.

As can be seen in the table below, Staff is proposing the residential TOU system availability charge increase from $16.50 to $22.50 and year two would increase to $28.50. Staff's proposed energy charge for on-peak kWh usage would increase from $0.169037 to $0.175000 in year one and then decrease to $0.170100 in year two. The energy charge for off-peak kWh would decrease from $0.101727 to $0.061000 in year 1 and decrease again to $0.053200 in year two.

Staff's Proposed Residential TOU Service Rates

	Year One	Year Two
Service Availability Charge	$22.50	$28.50
On-Peak Energy Charge (per kWh)	$0.175000	$0.170100
Off-Peak Energy Charge (per kWh)	$0.061000	$0.053200

Q. Does Staff support the addition of the Residential Auxiliary Rate Schedule?

A. Yes. Staff understands that while these services are not directly connected to a residential dwelling, they are services provided within the residential property for the residential customer (but may be services more typically associated with commercial services within SSVEC's service territory).

The establishment of a Residential Auxiliary Rate Schedule will affect slightly fewer than 2,000 General Service customers who have individual metered water wells, shops, and barns requiring less than 50 kVA transformer capacity. These customers have not been notified of the shift from a General Service Rate Schedule to the Residential Auxiliary Rate Schedule. Staff recommends that if this proposal is approved, SSVEC notify in writing each customer of the change in rate schedule status, with an explanation of the effects for those customers of this change. Incorporated into this notice should be an explanation to the customer of the grounds for refusal of establishment of service in accordance with R14-2-203(C)(1).

Staff agrees with the rates proposed by SSVEC with a slight modification to implement the rates in a two-year period rather than phases over four years. The proposed service availability charge would increase from $16.50 to $20.00 in year one and to $25.00 in year two. The energy charge is currently $0.118338 per kWh. This charge would decrease to $0.110659 in year one and $0.092420 per kWh in year two. At the same time, the billing demand level will decrease from 10 kW to 3 kW. Staff proposes for year one the billing demand for the first 3 kW be $1.50 per kW while over 3 kW be $8.00 per kW. In year two the billing demand for the first 3 kW will increase to $3.50 per kW and kW over 3 will be $10.00 per kW.

Customers who would be transitioned to the Residential Auxiliary Rate Schedule are currently General Service customers. As can be seen in Exhibit RSP-1 on page 4, the fixed purchased power costs are $63.98. The fixed costs associated with the distribution (wires) are $74.93 and the fixed customer costs per consumer for the General Service class are $25.72.

SSVEC's Fixed Costs Categories*	**$**
Fixed Purchased Power Costs	$63.98
Distribution (Wires) Costs	$74.93
Total Customer Costs	$25.72
TOTAL GENERAL SERVICE FIXED COSTS	$164.63

*Detail is also available on Exhibit RSP-1.

As discussed above, the Residential, General Service, and Lighting classes are experiencing a negative or low rate of return. Staff's rate design supports moving customer classes in the direction of more closely covering the costs to serve that class. By increasing the service availability charge and billing demand rate, and setting a billing demand level of 3 kW for the General Service class (including Residential Auxiliary customers as they are currently part of the General Service class), the General Service class is taking steps to move closer to recovering those customer fixed costs in this rate case.

Staff's Proposed Residential Auxiliary Service Rates

	Year One	Year Two
Service Availability Charge	$20.00	$25.00
Demand Charge, First 3 kW (per kW)	$1.50	$3.50
Demand Charge, Over 3 kW (per kW)	$8.00	$10.00
All kWh	$0.110659	$0.092420

GENERAL SERVICE

Q. Please describe the General Service Rate Schedule.

A. General Service in SSVEC's territory is available for all commercial customers who require less than 50 kVA transformer capacity located along the distribution lines of SSVEC for single or three phase service. All service is supplied at one point of delivery through a single line, and energy is metered through one meter.

Q. What changes did SSVEC propose for the General Service Rate Schedule?

A. SSVEC is requesting to increase the service availability charge for the General Service Rate Schedule (the current service availability charge is $16.50 per month). In Phase 1, the service availability charge would increase to $20.00, Phase 2 to $23.00, Phase 3 to $25.00, and stay at $25.00 for Phase 4. The level of billing demand would be 3 kW with the first 3 kW billed at $1.50 per kW in Phase 1, increase to $2.50 in Phase 2, $3.50 in Phase 3 and stay at $3.50 for Phase 4. Any billing demand kW over 3 would be billed $8.00 per kW in Phase 1, $9.00 in Phase 2, $10.00 in Phase 3, and stay at $10.00 for Phase 4. The energy charge which is currently $0.118338 per kWh would increase to $0.110659 (whether it is demand billed or non-demand billed) in Phase 1, $0.100991 in Phase 2, $0.092420 in Phase 3 and stay at $0.092420 for Phase 4.

Q. Did SSVEC propose any other changes for the General Service Class?

A. Yes. As explained above, SSVEC requested the addition of the Residential Auxiliary Rate Schedule. Current General Service customers who meet the availability and applicability sections of the Residential Auxiliary Rate Schedule would be moved to the new Residential Auxiliary Rate Schedule.

In addition, SSVEC proposed eliminating the existing General Power Service RV Parks tariff within the General Service Class. SSVEC indicated in its application that the Large Power Rate Schedule is applicable and similar to the rate structure of the General Power Service RV Parks tariff. All existing customers on this tariff will be transferred to the Large Power Rate Schedule.[7]

Q. What are the General Service Class customer costs?

A. As discussed above and detailed in the table below, Exhibit RSP-1 on page 4 details the fixed purchased power costs are $63.98. The fixed distribution (wires) costs are $74.93 and the fixed customer costs per consumer for the General Service class are $25.72.

SSVEC's Fixed Costs Categories*	$
Fixed Purchased Power Costs	$63.98
Distribution (Wires) Costs	$74.93
Total Customer Costs	$25.72
TOTAL GENERAL SERVICE FIXED COSTS	$164.63

*Detail is also available on Exhibit RSP-1.

Q. Does Staff support the changes to the General Service Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the General Service rate schedule, but has modified the implementation timeframe.

- Staff supports a two-year phase in of rate changes (both fixed and variable) as can be seen in Exhibit RSP-2. The proposed overall revenue requirement for the General Service class would be achieved in year one, and year two rate changes would not affect General Service class revenue.

[7] Hedrick Direct page 30 lines 17-19.

- Staff supports reduced subsidization of one class by another class.

- Staff proposes rates that more closely cover fixed costs from the COSS.

- As indicated above, Staff supports the creation of the Residential Auxiliary Rate Schedule and the transfer of qualifying General Service customers to that rate schedule.

- For the General Service rate schedule (including customers with DG), Staff proposes a change in the rate design by implementing the rates in a two-year period rather than four phases over four years. Staff's proposed rates represent a greater recovery of fixed costs over a two-year period through the service availability charge, billing demand charge, and lower billing demand level, thus leaving less of the fixed costs to be recovered through the variable energy charge.

As can be seen in the table below, Staff proposes that the service availability charge for General Service would go from $16.50 to $20.00 in year one and to $25.00 in year two. The energy charge is currently $0.118338 per kWh. This charge would decrease to $0.110659 in year one and $0.092420 per kWh in year two. At the same time the billing demand level will drop from 10 kW to 3 kW.

Staff proposes for year one the billing demand for the first 3 kW be $1.50 per kW while over 3 kW be $8.00 per kW. In year two, the billing demand for the first 3 kW will increase to $3.50 per kW and kW over 3 will be at $10.00 per kW. As can be seen in Exhibit RSP-4, the estimated bill impact of this increase for the average usage general service customer is $9.18 per month. This represents a 6.98 percent increase for General Service customers.

Staff's Proposed General Service Rates

	Year One	Year Two
Service Availability Charge	$20.00	$25.00
Demand Charge, First 3 kW (per kW)	$1.50	$3.50
Demand Charge, Over 3 kW (per kW)	$8.00	$10.00
All kWh	$0.110659	$0.092420

Q. Please describe the General Service TOU Rate Schedule.

A. General Service TOU in SSVEC's territory is available for all commercial customers who require less than 50 kVA transformer capacity located along the distribution lines of SSVEC for single or three phase service. All service is supplied at one point of delivery through a single line, and energy is metered through one meter. TOU customers' rates vary for kW during on-peak time versus total kWh and total metered kW.

Q. Does Staff support the changes to the General Service TOU Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the General Service TOU Rate Schedule but has modified the timeframe by implementing the rate changes over a two-year period compared to four phases proposed by SSVEC.

As can be seen in the table below, Staff proposes that in year one the service availability charge would increase from $18.00 to $22.00 and in year two would increase to $27.00. The metered kW charge (billing demand) would be $1.50 for the first 3 kW in year one and would increase to $3.50 in year two. The billed on peak kW would remain at $18.50 per kW. The energy charge would increase from $0.090972 to $0.59862 per kWh in year one and then decrease to $0.041623 per kWh in year two. As indicated in Exhibit RSP-4, the estimated bill impact of this increase for the average usage General Service TOU customer is $2.65 per month. This represents a 2.29 percent increase for General Service TOU customers.

Staff's Proposed General Service TOU Rates

	Year One	Year Two
Service Availability Charge	$22.00	$27.00
Metered kW	$1.50	$3.50
On-Peak Capacity Charge, per billing kW	$18.50	$18.50
All kWh	$0.059862	$0.041623

Q. Does Staff support the changes to the General Power Service RV Parks Rate Schedule proposed by SSVEC?

A. Staff supports the elimination of the General Power Service RV Parks Rate Schedule. The existing General Power Service RV Parks Rate Schedule is open to all RV parks located along the existing distribution lines for SSVEC. The RV Parks are either a single phase or three phase service and have a monthly billing capacity of 50 kVA or greater. The Large Power Service Rate Schedule is similar in availability and billing components as the RV Parks Rate Schedule, with the exception of a one-year contracting requirement which SSVEC has proposed eliminating from the Large Power Service Rate Schedule.

According to SSVEC, there are currently twelve customers on this rate schedule. The customers have not been notified of the shift from a General Power Service RV Parks Rate Schedule to the Large Power Service Rate Schedule. Staff recommends that if this proposal is approved, SSVEC notify in writing each customer of the change in rate schedule status with an explanation of the effects for those customers of this change. Incorporated into that notice should be detail of the new rate structure and the bill impact of approximately a 2.59 percent increase for the average usage customer.

Q. Please describe the Unmetered Service Schedule.

A. Unmetered Service in the General Service class of customers is open to customers with constant monthly demand and energy requirements. In addition, monthly demand may not exceed 1.5 kW. The fixed monthly energy usage is calculated based on a 730 hour month.

Q. Does Staff support the changes to the General Service Unmetered Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the General Service Unmetered Rate Schedule, but has modified the timeframe by implementing the rate changes over a two-year period rather than the four phases proposed by SSVEC. As can be seen in the table below, Staff proposes that the service availability charge increase from $16.50 to $24.50 in year one to $35.50 in year two. The energy charge would increase from $0.091859 per kWh to $0.096735 in year one and decrease to $0.078496 in year two.

Staff's Proposed Unmetered Service Rates

	Year One	Year Two
Service Availability Charge	$24.50	$35.50
Energy Charge (per kWh)	$0.096735	$0.078496

LARGE POWER

Q. Please describe the Large Power Service Rate Schedule.

A. Large Power Service in SSVEC's territory is available for all large power customers who demonstrate or elect to pay a monthly billing minimum of 50 kVA transformer capacity located along the distribution lines of SSVEC for single or three phase service. All service is supplied at one point of delivery through a single line and energy is metered through one meter. The existing tariff requires service to be on a twelve-month, non-seasonal basis and is not available to Irrigation customers.

Q. What changes did SSVEC propose to the Large Power Service Rate Schedule?

A. SSVEC is requesting no changes to the service availability charge for the Large Power Service Rate Schedule (the current service availability charge is $55.00 per month). The billed kVA is currently $7.05 per kVA and will increase to $8.00 per kVA in Phase 1 and would remain at that level through Phase 4. The energy charge which is currently $0.079844 per kWh would be $0.073020 in Phase 1 and remain at that level through Phase 4.

Q. Did SSVEC propose any other changes for the Large Power Service Class?

A. Yes. SSVEC requested the elimination of the Seasonal Power Service Rate Schedule. SSVEC indicated in its application that there is no reason for maintaining a separate rate schedule for seasonal large power customers. All existing customers would be transferred to the Large Power Rate Schedule.[8]

Q. What are the Large Power Service class customer costs?

A. As discussed above and detailed in the table below, Exhibit RSP-1 on page 4 illustrates the fixed purchased power costs per consumer for the Large Power Service class are $1,291.96. The fixed distribution (wires) costs are $926.09 and the fixed customer costs per consumer are $53.35.

SSVEC's Fixed Costs Categories*	$
Fixed Purchased Power Costs	$1,291.96
Distribution (Wires) Costs	$926.09
Total Customer Costs	$53.35
TOTAL LARGE POWER FIXED COSTS	$2,271.40

*Detail is also available on Exhibit RSP-1.

[8] Hedrick Direct page 31 lines 19-22.

Q. Does Staff support the changes to the Large Power Service Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the Large Power Service rate schedule but has modified the timeframe for implementation.

- Staff supports a two-year phase in of rate changes (both fixed and variable) as can be seen in Exhibit RSP-2. The proposed overall revenue requirement for the Large Power Service class would be achieved in year one and year two rate changes would be revenue neutral.

- For the Large Power Service rate schedule (including customers with DG), Staff proposes a modification to the rate design proposed by SSVEC by implementing the rates in a two-year period rather than phases over four years. Staff's proposed rates represent a slight increase in the collection of fixed costs over a two-year period through an increase in the billed demand thus reducing the fixed costs to be collected through the variable energy charge.

As can be seen in the table below, Staff proposes the service availability charge stay at $55.00. The billed demand would increase from $7.05 per kVA to $8.00 per kVA in year one and remain the same for year two. The energy charge is currently $0.079844 per kWh. This charge would decrease to $0.073020 in year one and remain the same for year two. As indicated in Exhibit RSP-4, the estimated bill impact of this increase for the average usage large power customer is $75.52 per month. This represents a 2.80 percent increase for the Large Power customer.

Staff's Proposed Large Power Service Rates

	Year One	Year Two
Service Availability Charge	$55.00	$55.00
Demand Charge per kVA	$8.00	$8.00
Energy Charge per kWh	$0.073020	$0.073020

Q. Please describe the Large Power Service TOU Rate Schedule.

A. Large Power TOU Service in SSVEC's territory is available for all large power customers who demonstrate or elect to pay a monthly billing minimum of 50 kVA transformer capacity located along the distribution lines of SSVEC for single or three phase service. All service is supplied at one point of delivery through a single line and energy is metered through one meter. The existing tariff requires service to be on a twelve-month, non-seasonal basis and is not available to Irrigation customers. TOU customers' rates vary with on-peak and off-peak capacity charges.

Q. What changes did SSVEC propose to the Large Power Service TOU Rate Schedule?

A. SSVEC is requesting no changes to the service availability charge for the Large Power Service TOU Rate Schedule (the current service availability charge is $55.00 per month). The on-peak billed kVA is currently $17.15 per kVA and would increase to $20.00 per kVA in Phase 1 and remain at that level through Phase 4. The off-peak billed kVA is currently $4.15 per kVA and would decrease to $4.00 per kVA in Phase 1 and remain the same through Phase 4. The energy charge, which is currently $0.055515 per kWh, would decrease to $0.047046 in Phase 1 and remain at that level through Phase 4.

Q. Does Staff support the changes to the Large Power TOU Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the Large Power TOU Rate Schedule but has modified the timeframe by implementing the rate changes over a two-year period rather than over four phases as proposed by SSVEC.

As can be seen in the table below, Staff proposes the service availability charge would stay at $55.00. The billed on-peak billed demand would increase from $17.15 per kVA to $20.00 per kVA in year one and remain the same for year two. The off-peak billed demand would increase from $4.15 per kVA to $4.00 per kVA in year one and remain the same for year two. The energy charge is currently $0.055515 per kWh. This charge would decrease to $0.047046 in year one and remain the same for year two. As indicated in Exhibit RSP-4, the estimated bill impact of this change for the average Large Power TOU customer is a slight decrease of $17.47 per month. This represents a 1.41 percent decrease for the Large Power TOU customers.

Staff's Proposed Large Power Service TOU Rates

	Year One	Year Two
Service Availability Charge	$55.00	$55.00
On-Peak kVA	$20.00	$20.00
Off-Peak kVA	$4.00	$4.00
All kWh	$0.047046	$0.047046

Q. Does Staff support the changes to the Seasonal Power Service Rate Schedule proposed by SSVEC?

A. Staff supports the elimination of the Seasonal Power Service Rate Schedule. The existing Seasonal Power Service Rate Schedule is similar in availability and applicability to the Large Power Service Rate Schedule and would meet the needs of the Seasonal Power Service customers. The proposed tariff language submitted by SSVEC in its Application, removes a

one-year contract requirement for service under the Large Power tariff from the "Availability" section. Staff is in agreement with this change and recommends the one-year restriction be removed and that the Seasonal Power Service Rate Schedule be eliminated.

According to SSVEC, there are currently no customers on this rate schedule. No one has been notified of the shift from a Seasonal Power Service Rate Schedule to the Large Power Service Rate Schedule. Staff recommends that if this proposal is approved, SSVEC notify in writing any customer then on the rate (at the time of the effectiveness of a decision in this rate case) of the change in rate schedule status with an explanation of the effects for those customers of this change. Incorporated into that notice is detail of the new rate structure and the bill impact of roughly a 9.11 percent decrease for the average usage customer.

Q. Please describe the Industrial Power Service Rate Schedule.

A. Industrial Power Service in SSVEC's territory is available for all industrial customers who demonstrate or elect to pay a monthly billing minimum of 500 kVA transformer capacity located along the distribution lines of SSVEC for single or three phase service. This rate schedule is not available to RV Parks.

Q. What changes did SSVEC propose to the Industrial Power Service Rate Schedule?

A. SSVEC is requesting that the service availability charge increase from $233.50 (the existing rate) to $400.00 in Phase 1 and remain the same through Phase 4. The demand charge per billing kVA is currently $6.45 per kVA and would increase to $7.00 per kVA in Phase 1 and remain at that level through Phase 4. The rate for the first 400 kWh per billed kVA is currently $0.079830. This rate decreases to $.073135 in Phase 1 and remains the same through the remaining phases. The rate for any kWh over 400 is currently $0.050730. This rate decreases to $0.046746 in Phase 1 and remains the same through the remaining phases.

Q. Does Staff support the changes to the Industrial Power Service Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the Industrial Power Service Rate Schedule, but has modified the timeframe by implementing the rate changes over a two-year period compared to four phases.

As can be seen in the table below, Staff proposes the service availability charge would increase from $233.50 to $400.00 in year one and remain the same for year two. The billed demand would increase from $6.45 per kVA to $7.00 per kVA in year one and remain the same for year two. The first 400 kWh per billing kVA would decrease from $0.079830 to $0.073135 per kWh in year one and remain the same for year two. The kWh over 400 per billing kVA would decrease from $0.050730 to $0.046746 per kWh in year one and remain the same in year two. As indicated in Exhibit RSP-4, the estimated bill impact of this increase for the average usage Industrial customer is $506.82 per month. This represents a 1.98 percent increase for Industrial customers.

Staff's Proposed Industrial Power Service Rates

	Year One	Year Two
Service Availability Charge	$400.00	$400.00
Demand Charge per billing kVA	$7.00	$7.00
First 400 kWh per billing kVA	$0.073135	$0.073135
Over 400 kWh per billing kVA	$0.046746	$0.046746

IRRIGATION

Q. Please describe the Irrigation Service Rate Schedule.

A. Irrigation Service in SSVEC's territory is available for all irrigation, commercial and municipal water systems in SSVEC's territory. All service should only be used for irrigating land for

agricultural purposes and to run the pumps used for commercial and municipal water systems.

Q. What changes did SSVEC propose to the Irrigation Service Rate Schedule?

A. SSVEC is requesting no changes to the service availability charge for the Irrigation Service Rate Schedule (the current service availability charge is $30.00 per month). The capacity charge for April-October per billing kVA is currently $7.15 per billing kVA and would increase to $8.25 per billing kVA in Phase 1 and remain the same through Phase 4. The energy charge for all kWh April-October would decrease from $0.088509 currently to $0.082502 in Phase 1 and stay the same through Phase 4. The energy charge for November-March for the first 300 kWh per kVA would decrease from $0.114209 per kWh to $0.108284 in Phase 1 and stay the same through Phase 4. The energy charge for November-March for kWh over 300 per kVA would decrease from $0.087209 to $0.081198 in Phase 1 and stay the same through Phase 4.

Q. What are the Irrigation class customer costs?

A. The table below illustrates the fixed purchased power costs per consumer for the Irrigation class are $127.69. The fixed distribution (wires) costs are $510.94 and the fixed costs associated with the total customer costs are $36.94.

SSVEC's Fixed Costs Categories*	$
Fixed Purchased Power	$127.69
Distribution (Wires) Costs	$510.94
Total Customer Costs	$36.94
TOTAL IRRIGATION FIXED COSTS	$675.57

*Detail is also available on Exhibit RSP-1.

Q. Does Staff support the changes to the Irrigation Service Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the Irrigation Service rate schedule, but has modified the timeframe for implementation.

- Staff supports a two-year phase in of rate changes (both fixed and variable) as can be seen in Exhibit RSP-2. The proposed overall revenue requirement for the Irrigation Service class would be achieved in year one, and year two rate changes would be revenue neutral.

- Staff proposes rates that more closely cover fixed costs from the COSS. The Irrigation class has a relative rate of return well above 1.0. SSVEC has proposed minimal increases in rates for this class. Staff agrees that minimal overall rate class increases are appropriate, as the Irrigation class is well above a rate of return of 1.0.

- For the Irrigation Service rate schedule (including customers with DG), Staff proposes to modify the rate design proposed by SSVEC by implementing the rates over two years rather than in phases over four years.

As can be seen in the table below, Staff proposes the service availability charge stay at $30.00. The capacity charge in April through October would increase from $7.15 per kVA to $8.25 per kVA in year one and remain the same for year two. The energy charge for the first 300 kWh per kVA in November through March would increase from $0.114209 per kWh to $0.108284 per kWh in year one and remain the same for year two. The energy charge for the kWh over 300 kWh per kVA in November through March would increase from $0.087209 per kWh to $0.081198 in year one and remain the same for year two. The kWh charge for April through October would go from $0.088509 per kWh to $0.082502 per kWh in year one and remain the same for year two. As indicated in Exhibit RSP-4, the estimated bill impact of

this increase for the average usage irrigation customer is $42.43 per month. This represents a 3.06 percent increase for Irrigation customers.

Staff's Proposed Irrigation Service Rates

	Year One	Year Two
Service Availability Charge	$30.00	$30.00
Capacity Charge (Apr-Oct) per billing kVA	$8.25	$8.25
First 300 kWh per billing kVA (Nov-Mar)	$0.108284	$0.108284
Over 300 kWh per billing kVA (Nov-Mar)	$0.081198	$0.081198
Energy Charge all kWh (Apr-Oct)	$0.082502	$082502

Q. Please describe the Irrigation Load Factor Service Rate Schedule.

A. This rate schedule is an optional rate under the Irrigation Service Rate Schedule. Customers participating in this load factor service must be willing to guarantee minimum monthly load factor usage and must be connected for a minimum of five consecutive months.

Q. What changes did SSVEC propose to the Irrigation Load Factor Service Rate Schedule?

A. SSVEC is requesting no changes to the service availability charge for the Irrigation Load Factor Service Rate Schedule (the current service availability charge is $35.00 per month). The energy charge would decrease from $0.094120 currently to $0.088131 in Phase 1 and stay the same through Phase 4.

Q. Does Staff support the changes to the Irrigation Load Factor Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the Irrigation Load Factor Rate Schedule, but has modified the rates by implementing them over two years compared to four phases proposed by SSVEC.

As can be seen in the table below, Staff proposes the service availability charge would stay at $35.00. The energy charge is currently $0.094120 per kWh and will decrease to $0.088131 per kWh in year one and remain the same for year two.

Staff's Proposed Irrigation Load Factor Service Rates

	Year One	Year Two
Service Availability Charge	$35.00	$35.00
Energy Charge all kWh	$0.088131	$0.088131

Q. Please describe the Controlled Irrigation Service Rate Schedule.

A. This rate schedule is available to irrigation customers with an installed capacity of 10 HP. Service under this rate schedule is limited to the amount of load SSVEC can control for peak shaving purposes through radio-controlled switch equipment. Control options are weekly, twice-weekly, or daily.

Q. What changes did SSVEC propose to the Controlled Irrigation Service Rate Schedule?

A. SSVEC is requesting no changes to the service availability charge for the Controlled Irrigation Service Rate Schedule (the current service availability charge is $30.00 per month). The energy charge for the first 300 kWh per kVA would decrease from $0.110979 to $0.105044 in Phase 1 and remain the same through Phase 4. The energy charge for kWh over 300 per kVA would decrease from $0.083679 per kWh to $0.077657 in Phase 1 and remain the same through Phase 4. The override penalty per kW would increase from $19.00 per kW to $20.00 in Phase 1 and remain the same through Phase 4. The discount applicable to the level of control agreed upon will remain the same at 5 percent for weekly controlled, 10 percent for twice-weekly controlled, and 17 percent for daily controlled.

Q. Does Staff support the changes to the Controlled Irrigation Service Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the Weekly Controlled Irrigation Service Rate Schedule but has modified the timeframe by implementing the rate changes over a two-year period compared to four phases proposed by SSVEC.

As can be seen in the table below, Staff proposes the service availability charge would stay at $30.00. The override kW charge would increase from $19.00 per kW to $20.00 per kW in year one and remain the same for year two. The first 300 kWh per kVA would increase from $0.110979 per kWh to $0.105044 in year one and remain the same for year two. The kWh over 300 per kVA would increase from $0.083679 per kWh to $0.077657 per kWh in year one and remain the same for year two. The discount for the first 300 kWh per kW will remain at 5 percent for the weekly controlled, 10 percent for the twice-weekly controlled, and 17 percent for the daily controlled. As indicated in Exhibit RSP-4, the estimated bill impact of this increase for the average usage weekly controlled irrigation customer ranges from $5.86-$6.66 per month. This represents approximately a 0.31 percent increase for Controlled Irrigation customers.

Staff's Proposed Controlled Irrigation Service Rates

	Year One	Year Two
Service Availability Charge	$30.00	$30.00
Override Penalty per kW	$20.00	$20.00
First 300 kWh per kVA	$0.105044	$0.105044
Over 300 kWh per kVA	$0.077657	$0.077657
Discount Weekly Controlled	5%	5%
Discount Twice-Weekly Controlled	10%	10%
Discount Daily Controlled	17%	17%

Q. Please describe the Interruptible Irrigation Service Rate Schedule.

A. This rate schedule is available to irrigation customers and commercial and municipal systems with installed capacity of 100 HP. Customers under this rate schedule are subject to daily control so SSVEC can effectively control for peak shaving purposes.

Q. What changes did SSVEC propose to the Interruptible Irrigation Service Rate Schedule?

A. SSVEC is requesting no changes to the service availability charge for the Interruptible Irrigation Service Rate Schedule (the current service availability charge is $30.00 per month). The energy charge would decrease from $0.087737 to $0.081728 in Phase 1 and remain the same through Phase 4. The override penalty per kW would increase from $19.00 per kW to $20.00 in Phase 1 and remain the same through Phase 4.

Q. Does Staff support the changes to the Interruptible Irrigation Service Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the Interruptible Irrigation Service Rate Schedule but has modified the timeframe by implementing the rate changes over a two-year period compared to four phases proposed by SSVEC.

As can be seen in the table below, Staff proposes the service availability charge stay at $30.00. The override kW charge would increase from $19.00 per kW to $20.00 per kW in year one and remain the same for year two. The energy charge per kWh would increase from $0.087737 to $0.081728 and remain the same for year two. As indicated in Exhibit RSP-4, the estimated bill impact of this increase for the average usage interruptible irrigation customer is $6.33 per month. This represents a 0.32 percent increase for interruptible irrigation customers.

Staff's Proposed Interruptible Irrigation Service Rates

	Year One	Year Two
Service Availability Charge	$30.00	$30.00
Override Penalty per kW	$20.00	$20.00
First 300 kWh Energy Charge	$0.081728	$0.081728

Q. Did SSVEC propose any other changes to the Irrigation Rate Class?

A. Yes. SSVEC proposed tariff language changes to the "Other Conditions" section of the Controlled Irrigation Service Rate Schedule. SSVEC requested to insert language into the paragraph detailing the exact cost of the control equipment. The control equipment needed under the Controlled Irrigation Rate Schedule is estimated to cost $235 in equipment costs for the radio control units and $192 for labor to install the units. SSVEC also indicated that it incurs travel costs associated with the travel of a 2-man crew to install the radio control units. SSVEC is requesting to insert language which states the Customer will pay a one-time charge of $425 and a mileage fee of $4.50/mile for the travel time.

Q. Does Staff agree with the changes proposed to the "Other Conditions" section of the Controlled Irrigation Rate Schedule requested by SSVEC?

A. While Staff appreciates SSVEC's attempt to be more transparent in the costs that customers may incur, Staff does not agree with the language change that SSVEC has requested. SSVEC explained the costs for the control equipment are always paid by the customer. The clarification SSVEC has requested is to let the customer know up-front the costs that may be incurred. Staff's concern is when the actual costs deviate from the $425 specified in the proposed tariff language. Staff recommends keeping the language currently in effect in its approved Controlled Irrigation tariff as this language allows SSVEC to collect the actual costs associated with the control equipment rather than an estimate of $425. If SSVEC is concerned the customer would need to know the costs in advance of installation, SSVEC may want to consider providing an estimate of the costs prior to the installation.

If there are issues that SSVEC has encountered in relation to these control equipment costs, SSVEC should indicate those issues in its rebuttal testimony and explain further why this proposed language is necessary to clear up the issues.

SECURITY AND STREET LIGHTING

Q. What are the Lighting class (both Security and Street) customer costs?

A. Exhibit RSP-1 on page 4 illustrates the fixed purchased power costs per consumer are $1.40. The fixed distribution (wires) costs are $1.29 and the fixed costs associated with the total customer costs are $13.71.

SSVEC's Fixed Costs Categories*	$
Fixed Purchased Power Costs	$1.40
Distribution (Wires) Costs	$1.29
Total Customer Costs	$13.71
TOTAL LIGHTING FIXED COSTS	$16.40

*Detail is also available on Exhibit RSP-1.

Q. Does Staff support the changes to the Security Lighting Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the Security Lighting Service rate schedule. The bill impact of the proposed rates can be seen in Exhibit RSP-4.

Q. Does Staff support the changes to the Street Lighting Rate Schedule proposed by SSVEC?

A. Staff supports SSVEC's proposed changes to the rates for the Security Lighting Service rate schedule. The bill impact of the proposed rates can be seen in Exhibit RSP-4.

OTHER TARIFFS

Q. Does Staff support changes to the Special Contracts proposed by SSVEC?

A. Staff has no adjustments to the negotiated contracts noted in the rate application.

Q. Did SSVEC propose any changes to its Qualified Cogeneration and Small Power Production Facilities (Schedule COGEN-1) tariff?

A. No. SSVEC did not propose any changes to COGEN-1 tariff.

Q. Did SSVEC propose any changes to its Cogeneration Qualifying Facilities (Schedule QF-1)?

A. No. SSVEC did not propose any changes to its QF-1 tariff.

CONCLUSIONS AND RECOMMENDATIONS

Q. Based upon your testimony, what are Staff's conclusions and recommendations regarding its COSS, revenue allocation, and rate design?

A. Staff's conclusions and recommendations are as follows:

Conclusions

Based on Staff's review of SSVEC's COSS, revenue allocation and rate design proposals, Staff concludes as follows:

a. That SSVEC has performed the COSS consistent with methodologies generally accepted in the industry, and developed the allocation factors appropriately.

b. That the application of the COSS model is reasonable with the exception of the customer count adjustment found in Exhibit RSP-1.

c. That the revenue allocation developed by SSVEC is reasonable.

d. That SSVEC's rate design proposals for the Residential Service Rate Schedule, Residential TOU Rate Schedule, Residential Service with DG-Existing and Residential Service with DG are unreasonable.

e. That SSVEC's rate design proposals for the Residential Auxiliary Service Rate Schedule, General Service Rate Schedule, General Service TOU Rate Schedule, Unmetered Rate Schedule, Large Power Rate Schedule, Large Power TOU Rate Schedule, Industrial Rate Schedule, Irrigation Service Rate Schedule, Irrigation Load Factor Rate Schedule, Controlled Irrigation Rate Schedules (Weekly, Twice-Weekly, and Daily), Interruptible (including Interruptible Irrigation) Rate Schedule, Security and Street Lighting Rate Schedules, and Contract Power Service Rate Schedule rate design proposals are reasonable.

f. That the rate design proposals for General Service DG, Large Power DG, Irrigation DG and Irrigation Controlled DG should not be separated from the rate design proposals for the General Service Rate Schedule, the Large Power Rate Schedule, the Irrigation Service Rate Schedule, and the Controlled Irrigation Rate Schedule as the rate design proposals are identical.

g. That the General Service RV Parks Rate Schedule should be discontinued and any customers on this schedule transferred to the Large Power Rate Schedule.

h. That the Seasonal Power Service Rate Schedule should be discontinued and any customers on this schedule transferred to the Large Power Rate Schedule.

i. That the Large Power Rate Schedule should be approved as filed by SSVEC in its application where the language requiring customers be on the schedule for a period of twelve consecutive months is removed.

j. That Staff does not support the creation of rate schedules which single out distributed generation customers.

k. That Staff supports gradual movement toward recovering fixed costs based on the cost of serving each class.

l. That Staff supports system-wide reduction in subsidies by one class of customer by other classes of customers.

m. That Staff supports the treatment of the residential class on the whole as a class which needs to gradually move toward recovering fixed costs based on the cost to serve the customer class.

n. That the currently approved language in the "Other Conditions" section of the Controlled Irrigation Schedule offers more flexibility to SSVEC to recover actual equipment costs compared to the proposed changes and the existing approved language should be retained.

Recommendations

Based on aforementioned conclusions, Staff recommends:

a. That the Commission accept SSVEC's COSS for use in this case including the changes made to RSP-1.

b. That the Commission accept the revenue allocation developed by SSVEC; however, in future rate cases, SSVEC needs to make the following two adjustments with regard to revenue and costs for the COSS:

1. Residential Auxiliary Rate Schedule customers should be incorporated as part of the Residential class rather than the General Service class.
2. General Service RV Parks Rate Schedule customers should be incorporated as part of the Large Power class rather than the General Service class.

c. That the proposed Residential Service with Distributed Generation-Existing Rate Schedule and Residential Service with Distributed Generation Rate Schedule not be approved.

d. That the Staff-proposed rates found in Exhibit RSP-2 and detailed in this testimony be approved.

e. That SSVEC notify in writing customers who will be transferred from the General Service Rate Schedule to the new Residential Auxiliary Rate Schedule. These customers should be informed of the timing and effects of that transition.

f. That the General Service RV Parks Rate Schedule be discontinued and customers transferred to the Large Power Service Rate Schedule.

g. That SSVEC notify in writing customers who will be transferred from the General Service RV Parks Rate Schedule to the Large Power Service Rate Schedule. These customers should be informed of the timing and effects of that transition.

h. That the Seasonal Power Service Rate Schedule be discontinued and customers transferred to the Large Power Service Rate Schedule.

i. That SSVEC notify in writing customers who will be transferred from the Seasonal Power Service to the Large Power Service Rate Schedule. These customers should be informed of the timing and implications of that transition

j. That the Large Power Rate Schedule should be revised to delete the one year service requirement as SSVEC filed in its application.

k. That SSVEC's proposal to revise the language in the "Other Conditions" section of the Controlled Irrigation Schedule not be approved.

Q. Does this conclude your direct rate design testimony?

A. Yes, it does.

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ARIZONA CORPORATION COMMISSION
UNBUNDLED COSTS W/ UNIFORM ROR ON RATE BASE
SSVEC ADJUSTED TY ENDING 12/31/2014 - REVISED
Summary of Components of Expenses

Accounts	Total	RESIDENTIAL	GENERAL SERV	LARGE POWER	IRRIGATION	LIGHTING	CONTRACTS	Ft Huachuca
Average Consumers	51,429	41,647	8,545	389	845	5,009	3	1
kWh Sold	793,021,534	335,779,118	98,846,734	141,335,112	169,888,486	3,547,884	43,824,200	0
Metered kW		0	548,348	431,407	650,924	0	92,574	0
Billed kW		0	518,599	493,080	656,554	0	123,676	0
Pur Pwr Capacity	**23,805,765**	**11,542,178**	**5,184,969**	**4,766,412**	**1,023,276**	**66,600**	**1,222,330**	**0**
Monthly Cost per Cons	38.57	23.10	50.57	1,021.08	100.91	1.11	33,953.60	0.00
Average Cost per kWh	0.030019	0.034374	0.052455	0.033724	0.006030	0.018772	0.027892	0.000000
Cost per Metered kW		0.00	9.46	11.05	1.57	0.00	13.20	0.00
Cost per Billed kW		0.00	10.00	9.67	1.56	0.00	9.88	0.00
Pur Pwr Delivery	**6,315,219**	**3,061,921**	**1,375,474**	**1,264,439**	**271,456**	**17,668**	**324,261**	**0**
Monthly Cost per Cons	10.23	6.13	13.41	270.87	26.77	0.29	9,007.25	0.00
Average Cost per kWh	0.007963	0.009119	0.013915	0.008946	0.001600	0.004980	0.007399	0.000000
Cost per Metered kW		0.00	2.51	2.93	0.42	0.00	3.50	0.00
Cost per Billed kW		0.00	2.65	2.56	0.41	0.00	2.62	0.00
Pur Pwr Energy	**22,104,679**	**9,393,372**	**2,765,223**	**3,952,571**	**4,747,011**	**99,252**	**1,147,251**	**0**
Monthly Cost per Cons	35.82	18.80	26.97	846.74	468.15	1.65	31,868.09	0.00
Average Cost per kWh	0.027874	0.027975	0.027975	0.027966	0.027975	0.027975	0.026178	0.000000
Cost per Metered kW		0.00	5.04	9.16	7.29	0.00	12.39	0.00
Cost per Billed kW		0.00	5.33	8.02	7.23	0.00	9.28	0.00
Generation Plant	**376,517**	**159,424**	**46,931**	**67,104**	**80,566**	**1,684**	**20,807**	**0**
Monthly Cost per Cons	0.61	0.32	0.46	14.38	7.95	0.03	577.98	0.00
Average Cost per kWh	0.000475	0.000475	0.000475	0.000475	0.000475	0.000475	0.000475	0.000000
Cost per Metered kW		0.00	0.09	0.16	0.12	0.00	0.22	0.00
Cost per Billed kW		0.00	0.09	0.14	0.12	0.00	0.17	0.00
Transmission Plant	**3,292,823**	**1,416,520**	**647,897**	**589,551**	**489,645**	**7,710**	**141,501**	**0**
Monthly Cost per Cons	5.34	2.83	6.32	126.30	48.29	0.13	3,930.58	0.00
Average Cost per kWh	0.004152	0.004219	0.006555	0.004171	0.002886	0.002173	0.003229	0.000000
Cost per Metered kW		0.00	1.18	1.37	0.75	0.00	1.53	0.00
Cost per Billed kW		0.00	1.25	1.20	0.75	0.00	1.14	0.00

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kWh Sold	793,021,534	335,779,118	98,846,734	141,335,112	169,688,486	3,547,884	43,824,200	0
Metered kW		0	548,348	431,407	650,924	0	92,574	0
Billed kW		0	518,599	493,080	656,554	0	123,676	0
Distrib Substation	**3,933,549**	**1,618,926**	**740,474**	**673,791**	**559,610**	**8,812**	**331,937**	**0**
Monthly Cost per Cons	6.37	3.24	7.22	144.34	55.19	0.15	9,220.46	0.00
Average Cost per kWh	0.004960	0.004821	0.007491	0.004767	0.003298	0.002484	0.007574	0.000000
Cost per Metered kW		0.00	1.35	1.56	0.86	0.00	3.59	0.00
Cost per Billed kW		0.00	1.43	1.37	0.85	0.00	2.68	0.00
Distrib Backbone	**14,246,716**	**4,304,020**	**4,200,243**	**2,292,561**	**2,591,284**	**23,283**	**0**	**835,325**
Monthly Cost per Cons	23.08	8.61	40.96	491.12	255.55	0.39	0.00	69,610.43
Average Cost per kWh	0.017965	0.012818	0.042492	0.016221	0.015271	0.006562	0.000000	0.000000
Cost per Metered kW		0.00	7.66	5.31	3.98	0.00	0.00	0.00
Cost per Billed kW		0.00	8.10	4.65	3.95	0.00	0.00	0.00
Distrib Demand	**9,619,203**	**5,179,127**	**2,094,886**	**767,085**	**1,540,354**	**37,752**	**0**	**0**
Monthly Cost per Cons	15.59	10.36	20.43	164.33	151.91	0.63	0.00	0.00
Average Cost per kWh	0.012130	0.015424	0.021193	0.005427	0.009078	0.010641	0.000000	0.000000
Cost per Metered kW		0.00	3.82	1.78	2.37	0.00	0.00	0.00
Cost per Billed kW		0.00	4.04	1.56	2.35	0.00	0.00	0.00
Distrib Customer	**7,363,091**	**5,452,190**	**1,054,660**	**22,110**	**48,473**	**785,657**	**0**	**0**
Monthly Cost per Cons	11.93	10.91	10.29	4.74	4.78	13.07	0.00	0.00
Average Cost per kWh	0.009285	0.016237	0.010670	0.000156	0.000286	0.221444	0.000000	0.000000
Cost per Metered kW		0.00	1.92	0.05	0.07	0.00	0.00	0.00
Cost per Billed kW		0.00	2.03	0.04	0.07	0.00	0.00	0.00
Distrib Metering	**2,879,673**	**2,337,749**	**473,442**	**21,820**	**46,663**	**0**	**0**	**0**
Monthly Cost per Cons	4.67	4.68	4.62	4.67	4.60	0.00	0.00	0.00
Average Cost per kWh	0.003631	0.006962	0.004790	0.000154	0.000275	0.000000	0.000000	0.000000
Cost per Metered kW		0.00	0.86	0.05	0.07	0.00	0.00	0.00
Cost per Billed kW		0.00	0.91	0.04	0.07	0.00	0.00	0.00

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kWh Sold	793,021,534	335,779,118	98,846,734	141,335,112	169,688,486	3,547,884	43,824,200	0
Metered kW		0	548,348	431,407	650,924	0	92,574	0
Billed kW		0	518,599	493,080	656,554	0	123,676	0
Meter Reading	**307,843**	**249,197**	**50,467**	**2,326**	**4,974**	**0**	**879**	**0**
Monthly Cost per Cons	0.50	0.50	0.49	0.50	0.49	0.00	24.41	0.00
Average Cost per kWh	0.000388	0.000742	0.000511	0.000016	0.000029	0.000000	0.000020	0.000000
Cost per Metered kW		0.00	0.09	0.01	0.01	0.00	0.01	0.00
Cost per Billed kW		0.00	0.10	0.00	0.01	0.00	0.01	0.00
Billing & Records	**3,905,583**	**3,153,440**	**639,081**	**29,433**	**62,944**	**20,462**	**222**	**0**
Monthly Cost per Cons	6.33	6.31	6.23	6.31	6.21	0.34	6.18	0.00
Average Cost per kWh	0.004925	0.009391	0.006465	0.000208	0.000371	0.005768	0.000005	0.000000
Cost per Metered kW		0.00	1.17	0.07	0.10	0.00	0.00	0.00
Cost per Billed kW		0.00	1.23	0.06	0.10	0.00	0.00	0.00
Customer Services	**1,578,951**	**1,268,078**	**260,305**	**11,850**	**25,741**	**8,408**	**4,569**	**0**
Monthly Cost per Cons	2.56	2.54	2.54	2.54	2.54	0.14	126.93	0.00
Average Cost per kWh	0.001991	0.003777	0.002633	0.000084	0.000152	0.002370	0.000104	0.000000
Cost per Metered kW		0.00	0.47	0.03	0.04	0.00	0.05	0.00
Cost per Billed kW		0.00	0.50	0.02	0.04	0.00	0.04	0.00
Revenue Related	**1,075,028**	**517,485**	**158,875**	**161,501**	**185,785**	**9,643**	**41,739**	**0**
Monthly Cost per Cons	1.74	1.04	1.55	34.60	18.32	0.16	1,159.41	0.00
Average Cost per kWh	0.001356	0.001541	0.001607	0.001143	0.001095	0.002718	0.000952	0.000000
Cost per Metered kW		0.00	0.29	0.37	0.29	0.00	0.45	0.00
Cost per Billed kW		0.00	0.31	0.33	0.28	0.00	0.34	0.00
Total Expenses	100,804,640	49,653,626	19,692,927	14,622,553	11,677,780	1,086,930	3,235,496	835,325
Monthly Cost per Cons	163.34	99.35	192.05	3,132.51	1,151.65	18.08	89,874.89	69,610.43
Average Cost per kWh	0.127115	0.147876	0.199227	0.103460	0.068819	0.306360	0.073829	0.000000
Cost per Metered kW		0.00	35.91	33.90	17.94	0.00	34.95	0.00
Cost per Billed kW		0.00	37.97	29.66	17.79	0.00	26.16	0.00

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ARIZONA CORPORATION COMMISSION
UNBUNDLED COSTS W/ UNIFORM ROR ON RATE BASE
SSVEC ADJUSTED TY ENDING 12/31/2014 - REVISED
Summary of Components of Expenses

Accounts	Total	RESIDENTIAL	GENERAL SERV	LARGE POWER	IRRIGATION	LIGHTING	CONTRACTS	Ft Huachuca
Average Consumers	51,429	41,647	8,545	389	845	5,009	3	1
kWh Sold	793,021,534	335,779,118	98,846,734	141,335,112	169,688,486	3,547,884	43,824,200	0
Metered kW		0	548,348	431,407	650,924	0	92,574	0
Billed kW		0	518,599	493,080	656,554	0	123,676	0
PUR PWR DEMAND	**30,120,984**	**14,604,099**	**6,560,443**	**6,030,851**	**1,294,732**	**84,268**	**1,546,591**	**0**
Monthly Cost per Cons	48.81	29.22	63.98	1,291.96	127.69	1.40	42,960.85	0.00
Average Cost per kWh	0.037983	0.043493	0.066370	0.042671	0.007630	0.023752	0.035291	0.000000
Cost per Metered kW		0.00	11.96	13.98	1.99	0.00	16.71	0.00
Cost per Billed kW		0.00	12.65	12.23	1.97	0.00	12.51	0.00
PUR PWR ENERGY	**22,481,196**	**9,552,795**	**2,812,154**	**4,019,675**	**4,827,577**	**100,936**	**1,168,058**	**0**
Monthly Cost per Cons	36.43	19.11	27.42	861.11	476.09	1.68	32,446.07	0.00
Average Cost per kWh	0.028349	0.028450	0.028450	0.028441	0.028450	0.028450	0.026653	0.000000
Cost per Metered kW		0.00	5.13	9.32	7.42	0.00	12.62	0.00
Cost per Billed kW		0.00	5.42	8.15	7.35	0.00	9.44	0.00
WIRES DEMAND	**31,092,292**	**12,518,594**	**7,683,500**	**4,322,987**	**5,180,892**	**77,556**	**473,438**	**835,325**
Monthly Cost per Cons	50.38	25.05	74.93	926.09	510.94	1.29	13,151.05	69,610.43
Average Cost per kWh	0.039207	0.037282	0.077731	0.030587	0.030532	0.021860	0.010803	0.000000
Cost per Metered kW		0.00	14.01	10.02	7.96	0.00	5.11	0.00
Cost per Billed kW		0.00	14.82	8.77	7.89	0.00	3.83	0.00
TOTAL CUSTOMER	**17,110,169**	**12,978,138**	**2,636,830**	**249,040**	**374,581**	**824,170**	**47,409**	**0**
Monthly Cost per Cons	27.72	25.97	25.72	53.35	36.94	13.71	1,316.92	0.00
Average Cost per kWh	0.021576	0.038651	0.026676	0.001762	0.002207	0.232299	0.001082	0.000000
Cost per Metered kW		0.00	4.81	0.58	0.58	0.00	0.51	0.00
Cost per Billed kW		0.00	5.08	0.51	0.57	0.00	0.38	0.00
Total Expenses	100,804,640	49,653,626	19,692,927	14,622,553	11,677,780	1,086,930	3,235,496	835,325
Monthly Cost per Cons	163.34	99.35	192.05	3,132.51	1,151.65	18.08	89,874.89	69,610.43
Average Cost per kWh	0.127115	0.147876	0.199227	0.103460	0.068819	0.306360	0.073829	0.000000
Cost per Metered kW		0.00	35.91	33.90	17.94	0.00	34.95	0.00
Cost per Billed kW		0.00	37.97	29.66	17.79	0.00	26.16	0.00

CoOPTIONS:® Cost of Service
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SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
E-01575A-15-0312
STAFF PROPOSED RATES AND PROOF OF REVENUE

NOTES:
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	Billing Units	Existing Rate	Existing Revenue	Year 1 Staff Proposed Rate	Year 1 Revenue from Proposed Rates	% Total Revenue Increase
1. RESIDENTIAL						
Residential (including DG)						
Consumers (12-month sum)	499,514	$ 10.25	$ 5,120,019	$ 18.25	$ 9,116,131	
kWh	335,526,198	$ 0.126038	$ 42,289,051	$ 0.113053	$ 37,932,243	
Subtotal	335,526,198		$ 47,409,070		$ 47,048,374	
PCA			$ (2,003,590)		$ 100,159	
Total			$ 45,405,480		$ 47,148,533	3.84%
Residential TOU						
Consumers (12-month sum)	252	$ 16.50	$ 4,158	$ 22.50	$ 5,670	
kWh - On Peak	64,025	$ 0.169037	$ 10,823	$ 0.175000	$ 11,204	
kWh - Off Peak	188,895	$ 0.101727	$ 19,216	$ 0.061000	$ 11,523	
Subtotal	252,920		$ 34,197		$ 28,397	
PCA			$ (1,443)		$ 143	
Total			$ 32,754		$ 28,540	-12.87%
Total Base Revenue	**335,779,118**		**$ 47,443,267**		**$ 47,076,771**	
Total PCA Revenue			**$ (2,005,033)**		**$ 100,302**	
Total Revenue			**$ 45,438,234**		**$ 47,177,073**	3.83%
Residential Auxiliary Service (New Rate: To be transferred from General Service--revenue included in GS for this rate case.)						
Consumers (12-month sum)	23,314	$ 16.50	$ 384,681	$ 20.00	$ 466,280	
over 10 kW	2,150	$ 8.00	$ 17,197			
First 3 Billing kW	66,066	$ -	$ -	$ 1.50	$ 99,099	
Over 3 Billing kW	14,208	$ -	$ -	$ 8.00	$ 113,663	
kWh	5,326,917	$ 0.118338	$ 630,377	$ 0.110659	$ 589,471	
Subtotal	5,326,917		$ 1,032,255		$ 1,268,513	
PCA			$ (30,355)		$ 3,044	
Total			$ 1,001,900		$ 1,271,557	

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		Billing Units	Existing Rate	Existing Revenue	Year 1 Staff Proposed Rate	Year 1 Revenue from Proposed Rates	% Total Revenue Increase
2. COMMERCIAL AND INDUSTRIAL							
General Service (including DG)							
Consumers (12-month sum)		101,825	$ 16.50	$ 1,680,113	$ 20.00	$ 2,036,500	
First	10 Billing kW	355,615	$ -	$ -	$ -	$ -	
Over	10 Billing kW	143,344	$ 8.00	$ 1,146,752	$ -	$ -	
First	3 Billing kW	450,373	$ -	$ -	$ 1.50	$ 675,560	
Over	3 Billing kW	142,420	$ -	$ -	$ 8.00	$ 1,139,359	
kWh - Demand Billed		88,833,837	$ 0.118338	$ 10,512,419	$ 0.110659	$ 9,830,264	
kWh - Non Demand		5,442,202	$ 0.118338	$ 644,019	$ 0.110659	$ 602,229	
Subtotal		94,276,039		$ 13,983,303		$ 14,283,912	
PCA				$ (530,935)		$ 60,175	
Total				$ 13,452,368		$ 14,344,087	6.63%
General Service TOU							
Consumers (12-month sum)		523	$ 18.00	$ 9,414.00	$ 22.00	$ 11,506	
Metered kW		7,491.18	$ -	$ -	$ 1.50	$ 11,237	
Billed On Peak kW		556.15	$ 18.50	$ 10,289.00	$ 18.50	$ 10,289	
kWh		480,843	$ 0.090972	$ 43,743.00	$ 0.059862	$ 28,784	
Subtotal		480,843		$ 63,446		$ 61,816	
PCA				$ (3,535)		$ (520)	
Total				$ 59,911		$ 61,296	2.31%
General Service RV Parks (Discontinued; Transfer to Standard Large Power Rate-Revenue is included GS for this rate case.)							
Consumers (12-month sum)		120	$ 50.00	$ 6,000	$ 55.00	$ 6,600	
Billed kW		12,147.90	$ 6.70	$ 81,391	$ 8.00	$ 97,183	
kWh		3,765,120	$ 0.081102	$ 305,359	$ 0.073020	$ 274,929	
Subtotal		3,765,120		$ 392,750		$ 378,712	
PCA				$ (15,964)		$ 7,644	
Total				$ 376,786		$ 386,356	
Unmetered Service							
Consumers (12-month sum)		72	$ -	$ -	$ -	$ -	
Billed Services		1,992.00	$ 16.50	$ 32,868	$ 24.50	$ 48,804	
kWh		324,732	$ 0.091859	$ 29,830	$ 0.096735	$ 31,413	
Subtotal		324,732		$ 62,698		$ 80,217	
PCA				$ (1,595)		$ 441	
Total				$ 61,103		$ 80,658	32.00%
Total Base Revenue		**98,846,734**		**$ 14,502,197**		**$ 14,804,657**	
Total PCA Revenue				**$ (552,029)**		**$ 67,740**	
Total Revenue				**$ 13,950,168**		**$ 14,872,397**	**6.61%**

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	Billing Units	Existing Rate	Existing Revenue	Year 1 Staff Proposed Rate	Year 1 Revenue from Proposed Rates	% Total Revenue Increase
3. LARGE POWER						
Large Power						
Consumers (12-month sum)	4,470	$ 55.00	$ 245,850	$ 55.00	$ 245,850	
Billed kVA	424,548	$ 7.05	$ 2,993,063	$ 8.00	$ 3,396,383	
kWh	118,974,922	$ 0.079844	$ 9,499,434	$ 0.07302	$ 8,687,549	
Subtotal	118,974,922		$ 12,738,347		$ 12,329,782	
PCA			$ (662,968)		$ 83,005	
Total			$ 12,075,379		$ 12,412,787	2.79%
Large Power TOU						
Consumers (12-month sum)	17	$ 55.00	$ 935	$ 55.00	$ 935	
On Peak Billed kVA	132	$ 17.15	$ 2,260	$ 20.00	$ 2,636	
Off Peak Billed kVA	3,504	$ 4.15	$ 14,541	$ 4.00	$ 14,016	
kWh	66,831	$ 0.055515	$ 3,710	$ 0.047046	$ 3,144	
Subtotal	66,831		$ 21,446		$ 20,731	
PCA			$ (181)		$ 238	
Total			$ 21,265		$ 20,969	-1.39%
Seasonal Power Service (Discontinued: Transferred to Large Power Rate -- Revenue is included with the LP for this Rate Case and will stay in LP.)						
Consumers (12-month sum)	102	$ 67.00	$ 6,834	$ 55.00	$ 5,610	
Billed kW	12,136	$ 9.55	$ 115,896	$ 8.00	$ 97,085	
Billed kW - Primary Discount *	12,136	$ (1.55)	$ (18,810)	$ (1.00)	$ (12,136)	
kWh	1,441,579	$ 0.079844	$ 115,101	$ 0.07302	$ 105,264	
Subtotal	1,441,579		$ 219,021		$ 195,823	
PCA			$ (925)		$ 8,113	
Total			$ 218,096		$ 203,936	
Industrial						
Consumers (12-month sum)	72	$ 233.50	$ 16,812	$ 400.00	$ 28,800	
Billed kVA	52,891	$ 6.45	$ 341,147	$ 7.00	$ 370,237	
First 400 kWh per billing kVA	19,274,700	$ 0.079830	$ 1,538,699	$ 0.073135	$ 1,409,655	
Over 400 kWh per billing kVA	1,577,080	$ 0.050730	$ 80,005	$ 0.046746	$ 73,722	
Subtotal	20,851,780		$ 1,976,663		$ 1,882,414	
PCA			$ (110,678)		$ 20,063	
Total			$ 1,865,985		$ 1,902,477	1.96%
Total Base Revenue	**141,335,112**		**$ 14,955,477**		**$ 14,428,750**	
Total PCA Revenue			**$ (774,752)**		**$ 111,419**	
Total Revenue			**$ 14,180,725**		**$ 14,540,169**	2.53%

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		Billing Units	Existing Rate	Existing Revenue	Year 1 Staff Proposed Rate	Year 1 Revenue from Proposed Rates	% Total Revenue Increase
4. IRRIGATION							
Irrigation							
Consumers (12-month sum)		2,434	$ 30.00	$ 73,020	$ 30.00	$ 73,020	
Billed kW (November-March)		56,123	$ -	$ -	$ -	$ -	
Billed kW (April-October)		84,284	$ 7.15	$ 602,632	$ 8.25	$ 695,345	
First	300 kWh per kVA (Nov-Mar)	7,412,766	$ 0.114209	$ 846,605	$ 0.108284	$ 802,684	
Over	300 kWh per kVA (Nov-Mar)	740,589	$ 0.087209	$ 64,586	$ 0.081198	$ 60,134	
kWh (April-October)		21,866,642	$ 0.088509	$ 1,935,395	$ 0.082502	$ 1,804,042	
Subtotal		30,019,997		$ 3,522,238		$ 3,435,225	
PCA				$ (206,313)		$ (18,087)	
Total				$ 3,315,925		$ 3,417,138	**3.05%**
Irrigation Load Factor							
Consumers (12-month sum)		118	$ 35.00	$ 4,130	$ 35.00	$ 4,130	
Billed kW		17,011	$ -	$ -	$ -	$ -	
kWh - Add'l Billing kWh for Load Factor		1,114,882	$ 0.094120	$ 104,933	$ 0.088131	$ 98,256	
kWh		4,572,812	$ 0.094120	$ 430,393	$ 0.088131	$ 403,006	
Subtotal		4,572,812		$ 539,456		$ 505,392	
PCA				$ (43,079)		$ (14,408)	
Total				$ 496,377		$ 490,984	**-1.09%**
Controlled Irrigation 1 Day/Week							
Consumers (12-month sum)		5,585	$ 30.00	167,550	$ 30.00	$ 167,550	
Billed kW		352,076	$ -	-	$ -	$ -	
Override kW		2,766	$ 19.00	52,558	$ 20.00	$ 55,325	
First	300 kWh per kVA	68,875,158	$ 0.110979	7,643,696	$ 0.105044	$ 7,234,922	
Over	300 kWh per kVA	28,898,037	$ 0.083679	2,418,159	$ 0.077657	$ 2,244,135	
First	300 kWh per kVA w/5% Discount	43,835,379	$ (0.005549)	(243,243)	$ (0.005252)	$ (230,223)	
Subtotal		97,773,195		$ 10,038,720		$ 9,471,709	
PCA				$ (863,849)		$ (250,811)	
Total				$ 9,174,871		$ 9,220,898	**0.50%**

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		Billing Units	Existing Rate	Existing Revenue	Year 1 Staff Proposed Rate	Year 1 Revenue from Proposed Rates	% Total Revenue Increase
Controlled Irrigation 2 Day/Week							
Consumers (12-month sum)		665	$ 30.00	$ 19,950	$ 30.00	$ 19,950	
Billed kW		43,862	$ -	$ -	$ -	$ -	
Override kW		380	$ 19.00	$ 7,224	$ 20.00	$ 7,605	
First	300 kWh per kVA	8,016,297	$ 0.1109790	$ 889,641	$ 0.105044	$ 842,064	
Over	300 kWh per kVA	2,746,919	$ 0.0836790	$ 229,859	$ 0.077657	$ 213,317	
First	300 kWh per kVA w/10% Discount	4,899,458	$ (0.0110980)	$ (54,374)	$ (0.010504)	$ (51,464)	
Subtotal		10,763,216		$ 1,092,300		$ 1,031,472	
PCA				$ (81,837)		$ (14,352)	
Total				$ 1,010,463		$ 1,017,120	0.66%
Controlled Irrigation 7 Day/Week							
Consumers (12-month sum)		1,066	$ 30.00	$ 31,980	$ 30.00	$ 31,980	
Billed kW		75,210	$ -	$ -	$ -	$ -	
Override kW		171	$ 19.00	$ 3,248	$ 20.00	$ 3,419	
First	300 kWh per kVA	14,802,640	$ 0.110979	$ 1,642,782	$ 0.105044	$ 1,554,929	
Over	300 kWh per kVA	5,206,647	$ 0.083679	$ 435,687	$ 0.077657	$ 404,333	
First	300 kWh per kVA w/17% Discount	9,779,715	$ (0.018867)	$ (184,514)	$ (0.017858)	$ (174,646)	
Subtotal		20,009,287		$ 1,929,183		$ 1,820,015	
PCA				$ (150,359)		$ (24,900)	
Total				$ 1,778,824		$ 1,795,115	0.92%
Interruptible Irrigation							
Consumers (12-month sum)		270	$ 30.00	$ 8,100	$ 30.00	$ 8,100	
Override Demand		-	19	$ -	$ 20.00	$ -	
Metered kW		22,357	-	$ -	$ -	$ -	
kWh		6,549,979	$ 0.087737	$ 574,676	$ 0.081728	$ 535,317	
Subtotal		6,549,979		$ 582,776		$ 543,417	
PCA				$ (46,181)		$ (5,113)	
Total				$ 536,595		$ 538,304	0.32%
Total Base Revenue		**169,688,486**		**$ 17,704,673**		**$ 16,807,230**	
Total PCA Revenue				**$ (1,391,618)**		**$ (327,671)**	
Total Revenue				**$ 16,313,055**		**$ 16,479,559**	1.02%

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	Billing Units	Existing Rate	Existing Revenue	Year 1 Staff Proposed Rate	Year 1 Revenue from Proposed Rates	% Total Revenue Increase
5. SECURITY LIGHTING						
35 to 75 Watt LED		$ -	$ -	$ 11.74	$ -	
100 Watt HPS	20,646	$ 11.47	$ 236,810	$ 11.74	$ 242,384	
35 Watt LP (No New Installations)	1,705	$ 9.26	$ 15,788	$ 10.48	$ 17,868	
Additional Poles		$ 2.05	$ -	$ 2.15	$ -	
Total Lights	**22,351**					
Subtotal	**1,343,772**		**$ 252,598**	**-**	**$ 260,252**	
PCA			**$ (6,604)**		**$ 1,822**	
Total			**$ 245,994**		**$ 262,074**	**6.54%**
6. STREET LIGHTING**						
Cooperative Provided & Operated & Maintained:						
70 Watt HPS	168	$ 12.90	$ 2,167	$ 13.16	$ 2,211	
100 Watt HPS - Single/Wood	1,884	$ 11.73	$ 22,099	$ 11.88	$ 22,382	
100 Watt HPS - Single/Steel	2,292	$ 16.74	$ 38,368	$ 17.06	$ 39,102	
100 Watt HPS - Double/Wood	24	$ 21.68	$ 520	$ 21.93	$ 526	
100 Watt HPS - Double/Steel	24	$ 24.10	$ 578	$ 24.43	$ 586	
35 to 75 Watt LED - Single/Wood		$ -	$ -	$ 11.88	$ -	
35 to 75 Watt LED - Single/Steel		$ -	$ -	$ 17.06	$ -	
35 to 75 Watt LED - Double/Wood		$ -	$ -	$ 21.93	$ -	
35 to 75 Watt LED - Double/Wood		$ -	$ -	$ 24.43	$ -	
150 Watt HPS - Single/Wood	4,362	$ 15.40	$ 67,175	$ 15.56	$ 67,873	
150 Watt HPS - Single/Steel	4,428	$ 18.54	$ 82,095	$ 18.80	$ 83,246	
150 Watt HPS - Double/Wood	12	$ 28.96	$ 348	$ 29.21	$ 351	
150 Watt HPS - Double/Steel	84	$ 31.58	$ 2,653	$ 31.92	$ 2,681	
76 to 125 Watt LED - Single/Wood		$ -	$ -	$ 15.56	$ -	
76 to 125 Watt LED - Single/Steel		$ -	$ -	$ 18.80	$ -	
76 to 125 Watt LED - Double/Wood		$ -	$ -	$ 29.21	$ -	
76 to 125 Watt LED - Double/Wood		$ -	$ -	$ 31.92	$ -	
250 Watt HPS - Single/Wood	888	$ 21.55	$ 19,136	$ 21.68	$ 19,252	
250 Watt HPS - Single/Steel	4,080	$ 24.43	$ 99,674	$ 24.65	$ 100,572	
250 Watt HPS - Double/Wood		$ 41.13	$ -	$ 41.32	$ -	
250 Watt HPS - Double/Steel	120	$ 43.23	$ 5,188	$ 43.48	$ 5,218	
126 to 175 Watt LED - Single/Wood		$ -	$ -	$ 21.68	$ -	
126 to 175 Watt LED - Single/Steel		$ -	$ -	$ 24.65	$ -	
126 to 175 Watt LED - Double/Wood		$ -	$ -	$ 41.32	$ -	
126 to 175 Watt LED - Double/Wood		$ -	$ -	$ 43.48	$ -	
176 to 225 Watt LED - Single/Wood		$ -	$ -	$ 24.20	$ -	
176 to 225 Watt LED - Single/Steel		$ -	$ -	$ 27.17	$ -	
176 to 225 Watt LED - Double/Wood		$ -	$ -	$ 46.36	$ -	
176 to 225 Watt LED - Double/Wood		$ -	$ -	$ 48.52	$ -	
Subtotal			$ 340,001		$ 344,000	

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
E-01575A-15-0312
STAFF PROPOSED RATES AND PROOF OF REVENUE

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	Billing Units	Existing Rate	Existing Revenue	Year 1 Staff Proposed Rate	Year 1 Revenue from Proposed Rates	% Total Revenue Increase
6. STREET LIGHTING - Continued**						
Customer CIAC/Cooperative Owned, Operated & Maintained:						
100 Watt HPS - Single/Wood	252	$ 9.04	$ 2,278	$ 9.10	$ 2,293	
100 Watt HPS - Single/Steel	3,852	$ 10.68	$ 41,139	$ 10.80	$ 41,602	
100 Watt HPS - Double/Wood		$ 17.35	$ -	$ 17.45	$ -	
100 Watt HPS - Double/Steel		$ 18.40	$ -	$ 18.54	$ -	
35 to 75 Watt LED - Single/Wood		$ -	$ -	$ 9.10	$ -	
35 to 75 Watt LED - Single/Steel		$ -	$ -	$ 10.80	$ -	
35 to 75 Watt LED - Double/Wood		$ -	$ -	$ 17.45	$ -	
35 to 75 Watt LED - Double/Steel		$ -	$ -	$ 18.54	$ -	
150 Watt HPS - Single/Wood	324	$ 12.11	$ 3,924	$ 12.16	$ 3,940	
150 Watt HPS - Single/Steel	11,708	$ 13.76	$ 161,102	$ 13.86	$ 162,273	
150 Watt HPS - Double/Wood	12	$ 23.12	$ 277	$ 23.18	$ 278	
150 Watt HPS - Double/Steel	228	$ 24.37	$ 5,556	$ 24.47	$ 5,579	
76 to 125 Watt LED - Single/Wood		$ -	$ -	$ 12.16	$ -	
76 to 125 Watt LED - Single/Steel		$ -	$ -	$ 13.86	$ -	
76 to 125 Watt LED - Double/Wood		$ -	$ -	$ 23.18	$ -	
76 to 125 Watt LED - Double/Steel		$ -	$ -	$ 24.47	$ -	
250 Watt HPS - Single/Wood	716	$ 17.69	$ 12,666	$ 17.69	$ 12,666	
250 Watt HPS - Single/Steel	2,244	$ 19.13	$ 42,928	$ 19.18	$ 43,040	
250 Watt HPS - Double/Wood		$ 34.38	$ -	$ 34.34	$ -	
250 Watt HPS - Double/Steel	48	$ 34.98	$ 1,679	$ 34.96	$ 1,678	
126 to 175 Watt LED - Single/Wood		$ -	$ -	$ 17.69	$ -	
126 to 175 Watt LED - Single/Steel		$ -	$ -	$ 19.18	$ -	
126 to 175 Watt LED - Double/Wood		$ -	$ -	$ 34.34	$ -	
126 to 175 Watt LED - Double/Steel		$ -	$ -	$ 34.96	$ -	
176 to 225 Watt LED - Single/Wood		$ -	$ -	$ 19.88	$ -	
176 to 225 Watt LED - Single/Steel		$ -	$ -	$ 21.37	$ -	
176 to 225 Watt LED - Double/Wood		$ -	$ -	$ 38.72	$ -	
176 to 225 Watt LED - Double/Steel		$ -	$ -	$ 39.34	$ -	
Subtotal	37,750		$ 271,549		$ 273,349	0.66%
Subtotal	**2,204,112**		**$ 611,550**		**$ 617,349**	
Total PCA Revenue			**$ (10,846)**		**$ 2,974**	
Total Revenue			**$ 600,704**		**$ 620,323**	
Total Lighting			**$ 846,698**		**$ 882,397**	**4.22%**

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		Billing Units	Existing Rate	Existing Revenue	Year 1 Staff Proposed Rate	Year 1 Revenue from Proposed Rates	% Total Revenue Increase
7. INTERRUPTIBLE			(See Interruptible Irrigation)				
Consumers (12-month sum)		-			$ -	$ -	
Override kW		-			$ -	$ -	
Metered kW		-			$ -	$ -	
kWh		-			$ -	$ -	
Subtotal		-				$ -	
PCA						$ -	
Total						$ -	
8. CONTRACT POWER-1							
Consumers (12-month sum)		12	$ 500.00	$ 6,000	$ 500.00	$ 6,000	
Billed kW		22,397	$ 3.35	$ 75,028	$ 3.35	$ 75,028	
First	400 kWh per billing kW	8,958,600	$ 0.076300	$ 683,541	$ 0.07081	$ 634,358	
Over	400 kWh per billing kW	2,878,400	$ 0.041300	$ 118,878	$ 0.03260	$ 93,836	
Subtotal		11,837,000		$ 883,447		$ 809,222	
PCA				$ (59,561)		$ 14,657	
Total				$ 823,886		$ 823,879	0.00%
9. CONTRACT POWER-2							
Consumers (12-month sum)		12	$ 9,000.00	$ 108,000	$ 9,000.00	$ 108,000	
Billed kW		29,249	$ 9.00	$ 263,239	$ 9.00	$ 263,239	
First	400 kWh per billing kW	11,699,520	$ 0.054750	$ 640,549	$ 0.06630	$ 775,678	
Over	400 kWh per billing kW	7,201,680	$ 0.034750	$ 250,258	$ 0.03406	$ 245,289	
Subtotal		18,901,200		$ 1,262,046		$ 1,392,206	
PCA				$ 151,171		$ 20,999	
Total				$ 1,413,217		$ 1,413,205	0.00%
10. CONTRACT POWER-3							
Consumers (12-month sum)		12	$ 250.00	$ 3,000	$ 250.00	$ 3,000	
Service Availability Charge		12	$ 8,675.23	$ 104,103	$ 8,675.23	$ 104,103	
Billed kW		72,000	$ 5.75	$ 414,000	$ 5.75	$ 414,000	
First	400 kWh per billing kW	13,086,000	$ 0.07500	$ 981,450	$ 0.06873	$ 899,401	
Over	400 kWh per billing kW	-	$ 0.04500	$ -	$ 0.03637	$ -	
Subtotal		13,086,000		$ 1,502,553		$ 1,420,504	
PCA				$ (74,763)		$ 7,286	
Total				$ 1,427,790		$ 1,427,790	0.00%
11. TOTAL							
Base Revenue		**793,021,534**		**$ 99,117,808**		**$ 97,616,941**	
PCA Revenue				**$ (4,724,035)**		**$ (472)**	
Total Energy Sales				**$ 94,393,773**		**$ 97,616,469**	
Other Revenue				**$ 3,309,366**		**$ 3,200,541**	
Total				**$ 97,703,139**		**$ 100,817,010**	**3.19%**

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1. RESIDENTIAL					
Residential (including DG)					
Consumers (12-month sum)	499,514	$ 18.25	$ 9,116,131	$ 27.00	$ 13,486,878
kWh	335,526,198	$ 0.113053	$ 37,932,243	$ 0.100028	$ 33,562,015
Subtotal	335,526,198		$ 47,048,374		$ 47,048,893
PCA			$ 100,159		$ 100,159
Total			$ 47,148,533		$ 47,149,052
Residential TOU					
Consumers (12-month sum)	252	$ 22.50	$ 5,670	$ 28.50	$ 7,182
kWh - On Peak	64,025	$ 0.175000	$ 11,204	$ 0.170100	$ 10,891
kWh - Off Peak	188,895	$ 0.061000	$ 11,523	$ 0.053200	$ 10,049
Subtotal	252,920		$ 28,397		$ 28,122
PCA			$ 143		$ 143
Total			$ 28,540		$ 28,265
Total Base Revenue	**335,779,118**		**$ 47,076,771**		**$ 47,077,015**
Total PCA Revenue			**$ 100,302**		**$ 100,302**
Total Revenue			**$ 47,177,073**		**$ 47,177,317**
Residential Auxiliary Service (New Rate: To be transferred from General Service--revenue included in GS for this rate case.)					
Consumers (12-month sum)	23,314	$ 20.00	$ 466,280	$ 25.00	$ 582,850
over 10 kW	2,150	$ -	$ -		
First 3 Billing kW	66,066	$ 1.50	$ 99,099	$ 3.50	$ 231,231
Over 3 Billing kW	14,208	$ 8.00	$ 113,663	$ 10.00	$ 142,079
kWh	5,326,917	$ 0.110659	$ 589,471	$ 0.092420	$ 492,314
Subtotal	5,326,917		$ 1,268,513		$ 1,448,474
PCA			$ 3,044		$ 3,044
Total			$ 1,271,557		$ 1,451,518

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2. COMMERCIAL AND INDUSTRIAL						
General Service (including DG)						
Consumers (12-month sum)		101,825	$ 20.00	$ 2,036,500	$ 25.00	$ 2,545,625
First	10 Billing kW	355,615	$ -	$ -	$ -	$ -
Over	10 Billing kW	143,344	$ -	$ -	$ -	$ -
First	3 Billing kW	450,373	$ 1.50	$ 675,560	$ 3.50	$ 1,576,307
Over	3 Billing kW	142,420	$ 8.00	$ 1,139,359	$ 10.00	$ 1,424,199
kWh - Demand Billed		88,833,837	$ 0.110659	$ 9,830,264	$ 0.092420	$ 8,210,023
kWh - Non Demand		5,442,202	$ 0.110659	$ 602,229	$ 0.092420	$ 502,968
Subtotal		94,276,039		$ 14,283,912		$ 14,259,122
PCA				$ 60,175		$ 60,175
Total				$ 14,344,087		$ 14,319,297
General Service TOU						
Consumers (12-month sum)		523	$ 22.00	$ 11,506	$ 27.00	$ 14,121
Metered kW		7,491.18	$ 1.50	$ 11,237	$ 3.50	$ 26,219
Billed On Peak kW		556.15	$ 18.50	$ 10,289	$ 18.50	$ 10,289
kWh		480,843	$ 0.059862	$ 28,784	$ 0.041623	$ 20,014
Subtotal		480,843		$ 61,816		$ 70,643
PCA				$ (520)		$ (520)
Total				$ 61,296		$ 70,123
General Service RV Parks (Discontinued: Transfer to Standard Large Power Rate-Revenue is included GS for this rate case.)						
Consumers (12-month sum)		120	$ 55.00	$ 6,600	$ 55.00	$ 6,600
Billed kW		12,147.90	$ 8.00	$ 97,183	$ 8.00	$ 97,183
kWh		3,765,120	$ 0.073020	$ 274,929	$ 0.073020	$ 274,929
Subtotal		3,765,120		$ 378,712		$ 378,712
PCA				$ 7,644		$ 7,644
Total				$ 386,356		$ 386,356
Unmetered Service						
Consumers (12-month sum)		72	$ -	$ -	$ -	$ -
Billed Services		1,992.00	$ 24.50	$ 48,804	$ 35.50	$ 70,716
kWh		324,732	$ 0.096735	$ 31,413	$ 0.078496	$ 25,490
Subtotal		324,732		$ 80,217		$ 96,206
PCA				$ 441		$ 441
Total				$ 80,658		$ 96,647
Total Base Revenue		**98,846,734**		**$ 14,804,657**		**$ 14,804,683**
Total PCA Revenue				**$ 67,740**		**$ 67,740**
Total Revenue				**$ 14,872,397**		**$ 14,872,423**

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3. LARGE POWER						
Large Power						
Consumers (12-month sum)		4,470	$ 55.00	$ 245,850	$ 55.00	$ 245,850
Billed kVA		424,548	$ 8.00	$ 3,396,383	$ 8.00	$ 3,396,383
kWh		118,974,922	$ 0.073020	$ 8,687,549	$ 0.07302	$ 8,687,549
Subtotal		118,974,922		$ 12,329,782		$ 12,329,782
PCA				$ 83,005		$ 83,005
Total				$ 12,412,787		$ 12,412,787
Large Power TOU						
Consumers (12-month sum)		17	$ 55.00	$ 935	$ 55.00	$ 935
On Peak Billed kVA		132	$ 20.00	$ 2,636	$ 20.00	$ 2,636
Off Peak Billed kVA		3,504	$ 4.00	$ 14,016	$ 4.00	$ 14,016
kWh		66,831	$ 0.047046	$ 3,144	$ 0.047046	$ 3,144
Subtotal		66,831		$ 20,731		$ 20,731
PCA				$ 238		$ 238
Total				$ 20,969		$ 20,969
Seasonal Power Service (Discontinued: Transferred to Large Power Rate -- Revenue is included with the LP for this Rate Case and will stay in LP.)						
Consumers (12-month sum)		102	$ 55.00	$ 5,610	$ 55.00	$ 5,610
Billed kW		12,136	$ 8.00	$ 97,085	$ 8.00	$ 97,085
Billed kW - Primary Discount *		12,136	$ (1.00)	$ (12,136)	$ (1.00)	$ (12,136)
kWh		1,441,579	$ 0.073020	$ 105,264	$ 0.07302	$ 105,264
Subtotal		1,441,579		$ 195,823		$ 195,823
PCA				$ 8,113		$ 8,113
Total				$ 203,936		$ 203,936
Industrial						
Consumers (12-month sum)		72	$ 400.00	$ 28,800	$ 400.00	$ 28,800
Billed kVA		52,891	$ 7.00	$ 370,237	$ 7.00	$ 370,237
First	400 kWh per billing kVA	19,274,700	$ 0.073135	$ 1,409,655	$ 0.073135	$ 1,409,655
Over	400 kWh per billing kVA	1,577,080	$ 0.046746	$ 73,722	$ 0.046746	$ 73,722
Subtotal		20,851,780		$ 1,882,414		$ 1,882,414
PCA				$ 20,063		$ 20,063
Total				$ 1,902,477		$ 1,902,477
Total Base Revenue		**141,335,112**		**$ 14,428,750**		**$ 14,428,750**
Total PCA Revenue				**$ 111,419**		**$ 111,419**
Total Revenue				**$ 14,540,169**		**$ 14,540,169**

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4. IRRIGATION						
Irrigation						
Consumers (12-month sum)		2,434	$ 30.00	$ 73,020	$ 30.00	$ 73,020
Billed kW (November-March)		56,123	$ -	$ -	$ -	$ -
Billed kW (April-October)		84,284	$ 8.25	$ 695,345	$ 8.25	$ 695,345
First	300 kWh per kVA (Nov-Mar)	7,412,766	$ 0.108284	$ 802,684	$ 0.108284	$ 802,684
Over	300 kWh per kVA (Nov-Mar)	740,589	$ 0.081198	$ 60,134	$ 0.081198	$ 60,134
kWh (April-October)		21,866,642	$ 0.082502	$ 1,804,042	$ 0.082502	$ 1,804,042
Subtotal		30,019,997		$ 3,435,225		$ 3,435,225
PCA				$ (18,087)		$ (18,087)
Total				$ 3,417,138		$ 3,417,138
Irrigation Load Factor						
Consumers (12-month sum)		118	$ 35.00	$ 4,130	$ 35.00	$ 4,130
Billed kW		17,011	$ -	$ -	$ -	$ -
kWh - Add'l Billing kWh for Load Factor		1,114,882	$ 0.088131	$ 98,256	$ 0.088131	$ 98,256
kWh		4,572,812	$ 0.088131	$ 403,006	$ 0.088131	$ 403,006
Subtotal		4,572,812		$ 505,392		$ 505,392
PCA				$ (14,408)		$ (14,408)
Total				$ 490,984		$ 490,984
Controlled Irrigation 1 Day/Week						
Consumers (12-month sum)		5,585	$ 30.00	167,550	$ 30.00	$ 167,550
Billed kW		352,076	$ -	-	$ -	$ -
Override kW		2,766	$ 20.00	55,325	$ 20.00	$ 55,325
First	300 kWh per kVA	68,875,158	$ 0.105044	7,234,922	$ 0.105044	$ 7,234,922
Over	300 kWh per kVA	28,898,037	$ 0.077657	2,244,135	$ 0.077657	$ 2,244,135
First	300 kWh per kVA w/5% Discount	43,835,379	$ (0.005252)	(230,223)	$ (0.005252)	$ (230,223)
Subtotal		97,773,195		$ 9,471,709		$ 9,471,709
PCA				$ (250,811)		$ (250,811)
Total				$ 9,220,898		$ 9,220,898

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Controlled Irrigation 2 Day/Week						
Consumers (12-month sum)		665	$ 30.00	$ 19,950	$ 30.00	$ 19,950
Billed kW		43,862	$ -	$ -	$ -	$ -
Override kW		380	$ 20.00	$ 7,605	$ 20.00	$ 7,605
First	300 kWh per kVA	8,016,297	$ 0.1050440	$ 842,064	$ 0.105044	$ 842,064
Over	300 kWh per kVA	2,746,919	$ 0.0776570	$ 213,317	$ 0.077657	$ 213,317
First	300 kWh per kVA w/10% Discount	4,899,458	$ (0.0105040)	$ (51,464)	$ (0.010504)	$ (51,464)
Subtotal		10,763,216		$ 1,031,472		$ 1,031,472
PCA				$ (14,352)		$ (14,352)
Total				$ 1,017,120		$ 1,017,120
Controlled Irrigation 7 Day/Week						
Consumers (12-month sum)		1,066	$ 30.00	$ 31,980	$ 30.00	$ 31,980
Billed kW		75,210	$ -	$ -	$ -	$ -
Override kW		171	$ 20.00	$ 3,419	$ 20.00	$ 3,419
First	300 kWh per kVA	14,802,640	$ 0.105044	$ 1,554,929	$ 0.105044	$ 1,554,929
Over	300 kWh per kVA	5,206,647	$ 0.077657	$ 404,333	$ 0.077657	$ 404,333
First	300 kWh per kVA w/17% Discount	9,779,715	$ (0.017858)	$ (174,646)	$ (0.017858)	$ (174,646)
Subtotal		20,009,287		$ 1,820,015		$ 1,820,015
PCA				$ (24,900)		$ (24,900)
Total				$ 1,795,115		$ 1,795,115
Interruptible Irrigation						
Consumers (12-month sum)		270	$ 30.00	$ 8,100	$ 30.00	$ 8,100
Override Demand		-	20	$ -	$ 20.00	$ -
Metered kW		22,357	-	$ -	$ -	$ -
kWh		6,549,979	$ 0.081728	$ 535,317	$ 0.081728	$ 535,317
Subtotal		6,549,979		$ 543,417		$ 543,417
PCA				$ (5,113)		$ (5,113)
Total				$ 538,304		$ 538,304
Total Base Revenue		**169,688,486**		**$ 16,807,230**		**$ 16,807,230**
Total PCA Revenue				**$ (327,671)**		**$ (327,671)**
Total Revenue				**$ 16,479,559**		**$ 16,479,559**

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5. SECURITY LIGHTING					
35 to 75 Watt LED		$ 11.74	$ -	$ 11.74	$ -
100 Watt HPS	20,646	$ 11.74	$ 242,384	$ 11.74	$ 242,384
35 Watt LP (No New Installations)	1,705	$ 10.48	$ 17,868	$ 10.48	$ 17,868
Additional Poles		$ 2.15	$ -	$ 2.15	$ -
Total Lights	**22,351**				
Subtotal	**1,343,772**		**$ 260,252**	**-**	**$ 260,252**
PCA			**$ 1,822**		**$ 1,822**
Total			**$ 262,074**		**$ 262,074**
6. STREET LIGHTING**					
Cooperative Provided & Operated & Maintained:					
70 Watt HPS	168	$ 13.16	$ 2,211	$ 13.16	$ 2,211
100 Watt HPS - Single/Wood	1,884	$ 11.88	$ 22,382	$ 11.88	$ 22,382
100 Watt HPS - Single/Steel	2,292	$ 17.06	$ 39,102	$ 17.06	$ 39,102
100 Watt HPS - Double/Wood	24	$ 21.93	$ 526	$ 21.93	$ 526
100 Watt HPS - Double/Steel	24	$ 24.43	$ 586	$ 24.43	$ 586
35 to 75 Watt LED - Single/Wood		$ 11.88	$ -	$ 11.88	$ -
35 to 75 Watt LED - Single/Steel		$ 17.06	$ -	$ 17.06	$ -
35 to 75 Watt LED - Double/Wood		$ 21.93	$ -	$ 21.93	$ -
35 to 75 Watt LED - Double/Wood		$ 24.43	$ -	$ 24.43	$ -
150 Watt HPS - Single/Wood	4,362	$ 15.56	$ 67,873	$ 15.56	$ 67,873
150 Watt HPS - Single/Steel	4,428	$ 18.80	$ 83,246	$ 18.80	$ 83,246
150 Watt HPS - Double/Wood	12	$ 29.21	$ 351	$ 29.21	$ 351
150 Watt HPS - Double/Steel	84	$ 31.92	$ 2,681	$ 31.92	$ 2,681
76 to 125 Watt LED - Single/Wood		$ 15.56	$ -	$ 15.56	$ -
76 to 125 Watt LED - Single/Steel		$ 18.80	$ -	$ 18.80	$ -
76 to 125 Watt LED - Double/Wood		$ 29.21	$ -	$ 29.21	$ -
76 to 125 Watt LED - Double/Wood		$ 31.92	$ -	$ 31.92	$ -
250 Watt HPS - Single/Wood	888	$ 21.68	$ 19,252	$ 21.68	$ 19,252
250 Watt HPS - Single/Steel	4,080	$ 24.65	$ 100,572	$ 24.65	$ 100,572
250 Watt HPS - Double/Wood		$ 41.32	$ -	$ 41.32	$ -
250 Watt HPS - Double/Steel	120	$ 43.48	$ 5,218	$ 43.48	$ 5,218
126 to 175 Watt LED - Single/Wood		$ 21.68	$ -	$ 21.68	$ -
126 to 175 Watt LED - Single/Steel		$ 24.65	$ -	$ 24.65	$ -
126 to 175 Watt LED - Double/Wood		$ 41.32	$ -	$ 41.32	$ -
126 to 175 Watt LED - Double/Wood		$ 43.48	$ -	$ 43.48	$ -
176 to 225 Watt LED - Single/Wood		$ 24.20	$ -	$ 24.20	$ -
176 to 225 Watt LED - Single/Steel		$ 27.17	$ -	$ 27.17	$ -
176 to 225 Watt LED - Double/Wood		$ 46.36	$ -	$ 46.36	$ -
176 to 225 Watt LED - Double/Wood		$ 48.52	$ -	$ 48.52	$ -
Subtotal			$ 344,000		$ 344,000

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
E-01575A-15-0312
STAFF PROPOSED RATES AND PROOF OF REVENUE

NOTES:
All highlighted sections represent rate schedules either being discontinued or moved into ano

*The Seasonal Power Service calculation of revenue under proposed rates was corrected to sh discount as originally filed. This correction increases proposed revenue $6,675.

**Mercury Vapor lighting rates have been excluded from the table. There are no customers c Code mandated the removal of mercury vapor lights.

	Billing Units	Year 1 Existing Rate	Year 1 Existing Revenue	Year 2 Staff Proposed Rate	Year 2 Revenue from Proposed Rates
6. STREET LIGHTING - Continued**					
Customer CIAC/Cooperative Owned, Operated & Maintained:					
100 Watt HPS - Single/Wood	252	$ 9.10	$ 2,293	$ 9.10	$ 2,293
100 Watt HPS - Single/Steel	3,852	$ 10.80	$ 41,602	$ 10.80	$ 41,602
100 Watt HPS - Double/Wood		$ 17.45	$ -	$ 17.45	$ -
100 Watt HPS - Double/Steel		$ 18.54	$ -	$ 18.54	$ -
35 to 75 Watt LED - Single/Wood		$ 9.10	$ -	$ 9.10	$ -
35 to 75 Watt LED - Single/Steel		$ 10.80	$ -	$ 10.80	$ -
35 to 75 Watt LED - Double/Wood		$ 17.45	$ -	$ 17.45	$ -
35 to 75 Watt LED - Double/Steel		$ 18.54	$ -	$ 18.54	$ -
150 Watt HPS - Single/Wood	324	$ 12.16	$ 3,940	$ 12.16	$ 3,940
150 Watt HPS - Single/Steel	11,708	$ 13.86	$ 162,273	$ 13.86	$ 162,273
150 Watt HPS - Double/Wood	12	$ 23.18	$ 278	$ 23.18	$ 278
150 Watt HPS - Double/Steel	228	$ 24.47	$ 5,579	$ 24.47	$ 5,579
76 to 125 Watt LED - Single/Wood		$ 12.16	$ -	$ 12.16	$ -
76 to 125 Watt LED - Single/Steel		$ 13.86	$ -	$ 13.86	$ -
76 to 125 Watt LED - Double/Wood		$ 23.18	$ -	$ 23.18	$ -
76 to 125 Watt LED - Double/Steel		$ 24.47	$ -	$ 24.47	$ -
250 Watt HPS - Single/Wood	716	$ 17.69	$ 12,666	$ 17.69	$ 12,666
250 Watt HPS - Single/Steel	2,244	$ 19.18	$ 43,040	$ 19.18	$ 43,040
250 Watt HPS - Double/Wood		$ 34.34	$ -	$ 34.34	$ -
250 Watt HPS - Double/Steel	48	$ 34.96	$ 1,678	$ 34.96	$ 1,678
126 to 175 Watt LED - Single/Wood		$ 17.69	$ -	$ 17.69	$ -
126 to 175 Watt LED - Single/Steel		$ 19.18	$ -	$ 19.18	$ -
126 to 175 Watt LED - Double/Wood		$ 34.34	$ -	$ 34.34	$ -
126 to 175 Watt LED - Double/Steel		$ 34.96	$ -	$ 34.96	$ -
176 to 225 Watt LED - Single/Wood		$ 19.88	$ -	$ 19.88	$ -
176 to 225 Watt LED - Single/Steel		$ 21.37	$ -	$ 21.37	$ -
176 to 225 Watt LED - Double/Wood		$ 38.72	$ -	$ 38.72	$ -
176 to 225 Watt LED - Double/Steel		$ 39.34	$ -	$ 39.34	$ -
Subtotal	37,750		$ 273,349		$ 273,349
Subtotal	**2,204,112**		**$ 617,349**		**$ 617,349**
Total PCA Revenue			**$ 2,974**		**$ 2,974**
Total Revenue			**$ 620,323**		**$ 620,323**
Total Lighting					

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE
E-01575A-15-0312
STAFF PROPOSED RATES AND PROOF OF REVENUE

NOTES:
All highlighted sections represent rate schedules either being discontinued or moved into ano

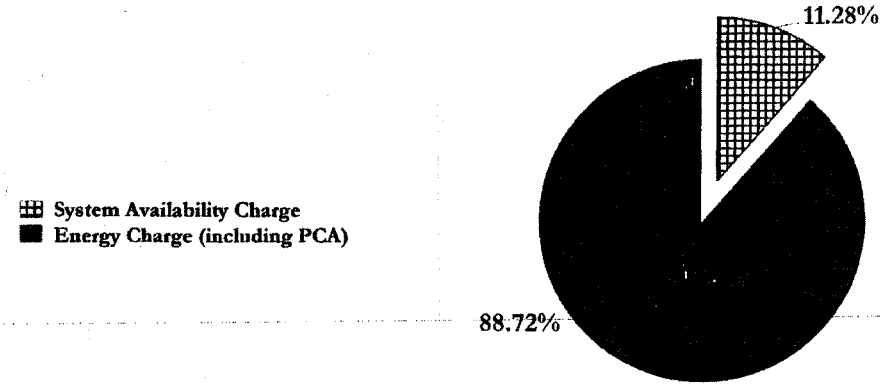
*The Seasonal Power Service calculation of revenue under proposed rates was corrected to sh discount as originally filed. This correction increases proposed revenue $6,675.

**Mercury Vapor lighting rates have been excluded from the table. There are no customers c Code mandated the removal of mercury vapor lights.

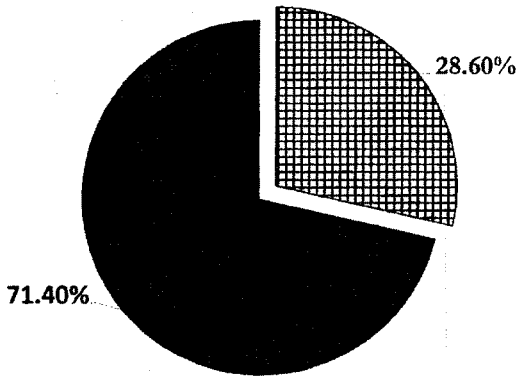
		Billing Units	Year 1 Existing Rate	Year 1 Existing Revenue	Year 2 Staff Proposed Rate	Year 2 Revenue from Proposed Rates
7. INTERRUPTIBLE			(See Interruptible Irrigation)			
Consumers (12-month sum)		-			$ -	$ -
Override kW		-			$ -	$ -
Metered kW		-			$ -	$ -
kWh		-			$ -	$ -
Subtotal		-				$ -
PCA						$ -
Total						$ -
8. CONTRACT POWER-1						
Consumers (12-month sum)		12	$ 500.00	$ 6,000	$ 500.00	$ 6,000
Billed kW		22,397	$ 3.35	$ 75,028	$ 3.35	$ 75,028
First	400 kWh per billing kW	8,958,600	$ 0.070810	$ 634,358	$ 0.07081	$ 634,358
Over	400 kWh per billing kW	2,878,400	$ 0.032600	$ 93,836	$ 0.03260	$ 93,836
Subtotal		11,837,000		$ 809,222		$ 809,222
PCA				$ 14,657		$ 14,657
Total				$ 823,879		$ 823,879
9. CONTRACT POWER-2						
Consumers (12-month sum)		12	$ 9,000.00	$ 108,000	$ 9,000.00	$ 108,000
Billed kW		29,249	$ 9.00	$ 263,239	$ 9.00	$ 263,239
First	400 kWh per billing kW	11,699,520	$ 0.066300	$ 775,678	$ 0.06630	$ 775,678
Over	400 kWh per billing kW	7,201,680	$ 0.034060	$ 245,289	$ 0.03406	$ 245,289
Subtotal		18,901,200		$ 1,392,206		$ 1,392,206
PCA				$ 20,999		$ 20,999
Total				$ 1,413,205		$ 1,413,205
10. CONTRACT POWER-3						
Consumers (12-month sum)		12	$ 250.00	$ 3,000	$ 250.00	$ 3,000
Service Availability Charge		12	$ 8,675.23	$ 104,103	$ 8,675.23	$ 104,103
Billed kW		72,000	$ 5.75	$ 414,000	$ 5.75	$ 414,000
First	400 kWh per billing kW	13,086,000	$ 0.06873	$ 899,401	$ 0.06873	$ 899,401
Over	400 kWh per billing kW	-	$ 0.03637	$ -	$ 0.03637	$ -
Subtotal		13,086,000		$ 1,420,504		$ 1,420,504
PCA				$ 7,286		$ 7,286
Total				$ 1,427,790		$ 1,427,790
11. TOTAL						
Base Revenue		**793,021,534**		**$ 97,616,941**		**$ 97,617,211**
PCA Revenue				**$ (472)**		**$ (472)**
Total Energy Sales				**$ 97,616,469**		**$ 97,616,739**
Other Revenue				**$ 3,309,366**		**$ 3,200,541**
Total				**$ 100,925,835**		**$ 100,817,280**

COMPARISON OF FIXED VS. VARIABLE REVENUE
SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312

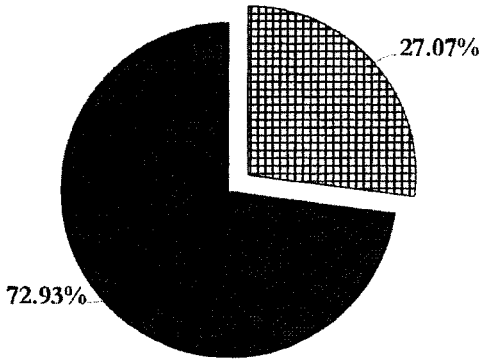
Existing Total Residential Revenue Sources (excluding TOU)



Staff Proposed Total Residential Revenue Sources (excluding TOU)
Increase $1,739,083



SSVEC Proposed Total Residential Revenue Sources (excluding TOU)
Increase $1,733,084



SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
RESIDENTIAL SERVICE

	YEAR ONE				YEAR TWO			
kWh Usage	Existing Rate	Staff Proposed Rate	Change From Existing Rate - $	Change From Existing Rate - %	Year One Rate	Staff Proposed Rate	Change From Year One Rate - $	Change From Year One Rate - %
Service Availability Charge	$ 10.25	$ 18.25	$ 8.00	78.05%	$ 18.25	$ 27.00	$ 8.75	47.95%
Energy Charge, per kWh	$ 0.126038	$ 0.113053	$ (0.012985)	-10.30%	$ 0.113053	$ 0.100028	$ (0.013025)	-11.52%
PCA Factor, per kWh	$ (0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
Total Energy, per kWh	$ 0.119768	$ 0.113053	$ (0.006715)	-5.61%	$ 0.113053	$ 0.100028	$ (0.013025)	-11.52%
50	$ 16.24	$ 23.90	$ 7.66	47.17%	$ 23.90	$ 32.00	$ 8.10	33.89%
100	$ 22.23	$ 29.56	$ 7.33	32.97%	$ 29.56	$ 37.00	$ 7.44	25.17%
250	$ 40.19	$ 46.51	$ 6.32	15.73%	$ 46.51	$ 52.01	$ 5.50	11.83%
500	$ 70.13	$ 74.78	$ 4.65	6.63%	$ 74.78	$ 77.01	$ 2.23	2.98%
750	$ 100.08	$ 103.04	$ 2.96	2.96%	$ 103.04	$ 102.02	$ (1.02)	-0.99%
1000	$ 130.02	$ 131.30	$ 1.28	0.98%	$ 131.30	$ 127.03	$ (4.27)	-3.25%
3000	$ 369.55	$ 357.41	$ (12.14)	-3.29%	$ 357.41	$ 327.08	$ (30.33)	-8.49%
5000	$ 609.09	$ 583.52	$ (25.57)	-4.20%	$ 583.52	$ 527.14	$ (56.38)	-9.66%
668 Average	$ 90.26	$ 93.77	**$ 3.51**	**3.89%**	$ 93.77	$ 93.82	**$ 0.05**	**0.05%**
550 Median	$ 76.12	$ 80.43	$ 4.31	5.66%	$ 80.43	$ 82.02	$ 1.59	1.98%
		Staff Proposed	$ 3.51	3.89%		Staff Proposed	$ 0.05	0.05%
		SSVEC Proposed Phase 1	$ 2.66	2.89%				

Residential Average usage is slightly lower for Staff's bill impact compared to what SSVEC submitted as Staff incorporated DG volumes into the average.

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
RESIDENTIAL TOU SERVICE

			YEAR ONE				YEAR TWO			
kWh Usage	kWh On Peak	kWh Off Peak	Existing Rate	Staff Proposed Rate	Change From Existing Rate - $	Change From Existing Rate - %	Year One Rate	Staff Proposed Rate	Change From Year One Rate - $	Change From Year One Rate - %
	25.31%	74.69%								
Service Availability Charge			$ 16.50	$ 22.50	$ 6.00	36.36%	$ 22.50	$ 28.50	$ 6.00	36.36%
Energy Charge, per kWh										
On-Peak			$ 0.169037	$ 0.175000	$ 0.005963	3.53%	$ 0.175000	$ 0.170100	$ (0.004900)	-2.80%
Off-Peak			$ 0.101727	$ 0.061000	$ (0.040727)	-40.04%	$ 0.061000	$ 0.053200	$ (0.007800)	-12.79%
PCA Factor, per kWh			$ (0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
50	13	37	$ 22.15	$ 27.03	$ 4.88	22.05%	$ 27.03	$ 32.68	$ 5.65	25.50%
100	25	75	$ 27.73	$ 31.45	$ 3.72	13.42%	$ 31.45	$ 36.74	$ 5.29	19.09%
250	63	187	$ 44.60	$ 44.93	$ 0.33	0.73%	$ 44.93	$ 49.16	$ 4.23	9.49%
500	127	373	$ 72.78	$ 67.48	$ (5.30)	-7.28%	$ 67.48	$ 69.95	$ 2.47	3.39%
750	190	560	$ 100.88	$ 89.91	$ (10.97)	-10.88%	$ 89.91	$ 90.61	$ 0.70	0.69%
1000	253	747	$ 128.99	$ 112.34	$ (16.64)	-12.90%	$ 112.34	$ 111.28	$ (1.07)	-0.83%
3000	759	2241	$ 353.96	$ 292.03	$ (61.93)	-17.50%	$ 292.03	$ 276.83	$ (15.20)	-4.29%
5000	1266	3734	$ 579.00	$ 471.82	$ (107.18)	-18.51%	$ 471.82	$ 442.50	$ (29.33)	-5.07%
1004	254	750	$ 129.44	$ 112.70	$ (16.74)	-12.93%	$ 112.70	$ 111.61	$ (1.09)	-0.85%
994 Average	740	254	$ 161.19	$ 167.49	$ 6.30	3.91%	$ 167.49	$ 167.89	$ 0.39	0.24%
687 Median	546	141	$ 118.83	$ 126.65	$ 7.82	6.58%	$ 126.65	$ 128.88	$ 2.22	1.87%
				Staff Proposed	$ 6.30	3.91%		Staff Proposed	$ 0.39	0.24%
				SSVEC Proposed Phase 1	$ 38.85	24.10%				

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
GENERAL SERVICE

			YEAR ONE				YEAR TWO			
Load Factor	kW	kWh	Existing Rate	Staff Proposed Rate	Change From Existing Rate - $	Change From Existing Rate - %	Year One Rate	Staff Proposed Rate	Change From Year One Rate - $	Change From Year One Rate - %
Service Availability Charge			$ 16.50	$ 20.00	$ 3.50	21.21%	$ 20.00	$ 25.00	$ 5.00	25.00%
			First 10 kW	First 3 kW			First 3 kW	First 3 kW		
Demand Charge, First Block			$ -	$ 1.50	$ 1.50	0.00%	$ 1.50	$ 3.50	$ 2.00	133.33%
Demand Charge, Over			$ 8.00	$ 8.00	$ -	0.00%	$ 8.00	$ 10.00	$ 2.00	25.00%
Energy Charge, per kWh										
Demand Metered kWh			$ 0.118338	$ 0.110659	$ (0.007679)	-6.49%	$ 0.110659	$ 0.092420	$ (0.018239)	-16.48%
Non-Demand Metered kWh			$ 0.118338	$ 0.110659	$ (0.007679)	-6.49%	$ 0.110659	$ 0.092420	$ (0.018239)	-16.48%
PCA Factor, per kWh			$ (0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
10.00%	5	365	$ 57.40	$ 80.89	$ 23.49	40.91%	$ 80.89	$ 89.23	$ 8.34	14.53%
35.00%	5	1278	$ 159.72	$ 181.92	$ 22.20	13.90%	$ 181.92	$ 173.61	$ (8.31)	-5.20%
55.00%	5	2008	$ 241.53	$ 262.70	$ 21.17	8.77%	$ 262.70	$ 241.08	$ (21.62)	-8.95%
75.00%	5	2738	$ 323.34	$ 343.48	$ 20.14	6.23%	$ 343.48	$ 308.55	$ (34.94)	-10.81%
10.00%	10	730	$ 98.31	$ 161.28	$ 62.97	64.05%	$ 161.28	$ 172.97	$ 11.69	11.89%
35.00%	10	2555	$ 302.83	$ 363.23	$ 60.40	19.94%	$ 363.23	$ 341.63	$ (21.60)	-7.13%
55.00%	10	4015	$ 466.45	$ 524.80	$ 58.34	12.51%	$ 524.80	$ 476.57	$ (48.23)	-10.34%
75.00%	10	5475	$ 630.07	$ 686.36	$ 56.29	8.93%	$ 686.36	$ 611.50	$ (74.86)	-11.88%
10.00%	25	1825	$ 341.02	$ 402.45	$ 61.43	18.01%	$ 402.45	$ 424.17	$ 21.71	6.37%
35.00%	25	6388	$ 852.39	$ 907.39	$ 55.00	6.45%	$ 907.39	$ 845.88	$ (61.51)	-7.22%
55.00%	25	10038	$ 1,261.44	$ 1,311.30	$ 49.86	3.95%	$ 1,311.30	$ 1,183.21	$ (128.08)	-10.15%
75.00%	25	13688	$ 1,670.49	$ 1,715.20	$ 44.71	2.68%	$ 1,715.20	$ 1,520.54	$ (194.66)	-11.65%
10.00%	50	3650	$ 745.55	$ 804.41	$ 58.86	7.89%	$ 804.41	$ 842.83	$ 38.43	5.15%
35.00%	50	12775	$ 1,768.17	$ 1,814.17	$ 46.00	2.60%	$ 1,814.17	$ 1,686.17	$ (128.00)	-7.24%
55.00%	50	20075	$ 2,586.27	$ 2,621.98	$ 35.71	1.38%	$ 2,621.98	$ 2,360.83	$ (261.15)	-10.10%
75.00%	50	27375	$ 3,404.36	$ 3,429.79	$ 25.43	0.75%	$ 3,429.79	$ 3,035.50	$ (394.29)	-11.58%
25.88% Average	4.90	925.86338	$ 131.52	$ 140.70	$ 9.18	6.98%	$ 140.70	$ 141.02	$ 0.32	0.24%
				Staff Proposed	$ 9.18	6.98%		Staff Proposed	$ 0.32	0.24%
				SSVEC Proposed Phase 1	$ 9.14	6.95%				

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
GENERAL SERVICE TOU

				YEAR ONE				YEAR TWO			
Load Factor	Metered kW	On-Peak	kWh	Existing Rate	Staff Proposed Rate	Change From Existing Rate - $	Change From Existing Rate - %	Year One Rate	Staff Proposed Rate	Change From Year One Rate - $	Change From Year One Rate - %
		7.42%									
Service Availability Charge				$ 18.00	$ 22.00	$ 4.00	22.22%	$ 22.00	$ 27.00	$ 5.00	22.73%
Metered kW				$ -	$ 1.50	$ 1.50	0.00%	$ 1.50	$ 3.50	$ 2.00	133.33%
On-Peak Capacity Charge, per Billing kW				$ 18.50	$ 18.50	$ -	0.00%	$ 18.50	$ 18.50	$ -	0.00%
Energy Charge, per kWh				$ 0.090972	$0.059862	$ (0.031110)	-34.20%	$ 0.059862	$ 0.041623	$ (0.018239)	-30.47%
PCA Factor, per kWh				$(0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
10.00%	5	0.37	365	$ 55.78	$ 58.22	$ 2.43	4.36%	$ 58.22	$ 66.56	$ 8.34	14.96%
35.00%	5	0.37	1,278	$ 133.12	$ 112.87	$ (20.25)	-15.21%	$ 112.87	$ 104.56	$ (8.31)	-6.24%
55.00%	5	0.37	2,008	$ 194.95	$ 156.57	$ (38.38)	-19.69%	$ 156.57	$ 134.95	$ (21.62)	-11.09%
75.00%	5	0.37	2,738	$ 256.78	$ 200.27	$ (56.51)	-22.01%	$ 200.27	$ 165.33	$ (34.94)	-13.61%
10.00%	10	0.74	730	$ 93.57	$ 94.43	$ 0.87	0.93%	$ 94.43	$ 106.12	$ 11.69	12.49%
35.00%	10	0.74	2,555	$ 248.15	$ 203.68	$ (44.47)	-17.92%	$ 203.68	$ 182.08	$ (21.60)	-8.70%
55.00%	10	0.74	4,015	$ 371.81	$ 291.08	$ (80.73)	-21.71%	$ 291.08	$ 242.85	$ (48.23)	-12.97%
75.00%	10	0.74	5,475	$ 495.48	$ 378.48	$ (117.00)	-23.61%	$ 378.48	$ 303.62	$ (74.86)	-15.11%
10.00%	25	1.86	1,825	$ 206.92	$ 203.08	$ (3.83)	-1.85%	$ 203.08	$ 224.80	$ 21.71	10.49%
35.00%	25	1.86	6,388	$ 593.41	$ 476.23	$ (117.18)	-19.75%	$ 476.23	$ 414.72	$ (61.51)	-10.37%
55.00%	25	1.86	10,038	$ 902.57	$ 694.73	$ (207.84)	-23.03%	$ 694.73	$ 566.65	$ (128.08)	-14.19%
75.00%	25	1.86	13,688	$ 1,211.74	$ 913.23	$ (298.51)	-24.63%	$ 913.23	$ 718.57	$ (194.66)	-16.06%
10.00%	50	3.71	3,650	$ 395.83	$ 384.17	$ (11.67)	-2.95%	$ 384.17	$ 422.60	$ 38.43	9.71%
35.00%	50	3.71	12,775	$ 1,168.74	$ 930.41	$ (238.33)	-20.39%	$ 930.41	$ 802.41	$ (128.00)	-10.95%
55.00%	50	3.71	20,075	$ 1,787.06	$ 1,367.40	$ (419.66)	-23.48%	$ 1,367.40	$ 1,106.25	$ (261.15)	-14.61%
75.00%	50	3.71	27,375	$ 2,405.39	$ 1,804.39	$ (601.00)	-24.99%	$ 1,804.39	$ 1,410.10	$ (394.29)	-16.39%
8.79%	14.32	1.06	919	$ 115.55	$ 118.19	$ 2.65	2.29%	$ 118.19	$ 135.07	$ 16.88	14.61%
					Staff Proposed	$ 2.65	2.29%		Staff Proposed	$ 16.88	14.61%
					SSVEC Proposed Phase 1	$ 2.65	2.29%				

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
GENERAL POWER SERVICE RV PARKS/LARGE POWER SERVICE

			YEAR ONE				YEAR TWO			
Load Factor	kVA	kWh	Existing Rate	Staff Proposed Rate	Chage From Existing Rate - $	Change From Existing Rate - %	Year One Rate	Staff Proposed Rate	Change From Year One Rate - $	Change From Year One Rate - %
Service Availability Charge			$ 50.00	$ 55.00	$ 5.00	10.00%	$ 55.00	$ 55.00	$ -	0.00%
Capacity Charge, per Billing kVA			$ 6.70	$ 8.00	$ 1.30	19.40%	$ 8.00	$ 8.00	$ -	0.00%
Energy Charge, per kWh			$ 0.081102	$ 0.073020	$ (0.008082)	-9.97%	$ 0.073020	$ 0.073020	$ -	0.00%
PCA Factor, per kWh			$(0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
10.00%	50	3,650	$ 658.14	$ 721.52	$ 63.38	9.63%	$ 721.52	$ 721.52	$ -	0.00%
30.00%	50	10,950	$ 1,204.41	$ 1,254.57	$ 50.16	4.16%	$ 1,254.57	$ 1,254.57	$ -	0.00%
50.00%	50	18,250	$ 1,750.68	$ 1,787.62	$ 36.94	2.11%	$ 1,787.62	$ 1,787.62	$ -	0.00%
70.00%	50	25,550	$ 2,296.96	$ 2,320.66	$ 23.70	1.03%	$ 2,320.66	$ 2,320.66	$ -	0.00%
90.00%	50	32,850	$ 2,843.23	$ 2,853.71	$ 10.48	0.37%	$ 2,853.71	$ 2,853.71	$ -	0.00%
10.00%	100	7,300	$ 1,266.27	$ 1,388.05	$ 121.78	9.62%	$ 1,388.05	$ 1,388.05	$ -	0.00%
30.00%	100	21,900	$ 2,358.82	$ 2,454.14	$ 95.32	4.04%	$ 2,454.14	$ 2,454.14	$ -	0.00%
50.00%	100	36,500	$ 3,451.37	$ 3,520.23	$ 68.86	2.00%	$ 3,520.23	$ 3,520.23	$ -	0.00%
70.00%	100	51,100	$ 4,543.92	$ 4,586.32	$ 42.40	0.93%	$ 4,586.32	$ 4,586.32	$ -	0.00%
90.00%	100	65,700	$ 5,636.46	$ 5,652.41	$ 15.95	0.28%	$ 5,652.41	$ 5,652.41	$ -	0.00%
10.00%	250	18,250	$ 3,090.68	$ 3,387.62	$ 296.94	9.61%	$ 3,387.62	$ 3,387.62	$ -	0.00%
30.00%	250	54,750	$ 5,822.05	$ 6,052.85	$ 230.80	3.96%	$ 6,052.85	$ 6,052.85	$ -	0.00%
50.00%	250	91,250	$ 8,553.42	$ 8,718.08	$ 164.66	1.93%	$ 8,718.08	$ 8,718.08	$ -	0.00%
70.00%	250	127,750	$11,284.79	$ 11,383.31	$ 98.52	0.87%	$11,383.31	$11,383.31	$ -	0.00%
90.00%	250	164,250	$14,016.16	$ 14,048.54	$ 32.38	0.23%	$14,048.54	$14,048.54	$ -	0.00%
10.00%	500	36,500	$ 6,131.37	$ 6,720.23	$ 588.86	9.60%	$ 6,720.23	$ 6,720.23	$ -	0.00%
30.00%	500	109,500	$11,594.10	$ 12,050.69	$ 456.59	3.94%	$12,050.69	$12,050.69	$ -	0.00%
50.00%	500	182,500	$17,056.84	$ 17,381.15	$ 324.31	1.90%	$17,381.15	$17,381.15	$ -	0.00%
70.00%	500	255,500	$22,519.58	$ 22,711.61	$ 192.03	0.85%	$22,711.61	$22,711.61	$ -	0.00%
90.00%	500	328,500	$27,982.31	$ 28,042.07	$ 59.76	0.21%	$28,042.07	$28,042.07	$ -	0.00%
42.46%	101	31,376	$ 3,076.19	$ 3,155.94	$ 79.75	2.59%	$ 3,155.94	$ 3,155.94	$ -	0.00%
				Staff Proposed	$ 79.75	2.59%		Staff Proposed	$ -	0.00%
				SSVEC Proposed Phase 1	$ 79.75	2.59%				

Note: Discontinued
Transfer to Standard Large Power Rate

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
SEASONAL POWER SERVICE

			YEAR ONE				YEAR TWO			
Load Factor	kVA	kWh	Existing Rate	Staff Proposed Rate	Change From Existing Rate - $	Change From Existing Rate - %	Year One Rate	Staff Proposed Rate	Change From Year One Rate - $	Change From Year One Rate - %
Service Availability Charge			$ 67.00	$ 55.00	$ (12.00)	-17.91%	$ 55.00	$ 55.00	$ -	0.00%
Demand Charge, per Billing kVA			$ 9.55	$ 8.00	$ (1.55)	-16.23%	$ 8.00	$ 8.00	$ -	0.00%
Energy Charge, per kWh			$0.079844	$ 0.073020	$ (0.006824)	-8.55%	$0.073020	$0.073020	$0.000000	0.00%
PCA Factor, per kWh			($0.006270)	$ -	$ 0.006270	-100.00%	$0.000000	$0.000000	$0.000000	0.00%
10.00%	50	3,650	$ 813.05	$ 721.52	$ (91.53)	-11.26%	$ 721.52	$ 721.52	$ -	0.00%
30.00%	50	10,950	$ 1,350.14	$ 1,254.57	$ (95.57)	-7.08%	$ 1,254.57	$ 1,254.57	$ -	0.00%
50.00%	50	18,250	$ 1,887.23	$ 1,787.62	$ (99.61)	-5.28%	$ 1,787.62	$ 1,787.62	$ -	0.00%
70.00%	50	25,550	$ 2,424.32	$ 2,320.66	$ (103.66)	-4.28%	$ 2,320.66	$ 2,320.66	$ -	0.00%
90.00%	50	32,850	$ 2,961.41	$ 2,853.71	$ (107.70)	-3.64%	$ 2,853.71	$ 2,853.71	$ -	0.00%
10.00%	100	7,300	$ 1,559.09	$ 1,388.05	$ (171.04)	-10.97%	$ 1,388.05	$ 1,388.05	$ -	0.00%
30.00%	100	21,900	$ 2,633.27	$ 2,454.14	$ (179.13)	-6.80%	$ 2,454.14	$ 2,454.14	$ -	0.00%
50.00%	100	36,500	$ 3,707.45	$ 3,520.23	$ (187.22)	-5.05%	$ 3,520.23	$ 3,520.23	$ -	0.00%
70.00%	100	51,100	$ 4,781.63	$ 4,586.32	$ (195.31)	-4.08%	$ 4,586.32	$ 4,586.32	$ -	0.00%
90.00%	100	65,700	$ 5,855.81	$ 5,652.41	$ (203.40)	-3.47%	$ 5,652.41	$ 5,652.41	$ -	0.00%
10.00%	250	18,250	$ 3,797.23	$ 3,387.62	$ (409.61)	-10.79%	$ 3,387.62	$ 3,387.62	$ -	0.00%
30.00%	250	54,750	$ 6,482.68	$ 6,052.85	$ (429.83)	-6.63%	$ 6,052.85	$ 6,052.85	$ -	0.00%
50.00%	250	91,250	$ 9,168.13	$ 8,718.08	$ (450.05)	-4.91%	$ 8,718.08	$ 8,718.08	$ -	0.00%
70.00%	250	127,750	$11,853.58	$ 11,383.31	$ (470.27)	-3.97%	$ 11,383.31	$ 11,383.31	$ -	0.00%
90.00%	250	164,250	$14,539.03	$ 14,048.54	$ (490.49)	-3.37%	$ 14,048.54	$ 14,048.54	$ -	0.00%
10.00%	500	36,500	$ 7,527.45	$ 6,720.23	$ (807.22)	-10.72%	$ 6,720.23	$ 6,720.23	$ -	0.00%
30.00%	500	109,500	$12,898.35	$ 12,050.69	$ (847.66)	-6.57%	$ 12,050.69	$ 12,050.69	$ -	0.00%
50.00%	500	182,500	$18,269.26	$ 17,381.15	$ (888.11)	-4.86%	$ 17,381.15	$ 17,381.15	$ -	0.00%
70.00%	500	255,500	$23,640.16	$ 22,711.61	$ (928.55)	-3.93%	$ 22,711.61	$ 22,711.61	$ -	0.00%
90.00%	500	328,500	$29,011.06	$ 28,042.07	$ (968.99)	-3.34%	$ 28,042.07	$ 28,042.07	$ -	0.00%
16.27%	119	14,133	$ 2,243.06	$ 2,038.82	$ (204.24)	-9.11%	$ 2,038.82	$ 2,038.82	$ -	0.00%
				Staff Proposed	$ (204.24)	-9.11%		Staff Proposed	$ -	0.00%
				SSVEC Proposed	$ (204.24)	-9.11%				

Note: Discontinued
Transfer to Standard Large Power Rate

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
LARGE POWER SERVICE

			YEAR ONE				YEAR TWO			
Load Factor	kVA	kWh	Existing Rate	Staff Proposed Rate	Change From Existing Rate - $	Change From Existing Rate - %	Year One Rate	Staff Proposed Rate	Change From Year One Rate - $	Change From Year One Rate - %
Service Availability Charge			$ 55.00	$ 55.00	$ -	0.00%	$ 55.00	$ 55.00	$ -	0.00%
Demand Charge, per Billing kVA			$ 7.05	$ 8.00	$ 0.95	13.48%	$ 8.00	$ 8.00	$ -	0.00%
Energy Charge, per kWh			$ 0.079844	$ 0.073020	$ (0.006824)	-8.55%	$ 0.073020	$ 0.073020	$ -	0.00%
PCA Factor, per kWh			$(0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
10.00%	50	3,650	$ 676.05	$ 721.52	$ 45.47	6.73%	$ 721.52	$ 721.52	$ -	0.00%
30.00%	50	10,950	$ 1,213.14	$ 1,254.57	$ 41.43	3.42%	$ 1,254.57	$ 1,254.57	$ -	0.00%
50.00%	50	18,250	$ 1,750.23	$ 1,787.62	$ 37.39	2.14%	$ 1,787.62	$ 1,787.62	$ -	0.00%
70.00%	50	25,550	$ 2,287.32	$ 2,320.66	$ 33.34	1.46%	$ 2,320.66	$ 2,320.66	$ -	0.00%
90.00%	50	32,850	$ 2,824.41	$ 2,853.71	$ 29.30	1.04%	$ 2,853.71	$ 2,853.71	$ -	0.00%
10.00%	100	7,300	$ 1,297.09	$ 1,388.05	$ 90.96	7.01%	$ 1,388.05	$ 1,388.05	$ -	0.00%
30.00%	100	21,900	$ 2,371.27	$ 2,454.14	$ 82.87	3.49%	$ 2,454.14	$ 2,454.14	$ -	0.00%
50.00%	100	36,500	$ 3,445.45	$ 3,520.23	$ 74.78	2.17%	$ 3,520.23	$ 3,520.23	$ -	0.00%
70.00%	100	51,100	$ 4,519.63	$ 4,586.32	$ 66.69	1.48%	$ 4,586.32	$ 4,586.32	$ -	0.00%
90.00%	100	65,700	$ 5,593.81	$ 5,652.41	$ 58.60	1.05%	$ 5,652.41	$ 5,652.41	$ -	0.00%
10.00%	250	18,250	$ 3,160.23	$ 3,387.62	$ 227.39	7.20%	$ 3,387.62	$ 3,387.62	$ -	0.00%
30.00%	250	54,750	$ 5,845.68	$ 6,052.85	$ 207.17	3.54%	$ 6,052.85	$ 6,052.85	$ -	0.00%
50.00%	250	91,250	$ 8,531.13	$ 8,718.08	$ 186.95	2.19%	$ 8,718.08	$ 8,718.08	$ -	0.00%
70.00%	250	127,750	$11,216.58	$ 11,383.31	$ 166.73	1.49%	$ 11,383.31	$ 11,383.31	$ -	0.00%
90.00%	250	164,250	$13,902.03	$ 14,048.54	$ 146.51	1.05%	$ 14,048.54	$ 14,048.54	$ -	0.00%
10.00%	500	36,500	$ 6,265.45	$ 6,720.23	$ 454.78	7.26%	$ 6,720.23	$ 6,720.23	$ -	0.00%
30.00%	500	109,500	$11,636.35	$ 12,050.69	$ 414.34	3.56%	$ 12,050.69	$ 12,050.69	$ -	0.00%
50.00%	500	182,500	$17,007.26	$ 17,381.15	$ 373.89	2.20%	$ 17,381.15	$ 17,381.15	$ -	0.00%
70.00%	500	255,500	$22,378.16	$ 22,711.61	$ 333.45	1.49%	$ 22,711.61	$ 22,711.61	$ -	0.00%
90.00%	500	328,500	$27,749.06	$ 28,042.07	$ 293.01	1.06%	$ 28,042.07	$ 28,042.07	$ -	0.00%
38.56%	95	26,773	$ 2,695.30	$ 2,770.82	$ 75.52	2.80%	$ 2,770.82	$ 2,770.82	$ -	0.00%
				Staff Proposed	$ 75.52	2.80%		Staff Proposed	$ -	0.00%
				SSVEC Proposed	$ 75.52	2.80%				

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
LARGE POWER TOU SERVICE

				YEAR ONE				YEAR TWO			
Load Factor	kW	Peak kW 3.625%	kWh	Existing Rate	Staff Proposed Rate	Change From Existing Rate - $	Change From Existing Rate - %	Year One Rate	Staff Proposed Rate	Change From Year One Rate - $	Change From Year One Rate - %
Service Availability Charge				$ 55.00	$ 55.00	$ -	0.00%	$ 55.00	$ 55.00	$ -	0.00%
Capacity Charge, per kVA											
All On-Peak kVA				$ 17.15	$ 20.00	$ 2.85	16.62%	$ 20.00	$ 20.00	$ -	0.00%
All Off-Peak kVA				$ 4.15	$ 4.00	$ (0.15)	-3.61%	$ 4.00	$ 4.00	$ -	0.00%
Energy Charge, per kWh				$ 0.055515	$ 0.047046	$(0.008469)	-15.26%	$ 0.047046	$ 0.047046	$ -	0.00%
PCA Factor, per kWh				$(0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
10.00%	50	1.81	3,650	$ 465.81	$ 455.72	$ (10.09)	-2.17%	$ 455.72	$ 455.72	$ -	0.00%
30.00%	50	1.81	10,950	$ 825.30	$ 799.15	$ (26.14)	-3.17%	$ 799.15	$ 799.15	$ -	0.00%
50.00%	50	1.81	18,250	$ 1,184.78	$ 1,142.59	$ (42.19)	-3.56%	$ 1,142.59	$ 1,142.59	$ -	0.00%
70.00%	50	1.81	25,550	$ 1,544.27	$ 1,486.03	$ (58.25)	-3.77%	$ 1,486.03	$ 1,486.03	$ -	0.00%
90.00%	50	1.81	32,850	$ 1,903.76	$ 1,829.46	$ (74.30)	-3.90%	$ 1,829.46	$ 1,829.46	$ -	0.00%
10.00%	100	3.63	7,300	$ 876.61	$ 856.44	$ (20.18)	-2.30%	$ 856.44	$ 856.44	$ -	0.00%
30.00%	100	3.63	21,900	$ 1,595.59	$ 1,543.31	$ (52.28)	-3.28%	$ 1,543.31	$ 1,543.31	$ -	0.00%
50.00%	100	3.63	36,500	$ 2,314.57	$ 2,230.18	$ (84.39)	-3.65%	$ 2,230.18	$ 2,230.18	$ -	0.00%
70.00%	100	3.63	51,100	$ 3,033.55	$ 2,917.05	$ (116.49)	-3.84%	$ 2,917.05	$ 2,917.05	$ -	0.00%
90.00%	100	3.63	65,700	$ 3,752.52	$ 3,603.92	$ (148.60)	-3.96%	$ 3,603.92	$ 3,603.92	$ -	0.00%
10.00%	250	9.06	18,250	$ 2,109.04	$ 2,058.59	$ (50.44)	-2.39%	$ 2,058.59	$ 2,058.59	$ -	0.00%
30.00%	250	9.06	54,750	$ 3,906.48	$ 3,775.77	$ (130.71)	-3.35%	$ 3,775.77	$ 3,775.77	$ -	0.00%
50.00%	250	9.06	91,250	$ 5,703.92	$ 5,492.95	$ (210.97)	-3.70%	$ 5,492.95	$ 5,492.95	$ -	0.00%
70.00%	250	9.06	127,750	$ 7,501.36	$ 7,210.13	$ (291.23)	-3.88%	$ 7,210.13	$ 7,210.13	$ -	0.00%
90.00%	250	9.06	164,250	$ 9,298.81	$ 8,927.31	$ (371.50)	-4.00%	$ 8,927.31	$ 8,927.31	$ -	0.00%
10.00%	500	18.13	36,500	$ 4,163.07	$ 4,062.19	$ (100.89)	-2.42%	$ 4,062.19	$ 4,062.19	$ -	0.00%
30.00%	500	18.13	109,500	$ 7,757.96	$ 7,496.54	$ (261.41)	-3.37%	$ 7,496.54	$ 7,496.54	$ -	0.00%
50.00%	500	18.13	182,500	$11,352.84	$10,930.90	$ (421.94)	-3.72%	$ 10,930.90	$ 10,930.90	$ -	0.00%
70.00%	500	18.13	255,500	$14,947.73	$14,365.26	$ (582.47)	-3.90%	$ 14,365.26	$ 14,365.26	$ -	0.00%
90.00%	500	18.13	328,500	$18,542.61	$17,799.62	$ (743.00)	-4.01%	$ 17,799.62	$ 17,799.62	$ -	0.00%
2.52%	214	7.75	3,931	$ 1,236.94	$ 1,219.47	$ (17.47)	-1.41%	$ 1,219.47	$ 1,219.47	$ -	0.00%
					Staff Proposed	$ (17.47)	-1.41%		Staff Proposed	$ -	0.00%
					SSVEC Proposed	$ (17.47)	-1.41%				

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
INDUSTRIAL SERVICE

			YEAR ONE				YEAR TWO			
Load Factor	kVA	kWh	Existing Rate	Staff Proposed Rate	Change From Existing Rate - $	Change From Existing Rate - %	Year One Rate	Staff Proposed Rate	Change From Year One Rate - $	Change From Year One Rate - %
Service Availability Charge			$ 233.50	$ 400.00	$ 166.50	71.31%	$ 400.00	$ 400.00	$ -	0.00%
Demand Charge, per Billing kVA			$ 6.45	$ 7.00	$ 0.55	8.53%	$ 7.00	$ 7.00	$ -	0.00%
Energy Charge, per kWh										
First 400 kWh/kVA			$ 0.079830	$ 0.073135	$ (0.006695)	-8.39%	$ 0.073135	$ 0.073135	$ -	0.00%
Over 400 kWh/kVA			$ 0.050730	$ 0.046746	$ (0.003984)	-7.85%	$ 0.046746	$ 0.046746	$ -	0.00%
PCA Factor, per kWh			$ (0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
10.00%	50	3,650	$ 824.49	$ 1,016.94	$ 192.45	23.34%	$ 1,016.94	$ 1,016.94	$ -	0.00%
30.00%	50	10,950	$ 1,361.48	$ 1,550.83	$ 189.35	13.91%	$ 1,550.83	$ 1,550.83	$ -	0.00%
50.00%	50	18,250	$ 1,898.47	$ 2,084.71	$ 186.24	9.81%	$ 2,084.71	$ 2,084.71	$ -	0.00%
70.00%	50	25,550	$ 2,273.95	$ 2,472.14	$ 198.19	8.72%	$ 2,472.14	$ 2,472.14	$ -	0.00%
90.00%	50	32,850	$ 2,598.51	$ 2,813.39	$ 214.88	8.27%	$ 2,813.39	$ 2,813.39	$ -	0.00%
10.00%	100	7,300	$ 1,415.49	$ 1,633.89	$ 218.40	15.43%	$ 1,633.89	$ 1,633.89	$ -	0.00%
30.00%	100	21,900	$ 2,489.46	$ 2,701.66	$ 212.20	8.52%	$ 2,701.66	$ 2,701.66	$ -	0.00%
50.00%	100	36,500	$ 3,563.44	$ 3,769.43	$ 205.99	5.78%	$ 3,769.43	$ 3,769.43	$ -	0.00%
70.00%	100	51,100	$ 4,314.41	$ 4,544.28	$ 229.87	5.33%	$ 4,544.28	$ 4,544.28	$ -	0.00%
90.00%	100	65,700	$ 4,963.52	$ 5,226.77	$ 263.25	5.30%	$ 5,226.77	$ 5,226.77	$ -	0.00%
10.00%	250	18,250	$ 3,188.47	$ 3,484.71	$ 296.24	9.29%	$ 3,484.71	$ 3,484.71	$ -	0.00%
30.00%	250	54,750	$ 5,873.41	$ 6,154.14	$ 280.73	4.78%	$ 6,154.14	$ 6,154.14	$ -	0.00%
50.00%	250	91,250	$ 8,558.35	$ 8,823.57	$ 265.22	3.10%	$ 8,823.57	$ 8,823.57	$ -	0.00%
70.00%	250	127,750	$ 10,435.77	$ 10,760.70	$ 324.93	3.11%	$ 10,760.70	$ 10,760.70	$ -	0.00%
90.00%	250	164,250	$ 12,058.56	$ 12,466.93	$ 408.37	3.39%	$ 12,466.93	$ 12,466.93	$ -	0.00%
10.00%	500	36,500	$ 6,143.44	$ 6,569.43	$ 425.99	6.93%	$ 6,569.43	$ 6,569.43	$ -	0.00%
30.00%	500	109,500	$ 11,513.32	$ 11,908.28	$ 394.96	3.43%	$ 11,908.28	$ 11,908.28	$ -	0.00%
50.00%	500	182,500	$ 16,883.20	$ 17,247.14	$ 363.94	2.16%	$ 17,247.14	$ 17,247.14	$ -	0.00%
70.00%	500	255,500	$ 20,638.03	$ 21,121.40	$ 483.37	2.34%	$ 21,121.40	$ 21,121.40	$ -	0.00%
90.00%	500	328,500	$ 23,883.61	$ 24,533.86	$ 650.25	2.72%	$ 24,533.86	$ 24,533.86	$ -	0.00%
54.01%	735	289,608	$ 25,637.82	$ 26,144.64	$ 506.82	1.98%	$ 26,144.64	$ 26,144.64	$ -	0.00%
				Staff Proposed	$ 506.82	1.98%		Staff Proposed	$ -	0.00%
				SSVEC Proposed	$ 506.82	1.98%				

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
SECURITY LIGHTS

			YEAR ONE				YEAR TWO			
kWh Usage	Existing kWh	Proposed kWh	Existing Rate	Staff Proposed Rate	Change From Existing Rate - $	Change From Existing Rate - %	Year One Rate	Staff Proposed Rate	Change From Year One Rate - $	Change From Year One Rate - %
175 Watt MVL on Existing Pole	60 kWh/Mo	63 kWh/Mo	$ 11.97	Discontinued			Discontinued			
35 to 75 Watt LED on Existing Pole		25 kWh/Mo		$ 11.74			$ 11.74	$ 11.74	$ -	
100 Watt HPS on Existing Pole	60 kWh/Mo	36 kWh/Mo	$ 11.47	$ 11.74	$ 0.27	2.35%	$ 11.74	$ 11.74	$ -	0.00%
35 Watt LPS on Existing Pole	60 kWh/Mo	15 kWh/Mo	$ 9.26	$ 10.48	$ 1.22	13.17%	$ 10.48	$ 10.48	$ -	0.00%
Additional Poles for Security Lighting			$ 2.05	$ 2.15	$ 0.10	4.88%	$ 2.15	$ 2.15	$ -	0.00%
PCA Factor, per kWh			$(0.006270)	$ -	$0.006270	-100.00%	$ -	$ -	$ -	0.00%
175 Watt MVL on Existing Pole			$ 11.59	Discontinued						
35 to 75 Watt LED on Existing Pole				$ 11.74			$ 11.74	$ 11.74	$ -	0.00%
100 Watt HPS on Existing Pole			$ 11.09	$ 11.74	$ 0.65	5.86%	$ 11.74	$ 11.74	$ -	0.00%
35 Watt LPS on Existing Pole			$ 8.88	$ 10.48	$ 1.60	18.02%	$ 10.48	$ 10.48	$ -	0.00%
Additional Poles for Security Lighting			$ 2.05	$ 2.15	$ 0.10	4.88%	$ 2.15	$ 2.15	$ -	0.00%

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
STREET LIGHTS

		YEAR ONE						YEAR TWO					
		Existing Rate	Staff Proposed Rate	Existing Billing	Staff Proposed Billing	Change From Existing Billing - $	Change From Existing Billing - %	Year One Rate	Staff Proposed Rate	Existing Billing	Staff Proposed Billing	Change From Year One Billing - $	Change From Year One Billing - %
PCA Factor, per kWh		$ (0.006270)	$ -					$ -	$ -				
		Street Lighting Cooperative Provided											
70 Watt HPS	25 kWh/Mo	$ 12.90	$ 13.16	$ 12.74	$ 13.16	$ 0.42	3.30%	$ 13.16	$ 13.16	$ 13.16	$ 13.16	$ -	0.00%
100 Watt HPS - Single/Wood	36 kWh/Mo	$ 11.73	$ 11.88	$ 11.50	$ 11.88	$ 0.38	3.30%	$ 11.88	$ 11.88	$ 11.88	$ 11.88	$ -	0.00%
100 Watt HPS - Single/Steel	36 kWh/Mo	$ 16.74	$ 17.06	$ 16.51	$ 17.06	$ 0.55	3.33%	$ 17.06	$ 17.06	$ 17.06	$ 17.06	$ -	0.00%
100 Watt HPS - Double/Wood	72 kWh/Mo	$ 21.68	$ 21.93	$ 21.23	$ 21.93	$ 0.70	3.30%	$ 21.93	$ 21.93	$ 21.93	$ 21.93	$ -	0.00%
100 Watt HPS - Double/Steel	72 kWh/Mo	$ 24.10	$ 24.43	$ 23.65	$ 24.43	$ 0.78	3.30%	$ 24.43	$ 24.43	$ 24.43	$ 24.43	$ -	0.00%
175 Watt MV - Single/Wood	63 kWh/Mo	$ 13.56	Discontinued					Discontinued	Discontinued				
175 Watt MV - Single/Steel	63 kWh/Mo	$ 16.44	Discontinued					Discontinued					
175 Watt MV - Double/Wood	126 kWh/Mo	$ 24.50	Discontinued					Discontinued					
175 Watt MV - Double/Steel	126 kWh/Mo	$ 26.86	Discontinued					Discontinued					
35 to 75 Watt LED - Single/Wood	25 kWh/Mo		$ 11.88		$ 11.88			$ 11.88	$ 11.88		$ 11.88		
35 to 75 Watt LED - Single/Steel	25 kWh/Mo		$ 17.06		$ 17.06			$ 17.06	$ 17.06		$ 17.06		
35 to 75 Watt LED - Double/Wood	50 kWh/Mo		$ 21.93		$ 21.93			$ 21.93	$ 21.93		$ 21.93		
35 to 75 Watt LED - Double/Steel	50 kWh/Mo		$ 24.43		$ 24.43			$ 24.43	$ 24.43		$ 24.43		
150 Watt HPS - Single/Wood	54 kWh/Mo	$ 15.40	$ 15.56	$ 15.06	$ 15.56	$ 0.50	3.32%	$ 15.56	$ 15.56	$ 15.56	$ 15.56	$ -	0.00%
150 Watt HPS - Single/Steel	54 kWh/Mo	$ 18.54	$ 18.80	$ 18.20	$ 18.80	$ 0.60	3.30%	$ 18.80	$ 18.80	$ 18.80	$ 18.80	$ -	0.00%
150 Watt HPS - Double/Wood	108 kWh/Mo	$ 28.96	$ 29.21	$ 28.28	$ 29.21	$ 0.93	3.29%	$ 29.21	$ 29.21	$ 29.21	$ 29.21	$ -	0.00%
150 Watt HPS - Double/Steel	108 kWh/Mo	$ 31.58	$ 31.92	$ 30.90	$ 31.92	$ 1.02	3.30%	$ 31.92	$ 31.92	$ 31.92	$ 31.92	$ -	0.00%
250 Watt MV - Single/Wood	90 kWh/Mo	$ 17.49	Discontinued					Discontinued	Discontinued				
250 Watt MV - Single/Steel	90 kWh/Mo	$ 20.70	Discontinued					Discontinued					
250 Watt MV - Double/Wood	180 kWh/Mo	$ 32.49	Discontinued					Discontinued					
250 Watt MV - Double/Steel	180 kWh/Mo	$ 35.11	Discontinued					Discontinued					
76 to 125 Watt LED - Single/Wood	42 kWh/Mo		$ 15.56		$ 15.56			$ 15.56	$ 15.56		$ 15.56		
76 to 125 Watt LED - Single/Steel	42 kWh/Mo		$ 18.80		$ 18.80			$ 18.80	$ 18.80		$ 18.80		
76 to 125 Watt LED - Double/Wood	84 kWh/Mo		$ 29.21		$ 29.21			$ 29.21	$ 29.21		$ 29.21		
76 to 125 Watt LED - Double/Steel	84 kWh/Mo		$ 31.92		$ 31.92			$ 31.92	$ 31.92		$ 31.92		
250 Watt HPS - Single/Wood	90 kWh/Mo	$ 21.55	$ 21.68	$ 20.99	$ 21.68	$ 0.69	3.29%	$ 21.68	$ 21.68	$ 21.68	$ 21.68	$ -	0.00%
250 Watt HPS - Single/Steel	90 kWh/Mo	$ 24.43	$ 24.65	$ 23.87	$ 24.65	$ 0.78	3.27%	$ 24.65	$ 24.65	$ 24.65	$ 24.65	$ -	0.00%
250 Watt HPS - Double/Wood	180 kWh/Mo	$ 41.13	$ 41.32	$ 40.00	$ 41.32	$ 1.32	3.30%	$ 41.32	$ 41.32	$ 41.32	$ 41.32	$ -	0.00%
250 Watt HPS - Double/Steel	180 kWh/Mo	$ 43.23	$ 43.48	$ 42.10	$ 43.48	$ 1.38	3.28%	$ 43.48	$ 43.48	$ 43.48	$ 43.48	$ -	0.00%
400 Watt MV - Single/Wood	144 kWh/Mo	$ 24.30	Discontinued					Discontinued	Discontinued				
400 Watt MV - Single/Steel	144 kWh/Mo	$ 27.19	Discontinued					Discontinued					
400 Watt MV - Double/Wood	288 kWh/Mo	$ 46.17	Discontinued					Discontinued					
400 Watt MV - Double/Steel	288 kWh/Mo	$ 48.34	Discontinued					Discontinued					
126 to 175 Watt LED - Single/Wood	58 kWh/Mo		$ 21.68		$ 21.68			$ 21.68	$ 21.68		$ 21.68		
126 to 175 Watt LED - Single/Steel	58 kWh/Mo		$ 24.65		$ 24.65			$ 24.65	$ 24.65		$ 24.65		
126 to 175 Watt LED - Double/Woo	116 kWh/Mo		$ 41.32		$ 41.32			$ 41.32	$ 41.32		$ 41.32		
126 to 175 Watt LED - Double/Steel	116 kWh/Mo		$ 43.48		$ 43.48			$ 43.48	$ 43.48		$ 43.48		
176 to 225 Watt LED - Single/Wood	75 kWh/Mo		$ 24.20		$ 24.20			$ 24.20	$ 24.20		$ 24.20		
176 to 225 Watt LED - Single/Steel	75 kWh/Mo		$ 27.17		$ 27.17			$ 27.17	$ 27.17		$ 27.17		

BILL IMPACT OF STAFF PROPOSED RATES
STREET LIGHTS

		YEAR ONE						YEAR TWO					
		Existing Rate	Staff Proposed Rate	Existing Billing	Staff Proposed Billing	Change From Existing Billing - $	Change From Existing Billing - %	Year One Rate	Staff Proposed Rate	Existing Billing	Staff Proposed Billing	Change From Year One Billing - $	Change From Year One Billing - %
PCA Factor, per kWh		$ (0.006270)	$ -					$ -	$ -				
176 to 225 Watt LED - Double/Woo	150 kWh/Mo		$ 46.36		$ 46.36			$ 46.36	$ 46.36		$ 46.36		
176 to 225 Watt LED - Double/Steel	150 kWh/Mo		$ 48.52		$ 48.52			$ 48.52	$ 48.52		$ 48.52		
Street Lighting Customer Provided													
100 Watt HPS - Single/Wood	36 kWh/Mo	$ 9.04	$ 9.10	$ 8.81	$ 9.10	$ 0.29	3.29%	$ 9.10	$ 9.10	$ 9.10	$ 9.10	$ -	0.00%
100 Watt HPS - Single/Steel	36 kWh/Mo	$ 10.68	$ 10.80	$ 10.45	$ 10.80	$ 0.35	3.35%	$ 10.80	$ 10.80	$ 10.80	$ 10.80	$ -	0.00%
100 Watt HPS - Double/Wood	72 kWh/Mo	$ 17.35	$ 17.45	$ 16.90	$ 17.45	$ 0.55	3.25%	$ 17.45	$ 17.45	$ 17.45	$ 17.45	$ -	0.00%
100 Watt HPS - Double/Steel	72 kWh/Mo	$ 18.40	$ 18.54	$ 17.95	$ 18.54	$ 0.59	3.29%	$ 18.54	$ 18.54	$ 18.54	$ 18.54	$ -	0.00%
35 to 75 Watt LED - Single/Wood	25 kWh/Mo		$ 9.10		$ 9.10			$ 9.10	$ 9.10		$ 9.10		
35 to 75 Watt LED - Single/Steel	25 kWh/Mo		$ 10.80		$ 10.80			$ 10.80	$ 10.80		$ 10.80		
35 to 75 Watt LED - Double/Wood	50 kWh/Mo		$ 17.45		$ 17.45			$ 17.45	$ 17.45		$ 17.45		
35 to 75 Watt LED - Double/Steel	50 kWh/Mo		$ 18.54		$ 18.54			$ 18.54	$ 18.54		$ 18.54		
150 Watt HPS - Single/Wood	54 kWh/Mo	$ 12.11	$ 12.16	$ 11.77	$ 12.16	$ 0.39	3.31%	$ 12.16	$ 12.16	$ 12.16	$ 12.16	$ -	0.00%
150 Watt HPS - Single/Steel	54 kWh/Mo	$ 13.76	$ 13.86	$ 13.42	$ 13.86	$ 0.44	3.28%	$ 13.86	$ 13.86	$ 13.86	$ 13.86	$ -	0.00%
150 Watt HPS - Double/Wood	108 kWh/Mo	$ 23.12	$ 23.18	$ 22.44	$ 23.18	$ 0.74	3.30%	$ 23.18	$ 23.18	$ 23.18	$ 23.18	$ -	0.00%
150 Watt HPS - Double/Steel	108 kWh/Mo	$ 24.37	$ 24.47	$ 23.69	$ 24.47	$ 0.78	3.29%	$ 24.47	$ 24.47	$ 24.47	$ 24.47	$ -	0.00%
76 to 125 Watt LED - Single/Wood	42 kWh/Mo		$ 12.16		$ 12.16			$ 12.16	$ 12.16		$ 12.16		
76 to 125 Watt LED - Single/Steel	42 kWh/Mo		$ 13.86		$ 13.86			$ 13.86	$ 13.86		$ 13.86		
76 to 125 Watt LED - Double/Wood	84 kWh/Mo		$ 23.18		$ 23.18			$ 23.18	$ 23.18		$ 23.18		
76 to 125 Watt LED - Double/Steel	84 kWh/Mo		$ 24.47		$ 24.47			$ 24.47	$ 24.47		$ 24.47		
250 Watt HPS - Single/Wood	90 kWh/Mo	$ 17.69	$ 17.69	$ 17.13	$ 17.69	$ 0.56	3.27%	$ 17.69	$ 17.69	$ 17.69	$ 17.69	$ -	0.00%
250 Watt HPS - Single/Steel	90 kWh/Mo	$ 19.13	$ 19.18	$ 18.57	$ 19.18	$ 0.61	3.28%	$ 19.18	$ 19.18	$ 19.18	$ 19.18	$ -	0.00%
250 Watt HPS - Double/Wood	180 kWh/Mo	$ 34.38	$ 34.34	$ 33.25	$ 34.34	$ 1.09	3.28%	$ 34.34	$ 34.34	$ 34.34	$ 34.34	$ -	0.00%
250 Watt HPS - Double/Steel	180 kWh/Mo	$ 34.98	$ 34.96	$ 33.85	$ 34.96	$ 1.11	3.28%	$ 34.96	$ 34.96	$ 34.96	$ 34.96	$ -	0.00%
126 to 175 Watt LED - Single/Wood	58 kWh/Mo		$ 17.69		$ 17.69			$ 17.69	$ 17.69		$ 17.69		
126 to 175 Watt LED - Single/Steel	58 kWh/Mo		$ 19.18		$ 19.18			$ 19.18	$ 19.18		$ 19.18		
126 to 175 Watt LED - Double/Woo	116 kWh/Mo		$ 34.34		$ 34.34			$ 34.34	$ 34.34		$ 34.34		
126 to 175 Watt LED - Double/Steel	116 kWh/Mo		$ 34.96		$ 34.96			$ 34.96	$ 34.96		$ 34.96		
176 to 225 Watt LED - Single/Wood	75 kWh/Mo		$ 19.88		$ 19.88			$ 19.88	$ 19.88		$ 19.88		
176 to 225 Watt LED - Single/Steel	75 kWh/Mo		$ 21.37		$ 21.37			$ 21.37	$ 21.37		$ 21.37		
176 to 225 Watt LED - Double/Woo	150 kWh/Mo		$ 38.72		$ 38.72			$ 38.72	$ 38.72		$ 38.72		
176 to 225 Watt LED - Double/Steel	150 kWh/Mo		$ 39.34		$ 39.34			$ 39.34	$ 39.34		$ 39.34		

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
IRRIGATION SERVICE

			YEAR ONE				YEAR TWO			
Load Factor	kVA	kWh	Existing Rate	Staff Proposed Rate	Change From Existing Rates - $	Change From Existing Rates - %	Year One Rate	Staff Proposed Rate	Change From Year One Rates - $	Change From Year One Rates - %
Service Availability Charge			$ 30.00	$ 30.00	$ -	0.00%	$ 30.00	$ 30.00	$ -	0.00%
Capacity Charge, Apr - Oct, per Billing kVA			$ 7.15	$ 8.25	$ 1.10	15.38%	$ 8.25	$ 8.25	$ -	0.00%
Energy Charge, Apr - Oct, per kWh			$ 0.088509	$ 0.082502	$(0.006007)	-6.79%	$ 0.082502	$ 0.082502	$ -	0.00%
Energy Charge, Nov - Mar, per kWh										
First 300 kWh/kVA			$ 0.114209	$ 0.108284	$(0.005925)	-5.19%	$ 0.108284	$ 0.108284	$ -	0.00%
Over 300 kWh/kVA			$ 0.087209	$ 0.081198	$(0.006011)	-6.89%	$ 0.081198	$ 0.081198	$ -	0.00%
PCA Factor, per kWh			$ (0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
				Summer, April - October						
10.00%	50	3,650	$ 687.67	$ 743.63	$ 55.96	8.14%	$ 743.63	$ 743.63	$ -	0.00%
30.00%	50	10,950	$ 1,288.02	$ 1,345.90	$ 57.88	4.49%	$ 1,345.90	$ 1,345.90	$ -	0.00%
50.00%	50	18,250	$ 1,888.36	$ 1,948.16	$ 59.80	3.17%	$ 1,948.16	$ 1,948.16	$ -	0.00%
70.00%	50	25,550	$ 2,488.71	$ 2,550.43	$ 61.72	2.48%	$ 2,550.43	$ 2,550.43	$ -	0.00%
90.00%	50	32,850	$ 3,089.05	$ 3,152.69	$ 63.64	2.06%	$ 3,152.69	$ 3,152.69	$ -	0.00%
10.00%	100	7,300	$ 1,345.34	$ 1,457.26	$ 111.92	8.32%	$ 1,457.26	$ 1,457.26	$ -	0.00%
30.00%	100	21,900	$ 2,546.03	$ 2,661.79	$ 115.76	4.55%	$ 2,661.79	$ 2,661.79	$ -	0.00%
50.00%	100	36,500	$ 3,746.72	$ 3,866.32	$ 119.60	3.19%	$ 3,866.32	$ 3,866.32	$ -	0.00%
70.00%	100	51,100	$ 4,947.41	$ 5,070.85	$ 123.44	2.50%	$ 5,070.85	$ 5,070.85	$ -	0.00%
90.00%	100	65,700	$ 6,148.10	$ 6,275.38	$ 127.28	2.07%	$ 6,275.38	$ 6,275.38	$ -	0.00%
10.00%	250	18,250	$ 3,318.36	$ 3,598.16	$ 279.80	8.43%	$ 3,598.16	$ 3,598.16	$ -	0.00%
30.00%	250	54,750	$ 6,320.09	$ 6,609.48	$ 289.39	4.58%	$ 6,609.48	$ 6,609.48	$ -	0.00%
50.00%	250	91,250	$ 9,321.81	$ 9,620.81	$ 299.00	3.21%	$ 9,620.81	$ 9,620.81	$ -	0.00%
70.00%	250	127,750	$ 12,323.53	$ 12,632.13	$ 308.60	2.50%	$ 12,632.13	$ 12,632.13	$ -	0.00%
90.00%	250	164,250	$ 15,325.26	$ 15,643.45	$ 318.19	2.08%	$ 15,643.45	$ 15,643.45	$ -	0.00%
10.00%	500	36,500	$ 6,606.72	$ 7,166.32	$ 559.60	8.47%	$ 7,166.32	$ 7,166.32	$ -	0.00%
30.00%	500	109,500	$ 12,610.17	$ 13,188.97	$ 578.80	4.59%	$ 13,188.97	$ 13,188.97	$ -	0.00%
50.00%	500	182,500	$ 18,613.62	$ 19,211.62	$ 598.00	3.21%	$ 19,211.62	$ 19,211.62	$ -	0.00%
70.00%	500	255,500	$ 24,617.06	$ 25,234.26	$ 617.20	2.51%	$ 25,234.26	$ 25,234.26	$ -	0.00%
90.00%	500	328,500	$ 30,620.51	$ 31,256.91	$ 636.40	2.08%	$ 31,256.91	$ 31,256.91	$ -	0.00%
35.62%	61	15,765	$ 1,760.02	$ 1,830.86	$ 70.84	4.02%	$ 1,830.86	$ 1,830.86	$ -	0.00%
				Winter, November - March						
10.00%	50	3,650	$ 423.98	$ 425.24	$ 1.26	0.30%	$ 425.24	$ 425.24	$ -	0.00%
30.00%	50	10,950	$ 1,211.93	$ 1,215.71	$ 3.78	0.31%	$ 1,215.71	$ 1,215.71	$ -	0.00%
50.00%	50	18,250	$ 1,912.14	$ 1,918.15	$ 6.01	0.31%	$ 1,918.15	$ 1,918.15	$ -	0.00%
70.00%	50	25,550	$ 2,502.99	$ 2,510.90	$ 7.91	0.32%	$ 2,510.90	$ 2,510.90	$ -	0.00%
90.00%	50	32,850	$ 3,093.85	$ 3,103.64	$ 9.79	0.32%	$ 3,103.64	$ 3,103.64	$ -	0.00%
10.00%	100	7,300	$ 817.95	$ 820.47	$ 2.52	0.31%	$ 820.47	$ 820.47	$ -	0.00%
30.00%	100	21,900	$ 2,393.86	$ 2,401.42	$ 7.56	0.32%	$ 2,401.42	$ 2,401.42	$ -	0.00%
50.00%	100	36,500	$ 3,794.27	$ 3,806.31	$ 12.04	0.32%	$ 3,806.31	$ 3,806.31	$ -	0.00%
70.00%	100	51,100	$ 4,975.98	$ 4,991.80	$ 15.82	0.32%	$ 4,991.80	$ 4,991.80	$ -	0.00%
90.00%	100	65,700	$ 6,157.69	$ 6,177.29	$ 19.60	0.32%	$ 6,177.29	$ 6,177.29	$ -	0.00%

BILL IMPACT OF STAFF PROPOSED RATES
IRRIGATION SERVICE

			YEAR ONE				YEAR TWO			
Load Factor	kVA	kWh	Existing Rate	Staff Proposed Rate	Change From Existing Rates - $	Change From Existing Rates - %	Year One Rate	Staff Proposed Rate	Change From Year One Rates - $	Change From Year One Rates - %
Service Availability Charge			$ 30.00	$ 30.00	$ -	0.00%	$ 30.00	$ 30.00	$ -	0.00%
Capacity Charge, Apr - Oct, per Billing kVA			$ 7.15	$ 8.25	$ 1.10	15.38%	$ 8.25	$ 8.25	$ -	0.00%
Energy Charge, Apr - Oct, per kWh			$ 0.088509	$ 0.082502	$(0.006007)	-6.79%	$ 0.082502	$ 0.082502	$ -	0.00%
Energy Charge, Nov - Mar, per kWh										
First 300 kWh/kVA			$ 0.114209	$ 0.108284	$(0.005925)	-5.19%	$ 0.108284	$ 0.108284	$ -	0.00%
Over 300 kWh/kVA			$ 0.087209	$ 0.081198	$(0.006011)	-6.89%	$ 0.081198	$ 0.081198	$ -	0.00%
PCA Factor, per kWh			$ (0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
10.00%	250	18,250	$ 1,999.89	$ 2,006.18	$ 6.29	0.31%	$ 2,006.18	$ 2,006.18	$ -	0.00%
30.00%	250	54,750	$ 5,939.66	$ 5,958.55	$ 18.89	0.32%	$ 5,958.55	$ 5,958.55	$ -	0.00%
50.00%	250	91,250	$ 9,440.68	$ 9,470.77	$ 30.09	0.32%	$ 9,470.77	$ 9,470.77	$ -	0.00%
70.00%	250	127,750	$ 12,394.96	$ 12,434.49	$ 39.53	0.32%	$ 12,434.49	$ 12,434.49	$ -	0.00%
90.00%	250	164,250	$ 15,349.23	$ 15,398.22	$ 48.99	0.32%	$ 15,398.22	$ 15,398.22	$ -	0.00%
10.00%	500	36,500	$ 3,969.77	$ 3,982.37	$ 12.60	0.32%	$ 3,982.37	$ 3,982.37	$ -	0.00%
30.00%	500	109,500	$ 11,849.32	$ 11,887.10	$ 37.78	0.32%	$ 11,887.10	$ 11,887.10	$ -	0.00%
50.00%	500	182,500	$ 18,851.37	$ 18,911.54	$ 60.17	0.32%	$ 18,911.54	$ 18,911.54	$ -	0.00%
70.00%	500	255,500	$ 24,759.91	$ 24,838.99	$ 79.08	0.32%	$ 24,838.99	$ 24,838.99	$ -	0.00%
90.00%	500	328,500	$ 30,668.46	$ 30,766.44	$ 97.98	0.32%	$ 30,766.44	$ 30,766.44	$ -	0.00%
19.95%	54	7,878	$ 860.98	$ 863.64	$ 2.66	0.31%	$ 863.64	$ 863.64	$ -	0.00%
29.52% Average	58	12,479	$ 1,385.42	$ 1,427.85	$ 42.43	3.06%	$ 1,427.85	$ 1,427.85	$ -	0.00%
				Staff Proposed	$ 42.43	3.06%		Staff Proposed	$ -	0.00%
				SSVEC Proposed	$ 42.43	3.06%				

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
IRRIGATION LOAD FACTOR SERVICE

				YEAR ONE				YEAR TWO			
Load Factor	kVA	kWh	Billing kWh	Existing Rate	Staff's Proposed Rate	Change From Existing Rates - $	Change From Existing Rates -	Year One Rate	Staff's Proposed Rate	Change From Year One Rates - $	Change From Year One Rates - %
Service Availability Charge				$ 35.00	$ 35.00	$ -	0.00%	$ 35.00	$ 35.00	$ -	0.00%
Energy Charge, per kWh				$ 0.094120	$ 0.088131	$ (0.005989)	-6.36%	$ 0.088131	$ 0.088131	$ -	0.00%
PCA Factor, per kWh				$ (0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
10.00%	75	5,475	22,995	$ 2,055.11	$ 2,061.57	$ 6.46	0.31%	$ 2,061.57	$ 2,061.57	$ -	0.00%
30.00%	75	16,425	22,995	$ 2,055.11	$ 2,061.57	$ 6.46	0.31%	$ 2,061.57	$ 2,061.57	$ -	0.00%
50.00%	75	27,375	27,375	$ 2,439.89	$ 2,447.59	$ 7.70	0.32%	$ 2,447.59	$ 2,447.59	$ -	0.00%
70.00%	75	38,325	38,325	$ 3,401.85	$ 3,412.62	$ 10.77	0.32%	$ 3,412.62	$ 3,412.62	$ -	0.00%
90.00%	75	49,275	49,275	$ 4,363.81	$ 4,377.66	$ 13.85	0.32%	$ 4,377.66	$ 4,377.66	$ -	0.00%
10.00%	150	10,950	45,990	$ 4,075.22	$ 4,088.14	$ 12.92	0.32%	$ 4,088.14	$ 4,088.14	$ -	0.00%
30.00%	150	32,850	45,990	$ 4,075.22	$ 4,088.14	$ 12.92	0.32%	$ 4,088.14	$ 4,088.14	$ -	0.00%
50.00%	150	54,750	54,750	$ 4,844.79	$ 4,860.17	$ 15.38	0.32%	$ 4,860.17	$ 4,860.17	$ -	0.00%
70.00%	150	76,650	76,650	$ 6,768.70	$ 6,790.24	$ 21.54	0.32%	$ 6,790.24	$ 6,790.24	$ -	0.00%
90.00%	150	98,550	98,550	$ 8,692.62	$ 8,720.31	$ 27.69	0.32%	$ 8,720.31	$ 8,720.31	$ -	0.00%
10.00%	300	21,900	91,980	$ 8,115.44	$ 8,141.29	$ 25.85	0.32%	$ 8,141.29	$ 8,141.29	$ -	0.00%
30.00%	300	65,700	91,980	$ 8,115.44	$ 8,141.29	$ 25.85	0.32%	$ 8,141.29	$ 8,141.29	$ -	0.00%
50.00%	300	109,500	109,500	$ 9,654.58	$ 9,685.34	$ 30.76	0.32%	$ 9,685.34	$ 9,685.34	$ -	0.00%
70.00%	300	153,300	153,300	$ 13,502.41	$ 13,545.48	$ 43.07	0.32%	$ 13,545.48	$ 13,545.48	$ -	0.00%
90.00%	300	197,100	197,100	$ 17,350.24	$ 17,405.62	$ 55.38	0.32%	$ 17,405.62	$ 17,405.62	$ -	0.00%
Minimum required Load Factor			42.00%								

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
CONTROLLED IRRIGATION SERVICE

			YEAR ONE				YEAR TWO			
Load Factor	kVA	kWh	Existing Rate	Staff Proposed Rate	Change From Existing Rates - $	Change From Existing Rates - %	Year One Rate	Staff Proposed Rate	Change From Year One Rates - $	Change From Year One Rates %
Service Availability Charge			$ 30.00	$ 30.00	$ -	0.00%	$ 30.00	$ 30.00	$ -	0.00%
Override Penalty, per kW Override Capac			$ 19.00	$ 20.00	$ 1.00	5.26%	$ 20.00	$ 20.00	$ -	0.00%
Energy Charge, per kWh										
First 300 kWh/kVA			$ 0.110979	$ 0.105044	######	-5.35%	$ 0.105044	$ 0.105044	$ -	0.00%
Over 300 kWh/kVA			$ 0.083679	$ 0.077657	######	-7.20%	$ 0.077657	$ 0.077657	$ -	0.00%
PCA Factor, per kWh			$(0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
Discount		1 Day	5.00%	5.00%			5.00%	5.00%		
Discount		2 Day	10.00%	10.00%			10.00%	10.00%		
Discount		7 Day	17.00%	17.00%			17.00%	17.00%		
Comparisons are based on 1 Day Control										
10.00%	50	3,650	$ 412.19	$ 413.41	$ 1.22	0.30%	$ 413.41	$ 413.41	$ -	0.00%
30.00%	50	10,950	$ 1,176.56	$ 1,180.23	$ 3.67	0.31%	$ 1,180.23	$ 1,180.23	$ -	0.00%
50.00%	50	18,250	$ 1,768.98	$ 1,779.26	$ 10.28	0.58%	$ 1,779.26	$ 1,779.26	$ -	0.00%
70.00%	50	25,550	$ 2,334.07	$ 2,346.16	$ 12.09	0.52%	$ 2,346.16	$ 2,346.16	$ -	0.00%
90.00%	50	32,850	$ 2,899.15	$ 2,913.05	$ 13.90	0.48%	$ 2,913.05	$ 2,913.05	$ -	0.00%
10.00%	100	7,300	$ 794.38	$ 796.82	$ 2.44	0.31%	$ 796.82	$ 796.82	$ -	0.00%
30.00%	100	21,900	$ 2,323.13	$ 2,330.46	$ 7.33	0.32%	$ 2,330.46	$ 2,330.46	$ -	0.00%
50.00%	100	36,500	$ 3,507.96	$ 3,528.52	$ 20.56	0.59%	$ 3,528.52	$ 3,528.52	$ -	0.00%
70.00%	100	51,100	$ 4,638.13	$ 4,662.32	$ 24.19	0.52%	$ 4,662.32	$ 4,662.32	$ -	0.00%
90.00%	100	65,700	$ 5,768.30	$ 5,796.11	$ 27.81	0.48%	$ 5,796.11	$ 5,796.11	$ -	0.00%
10.00%	250	18,250	$ 1,940.94	$ 1,947.05	$ 6.11	0.31%	$ 1,947.05	$ 1,947.05	$ -	0.00%
30.00%	250	54,750	$ 5,762.82	$ 5,781.16	$ 18.34	0.32%	$ 5,781.16	$ 5,781.16	$ -	0.00%
50.00%	250	91,250	$ 8,724.90	$ 8,776.31	$ 51.41	0.59%	$ 8,776.31	$ 8,776.31	$ -	0.00%
70.00%	250	127,750	$ 11,550.33	$ 11,610.79	$ 60.46	0.52%	$ 11,610.79	$ 11,610.79	$ -	0.00%
90.00%	250	164,250	$ 14,375.76	$ 14,445.27	$ 69.51	0.48%	$ 14,445.27	$ 14,445.27	$ -	0.00%
10.00%	500	36,500	$ 3,851.88	$ 3,864.11	$ 12.23	0.32%	$ 3,864.11	$ 3,864.11	$ -	0.00%
30.00%	500	109,500	$ 11,495.64	$ 11,532.32	$ 36.68	0.32%	$ 11,532.32	$ 11,532.32	$ -	0.00%
50.00%	500	182,500	$ 17,419.80	$ 17,522.62	$ 102.82	0.59%	$ 17,522.62	$ 17,522.62	$ -	0.00%
70.00%	500	255,500	$ 23,070.66	$ 23,191.58	$ 120.92	0.52%	$ 23,191.58	$ 23,191.58	$ -	0.00%
90.00%	500	328,500	$ 28,721.51	$ 28,860.54	$ 139.03	0.48%	$ 28,860.54	$ 28,860.54	$ -	0.00%
38.04% 1 Day	63	17,506	$ 1,863.08	$ 1,868.94	$ 5.86	0.31%	$ 1,868.94	$ 1,868.94	$ -	0.00%
33.48% 2 Day	67	16,388	$ 1,745.95	$ 1,751.44	$ 5.49	0.31%	$ 1,751.44	$ 1,751.44	$ -	0.00%
38.62% 7 Day	71	19,890	$ 2,112.66	$ 2,119.32	$ 6.66	0.32%	$ 2,119.32	$ 2,119.32	$ -	0.00%

Staff Proposed 1 Day	$ 5.86	0.31%
Staff Proposed 2 Day	$ 5.49	0.31%
Staff Proposed 7 Day	$ 6.66	0.32%
SSVEC Proposed 1 Day	$ 5.86	0.31%
SSVEC Proposed 2 Day	$ 5.49	0.31%
SSVEC Proposed 7 Day	$ 6.66	0.32%

Staff Proposed	$ -	0.00%

Discount applicable to First 300 kWh per kW when total usage exceeds First 300 kWh per kW.

SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
E-01575A-15-0312
BILL IMPACT OF STAFF PROPOSED RATES
INTERRUPTIBLE IRRIGATION SERVICE

	Load Factor	kVA	kWh	YEAR ONE Existing Rate	YEAR ONE Staff Proposed Rate	YEAR ONE Change From Existing Rates - $	YEAR ONE Change From Existing Rates - %	YEAR TWO Year One Rate	YEAR TWO Staff Proposed Rate	YEAR TWO Change From Year One Rates - $	YEAR TWO Change From Year One Rates - %
Service Availability Charge				$ 30.00	$ 30.00	$ -	0.00%	$ 30.00	$ 30.00	$ -	0.00%
Over-Ride Penalty, per kW Override Capacity				$ 19.00	$ 20.00	$ 1.00	5.26%	$ 20.00	$ 20.00	$ -	0.00%
Energy Charge, per kWh				$ 0.087737	$ 0.081728	$ (0.006009)	-6.85%	$ 0.081728	$ 0.081728	$ -	0.00%
PCA Factor, per kWh				$ (0.006270)	$ -	$ 0.006270	-100.00%	$ -	$ -	$ -	0.00%
	10.00%	50	3,650	$ 327.35	$ 328.31	$ 0.96	0.29%	$ 328.31	$ 328.31	$ -	0.00%
	30.00%	50	10,950	$ 922.06	$ 924.92	$ 2.86	0.31%	$ 924.92	$ 924.92	$ -	0.00%
	50.00%	50	18,250	$ 1,516.77	$ 1,521.54	$ 4.77	0.31%	$ 1,521.54	$ 1,521.54	$ -	0.00%
	70.00%	50	25,550	$ 2,111.48	$ 2,118.15	$ 6.67	0.32%	$ 2,118.15	$ 2,118.15	$ -	0.00%
	90.00%	50	32,850	$ 2,706.19	$ 2,714.76	$ 8.57	0.32%	$ 2,714.76	$ 2,714.76	$ -	0.00%
	10.00%	100	7,300	$ 624.71	$ 626.61	$ 1.90	0.30%	$ 626.61	$ 626.61	$ -	0.00%
	30.00%	100	21,900	$ 1,814.13	$ 1,819.84	$ 5.71	0.31%	$ 1,819.84	$ 1,819.84	$ -	0.00%
	50.00%	100	36,500	$ 3,003.55	$ 3,013.07	$ 9.52	0.32%	$ 3,013.07	$ 3,013.07	$ -	0.00%
	70.00%	100	51,100	$ 4,192.96	$ 4,206.30	$ 13.34	0.32%	$ 4,206.30	$ 4,206.30	$ -	0.00%
	90.00%	100	65,700	$ 5,382.38	$ 5,399.53	$ 17.15	0.32%	$ 5,399.53	$ 5,399.53	$ -	0.00%
	10.00%	250	18,250	$ 1,516.77	$ 1,521.54	$ 4.77	0.31%	$ 1,521.54	$ 1,521.54	$ -	0.00%
	30.00%	250	54,750	$ 4,490.32	$ 4,504.61	$ 14.29	0.32%	$ 4,504.61	$ 4,504.61	$ -	0.00%
	50.00%	250	91,250	$ 7,463.86	$ 7,487.68	$ 23.82	0.32%	$ 7,487.68	$ 7,487.68	$ -	0.00%
	70.00%	250	127,750	$ 10,437.41	$ 10,470.75	$ 33.34	0.32%	$ 10,470.75	$ 10,470.75	$ -	0.00%
	90.00%	250	164,250	$ 13,410.95	$ 13,453.82	$ 42.87	0.32%	$ 13,453.82	$ 13,453.82	$ -	0.00%
	10.00%	500	36,500	$ 3,003.55	$ 3,013.07	$ 9.52	0.31%	$ 3,013.07	$ 3,013.07	$ -	0.00%
	30.00%	500	109,500	$ 8,950.64	$ 8,979.22	$ 28.58	0.32%	$ 8,979.22	$ 8,979.22	$ -	0.00%
	50.00%	500	182,500	$ 14,897.73	$ 14,945.36	$ 47.63	0.32%	$ 14,945.36	$ 14,945.36	$ -	0.00%
	70.00%	500	255,500	$ 20,844.82	$ 20,911.50	$ 66.68	0.32%	$ 20,911.50	$ 20,911.50	$ -	0.00%
	90.00%	500	328,500	$ 26,791.91	$ 26,877.65	$ 85.74	0.32%	$ 26,877.65	$ 26,877.65	$ -	0.00%
	40.13%	83	24,259	$ 2,006.32	$ 2,012.65	$ 6.33	0.32%	$ 2,012.65	$ 2,012.65	$ -	0.00%
				Staff Proposed				Staff Proposed			
				SSVEC Proposed Phase 1		$ 6.33	0.32%				0.00%

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS.	)	DOCKET NO. E-01575A-15-0312

SURREBUTTAL

TESTIMONY

OF

RANELLE PALADINO

PUBLIC UTILITIES ANALYST IV

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

MAY 6, 2016

EXHIBIT
S-8
ADMITTED

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EXECUTIVE SUMMARY
SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01575A-15-0312

Staff's surrebuttal testimony addresses issues raised in the rebuttal testimony of Sulphur Springs Valley Electric Cooperative, Inc.'s ("SSVEC") witness Mr. David Hedrick.

Staff's recommendations are as follows:

1. As a point of clarification, Staff recommends that in future rate cases the Residential Auxiliary Rate be included in the Residential class for the cost of service study rather than the General Service class and that the General Service RV Park Rate be included in the Large Power class for the cost of service study rather than the General Service class.

2. Staff does not support the creation of new residential rate schedules for existing customers who have installed distributed generation ("DG") and new customers who may install DG.

3. The Service Availability Charge should be increased to $25.00 per month for all customers on the Residential ("Schedule R") rate schedule. This increase in Service Availability Charge should be phased in over a four-year period as proposed by SSVEC in its application.

4. The Service Availability Charge should be increased to $26.50 per month for all customers on the Residential Time of Use ("TOU") rate schedule. This increase in Service Availability Charge should be phased in over a four-year period as proposed by SSVEC in its application.

5. All existing and new DG residential customers should remain on the rate schedule they are currently on, and be subject to the rate increases noted above, rather than being moved to the proposed new residential DG rate schedules.

6. The Energy Charge for the Residential and Residential TOU rate schedules should be adjusted in each phase to ensure the level of revenue approved by the Commission for the residential class is met.

7. All non-residential rate schedule increases proposed in four phases by SSVEC in its rate application should be approved.

8. SSVEC should continue to offer TOU rates for its residential, commercial, and large power customers.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Ranelle Paladino. I am a Public Utilities Analyst employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Have you previously filed testimony in this docket?

A. Yes. I filed direct testimony concerning the cost of service study, revenue allocation, rate design, elimination of rate schedules, and the addition of new rate schedules.

PURPOSE OF SURREBUTTAL TESTIMONY

Q. What is the purpose of your surrebuttal testimony in this proceeding?

A. The purpose of my surrebuttal testimony in this proceeding is to respond, on behalf of Staff, to the rebuttal testimony of Mr. David Hedrick, witness for Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Cooperative").

Q. What issues will you address?

A. I will address a clarification of a statement in David Hedrick's rebuttal testimony, SSVEC's proposed rate design, and the request to freeze the Time of Use ("TOU") rate schedules.

COST OF SERVICE STUDY

Q. Did Staff review the Cooperative's rebuttal testimony explaining SSVEC's position regarding areas of agreement with Staff's recommendations?

A. Yes. On pages 3-6 of Mr. Hedrick's rebuttal testimony, SSVEC indicates those items that SSVEC believes are areas of agreement between Staff and SSVEC.

Q. Does Staff agree with the items outlined as points of agreement?

A. Yes, with one exception. Staff would like to clarify lines 1-5 on page 6 of Mr. Hedrick's testimony. SSVEC's rebuttal testimony indicates that it accepts Staff's recommendation to include the Residential Auxiliary Rate in the General Service class and the General Service RV Park Rate in the Large Power Class. Staff's recommendation on page 41 lines 10-11 of my direct testimony indicates that the Residential Auxiliary Rate should be included in the Residential class for future cost of service studies rather than part of the General Service class.

Q. Has Staff changed its recommendation with respect to the Residential Auxiliary Rate and the General Service RV Park Rate in future SSVEC rate case cost of service studies?

A. No. Staff still recommends that, in future SSVEC rate cases, the Residential Auxiliary Rate be included in the Residential class for the cost of service study, rather than the General Service class and that the General Service RV Park Rate be included in the Large Power class for the cost of service study, rather than the General Service class.

RATE DESIGN

Q. Did Staff review the Cooperative's rebuttal testimony explaining SSVEC's position regarding areas of disagreement with respect to Staff's recommendations on rate design?

A. Yes. On page 6 of Mr. Hedrick's rebuttal testimony, SSVEC indicates areas of disagreement between Staff and SSVEC. Specifically, SSVEC does not agree with: (1) Staff's recommendation not to implement separate rate schedules for new and existing residential customers who have installed distributed generation ("DG"), (2) Staff's recommended rate design for the Residential rate schedule and the Residential TOU rate schedule, (3) Staff's recommendation to implement all rate changes over a two-year period rather than a four-year

phase in timeframe, and (4) Staff's recommendation to set an export rate valued between avoided cost and the retail rate.

Q. Will you address each of these items that are disagreements between SSVEC and Staff?

A. In my surrebuttal testimony, I will address items 1-3 above as they relate to rate design. Staff's recommendation regarding net metering and the export rate will be discussed in the surrebuttal testimony of Eric Van Epps.

Q. What is Staff's recommendation with regard to SSVEC's request to implement separate Residential rate schedules for new and existing DG customers?

A. Staff's recommendation has not changed. Staff does not support the creation of new rate schedules.

SSVEC explained in Mr. Hedrick's direct testimony on pages 15-16 that SSVEC is proposing several changes to address the issue of lost fixed cost. One of the methods SSVEC proposes to address this issue is the creation of the separate Residential rate schedules for DG customers.

As detailed in my direct testimony on pages 6-7, Staff does not attribute SSVEC's inability to recover the established revenue requirement to the existence of DG customers on its system. DG customers are not the only customers who have reduced kWh usage since the last rate case. In addition to the installation of DG, some customers have implemented energy efficiency measures, some customers have intentionally implemented other energy conservation measures, and some customers have moved out of their home and left the home vacant. These customers do not warrant a new rate schedule, despite the fact that they are contributing to a loss of revenue for SSVEC.

Q. What does Staff consider the reason for SSVEC's inability to recover its established revenue requirement?

A. Staff attributes SSVEC's inability to recover the established revenue requirement to the structure of SSVEC's existing rate design. Fixed charges are being recovered not just through the monthly Service Availability Charge, but also through volumetric rates. Staff believes that rate design should be more closely based on the actual costs to serve each customer class. Although a rate design which embeds a portion of the fixed rates in the volumetric charge has recovered the necessary revenue requirement in the past, DG, increased energy efficiency, and conservation, for example, have reduced SSVEC's ability to recover fixed costs using this rate design.

Staff believes that the fixed cost recovery issue is a function of rate design and has indicated that a three-part rate (service availability charge, demand charge, and energy charge) would allow each customer to pay for the type and level of service they require. Staff believes that a change in rate design, not separate rate schedules, are needed to address the recovery of fixed costs.

Q. What is Staff's recommendation with regard to SSVEC's request to change Residential and Residential TOU rates?

A. Staff will address both areas of disagreement (the residential rates themselves and the implementation timeframe) in this discussion. Staff's original recommendation with regard to rate design for the Residential rate schedule and the Residential TOU rate schedule, was to leave the DG customers as part of the Residential rate schedule and implement a $27.00 per month Service Availability Charge for the Residential rate schedule, and a $28.50 per month Service Availability Charge for the Residential TOU rate schedule. Staff recommended Energy Charges that maintained the level of revenue recovery recommended by Staff from the

Residential class. Staff did not recommend any changes to the rates proposed by SSVEC for the rest of the customer classes.

In addition to changes to the rates for the Residential and Residential TOU rate schedules, Staff also recommended implementation of the new rates over a shortened timeframe of two years rather than SSVEC's proposal of a four-year phase in. Staff felt the shortened timeframe would be less confusing and result in lower marketing costs for SSVEC.

After further consideration, Staff understands that SSVEC has already spent a considerable amount of time and money educating its customers regarding a four-year phase in of the new rates. Staff also recognizes that a longer implementation timeframe supports Staff's desire to gradually address issues with rate design, such as increasing the recovery of fixed costs through the fixed charge. A four-year phase in of rates moves away from recovering so much of the fixed costs through a variable charge, but does so in a gradual manner.

Staff also notes that the numerous customer meetings held by SSVEC addressed the need for a higher customer charge. SSVEC communicated to its residential customers that the System Availability Charge will increase to $25.00 per month over a four-year phase in. (SSVEC also proposed the System Availability Charge increase to $50.00 per month for DG customers.) Staff's proposal was to increase the System Availability Charge to $27.00 over a two-year timeframe.

Staff believes that a $25.00 System Availability Charge implemented over a four-year phase in is an acceptable method of moving the rates toward recovering fixed costs through a fixed charge. Staff recommends the implementation of the $25.00 System Availability Charge for all Residential customers and a $26.50 System Availability Charge for all Residential TOU

customers over a four-year phase in, as originally proposed by SSVEC. Staff does not recommend separate rates for current Residential customers with DG or those that may install DG in the future. The implementation of a $25.00 System Availability Charge for all customers, rather than a higher System Availability Charge for customers with DG, will result in a revenue shortfall of close to $315,000 in the Residential class. Staff recommends that the Energy Charge be adjusted over the four phases to fully recover the revenue shortfall (approximately $315,000) so the revenue requirement for the Residential class is met.

Q. What is Staff's recommendation with regard to non-residential rate schedule increases proposed by SSVEC in its rate application?

A. As indicated previously, in its direct testimony, Staff proposed to implement the proposed non-residential rates as filed by SSVEC, but to implement those rates in a two-year timeframe rather than the four phases proposed by SSVEC. Given the discussion herein, Staff believes a four-year phase in is acceptable for the non-residential rates proposed by SSVEC in its rate application.

Q. Did SSVEC request any other changes to its rates or rate schedules in its rebuttal testimony?

A. Yes. On pages 24-25 of Mr. Hedrick's rebuttal testimony, SSVEC explains the challenges with implementing TOU rates on SSVEC's system and details SSVEC's request to freeze the TOU rate schedules. Mr. Hedrick explains that there are only 17 customers on the Residential TOU rate, 39 customers on the commercial TOU rate, and 1 customer on the Large Power TOU rate. SSVEC attributes the lack of interest in TOU rates to the fact that SSVEC's power supply from Arizona Electric Power Cooperative ("AEPCO") is not time differentiated.

Q. Does Staff agree with SSVEC's request to freeze its currently in effect TOU rates?

A. No. Decision No. 69736, dated July 30, 2007, details that the Commission was required by the Energy Policy Act of 2005 to consider implementing certain Public Utility Regulatory Policies Act of 1978 ("PURPA") provisions, including time-based metering and communications. As a result of that directive, the Commission approved a modified version of the PURPA standard on time-based metering and communications. The modified version requires all electric utilities in the state to offer time-based rate schedules to appropriate customer classes.

Although SSVEC's TOU rates were in place long before the Energy Policy Act of 2005, in light of Decision No. 69736, Staff believes it is inappropriate to freeze the existing TOU rate schedules. Staff understands the challenges in implementing meaningful TOU rates given the lack of price signals in its supply from AEPCO; Staff also recognizes the reason for the lack of participation in the TOU rates as explained by Mr. Hedrick in his rebuttal testimony. Staff also understands that if AEPCO's rates are structured differently in the future, the desire to be on a TOU rate may increase within SSVEC's territory. Staff believes that the existing TOU rates and those proposed by SSVEC in this rate case are not harmful to SSVEC's operations or financial integrity. Staff recommends that SSVEC continue to offer TOU rates for its residential, commercial, and large power customers.

SUMMARY OF STAFF RECOMMENDATIONS

Q. Please summarize Staff's recommendations.

A. Staff's recommendations are as follows:

1. As a point of clarification, Staff recommends that in future rate cases the Residential Auxiliary Rate be included in the Residential class for the cost of service study rather than the General Service class and that the General Service RV Park Rate be included

in the Large Power class for the cost of service study rather than the General Service class.

2. Staff does not support the creation of new residential rate schedules for existing customers who have installed DG and new customers who may install DG.

3. The Service Availability Charge should be increased to $25.00 per month for all customers on the Residential ("Schedule R") rate schedule. This increase in Service Availability Charge should be phased in over a four-year period as proposed by SSVEC in its application.

4. The Service Availability Charge should be increased to $26.50 per month for all customers on the Residential TOU rate schedule. This increase in the Service Availability Charge should be phased in over a four-year period as proposed by SSVEC in its application.

5. All existing and new DG residential customers should remain on the rate schedule they are currently on, and be subject to the rate increases noted above, rather than being moved to the proposed new residential DG rate schedules.

6. The Energy Charge for the Residential and Residential TOU rate schedules should be adjusted in each phase to ensure the level of revenue approved by the Commission for the residential class is met.

7. All non-residential rate schedule increases proposed in four phases by SSVEC in its rate application should be approved.

8. SSVEC should continue to offer TOU rates for its residential, commercial, and large power customers.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. FOR ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. DEVOTED TO ITS OPERATIONS IN THE STATE OF ARIZONA AND RELATED APPROVALS	)	DOCKET NO. E-01575A-15-0312

DIRECT

RATE DESIGN

TESTIMONY

OF

ERIC VAN EPPS

PUBLIC UTILITIES ANALYST

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

MARCH 18, 2016

EXHIBIT
S-9
ADMITTED

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EXECUTIVE SUMMARY
SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01575A-15-0312

The direct rate design testimony of Eric Van Epps presents the results of the Utility Division Staff's ("Staff") review of the rate case application ("Application") of Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Company") filed with the Arizona Corporation Commission ("Commission") on August 31, 2015 and the results of Staff's evaluation of the Company's Net Metering ("NEM") proposal.

Based on its review of SSVEC's Application, Staff's recommendations are as follows:

a) Staff recommends that SSVEC's Schedule NM-1 be changed so that it is only available to customers who installed a DG system on or before April 14, 2015. After this change to the Availability section is made, Staff recommends that NM-1 be frozen.

b) Staff recommends that SSVEC's Schedule DG be adapted to eliminate the banking of excess kWh, require that all energy procured from the grid be compensated for at SSVEC's retail rate, and provide a methodology for the treatment of any energy provided or exported by a DG system to the grid. Schedule DG should act as an export rate rider. This rider should provide language outlined in schedule NM-1 that provides definitions, interconnection requirements, system requirements, sizing requirements, etc. Schedule DG should be updated to include an export rate methodology that includes a year one and year two phase-in. Schedule DG should be made available to all eligible DG customers who install a system on or after April 15, 2015.

c) Staff recommends that SSVEC Schedules R-DG E and R-DG be denied. Further, Staff recommends that new and existing DG customers remain on Schedule R.

d) Staff recommends that the export rate be updated every three years.

e) Staff recommends that, to the extent necessary, and in the event one of the parties to this case believes the NEM rules should be waived for SSVEC, there be a partial waiver of the NEM rules for SSVEC to enact the rate design recommendations discussed herein.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Eric Van Epps. I am a Public Utilities Analyst employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Briefly describe your responsibilities as a Public Utilities Analyst.

A. In my capacity as a Public Utilities Analyst, I provide recommendations to the Commission on matters involving electric and gas utilities. I also perform studies on ancillary issues pertaining to matters concerning the electric industry.

Q. Please describe your educational background and professional experience.

A. I have a bachelor's degree in Business Administration and Political Science, specializing in international business and international politics from Arizona State University. I also graduated with a degree in Sustainability with a focus on alternative energy and resources from Arizona State University. I have been employed with the Commission since January of 2013.

Q. What is the scope of your testimony in this case?

A. I will be addressing Net Metering ("NEM"), for Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Company").

Q. Have you reviewed the testimony submitted by the Company in this case?

A. Yes. I reviewed the testimonies of Company witnesses, Mr. Creden W. Huber and Mr. David Hedrick, as they specifically pertain to NEM.

Mr. Huber and Mr. Hedrick are proposing multiple rate design strategies to address NEM.

1. The Company has proposed an increase in the monthly service availability charge from $10.25 to $25.00 for all standard residential customers. For residential customers with Distributed Generation ("DG") the Company has proposed a monthly service availability charge of $50.00. In both cases, the increase in the customer charge would transition over a four-year period.
2. In addition to the increased customer charge, the Company has proposed two new rate schedules, Residential Service with Distributed Generation-Existing ("R-DG E") and Residential Service with Distributed Generation ("R-DG"). Under R-DG E, customers who installed their system on or before April 14, 2015, would be grandfathered on the existing NM-1 Tariff for a period of 20 years from the date their system was installed.
3. Under R-DG, customers who installed a DG system on or after April 15, 2015, would no longer be able to participate in NEM in its current form. Under R-DG, all excess distributed generation energy would be compensated for at the Company's Annual Average Avoided Cost, while all energy procured by the customer from the utility would be charged at the retail rate.

NET METERING TESTIMONY AND RECOMMENDATIONS

Q. Does Staff accept the Company's NEM proposal?

A. No. Although, Staff understands the problem outlined by the Company, SSVEC's NEM solution does not align with Staff's overall philosophy concerning rate design for SSVEC's DG customers. Staff would prefer to not differentiate among SSVEC customers who make up the residential class.

Q. What is Staff's preferred rate design for SSVEC?

A. Staff would prefer to implement mandatory three-part rates for customers in the SSVEC service territory. Three-part rates would more equitably align costs with cost causers, eliminating many cross-subsidies and other inequities associated with SSVEC's current two-part rate design for residential customers.

Q. Can three-part rates be implemented for SSVEC at this time?

A. No. Due to technological limitations associated with SSVEC's metering capabilities, implementing three-part rates in SSVEC's territory at this time would be unduly burdensome. Thus, a three-part rate design is not a viable option at this time.

Q. Is there evidence that the Company is under-recovering due to current DG installations?

A. Yes. The Company has indicated that there was an under-recovery associated with the proliferation of DG systems that equated to $1,139,013 under the existing residential rate in its 2014 test year.

Q. Can the aforementioned under-recovery claim be substantiated?

A. Yes. If you were to set aside cross subsidization and the alignment of costs with cost causation then it would be appropriate to assume that under-recovery associated with the proliferation of DG in SSVEC's service territory would be equal to DG production, multiplied by unavoidable fixed costs. For SSVEC, in addition to the total customer costs, the unavoidable fixed costs would be the purchased power demand and the distribution wires portion of the bill.

Q. Can Staff please explain this further?

A. Yes. As I mentioned before, current two-part rates allow for many unintended subsidies. One of the largest subsidies in the residential class is the subsidy between high usage and low usage customers. Because most of a utility's fixed costs are recovered through a volumetric rate, inevitably a larger customer will pay a larger portion of the fixed costs associated with serving all customers. Conversely, a low usage customer will pay less. Given this flaw embedded in two-part rates, DG customers can reduce their usage and avoid paying large portions of their fixed costs. When rates are set, they are set using a snap-shot in time. This snap-shot looks at system-wide consumption to determine a rate appropriate for a utility to recover fixed costs based on future consumption. When future consumption is reduced due to installed DG, utilities are left with under-recoveries and are in turn forced to increase rates or find other ways to recover their fixed costs.

Q. Does Staff believe that based on a two-part rate design the current NEM policy is sustainable for SSVEC?

A. No. Currently, roughly 3 percent of SSVEC's residential class are DG customers. As DG system prices continue to trend down it is reasonable to assume that a larger percentage of SSVEC's residential class will install DG systems. Given the current NEM policy, it is also reasonable to assume that future DG systems will continue to be sized so that customers may offset a large percentage, if not all, of their consumption. As this trend continues more and more SSVEC customers will avoid paying their share of the system's fixed costs, leading to further under-recoveries. If this trend continues and a utility's ability to recover its fixed costs from all of its customers is not addressed, the resulting scenario could be unsustainable.

Q. Given that three-part rates are not an option, does Staff have recommended changes for SSVEC's NEM policy?

A. Yes.

Q. What changes does Staff recommend to the way exported excess energy, produced by a DG system located in SSVEC's service territory, be handled on an SSVEC customer's bill?

A. Staff recommends that the existing NM-1 tariff be frozen and a new rider be proposed for new DG customers. This new DG rider should eliminate the banking of excess kWh, require that all energy procured from the grid be paid for at SSVEC's respective retail rate, and provide a methodology for the treatment of any energy provided or exported by a DG system to the grid.

Q. Why does Staff recommend the elimination of banking?

A. Staff recommends the elimination of banking for SSVEC because Staff believes banking creates an inequity with respect to the sale of excess energy by the Company's DG customers. Under SSVEC's NEM policy which provides a 1-for-1 kWh offset, banking gives customers an incentive to oversize their solar DG systems. Solar systems can be sized in a way that is disproportionate to a customer's needs and, as a result, provide SSVEC with a glut of energy when the Company doesn't need it and a lack of energy when it does. Once a kWh is assigned a value, SSVEC's banking should be looked at conceptually as a bill credit that is either rolled over or not.

Q. What is Staff's position on a bill credit roll-over SSVEC customers?

A. Staff is open to considering this. Staff suggests that if there is a bill credit to be rolled over, SSVEC customers be given the choice to either receive it as a check or apply it to their next

month's bill. Staff also believes that the latter option would be less expensive than having the Company issue a check to DG customers every month.

Q. Why does Staff believe that residential customers should pay a retail rate for all energy procured from a utility?

A. As addressed earlier in my testimony, SSVEC's current two-part rate disproportionately recovers fixed and variable costs associated with serving customers. At this time, the Company is unable to implement three-part rates for residential customers. If the Company could implement mandatory three-part rates, many of the Company's concerns regarding the recovery of fixed costs would be addressed. Given that SSVEC's DG customers rely on the grid, just as all other customers do, SSVEC's DG customers have the same responsibility to pay for the infrastructure that allows them to have reliable power 24 hours a day.

Q. Why does Staff believe that excess DG energy in SSVEC's service territory, exported to the grid, be compensated for at a separate export rate?

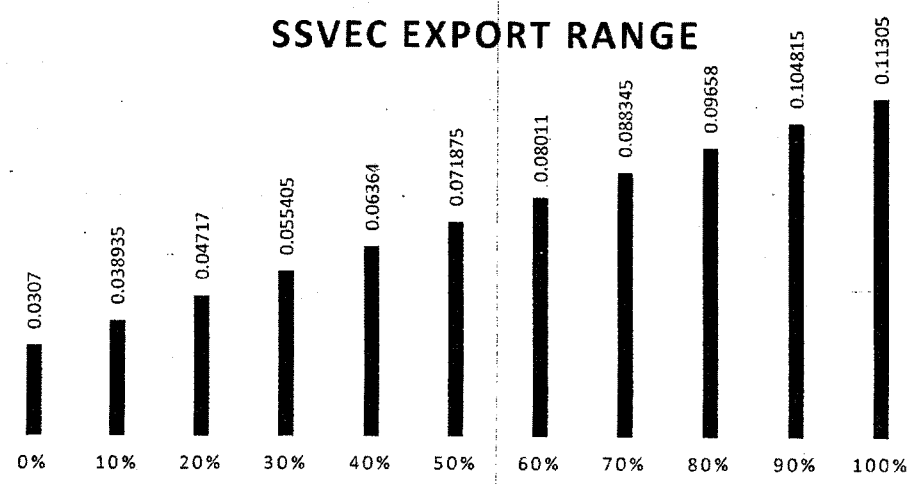
A. Staff believes a separate export rate for energy exported to the grid would provide the Commission the ability to set a value for DG on its own individual merits rather than merely assessing a value based on an all-inclusive retail rate.

Q. You mentioned that Staff recommends that DG be valued on its own individual merits; does Staff have a process for doing this?

A. Not yet. Currently, the Commission has an open docket investigating the value and cost of distributed generation, Docket No. E-00000J-14-0023. In this docket, Staff has proposed a matrix that could provide the Commission with a means for determining the value of DG.

Q. Given that there hasn't been a decision in Docket No. E-00000J-14-0023, does Staff have a recommendation for the proposed export rate?

A. Yes. Staff believes that there appears to be a consensus among parties that the price floor for DG should be valued at Avoided Cost and the price ceiling for DG should be its currently valued rate, the retail rate. Staff is left with determining an export rate for DG somewhere between avoided cost and the retail rate. The graph below illustrates different export rates based on a range of values above avoided cost.



* 0 percent Represents The Company's Avoided Cost
* 100 percent Represents Staff's Proposed Year 1 Retail Rate

Q. Given the proposed export rate range, does Staff have a recommendation for a starting point?

A. No. At this time Staff cannot give a specific starting rate; however, Staff recommends that the rate be higher than avoided cost and lower than the retail rate. Staff prefers to arrive at an export rate that utilizes a quantitative method, incorporating potential value determinants derived from the Value and Cost of DG Docket. Staff invites parties to the SSVEC rate case

to speak to the aforementioned export range, providing Staff with a suggested starting point based on detailed justification.

Q. Does Staff have further recommendations regarding the Company's treatment of DG customers?

A. Yes. There are a number of proposals regarding new Standard Offer Tariffs explicitly with regard to Schedules R-DG E, R-DG, NM-1, and DG that Staff would like to comment on. These tariffs address the treatment of new and existing DG customers.

Q. What comments do you have with regard to Schedule R-DG E and R-DG?

A. Staff would echo its earlier comments in this testimony with regard to the differentiation among residential customers. Staff is very much opposed to a $50 customer charge and does not believe it is necessary to have a separate Schedule for new and existing DG customers. Further, because the proposed changes to Schedule NM-1 and DG are tied to the creation of Schedule R-DG E and R-DG, Staff has recommendations for how these Schedules are addressed.

Q. What are Staff recommendations for the aforementioned Schedules?

A. Staff recommends that SSVEC's Schedule R-DG E and R-DG be denied. Staff recommends that new and existing DG customers remain on Schedule R. Staff witness Ranelle Paladino has recommended in her Direct Testimony that the fixed customer charge on this rate schedule be set at $27.00 a month in year two. Staff believes that this will begin to mitigate some of the under-recovery associated with both new and existing DG customers. Staff's recommendations with regard to Schedule R also includes a reduction in the volumetric energy charge in both years one and two.

Staff recommends that SSVEC's Schedule NM-1 be changed so that it is only available to customers who installed a DG system on or before April 14, 2015. After this change to the Availability section is made, Staff recommends that NM-1 be frozen. Further, Staff recommends that Schedule DG be adapted to act as an export rate rider. This rider should for all intents and purposes provide logistical language previously outlined in Schedule NM-1. Schedule DG should be updated to include an export rate methodology that includes a year one and year two phase-in. Schedule DG should be made available to all eligible DG customers who install a system on or after April 15, 2015.

Q. How often should the export rate in Schedule DG be updated?

A. Under Staff's proposed methodology the export rate portion of Schedule DG is directly tied to both the avoided cost floor and the retail rate ceiling. Thus, as these two rates change, so will the export rate. However, Staff opposes an export rate for SSVEC that adjusts annually, because Staff prefers that there be some stability with the proposed export rate. Staff recommends that the export rate be changed every three years.

Q. Does Staff believe a waiver of the Net Metering rules is needed?

A. No. Staff believes that freezing SSVEC's NM-1 tariff addresses this issue, with the added benefit of keeping rules in place to reinforce the treatment of customers frozen on the NM-1 tariff. However, if parties believe the rules should be waived, Staff would consider recommending a partial waiver of the rules to enact the rate design recommendations for SSVEC discussed herein.

Q. Are there any other issues Staff wishes to discuss?

A. Yes. Given Staff's preference to not differentiate among customers in the residential class, there are a number of customer segments that operate in a fashion similar to DG customers. For example, seasonal customers may only occupy their homes for 2-3 months a year. In this instance, these customers may or may not be covering their fixed costs and may be contributing to the utility's under-recovery.

Q. Given that there are other low-use customers in SSVEC territory, did the Company file a "low-use" tariff?

A. No.

Q. Does this conclude your direct testimony?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. FOR ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. DEVOTED TO ITS OPERATIONS IN THE STATE OF ARIZONA AND RELATED APPROVALS	)	DOCKET NO. E-01575A-15-0312

SURREBUTTAL

TESTIMONY

OF

ERIC VAN EPPS

PUBLIC UTILITIES ANALYST

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

MAY 6, 2016

EXHIBIT
S-10
ADMITTED

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EXECUTIVE SUMMARY
SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01575A-15-0312

The Surrebuttal testimony of Eric Van Epps responds to Company Witness Hedrick and presents an update to Utility Division Staff's ("Staff") recommendations in the rate case application ("Application") of Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Company") filed with the Arizona Corporation Commission ("Commission") on August 31, 2015.

Staff's Surrebuttal recommendations are as follows:

a) Staff recommends that SSVEC's proposed partial requirement tariffs proposed, R-PR and R-PR-E, be denied.

b) Staff is withdrawing its original Net Metering recommendation proposed in its direct testimony.

c) Staff recommends that the status quo for Net Metering be maintained in SSVEC's service territory until such time as a decision has been made in the Value and Cost of Distributed Generation ("DG") Docket (Docket No. E-00000J-14-0023). Further, Staff recommends that SSVEC's rate case be held open for 12 months to address any future changes to the net metering tariff. Staff recommends that such changes to net metering be made by the Company by filing the appropriate request, and performing the appropriate analysis within 3 months of the conclusion of the value of DG docket.

d) Staff recommends that the inter-relationship between proposed export rates and changes to the net metering billing methodology be evaluated together. The evaluation should include an analysis providing metrics on a utility's ability to recover its fixed costs as well as financial impacts to prospective solar customers. The evaluation should conclude with an analysis of how the proposed changes will affect non-solar customers moving forward.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Eric Van Epps. I am a Public Utilities Analyst employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Briefly describe your responsibilities as a Public Utilities Analyst.

A. In my capacity as a Public Utilities Analyst, I provide recommendations to the Commission on matters involving electric and gas utilities. I also perform studies on ancillary issues pertaining to matters concerning the electric industry.

Q. Have you previously filed testimony in this docket?

A. Yes, I previously provided direct testimony addressing Net Metering ("NEM"), for Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Company").

Q. What is the purpose of your surrebuttal testimony?

A. My testimony provides Staff's response to rebuttal testimony filed by the Company along with a change of position by Staff regarding the treatment of Net Metering customers.

DIRECT TESTIMONY

Q. Please summarize your recommendations?

A. In Direct Testimony, Staff recommended the following:

a) That SSVEC's Schedule NM-1 be changed so that it is only available to customers who installed a Distributed Generation ("DG") system on or before April 14, 2015. After this change to the Availability section is made, Staff recommended that NM-1 be frozen.

b) That SSVEC's Schedule DG be adapted to eliminate the banking of excess kWh, require that all energy procured from the grid be compensated at SSVEC's retail rate, and provide a methodology for the treatment of any energy provided or exported by a DG system to the grid. Schedule DG should act as an export rate rider. This rider should provide logistical language previously outlined in schedule NM-1. Schedule DG should be updated to include an export rate methodology that includes a year one and year two phase-in. Schedule DG should be made available to all eligible DG customers who install a system on April 15, 2015.

c) That SSVEC proposed Schedules R-DG E and R-DG be denied, and that new and existing DG customers remain on Schedule R.

d) That the export rate be updated every three years.

e) That, to the extent necessary, and in the event one of the parties to this case believes the NEM rules should be waived for SSVEC, there be a partial waiver of the NEM rules for SSVEC to enact the rate design recommendations discussed herein.

PARTIAL REQUIREMENT TARIFF

Q. Has the Company provided Staff with partial requirement tariffs for review?

A. Yes, In Mr. Hedrick's Rebuttal Testimony, the Company provided revised tariffs R-DG and R-DG-E. The Company revised these tariffs to create partial requirement tariffs R-PR and R-PR-E. Staff believes this was an attempt by the Company to address an issue mentioned in Staff's direct testimony regarding fairness and other customer segments that operate similarly to DG customers.

Q. Does Staff believe that proposed partial requirement tariffs adequately address the issues outlined in Staff's direct testimony?

A. No. Rate Schedules R-PR and R-PR-E, SSVEC's partial requirement tariffs, are essentially the same tariffs that Staff has already recommended be denied. Staff's intent in its direct testimony was to point out that there are more than just DG customers contributing to the Company's under-recovery of fixed costs.

Q. Did the Company adequately present a case that it has experienced an under-recovery of fixed costs due to the proliferation of DG?

A. Yes. The Company supported its contention that is has experienced an under-recovery associated with the proliferation of DG systems that equated to $1,139,013.

Q. Could the Company experience under-recovery of its fixed costs attributable to other factors and customer segments?

A. Yes. The Company could potentially experience under-recovery attributable to a number of different factors and customer segments. Examples include weather, energy efficiency, home vacancy, the loss of a large commercial or industrial customer, seasonal customers, etc.

Q. Given the aforementioned under-recovery, why is Staff unwilling to support R-PR and R-PR-E as separate rate schedules for DG customers?

A. Staff previously addressed this issue in its Direct Testimony, but will state it differently here. Under-recovery does not arise from any characteristic specific to DG customers, but instead from a rate design issue impacting all Residential customers—the embedding of fixed costs in volumetric rates. Because this rate design issue is both caused by and affects all customers, solutions must be addressed holistically. Staff cannot support a rate design that singles out one customer segment in SSVEC's territory.

Another reason Staff does not support recommending these separate rate schedules for DG customers is the concept of gradualism. SSVEC customers have historically enjoyed a relatively nominal customer charge of $10.25 a month; both R-PR and R-PR-E would increase that customer charge by 500 percent. Staff understands why the Company has proposed such a drastic increase; however, Staff cannot support rates based solely on under-recovery, especially when under-recovery could be easily addressed with a nominal increase in the volumetric energy rate. Staff believes a $50 customer charge would be a significant policy change. At this time, Staff can support gradually increasing the customer charge over time and supports the Company's proposed four-year transition proposal.

Q. What does Staff recommend for the proposed partial requirement tariffs, R-PR and R-PR-E?

A. Staff continues to recommend that all general service residential customers remain on the same tariff. Staff cannot support SSVEC's proposed partial requirement tariffs and recommends that they be denied.

NET METERING

Q. Did Staff make recommendations for Net Metering in its direct testimony?

A. Yes.

Q. Is Staff changing its recommendation for Net Metering?

A. Yes.

Q. Please explain.

A. In its direct testimony, Staff's recommendations for Net Metering were based on the assumption that there would be a decision in the Value and Cost of DG Docket prior to the

conclusion of this case. When direct testimony was filed in this case, the Value and Cost of DG hearing had not yet begun. Staff has now reviewed information and testimony from the Value and Cost of DG case regarding subject areas that directly impact Staff's initial recommendation for Net Metering in this case. Based on this information, Staff does not want to formulate a policy direction in the SSVEC case before a conclusion has been reached in the Value and Cost of DG case. Mr. Broderick will provide further explanation in his surrebuttal testimony.

Q. What is Staff's recommendation for Net Metering in the immediate future?

A. Staff recommends that the status quo for Net Metering be maintained in SSVEC's service territory until such time as a decision has been made in the Value and Cost of DG Docket. Further, Staff recommends that SSVEC's rate case be held open for 12-months to address any future changes to the net metering tariff. Staff recommends that such changes to net metering be made by the Company by filing the appropriate request, and performing the appropriate analysis within 3 months of the conclusion of the value of DG docket.

Q. Does Staff have anything further to add to the Net Metering discussion?

A. Yes. Staff would like to note that there are many options when it comes to making adjustments to the way Net Metering currently functions. Further, Staff would like to emphasize the importance of fully understanding the impact of apparently minute differences associated with the diverse proposals currently before the Commission. When considering Net Metering proposals it is important to understand how the mechanism and the export rate interact with one another. Variations in the billing methodologies and the export rate can have drastic effects on the value to prospective solar customers and adversely a utility's ability to recover fixed costs. If the mechanism is only slightly changed and the export rate is increased above avoided cost, a utility may see little to no improvement in its ability to recover fixed costs.

Similarly if the mechanism is significantly changed and the export rate is pegged at a rate equal to or less than avoided cost, there may no longer be any value to a potential solar customer.

Given the close inter-relationship between the net metering methodology and the export rate, Staff recommends that each proposal to alter either one be evaluated together, with an analysis providing metrics on a utility's ability to recover its fixed costs, and the financial impacts on prospective solar customers. The evaluation should conclude with an analysis of how any changes will affect non-solar customers moving forward.

Q. Has the Company or any of the interveners provided Staff with any such evaluation?

A. No. Staff witness Yue Liu has done some modeling with regard to the internal rate of return and payoff periods for current and future solar customers under different rate designs and net metering proposals. However, Staff has not seen a holistic analysis on how individual proposals affect a company's ability to recover its fixed costs as well as the resulting effect on other rate payers.

Q. Has the lack of a holistic study, analyzing the inter-relationships between the net metering mechanism, export rates, rate design and its effect on solar sales, recovery of SSVEC's fixed costs and the impact to non-solar customers altered Staff's position in this case?

A. Yes. There are many moving parts with regard to a net metering policy direction, an agreed upon export rate or "Value of DG" is one piece of that puzzle. Unfortunately, without the rest of the pieces and an understanding of how each one affects the other; Staff cannot provide an informed recommendation. It is for this reason that Staff has tabled the net metering discussion and recommended the status quo.

SUMMARY OF STAFF RECOMMENDATIONS

Q. Based upon your testimony, what are Staff's recommendations?

A. Staff's recommendations are as follows:

a) Staff recommends that SSVEC's proposed partial requirement tariffs proposed, R-PR and R-PR-E, be denied.

b) Staff is withdrawing its original NEM recommendation proposed in its direct testimony.

c) Staff recommends that the status quo for Net Metering be maintained in SSVEC's service territory until such time that a decision has been made in the Value and Cost of DG Docket. Further, Staff recommends that the rate case be held open for 12 months to address any future changes to the net metering tariff. Staff recommends that such changes to net metering be made by the Company by filing the appropriate request, and performing the appropriate analysis within 3 months of the conclusion of the value of DG docket.

d) Staff recommends that the inter-relationship between proposed export rates and changes to the net metering billing methodology be evaluated together. The evaluation should include an analysis providing metrics on a utility's ability to recover its fixed costs and the financial impacts for prospective solar customers. The evaluation should also include an analysis of how the proposed changes will affect non-solar customers moving forward.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. FOR ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC. DEVOTED TO ITS OPERATIONS IN THE STATE OF ARIZONA AND RELATED APPROVALS	)	DOCKET NO. E-01575A-15-0312

SURREBUTTAL

TESTIMONY

OF

THOMAS M. BRODERICK

DIRECTOR

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

MAY 6, 2016

EXHIBIT
S-11
ADMITTED

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INTRODUCTION

Q. Please state your name and business address.

A. My name is Thomas M. Broderick. My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. By whom are you employed and in what capacity?

A. I am employed by the Arizona Corporation Commission ("Commission") as Director of the Utilities Division ("Staff").

PURPOSE OF SURREBUTTAL TESTIMONY

Q. What is the purpose of your Surrebuttal testimony?

A. The purpose of my Surrebuttal testimony is to place further into current context Staff's interrelated testimonies for Net Metering ("NEM") and residential rate design[1] as presented by Staff witnesses Ranelle Paladino, Eric Van Epps and Yue Liu. A secondary purpose is to continue to encourage the parties to this case to settle all issues.

All of the investor owned utilities and many of the cooperatives the Commission regulates have either completed, pending or soon to be filed rate cases addressing, among other issues, NEM and residential rate design particularly as it relates to alleged under recovery of each utilitie's fixed costs and the subsequent shifting of recovery of those fixed costs to other customers. Additionally, the Commission has on-going generic Docket E-00000J-14-0023, concerning the Value and Cost of Distributed Generation for which rooftop solar distributed generation is a focus area and thus for which proposed changes to NEM are a possibility or likelihood.

[1] And small general service customers in some cases.

Q. What is the core NEM and residential rate design issue as Staff sees it presently?

A. Virtually every utility proposed change to NEM and residential rate design which is intended to improve utility fixed cost recovery is alleged unfavorably impact the economics of rooftop solar. As described in Staff witness Mr. Yue Liu's testimony, Staff has selected for evaluation two measurements, simple payback and internal rate of return, to express the impacts on rooftop solar of various proposed NEM and rate design changes. In this case, SSVEC has proposed to place residential DG rooftop solar customers on a separate tariff with a $50 per month basic service charge and a payment for solar generated electricity exported to the grid based on the short-term avoided wholesale cost of power. However, at the present time, the Commission has not approved or selected any set of NEM and residential rate design changes in any recent or on-going rate case that improve utility fixed cost recovery.

Q. What changes to NEM and residential rate design has Staff proposed to-date?

A. In UNSE's rate case, Docket E-04204A-15-0142, Staff proposed mandatory demand charges for residential and small general service customers[2] and no changes to NEM. Recently, in Docket E-04204A-15-0142, two Commissioners filed letters in that Docket seeking analysis of rate design and NEM alternatives to mandatory demand charges.

In this case, SSVEC neither proposed nor supported mandatory demand charges, and Staff did not propose demand charges, Instead, Staff evaluated and discussed in its direct testimony changes to residential rate design and NEM. While Staff is unable to support the formation of a separate class or separate tariff for rooftop solar customers at this time, Staff did discuss alternatives to NEM's banking and NEM's compensation for solar generated electricity exported to the grid. In his surrebuttal testimony, Staff witness Mr. Yue Liu places into context the SSVEC proposal for a separate tariff for residential DG and indicates the adverse possible

[2] When the applicant was also supportive.

impacts of that proposal on payback and internal rate of return. And, while Staff witness Van Epps continues to discuss changes to NEM, Staff is unable at this time – without further policy direction from the Commission – to support changes to NEM in this case.

Staff witness Paladino is supportive of SSVEC's request to increase the monthly basic service charge for residential to $25 per month in four annual steps. That increase will provide SSVEC a very significant improvement in fixed cost recovery and revenue stability.

Q. Why is Staff opposed to the formation of a separate class or tariff for solar rooftop customers?

A. Since the Commission's NEM rules allow for a separate charge for specific metering cost increases imposed by rooftop solar customers, Staff concludes that the creation of such a class or tariff at this time is unnecessary and duplicative and would impose additional fixed costs on some residential customers (i.e., rooftop solar) that are not imposed on all other residential customers.

In this case, SSVEC has not performed a cost of service analyses for such a separate class or tariff in support of its request to increase the monthly basic service charge to $50. SSVEC has an existing charge of approximately $3 per month applicable to rooftop solar customers as per the existing NEM rules. SSVEC has not proposed to change that rate in this case.

Q. What positions has Staff taken in the on-going generic Docket E-00000J-14-0023?

A. In short, Staff has proposed a conceptual model of avoided cost. Staff is also examining geographic feeder based evaluation of DG. Staff is also responding to utilities' proposal of a single recent PPA as the proxy for the value of DG. Staff's response is considering a weighted

1 average of both owned and PPA photovoltaic utility scale sources actually in-service for each
2 utility. That proposal is still under development.
3
4 **Q. Does that conclude your surrebuttal testimony?**
5 A. Yes.
6

QUALIFICATIONS

THOMAS M. BRODERICK

Employment History

Director, Utilities Division, Arizona Corporation Commission, Phoenix, AZ (July 2015 - present)

Field Team Lead, Power Africa Project, Deloitte Consulting, Nairobi, Kenya (September 2013 - August 2014)

Director, Rates & Regulation, EPCOR and American Water, Phoenix, AZ (2004 - August 2013)

Director, External Affairs, PG&E National Energy Group, Phoenix, AZ (2001 - 2003)

Senior Energy Advisor, USAID, US Embassy, Kiev, Ukraine (1999 – 2000)

Consultant, PG&E Energy Services Corporation, Phoenix, AZ, (1997 – 1998)

Manager / Supervisor, Planning, Forecasts and Regulatory Affairs, APS, Phoenix, AZ (1984 – 1996)

Marketing Research Analyst, Miller Brewing Company, Milwaukee, WI (1982-1984)

Economist, Illinois Health Finance Authority, Chicago, IL (1981-1982)

Education

M.S., Economics, University of Wisconsin, Madison (1981)

B.S., Economics, Arizona State University, (1979)

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR A HEARING TO DETERMINE THE FAIR VALUE OF ITS PROPERTY FOR RATEMAKING PURPOSES, TO FIX A JUST AND REASONABLE RETURN THEREON, TO APPROVE RATES DESIGNED TO DEVELOP SUCH RETURN AND FOR RELATED APPROVALS.	)	DOCKET NO. E-01575A-15-0312

SURREBUTTAL

TESTIMONY

OF

YUE LIU

PUBLIC UTILITIES ANALYST III

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

MAY 6, 2016

EXHIBIT
S-12
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EXECUTIVE SUMMARY
SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC.
DOCKET NO. E-01575A-15-0312

My Surrebuttal Testimony addresses the estimated financial net savings or net costs of purchasing or leasing a rooftop solar system from a typical Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or the "Co-op") residential customer's perspective. I provide a comparison of the net savings and net costs for a customer considering the purchase or lease of a rooftop solar system based on four different rate designs, namely, SSVEC's current effective Residential Service rate schedule ("Existing Schedule R"), SSVEC's proposed Residential Service with Distributed Generation on or before April 14, 2015 rate schedule in Phase 4 in its Application ("Schedule R-DG E"), SSVEC's proposed Residential Service with Distributed Generation after April 14, 2015 rate schedule in Phase 4 in its Application ("Schedule R-DG"), and SSVEC's proposed Residential Service rate schedule in Phase 4 in its application ("Proposed Schedule R").

By modeling the bill savings under four different rate designs, and considering information provided by the DG solar industry representatives and associations which intervened in this case, Staff demonstrates that under the Existing Schedule R, the solar market might be considered to be overheated; under the Schedule R-DG E and Schedule R-DG, the solar market would be quite averse; and under the Proposed Schedule R, the solar market would be sustainable. Moreover, the Internal Rate of Return ("IRR") under the Schedule R-DG for new DG customers would be much lower compared to the other three rate designs. The 1.9 percent IRR for an average customer under the Schedule R-DG is lower than all the prevailing rate of return for a long-term investment, which makes solar DG not an economically viable investment option for customers. Therefore, the pace of rooftop solar installations would be expected to be slow, at least temporarily, if Schedule R-DG is adopted, all else being constant.

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Yue Liu. I am a Public Utilities Analyst III employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Please describe your educational background and professional experience.

A. In 2013, I graduated with high distinction from the University of Minnesota, receiving a Bachelor of Arts degree in economics, mathematics and statistics. In 2014, after working as an investment-banking analyst for one year, I enrolled in the graduate program in statistics at the University of California Berkeley and received a Master of Arts degree in 2015. Before joining the Commission in December 2015, I worked on several research projects of various disciplines as a statistical consultant, offering clients advisory services on experimental designs, sampling methodologies, data analytics and statistical inferences.

Q. Briefly describe your responsibilities as a Public Utilities Analyst III.

A. In my capacity as a Public Utilities Analyst III, I have been tasked to analyze and provide recommendations to the Commission on assigned cases.

Q. Did you file Direct Testimony in this proceeding?

A. No.

Q. What is the scope of your testimony in this case?

A. I provide estimates of financial net savings and net costs in purchasing or leasing a rooftop solar system from the perspective of a typical Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or the "Coop") residential customer using a bill and solar cost estimation model I

sponsor herein. Among other things, I provide a comparison of the net savings and net costs for a customer considering solar based on four different rate designs, namely, SSVEC's current effective Residential Service Schedule R ("Existing Schedule R"), SSVEC's proposed Residential Service with Distributed Generation on or before April 14, 2015 rate schedule in Phase 4 in its Application ("Schedule R-DG E"), SSVEC's proposed Residential Service with Distributed Generation after April 14, 2015 rate schedule in Phase 4 in its Application ("Schedule R-DG"), and SSVEC's proposed Residential Service rate schedule in Phase 4 in its application ("Proposed Schedule R").

Q. Please provide a summary of the four rate designs you have applied in the bill and solar cost model.

A. The rates of the four rate designed mentioned above are summarized in Table 1:

	Monthly Service Availability Charges ($)	Energy Charges ($/kWh)
Existing Schedule R	10.25	0.126038
Schedule R-DG E	50.00	0.119768
Schedule R-DG	50.00	0.071165
Proposed Schedule R	25.00	0.102038

Table 1: Summary of the four rate designs

Q. Have you reviewed direct and rebuttal testimony submitted by the various parties in this case as it relates to the subject matter of your Surrebuttal Testimony?

A. Yes. My reviews included testimony from DG solar industry representatives and associations which intervened in this case.

BILL ESTIMATION AND SOLAR COST MODEL AND ASSUMPTIONS

Q. How was the bill estimation and solar cost model established?

A. The bill estimation and solar cost model was first established in the UNS Electric, Inc. ("UNSE") rate case (Docket No. E-04204A-15-0142). For this surrebuttal testimony, Staff issued data requests to SSVEC, The Energy Freedom Coalition of America ("EFCA") and Arizona Solar Deployment Association ("ASDA") requesting their thoughts and suggestions for improving the model.

The final model used in Staff's surrebuttal testimony was based on the initial model and augmented by relevant revisions and improvements from incorporation of SSVEC, EFCA and ASDA input and Staff's internal review and best judgement.

The model used here should be viewed as Staff's model for which Staff is responsible. Staff is confident in the relative DG solar cost effectiveness demonstrated under the various rate options presented herein. Staff acknowledges there is uncertainty concerning the input assumptions and, therefore, in the absolute values of the resulting estimations.

Q. What are the key assumptions used in modeling the net savings or net costs in purchasing or leasing a rooftop solar system?

A. The initial assumptions include the 1) solar system size (kW-DC); 2) solar system conversion factor (kWh-AC/kW-DC); 3) seasonal shaping of solar generation; 4) solar off-setting load at time of generation; 5) a typical residential customer kWh before solar by season; 6) related taxes and fees; 7) solar purchase cost ($/kW-DC); 8) fixed system operating and maintenance (O&M) cost ($/kW-year); 9) SSVEC residential PV incentive ($/W) and 10) applicable federal and state investment credits. The numerical values of those assumptions are listed in Schedule YL-1.

Q. Please discuss each key necessary assumption starting with the customer's solar system size (kW-DC).

A. For this assumption, Staff utilized SSVEC's response to Staff data requests[1] for the average residential customer and the large residential customer assuming a 90 percent offset of a customer's energy. This means the customer's DG solar system generates 90 percent of its energy requirement. Staff arrived on 4.36 kW and 6.80 kW system sizes, respectively, for average and large customers.

Q. What is the solar system conversion factor (kWh-AC/kW-DC)?

A. That assumption represents the energy kWh generation estimate per kW. Staff used 1,678 kWh annually per one kW based on the National Renewable Energy Laboratory's ("NREL") PVWatts residential solar generation profile for Douglas Bisbee International Airport (TMY3). This assumption is also used in the formula for the customer's solar system size as described above.

Q. What did you assume for seasonal shaping of solar generation?

A. Seasonal shaping is each season's average monthly DG solar generation as a percentage of the monthly average DG solar generation. Staff used a 105 percent summer to annual solar generation percentage and a 95 percent winter to annual solar generation percentage.

Q. What is solar off-setting load at time of generation?

A. Solar off-setting load at time of generation represents the percentage of a customer's solar production which is self-consumed at the time of generation. The balance, then, is exported. Staff used EFCA's provided summer percentage of 43 percent and winter percentage of 34

[1] Staff to SSVEC 12.2

percent for average customer, and summer percentage of 44 percent and winter percentage of 36 percent for large customer.

Q. What is customer load before solar by season?

A. This is the SSVEC-provided customer load profile data for the average customer. Staff pro rata scaled this data for the large customer. The detailed customer usage profiles are provided in Schedule YL-2.

Q. What is the solar purchase cost assumption ($/kW-DC)?

A. This assumption is the installed purchase price to the customer. Staff used a cost of $2,750 per kW as cited in the surrebuttal testimony in the UNSE rate case.

Q. What are the taxes, fees and investment tax credit assumptions?

A. These assumptions relate to applicable avoidable taxes on electric bills and applicable investment tax credits. Staff used 10 percent as the percentage of taxes and government fees, 30 percent as the percentage of federal investment tax credit under the Existing Schedule R and Schedule R-DG E and 26 percent for the other two rate designs, and $1,000 per rooftop solar system as the Arizona residential solar tax credit.

Q. What is the fixed system O&M cost ($/kW-year)?

A. This is the fixed annual cost per kW for the operation and maintenance of purchased systems. Staff used $21/kW-year as the cost, assuming a system life of 33 years, based on NREL's Distributed Generation Renewable Energy Estimate of Costs (updated February 2016).

Q. What is the SSVEC residential PV incentive ($/W)?

A. This is the-per Watt up-front incentive for residential PV approved in Commission Decision No. 74870. The incentive is $0.25/W, up to $2,500.

Q. Lastly, what assumptions are made on Net Energy Metering (NEM)?

A. Under the Existing Schedule R, Schedule R-DG E and Proposed Schedule R, the current effective NEM is assumed, with banking and rollover for excess generation. For modeling purposes, the accumulated excess generation is represented as an average credit spread over all months, and the excess generation banked during the winter months is assumed to evenly offset summer months' energy usage. The year-end balance of excess generation is paid out to customers at SSVEC's avoided cost of $0.025800 per kWh.

Under Schedule R-DG, the proposed NEM alternative in SSVEC's Application is assumed. With the proposed NEM alternative, all exported electricity from a customer to SSVEC is paid out each month to the customer at the avoided cost of $0.025800 per kWh.

RESULTS AND COMPARISON

Q. What evaluation measures did you select for purchasing a rooftop solar system?

A. In order to evaluate the purchasing option, the simple payback and the Internal Rate of Return ("IRR") measures were selected. The purpose of using those two measures is to capture the total financial impact of purchasing a rooftop solar system, by evaluating bill savings together with system capital cost recovery.

Q. What are the resulting simple paybacks?

A. Simple payback is a straightforward measure of how many years a customer needs to recover the initial cost of purchasing a rooftop solar system through bill savings. Table 2 below summarizes the resulting simple paybacks for an Average Customer and a Large Customer.

	Simple Payback (Years)	
	Average Customer	Large Customer
Existing Schedule R	6.5	6.8
Schedule R-DG E	14.7	11.9
Schedule R-DG	34.1	21.1
Proposed Schedule R	8.8	9.1

Table 2: Resulting Simple Paybacks

The results suggest that, under the Existing Schedule R, both the Average Customer and Large Customer can achieve a better simple payback. However, with the Proposed Schedule R, both customers have significant improvement in terms of simple payback, as compared to Schedule R-DG E and Schedule R-DG.

Q. Please summarize your findings on the simple paybacks.

A. In ASDA's response to Staff data requests[2], ASDA provided an insightful comment on the relationship between the simple payback and the solar market:

> "ASDA believes that a superheated solar market exists when the simple payback is 7 years or less, a sustainable solar market exists when the simple payback is 8 to 11 years, and an adverse market exists when the simple payback is over 12 years."

[2] Staff to ASDA 1.3

Applying this comment to the resulting simple paybacks shown in Table 2, it could be suggested that under the Existing Schedule R, the solar market might be considered to be superheated; under the Schedule R-DG E and Schedule R-DG, the solar market is quite averse; and under the Proposed Schedule R, the solar market would be sustainable.

Q. What is the formula of the IRR?

A. The IRR is a financial metric used to evaluate the profitability of any potential investments. The IRR is a discount rate that makes the net present value ("NPV") of all cash flows from a particular investment equal to zero. In the bill saving model, the IRR is calculated based on the formula below:

$$NPV = 0 = -C_0 + \frac{S_1}{1+IRR} + \frac{S_2}{(1+IRR)^2} + \cdots + \frac{S_{33}}{(1+IRR)^{33}},$$

where C_0 is the total initial cost of purchasing the rooftop solar system, and S_1, S_2, …, S_{33} are the annual bill savings during the period of year 1, 2, …, 33 after the rooftop solar system is installed.

Q. Why is the IRR used to evaluate a customer's investment decision in purchasing the rooftop solar system?

A. Staff is using the IRR because, unlike the NPV, it does not make a numerical assumption regarding discount rate. Given different perspectives on discount rates for various customers, using the IRR simplifies the evaluation. Generally speaking, the higher an investment's IRR, the more desirable it is to undertake the investment from the customer's perspective. Thus, the IRR can be used to rank multiple potential investments. In the bill saving model, the IRR provides an effective comparison for the financial feasibility of investing in a rooftop solar system under the four rate designs. Moreover, the IRR can also be compared against the prevailing rate of return in the securities market or accepted discount rate which are reference points for customers. For a customer considering an investment in a rooftop solar system, if

the IRR for the investment is higher than his/her (publicly unknown) but accepted discount rate, the investment is economically viable.

Q. Are there additional assumptions in calculating the IRR?

A. Yes. An annual DG solar degradation rate of 0.25 percent and a lifespan of 33 years are assumed for the solar system. Moreover, an annual future utility rate escalation of 2.5 percent is assumed.

Q. How does the change of those assumptions affect the resulting IRRs?

A. The change of assumptions on annual degradation rate and annual future utility rate escalation will affect the numeric values of the resulting IRRs. However, the relative ranking among the four rate designs should be unchanged and accurate, which is the reason why the IRR is used here as an evaluation measure.

Q. What are the resulting IRRs for Average Customer and Large Customer?

A. The resulting IRRs for Average Customer and Large Customer under the four rate designs are summarized in Table 3 below:

	IRR (%)	
	Average Customer	Large Customer
Existing Schedule R	17.4%	16.8%
Schedule R-DG E	7.9%	9.9%
Schedule R-DG	1.9%	5.0%
Proposed Schedule R	13.3%	12.8%

Table 3: Resulting IRRs

From the table above, it can be observed that both customers are much better off under Proposed Schedule R compared to Schedule R-DG E and Schedule R-DG. Even though the

IRR is lower compared to the IRR under the Existing Schedule R, with Proposed Schedule R purchasing a rooftop solar system is still an economically viable investment, especially when a high utility rate escalation is expected.

Q. Can you provide a prevailing rate of return in the securities market or a generally accepted discount rate for comparison purposes?

A. Yes. The Standard & Poor's 500 ("S&P 500") is an American stock market index based on the market capitalizations of 500 large companies with common stock listed on the NYSE or NASDAQ. The S&P 500 has a diverse constituency and is widely considered as one of the best representations of the U.S. stock market and the U.S. economy. Therefore, the return on the S&P 500 can be used as a prevailing rate of return in the securities market. In addition, the returns on a 3-month Treasury Bill ("3-month T-Bill") and a 10-year Treasury Bond ("10-year T-Bond") are generally accepted discount rates for long term and short term investments, respectively. Table 4 below summarizes the geometric averages of the annual returns on the S&P 500, the 3-month T-Bill and the 10-year T-Bond for three different time periods. The raw data of annual returns during 1928 - 2015 was retrieved from Dr. Aswath Damodaran's online database (http://pages.stern.nyu.edu/~adamodar/). Dr. Damodaran is a Professor of Finance at the Stern School of Business at New York University.

	S&P 500	3-month T-Bill	10-year T-Bond
1928-2015	9.50%	3.45%	4.96%
1966-2015	9.61%	4.92%	6.71%
2006-2015	7.25%	1.14%	4.71%

Table 4: Geometric Averages of the Annual Returns

Q. Are there any other prevailing discount rates that can be used for comparison purposes?

A. Mortgage rate is another widely used prevailing discount rate. The Primary Mortgage Market Survey ("PMMS") results provided by Freddie Mac are presented in this surrebuttal testimony. Through the PMMS, Freddie Mac surveys lenders each week on the rates, fees and points for the most popular mortgage products. Three types of mortgage products will be shown, namely 30-Year Fixed-Rate Mortgages ("30-Yr FRM"), 15-Year Fixed-Rate Mortgages ("15-Yr FRM") and 5-Year Adjustable-Rate Mortgages ("5/1-Yr ARM"). Table 5 below lists the average rates of these three mortgage products for 2005-2015.

	Mortgage Products		
	30-Yr FRM	15-Yr FRM	5/1-Yr ARM
Average Rate (2005-2015)	4.95%	4.35%	4.25%

Table 5: Average Rates of Three Mortgage Products

Q. Please summarize your findings from your analysis.

A. Under the Proposed Schedule R, the IRRs can reach 13.3 percent and 12.8 percent, respectively, for an Average Customer and a Large Customer. This level of IRR is significantly higher than the annual return on a 10-year T-Bond, which is generally accepted as the discount rate for long-term investment. The IRRs are even substantially higher than the recent 10-year (2006-2015) average annual return on the S&P 500. In addition, the IRRs are more than double of the mortgage rates. Therefore, purchasing a rooftop solar system would still be an economically viable choice with the adoption of Proposed Schedule R. On the other hand, the IRRs under the Schedule R-DG for new DG customers would be much lower compared to the other three rate designs. The 1.9 percent IRR for an average customer under the Schedule R-DG is lower than all the prevailing rate of return for a long-term investment, which makes solar DG not a financially feasible investment option for customers. Moreover, the pace of rooftop solar installations would be expected to be reduced, at least temporarily, if Schedule R-DG is adopted, all else being constant.

Q. What are the net payoffs under the four rate designs if a customer chooses to lease a rooftop solar system?

A. $0.09/kWh is assumed as the rooftop solar system lease rate. The monthly average net payoffs under the four rate designs for both an Average Customer and a Large Customer are summarized in Table 6 below. The parentheses in the table indicate a net loss.

	Monthly Average Net Payoff	
	Average Customer	Large Customer
Existing Schedule R	$ 33.39	$ 53.75
Schedule R-DG E	$ (11.51)	$ (0.92)
Schedule R-DG	$ (30.66)	$ (29.86)
Proposed Schedule R	$ 17.29	$ 28.64

Table 6: Monthly Average Net Payoffs for Leasing

Based on the results shown above in Table 6, both customers would expect significant savings if they choose to lease rooftop solar systems under the Proposed Schedule R. However, customers would experience substantial losses under the two DG specific rate designs especially for new DG customers under the Schedule R-DG.

Q. Does this conclude your Surrebuttal Testimony?

A. Yes, it does.

Key Assumptions

Solar system Size (kW-DC)	
Average Customer	4.36
Large Customer	6.80
Solar system conversion factor (kWh-AC/kW-DC)	1,678
Seasonal shaping of solar generation	
Summer	105% of monthly average
Winter	95% of monthly average
Solar off-setting load at time of generation (Average Customer)	
Summer	43% of total solar kWh
Winter	34% of total solar kWh
Solar off-setting load at time of generation (Large Customer)	
Summer	44% of total solar kWh
Winter	36% of total solar kWh
Customer load before solar by season	See Schedule YL-2
Taxes and government fees	10%
Solar purchase cost ($/kW-DC)	2,750
Fixed system O&M cost ($/kW-year)	21
SSVEC Residential PV Incentive	$0.25/W, up to $2,500
Federal investment tax credit	30% (by 12/31/2019) or 26% (after 12/31/2019 and before 01/01/2021)
Arizona residential solar tax credit	$1,000

Customer Profiles

	Average Customer	Large Customer
Monthly kWh	677	1,057
Solar system size kW-DC	4.36	6.80
Monthly kWh - Summer	741	1,157
Monthly kWh - Winter	612	956