



0000109669

Transcript Exhibit(s)

Docket #(s): E-0575A-08-0328

E-0575A-09-0453

Exhibit #: A4-A13, Sl, Rowley 1 - Rowley 3, Scott 1,
Scott 2, Downing 1, Downing 2

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To: Docket Control

Date: March 31, 2010

Re: SSVEC / Rates
E-01575A-08-0328, etc.
Volumes I through III, Concluded
March 24 through 26, 2010

STATUS OF ORIGINAL EXHIBITS

FILED WITH DOCKET CONTROL

SSVEC (A Exhibits)

1 through 13

Staff (S Exhibits)

1

Intervenor James F. Rowley, III (Rowley Exhibits)

1 through 3

Intervenor Susan Scott (Scott Exhibits)

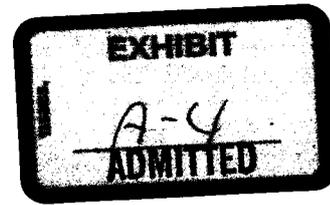
1 and 2

Intervenor Susan J. Downing (Downing Exhibits)

1 and 2

Copy to:

Jane L. Rodda, ALJ
Bradley S. Carroll, Esq. – SSVEC
Charles H. Hains, Esq. – Staff
Mr. James F. Rowley, III
Ms. Susan Scott
Ms. Susan J. Downing



PATRICK K. SCHARFF, P.E.

AREAS OF EXPERTISE

Technical and management experience in the following general areas:

- Planning Studies
- Project Management
- Engineering Management
- Generator Interconnection Requirements
- Power Flow Studies
- Operational Studies
- Reliability Studies
- Protective Device Coordination Studies
- Switching Studies
- Distribution Planning Studies
- Integration of Advanced Technologies into Utility Operations
- Smart Grid Technology Applications
- Distributed Generation Assessments
- Demand-side Management Program Development
- Net metering
- Renewable Energy Programs
- Marketing and Program Development
- Customer Service
- Expert Testimony

REPRESENTATIVE EXPERIENCE

Principal Electrical Engineer with over 30 years of engineering and management experience with investor-owned electric utilities. Extensive hands-on and leadership experience in:

- Power system planning, operations and engineering including conceptual design and budgeting for substation, transmission line and distribution line additions and modifications, construction project coordination, project scheduling and contract management.
- Development and implementation of energy efficiency and load management programs, the integration of distributed generation, smart grid and other advanced technologies into utility system operations and the preparation of business cases supporting deployment of distribution automation technologies including advanced metering.

TRC Solutions – Principal Electrical Engineer – Albuquerque, NM

Principal Electrical Engineer providing planning assistance and power system analysis support to municipal, RUS co-operative and investor owned utilities.

Long Range Area Studies – Public Service Company of New Mexico, Albuquerque, NM

Detailed land use and load forecast studies using linear and Gompertz forecasting techniques to identify substation, transmission and distribution line requirements for 5,000 acre and larger areas zoned for high-density development.

Small Generator Interconnection Request – Jemez Mountains Electric Cooperative – Española, NM Feasibility and facilities studies for 3.5MW solar PV interconnection request.

Small Generator Interconnection Request – Emcore – Albuquerque, NM

One-line diagram and design for interconnecting 12MW solar PV system to Public Service Company of New Mexico 12.47kV distribution system. Prepared the SGIR form for submittal to the local utility.

Large Generator Interconnection Project Due Diligence – GA Solar USA – San Francisco, CA Technical due diligence for the acquisition of 300MW renewable energy project by GA-Solar USA. Revised large generator interconnection and transmission service requests to change technology from wind and solar thermal to solar PV.

Small Generator Interconnection Request – enXco – Escondido, CA

Identified candidate 12.47kV and 115kV circuits and potential sites for interconnecting solar PV systems ranging in size from 1MW to 5MW. Assisted with preparing FERC Small Generator Interconnection requests for submittal to the local utility.

Construction Work Plan - Jemez Mountains Electric Cooperative – Española, NM

Detailed system planning and performance analysis study to determine and document Jemez Mountains Electric Cooperative's 4-year construction needs. The CWP addresses system performance for existing and projected loads during normal and contingency operations.

Integrated Resource Plan – City of Gallup – Gallup, NM

Analysis of energy supply resource options and energy conservation and load management alternatives to meet the City of Gallup's projected 5-year electrical load needs.

Short Range Plan – City of Gallup – Gallup, NM

Detailed system planning study and system performance analysis to determine and document Gallup's 4-year construction needs based an analysis of system performance for existing and projected loads during normal and contingency operations.

System Protective Device Coordination Study – City of Gallup – Gallup, NM

Detailed system sectionalizing study and protective device performance analysis to determine and document the capabilities of Gallup's electric system protective devices and identify operational and capital improvement required by Gallup and Gallup's power supplier to meet safety and reliability criteria.

Long Range Plan – City of Gallup – Gallup, NM

Detailed system planning study and performance analysis to forecast and document Gallup's 10-year construction needs based an analysis of system performance for existing and projected loads during normal and contingency operations.

Public Service Company of New Mexico – Manager of Distribution Planning & Distributed Resource Programs – Albuquerque, NM

Responsible for the evaluation and deployment of smart grid, distribution automation and other advanced technologies to meet PNM's existing and future business and operational needs, including advanced metering, distributed generation, energy storage, renewable energy and micro grids.

- developed, implemented and managed PNM's processes for interconnecting distributed generation
- wrote the language for New Mexico's net metering rule that was subsequently adopted by the NMPRC as New Mexico's net metering rule
- architect for revised New Mexico rules for interconnecting distributed generation
- developed and deployed PNM's production based solar incentive program, the first of its kind in the US
- designer of PNM's 25kW solar sunflower demonstration PV system
- prepared business cases to support advanced technology deployments
- provided expert witness testimony in support of cost recovery for technology trials and deployments

Public Service Company of New Mexico – Manager of Distribution Planning & Distributed Resource Programs – Albuquerque, NM

Statewide responsibility for planning and budgeting expansions of, and improvements to, PNM's 12.47kV, 46kV and local 115kV systems which included 74 substations, 500+ distribution feeders, 8,600 miles of 12.5kV and 5kV distribution lines and 1,200 miles of 115kV and 46kV transmission lines. Key participant in the development of New Mexico's net metering rules and the development of IEEE Standard 1547 for the interconnection of distributed generation.

Tucson Electric Power Company – Manager, Conservation and Load Management – Tucson, AZ

Developed TEP's department for energy efficiency, DSM and load management programs. Implemented TEP's energy efficiency and load management programs including marketing programs, and program monitoring and evaluation processes.

Prepared of the DSM portions of TEP's Integrated Resource Plan and provided of expert witness testimony in support of lost revenue recovery.

Tucson Electric Power Company – Manager, Distribution Services – Tucson, AZ
Responsible for providing distribution system services statewide for TEP including, distribution system planning and engineering; designs, estimates and work orders for all non-substation additions, modifications to the distribution system including new service extensions; construction scheduling and coordination, public improvement project coordination, property and right-of-way acquisition, line extension and special contract preparation and administration and capital and O&M budget development and management.

Tucson Electric Power Company – Superintendent, Transmission and Distribution Control – Tucson, AZ
Responsible for the statewide operation, control and dispatch of TEP's 345kV, 138kV, 46kV and 13.8kV systems. Responsibilities also included supervision of for TEP's Trouble Response crews.

Virginia Electric Power Company – Northern Division Planning Engineer – Alexandria, Virginia
Planning Engineer responsible for planning the orderly expansion and improvement of VEPCO's 34.5kV and 12.47kV distribution systems in five Northern Division operating districts.

Central Intelligence Agency – Office of Scientific Intelligence – McLean, Virginia
Intelligence analyst specializing in advanced weapon system technologies and remote sensing.

EDUCATION

M.S., Electrical Engineering, Electric Utility Management, New Mexico State University
B.S., Electrical Engineering, New Mexico State University

PROFFESIONAL REGISTRATIONS

Professional Engineer, Arizona (19742)
Professional Engineer, New Mexico (13428)

PROFESSIONAL AFFILIATIONS

- Life Member, IEEE



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 

14-5

Docket No. E-01575A-08-0328
Compliance with Decision No. 71274
Sonoita Reliability Project
Public Forum Report for Affected Areas
March 24, 2010

In compliance with Arizona Corporation Commission Decision (“Commission”) No. 71274 dated September 8, 2009 (“Decision”), Sulphur Springs Valley Electric Cooperative, Inc. (“SSVEC” or “Cooperative”) submits its Public Forum Report for the Public Forums held “in the communities served by the planned 69kV line and associated upgrades” (“Affected Areas”) in the Cooperative’s service territory.

BACKGROUND

The Commission’s Decision sets forth the following:

We believe a feasibility study prepared on behalf of the Cooperative by an independent third party is necessary for further analysis and consideration of the issues presented, prior to proceeding with construction of the project. Therefore, we will require the Cooperative to docket a feasibility study on the project and possible alternatives and hold public forums in the impacted communities. The public forums shall include an opportunity for community members’ discussion on the feasibility study, including alternatives prior to construction of the project. At the conclusion of the public forums the Cooperative shall docket a report and minutes of the public forums.¹

IT IS FURTHER ORDERED that Sulphur Springs Valley Electric Cooperative, Inc. as a matter of compliance, shall docket by October 30, 2009, a report setting forth the manner and dates it shall conduct public forums in the communities served by the planned 69kV line and associated upgrades. The report shall discuss the topics to be addressed at the public forums and topics shall include, but not limited to, addressing how renewable energy generation (in particular, distributed generation) could be incorporated into the generation plans to serve the area covered by the planned 69 kV line and associated upgrades.

IT IS FURTHER ORDERED that by July 30, 2010, Sulphur Springs Valley Electric Cooperative, Inc., as a matter of compliance, shall docket a report discussing the outcome of the public forums and also discussing

¹ Decision at page 39, lines 12-19.



*how it plans to incorporate reasonable and effective renewable energy proposals resulting from the public forums.*²

Per the Decision, on October 30, 2009, SSVEC filed its compliance report that set forth the manner and anticipated timeframes of when the public forums were to be held in the Affected Areas (and elsewhere), as well as the topics that would be discussed to include, but not limited to, addressing how renewable energy generation (in particular, distributed generation) could be incorporated into the generation plans to serve the area covered by the planned 69 kV line and associated upgrades. A copy of the October 30, 2009, compliance report is attached as Exhibit A. SSVEC received no comments on the compliance report from the Commission or any member of the public. Accordingly, the Cooperative proceeded to schedule public forums consistent with its compliance report and the Decision.

On January 14, 2010, Susan Scott filed comments that resulted in the Administrative Law Judge (“ALJ”) issuing a Procedural Order on January 29, 2010. Following the ALJ’s review of Ms. Scott’s suggestions, the only additional requirements that were set forth in the Procedural Order was for the Cooperative to file a more detailed compliance report by February 10, 2010, to include: (i) a schedule of times and locations of the public forums, (ii) the Cooperative’s plan to advertise the times and locations of the public forums, and (iii) how the Cooperative was going to make the Independent Feasibility Study available to interested members. Additionally, the Procedural Order required “SSVEC [to] engage an independent moderator to conduct the public forums in order to assist in the open and impartial exchange of ideas.”³

On February 10, 2010, in compliance with the ALJ’s Procedural Order, SSVEC filed a second compliance report (“Second Report”), which is attached as Exhibit B. Consistent with the Procedural Order and the Decision, the report included information: (i) outlining where and when the public forums would be held in the Affected Areas (consistent with the requirements of the Decision), (ii) where and when additional public forums would be held for various Chambers of Commerce in other parts of the Cooperative’s service territory (not required by the Decision, but certainly not prohibited), (iii) regarding the proposed agenda to include topics related to bringing renewable generation (including distributed generation) to the Affected Areas (also consistent with the requirements of the Decision), (iv) regarding how SSVEC planned to notify its members and the public of the public forums, (v) the locations where the Independent Feasibility Study would be available for inspection and review, and (vi) that there would be an Independent Moderator conducting the meetings. At the time SSVEC filed the Second Report on February 10, 2010, SSVEC it had not yet been able to confirm who would be the Independent Moderator. However, the next day, SSVEC confirmed that Ms. Judith Gignac would be available to be the Independent Moderator for the two primary public forums to be held within the Affected Areas on March 9 and March 11, 2010. On February 12, 2010, SSVEC filed a Supplement to the Second Report advising the Commission and the Parties that Ms. Gignac would be the Independent Moderator and attached to the filing Ms. Gignac’s resume. A copy of Ms. Gignac’s resume is also attached to this Report as Exhibit C.

On February 17, 2010, the Intervenors docketed various objections to the Second Report regarding SSVEC’s plans to conduct the Public Forums per the requirements of the Decision, including objections to Ms. Gignac as the Independent Moderator and SSVEC’s plans to voluntarily conduct public forum-type meetings outside the Affected Areas. On March 3, 2010,

² Decision at page 48, lines 5-15.

³ Procedural Order dated January 29, 2010, at page 6, lines 14-16; lines 24-25.

Staff, at the request of the ALJ⁴, filed a response concluding that “SSVEC’s [Second] [R]eport on the planned conduct of the public forums complies with the related requirements expressed in Decision No. 71274.”⁵ By Procedural Order dated March 8, 2010, the ALJ found that “SSVEC’s plans for the public forums should be permitted as proposed.”⁶

THE PUBLIC FORUMS FOR THE AFFECTED AREAS – GENERAL

SSVEC noticed the March 9 and 11, 2010, Public Forums to be held in the Affected Areas two weeks prior to the meeting dates with a formal announcement that was contained in conjunction with a direct mailing to all SSVEC members, as well as on SSVEC’s website.⁷ SSVEC also advertised the Public Forums in the following newspapers:

- Nogales Bulletin, Regional newspaper in the Affected Areas
- Patagonia Regional Times, Regional newspaper in the Affected Areas
- Sierra Vista Herald, Regional newspaper in the greater Sierra Vista area

SSVEC made the Independent Feasibility Study available for inspection and review at the following locations:

- SSVEC Regional Office, 281 McKeown Avenue, Patagonia, AZ
- SSVEC Regional Office, 311 E Wilcox Dr, Sierra Vista, AZ
- SSVEC Regional Office, 350 N Haskell Ave, Willcox, AZ
- SSVEC Regional Office, 285 W Fifth Street, Benson, AZ
- SSVEC Regional Office, 4179 W Thistle Lane, Elfrida, AZ
- Patagonia Public Library, 342 Duquesne Avenue, Patagonia, AZ
- Sonoita Community Library, 3147 Highway 83, Sonoita, AZ

The Agenda for the Public Forums incorporated the following agenda topics:

- Introduction of Independent Moderator and Presenters

⁴ Procedural Order dated February 26, 2010, “Staff should file its recommendations concerning compliance with the directive in Decision No. 71274 concerning public forums by March 4, 2010”, at page 2, lines 5-7.

⁵ Staff Response dated March 3, 2010, at page 3 lines 12-13.

⁶ Procedural Order dated March 8, 2010, at page 3, lines 1-2. Additionally, the ALJ ordered SSVEC to have copies of the rate case transcripts made available at public libraries within the Affected Areas, which SSVEC promptly complied.

⁷ Although not required by the Decision, SSVEC chose to voluntarily conduct various informal Public Forums outside the Affected Areas. The Cooperative felt that SSVEC’s entire membership had a right to have information as to where and why the Cooperative’s money is being expended and why their electric rates may increase as a result. Moreover, these additional meetings were not designed to be the large-scale meetings that SSVEC held in the Affected Areas to comply with the Decision. They are (and will be) shorter informational meetings held at Chambers of Commerce offices consistent with other Chambers of Commerce presentations that SSVEC *routinely* makes each year to Chamber members. Moreover, neither Staff nor the ALJ believed this to be inappropriate. See Staff’ March 3, 2010, Response, and Procedural Orders dated January 29, 2010, and March 8, 2010.

- Overview of the Commission Proceedings
- Review of the Sonoita Reliability Project
- Presentation of the Independent Feasibility Study
- Renewable Energy Generation Plans for the Affected Areas including:
 - \$6 Million 750 kW solar array at proposed Sonoita substation
 - \$1.1 Million American Recovery and Reinvestment Act “Smart Grid”
 - Current and future Demand Side Management programs
- Overview of the SSVEC Member Opinion Poll

All attendees at the Public Forums were asked to sign in and fill out speaker slips if they wished to speak at the Public Forums. A copy of the sign-in sheets for each Public Forum is attached as Exhibits D-1 and D-2. SSVEC also had copies of the Independent Feasibility Study and the Independent Poll on hand in case any attendee needed to review the documents.⁸ The Independent Moderator, Ms. Gignac, opened each Public Forum as set forth in Exhibit E.⁹ She then introduced each of the presenters. Those presenters are the following individuals who presented on the following topics:

- Overview of the Arizona Corporation Commission Proceedings and Overview of Independent Public Opinion Poll - Jack Blair, CMSO
- Sonoita Reliability Project Review – Deborah White, SR/WA
- Independent Third Party Study / TRC’s Role (I3P Firm Selection) - Rick Goodwin, P.E. BSEE Team Lead
- Independent Third Party Feasibility Study Report - Pat Scharff, P.E. BSEE, MSEE Principal Engineer and Tom Engels, Ph.D., Sr. Environmental Scientist
- Renewable Energy and “Smart Grid” Plans for the Affected Areas – Ron Orozco, P.E., CEM

As the entity which prepared the Independent Feasibility Request for Proposal and Statement of Work, and maintained all coordination between Navigant, SSVEC, and the Community, SSVEC determined that TRC would be a neutral representative to present the Independent Feasibility Study and to provide clarification of any questions regarding the subject matter and/or conclusions contained within the Study. Resumes for the TRC presenters are attached as Exhibit F.

A power point presentation was projected on a large screen and each presenter provided detailed and comprehensive information regarding each slide. A copy of the presentation is attached as Exhibit G.¹⁰ Following the formal presentation, the Independent Moderator opened the meeting to members of the public for questions, comments, or any information that they wanted to present. At the conclusion of each Public Forum, Ms. Gignac thanked everyone for their attendance and participation.

⁸ Attendees were also advised that copies of the Independent Feasibility and Independent Poll were available on the SSVEC and Commission websites, in SSVEC regional offices, and in local public libraries.

⁹ Ms. Gignac’s opening statement was taken from her March 12, 2010, letter to the ALJ that was docketed and attached as Exhibit K below.

¹⁰ SSVEC has also posted the presentation on its website.

MARCH 9, 2010, PUBLIC FORUM - PATAGONIA HIGH SCHOOL, PATAGONIA AZ - 6:00PM

At the Public Forum held in Patagonia, there were a total of 53 attendees who signed in. Of those attendees, 37 were SSVEC members not otherwise affiliated with the Cooperative. There were a total of nine (9) speakers following the formal presentation. Five (5) of those speakers spoke in favor of SSVEC proceeding with construction of the Sonoita Reliability Project including the construction of the 69 kV line and substation; one (1) member spoke in opposition to the 69 kV line; one (1) member had a specific question regarding the Independent Feasibility Study; and two (2) members that had general statements or comments. In order to accurately represent the comments/questions in the Discussions following the formal presentation portion of the Public Forum, SSVEC audio taped the public participation portion of the Public Forum. Rather than attempt to summarize the questions, comments, and/or discussion between members of the public and the panel as minutes, SSVEC transcribed the audio tape and has attached the transcription as Exhibit H.

MARCH 11, 2010, PUBLIC FORUM - ELGIN ELEMENTARY SCHOOL, SONOITA AZ - 6:00PM

At the Public Forum held in Sonoita, there were a total of 70 attendees who signed in. Of those attendees, 60 were SSVEC members not otherwise affiliated with the Cooperative. There were a total of eighteen (18) speakers following the formal presentation. Four (4) of those speakers spoke in favor of SSVEC proceeding with construction of the Sonoita Reliability Project including the construction of the 69 kV line and substation; seven (7) member spoke in opposition to the 69 kV line; two (2) members had a specific question regarding the Independent Feasibility Study; and five (5) members had general statements or comments. As the Cooperative did in Patagonia, in order to accurately represent the comments/questions in the Discussions following the formal presentation portion of the Public Forum, SSVEC audio taped the public participation portion of the Public Forum. Rather than attempt to summarize the questions, comments, and/or discussion between members of the public and the panel as minutes, SSVEC transcribed the audio tape and has attached the transcription as Exhibit I. Additionally, one of the speakers, Mr. David V. MacCollum, P.E., CSP, handed out to everyone in the room a letter titled "SSVEC Meeting in Elgin, March 11, 2009," which is attached as Exhibit J.

CONCLUSION

SSVEC believes that it has fully complied with the spirit and intent of the requirements of the Decision with respect to conducting the Public Forums in the Affected Areas. Although there will inevitably be comments filed in the docket suggesting that the Public Forums which were held in the Affected Areas did not comply with the Decision, on March 12, 2010, a letter from the Independent Moderator of the Public Forums was sent to the ALJ, and filed in the docket, where Ms. Gignac provided her views regarding the Public Forums. A copy of that letter is attached Exhibit K.

Although SSVEC presented its plans to bring renewable generation, including distributed generation application, to the Affected Areas, there were no viable renewable energy proposals or ideas brought forth at the Public Forums by any of the attendees of which SSVEC could incorporate into the generation plans to serve the area covered by the planned 69 kV line and associated upgrades that would negate the necessity of building the 69 kV line.

SSVEC believes it has fully complied with the Commission's requirements to file the Independent Feasibility Study, conduct the Public Forums, and to file this Report, which chronicles the Public Forums. Accordingly, SSVEC is seeking the Commission's authorization pursuant to the Decision to immediately commence construction of the referenced 69 kV line in order to alleviate the existing and increasing reliability and capacity problems in the Affected Areas.

Exhibit A

Snell & Wilmer
— L.L.P. —
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Bradley S. Carroll
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October 30, 2009

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ARIZONA CORPORATION COMMISSION
1200 West Washington Street
Phoenix, Arizona 85007

**Re: Compliance with Decision No. 71274 Regarding Public Forum Report (“Report”)
Sulphur Springs Valley Electric Cooperative, Inc. (“SSVEC”)
Docket No. E-01575A-08-0328**

Dear Sir/Madam:

Pursuant to Arizona Corporation Commission Decision No. 71274, dated September 8, 2009 (“Decision”), SSVEC, through counsel undersigned, hereby files in compliance with the first ordering paragraph on page 48 of the Decision, the enclosed Report regarding the public forums SSVEC intends to conduct in the communities served by the planned 69 kV line and associated upgrades.

If you have any questions, please do not hesitate to contact me.

Sincerely,



Bradley S. Carroll

BSC/dcp
Enclosure

cc: Brian Bozzo, Compliance Manager (hand delivered)
Docket – original and 13 copies
Jack Blair, SSVEC (via email)



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 

Docket No. E-01575A-08-0328

Decision No. 71274

Sonoita Reliability Project Public Forum Report

In compliance with the Arizona Corporation Commission Decision No. 71274 ("Decision"), Sulphur Springs Valley Electric Cooperative, Inc ("SSVEC") submits the following schedule of Public Forums "in the communities served by the planned 69kV line and associated upgrades", and in communities throughout SSVEC's service territory which will be or have been impacted by the results of the Decision.

Topics which shall be addressed at the Public Forums will focus on solutions identified in the Independent Third Party Feasibility Study required by the Decision, to be docketed December 31, 2009, along with associated short-term and long-term costs, time effectiveness, environmental factors, health and safety considerations, and legal and regulatory requirements.

Included as discussion in the Public Forums, is how renewable energy generation could be incorporated into the generation plans to serve the area covered by the planned 69kV line and associated upgrades, and other areas in SSVEC's service territory.

Public Forums will begin the week of February 1, 2010, and shall continue through March 28, 2010. The official dates shall be based upon a determination of the availability of locations and commitment of meeting facilities.

Public Forums shall be held at the following locations/organizations:

Sonoita/Elgin:

Elgin School
Sonoita Chamber of Commerce
Sonoita Community Crossroads Forum

Sonoita/Patagonia Association of Realtors

Town of Patagonia
Patagonia Chamber of Commerce

City of Sierra Vista
Sierra Vista Chamber of Commerce

City of Benson
Benson Chamber of Commerce

City of Willcox
Willcox Chamber of Commerce

Exhibit B

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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

KRISTIN K. MAYES—Chairman
GARY PIERCE
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP

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-08-0328

IN THE MATTER OF THE APPLICATION
OF SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC. FOR AN
ORDER INSTITUTING A MORATORIUM
ON NEW CONNECTIONS TO THE V-7
FEEDER LINE SERVING THE
WHETSTONE, RAIN VALLEY, ELGIN,
CANELO, SONOITA, AND PATAGONIA,
ARIZONA AREAS.

DOCKET NO. E-01575A-09-0453

**NOTICE OF FILING PUBLIC
FORUM REPORT**

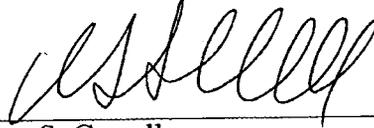
Pursuant to the January 29, 2010, Procedural Order in the above-captioned matters,
Sulphur Springs Valley Electric Cooperative, Inc. hereby submits its public forum report.

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RESPECTFULLY SUBMITTED this 10th day of February, 2010.

SNELL & WILMER LLP.

By



Bradley S. Carroll
One Arizona Center
400 East Van Buren
Phoenix, Arizona 85004-2202
Attorneys for Sulphur Springs Valley
Electric Cooperative, Inc.

ORIGINAL and 14 copies filed this
10th day of February, 2010, with:

Docket Control
ARIZONA CORPORATION COMMISSION
1200 West Washington
Phoenix, Arizona 85007

COPIES of the foregoing hand-delivered
this 10th day of February, 2010, to:

Steve Olea, Director
Utilities Division
ARIZONA CORPORATION COMMISSION
1200 West Washington Street
Phoenix, Arizona 85007

Wesley C. Van Cleve, Attorney
Legal Division
ARIZONA CORPORATION COMMISSION
1200 West Washington Street
Phoenix, Arizona 85007

COPY of the foregoing mailed/e-mailed
this 10th day of February, 2010, to:

Jane L. Rodda, Administrative Law Judge
Hearing Division
ARIZONA CORPORATION COMMISSION
400 West Congress
Tucson, AZ 85701-1347

Snell & Wilmer

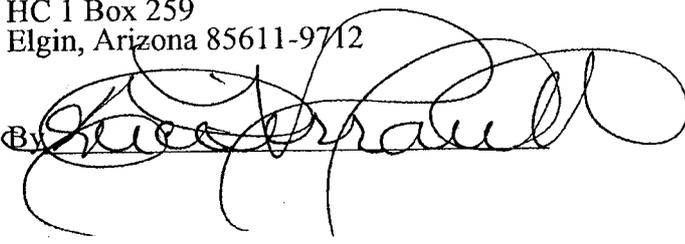
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James F. Rowley, III
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Elgin, Arizona 85611-9712

By 



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 

Docket Nos. E-01575A-08-0328 and E-01575A-09-0453
Decision No. 71274 and Procedural Order January 29, 2010
Sonoita Reliability Project ("SRP")
Public Forum Report
February 10, 2010

In compliance with the Arizona Corporation Commission Decision ("Commission") No. 71274 ("Decision") and the Procedural Order dated January 29, 2010, Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC") submits the following schedule of Public Forums to be held "in the communities served by the planned 69kV line and associated upgrades," and in communities throughout SSVEC's service territory.

SSVEC has scheduled Public Forums in the areas directly impacted by the SRP ("Affected Areas") on the following dates and at the following locations:

March 9, 2010	Patagonia High School, 200 Naugle Ave, Patagonia AZ	6:00pm
March 11, 2010	Elgin Elementary School, 23 Elgin Rd, Sonoita AZ	6:00pm

Meetings with various local organizations in the Affected Areas may also be scheduled.

SSVEC has scheduled presentations to Local Chambers of Commerce on the following dates and at the following locations:

March 2, 2010	Willcox Chamber of Commerce, Willcox, AZ	12:00pm
March 25, 2010	Sierra Vista Chamber of Commerce, Sierra Vista, AZ	8:00am
March 25, 2010	Benson Chamber of Commerce, Benson, AZ	12:00pm

Further meetings with various local organizations may also be scheduled.

SSVEC will advertise the Public Forums in the following newspapers:

- Nogales Bulletin, Regional newspaper in the Affected Areas
- Patagonia Regional Times, Regional newspaper in the Affected Areas
- Sierra Vista Herald, Regional newspaper in the greater Sierra Vista area

SSVEC will mail its members a formal announcement letter to include the Public Forum dates, times, meeting locations, agenda, and locations where the Independent Feasibility Study will be made available for inspection and review, and post the announcements on its website and in its regional offices.

SSVEC intends to make the Independent Feasibility Study available for inspection and review at the following locations:

- SSVEC Regional Office, 281 McKeown Avenue, Patagonia, AZ
- SSVEC Regional Office, 311 E. Wilcox Dr, Sierra Vista, AZ
- SSVEC Regional Office, 350 N. Haskell Ave, Willcox, AZ
- SSVEC Regional Office, 285 W. Fifth Street, Benson, AZ
- SSVEC Regional Office, 4179 W. Thistle Lane, Elfrida, AZ
- Patagonia Public Library, 342 Duquesne Avenue, Patagonia, AZ
- Sonoita Community Library, 3147 Highway 83, Sonoita, AZ

SSVEC intends to advertise the Public Forums and make available a hard copy of the Independent Feasibility Study at least two weeks prior to first meeting date. The Independent Feasibility Study has been, and will continue to be, available on SSVEC's website. It is also available on the Commission's E-Docket.

SSVEC will engage an independent moderator to conduct the Public Forums in the Affected Areas and to assist in the open and impartial exchange of ideas.

Topics which shall be addressed at the Public Forums will focus on solutions identified in the Independent Feasibility Study. Included in the discussion at the Public Forums, is how renewable energy generation could be incorporated into the generation plans to serve the area covered by the planned 69kV line and associated upgrades and other areas in SSVEC's service territory.

The Agenda for the Public Forums is as follows:

- Introduction of Moderator and Presenters
- Review of the Sonoita Reliability Project
- Overview of the Proceedings before the Arizona Corporation Commission
- Presentation of the Independent Feasibility Study
- Renewable Energy Generation Plans for the Area to include:
 - \$6 Million 750kW Solar Array at proposed Sonoita Substation
 - \$1.2 Million American Recovery and Reinvestment Act 'Smart Grid'

- Demand Side Management possibilities
- Open Discussions between SSVEC and members of the public regarding solutions identified in the Independent Feasibility Study and how renewable energy generation could be incorporated into the generation plans to serve the Affected Areas covered by the planned 69kV Line and associated upgrades.

SSVEC intends to prepare a record of the Public Forums which, if practical, will be posted on its website and will be utilized in the preparation of the compliance report SSVEC will file as required by the Decision.

Exhibit C

1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2 COMMISSIONERS

3 KRISTIN K. MAYES—Chairman
4 GARY PIERCE
5 PAUL NEWMAN
6 SANDRA D. KENNEDY
7 BOB STUMP

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

DOCKET NO. E-01575A-08-0328

17 IN THE MATTER OF THE APPLICATION
18 OF SULPHUR SPRINGS VALLEY
19 ELECTRIC COOPERATIVE, INC. FOR AN
20 ORDER INSTITUTING A MORATORIUM
21 ON NEW CONNECTIONS TO THE V-7
22 FEEDER LINE SERVING THE
23 WHETSTONE, RAIN VALLEY, ELGIN,
24 CANELO, SONOITA, AND PATAGONIA,
25 ARIZONA AREAS.

DOCKET NO. E-01575A-09-0453

**NOTICE OF FILING
SUPPLEMENTAL
INFORMATION REGARDING
INDEPENDENT MODERATOR
FOR PUBLIC FORUM REPORT**

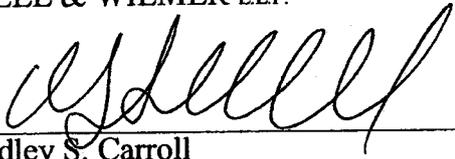
17 Pursuant to the January 29, 2010, Procedural Order in the above-captioned
18 consolidated matters, Sulphur Springs Valley Electric Cooperative, Inc. (“SSVEC”) filed
19 on February 10, 2010, its Public Forum Report (“Report”). The Report states that
20 “SSVEC will engage an independent moderator to conduct the Public Forums in the
21 Affected Areas and to assist in the open and impartial exchange of ideas.” Since the filing
22 of the Report, SSVEC has confirmed, as the independent moderator to conduct the Public
23 Forums in the Affected Areas, Ms. Judith A. Gignac. Ms. Gignac’s biographical
24 information is attached hereto and should be considered as a supplement to the Report.

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RESPECTFULLY SUBMITTED this 12th day of February, 2010.

SNELL & WILMER LLP.

By 

Bradley S. Carroll
One Arizona Center
400 East Van Buren
Phoenix, Arizona 85004-2202
Attorneys for Sulphur Springs Valley
Electric Cooperative, Inc.

ORIGINAL and 14 copies filed this
12th day of February, 2010, with:

Docket Control
ARIZONA CORPORATION COMMISSION
1200 West Washington
Phoenix, Arizona 85007

COPIES of the foregoing hand-delivered
this 12th day of February, 2010, to:

Steve Olea, Director
Utilities Division
ARIZONA CORPORATION COMMISSION
1200 West Washington Street
Phoenix, Arizona 85007

Wesley C. Van Cleve, Attorney
Legal Division
ARIZONA CORPORATION COMMISSION
1200 West Washington Street
Phoenix, Arizona 85007

COPY of the foregoing mailed/e-mailed
this 12th day of February, 2010, to:

Jane L. Rodda, Administrative Law Judge
Hearing Division
ARIZONA CORPORATION COMMISSION
400 West Congress
Tucson, AZ 85701-1347

Snell & Wilmer

LLP
LAW OFFICES
One Arizona Center, 400 E. Van Buren
Phoenix, Arizona 85004-2202
(602) 382-6000

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Susan Scott
P.O. Box 178
Sonoita, AZ 85637

Susan J. Downing
HC 1 Box 197
Elgin, Arizona 85611

James F. Rowley, III
HC 1 Box 259
Elgin, Arizona 85611-9712

By *G. M. Bell*

Judith A. Gignac

Ms. Gignac, recently retired as General Manager of Bella Vista Ranches Limited Partnership in Sierra Vista having been with the company since 1988. After serving 17 years as Vice President and General Manager of Bella Vista Water Company she retired from that position in 2004. She was appointed to an eight-year term on the Arizona Board of Regents in 1994, and served as its President during 1998-1999 and nine years on the State Board of Directors for AZ Community Colleges. She has served on the board of University Medical Center in Tucson since 1997 and currently is the Board Chair. She is a member of the Upper San Pedro Partnership and past chair of the Executive Committee. She has been a long-time member of Arizona Town Hall, served on the Board and as Chair in 2001-2003. Ms. Gignac served for twelve years on the Cochise County Board of Supervisors (1977-1988). She received an Honorary Doctor of Letters from the University of Arizona, December 2004 and a Lifetime Achievement Award from the Sierra Vista Chamber of Commerce in 2007.

She has held positions on numerous boards and committees including the Greater Sierra Vista United Way, the Sierra Vista Citizens' Advisory Committee, Sierra Vista Chamber of Commerce and is an honorary director of University South Foundation. Other positions consist of serving as a member of the statewide Riparian Area Advisory Committee, co-chair of the Water Issues Group for the Sierra Vista area, and director of the Water Utilities Association of Arizona.

She has been honored by the Commission on the Status of Women Vision Award (2000) and the University of Arizona Commission's Vision Award (2002), Fort Huachuca 50 DeConcini Award (1995), named as Sierra Vista Chamber of Commerce Citizen of the Year (1994), Republican Woman of the Year (1988), DAR Medal of Honor, Toastmasters International Leadership & Communications Award, Who's Who in the West, Who's Who of American Women, and Who's Who in Politics. The Rotary Club of Sierra Vista honored her in October 2005 with their first Certificate of Professional Excellence.

Exhibit D-1

Visitors' Register

69kV Line Public Forum Patagonia

DATE	NAME	FIRM	ADDRESS	TO SEE
3/9/10	Vic Plumb	SSVEC	STREET CITY STATE	TIME IN TIME OUT
2	ANSELMO TORRES	" "	STREET CITY STATE	TIME IN TIME OUT
	Kelly SHANNON	SSVEC	STREET CITY STATE	TIME IN TIME OUT
	Andrea Shannon	SSVEC	STREET CITY STATE	TIME IN TIME OUT
	RON OROZCO	SSVEC	STREET CITY STATE	TIME IN TIME OUT
	MIKE RUDKIN	SIENKISTA	STREET CITY STATE	TIME IN TIME OUT
	Eileen Brien	SSVEC	STREET CITY STATE	TIME IN TIME OUT
	GARY SOLIBRE	Sonita	STREET CITY STATE	TIME IN TIME OUT
	MARCUS HANSEN	SSVEC	STREET CITY STATE	TIME IN TIME OUT
	Judy Gignac	Moderator	STREET CITY STATE	TIME IN TIME OUT
	PETE SWIATEK	SSVEC	STREET CITY STATE	TIME IN TIME OUT
	Pat English	SSVEC	STREET CITY STATE	TIME IN TIME OUT
	SUSAN SCOTT	SONAITA	STREET CITY STATE	TIME IN TIME OUT
	Gail Getzwiller	Sonita	STREET CITY STATE	TIME IN TIME OUT
	Jim Rowley	Elgin	STREET CITY STATE	TIME IN TIME OUT

Visitors' Register

DATE	NAME	FIRM	ADDRESS	TO SEE
3/9/10	MICHAEL O'HALLORAN	PATAGONIA	STREET CITY STATE	TIME IN TIME OUT
	Edith O'Halloran	Patagonia	STREET CITY STATE	TIME IN TIME OUT
	ROBERT KIRWAN	PATAGONIA	STREET W BULLITT CITY NOGARS STATE ILL	TIME IN TIME OUT
	RON PEARSON	PATAGONIA	STREET CITY STATE	TIME IN TIME OUT
	Imma Sang	PATAGONIA	STREET CITY STATE	TIME IN TIME OUT
	Gene Manning	SSUEC	STREET CITY Sierra Vista STATE AZ	TIME IN TIME OUT
	F. S. Sny	PATAGONIA	STREET 492 N 300 AVE CITY Patagonia STATE Ariz	TIME IN TIME OUT
	Ricardo Garcia	SSUEC	STREET 93975 R. Verdugo Rd CITY Herford STATE AZ	TIME IN TIME OUT
	Jim Pendleton	Patagonia	STREET CITY STATE	TIME IN TIME OUT
	Arnold S. Hendry	Benson	STREET 900 W. 4th St. CITY Benson STATE Ariz	TIME IN TIME OUT
	Don Bamer	Benson	STREET 1050 S Greenwood CITY Benson STATE AZ	TIME IN TIME OUT
	GENE WHERLOCK	S.V.	STREET CITY STATE	TIME IN TIME OUT
FLOYD GREGORY	S.V.	STREET CITY STATE	TIME IN TIME OUT	
WAYNE PORTER	PEARC	STREET CITY STATE	TIME IN TIME OUT	
HERBERT LOVE LAND		STREET CITY BRAWSON STATE AZ	TIME IN TIME OUT	

Visitors' Register

DATE	NAME	FIRM	ADDRESS	TO SEE	
3/9/10	Crosen Huron	SSUEC	STREET	TIME IN	TIME OUT
			CITY		
	Dana Cole	Whetstone SV Herald	STREET	TIME IN	TIME OUT
			CITY		
	Connie Dekkusu	Whetstone	STREET	TIME IN	TIME OUT
			CITY		
	Ron Simms	Sonoma	STREET	TIME IN	TIME OUT
			CITY		
	Hildegard Simms	Sonoma	STREET	TIME IN	TIME OUT
			CITY		
	Kathy Schul	CFC	STREET	TIME IN	TIME OUT
			CITY		
	LINDA KENNEDY	ELGIN	STREET	TIME IN	TIME OUT
			CITY		
	Bob Bernal	SSUEC	STREET	TIME IN	TIME OUT
			CITY		
	Wm Le Mc Soughlin	Sonoma	STREET	TIME IN	TIME OUT
			CITY		
	Carl Bowden	Patagonia	STREET	TIME IN	TIME OUT
			CITY		
	EMMETT McLoughlin	Sonoma	STREET	TIME IN	TIME OUT
			CITY		
	Nancy McGary	Patagonia	STREET	TIME IN	TIME OUT
			CITY		
	Ralph Schmitt	Patagonia	STREET	TIME IN	TIME OUT
			CITY		
	R. Latta	Sonoma	STREET	TIME IN	TIME OUT
			CITY		
	Anne Swa	Patagonia	STREET	TIME IN	TIME OUT
			CITY		

Exhibit D-2

Visitors' Register

69kV Line Public Forum Sonoita

DATE	NAME	FIRM FROM	ADDRESS	TO SEE
3/11/10	Anselmo Ramirez	SSVEC	STREET	
			CITY STATE TIME IN TIME OUT	
	Vic Phil	SSVEC	STREET	
			CITY STATE TIME IN TIME OUT	
	Daniel Wilson	SSVEC	STREET	
			CITY STATE TIME IN TIME OUT	
	Pete Swartz	SSVEC	STREET	
			CITY STATE TIME IN TIME OUT	
	David D. McCollu	Sierra Vista	STREET	
			CITY STATE TIME IN TIME OUT	
	LEE SIMS	Sonoita	STREET	
			CITY STATE TIME IN TIME OUT	
	Josephine Lockman	Sonoita	STREET	
			CITY STATE TIME IN TIME OUT	
	Phyllis Martin Ted Masters	Sonoita "	STREET	
			CITY STATE TIME IN TIME OUT	
	Joe Lunn	ELGIN	STREET	
			CITY STATE TIME IN TIME OUT	
	Gene Manning	SSVEC	STREET	
			CITY STATE TIME IN TIME OUT	
	Thomas Klinkel	Sonoita	STREET	
			CITY STATE TIME IN TIME OUT	
	Lindsay Kinch	Sonoita	STREET	
			CITY STATE TIME IN TIME OUT	
	LINDA KENNEDY	ELGIN	STREET	
			CITY STATE TIME IN TIME OUT	
	gail getzwill	Sonoita	STREET	
			CITY STATE TIME IN TIME OUT	
	Dan Kin Dow	Sierra Vista	STREET	
			CITY STATE TIME IN TIME OUT	

Visitors' Register

DATE	NAME	CITY FROM	ADDRESS	TO SEE	
3/11/10	LINDA BOZARTH ALAIN CHUZE	ELGIN	STREET CITY STATE	TIME IN	TIME OUT
}	PAT BASINGER	Elgin	STREET CITY STATE	TIME IN	TIME OUT
	Jane Wood	Elgin	STREET CITY STATE	TIME IN	TIME OUT
	Fredrick B. Willetts	Sievin Vista	STREET CITY STATE	TIME IN	TIME OUT
	Stu & Elaine Misener	Elgin	STREET CITY STATE	TIME IN	TIME OUT
	BOB OWENS	Elgin	STREET CITY STATE	TIME IN	TIME OUT
	SANDRA S. WOLF	Sonoita	STREET CITY STATE	TIME IN	TIME OUT
	LOREN KILBY	Sonoita	STREET CITY STATE	TIME IN	TIME OUT
	Catherine Bevan	Sonoita	STREET CITY STATE	TIME IN	TIME OUT
	John V. Bevan	Sonoita	STREET CITY STATE	TIME IN	TIME OUT
	CONSTANCE WICKS	SONOITA	STREET CITY STATE	TIME IN	TIME OUT
	JOHN FINK	ELGIN	STREET CITY STATE	TIME IN	TIME OUT
	J. Dale MILES	Sonoita	STREET CITY STATE	TIME IN	TIME OUT
	Anne Gibson	Elgin	STREET CITY STATE	TIME IN	TIME OUT
	Jeanette Brs mann	SONOITA	STREET CITY STATE	TIME IN	TIME OUT

Visitors' Register

DATE	NAME	FIRM FROM	ADDRESS	TO SEE
2/11/10	Rob Horstmann R Horstmann	Sonoma, Tr	STREET	
			CITY	
3/11/10	Markus Han	Elgeri	STREET	
			CITY	
3/11/10	Matt & Helen Galloway	St. David	STREET	
			CITY	
3/11	Kest. e Kramer	Sonoma	STREET	
			CITY	
3/11	Ricardo Garcia	Hereford SSUEL	STREET	
			CITY	
3/11	Sam Grossman	Patagonia	STREET	
			CITY	
3/11	Roanna Kayajian	Sonoma	STREET	
			CITY	
3/11	Rebecca Lata	Sonoma	STREET	
			CITY	
3/11	W. Debra Lata	"	STREET	
			CITY	
			STREET	
			CITY	
			STREET	
			CITY	
			STREET	
			CITY	
			STREET	
			CITY	
			STREET	
			CITY	

Visitors' Register

69kV Line Public Forum Sonoita

DATE	NAME	FIRM	ADDRESS	TO SEE
3/11/10	Laura Sunk	Sonoita	STREET CITY STATE	TIME IN TIME OUT
	JOHN BOBRY	SONOITA	STREET CITY STATE	TIME IN TIME OUT
	Paul O'Cally	SSVEC	STREET CITY STATE	TIME IN TIME OUT
	Wayne Porter	PEYRC	STREET CITY STATE	TIME IN TIME OUT
	Tom & Nancy CALHOUN	SONOITA	STREET CITY STATE	TIME IN TIME OUT
	CRONON HUSON	SSVEC SONOITA VASTA	STREET CITY STATE	TIME IN TIME OUT
	Midge Cole	Sonoita	STREET CITY STATE	TIME IN TIME OUT
	GEOFFREY OLDATHER	BENSON ARIZONA	STREET CITY STATE	TIME IN TIME OUT
	EVELYN KARL	Sonoita	STREET CITY STATE	TIME IN TIME OUT
	WACT. KARL	SONOITA	STREET CITY STATE	TIME IN TIME OUT
	Leo Swatowski	"	STREET CITY STATE	TIME IN TIME OUT
	Henry Swatowski	"	STREET CITY STATE	TIME IN TIME OUT
	Carl Ervig	Sonoita	STREET CITY STATE	TIME IN TIME OUT
	William [unclear]	"	STREET CITY STATE	TIME IN TIME OUT
	Jim Rowley	Elsin	STREET CITY STATE	TIME IN TIME OUT

Visitors' Register

DATE	NAME	FIRM	ADDRESS	TO SEE
		From		
	Frances Garcia	58 Broncho Trail	STREET	
		Sonoita	CITY STATE	TIME IN TIME OUT
	Charles Kentner	307 Waverly Loop Rd	STREET	
		ELGIN, IL	CITY STATE	TIME IN TIME OUT
	Nathleen James	POB 98	STREET	
		Paragona 85624	CITY STATE	TIME IN TIME OUT
	Gary Retherford	"	STREET	
		"	CITY STATE	TIME IN TIME OUT
	Jecian J. Heide/Kobowitz	HCI Box 13	STREET	
		ELGIN, IL	CITY STATE	TIME IN TIME OUT
	Jay Smith	3 Roundup Ct	STREET	
		85611	CITY STATE	TIME IN TIME OUT
	Debi Cafardini	3 Roundup Ct	STREET	
		85611	CITY STATE	TIME IN TIME OUT
	STUART MOYLE	SONOITA	STREET	
			CITY STATE	TIME IN TIME OUT
	A.E. MOSS	ELGIN	STREET	
			CITY STATE	TIME IN TIME OUT
	Ray R. Moss	Elgin	STREET	
			CITY STATE	TIME IN TIME OUT
	ADRIANNE HARPER	PARAGONA	STREET	
			CITY STATE	TIME IN TIME OUT
	Dorothy Sturgis	Sonoita	STREET	
			CITY STATE	TIME IN TIME OUT
	Theresa Pughett Murrith	Sonoita	STREET	
			CITY STATE	TIME IN TIME OUT
	Ruben Murrith	Sonoita	STREET	
			CITY STATE	TIME IN TIME OUT
			STREET	
			CITY STATE	TIME IN TIME OUT

Exhibit E

**PUBLIC MEETING COMMENTS
PATAGONIA AND ELGIN
MARCH 9 AND 11, 2010
Opening Comments**

Good Evening and welcome to what is the first/second of two public forums. These forums are being conducted per the requirements of the Arizona Corporation Commission regarding Sulphur Springs Valley Electric Cooperative's plans to construct a new substation and 69 kV sub transmission power line. The line and substation will serve the Sonoita/Patagonia/Elgin Areas. They are part of what has been called the Sonoita Reliability Project.

My name is Judy Gignac and I have been asked to moderate this public forum. First, let me tell you a little about myself:

- 40 year resident of the area
- 12 years as member of Cochise County Board of Supervisors
- 8 years on the Arizona Board of Regents and served as President
- 30+ years as a member of Arizona Town Hall and served as Chair for two years presiding over several 150-200 person plenary sessions.
- 22 years as Vice President and General Manager of Bella Vista Water Company (retired in 2004) and General Manager of Bella Vista Ranches (retired in 2009).

As I am sure most of you know, last year, Sulphur Springs had a case pending before the Commission. Various members of the public expressed their concerns to the Commission. These concerns included the need for the proposed 69 kV line; the proposed routing of the proposed line; the level of information that the Cooperative had provided to its members regarding the Project; whether other routes had been adequately explored; and whether renewable generation, including the use of distributed generation application, could either supplant or delay the necessity of building the line. Various members of the public asked the Commission to order Sulphur Springs to delay its planned construction of the proposed line until such time as an Independent Feasibility Study could be conducted. This study was meant to verify the Cooperative's conclusions regarding the need and routing of the proposed line. Ultimately, the Commission ordered Sulphur Springs to have an Independent Feasibility Study conducted and file the results of the Study with the Commission by December 31, 2009. This has been accomplished as ordered. The Commission also ordered the following and I will read these two paragraphs directly from Commission Decision No. 71274:

IT IS FURTHER ORDERED that Sulphur Springs Valley Electric Cooperative, Inc. as a matter of compliance, shall docket by October 30, 2009, a report setting forth the manner and dates it shall conduct public forums in the communities served by the planned 69kV line and associated upgrades. The report shall discuss the topics to be addressed at the public forums and topics shall include, but not limited to, addressing how renewable energy generation (in particular distributed generation) could be incorporated into the generation plans to serve the area covered by the planned 69 kV line and associated upgrades.

IT IS FURTHER ORDERED that by July 30, 2010, Sulphur Springs Valley Electric Cooperative, Inc., as a matter of compliance, shall docket a report discussing the outcome of the public forums and also discussing how it plans to incorporate reasonable and effective renewable energy proposals resulting from the public forums.

This is why we are here tonight.

The Commission subsequently ordered these public forums be conducted by an independent moderator which is my role. Although like most of you I am a Cooperative member, I am not otherwise affiliated in any way with Sulphur Springs, nor do I reside within what has been termed "the Affected Areas" to be impacted by the Project. I have formed no opinion whatsoever about this Project and my role here is to simply make certain that this public forum is conducted in an orderly and efficient manner to facilitate the free exchange of information between all concerned.

Now let me introduce you to the following individuals who have prepared presentations on various aspects of the issues that are the subject of this public forum.

Jack Blair, SSVEC, Chief Member Services Officer, Overview of ACC Proceedings (first) and Public Opinion Poll (last)

Deborah White SR/WA-NAC, SSVEC, Real Property/GIS Manager, Sonoita Reliability Project review,

Rick F. Goodwin P.E., TRC Solutions, Project Manager, Independent Feasibility Study

Patrick K. Scharff P.E., TRC Solutions, Principal Engineer, Independent Feasibility Study

Thomas M. Engels Ph.D., TRC Solutions, Senior Scientist, Independent Feasibility Study

Ron Orozco P.E., SSVEC, Engineering Manager, Renewable Energy Generation Plans

After all of these individuals have given their presentations, I will open up the forum to comments and questions from the audience. For those who wish to speak request slips were offered when you came into the forum. Hopefully you took one and filled it out. If you have not turned in your slip into Roxanne (raise you hand, Roxanne) or if you didn't pick up a slip and wish to speak, please raise your hand and the slips will be picked up or handed out as needed. I will call a couple of names at a time so that we always have a few people waiting to speak. When you come up to microphone, I ask that you present your question and/or comments to the appropriate member of the panel. Please try and speak as clearly as you can as this public forum is being recorded both in audio and video form. You may want to consider passing if your question has already been asked and answered. Please know that in order to ensure there is a free exchange of ideas and that all interested parties understand each other, members of the panel may ask you a question as well.

With the housekeeping out of the way and since we have a lot to cover tonight, I will ask our first presenter to begin.

Exhibit F

RICK GOODWIN, P.E.

EDUCATION

B.S., Electrical Engineering, Rose-Hulman Institute of Technology, 1980
Technical Translation Certification in German, Rose-Hulman Institute of Technology, 1980

PROFESSIONAL REGISTRATIONS

Professional Engineer, Arizona, (#27010)
Professional Engineer, California, (#E18202)
Professional Engineer, Colorado, (#41008)
Professional Engineer, Nevada, (#19822)
Professional Engineer, New Mexico, (#18003)
Professional Engineer, Oklahoma, (#23951)
Professional Engineer, Utah, (#6658287-2202)

AREAS OF EXPERTISE

Mr. Rick Goodwin, PE has project management and technical experience in the following general areas:

- Engineering Management
- Project Management
- Expert Testimony
- Distribution Design
- Distribution Facility Survey
- Distribution Layout Development
- Geographic Information Systems (GIS)
- Reliability Studies
- Switching Studies
- Distributed Generation Assessments
- Distribution Planning Studies
- Operational Studies

REPRESENTATIVE EXPERIENCE

Mr. Goodwin has over 25 years of experience in distribution engineering, system planning and Geographic Information Systems (GIS). Over twenty years of his experience has been working directly with electrical utilities and five years working for a software company that developed GIS based electric utility applications including outage management, engineering design and cost estimating tools. Mr. Goodwin's experience includes senior engineering and management level responsibility in distribution engineering, distribution sub-transmission and substation planning, project management, transmission and substation siting justification and testimony, underground residential subdivision design and management/implementation and cost benefit analysis of GIS systems and business process. He currently specializes in Area Studies, Construction Work Plans, Long Range Plans, Sectionalizing/Coordination

Studies, Subdivision Design, Power Requirements Studies and GIS Consulting. He serves as Manager, New Mexico Operations - Power Delivery.

Pacific Gas & Electric Company – Expert Witness – San Francisco, CA (Project Role: 2007-2009)

Provided distribution planning and engineering project review and Expert Witness deposition testimony on behalf of PG&E in a case involving wage and hour dispute in the matter of Conley, John, et al. v. PG&E, (Law Manager No. 000123) United States District Court for the District of California. January 2009. Case settled February 2009.

Anza Electric Cooperative, Inc., Construction Work Plan - Anza CA (Project Role: 2007-2008)

Prepared four year work plan that included four year load forecast by feeder and substation, performed voltage and capacity analysis for normal and emergency operations for the 34.5 kV and 12.47 kV systems, identified location and timing for new capital additions including a new 34.5/12.47 kV substation, single phase to three phase conversions, additional VAR support, voltage regulator installations and economically justified reconductor projects

Springer Electric Cooperative Inc., Construction Work Plan - Springer NM (Project Role: 2007) Prepared four year work plan that included four year load forecast by feeder and substation, performed voltage and capacity analysis for normal and emergency operations for the 69 kV and 12.47 kV systems, identified location and timing for new capital additions including substation capacity increases, single phase to three phase conversion projects, new feeder additions, additional VAR support, voltage regulator installations and economically justified reconductor projects.

Central New Mexico Electric Cooperative Inc., Construction Work Plan - Moriarty NM (Project Role: 2006-2007)

Prepared a four year work plan that included four year load forecast by feeder and substation, performed voltage and capacity analysis for normal and emergency operations for the 115 kV, 69 kV, 24.9 kV and 12.47 kV systems, identified location and timing for new capital additions including two substation capacity increases, new 115 kV transmission line, single phase to three phase conversion projects, new feeder additions, additional VAR support, voltage regulator installations and economically justified reconductor projects

Gila River Indian Community Utility Authority, Long Range Plan- Chandler, AZ (Project Role: 2005-2007)

Prepared twenty-five year load projections and evaluated the necessary interconnections, transmission, substation and distribution systems needed to support the estimated load growth. He identified new 230 kV points of power

interchanges, new substation locations, new transmission and distribution routes as well as existing electrical facilities to verify compliance with NESC.

Sierra Electric Cooperative, Inc., Power Requirements & Feeder Study- Truth or Consequences, NM (Project Role: 2005-2006)

Performed a power requirements study for the addition of a 1200 home golf course community and water treatment facility. He calculated feeder cable size based upon economic loading criteria and developed feeder configuration recommendations to serve the new project including voltage conversion and addition of capacitors. The study also recommended fuse sizes for large spot loads, reviewed automatic transfer switch specifications for irrigation pumps and motor starting analysis calculations. Mr. Goodwin calculated fault currents to coordinate switchgear fusing with upstream electronic reclosers and substation reclosers.

Kit Carson Electric Cooperative, Inc., Construction Work Plan- Taos, NM (Project Role: 2005-2006)

Prepared a four year work plan that included four year load forecast by feeder and substation, performed voltage and capacity analysis for normal and emergency operations for the 69 kV, 24.9 kV, 12.47 kV systems, identified location and timing for new capital additions including a new 115/24.9 kV substation, 12.47 to 24.9 kV voltage conversion projects, additional VAR support and economically justified reconductor projects.

City of Truth or Consequences, Short Range Plan- Truth or Consequences, NM (Project Role: 2006)

Worked with City staff to develop short term and long term estimate of load growth. He evaluated upgrade of existing substation vs. building new substation. Identified need and location for new substation and recommended new 115/12.47 kV substation, capacitor additions, new feeder ties and reconductor projects based upon reliability, system voltage profiles, losses and engineering economics.

Columbus Electric Cooperative, Inc., URD Design- Deming, NM (Project Role: 2006)

Prepared load analysis, economic cable loading, cable pulling, voltage drop, flicker, fault current, staking sheets and cost estimates for URD system design.

Telvent Miner & Miner, Strategic Account Manager, Marketing and Sales, Ft. Collins, CO

Mr. Goodwin was responsible for developing new software and services sales opportunities to strategic energy utilities as well as managing existing account activities within the western U.S. and Canada. He also presented and demonstrated Geographic Information Systems (GIS) based software solutions and benefits to energy utilities including Outage Management, Design and Engineering, Field Solutions and Asset Management. His responsibilities

included gathering design, engineering, operational and customer service requirements for GIS based software enhancements to add more business value for customers. Mr. Goodwin assisted and educated organizations in how to improve their enterprise business operations with GIS based technology and associated applications and negotiate software and service contracts for new and existing utility clients.

XCEL Energy, Manager Energy Services Support, Denver CO

Mr. Goodwin managed the company and contractor support, process changes, application development and maintenance for the GIS, Construction Activity Tracking System and the Estimating System used for the design and planning of the gas and electric distribution systems. He prepared cost-benefit analysis of existing and proposed GIS applications. He identified future savings opportunities of \$1,500,000 annually using GIS technology and new applications. He operated section within a 15% O&M budget reduction by closely coordinating and prioritizing GIS system maintenance work performed by IBM Global Services. Mr. Goodwin was selected to participate on the Northern States Power and New Century Energies merger team to evaluate and recommend a common Geographical Information System platform.

Tucson Electric Power Company, Project Manager, Distribution Engineering, Tucson, AZ

Mr. Goodwin was responsible for managing the design of a \$4,000,000 capacitor project to add 450 MVAR of capacitance to the distribution system. He completed the design, purchase and installation of four times the normal annual MVAR additions in one-half the time during Phase One of the project. He met project milestones by closely coordinating and communicating requirements with manufacturers, vendors, engineers, designers and construction personnel. Managed a \$9,000,000 transmission line project to design and construct a 138 kV transmission line through one of the most environmentally and politically sensitive areas of Tucson. He successfully prepared and presented the project overview, justification and requirements to senior management, governmental agencies and residents and obtained project support and initiated and coordinated line design alternatives to reduce costs by \$300,000.

Tucson Electric Power Company, Assistant Project Manager, Future Focus Team, Tucson, AZ

Mr. Goodwin participated in the fast-track technical implementation of a \$12,000,000 Work Management, and AM/FM/GIS project. He supervised a 20m member team consisting of business area representatives, programmers, systems analysts, database administrators and network specialists. Mr. Goodwin proposed and received approval for electrical connectivity model estimated to save \$1,100,000 annually. He also conducted executive education sessions with the CEO, Senior Vice-Presidents and Vice-Presidents to ensure ongoing project support and understanding.

Tucson Electric Power Company, Supervisor, Distribution Developing and New Service, Tucson, AZ

Mr. Goodwin supervised 35 designers, engineers and customer contract coordinators. He directed electric distribution system design to connect new customers and produced \$200,000 annual labor savings by implementing GIS technology. Mr. Goodwin proposed changes to the company's rules and regulations that positioned it to be more competitive. He received approval of the changes from the Arizona Corporation Commission.

Tucson Electric Power Company, Supervisor, Distribution Planning, Tucson, AZ

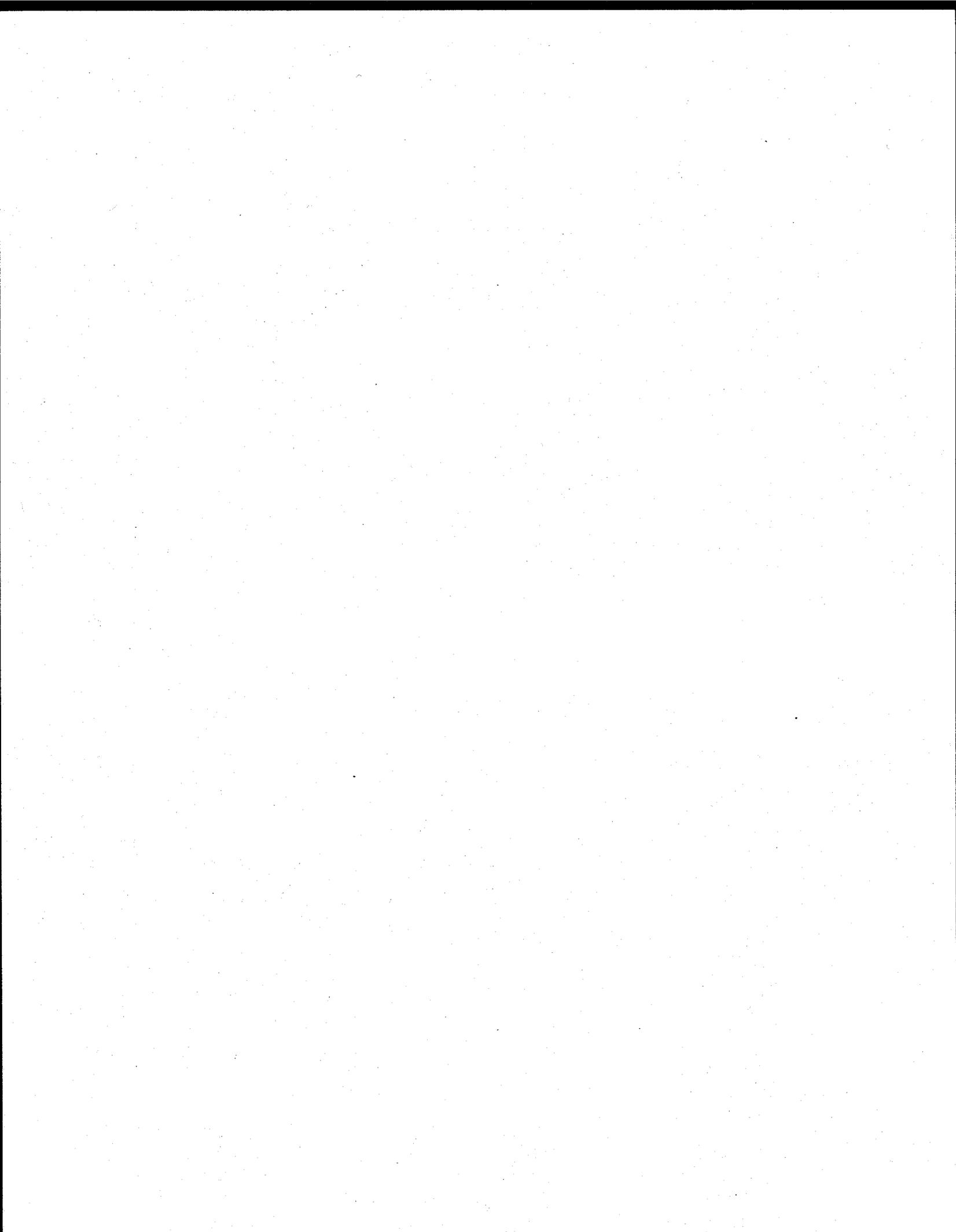
Mr. Goodwin managed the justification and preparation of the Ten-Year Capital Plan for sub-transmission, distribution and substation additions. He annually prepared and presented the \$50,000,000 Transmission & Distribution budget to Senior Management. Developed and presented alternatives to the purchase of a mobile substation transformer saving the company \$1,000,000. Prepared and presented justification and testimony for a new 138 kV transmission line and substation before the State Power Plant and Transmission Line Siting Committee. He received approval from the Siting Committee and the community to construct the 138 kV line. He also introduced changes to the standard method of substation expansion. He was successful in influencing others to implement the changes that delayed capital expenditures.

SPECIALIZED TRAINING

- Distribution Planning - ABB
- Protective Relay Course – McGraw Edison
- Power Quality – Harmonic Mitigation
- Project Management – PMI Institute
- Milsoft WindMil & LightTable

PROFESSIONAL AFFILIATIONS

- Member, Institute of Electrical & Electronics Engineers (IEEE)



PATRICK K. SCHARFF, P.E.

AREAS OF EXPERTISE

Technical and management experience in the following general areas:

- Planning Studies
- Project Management
- Engineering Management
- Generator Interconnection Requirements
- Power Flow Studies
- Operational Studies
- Reliability Studies
- Protective Device Coordination Studies
- Switching Studies
- Distribution Planning Studies
- Integration of Advanced Technologies into Utility Operations
- Smart Grid Technology Applications
- Distributed Generation Assessments
- Demand-side Management Program Development
- Net metering
- Renewable Energy Programs
- Marketing and Program Development
- Customer Service
- Expert Testimony

REPRESENTATIVE EXPERIENCE

Principal Electrical Engineer with over 30 years of engineering and management experience with investor-owned electric utilities. Extensive hands-on and leadership experience in:

- Power system planning, operations and engineering including conceptual design and budgeting for substation, transmission line and distribution line additions and modifications, construction project coordination, project scheduling and contract management.
- Development and implementation of energy efficiency and load management programs, the integration of distributed generation, smart grid and other advanced technologies into utility system operations and the preparation of business cases supporting deployment of distribution automation technologies including advanced metering.

TRC Solutions – Principal Electrical Engineer – Albuquerque, NM

Principal Electrical Engineer providing planning assistance and power system analysis support to municipal, RUS co-operative and investor owned utilities.

Long Range Area Studies – Public Service Company of New Mexico, Albuquerque, NM

Detailed land use and load forecast studies using linear and Gompertz forecasting techniques to identify substation, transmission and distribution line requirements for 5,000 acre and larger areas zoned for high-density development.

Small Generator Interconnection Request – Jemez Mountains Electric Cooperative – Española, NM Feasibility and facilities studies for 3.5MW solar PV interconnection request.

Small Generator Interconnection Request – Emcore – Albuquerque, NM

One-line diagram and design for interconnecting 12MW solar PV system to Public Service Company of New Mexico 12.47kV distribution system. Prepared the SGIR form for submittal to the local utility.

Large Generator Interconnection Project Due Diligence – GA Solar USA – San Francisco, CA Technical due diligence for the acquisition of 300MW renewable energy project by GA-Solar USA. Revised large generator interconnection and transmission service requests to change technology from wind and solar thermal to solar PV.

Small Generator Interconnection Request – enXco – Escondido, CA

Identified candidate 12.47kV and 115kV circuits and potential sites for interconnecting solar PV systems ranging in size from 1MW to 5MW. Assisted with preparing FERC Small Generator Interconnection requests for submittal to the local utility.

Construction Work Plan - Jemez Mountains Electric Cooperative – Española, NM

Detailed system planning and performance analysis study to determine and document Jemez Mountains Electric Cooperative's 4-year construction needs. The CWP addresses system performance for existing and projected loads during normal and contingency operations.

Integrated Resource Plan – City of Gallup – Gallup, NM

Analysis of energy supply resource options and energy conservation and load management alternatives to meet the City of Gallup's projected 5-year electrical load needs.

Short Range Plan – City of Gallup – Gallup, NM

Detailed system planning study and system performance analysis to determine and document Gallup's 4-year construction needs based an analysis of system performance for existing and projected loads during normal and contingency operations.

System Protective Device Coordination Study – City of Gallup – Gallup, NM

Detailed system sectionalizing study and protective device performance analysis to determine and document the capabilities of Gallup's electric system protective devices and identify operational and capital improvement required by Gallup and Gallup's power supplier to meet safety and reliability criteria.

Long Range Plan – City of Gallup – Gallup, NM

Detailed system planning study and performance analysis to forecast and document Gallup's 10-year construction needs based an analysis of system performance for existing and projected loads during normal and contingency operations.

Public Service Company of New Mexico – Manager of Distribution Planning & Distributed Resource Programs – Albuquerque, NM

Responsible for the evaluation and deployment of smart grid, distribution automation and other advanced technologies to meet PNM's existing and future business and operational needs, including advanced metering, distributed generation, energy storage, renewable energy and micro grids.

- developed, implemented and managed PNM's processes for interconnecting distributed generation
- wrote the language for New Mexico's net metering rule that was subsequently adopted by the NMPRC as New Mexico's net metering rule
- architect for revised New Mexico rules for interconnecting distributed generation
- developed and deployed PNM's production based solar incentive program, the first of its kind in the US
- designer of PNM's 25kW solar sunflower demonstration PV system
- prepared business cases to support advanced technology deployments
- provided expert witness testimony in support of cost recovery for technology trials and deployments

Public Service Company of New Mexico – Manager of Distribution Planning & Distributed Resource Programs – Albuquerque, NM

Statewide responsibility for planning and budgeting expansions of, and improvements to, PNM's 12.47kV, 46kV and local 115kV systems which included 74 substations, 500+ distribution feeders, 8,600 miles of 12.5kV and 5kV distribution lines and 1,200 miles of 115kV and 46kV transmission lines. Key participant in the development of New Mexico's net metering rules and the development of IEEE Standard 1547 for the interconnection of distributed generation.

Tucson Electric Power Company – Manager, Conservation and Load Management – Tucson, AZ

Developed TEP's department for energy efficiency, DSM and load management programs. Implemented TEP's energy efficiency and load management programs including marketing programs, and program monitoring and evaluation processes.

Prepared of the DSM portions of TEP's Integrated Resource Plan and provided of expert witness testimony in support of lost revenue recovery.

Tucson Electric Power Company – Manager, Distribution Services – Tucson, AZ
Responsible for providing distribution system services statewide for TEP including, distribution system planning and engineering; designs, estimates and work orders for all non-substation additions, modifications to the distribution system including new service extensions; construction scheduling and coordination, public improvement project coordination, property and right-of-way acquisition, line extension and special contract preparation and administration and capital and O&M budget development and management.

Tucson Electric Power Company – Superintendent, Transmission and Distribution Control – Tucson, AZ
Responsible for the statewide operation, control and dispatch of TEP's 345kV, 138kV, 46kV and 13.8kV systems. Responsibilities also included supervision of for TEP's Trouble Response crews.

Virginia Electric Power Company – Northern Division Planning Engineer – Alexandria, Virginia
Planning Engineer responsible for planning the orderly expansion and improvement of VEPCO's 34.5kV and 12.47kV distribution systems in five Northern Division operating districts.

Central Intelligence Agency – Office of Scientific Intelligence – McLean, Virginia
Intelligence analyst specializing in advanced weapon system technologies and remote sensing.

EDUCATION

M.S., Electrical Engineering, Electric Utility Management, New Mexico State University
B.S., Electrical Engineering, New Mexico State University

PROFFESIONAL REGISTRATIONS

Professional Engineer, Arizona (19742)
Professional Engineer, New Mexico (13428)

PROFESSIONAL AFFILIATIONS

- Life Member, IEEE



Thomas M. Engels, Ph.D.

EDUCATION

Ph.D. Biological Sciences, University of Texas, Austin, 1995

B.A. Liberal Arts (English), University of Texas, Austin, 1987

AREAS OF EXPERTISE

Mr. Thomas M. Engels, Ph.D. has project management and technical experience in the following general areas:

- Environmental Impact Assessment (CEQA, NEPA, & CPUC)
- Clean Water Act Permitting
- Endangered Species Act Compliance
- Feasibility Studies
- Environmental Constraints Analyses
- Agency Negotiation

REPRESENTATIVE EXPERIENCE

Mr. Engels has over 18 years of experience in environmental consulting specializing in utility, infrastructure, and water resources planning, regional natural resources management planning, California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA) compliance and impact analysis, Clean Water Act, and Endangered Species Act compliance, environmental documentation, and project management. Mr. Engels has managed projects and provided environmental regulatory compliance, environmental impact assessment, integrated natural resources management planning, habitat conservation planning, and feasibility studies. Mr. Engels has also taught numerous courses on CEQA, NEPA, Endangered Species Act, and Clean Water Act compliance for clients and the University of California System.

Proponent's Environmental Assessment (PEA) and Environmental Permitting Support, Windsor Substation Project – Pacific Gas & Electric Company, Windsor, CA

Mr. Engels is managing the preparation of a Proponent's Environmental Assessment and environmental permit applications for the PG&E Windsor Substation Project in Windsor, California. The purpose of the project is to relieve the electric system deficiency projected to occur in Windsor, Sonoma County, and to ensure safe and reliable electric service to existing and approved development. Key issues include impacts to visual resources, air quality, biological resources, and hydrological resources.

PEA and Environmental Permitting Support, Crazy Horse Switching Station – Pacific Gas & Electric Company, Monterey County, CA

Mr. Engels is managing the preparation of a PEA and environmental permit applications for the PG&E Crazy Horse Switching Station Project in Monterey

County, California. Mr. Engels is also assisting PG&E in complying with federal and state endangered species acts requirements for the project, including a Section 7 Consultation and a 2081 Incidental Take Permit. The purpose of the project is to improve transmission system reliability for nearby communities. In addition to the PEA and environmental permit applications, TRC prepared a Feasibility Study and Alternatives Analysis for the proposed project. Key issues include impacts to wetlands, endangered species habitat, visual resources, and air quality.

Holdover Permits Review – Pacific Gas & Electric Company

Mr. Engels is serving as principal-in-charge for a process initiated in 2004 to resolve all of PG&E's federal permits that are in arrears. He is overseeing a project team that is updating databases and preparing permit applications and is working with major permitting agencies to implement a strategy and process to meet PG&E's commitment from the bankruptcy process to resolve all permits in holdover status.

Battle Creek Salmon and Steelhead Restoration Project, Pacific Gas & Electric Company – U.S. Bureau of Reclamation, CA

Mr. Engels managed preparation of environmental compliance documents, including a public review draft and final EIS/Environmental Impact Report (EIR) assessing project-related effects on environmental resources. Also assisted in drafting an Action Specific Implementation Plan and addendum to describe project-related effects and conservation measures on special-status fish and terrestrial species, including Natural Community Conservation Plan (NCCP) habitat communities (Endangered Species Act, California Endangered Species Act, and NCCP Act compliance); a Clean Water Act Section 401 Water Quality Certification permit application; a Letter of Permission and Section 404(b)(1) Alternatives Analysis for a Clean Water Act Section 404 permit application; and a California Department of Fish and Game Section 1602 streambed alteration agreement.

Mr. Engels also assisted the federal and state lead agencies in addressing project-related concerns expressed by local landowners. The project involved an unprecedented cooperative effort among federal, state, and local agencies, including Reclamation (federal lead agency), the California State Water Board (state lead agency), U.S. Fish and Wildlife Service, NOAA Fisheries, California Department of Fish and Game, Pacific Gas & Electric, and the Federal Energy Regulatory Commission.

Lower Colorado River Basin Shortage Guidelines PH2B – U.S. Bureau of Reclamation, California, Arizona, and Nevada

Mr. Engels assisted in the management and preparation of an Environmental Impact Statement (EIS) for the Lower Colorado River Basin Shortage Guidelines

for the U.S. Bureau of Reclamation. The project established shortage allocation guidelines for the Colorado River lower basin states in the event the U.S. Secretary of Interior declares a shortage and included provisions allowing water users to “bank” water within Lake Mead. The Project Team was responsible for preparing the cultural resources, recreation, transportation, socioeconomics, and land use assessments and participated in preparing the biological resources and electric power resource assessments.

Pit 7 EIS – TransAlta Centralia Mining, LLC, Lewis County, WA

Mr. Engels managed the preparation of a NEPA/State Environmental Policy Act (SEPA) EIS and Habitat Mitigation Plan for the completion of an existing coal mine operation in Centralia, Washington. Key issues included impacts associated with re-routing a stream, loss of wetlands and other waters of the U.S., and project impacts to cultural resources, transportation, endangered species, and surface and ground water quality.

Lenihan Dam Outlet Modification Project – Santa Clara Valley Water District, CA

Managed preparation of CEQA compliance and permitting components for the Santa Clara Valley Water District’s (SCVWD) outlet modification of Lenihan Dam, Santa Clara County, CA. Key issues included wetlands and other waters of the U.S., endangered, threatened, and rare plant and animal species, surface and ground water quality, cultural resources, recreation, and noise. Managed preparation of compliance documents as required under Clean Water Act, Endangered Species Act, National Historic Preservation Act, and Section 1602 (Streambed Alteration Agreement with California Dept. of Fish and Game).

EIR/EIS for San Luis Reservoir Low Point Improvement – Santa Clara Valley Water District, CA, and U.S. Bureau of Reclamation

Mr. Engels managed the environmental compliance and permitting support components of the Santa Clara Valley Water District (SCVWD) San Luis Reservoir Low Point Improvement project. Mr. Engels also assisted with development and screening of conceptual project alternatives. The purpose of the Low Point Improvement project was to develop an integrative strategy to ensure maintenance of a high quality, reliable, and cost-effective water supply for SCVWD and other contractors of the U.S. Bureau of Reclamation San Felipe Division.

Key technical issues to be addressed in the EIR/EIS process included geotechnical and seismic safety concerns; potential impacts of build alternatives on special-status species; fisheries; wetland, riparian, and upland habitats; and agricultural and recreational land uses. Impacts related to growth inducement and statewide water uses were pivotal.

NEPA/CEQA Compliance for the Habitat Mitigation Program for Runway Expansion Program – San Francisco International Airport, CA

Mr. Engels managed the habitat mitigation site selection and planning program for the proposed runway expansion. The primary purpose of the project was to develop a habitat mitigation plan that offsets environmental impacts of constructing additional runways into the San Francisco Bay. Mr. Engels oversaw the development of mitigation site selection criteria, application of these criteria on lands throughout the San Francisco Bay, conducting of natural resources surveys at high-ranking sites, selection of mitigation alternatives, development of conceptual and detailed mitigation design plans for the preferred alternative, and assessment of potential environmental effects of implementing the plans.

Lower Guadalupe River Flood Protection Project Environmental Impact Report (EIR) – SCVWD, CA

Mr. Engels prepared an EIR for a flood protection project that encompasses 6.5 miles of the lower Guadalupe River between Interstate 880 and the Union Pacific Railroad bridge in the Cities of San Jose and Santa Clara. The purpose of the project was to restore the flood conveyance capacity of the existing channel and provide additional capacity to convey floodflows of approximately 481 cubic meters per second (17,000 cubic feet per second) during a design flood event.

Feasibility Study Proposed Modification of Dam Operations – Stanford University, Searsville Lake, CA

Mr. Engels managed an environmental regulatory review of proposed lowering of the Searsville Dam in Santa Clara County. The review addressed potential regulatory triggers associated with the proposed project on both the state and federal levels. The review also included a summary of each state and federal agency's jurisdiction and regulatory requirements, a review of permits that may be required before implementing the project, and the approximate time required to obtain those permits.

Alternative Screening and Environmental Review of Proposed Water Pumping and Diversion Project – National Aeronautics and Space Administration (NASA), CA

Mr. Engels screened a variety of potential water pumping and diversion activities in the South San Francisco Bay, including pumping 15,000 gallons per minute into Stevens Creek. He also conducted an environmental effects assessment of the alternatives to identify the preferred alternative.

Monterey Pine Forest Management Plan – Cambria, CA

Managed the development of a forest management plan to protect and restore the forest ecosystem. The plan contains detailed prescriptive measures pertaining to vegetation management, wildlife management, disease and pest control, reforestation, fire management, erosion control, aesthetics, and public

safety. The plan also includes an implementation strategy and a public education program.

Quail Hollow Quarry Habitat Conservation Plan Implementation – Granite Rock Company, Santa Cruz, CA

Mr. Engels prepared a work plan to help implement an approved habitat conservation plan at the Quail Hollow Quarry. The work plan outlined all of the steps that were involved to prepare a long-term management and maintenance plan for the rare habitats and four listed species covered by the permit.

Aluminum Company of America (ALCOA) – Texas (Environmental Management Consultant)

Mr. Engels served as full-time environmental management consultant to ALCOA for large-scale surface mining and reclamation activities in Texas. Coordinated all environmental permitting activities and assisted ALCOA maintain full compliance with NEPA, the Clean Water Act, Endangered Species Act, Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act, and National Historic Preservation Act. Coordinated surface and groundwater management programs and managed all projects associated with stream re-routings, reclamation, biological resources, land use, cultural resources, and prime farmland. He also served as primary liaison and negotiator with federal and state regulatory agencies.

Exhibit G

Sonoita Reliability Project

PUBLIC FORUMS

March 9 & 11, 2010



Sulphur Springs Valley Electric Cooperative, Inc.
A Member of the Electric Cooperative of Texas

AGENDA

Introductions

Overview of the ACC Proceedings

Sonoita Reliability Project Review

Presentation of the Independent Feasibility Study
Renewable Energy Generation Plans for Affected

Areas

Independent Public Opinion Poll

Discussion



Sulphur Springs Valley Electric Cooperative, Inc.
1000 Highway 100, Sulphur, LA 70588

INTRODUCTIONS

- Sulphur Springs Valley Electric Coop
 - Jack Blair, Chief Member Services Officer
 - Ron Orozco P. E., Engineering Manager
 - Deborah White SR/WA, Real Property/GIS Manager
- TRC
 - Rick F. Goodwin, P. E., Project Manager
 - Patrick K. Scharff, P. E., Principal Engineer
 - Thomas M. Engels, Ph.D., Senior Scientist



Sulphur Springs Valley Electric Cooperative, Inc.
A Tennessee Energy Cooperative



Overview of Arizona Corporation Commission Proceedings

Jack Blair, CMSO



Sulphur Springs Valley Electric Cooperative, Inc.
A Member of the Cooperative Group

ACC / SSVVEC RATE CASE

- SSVVEC Filed Rate Case June 2008
- Opponents to 69kV Line raised concerns in the Rate Case
 - February 2009 Sierra Vista Public Comment Session
 - April 2009 Administrative Law Hearing
 - August 2009 Open Meeting & Rate Case Decision
 - Independent Feasibility Study Ordered
 - Public Forums Ordered
 - September 2009 Moratorium Application
 - September 2009 Motion for Reconsideration
- Independent Feasibility Study filed December 31, 2009
- January 2010 40-252 Application to Amend Rate Case Decision
 - February 2010 ACC Orders Hearing on Application to Amend
 - March 24/25 2010 Administrative Hearing



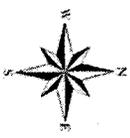
Sulphur Springs Valley Electric Cooperative, Inc.
A Tennessee Energy Cooperative

Sonoita Reliability Project Review

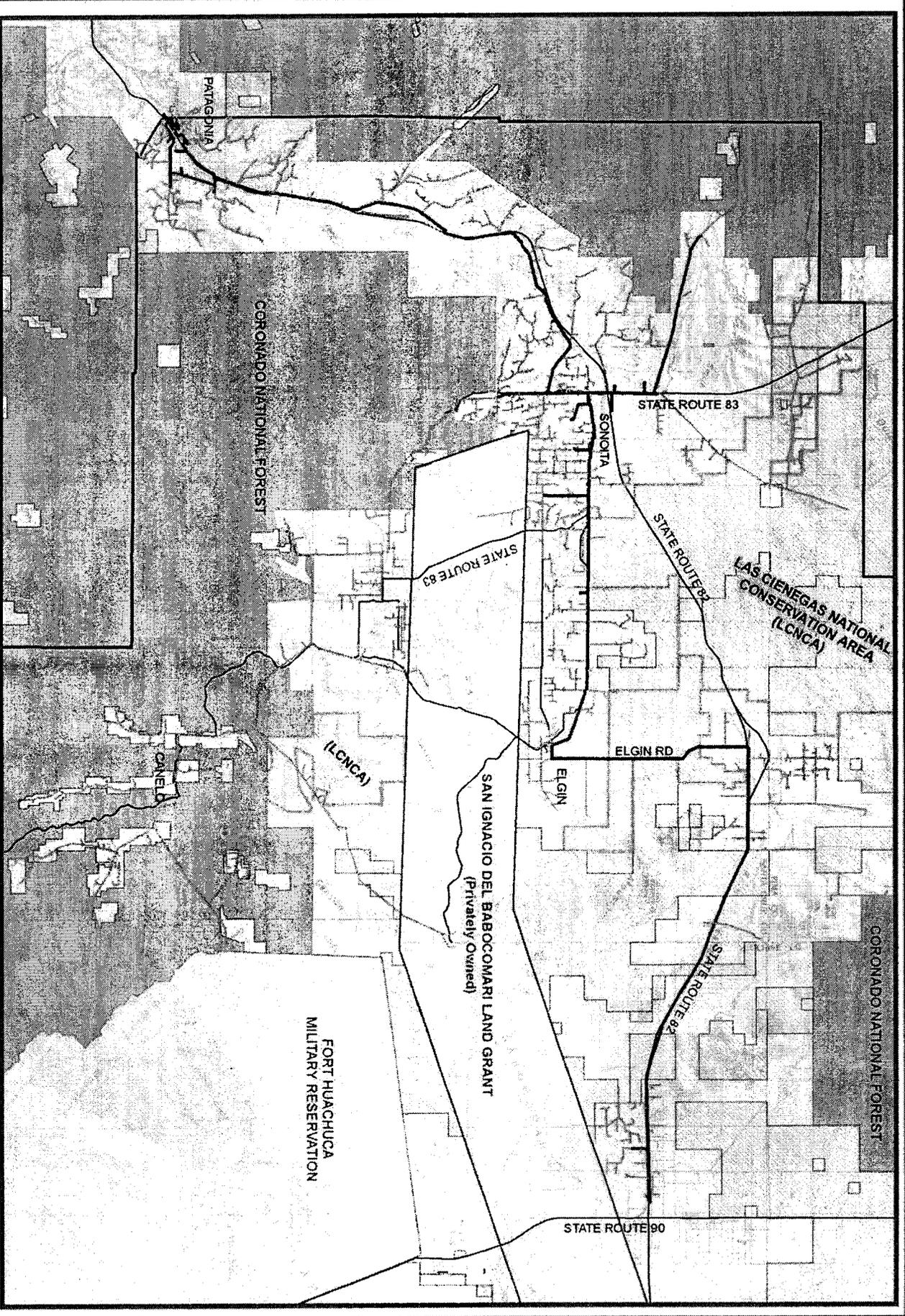
Deborah White, SR/WA



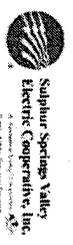
Sulphur Springs Valley Electric Cooperative, Inc.
A Division of the Electric Cooperative of Texas



- Existing V7 Feeder
- Subarea Selection
- Sonota Selection
- SIC8 Boundary
- LCNCA Boundary
- SSVEC ServiceArea
- BLM
- Forest
- Local & State Parks
- Library
- NAT Parks
- Other
- Private
- State Trust
- Yosemite



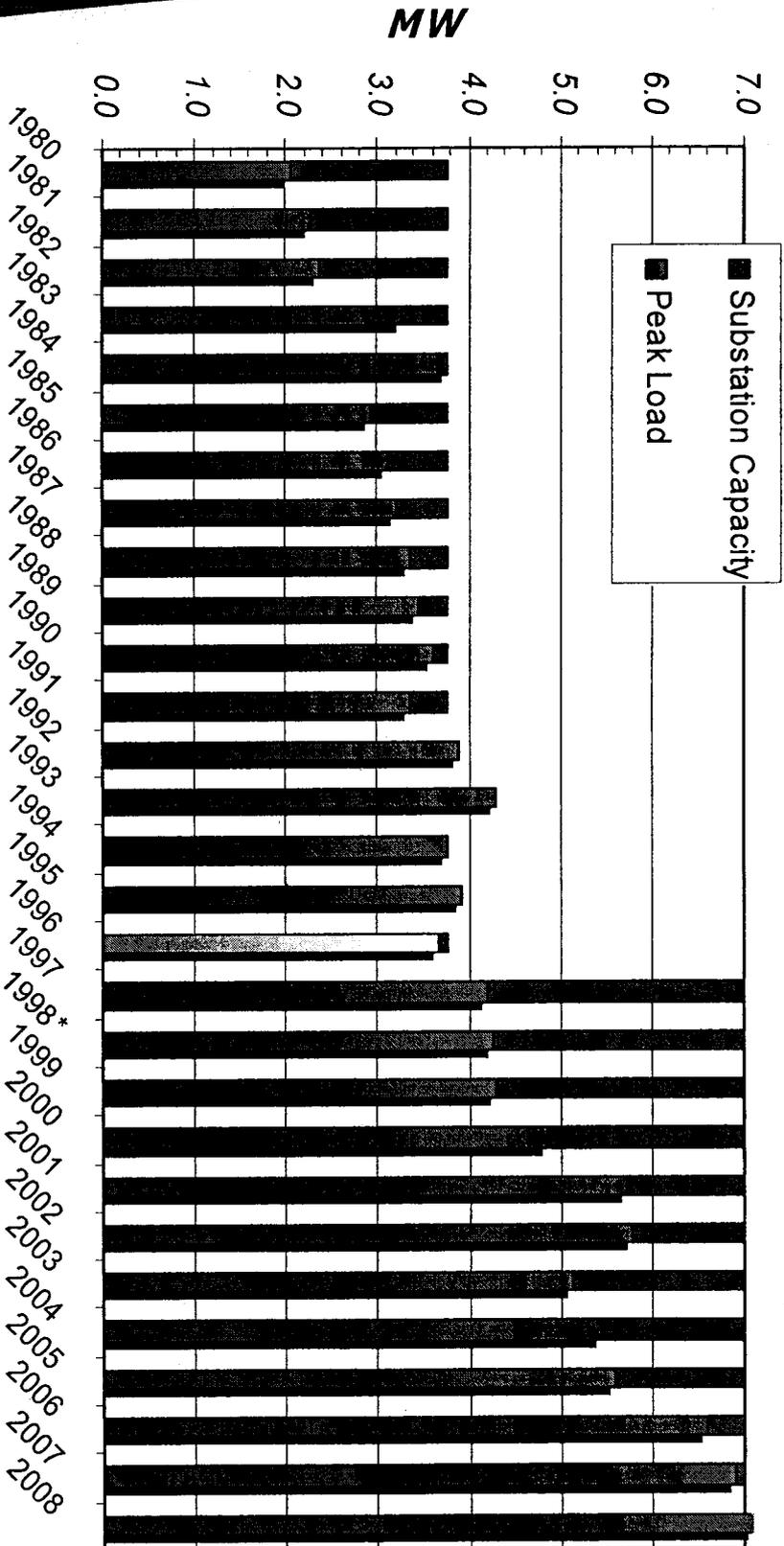
SONOTA RELIABILITY PROJECT



Sanjour Springs Valley
Electric Cooperative, Inc.
A Member of the Sonora Electric Service Area

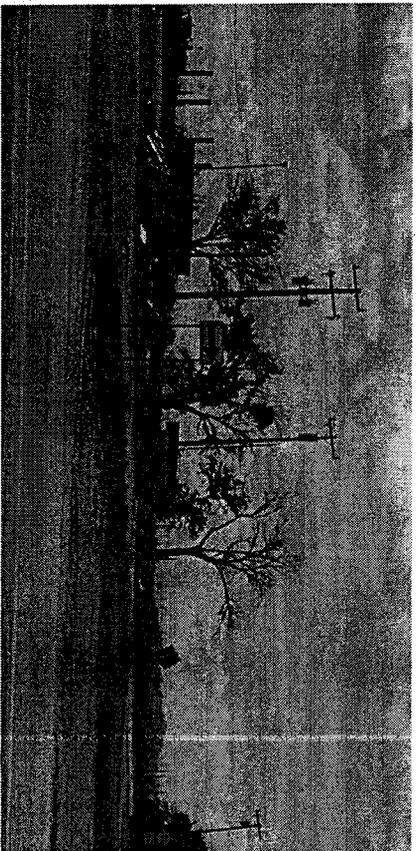
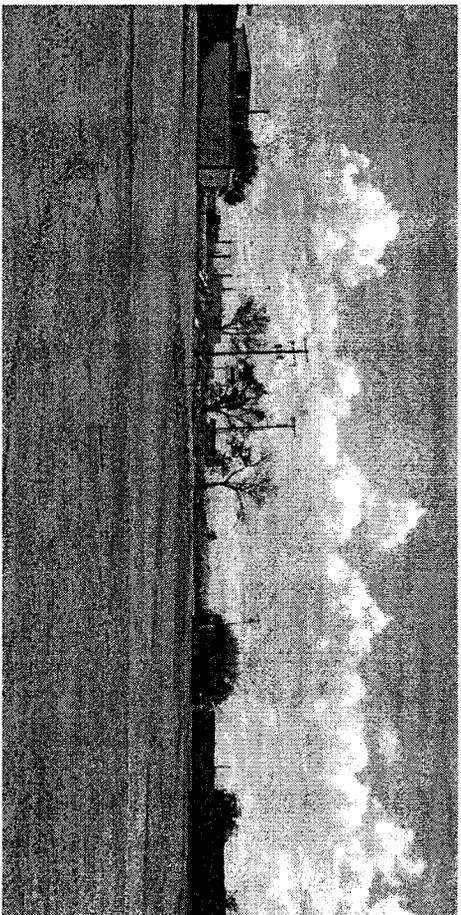
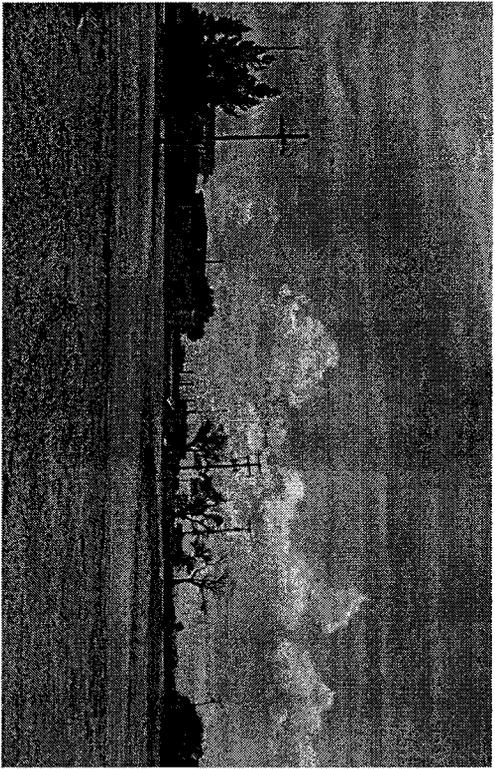
Increasing Load vs. Capacity

Huachuca Substation at Capacity

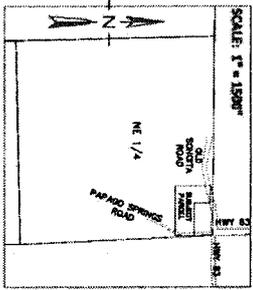
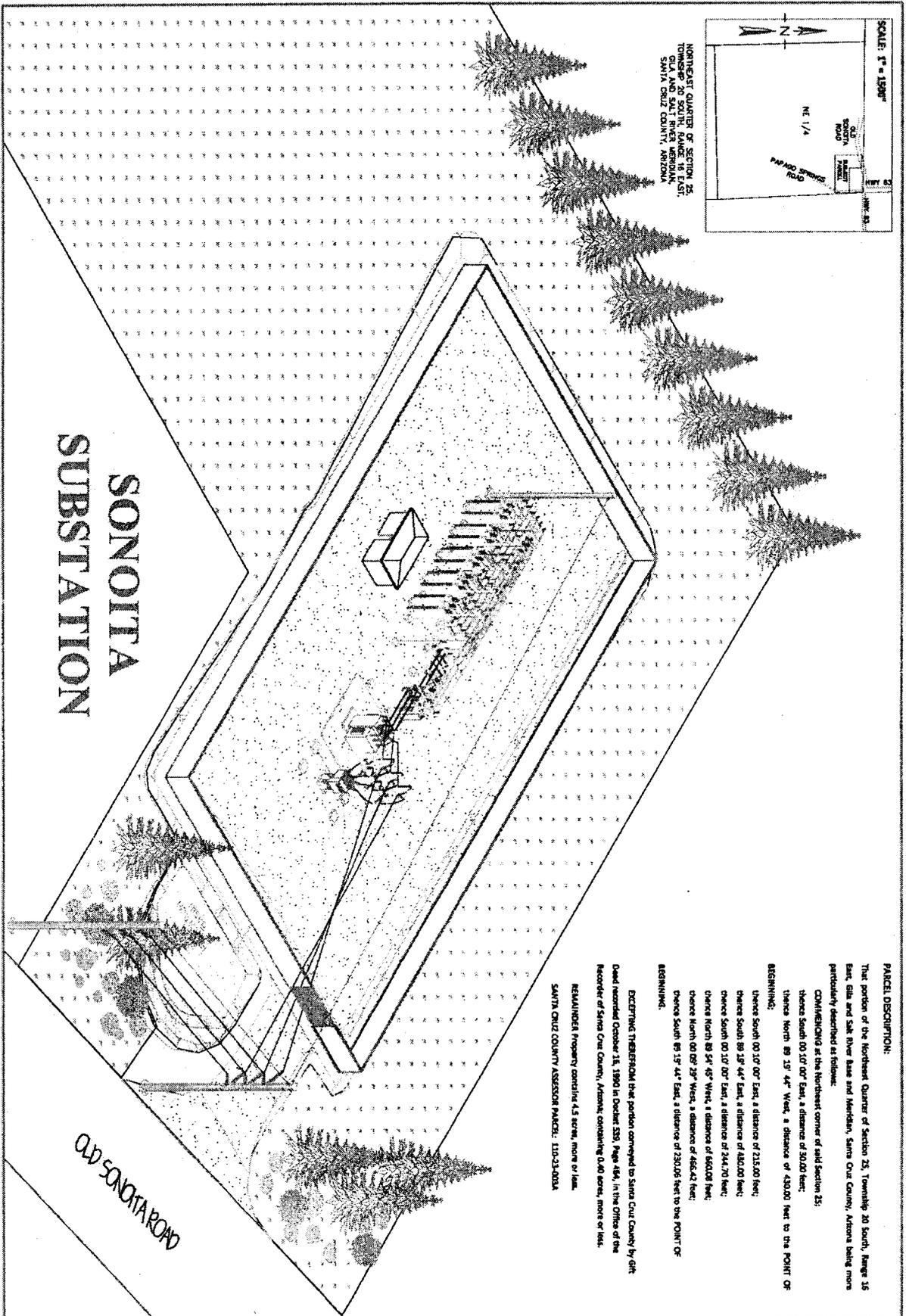


Existing Substation Property





New Substation Property



NORTHEAST QUARTER OF SECTION 25,
TOWNSHIP 20 SOUTH, RANGE 16 EAST,
SANTA CRUZ COUNTY, ARIZONA

SONOITA SUBSTATION

OLD SONOITA ROAD

PARCEL DESCRIPTION:

That portion of the Northeast Quarter of Section 25, Township 20 South, Range 16 East, 6th and 5th River Basins and Meridian, Santa Cruz County, Arizona being more particularly described as follows:

COMMENCING at the Northwest corner of said Section 25;

thence North 00 01' 00" East, a distance of 430.00 feet to the POINT OF

BEGINNING;

thence South 00 10' 00" East, a distance of 215.00 feet;

thence South 89 19' 44" East, a distance of 450.00 feet;

thence South 00 10' 00" East, a distance of 244.70 feet;

thence North 89 54' 40" West, a distance of 650.00 feet;

thence North 00 09' 29" West, a distance of 465.42 feet;

thence South 89 19' 44" East, a distance of 230.05 feet to the POINT OF

BEGINNING.

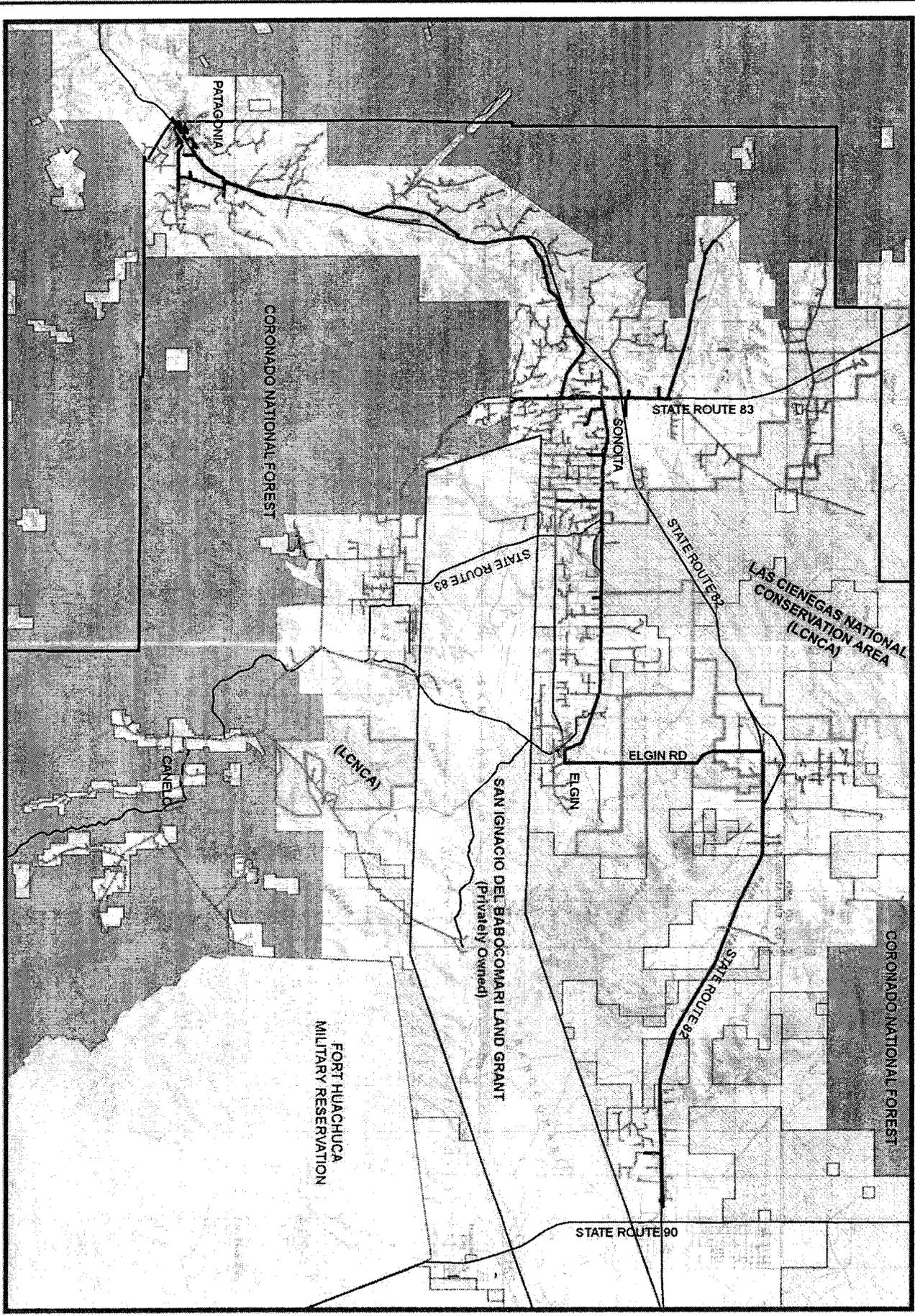
EXCEPTING THEREFROM that portion conveyed to Santa Cruz County by GTR Deed recorded October 15, 1990 in Decker 539, Page 494, in the Office of the Recorder of Santa Cruz County, Arizona, containing 0.40 acres, more or less.

RESUBDIVIDED property consisting 4.5 acres, more or less.
SANTA CRUZ COUNTY ASSESSOR PARCELS: 110-13-003A

<p>REVISIONS</p>	<p>SONOITA SUBSTATION</p>	<p>Sulphur Springs Valley Electric Cooperative, Inc. PO BOX 100 WILCOX ARIZONA 85644</p>	<p>SANTA CRUZ COUNTY BOARD OF ADJUSTMENT CONDITIONAL USE PERMIT APPLICATION</p>	<p>PRELIMINARY</p> <p>NO 7449 C# 403.001 DATE April 9, 2005 DRAWN BY DW SHEET 1 of 6</p>
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- Existing V7 Feeder**
- Existing V7 Feeder
 - Buchanan Substation
 - Sonota Substation
 - SDB Boundary
 - LCNCA Boundary
 - SSVCC ServiceArea
 - BILL
 - Road
 - Local or State Park
 - Well Tanks
 - Other
 - Route
 - State Trust
 - Waterline



SONOTA RELIABILITY PROJECT

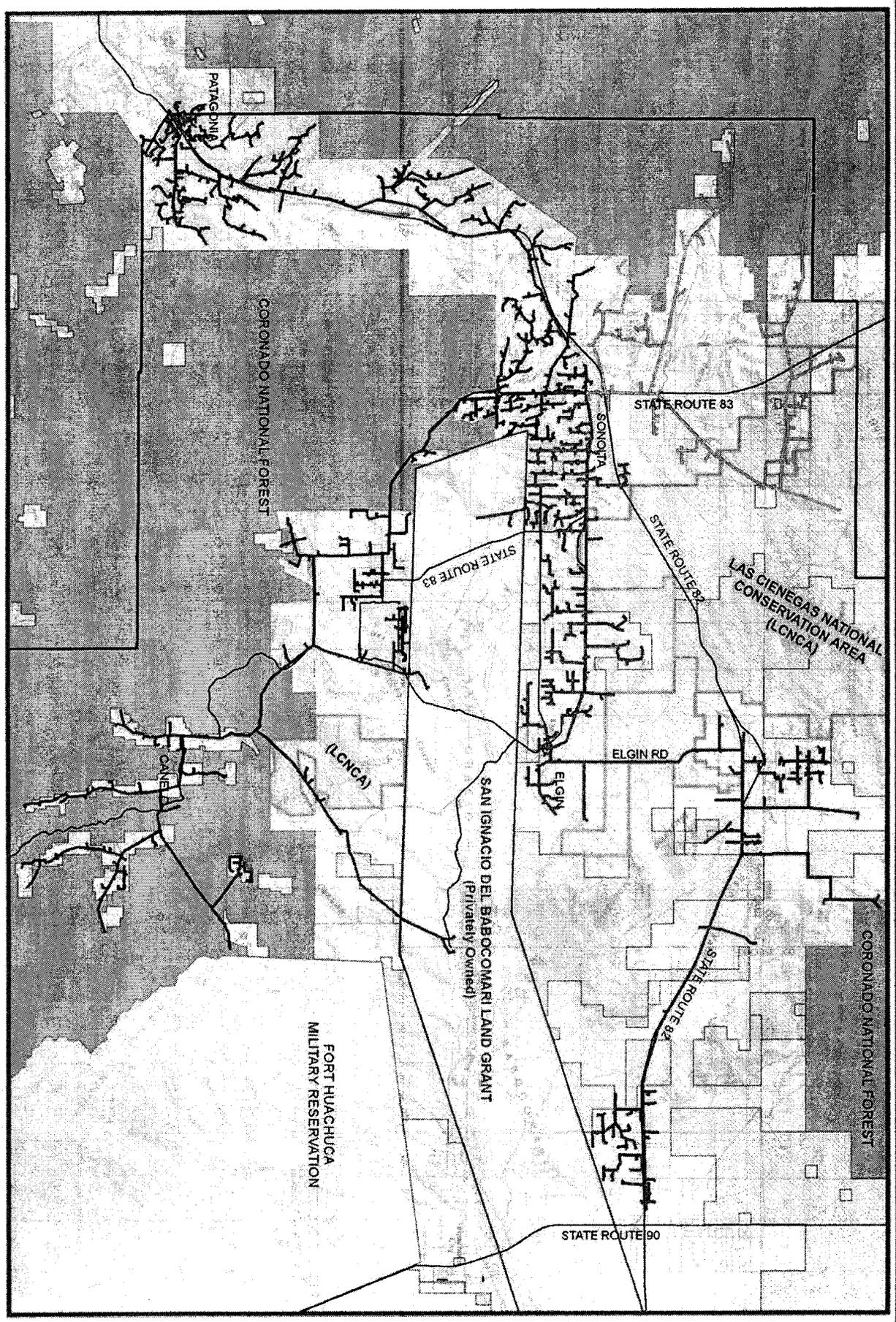


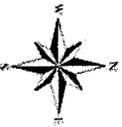
Sulphur Springs Valley
Electric Cooperative, Inc.
1999 W. Hwy. 200, Sulphur, TX 75483



- Feeder 1
- Feeder 2
- Feeder 3
- Feeder 4
- Feeder V7
- Burhan Substation
- Sonota Substation
- SIDB Boundary
- LCNCA Boundary
- SSVEC Service Area
- ELIA
- Forest
- Local or State Parks
- NATL Parks
- Other
- Private
- State Trust
- Reserve

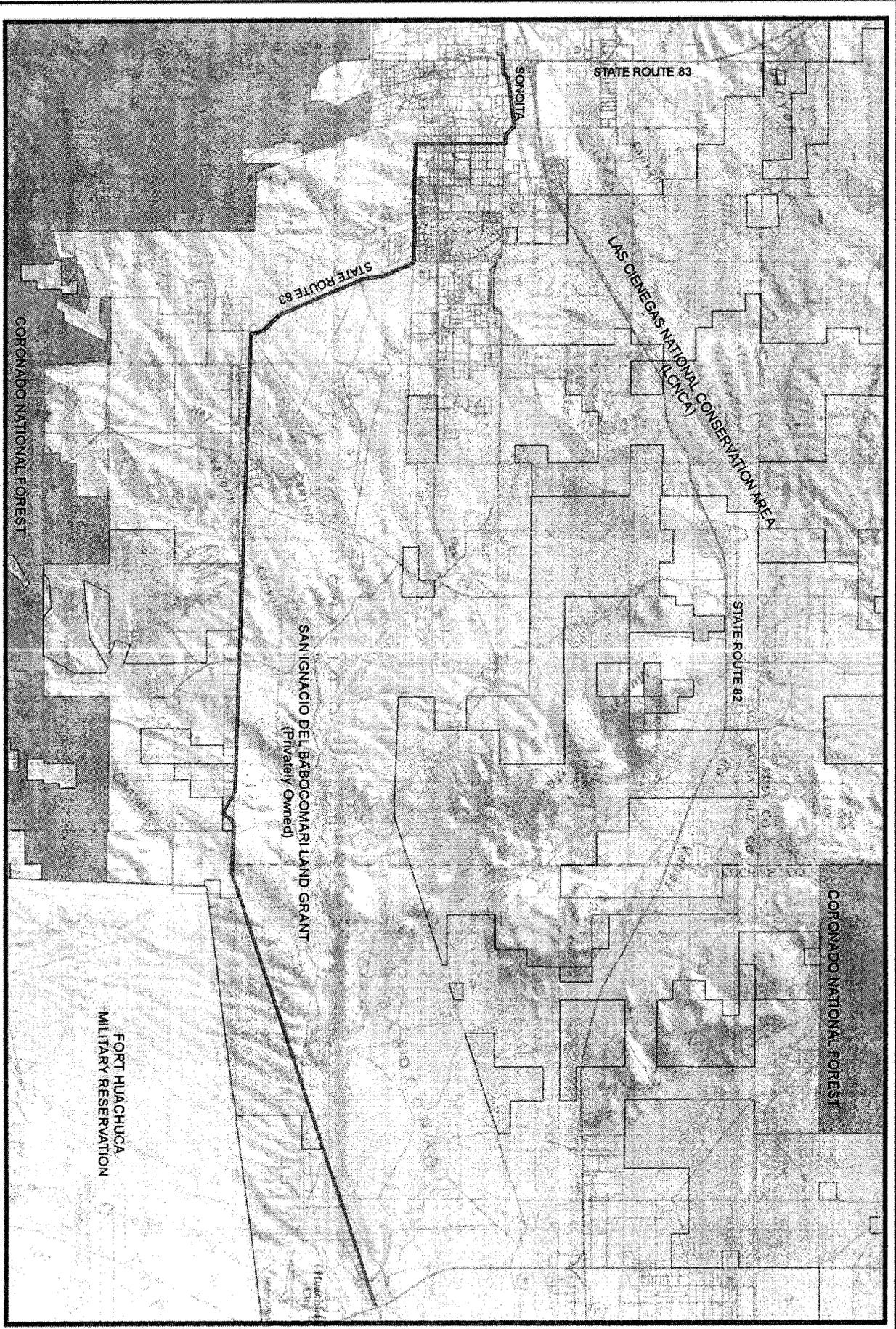
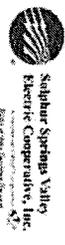
SONOTA RELIABILITY PROJECT



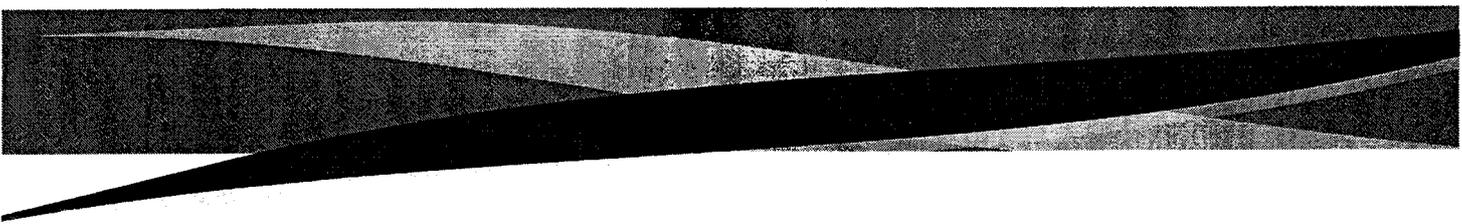


- Final Corridor
- Substation
- Substation
- BLM
- Forest
- Local or State Parks
- Military
- National Parks
- Other
- Private
- State Trust
- Wildlife

58kV Sub-Transmission Final Corridor
SONOITA RELIABILITY PROJECT

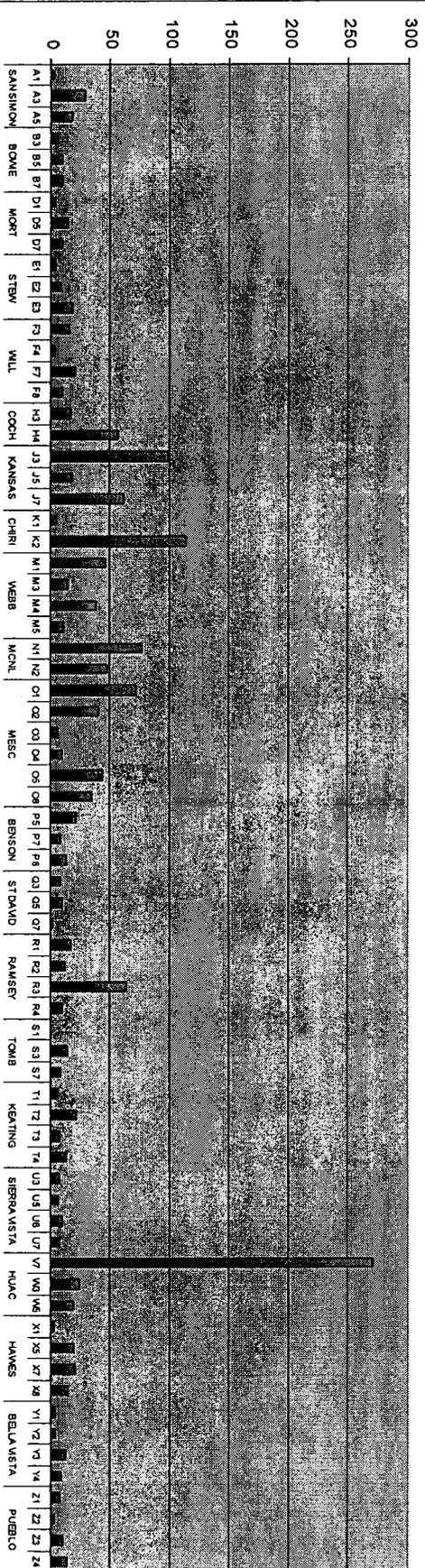


Selected Pole Configuration

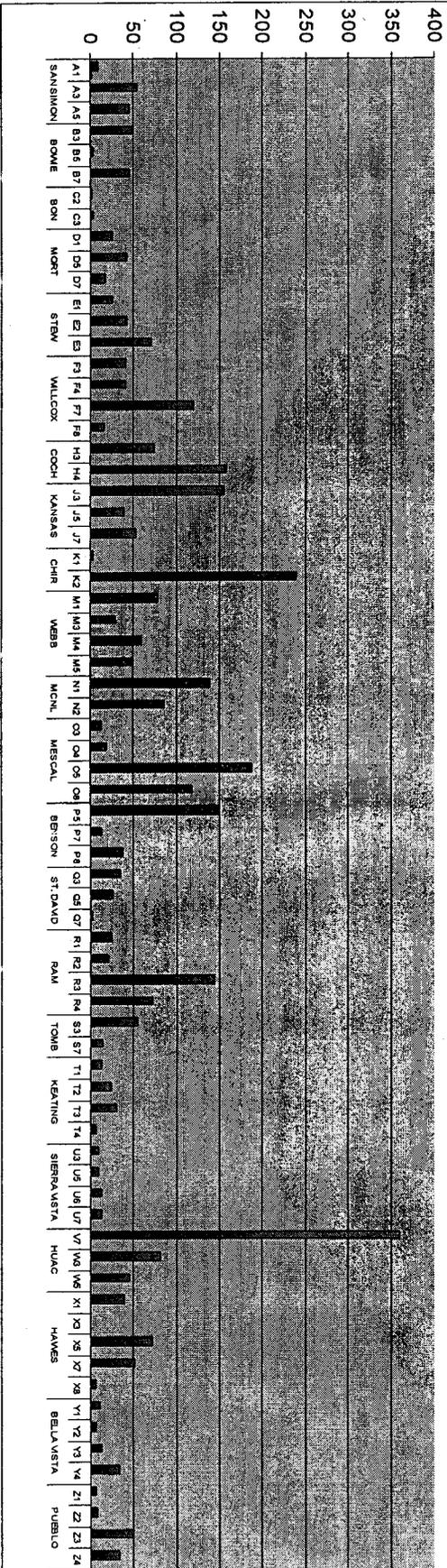


V-7 Feeder Outages and Length in Miles as Compared to all SSVEC feeders

1999 - 2008 Average Annual Hours Out: SSVEC System



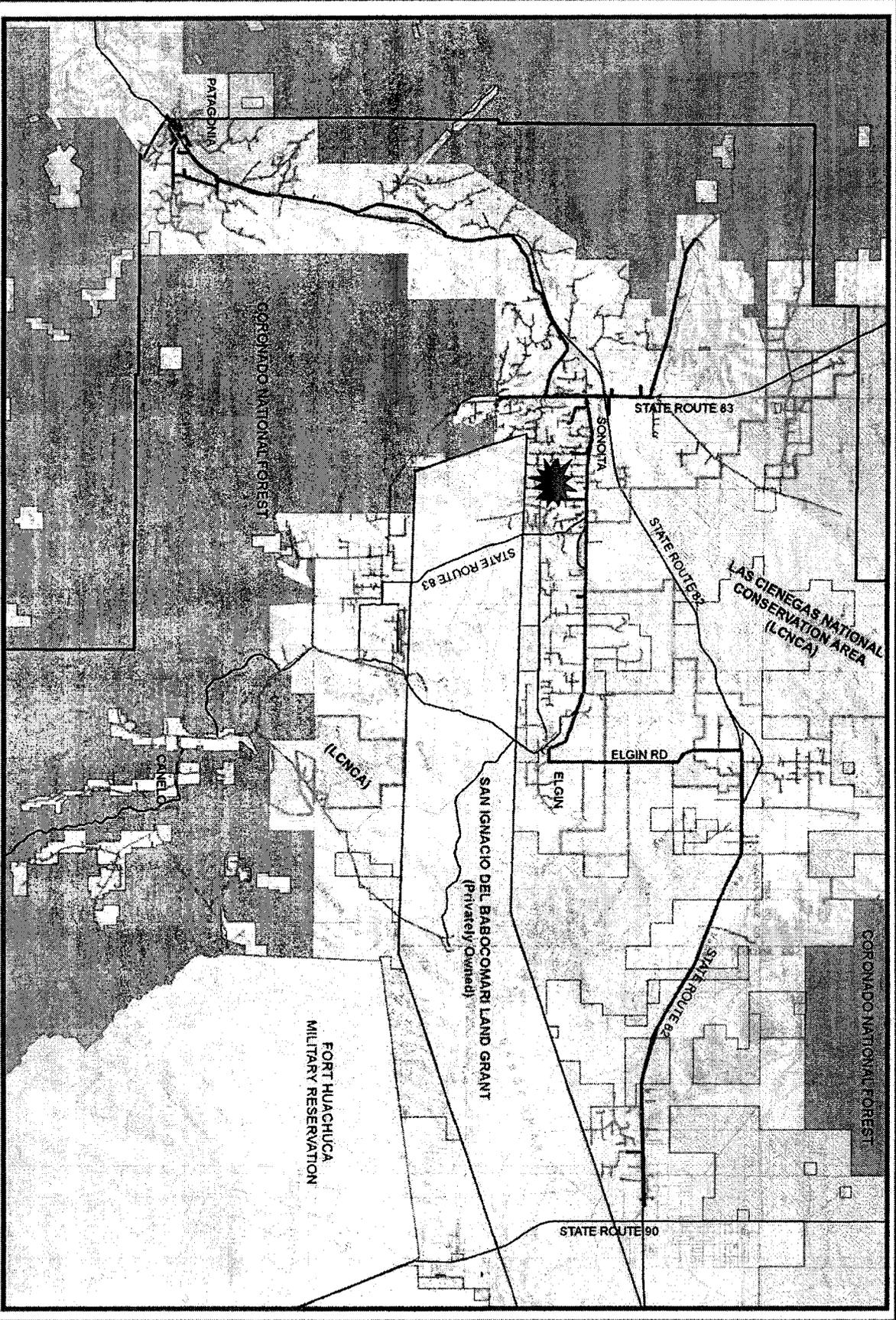
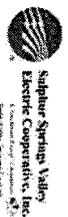
Total Miles

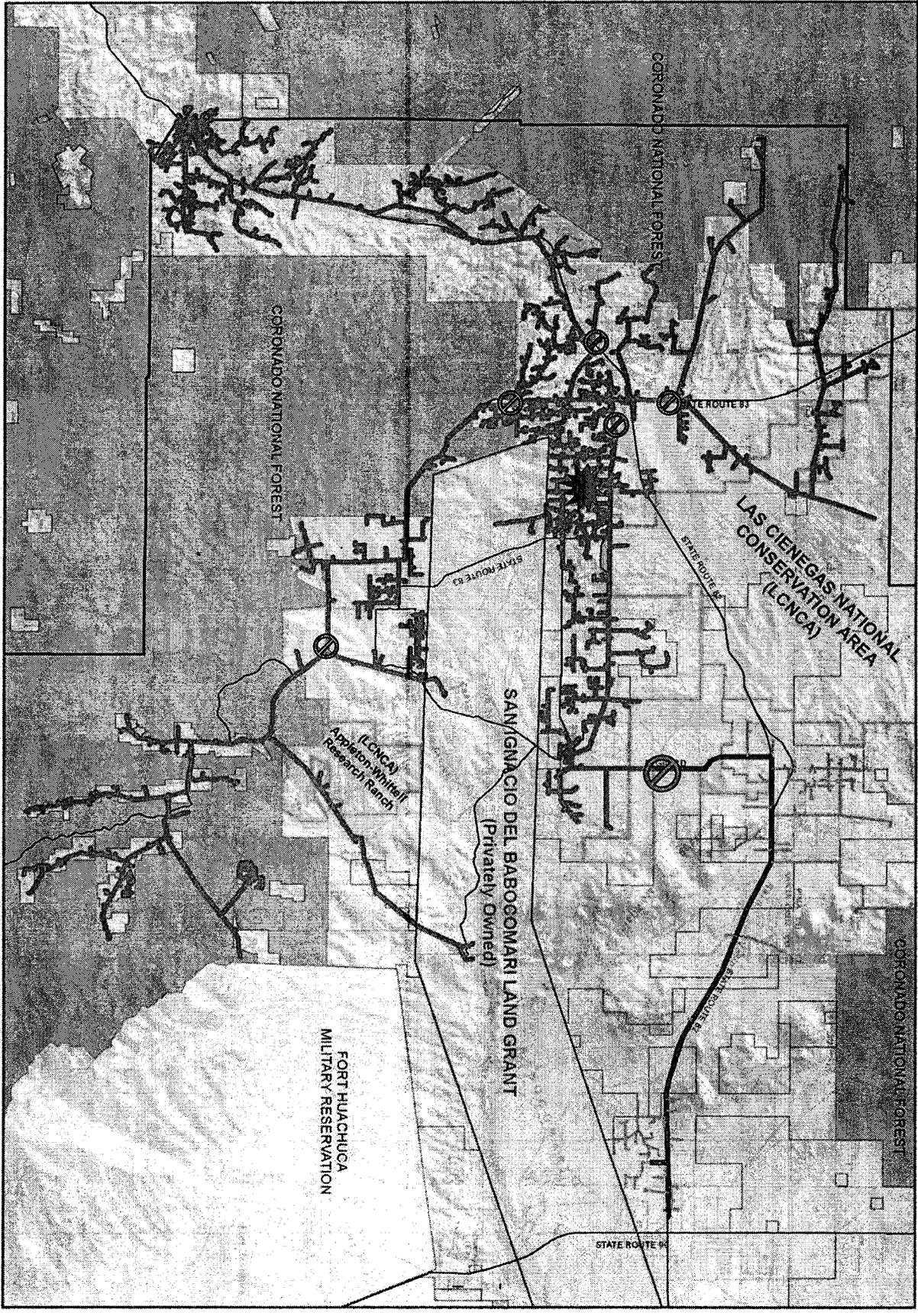




- Existing V7 Feeder**
- Bohman Substation
 - Socoma Substation
 - SIDG Boundary
 - CHCA Boundary
 - SSV/EC Service Area
 - BLM
 - Forest
 - State Parks
 - Other
 - Private
 - Public

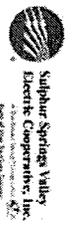
SONOITA RELIABILITY PROJECT





- Existing V7 Feeder
 - 1-Phase
 - 3-Phase
- Substation
 - Substation Substation
 - Substation Station
 - SSVEC Service Area
 - LCNCA Boundary
- BLM
 - Forest
 - Local or State Parks
 - National Park
- Other
 - Private
 - State Trust
 - Wildlife

SONOITA RELIABILITY PROJECT



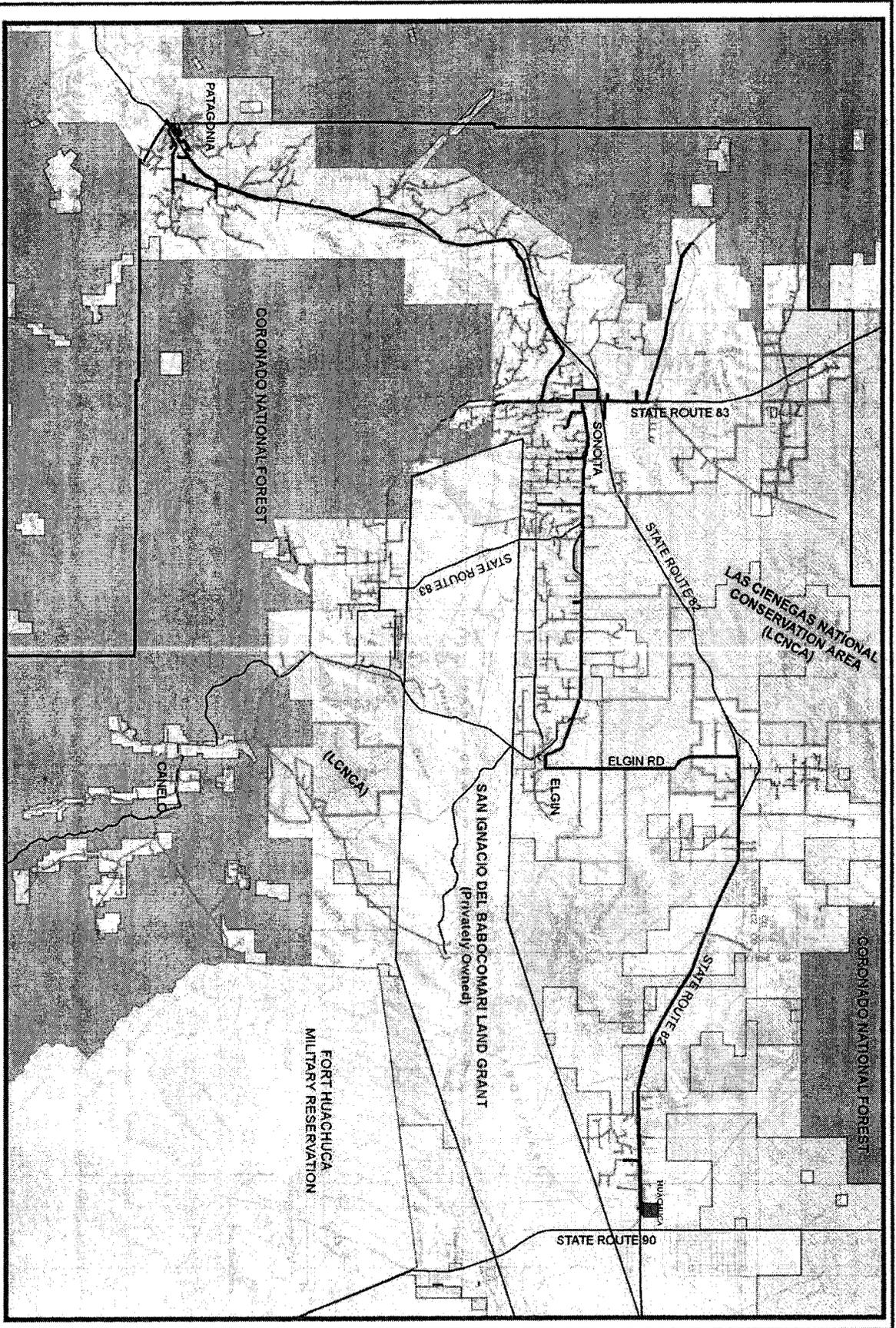


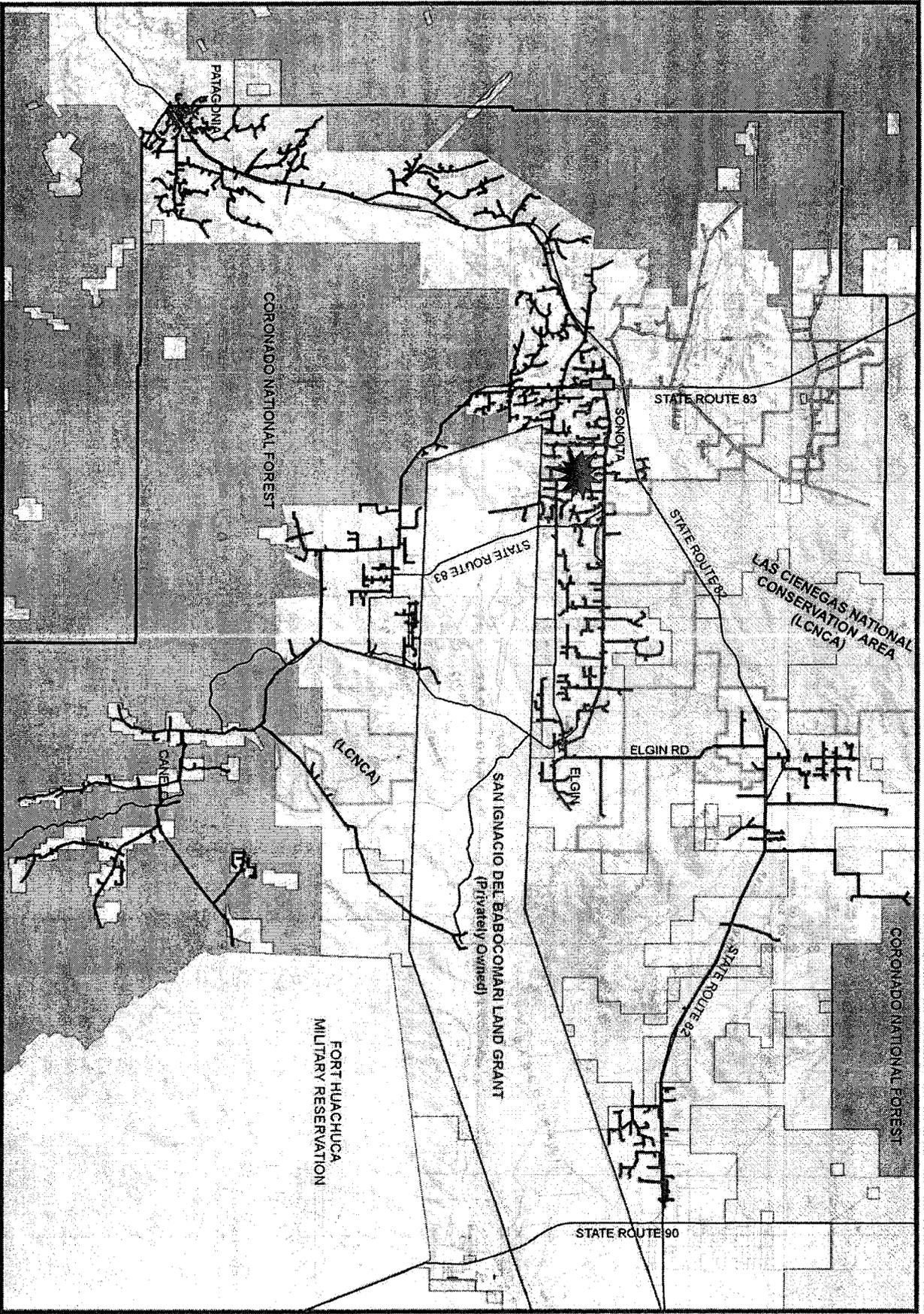
- Existing V7 Feeder
- Substation
 - Service Substation
 - SSJCB Boundary
 - CHCA Boundary
 - SSJEC Service Area
 - BLM
 - BLM Feeder
 - Local or State Power
 - Other
 - Private
 - State Road
 - Other
 - Private
 - State Road

SONOITA RELIABILITY PROJECT



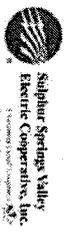
Sulphur Springs Valley
Electric Cooperative, Inc.
A Division of Sulphur Springs Valley Electric Cooperative, Inc.
1997





- Feeder 1
- Feeder 2
- Feeder 3
- Feeder 4
- Feeder V7
- Badwater Substation
- Concha Substation
- SDB Boundary
- LCNCA Boundary
- SSVEC Servicearea
- BLM
- Forest
- Local or State Parks
- Military
- Wild Parks
- Other
- Private
- State Trust
- Trackage

SONOYTA RELIABILITY PROJECT



Sulphur Springs Valley
Electric Cooperative, Inc.
April 2004

Community Information

SSVEC has kept the Community informed and it will continue regarding plans for the Sonoita Reliability Project. SSVEC has been disseminating information to the entire service area in order to keep all members informed as to the status of the Project.

- March 4, 2008: Meeting with Community group to discuss Project concerns
- March 4, 2008: Letter to community regarding reliability concerns in area
- July 7, 2008: Letter inviting community to attend Sonoita Reliability Project Presentation
- July 22, 2008: Community Presentation in Elgin
- August 6, 2008: Letter inviting Sonoita neighborhood to discuss route options
- August 8, 2008: Letter to community providing synopsis of July 22nd Presentation.
- August 13, 2008: Neighborhood Meeting for Sonoita residents
- September 12, 2008: Meeting with "Community Committee" to "facilitate discussions between the cooperative and the community"
- September 22, 2008: Letter to community providing detailed information regarding the Sonoita Reliability Project need, history, options, alternatives, myths & rumors.
- December 1, 2008: Letter to community regarding a final decision for routing of the 69KV sub-transmission line
- January 17, 2009: Sonoita Hills Neighborhood Meeting for to offer underground conversion of existing distribution lines in order to reduce height and number of 69KV poles on route through neighborhood
- April 2009: Letter to membership detailing Sonoita Reliability Project

Numerous telephone conversations, email, personal meetings, and small group meetings during this period.

Independent 3rd Party Study

TRC's Role



Sulphur Springs Valley Electric Cooperative, Inc.
A Member Service Cooperative

TRC's Role

- TRC Engaged by SSVVEC to
 - Ensure Independence of Third Party Review
 - Identify Qualified Firms for the Review
 - Prepare Scope of Work for the Review
 - Prepare RFP Solicitation
 - Manage RFP Process
 - Provide a Buffer Between I3P and SSVVEC
 - Review I3P Report for Compliance With Scope of Work



Sulphur Springs Valley Electric Cooperative, Inc.
A Member of the SSVVEC Group

TRC

- **Engineering & Environmental Consulting and Construction Management Firm**
 - 2,300 professional, technical & administrative staff
 - 73 offices nationwide
 - Leading provider of technical, financial, risk management and construction services.



Sulphur Springs Valley Electric Cooperative, Inc.
A Tennessee Electric Cooperative

TRC

- **Project Team**
 - **Rick Goodwin, P.E. BSEE Team Lead**
 - Manager of Power Delivery for Albuquerque and San Francisco Offices
 - 30 years electric utility experience in engineering planning
 - Registered Professional Engineer in AZ, CA, CO, NM, NV, OK, UT
 - **Tom Engels, Ph.D., Sr. Environmental Scientist**
 - Manager of TRC San Francisco Bay area Natural & Cultural Resources services offices
 - Ph.D., Biological Sciences
 - 18 years environmental experience in impact assessment, compliance
 - **Pat Scharff, P.E. BSEE, MSEE Principal Engineer**
 - 31 years electric utility industry experience in Electric distribution and transmission system planning, operations and engineering
 - Deployment of renewable and smart grid technologies.
 - Registered Professional Engineer in AZ and NM.



Sulphur Springs Valley Electric Cooperative, Inc.

A Southern Bell Company

I3P Selection

- RFP Submitted to 14 Firms On 10/13/09
 - Solicitation Limited to Pre-Qualified Firms
 - Nationally Recognized
 - Staffing Capabilities to Meet Study Requirements
 - Known Comprehensive Experience in Fields of Study
 - Ability to Respond in Timely Manner
 - Solicitation Included 3 Firms of Unknown Capability Recommended by 3SEG
 - Responses Due at TRC on 10/27/09
 - RFP was awarded after SSVEC met with ACC Staff on 10/28/09 regarding selection of I3P



Sulphur Springs Valley Electric Cooperative, Inc.

17 Anderson Street, Commerce, GA

I3P Firm Selection (continued)

Navigant Recommended for Award

- Experience in:
 - Planning and Reliability Studies
 - Distributed Generation
 - Energy Storage
 - Demand Response
 - Photovoltaics
- Cost



Sulphur Springs Valley Electric Cooperative, Inc.
A Southern Energy Company



Independent 3rd Party Feasibility Study



Sulphur Springs Valley Electric Cooperative, Inc.
A Member Energy Cooperative, Inc.

I3P Study Report

- I3P Report Filed With ACC on 12/31/09
- Report Available On
 - ACC Website
 - SSVEC Website
- Hard Copies Available For Viewing at
 - SSVEC Offices
 - Patagonia Public Library
 - Sonoita Community Library



Sulphur Springs Valley Electric Cooperative, Inc.
A Traditional Energy Cooperative



I3P Study Report

- Report Evaluated Alternatives Based On
 - Technical Performance
 - Environmental
 - Economic
- Alternatives
 - Distributed Generation
 - Photovoltaics
 - Demand Side Management
 - Energy Storage
 - Line Construction



Sulphur Springs Valley Electric Cooperative, Inc.
A Not-For-Profit Corporation

I3P Study Report

Supply Alternatives

Category	Alternative Description
Distribution	
D1: Reinforce Existing System	Optimize capacity and performance of existing system via load balancing, voltage regulation, power factor correction
D2: Reconduct 25kV I line (4/O to 795 ACSR)	Replace about 25 miles of conductor along SR 82 and Elgin Road from Huachuca substation to Sonota
D3: Install New 25kV Feeder from Huachuca: Split V-7	Construct 25 miles of double circuit 25kV distribution along SR 82 and Elgin Road from Huachuca substation to Sonota
D4: Create Tie to Foreign Source (13.8kV)	Extend Unisource 13.8kV line to Patagonia; install 13.8/24.9kV step up transformer and transfer about 1 MW of load
D5: Distribution Static Var Compensation	Install distribution class SVC at a location to be determined to improve voltage stability and power quality
Transmission	
T1: New 69kV line & Sonota Substation on Ranch ROW	Original SSVEC proposal. Tap 69kV SSVEC transmission line south of Whetstone; construction about 25 miles of new 69kV along southern border
T2: New 69kV line & Sonota Substation on SR 82 ROW	Construct 25 miles of double circuit 69kV transmission & 25kV distribution along SR 82 and Elgin Rd from Huachuca to Sonota
T3: Tap 138 or 115kV Transmission Lines	Install new 138/69kV substation where 138kV line crosses Ranch border and a new 69/25kV sub in Sonota; construct 15 miles of 69kV on southern border
T4: TIE 46kV Transmission Supply	Tap TEP 46kV lines and construct new 46/25kV substation along Routes 82 east of Sonota
T5: Underground Transmission Cable	Consider constructing underground transmission cable for T1 through T3 alternatives
Demand-Side Management	
DS1: Targeted DSM	Aggressively pursue energy efficiency and load management alternatives for residential, commercial and industrial customers served by the V-7 feeder
DS2: Electric Storage Heating	Aggressively pursue conversion of existing electric space heating for residential and commercial customers served by the V-7 feeder
DS3: Incentive Rate Option	Adopt time-of-use pricing to incentivize customers to reduce or shift peak demand usage to off-peak hours
DS4: Space Heating/Fuel Switching	Develop program to convert existing electric space heating systems for residential and commercial customer to alternate fuels
DS5: Combination of above Renewables & DG	Combinations of Alternatives DS1 through DS4
R1: Solar Photovoltaic	Promote programs to install PV on rooftops and ground-based systems for customers served by V-7; includes large utility-owned PV
R2: Concentrated Solar Power (CSP)	Develop single or distributed CSP systems on suitable sites near the V-7 primary lines; includes ground-based and distributed CSP
R3: Wind Generation	Develop utility-owned or third-party wind farm on suitable sites near the V-7 primary lines
R4: Energy Storage	Develop utility-owned or third-party energy storage systems; most likely at Sonota substation site
R5: Distributed Generation	Install utility-owned diesel or natural gas DG; most likely at Sonota substation site



Sulphur Springs Valley Electric Cooperative, Inc.

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I3P Study Report

Comparison of Feasible Supply Alternatives

Description of Solution	Solution Cost	Length of Time Needed to Implement the Solution	Length of Time Solution Provides a Solution	Advantages of Proposed Solution	Disadvantages of Proposed Solution
Option T1: Construct New 69 kilovolt (KV) Line & Sonoma substation along the San Ignacio Del Babocomari Ranch, and new 69/25KV substation at Sonoma site	\$14 Million	Approximately 12 - 18 months for design, equipment procurement and construction	30 years (or longer)	<ul style="list-style-type: none"> Provides highest level of firm capacity over 20 years Provides greatest improvement for voltage and reliability performance Lowest losses of all solutions 	<ul style="list-style-type: none"> High construction costs compared to other options New sections of line on some sections of ROW's are visible to customers
Option T2: Construct New 69KV Line & Sonoma Substation. Tap 69KV SSVFC transmission line at Sonoma Substation; construct about 25 miles of new 69/25KV double circuit line along Route 82 and Elgin Road	\$19 million	Approximately 16 - 24 months for design, equipment procurement and construction	30 years (or longer)	<ul style="list-style-type: none"> Provides highest level of firm capacity over 20 years Provides greatest improvement for voltage and reliability performance Lowest losses of all solutions 	<ul style="list-style-type: none"> Highest construction costs compared to other options Need to obtain numerous new & costly easements All sections of line on ROW's are visible to customers
Option DS2: Convert electric space heating for residential and commercial customers. Customers would be offered incentives to replace existing space heating systems with new storage units.	\$2.5 million	Approximately 12 - 18 months for appliance survey, program development and marketing, and initial customer sign-up	Unknown until appliance survey is completed and customer participation level is determined	<ul style="list-style-type: none"> Lowest cost of all solutions Potentially avoids new construction for many years 	<ul style="list-style-type: none"> Number of eligible heating customers unknown Customer willingness to participate is uncertain Performance and reliability will continue to degrade to if customer participation is low
Option DS4: Convert electric space heating for residential and commercial customers to use alternate fuels. Customers would be offered incentives to replace existing space heating systems with propane or kerosene units.	\$2.5 million	Approximately 12 - 18 months for appliance survey, program development and marketing, and initial customer sign-up	Unknown until appliance survey is completed and customer participation level is determined	<ul style="list-style-type: none"> Lowest cost of all solutions Potentially avoids new construction for many years 	<ul style="list-style-type: none"> Number of eligible heating customers unknown Customer willingness to participate is uncertain Performance and reliability will continue to degrade to if customer participation is low
Option RS: Install 2-1000KW or 4-500KW diesel generating units at the Sonoma substation site. Interconnect to 24.5KV distribution lines. Includes fuel storage and handling systems, oil retention facility, screening and noise abatement.	\$5.8 million	Approximately 6 - 12 months depending on length of air quality permitting process	Up to 20 years, provided generation is allowed to operate up to 2000 hours in year 20	<ul style="list-style-type: none"> Low capital or lease cost Sonoma site available to accommodate generation Potentially avoids new line construction for many years 	<ul style="list-style-type: none"> Uncertainty of air quality or other permit requirements Less reliable firm capacity than transmission options Does not materially improve feeder reliability and voltage



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A Truist Bank Company

I&P Study Report

Option	Environmental Considerations
<p>T1 69kV/Sonoma substation along San Ignacio Del Babocomari Land Grant ROW</p>	<ul style="list-style-type: none"> • Relatively minor biological and cultural impacts with cost-effective mitigation available • Major sections of line are not visible to the public • Sections of line on ROWs that are visible to customers (and where lines presently do not exist)
<p>T2 69kV/Sonoma substation along Route 82</p>	<ul style="list-style-type: none"> • Relatively minor biological and cultural impacts with cost-effective mitigation available • All sections of line on ROWs that are visible to customers
<p>DS2 Conversion of existing electric space heating w/new storage units</p>	
<p>DS4 Conversion of existing electric space heating to modular propane or kerosene systems</p>	<ul style="list-style-type: none"> • Burning propane or kerosene will create local fossil fuel emissions
<p>R5 2-1000kW or 4-500kW diesel gen units</p>	<ul style="list-style-type: none"> • Uncertainty of air quality (or other state/local) permit requirements • Creates local fossil fuel emissions & noise • Minor changes to visual setting



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A Tennessee Valley Cooperative, Inc.

I3P Study Report Conclusions

- “...SSVEC should take immediate action to address current performance issues and capacity limits, including carefully assessing the impact of customer requests for new or expanded service on V-7 feeder performance capacity.”
- “The preferred alternative based on feeder performance and firm capacity requirements is the construction of the new 69kV line along the Ranch where SSVEC has easement rights.”



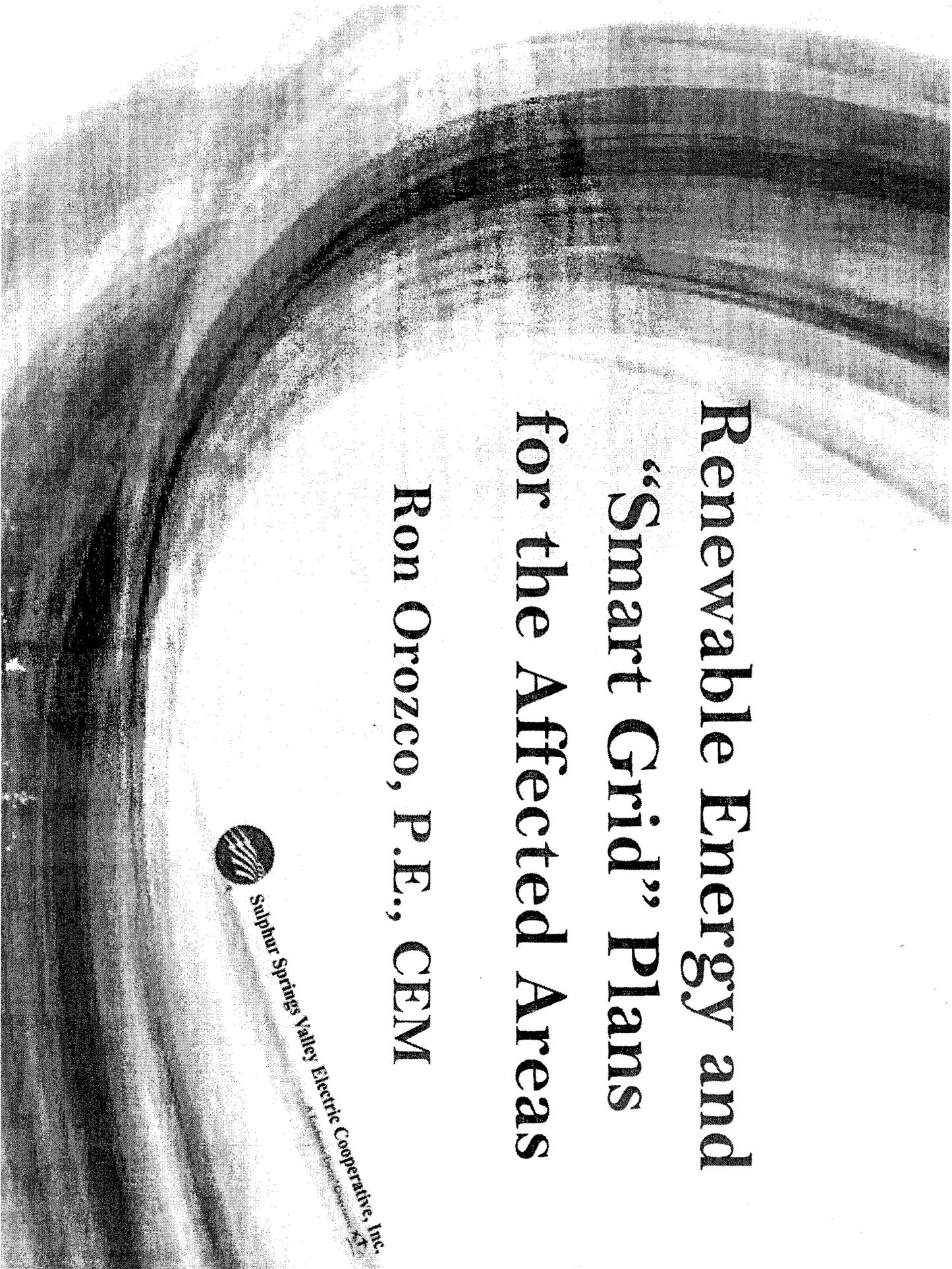
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I3P Study Report Conclusions (continued)

- The preferred 69kV route "...has the least visual constraints due to its relatively lower exposure to residential and roadway views."
- "Most renewable energy options, including wind and solar photovoltaic did not provide sufficient coincident peak load reduction to be feasible - ..."



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**Renewable Energy and
“Smart Grid” Plans
for the Affected Areas**

Ron Orozco, P.E., CEM



Sulphur Springs Valley Electric Cooperative, Inc.
1100 Highway 101, Sulphur Springs, TX 75488

Renewable Energy Programs

- **Clean Renewable Energy Bonds (CREBs)**
 - \$6M, low-interest loan for 750 kW at new Sonoita Substation
 - Received Allocation on October 23, 2009, Facility must be fully constructed and operational within a 3-year period
- **Sun Watts**
 - Funded by ACC-approved collection mechanism from all members
 - Funds member-owned renewable energy systems
 - Recently a very popular program



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A Southwest Energy Company

Renewable Energy Programs

(cont'd)

Net Metering

- Recently approved by ACC
- Now available to SSVVEC members
- Allows credit for renewable energy generated
- Any excess generation beyond member usage, up to 125% of member load, will be paid back to member at avoided cost – currently \$.0491.

All a part of SSVVEC's 2010 ACC Approved REST Plan (Renewable Energy Standard Tariff)



Sulphur Springs Valley Electric Cooperative, Inc.
11700 Highway 100, Sulphur, LA 70588

American Reinvestment and Recovery

Act – ARRA

“SMART GRID”

- Final negotiations for \$15M cost-share grant from ARRA – the Stimulus Package
 - 50/50 cost share
 - 3 years to complete
 - Strict reporting and accounting standards
- \$1.1M allocated for Sonoita Reliability Project



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Current Demand Side Management “DSM”

- Free home and business energy savings audits
- Energy savings tips advertising (including education on energy
- Zero interest loans for Energy Efficiency for residential and business
- Time of Use rates
- Interruptable rates for irrigators



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A Not-For-Profit Corporation

Future Demand Side Management “DSM”

- Data analysis including member surveys
- Improved Energy Efficiency program
- Automated Metering Infrastructure (AMI)
 - Two-way communication – to/from SSVVEC/member
 - To SSVVEC – energy usage in detail
 - From SSVVEC – pricing signals, other



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A Tennessee Energy Cooperative

Demand Side Management

“DSM” – cont’d

- Improved Direct load control – irrigation, large commercial, residential
- Home Energy Display (HED)
- Improved Time-of-use rates
- Improved Member education
- DSM program, through ‘Smart Grid’ under development at this time



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A Tennessee Electric Cooperative, Inc.

Demand Side Management

“DSM” – cont’d

- DSM program, through ‘Smart Grid’ under development at this time



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A Louisiana Energy Cooperative



Overview of Independent Public Opinion Poll

Jack Blair, CMSO



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A Member of the Georgia Power Company

PUBLIC OPINION POLL

January 18 – 20, 2010

600 Members



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A Tennessee Energy Cooperative

RBI Strategies and Research/Severson & Associates

CLIENT LIST INCLUDES:

- Senator George McGovern**
- Senator Tom Daschle**
- Limits on Open Pit Mining**
- National Wildlife Action Funds**
- Colorado Conservation Voters**
- AFL – CIO**
- Leadership Conference on Civil Rights**
- Fund for Animals**
- Sierra Club**



Sulphur Springs Valley Electric Cooperative, Inc.
A Division of Energy Cooperative, Inc.

	Total		SSVVEC	V-7
Question				
SSVVEC satisfaction			88%	75%
SSVVEC dissatisfaction			7%	15%
High knowledge of V-7 line			48%	95%
Low knowledge of V-7 line			52%	5%
Based on current knowledge, should SSVVEC build line?	Yes	63%	70%	
	No	8%	18%	
	Undecided	24%	11%	



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Basic Performance of SSVVEC

Total

SSVEC

V7

Issue	Good/Excellent	Fair/Poor	Good/Excellent	Fair/Poor
Blinks	78	5	46	24
Power Restoration	77	5	65	15
Member Communications	67	12	73	16
Good Environmental Stewards	57	7	51	18
Minimizing Long Outages	80	4	58	15



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A Tennessee Energy Cooperative



4 Questions on Pro/Con



Sulphur Springs Valley Electric Cooperative, Inc.

A Member Since 1934



Revote at End

Total

SSVVC

V-7

Build Line

83%

72%

Don't Build Line

8%

22%



Sulphur Springs Valley Electric Cooperative, Inc.
A Member of The Electric Cooperative of Texas

Discussion



Sulphur Springs Valley Electric Cooperative, Inc.
A Division of First Citizens Bank

Exhibit H

Sulphur Springs Valley Electric Cooperative
Public Forum Held at Patagonia High School
Transcription of Question and Answer Session
March 9, 2010

- Moderator Emmett from Sonoita?
- Mr. McLaughlin Good evening. I'm Emmett McLaughlin. I'm a resident of Sonoita. I've actually been a member of Sulphur Springs since the mid-80s when I had a place over in Cochise County as well. And I would compliment you, since that time, on the communication and support, the backup, the elections and all of the things that relate to the support of the member organization.
- I'm here because I'm concerned about having safe and secure electricity for my house. We've been living in Sonoita since 1992 in a house we built. The dishwasher has never worked. And the question that I have, what's it gonna take to get the dishwasher working? And all along, we've heard about the, the line that's going to be put in, but it never seems to be put in.
- And what I've read about the actions of the Corporation Commission, I'm dismayed; I'm distressed. I understand that at the meeting in August in Sierra Vista Mrs. Mayes, the Chairman, said that actually, they do not, as a Corporation Commission, have jurisdiction in this question – that you have to have a 100 or 110 kilowatts, kilovolts, to actually become under their purview. Then I heard that in February of this year that, in fact, the Corporation Commission, the attorney up in Tucson, made the same decision.
- And I'm just someone that's concerned about – you saw the graph and the problems that we're having in our area. I want safe, secure electricity to my house. And what's it gonna take?
- This is a wonderful exercise, and we get a chance to meet with our neighbors, and hear what Sulphur Springs is doing. Is there anyone from the Corporation Commission here? You know? This is an exercise they're putting us through, but I ask you, do they have jurisdiction on this, or is this an exercise that – they grab Sulphur Springs, that was asking for a rate increase, and say, well, this is an exercise in civic responsibility, of learning how we all have to be conscious of our proper use of energy.
- But I'm just one guy that says – my dishwasher isn't working. It hasn't worked for 18 years. And it's going to get worse. And what does, how does this satisfy me?
- Moderator Is there someone on our panel who can respond to those questions?
- Moderator We're trying to figure that out.
- Audience [laughter]
- & Audience I can tell you why every time there's a big power outage, that's [inaudible].
- Moderator Hold on, we might have an answer.
- Jack Blair The ACC regulates us. They told us to do this study. We did the study, and we're complying with what our reg-, with what the regulators have told us to

do.

I believe the end result is going to be that the Commission has a formal hearing in March, I believe it is, in which they'll make a determination.

Deborah White

And in response to some of the questions further – your dishwasher not working. SSVEC has [inaudible] – I don't understand that. You know, we did our analysis. We do look – the reason why your dishwasher is most likely not working is because of the voltage problems that we have. You turn it on, it sags a line down, or, you know, it trips a breaker, or something like that.

So that is what some of the problems are --

& Audience

[inaudible]

Deborah White

So there you go. And so those are voltage problems, and those are power quality problems. And that is why it is, especially if you are in the Patagonia area, you're at the very long end of this line, and by the time it's down here, the voltage is having issues.

Our studies have come back and shown that the substations in the presentation will reduce a lot of those problems. Especially it's going to get you a lot closer to the power source.

As well as SSVEC's study, Navigant's study came back and corroborated that exact same issue, that we do have voltage problems out there. This will fix that. So we're hoping that when this decision is made, it will come back towards, to where we can get this substation in and you can run your dishwasher.

& Audience

Thank you.

Moderator

Linda Kennedy? Is Linda still with us?

Ms. Kennedy

Here.

Moderator

Ah, the Sun Watts Linda!

Ms. Kennedy

Sun Watts Linda? Oh ho, yes! Am I limited to one question?

Moderator

Well, let's – I'll put them both on the list.

Ms. Kennedy

Okay, I'll try and keep it. Would it be possible to scroll back to your presentation to one of the first graphs that Deborah White showed? Please?

Moderator

Do you want to do that, Deb?

Deborah White

Do you recall what it said at the top?

Ms. Kennedy

Uh, I think it was peak – the peak loads.

Deborah White

Sorry, guys. Here we go. There you go! All right. Is that it?

Ms. Kennedy

Uh-huh [affirmative]. Yes, load versus capacity. And I see there on the graph that the substation capacity, the peak load has reached. According to the graph, the substation capacity or even exceeded it, in one instance.

How – and thank you, Deborah, for stepping up, because I think this is probably --

& Audience

We're having trouble hearing you in the back.

Jack Blair

Is that mike on?

Moderator It is on. Bring it closer to your mouth.

Ms. Kennedy Okay. Is that better?

Audience/Panel [*dissents*]

Jack Blair Is the red light on?

Moderator Yes.

Ms. Kennedy Now better? Okay. I'll try and hold, hold real still.

Okay, we have the – the graphic shows the peak load is right up there at the top. But according to the feasibility study, it looks like our 10-year average on outages per customer were only three hours per year? And the outages by cause were mostly due to lightning, birds, unknown, other animals, wind, UG fault, and that overload – which I guess would be this, correct? That would be overload? – happens in a very small percentage, or a very small number, and that the outages by customers affected – again, the 10-year average from the feasibility study – in most cases, the outages were suffered by 1-5 customers. So why are we not showing those graphs? And how would the new line address those issues, Deborah?

Deborah White Okay. So there's several questions there. And you started out with the capacity issue. So, and talking about outage – I think your main focus of your questions is about outages. Right? And you have one particular portion in the outages, which is an overload.

And in the outage data, what are showing is – overload conditions can be many different things. It can be – it's not typically showing capacity here. It's – an outage is caused by a fault. And that fault would be an overload at a location where it has overloaded a device or it's overload – and typically it's a protection device, or sometimes a transformer, something. It's not so much a substation transformer.

So it can be related to this, but a lot of times it would depend on the circumstances for that particular fault of what it overloaded. How, you know, what the cause was. Okay. So when you're talking about outages in relation to birds, wind, lightning, natural occurrences – hey, yes, there is a lot of outages, especially in this area, because there is so much exposure. This line is 360 miles long. It's still going to have outages created by lightning or birds or natural occurrences. However, when you take the substation, and you're going to split up this 360-mile long feeder into four separate ones, it's going to shorten the exposure area, okay? So when an outage occurs, instead of wiping out everybody down the line by one bird, then it's going to only wipe out a little bit of an area, depending on where the protection devices are at.

So there may still be – there's going to be natural causes. That's what most outages are on our entire system, okay? Not only in this area but in other areas. Farming areas have high outages of birds as well. So in response to that question, those are still going to occur. What happens is, is it just reduces the amount of people who are going to be affected by those outages.

Individual outages? There's still going to be individual outages. Again, it reduces the amount of exposure on those particular outages, because when you have a large outage – and that's where the problems are, occur on this – this feeder has more large outages than any of the other feeders, most of the other feeders on our system – to where it's the full feeder, okay? And when

you break that down again, it reduces the amount.

Now, the one fact that you're talking about – and let me move it forward here. Because I, uh – this has been a subject of quite a bit of conversation here – is this particular outage, correct? This graph about the outages? And you're talking about three hours. And then, in the study --

Ms. Kennedy

That's what [inaudible] the study.

Deborah White

Okay. So the study says that there are three hours per customer per year in this area, okay? It's a different – it's a type of analysis that is used. And when you're looking, when any type of utility company or any company looks at different types of a subject, they look at different ways to analyze it, okay? Four different answers.

This particular graph here shows 270 hours of outage time. This means annual hours out. Over this 10-year average, we have about 270 hours – that's total hours out -- on this feeder. And it's in comparison to all of our other feeders. When Navigant was looking at this study, No. 1, they weren't looking at all of our other feeders; they were just looking at this particular feeder. And they used indexes which are done a little bit different for a little different type of analysis. And that analysis is by customer, not by feeder, okay? So it says that yes, this whole area averages about three hours out per year per customer. That means every single customer on this feeder, every year, has about three hours out.

This graph says this feeder total, overall, has about 270 hours out a year. Does that make sense? Does that answer your question?

Ms. Kennedy

That starts to address the question, and --

Moderator?

Turn it off.

Ms. Kennedy

I would like to --

Jack Blair

[inaudible] off, on.

Ms. Kennedy

How's that? Can you hear me? No?

Moderator

Speak a little louder, that's all.

Ms. Kennedy

Okay. Can you hear me?

Moderator

No, into the mike.

Ms. Kennedy

Okay, can you hear now? All right.

That addresses some of the reporting issues, and I do appreciate that, but it still doesn't address the fact that according to the feasibility study, our area experiences on average one major – one, one outage per year that affects everyone. Will that change? Will we have fewer than one outage per year with this \$14 million project?

Deborah White

Well, I think that the outage rate is, is flexible, okay. So this year, actually, in December of 2009, and in the last three, three or four months, we had three major outages where it was one year. Okay? So when they were looking at that, they were looking at over an average period of time. And over an average period of time, it is about one major outage a year.

Typically, when you do have a substation, and there's only one feeder serving this whole area – when you have a substation with four feeders, rarely do we have an entire substation go down. In Sierra Vista, if we have

an outage in that area and we have one whole substation go down, that is a significant outage and it is a rare occurrence.

So, and your answer is, when the substation comes in, it is a very rare occurrence to have a major substation, total substation outage; yes.

Moderator? Well, I have several, so why don't I put you back on the file and [inaudible] call you at the end of the meeting. Okay, thanks, Linda.

Herbert Loveland, who came all the way from Benson. I think the button's on.

Mr. Loveland Is it working?

Moderator Yep.

Mr. Loveland Okay. First thing I want to say, that electricity is life. Everybody, they talked about their needs for their appliances and everything else. But that ain't what you need electricity for. Electricity sustains life. Your power lines, your poles – everything wears out, just like your car does. You need a new car? If you can afford it, you go buy one, because you have to have it. But the main thing you need electricity for, and nobody has brought up at all, is the electrical devices for medical. Any medical device has to have electricity. And every person in this room, tomorrow, they might need an electrical device, a medical device. And we all have to have it. Anybody that, because you don't like the esthetics of a power pole, think about life – that you need that medical tomorrow. Everybody in here can have the same thing. I do. And that's what I have to say.

Moderator Thank you, Herbert. Ernest Hendricks? He is also from Benson.

Mr. Hendricks My name is Ernest Hendricks, as you've heard, and I live in Benson --

Moderator Put it right up to your mouth.

Mr. Hendricks -- and have for the last 16 years. During which time I've had a very close relationship with SSVEC in both the customer service, as a purchaser of electrical power for our small mobile home business. During this time we have had no serious problems with SSVEC at all, I'm proud to say. Now that may not be true with everybody, but we have had no major problems whatsoever. We recently had a mild problem we felt was going to be a major problem, but within an hour SSVEC had us back in service. So I have nothing but high praise for SSVEC.

As you well know, a cooperative is owned by the purchasers of power. We all own SSVEC. So, what we are most interested in, in our area, is that the Patagonia, this area get the power and the energy that we need, but that it be purchased and provided at a minimal cost to the rest of the subscribers. We don't mind paying some little part of your bill, but let's keep it to a minimum. Thank you very much.

Moderator Thank you, Ernest.

Jim Henderson? Did I say that right? From Patagonia. Is Jim here? I'm sorry – Crenderson.

Mr. Pendleton Pendleton?

Moderator Pendleton. Yes, Pendleton. Excuse me. I can't read, apparently!

Mr. Pendleton Well, I wasn't going to say anything, but – you, you told me that --

Moderator I know, I just kept nagging; didn't I?

Mr. Pendleton I'm Jim Pendleton from Patagonia. And the thing that perked my interest was the shared energy thing, and I'd like to have an engineer come out to my place, my facility on Harshaw Road. And I'm in a 4,000-square-foot building up there. And I'd like to know how, what the load, or weight, is on these photocells, photoelectric cells, and I could probably generate some electricity, cut my power bill down.

Moderator? I bet they'd – I bet they'd come out and do that for you. Somebody will contact you, Mr. Pendleton.

Mr. Pendleton Thank you.

Moderator Irma Sang, who remembers the icehouse electricity. [inaudible] we're being told about it.

Ms. Sang My name is Irma Sang, and my husband and I own the Patagonia Market. And we are here in support of Sulphur Springs. We're here in support of Sulphur Springs. We have had issues that when the power goes down, we have to shut our business down. And we have put in thousands of dollars, you know, trying to upgrade our lines and our computers – we have had some computers burned up because of the brownouts and the power surges. And so we're here in support.

And the other thing is that Sulphur Springs has put that moratorium on, and my husband owns a construction business. So that would, you know, impact that.

I need to hear from my coach here!

Moderator Right. Did she miss something that she shouldn't supposed to say?

Mr. Sang No, I other than the fact that we're supporting Sulphur Springs.

Ms. Sang And we also put a – we have a petition at the store for people that came in that lived in the area to sign it, and there was quite a few signatures. Probably maybe 150, 200 people that are definitely for this project to continue. Thank you.

Moderator Gary Soliere. [spelling?]

Deborah White While Gary is coming up, I do want to address her comment in regards to the moratorium. SSVEC did file an application to the Corporation Commission for a new hook-up moratorium. It has not been approved. SSVEC is still accepting applications for service. We do hook-up new services under the same line extension service policies that we have done through the years. And it is an approved policy through the Corporation Commission, and that, at this time, is pending – the moratorium is. If this particular case needs to go forward, that may be re-addressed. But at this point in time, it is, it's still pending against the Commission and is not in effect.

Moderator Thank you. Yes, sir. Gary?

Mr. Soliere I would like to just tell a little story. And my last comment, I will direct to Mr. Blair.

In 1996, Karen and I purchased our property in Sonoita. But before we purchased our property, we noticed that there was a potential for having a future substation, the Buchanan Substation. And I called Sulphur Springs, and they said, yes, there might be. Karen and I still purchased our home,

which is on the corner of Mustang Trail and Highway 83.

In 2002, our home was being built by a local builder, and I got with Sherry Basinger. I didn't want any telephone poles at my home. I didn't want any lines brought up to my home. And so Karen and I had our electric buried. Sulphur Springs put in a midspan pole for us on Highway 83, and our power is buried to our home.

One of our neighbors started a petition against Sulphur Springs, about the line coming in and the substation. And since I knew about the substation, and there might be a possibility, I would not sign his petition. And he asked me, well, I've got 40 other people; what makes you any different? I think what was different with me is, what I told him, I have integrity. The substation was probably going to be built, and I knew that.

Mr Blair, this is directed to you. I support Sulphur Springs. Bring that line in. We need the power.

Audience [clapping]

Moderator Michael O'Halloran. The Irish [inaudible], or something like that.

Mr. O'Halloran Well, first thing, we are going to have the St. Patrick's Day dinner at the senior center, so I expect to see you all there, if the lights are on! But who knows?

I think the point I'd like to make is that this is a community, and we have children growing up that hopefully will find jobs in this area. And the only way we're going to have jobs for our children in these areas is if we have reliable power. If we don't have reliable power, I don't see those jobs coming in that are needed to keep our kids here, which is the problem which we have in Patagonia. We're not all retired. There are people with families who need to make sure that this area grows sensibly. Thank you.

Moderator Thank you, Mr. O'Halloran.

Audience [clapping]

Moderator Linda Kennedy, did you have another question you wanted to ask?

Ms. Kennedy I just have [inaudible]

Moderator Oh, okay. Well --

Ms. Kennedy Other than that [inaudible]

Moderator Okay, great. Okay. I'm down to one last. Gail, have you decided you want to speak?

Ms. Getzwiller I do have a question.

Moderator And then if anybody has come up with a question since, give a slip to Roxanne and we have time for you. Gail Getzwiller from Sonoita.

Ms. Getzwiller Thank you very much. I just had a couple of questions. This doesn't work very good, does it?

Jack Blair was talking about the poll that was done, and 600 people were called by company. And of the 600 people that were called, can you tell us how many of those people were from the V-7 feeder area? And you were talking about how the numbers were, so impressed this company, because they, they thought that the responses were extraordinary. Does this mean they have done a number of cooperative surveys, and how many have they

done?

& SSVEC (not Deb) Well, do you want me to answer the question before you make a whole list of them?

Ms. Getzwiller No, he – I just have one of them, I think he's got those.
And then, when Deborah White was – Maybe I can talk better without the microphone?

Moderator No, try – try again.

Ms. Getzwiller Okay. Deborah White had made a statement about the three hours per customer outage and how this wasn't really something that mattered, though it was something in the feasibility study that your 270 hours was more important because it was over the year. And in the study, it actually said that three hours of customer outage a year for the past decade was – that this area's performance was better than the appropriate national average. So it was not a terrible showing for a feeder of this length and size.

Deborah White Okay, I'll respond a little bit to your ques-, to your statement in regards to – the three hours per customer is different than the 270 hours. It's a different type of analysis. One is not more important than the other. It is – depending on what type of information that you are looking for in order.

The information that we are showing here is a comparison of this particular feeder amongst all of our other feeders. What is this total system look like? Where is a, where is a problem that jumps out at you? When I look at all these feeders, I see a problem that jumps right out at me, pretty easily. Okay? The three hours per customer is a different type of analysis, and it is – indeed, it's a very important analysis, just as this one, and it's a tool that we also use inside the house for different options, okay?

What it does is, it takes this particular feeder that we see in amongst all these other ones, and we take it and we say, wait a minute – we need to do additional analysis on here. What exactly does this mean? This is 270 hours out. We say, okay, we're going to break it down, and we're going to say, well, how many is every single customer? How many hours are they seeing out of this 270 hours? And it does come out that, yes, they are seeing three hours, and this is over this 10-year average, okay? Per customer, per year. So there's not a, there's not a "this answer is right and that answer is wrong". It's just different types of analysis on what it means.

Gail Getzwiller But the three hours per customer is not, not a bad show. According to the feasibility study, it is a, not inappropriate. And it's, it's more than appropriate for the national standard.

Deborah White It's actually, it is – what they say is that it is not surprising or inappropriate for a feeder of this length. When you have something that has this much exposure, 360 miles – which is an unusual length for most feeders – it's a very rural area. And to have three hours per customer per year is not an inappropriate number to have for something of this type of situation. And whether it is totally appropriate in, as far as the numbers are concerned and in comparison to the national average or averages of other cooperatives, is also something that we have to look from our customers. Is this appropriate for our customers to have three hours per year every year of outage time as well?

Moderator Hang on a minute. Let's get the answers from Jack to the first two questions,

and then I'll get back to you.

Jack Blair

To answer the question on the survey, what we did was, we took all of our residential members – 32,000 of them. We sent them to Severson & Associates, who then sent them to RBI. They went through two random selection processes. And out of the 600, what we did was, the 600 was evenly divided – excuse me, 500 were evenly divided amongst all of our service territories. But to get a statistically valid number in Sonoita, Elgin, Patagonia, Rain Valley, the people off the V-7 feeder – we oversampled by 100 people.

Oh, and Mr. Severson, in addition – yes, he has done work for cooperatives before. Utilities, political candidates, different causes. And I think in the information that is on our website, it lists all the clients that he has worked for, as well as RBI.

Moderator

Thank you. Michael? Uh, you need to come up to the microphone. Yep, sorry.

Michael
O'Halloran

As long as I've lived here, I can't think of a year that I didn't have more than three hours outage, so I don't know what the statistics [*inaudible*].

Audience

[*laughing*]

Moderator

Okay, well, you have had an opportunity – I hope that all of you have provided the input that you wanted to provide. We thank you very much for coming this evening. And watch that weather out there. I have no idea what it's doing right now. It's been blowing.

Thank you again.

END OF RECORDING

Exhibit I

Sulphur Springs Valley Electric Cooperative
Public Forum Held at Elgin Schools
Transcription of Question and Answer Session
March 11, 2010

Moderator – I think it's, I think it's on. I hope it's on.
Judy Gignac

Jack Blair Testing.

Moderator – It's on.
Judy Gignac

David McCullum *[Inaudible]* too often so I won't have to go through the whole talk so I can shorten it. Did you pass the notes out, Mr. Blair, that I gave you and those that want can use it?

And I'm an engineer. I've lived in this area since 1963. I'm not on the payroll of Sulphur Springs. I've been a loyal member of the co-op for all these years. I'm concerned about seeing that the line is built. As an engineer, there's two areas that I'm concerned about. Generally speaking an engineer designs something. And to design something like an electric utility you look at two factors: power generation and power distribution. For power distribution, which Sulphur Springs is all about, requires you abide by the national electric safety code. What you do on your own property from the meter on is governed by the national electric code, which is published by the fire protection group.

Now one of the things that I've observed is that you have to prove to the public and get money. You have to have licensed professional engineers, which Sulphur Springs has, and then combine well with that area. So when they design a distribution system, it has to meet with the national safety code. And it's not an easy task. That code is thick and requires detailed analysis to make sure that you comply and hold paramount the safety of the people that use it and the environment. And that summarizes what I have. And so if those that are interested, they can read that. I was not aware of the wonderful things that you're doing or the recent grants you got. Thank you.

Audience *[applause]*

Moderator – Thank you. Let's call the next person to be ready. Lee Simms and then
Judy Gignac Thomas Klinkel.

Lee?

Lee Simms I've been a member of Sulphur Springs Valley and *[inaudible]* for 49 years and a resident of Sonoita for 43 years. I am a retired professional engineer. I have really little to add to the presentation; just a few points.

I was very dismayed when I heard all the invective hurled against the co-op last year. And I would like to point out a few things that they have done or

are doing. And they provide scholarships for 20 students every year. They fund the welcome and youth tour and a science fair, and a few years ago, they gave two \$5,000 grants to CC, which is the organization [inaudible]. And with respect to Navigant, I found out they were a \$750,000,000 organization with offices in 40 cities, and they are on the Forbes 200 Best Small Companies list, and they own it all. One other thing that I bring tonight is that they have photovoltaic systems in 41 schools [inaudible]26 and they -- these photovoltaic systems provide almost a megawatt of power.

And one of the things, and the reliability of the lines, the outage that we had on December 8th was caused by an overload. The transformers spiked at 7000 kilowatts, and it hit over 8000 kilowatts that morning at 6:30, and my house was plunged into total darkness. The only flashlight was three rooms away, and I became completely disorientated.

Moderator –
Judy Gignac

Thank you, Lee.

Thomas? And Gail Getzwiller?

Thomas Klinkel

Thank you. A comment first, then I have question for Jack Blair and a question for Ronald Orozco, if I could.

I've lived here in the Sonoita area now for several years. And I grew up and lived for a number of years early on in South Dakota, which is a – I saw a couple of clients up on that list. But South Dakota is well known for having lots and lots of rural electric cooperatives. And the fact that there wouldn't been a lot of electricity in some of the farm areas of the upper Midwest if it hadn't been for the rural electric cooperatives. So I know something about rural electric proprieties before I came to Sonoita.

But I have to say, this is the worst service I've ever seen. I would certainly be in the dissatisfied group if I had been one of the people polled, but having familiarity with the rural electrics, there's no question about the need for something to be done. Because even with the tornados and the ice and the snow that I grew up with (and glad I have nothing to do with now) in South Dakota, they have better service than what we're getting in Sonoita, and so I want better service. I want the substation. Routing is a different issue, but I want that substation, and I want the things that you're talking about doing because they are overdue.

Now, a couple of questions for Ron. I just put in a solar PV system here on your program last fall and it seems to be operating pretty well. It's 4.8 kilowatt system. But in the last couple of months, there have been surges, which according to the contractor who put it up, because it shuts down my system. And these are surges that are exceeding the ANSI specifications or it wouldn't be shutting down the system. There are limits within it. And of course, in the first place, now that I got the net meter up, I'm losing all of that because I have to go out – I don't know if the system is off unless I go out there.

But I want to know from your standpoint whether you admit if SSVEC is in

fact doing surges, whether you intend to or not, that are exceeding the ANSI standards, and therefore cutting down on systems like mine that are trying to generate this renewable power. And if you do admit it, what are you going to do about it, and is this part of the surge issue that the substation can correct?

So, could we address that, and then I'll direct a different one to Jack.

Moderator –
Judy Gignac

Absolutely. Please, Ron, go up to the mike.

Ron Orozco

Thank you for the question. Am I correct – you live at the end or in a underground subdivision?

Thomas Klinkel

Well, not underground, except when I hear planes [*inaudible*].

Audience

[*laughter*]

Ron Orozco

No, no! I mean, is the power served to your house underground?

Thomas Klinkel

Yes.

Ron Orozco

Okay.

Thomas Klinkel

It is from 83. I'm north and west.

Ron Orozco

And I believe you're a mile or two, several miles from where it goes from overhead to underground. Is that correct?

Thomas Klinkel

Yes.

Ron Orozco

Okay. I think I know where you're at.

Thomas Klinkel

We're at the end of the December 23rd "turn it back on" line.

Ron Orozco

Okay, yeah.

Audience

[*laughter*]

Ron Orozco

All right. Well, there's an interesting phenomena called, I believe it's called ' capacity of rise. What happens is when there is a long underground feeder like, like in your neighborhood, without a lot of load on it – okay -- the underground cable is actually being energized. And it was designed for all of the homes that one thought were going to be built in your particular area, and those loads haven't developed. Consequently, because there isn't a lot of current flowing on that underground line, believe it or not, that causes a voltage increase. It actually increases the voltage on that line because there isn't enough usage to offset this reactive power that you get from the underground cable. Now that's a big long excuse to say that your particular problem will be solved once more houses are added to that load.

Thomas Klinkel

I don't want any more houses!

Audience

[*laughter*]

Thomas Klinkel

But – so, it's not part of the issue with the outages and things that the substation would have an effect on, or would it?

Ron Orozco The substation and, and can't remember how far you are from Sonoita here.

Thomas Klinkel Well as the crow fly's or as the line-

Ron Orozco As the line meanders.

Thomas Klinkel From where the new substation would be, I would guess probably not any more than six miles.

Ron Orozco Okay.

Thomas Klinkel Somewhere between four and six miles.

Ron Orozco Yeah we can, we can sit down and look at it. We actually have some computer models that could actually tell us exactly what the voltage profile would be. But the other thing I want to mention, and I think it was maybe your solar installer who gave me a call two days --

Thomas Klinkel A couple of days ago.

Ron Orozco Two days ago and said, hey we've got a problem over here.

Thomas Klinkel Yes, yes it was.

Ron Orozco He told me he measured 126 volts Grade A voltage, and I believe one of the engineers mentioned the National Electrical Safety Code and the Rural Electric Cooper-, Rural Electric Field REA. The guidelines are that we are obligated to serve you with Grade A voltage. Grade A voltage is 120 volts plus six or minus six. So we have a six, or actually a 12 volt range on each side, six volts on each side of 120 volts that we can serve you at. So the voltage that was reported was 126, which is admittedly right on the top part of the allowable Grade A voltage, but it is still within Grade A voltage. But I believe my technician agreed to come out and do some measurements and see if there wasn't something else maybe with the capa-, with the transformer or something else we can do to help you.

Thomas Klinkel I would love to sit down with you and do it. So this is not part of the, this is not something then – we can sit down and do that. But it's not part, it sounds like it's not part of what the substation would help to correct. Is that a fair conclusion?

Ron Orozco I'd like to take this offline because I think I might have some details that nobody else wants to hear.

Thomas Klinkel Okay, that's fine.

Ron Orozco Appreciate the question.

Thomas Klinkel You and I can do that, Ron.

To Jack, if I could – my understanding – and you have mentioned the administrative law judge hearing taking place. What I have heard and what I am asking you is whether it's correct is that the ALJ ruled that the, that the Arizona Corporation Commission has no legal jurisdiction over the 69 kV lines. Is that correct?

Jack Blair I believe that that's correct.

Thomas Klinkel Then what are we doing here? If they have no legal jurisdiction, what are they doing?

Jack Blair The Corporation Commission voted to have us do an independent feasibility study and we're obligated to work under their rules. They ordered us to do it.

Thomas Klinkel Wait a minute, wait a minute. There's a court decision that says they don't have power to say it.

Jack Blair The administrative law judge works for the Arizona Corporation Commission.

Thomas Klinkel Okay.

Jack Blair So they ruled --

Thomas Klinkel Is that on appeal?

Jack Blair Yes, and, and that, we actually -- if you recall early up there, we said that right after they made the decision, we put in a motion for reconsideration, which, I might add, that the Commissioners granted unanimously. And then after the study was done, we moved for a 252, which means we can move ahead on, on, and ask them to amend their decision and let us move ahead on the line immediately, since the feasibility study found that this was the best option. And that is what's going to be held on March 24th and 25th.

Thomas Klinkel I understand that. But what is the status, then, of the ruling that the ACC does not have legal power to, to decide whether or not you can locate a 69 kV line and substation in Sonoita?

Jack Blair That, that will be determined on March 24th and 25th.

Thomas Klinkel By the ACC?

Jack Blair Well by the ad -- well, the administrative law judge, and then it will be the hearing at the ACC after that.

Thomas Klinkel Right, and then --

Jack Blair Too much more and then I'm way in over my league.

Thomas Klinkel All right, one other -- okay, one other question then for you. Because after I got back in the fall and found out that this process was going on, which prior to that my understanding was the substation was going through, I emailed the ACC, and it's unfortunate some of the, them aren't here to answer this directly. I said what the heck is going on, and they said we didn't, we never ordered SSVEC to stop anything. Now I've kept that email. Is that true or is it a lie? Because I've got the email.

Jack Blair I, I can, I was there, and we were ordered to immediately cease construction, cancel purchase orders. And I can tell you there's still scars on our CEO's posterior.

Thomas Klinkel Well I kept that email. And I intend to make it public if anybody wants to

know whether or not the ACC is lying to the public or not about what it's even doing. And I'm not very happy about that, as a citizen who inquires of the ACC just what their authority is and what their decisions are, and then to be told, fortunately in writing, that they never ordered you to stop anything.

Moderator –
Judy Gignac

Thank you, Thomas. Thank you, Ron.

Audience

[*applause*]

Moderator –
Judy Gignac

Gail Getzwiller, and then the next person will be Jane Woods.

Gail Getzweiller

That was quite an exchange. I was actually out [*inaudible*] and the ALJ, I do believe, did not say, did not order the ACC to say – I don't know what [*inaudible*]. The ALJ said that the ACC didn't have jurisdiction over 69 kV line [*inaudible*] and, and ACC – and SSVEC has attorneys here. I don't know how much how you're being paid here to come from Phoenix, for, work for Snell & Wilmer. But you could probably explain it better than I can.

Moderator –
Judy Gignac

Is that your question, Gail? You want -- ?

Gail Getzweiller

No, I just thought – and needs to be corrected, and so does Jack Blair. That's not something that should be on public record in this hearing.

One thing I would like to say, Judy, is I appreciate your introduction, saying that there was statements by citizens that were made; that maybe there's a better alternative for an answer for future power in our area. And I take exception to every time Jack Blair says something. He calls the citizens that speak their right as citizens to speak up, calls them opponents.

I have been a loyal SSVEC cooperator since the early 1970s. My kids grew up here. They went to the science fairs, etc. But that isn't what we're here for tonight. We're here to have a public hearing on the 69 kV line that may not be necessary. And in two years, there may be alternative solutions to power – renewable, locally distributed energy—that we do not need to put a brand new power line corridor through the largest historic land grant ranch in the United States of America. The San Ignacio del Babacomari is a historic place, and I do not appreciate that SSVEC thinks lightly of putting this power line through, when a feasibility study has other opportunities for power that can give us reliability. And there is new technology coming online in renewables. And there's storage areas. And I think its wonderful that in the next three years you are going to start an aggressive demand site management program and have not decided to do anything up to this point. I never knew that you had a time of use program.

There's so many things I'm learning about this utility that is not common knowledge that you don't share. You communicate, you put what you want out there, but you do not listen. I've been going to your board meetings for the last year and to no avail. And we could not communicate with you. And

that is why you're going to the Arizona Corporation Commission. That's the only reason. If you would have talked to us, it would have not happened, and we would not be here today. And I, and I, and I – I'm sorry that, that is a fault. Anyways, I'm really sorry that we're here today doing this. It's too bad that you never listened to what we had to say, and there are other alternatives. If the alternatives are here in two years from now, will you take the poles down? Did anyone see 60 Minutes a couple of weeks ago about the Bloom box? EBay has these systems – saved them a hundred thousand dollars in utility bills, last couple of, the last six months. And they didn't build power poles.

There's other technologies coming and we don't need to in two years from now, to know these technologies are there and say, thank you very much for bulldozing the Babacomari and putting up these lines. Because – and then what are you going to do? Are you going to take them down?

That's all I have to say.

Audience

[*applause*]

Moderator –
Judy Gignac

Thank you, Gail.

Mr. Carroll, before the next speaker, would you care to answer the questions, or try to clarify the issue of ACC oversight of the 69 kV routing line?

Brad Carroll

Hi, I'm Brad Carroll from the law firm of Snell & Wilmer. I'm Sulphur Springs's Arizona Corporation Commission attorney.

And I think what the, what there's, what the distinction here is, is that the process of the Corporation Commission is that after a hearing is held before an administrative law judge – and for three and half years in the early 90s, I was an administrative law judge at the Corporation Commission, which is how I learned my, my field – and the ALJ after a hearing writes is what a Recommended Opinion and Order. It is a recommendation to the Commission. And then the order is submitted to the Commissioners at an open meeting, at which point the Commissioners can accept, reject, or modify that Order. Because at the end of the day, it is the Corporation Commissioners who are the elected officials and make the decision. And so the ALJ Order, which is based on the evidentiary record, is in fact the recommendation. And then the Commission ultimately will make a final determination.

In this particular case, the Recommended Opinion and Order found that the Commission does not have the jurisdiction over the siting of the 69 kV line. We're talking about the siting. In fact, in the final order that the Commission issued, that language is still there today. What the Commission did is they asserted jurisdiction on other grounds, not on the siting statute – which admittedly, they admittedly don't have jurisdiction. They cited other statutes on the basis of their jurisdiction. Now, Sulphur – and I'm not going, I'm not going to debate that – Sulphur Springs in it's filings has stated that, that exercise of jurisdiction on those other grounds is not appropriate. Clearly,

the Commission disagrees with that.

Sulphur obviously, in order to move forward, is moving forward through the Commission process in order to deal with the situation, which is why it has made the filings it has made. So basically, because the Commission asserted jurisdiction on these other grounds that Sulphur disputes, it ordered Sulphur to stop construction of the line, of the project, immediately. The Order doesn't say immediately, but the Order – I think the language says, is that Sulphur Springs shall not construct the 69 kV line until after it files its public forum report and upon order of the Commission. That's why we filed the 252 – to seek the order of the Commission.

So without conceding the jur-, whether or not they have jurisdiction, we're moving forward though the process in order to seek that authorization to build the line. And so, therefore, because of that language, the Commission ordered us to stop building the line. It ordered the feasibility study. It ordered the public forms, and then ordered us to come back to them at such time that we were ready to build the line.

And that's, I hope, that explains how we got here today and why.

Moderator –
Judy Gignac

Thank you.

Leslie Kramer
from Audience

Why don't you explain what the 252 hearing is because I don't think people in the audience understand? [inaudible].

Brad Carroll

Yeah, okay. Basically, once the Commission issues an order – a final decision, as it did in this case on September 8, it is a final order of the Commission. Once the Commission issues a final order, that order may not be changed or modified in any way except by the Commission itself. And in order to ask permission, or ask the Commission to go back and modify its order, you have to file what is called a 252 motion, and the 252 is from Arizona Revised Statutes 252 – that's where, that's where it comes from – which says that – to paraphrase it, it basically says that order, a final order of the Commission, may not be altered in any way except upon application and further order of the Commission. So that's, that's where that comes from.

And so, in a nutshell, the relief that the Commission, that these, that the company has asked for here is based on the results of the feasibility study for immediate authorization under the original decision to start, commence construction of the line.

Moderator –
Judy Gignac

Thank you very much, Mr. Carroll. Appreciate that.

Jane Woods

Jane Woods? Is Jane here? There she is.

Moderator –
Judy Gignac

I don't think I want to use that, I think everybody can hear me.
Well, we're recording, so we really do need you to come up to the mike.

Jane Woods

I think -- well, it sounds more muffled to me than just --.

Moderator –
Judy Gignac

I understand.

Jane Woods

I have a chorale voice, okay. I don't know what I'll sound like on this.

Moderator –
Judy Gignac

You sound just fine.

Jane Woods

I guess I'll start with the fact that in 1985, I started work for the Elgin School, where I went to school also. At that point, I was secretary there. And there were a total of 47 students, K-8. And today – these few years later, we have this big complex, and I think they have a 140-150 kids. I'm not sure. But that's just to show you a bit of the change that's going on in those few years.

I was concerned about it back then because we began to get a lot of people moving in. And a lot of them had children; a lot of them didn't. But the pace of our growth in this area may not seem bad to lots of other people, but for this country, for this portion of the country, it was alarming and is alarming. And I have, I find it hard to believe that a small percentage, such a small percentage of the people that answered the poll that are SSVEC patrons, that small portion can make enough -- create enough turmoil, I guess I would say – to cause that Corporation Commission to get their finger in the pot, whether they have the jurisdiction or not. But it seems sad to me, because a lot of the old timers that I know sat back and didn't complain when all these people moved in here. None of us bitched and griped about the houses they built. We didn't say, oh, that looks horrible, that looks beautiful. We didn't make any comments. We accepted it. Most of the people are wonderful, and they fit into the community nicely. But there are a lot of them. And they all have all the modern conveniences that require power. And then the newer ones are the ones that make the, make the complaint. And, I suppose, we're at fault for not complaining right back.

But in my book, Sulphur Springs Valley has never, ever done anything but answer my questions, give me all the help I needed. They've never faltered on any repairs or anything. And yes, we have surges, but you know you have a kerosene lamp, and when the wind blows you get a little waver. That's a surge too, I guess. I don't know. I think they've done a wonderful job, and I'm very sorry to hear people go on and on, knowing that with all of these people here and the power pushed to the limit, what can we do but have more power put in? We can't all afford solar or wind. We're lucky to have the power company that we have.

Audience

[*applause*}]

Moderator –
Judy Gignac

Bob Owens. And then it will be Sandra Wolf. Is Bob here? Okay, I'll put Bob aside. Sandra Wolf? Sandra?

Sandra Wolf

Hi, my name is Sandy Wolf. I'm a Sonoita resident, and thank you very much for coming.

I understand that we do need electricity [*inaudible*]. There's a thing, couple

things here that I really just don't agree with, and I really hope that you listen and reconsider.

Number one, you talk about power outages. I don't think we have that many power outages. We have bleeps that last less than a minute. Sure, that was pretty bad on December. But most of us don't live in the Sonoita-Elgin area; don't use a lot of energy, a lot of power in the morning to go to work. There aren't a lot of us really going to work, so there's different hours that we use. I can't believe that we have special hours.

I'm also very concerned about the route that you've chosen. I really think that you guys had your mindset on keeping the same exact route. Had any of you walked on the Babacomari from the feasibility study? Have you actually walked back there? Yes? And what did you think about it? Excuse me?

Ron Orozco

Beautiful.

Sandra Wolf

Beautiful, okay my question is. Go ahead, Deborah.

Moderator –
Judy Gignac

We can't, we really can't hear you, Deborah. If you want to come up to the mike, please.

Deborah White

Okay, go ahead.

Sandra Wolf

No, I want to hear what you thought about the land there, the pristine land there and the wild life – the other day I saw a bobcat walking by – and what it's really going to do to us. And my thought also is, in short, that's behind – you know, other people are not going to see it. That you're talking about that yard, those few miles back there. That, where it's not going to be visible. My thought is, hell, it's such a mess on 82 already. Just keep the lines going in that direction if you must.

The other thing, Gail made a really good point before. You're talking about in two, three years you're going to ramp up. And how are we going to learn about how to, you know, control our energy costs? Why not do that now? People should be changing their light bulbs out. There's so many things they can do to reduce that whole issue. That bothers me also. I know, I just can't see blading a whole ranch, making a mess there, putting up more poles, when we already have the route. [applause]

Moderator –
Judy Gignac

Thank you.

Audience

[applause]

Moderator –
Judy Gignac

We found Bob Owen. Come on up. What, you didn't have to tell anybody.

Bob Owen

I didn't do anything. Can you hear me?

Moderator –
Judy Gignac

Yes.

Robert

Okay, I'm Robert Horseman, a Sonoita resident. Or did you call the wrong

Horseman person?

Moderator –
Judy Gignac I called the wrong person. That's all right.

Robert
Horseman I'm up here. You're stuck now.

Moderator –
Judy Gignac I know, I know. And I'll find you on here, and we'll just – there you are.
And go ahead; go ahead.

Robert
Horseman Well, I know where I'm at.

Moderator –
Judy Gignac I know. I do too, now.

Robert
Horseman Very good.

Moderator –
Judy Gignac Please proceed.

Robert
Horseman One of the, one of the biggest issues – I, I'm not against the 69kV line. I'm against the route of it. And while back we had a rain, and I had to go out to Research Ranch and Babacomari Ranch. And I think I was maybe straight, you know, one percent of the time. So being able to go down the line is going to be very, very difficult down there. There's not a lot of access, plus it is one of the most biologically diverse areas in the state, if not the nation. I do compliment all you guys for being here, taking the time to be here. And thank you, Ron, for that demand side management thing. I've been trying to get that out of David Bane.

One thing about future growth – there has not been a recent water study. There seems to be -- we have the capacity with the study – the Gold Study of three to five thousand people. I don't know whether that's true. The actual thing I like to ask is: I know its probably going to take you 12-18 months to build this line. And in the meantime, what's the solution? Are you going to put in some feeder plants to be able to serve the line, or does that have to be Ron's question? Or someone's question?

Moderator –
Judy Gignac Let's see if we can get some of your questions answered.

Let's start with Mr. Ralph Engels. Can you, can you talk about what's going to happen on the Babacomari when the line goes in? Some people have said, you know, you're blading a lot of stuff, but is – how is that going to add? Would that be you that could answer that question?

Thomas Engels Access during outages. If you need --

Moderator –
Judy Gignac Well, and we'll get to that one, too. So let's, let's take the environmental impact one first. I wasn't sure whether I was asking the right person to come up and answer.

Thomas Engels Sure. What I can talk about just briefly is that Navigant, which is the independent third-party consultant, they had a team of biologists and visual consultants who did look at – and cultural resources experts -- they looked at the environmental impacts of a line through the Ranch. And those impacts are summarized in the Report and – on pages 75 and 85 of the Report. They list out some measures that could be implemented to minimize those impacts, mitigate those impacts, and concluded that these are relatively minor impacts.

Moderator –
Judy Gignac Okay, thank you. Then if we could answer the second question, which is between now, not for you. I think it might be for Deborah. What's happening, what's going to happen between now and when the construction is completed as far as outages are concerned. That was your question, right, sir?

Robert
Horseman Yes, ma'am.

Thomas Engels What Sulphur Springs has proposed to the Corporation Commission in our 252 petition is that we are willing to do everything we can, of course, to keep the lights on during construction. If we can be allowed to begin construction immediately, you're right – it might take us 18 months. We've got orders that are kind of hanging in limbo because we were indeed told to stop work. So, in the mean time, we are going to keep the lights on. We're going to do the best we can to connect new consumers as they come about, and we'll be building the line as quickly as we can.

Moderator –
Judy Gignac Thank you very much. Did you have a question, Rob?

Thomas Engels Just very briefly, just very -

Robert
Horseman So you could actually build the substation right now?

Thomas Engels No, my understanding is that we are not allowed to build a substation. We have had a stop work order on the project.

Robert
Horseman Okay.

Ron Orozco We have not taken any, any advances on the substation at all.

With regard to the Ranch. This is a privately-held, privately-owned ranch, and we are not at liberty to discuss the arrangements of the Ranch. And I assure you, we have a legal easement for the, for the easement itself. I'd also like to add that in 1991, and I'm sure maybe some of you remember, it was actually a underground cable that was plowed in on that same ground. So this is not necessarily a virgin easement, if you will.

Moderator –
Judy Gignac Thank you very much.

Okay, Rob, does that finish your list? Because I need to go onto the next

person.

Ann Gibson?

Robert
Horseman

Go on to the next person.

Moderator –
Judy Gignac

Thank you. Ann Gibson? And then, following, Mitch Cole.

Ann Gibson

I'm a real estate broker here and have been for 17 years. I am – my livelihood and income depends on the growth, you know, not [inaudible] against growth. But I'd like to see the growth done and managed in a sensible way. I think a lot of this could have – we wouldn't be here to today if Sulphur Springs had dealt with the community two and three years ago when we began asking Sulphur Springs to meet with us and talk to us about this. And I would still like to see a forum where the community can ask – what, more than, you know, than half hour to ask direct questions and Sulphur Springs give direct answers, other than saying we're going to keep your lights on. The people in the community that have raised issues, have raised some very good issues. And they have not been addressed, and I would like to see that happen.

Moderator –
Judy Gignac

We're going to be here for as long as it takes to answer the questions, so if you have a question you want to ask, please do it.

Ann Gibson

I would like to see, have Gail Getzweiller ask a couple of pertinent questions that would be --

Moderator –
Judy Gignac

Well, Gail has been up here, and I have some other people. And if there's time, we might be able to do that. But she did have --

Ann Gibson

I'm not qualified, you know, I, you know. That's not my field of expertise, and I haven't spent the time doing the research that others have.

Moderator –
Judy Gignac

Okay, I just want to make sure that you all do understand that this, this is the time for the questions. If Sulphur Springs at a later time wants another kind of community event, that, that's fine too.

Midge Cole. Is Midge here?

And then after Midge will be Frances Garcia.

Midge Cole
(female)

I'm a co-op member, and I reside in Sonoita.

The only thing I know about power and distribution and all those things is how to use it. But I do know that what we have is unreliable.

Two years ago, my husband had a massive heart attack and was in the Tucson Heart Hospital for five weeks. At the end of that time, we were told that they could do nothing more, and he wanted to come home to die. Well the big factor of whether not we should come home was whether or not the power might go off, because he had to have oxygen and that was supplied by electricity. Fear of unreliable power should not dictate those kind of

decisions. And yet for many of our people and our residents in our area, for older people, it does. I brought my husband home, and fortunately he was able to live out his life according to God's timetable, not a power outage. But that was definitely a concern and a fear.

I appreciate the reports that have been given tonight. I appreciate the thoroughness of them. I appreciate the lengths that have been gone to, to supply us with information and to get information by these private studies. It appears to me that these studies indicate that we have a need that should be taken care of and that it should be taken care of soon. It appears from the opinion polls that most of the community is in favor of moving ahead with the project and doing so. One of the things that has concerned – I had attended these meetings, these hearings, over and over and over. And I've been torn by the conflicting opinions in our community, of the conflicts between neighbors over which route to take and whether we should or whether we shouldn't. It has been a bit of turmoil for all of us.

I have appreciated Sulphur Springs for holding all these meetings. And I have appreciated our representative Joe Ferneau (*spelling?*), who has represented us to the best of his ability, to represent all of our opinions during some very, very difficult times. And I appreciate that you come here tonight to listen to us all once again.

We have conscientiously done the homework, I guess, I personally, because of my own personal experience, feel that it is time now to move ahead. And I thank my community members for your consideration and for all the hours that you've put in on this, whichever side you're on. Because you've been devoting much time to looking at this in a very conscientious way. But I hope we can somehow move ahead in this community and get the conflict behind us.

Moderator –
Judy Gignac

Thank you, Midge.

Audience

[*applause*]

Moderator –
Judy Gignac

Frances? Frances Garcia?

And then it will be Charles Kinter.

Frances Garcia

Uh. Yeah. I've been in Sonoita since 1984. I did not build a new house. I bought a house that was here, and I live in the Sonoita Hills subdivision. So that the power line proposal will go past our property and the easement would take my water well. It's right – my water well is that area. So I do oppose this.

But basically I'm here because I know there are a lot of facts being presented to the group and I, I'm not, I don't have the expertise to, to ask questions about some of the items, some of the facts. But I do want to address a tiny little part of the facts that they're giving tonight. And that's the beautiful snow storm that we had just before Christmas, and the power

outage that occurred then.

My husband called Sulphur Springs at 5:00 in the morning. He saw a bright flash of light through the north window of our house. It was on a power line. He knew exactly what power line it was. The power did not go out with that first bright light – like a lightning strike, but it wasn't lightning. About 30 seconds later it happened again, just as bright in the north window of our house. He got, he called Sulphur Springs immediately. It was 5:00, and less, like 30 seconds later, got on the cell phone, called them. told them exactly what line it was, where we lived. And he never saw any of the trucks come out at all in our area.

With all due respect to the employees at Sulphur Springs and the linemen I know that always come out before, they've always dealt with situations – but we never saw a soul. So we have what, four hours of outage. But it was reported exactly what line it happened on, because it was after the second bright light up through our north window that he – that the power did go straight out.

So we waited, and, yes, it finally came on. Well, I was at work. He was at home. And he waited and waited and it finally came up. I think it was five days later we had a phone message on our phone. And it was almost like a – you know, like one of these recordings that was written about how this problem was due to the Sonoita reliability problem.

Now I think, in actuality, it was due to the fact that we live out in the country, and we're 75 miles away from Wilcox where the brain center is, and they didn't have the communication going over there. We live 35 miles away from Sierra Vista, where the trucks are and people that come out. And, and somehow the communications didn't work. Because we gave them the location of this problem. And it still took four hours, apparently. And, and like this, this phone message on our phone system, you know – it's all because of this reliability problem.

I just wanted to make that clear, so that's the only fact I can really, really address clearly with everyone here. Thank you.

Moderator –
Judy Gignac

Thank you.

Ron Orozco

Ron, did you want to respond to that.

Moderator –
Judy Gignac

May I just answer.

Ron Orozco

Of course.

Thank you. I'm looking over here at Pete, our operations manager. He and I both worked that outage, so maybe I'll go ahead and Pat will correct me. How's that? Oh, you want to do it? No?

Okay, Sulphur Springs Valley Electric has an on-call service that we use to take outage calls out of normal hours. When that outage occurred, we received a number of phone calls to the call center that said there was a flash

reported in this general area. Several people called in and said, we saw a flash, we saw a flash. We knew what general area everybody was seeing the flash. I assure you we sent crews out to look, apparently as we discovered in speaking to your husband – what was it, a week or two weeks later – that a line had, a tree had actually come down on the line and that is what caused the flash and the outage. But our people, when they were driving through – and I'm sorry you didn't see them, but we were in the area looking – we saw no downed power lines. The guys rode one more time; said, "we don't see anything down on the ground. We don't see a safety hazard. Let's go ahead and energize it."

You're right. In retrospect, if we had said, okay, what exactly did, address did Mr. Garcia give us, and if we had distinguished that the one was unique, we may have gotten there sooner.

Frances Garcia He never got a call back that morning at all and --

Pete Swiatek No. I know – we received dozen of calls.

Frances Garcia -- And he was told that he was the first one that called. And, you know, the idea I think about communicating – if you didn't have the money to build this line and you had to solve the problem internally – you know – I've worked in a system that didn't have all the money that, you know, you're talking about having right now. You look at other things like communications. How can you improve communications? How can you improve, you know, quicker service? And, you know, like you said – all due respect to the employees of Sulphur Springs, but, you know, and really – you live out in the county. We all live out in the country. So if you wanted service that fast --

Moderator –
Judy Gignac Could you talk into the mike, please.

Frances Garcia If we live out in the country – if we want much faster – I got to admit, I would move to Tucson, maybe, where I can see the power company truck come in five minutes. But I understand so, so I'm not. I'm fine with power surges --

Pete Swiatek Right. On the outage that they – the guys did go by and look at that. I know I specifically sent the truck out there. We had the report of your place and a report right at the old Elgin School, where the old cottonwood trees are – a tree on the line there. We also had lines wrapped in ice right around the Elgin area. So, it was not one specific call. When your tree, or the tree that fell into the line – it blew a fuse on that part and isolated – that was not being used. There was more than one cause that day on what, on, you know, on how it had an effect on the outage. Okay? And when Ron explained earlier, when you have a system of this magnitude go down, you just don't throw it back on, okay? You have to sectionalize it. And we sectionalized it. And when we had it all together, and when we tried to put the last little piece on, it overloaded again and dropped out. And that's why we had to start back

over. That's why the outage lasted four hours.

Moderator –
Judy Gignac

Thank you.

Frances Garcia

Well, and once again, you know, like I said – I, I don't have a problem with the four hours of it being out. I, I just thought the phone call five days later that we had on our answering machine was kind of tacky.

Moderator –
Judy Gignac

Thank you. I think we've got the message on that one.

Charles Kinter? I think I'm pronouncing that correct. Is Charles here?

Okay. Stuart Moyle?

Stuart Moyle

I think that – I think Frances Garcia addressed the issue that I was going to address. That the, that our new transmission line. Now, we're looking at what Mother Nature does.

Now, we haven't looked at what man can, and – how many of you have seen the news, the TV news the past couple of weeks, about the terrorists that they caught in Philadel-, in the United States? White, female, blonde, 43 years old, and could speak fluent English. She is a Jihad terrorist. Now this puts a whole new perspective of what you can do.

Now, I grew up in northern Minnesota, and I know what [*inaudible*] just like you do in South Dakota. And I also know because I have worked with search and rescue, disaster management on the level of, the federal basis. And I was involved with Mt. St. Helens, plus I was indirectly involved with the Oklahoma bombing.

And we're not – you know, we've got a whole new perspective coming here now. We don't have people now that look like terrorists anymore. They look like you and I and everybody else in this room. And they can come across on an airline, and they speak fluent English. And they can blow up any of these transmission lines. And if you look at the 2011 [*sic*] report, I mean the 11 report on – this is one of the things they talked about. And this is some of the stuff I had to study when I worked on the national level on that stuff.

You've got a 69 kV – a high-voltage kV line cutting across here that can be taken out any time, and you're going to lose everything, not only just because of the weather or anything else.

I also worked with, on the seismic study in 71 for the DEA, which covered all 171 DEA stations, including the one in Phoenix. And I can go up there and show what effect seismic correction – what we had to do for a seismic correction in Phoenix. And that's to protect this area as well.

So you've got all kinds of things that – and we have the technology today. We can go anywhere, we can go all the way to California. And it's in operation. I mean, you can pick up the Scientific American, or you can pick up the Union of Concerned Scientists, and you can look at all this. It's all available.

And, in 1971, right after the Sylmar earthquake, I went to work with the DEA. And I saw – we studied that all the different stations that, what effects it could have on it. And I was also around in 70, in 69 and saw what happened when we had a copper strike and everything shut down. You don't have anything that lasts more than three days, and --

Moderator –
Judy Gignac

Excuse me. I, I think we know that there are lots of different things that can obviously [*inaudible* – *cross talk with Mr. Moyle*] You've had a lot of experience --

Stuart Moyle

Yeah, but, but, I look at this thing – because I used to develop projects for the federal government --

Moderator –
Judy Gignac

Right.

Stuart Moyle

Up to three-quarters of a billion dollars, plus another three-quarters of a billion dollars construction project. I found out in 73 what all the estimating – future estimates that I get, I threw out the window because everything went from 35% to 250% increase. And you never catch back; you never go backwards. And if we just had another three – we went from a \$600 billion surplus to a --

Moderator –
Judy Gignac

I think we're getting off the subject here, Mr. Moyle.

Stuart Moyle

No, this pertains to here, because they're not – I feel like I've got, what done is gone back into the 1900s, and doing the same kind of estimating like they did for the horse and buggies going to the automobile.

Moderator –
Judy Gignac

Okay, thank you very much, sir. I appreciate it. Let me get on to the next speaker, if I may. Thank you.

I'm not sure of the first name, but the last name is Goodman. And maybe when you come up to the mike, you can tell me what your first name is, because I couldn't read it!

Seth Goodman

I'm not a doctor, but I have a doctor's handwriting. It's Seth.

Moderator –
Judy Gignac

Seth. Thank you, sir. Okay.

Seth Goodman

Uh, this is pretty short here.

Moderator

I think you can take it out.

Seth Goodman

Can I?

Moderator –
Judy Gignac

Well, what you can – okay.

Seth Goodman

Kind of a talk show [*inaudible*] here.

I'm one of those newcomers. And I was very touched by a story of a lady whose husband came here; fears of vulnerability and not having energy. I've also been on that side of the table trying to get a project through, so I

appreciate the efforts you guys are going through here. But there are a couple of issues that I think are really important. And actually, what this gentleman was just talking about, I just want to say, I was listening closely to what you were saying. There is a real issue of energy security. And, you know, a plant burning coal 70 miles away from this community is not my idea of energy security.

Now I don't have a family yet, and I plan to have kids here in this community because I really love it, and I love the beauty of it. And this line's going to be blurring the view that I happen to really appreciate, a piece of nature that I truly love. And I'm sure people who have been in the community long enough have all come to appreciate that, that vista.

But I think that so far as where we're going with this, rushing this line as fast as we are – the other point was, it that, you know, once you put that up, we're not going to take it down. It's going to be there. So the necessity of really looking at the alternatives – and there are some incredible alternatives. MIT just came out with battery storage that is supposed to be rocket, light-years ahead of what we currently know. And so there's no reason why solar energy – I mean, there are communities across this country, in very cloudy areas, that are almost energy independent using solar energy. We live in the, the hot zone of where the most efficient energy production can be had through solar. And so, may I – and from my, from what I've known; I'm not a scientist, and I haven't kept up to date on the latest in solar energy – there is technology where we can set an example for the country, and actually, as a co-operative, as people, possibly make money ourselves. Each citizen, as a co-operator, if we all cooperate. That is possible with the new technology, that in the future, we could actually with solar panels on the, on the top of our homes, be making money.

So, but if we rush through this power effort, my understanding right now, we average about 5 MW of energy usage, and the capacity of our current lines are 7 MW. And we're only projected to need another 1 MW by 2019. So, you know, originally we had this – we wouldn't be able to look at this plan until July, and have the, the opportunity to really look at, you know – what are the alternatives out there? Let's get in some solar people that are, you know – and maybe some, you know – I understand you guys that have paid for this study, you know, but – what are we, you know, I haven't heard an independent voice. You know, I, I – Ron, you seem to be – it was a great presentation, but I – you guys want to put this line in. And I don't understand the urgency, but I have a feeling it's something other than, you know, the need for energy.

So, I would really request, and I think it's a fair thing, that we continue to the original July – that for the next 4 or 5 months, so we can really review what's out there. If we had an opportunity --

Moderator –
Judy Gignac

Yes, Seth. Perhaps I can – we can get the answer to that question, so we can get some clarification. And then I have a number of other people who would

like to speak as well.

So, this July date that Seth is talking about, does somebody want to address that?

And Seth, now I'll go to the next speaker, if I may, after you get your answer. [*inaudible*], but I have other people, too, so – be happy to deal with all of that.

Seth Goodman Your point is well taken. So then, we really don't have the time to review this.

Moderator –
Judy Gignac No, what --

Seth Goodman You've just made, you've just made the point. We don't have the time to really look at this closely and really have the give and take with the community.

Moderator –
Judy Gignac What I'd like to do is get the answer to your question with regard to July.

Seth Goodman Fine. It's getting late.

Moderator –
Judy Gignac Right. And then, if we have time, we can – I can bring you back up after other people have spoken, and you can ask another question.

Seth Goodman Okay. Thank you.

Pat Scharff I'm not going to speak to the 252 motion. That's out of my realm. But what is within my realm of understanding is solar photovoltaics, energy storage, and the problems associated with the V-7 line.

The problems with the V-7 line are not just a single problem. It has to do with transformer loading at the substation. It has to do with reliability. And that includes not just the outages, to where you are out of power for 5 or 10 or 20 minutes or 2 hours or 4 hours. It's the blinks. It's the voltage sags. Every time there is a short circuit on that line down in Sonoita, everybody between Sonoita and the substation is going to see that voltage sag. You're all connected together on that line.

Now with regard to photovoltaics. Yes, the peak load on the V-7 circuit, that Huachuca West Substation – that peak load occurs on very cold mornings in the wintertime. And typically on those cold mornings, it's going to be cloudy, quite frequently. That means that your PV system is not going to be putting out nearly as much power as it's capable of. Therefore, it's quite likely either not going to meet the requirements or going to have to be built oversized.

No, please – let me finish.

In terms of energy security, right now your energy security is a single 25 kV line that comes down Highway 82. When the new substation is built and the new 69 kV line is built, you will have a transmission line that is much more

secure. You will also have a backup source that is capable of serving at least a portion of the load for the majority of the time because the existing 25 kV line and the existing substation capacity is going to remain in service. Yes, the voltage will be low. Yes, it would be unreliable during certain conditions. But it would still be there.

Another issue you're facing – I don't know if you noticed it in the report – but you're paying approximately \$230,000 for losses because of that very long, 350-mile long line. By breaking it up into smaller portions, with better-balanced loads, and serving the load at 69 kV down to a substation, those costs will come down. At the margin, your losses are not 30%; they're 50%. That means every time a 1 KW load hooks up, you have to hook up 50% more, because that's how much you're going to have to supply for losses.

Energy storage – I have worked on numerous energy storage projects. Energy storage has great potential for renewable energy. And in fact, energy storage is what is going to make renewable energy truly a viable and reliable, cost-effective resource. However, it is not currently commercially available in significant amounts. There are numerous large projects out there. TVA has it. NYSEIA up in New York has it. There is a project up in Utah with redox batteries. You can read about these in Popular Science. You cannot read about them as proven projects in trade journals in the electric utility industry. So.

Seth Goodman Okay. Thank you. But the, the question I have, though, is that it's very possible – just quickly, and then this will be the last one – it's possible that within the next year that there could be something very viable. Or two years, or even three years. So, but, and it seems that our energy needs – there really is not a huge rush. Why can't we wait until July to look at this a little bit sooner? To look at this a little bit further?

Pat Scharff That's a question on the 252 motion. I'm going to have to let someone else answer that. The question is, though, is – your problems exist now. They have existed. And it is not a rush. This has been a long process, from the time the line route was identified and the substation sites were identified. This has been a long, steady process in which the Cooperative has done many things to delay and defer for as long as possible. It's kind of like pulling rabbits out of the hat when you're a magician. Eventually, there's no more rabbits. The only thing left in the hat is rabbit pellets, and that's about where you are right now. And that's my considered opinion as a P.E.

Audience [*applause*]

Moderator – Thank you.

Judy Gignac Adrian, is it Halpern?

Dorothy – Sturgis, thank you. Dorothy Sturgis.

And then it'll be Rosanna Kasanjian.

Well, now it's too tall, isn't it?

Dorothy Sturgis There we go; there we go. I'm a Sonoita resident, and I've lived here for 24 years. And I don't have any problem with the service I get. The outages have become fewer and of shorter duration over the time that I've lived here.

 However, I do have a problem with this line, because I think it's based on outdated technology. And I'd like to second what Seth Goodwin said and what Gail has said. There's so many alternative sources of energy out there. And let's wait for them and not build a line that's based on outdated technology.

Moderator – Thank you.
Judy Gignac

Audience [*applause*]

Rosanna My name is Rosanna Kazanjian, and I have lived in Sonoita, and I'm not
Kazanjian going to take up a lot of your time. I'm going to say ditto for what Dorothy
 has said and for what Gail has said, so that we go on record that there is more
 than one person saying this. So please make note. I agree with each thing
 they said. Let's not put ourselves in the position where we put our money
 and our electric capacity on the back of a very old system. You're right –
 whoever said, you've been working at this a long time – I think what hasn't
 happened is that you haven't kept up with what the newest technology is. So
 you're working on plan that's already way outdated. Coal – I can't believe
 you're talking about a coal-fired plant.

Moderator – Thank you.
Judy Gignac

Audience [*Applause*]

Moderator – Leslie Kramer, and then Wayne Porter.
Judy Gignac Is Leslie --?

Leslie Kramer Coming!

Moderator – Coming!
Judy Gignac

Leslie Kramer I'm a Sonoita resident. My, my first question initially had been – you were
 ordered by the ACC to provide public forums. I'm confused as to why you
 have spent co-operator money and time holding public forums in Benson,
 Wilcox, and Sierra Vista. That's question number one.

 Question number two is, how do you believe that what has happened here
 tonight is within the definition of a forum, which is a public discussion and
 exchange of ideas. Basically, what we received from you is a lecture for
 about an hour and a half. Now, basically, we're just getting public
 comments. We're not really having what I would understand to be an
 exchange of ideas. So those, that's the first question that I want addressed.
 And then I'd like to go on from there.

Moderator – And we need to answer the question on public forums?
 Judy Gignac

Deborah White I'll answer your first question in regards to the public forums and the money that – minimal amount of money spent having meetings in Wilcox, Benson, and Sierra Vista.

This particular study, because of the Corporation Commission's decision, has cost SSVEC, you as members, people and members of Wilcox, Benson, Sierra Vista, Elfrieda, Bowie, San Simon – our whole service territory is paying the cost of this study and this analysis. And they deserve to hear what the Commission has done and what the project, the money that is being spent on this and why. That is why these meetings are being held in those particular areas as well.

Leslie Kramer And when they, and when they heard your side, was the other side presented?

Deborah White We have given the same presentation. We have made the study available. This – we're not talking about sides here. We are giving a presentation in regards to what the feasibility study has said, with a little bit of background information and with other items that are in the docket.

Now, on your second item here, as far as an hour and a half lecture, I think SSVEC has tried to put forth the information that will bring people up to speed and then answer questions on the feasibility study. So far, we really have not had anyone come up and say, "on this particular page, or this particular document, we want to have a question on the feasibility study."

Leslie Kramer Well, I think one of your best slides – you had two very important slides, neither one of which anyone here could read. I mean, they, they were – they were 6 pt type sitting here. And --

Deborah White This, this, well, I, I under-; well, actually, we have it. Those were in slides. Those are – we do have the feasibility --

Leslie Kramer Powerpoints.

Deborah White We have the feasibility study here, to where we can pull this up on the screen to where you guys can see. Ask a question about it. That's what we're here for. We have not received any questions in regards to the study itself.

Leslie Kramer No, I'm, I'm saying you --

Deborah White As well as – the public – as well. The report, the report has been --

Leslie Kramer [*cross-talk; Leslie inaudible while Deborah spoke above*]

Deborah White You know, I do want to say that – I mean, it has been shown up here. The report has been on SSVEC's website. It is a 132-page document. It's on the website. It's on the Corporation Commission's website. It's in your public libraries. It is in these areas where you can go to it and look at it and get those questions to where it is a little bit difficult to read up on a screen. And maybe should – if you have concerns about the project, you know, you would

have gone to look at these where we have made them available in order to get your questions to come to these forums.

- Leslie Kramer Thank you. Specifically, with respect to the 69 kV line – if that line existed, how would the December 8th outage have been prevented?
- Pat Scharff I'm going to answer your question as an engineer, not as a Cooperative representative.
- Leslie Kramer And who are you with, again?
- Pat Scharff I am with TRC.
- Leslie Kramer Okay.
- Pat Scharff I am a Registered Professional Engineer in New Mexico and Arizona.
- Leslie Kramer Thank you. Okay.
- Pat Scharff You asked the question, how could the outage have been prevented.
- Leslie Kramer No, how would the 69 kV line have prevented the outage?
- Pat Scharff How would the 69 kV have prevented the outage? And the answer is – it would not.
- Leslie Kramer Thank you.
- Pat Scharff The 69 kV line, however, would have mitigated the amount of time the line and power was out and the number of customers that were impacted by the outage. That is --
- Leslie Kramer How so? Because the 69 kV line --
- Moderator –
Judy Gignac I'm sorry --
- Leslie Kramer -- would have been in a much more remote area than where the outage actually occurred, which is immediately accessible by road.
- Pat Scharff As Ms. White explained, the new substation will break the existing single feeder that has 350 miles of exposure – will have broken it up into four new feeders plus a portion of the line, which is a fifth feeder, that will be built from the Huachuca West Substation. Only one of the four new feeders, having approximately 300 customers on it, would have been impacted by that particular outage. That is a much smaller portion of line that has to be patrolled and repaired. That line can be brought back into service as soon as repairs are made. 300 people affected, much shorter patrol, much faster to find the fault, much quicker to repair it, and much quicker to return the line of service. But can it prevent the fault? No. The line, the 69 kV line cannot be – prevent drunks from hitting power poles; it can't prevent trees from falling into power lines.
- Leslie Kramer Thank you. How would the 69 kV power line be more secure in terms of the terrorism kind of question that was asked?

Pat Scharff The presence of an alternate source – the 69 kV line – one, any power line, whether it is 69 kV, 46, 345 thousand volts – that is, one of the major concerns in this country is energy security and acts of terrorism against our energy resources. So, if there is a concern about that, a big concern would be, well gee – they could do just as well by damaging the Huachuca West Substation, which would be a very long outage should something happen to that transformer; or damaging that line that comes down Highway 82. By adding the 69 kV line, you have a very strong primary source that's difficult to get to. And you still have a backup source, which would be the Huachuca West Substation and its capacity and the capacity that's available in the 25 kV line that comes down Highway 82.

Leslie Kramer Uh, Jack, Mr. Blair, when you talked about the independent public opinion poll, you said that 600 out of 32,000 co-operators were polled. Is that correct?

Jack Blair There were a total of 600 people polled; that's correct.

Leslie Kramer How were the people that were polled determined?

Jack Blair They asked us for a list of all of our residential members – I think that's approximately 32,000 or so. We sent them a list with all of the phone numbers on there. And they then took it through two – and for lack of a better term, they kind of sifted it; put it through a sifter, flour sifter, twice – and randomly came up with numbers. And I might add, you know, they do a lot of polling. It is the same thing that they do for anybody else's poll. So these names were randomly selected. Every single co-op member, residential member, was there. And then when they made the phone call, the company that made the phone call, first thing they did, was make sure: are you the person that pays the electric bill? So, these were totally randomly selected people.

Leslie Kramer So there was no focus on the area that is specifically interested in the 69 kV line?

Jack Blair Yes. What they did is, there were 600 total people. 500 of them were randomly selected from our entire service territory. And then to make sure that they had a statistically valid number, they added 100 additional to the people on the V-7 feeder so that they could get a statistically valid number.

Leslie Kramer So 100 were from the V-7 feeder and --

Jack Blair 100 extra were from the V-7 feeder.

Leslie Kramer How were those people determined?

Jack Blair They, the same method. They, there was a random selection by computers. And it goes through two different cycles.

Leslie Kramer Who, who designed the questions that were asked in the poll?

Jack Blair Mr. Severson.

Leslie Kramer And who's he?

Jack Blair He's --

Leslie Kramer Oh, excuse me; I forgot.

Jack Blair He's a, a --

Leslie Kramer Is he one of the, the owner of the polling company? Is that one --?

Jack Blair No, no. The actual people that did the poll --

Leslie Kramer Well, Severson & Associates.

Jack Blair Severson & Associates. He's in, I believe, South Dakota.

Leslie Kramer I thought they were in Wisconsin, actually.

Jack Blair No, he's in South Dakota, I believe.

Leslie Kramer Okay.

Jack Blair But he does, by the way, obviously work outside of just that area.

Leslie Kramer Thank you.

Moderator -- Thank you.
Judy Gignac Wayne Porter?

Wayne Porter Hi, I'm Wayne Porter. I'm a part-time Elgin resident. I'm working with a local organization called Practical Energy for Rural Communities. Actually, I do have a technical question for Pat Scharff about the feasibility study. On the one, the so-called removal option that made the final five -- the diesel generator. I'm wondering about the assumptions that were made in the operating and maintenance. And the cost estimate for that option was approximately \$3.9 million. And I wonder if you're familiar with the assumptions that were made to come to that number, such as the number of days, number of hours, each day that that facility would be operating, and the fuel -- I know you emphasized the choice of fuel. But the price increase assumption for the fuel and the discount rate used for that calculation --

Pat Scharff I'm not sure about the discount rate that we used. Initially, the DG would have to run about 500 hours a year, as a peaker unit. Each of the projects and viable alternatives had to have a 20-year life. So, by the end of the 20 years, that peaker is going to have to be operating on the order of 2,000 hours a year based on the load projections. Again, everything is sensitive to load projections. But what they did was take those numbers of operating hours and present-worth them all back. Now, again, they used diesel fuel because a natural gas resource will require tapping into the gas transmission line. It may also require a surge tank for gas storage to be able to start up and run the generation when it runs. But what happens is the generator might solve peak problems. It will not do as good a job on losses because it's not running all the time like the 69 kV would be. It doesn't even have as good a performance on losses as solar portable tanks. It also doesn't solve reliability, because the generator only runs part of the time. You still would

have the long, 350-miles worth of exposure. But I don't know what the – I can look it up; it'll be in the report there. But I'm not sure what the discount rate was. But that's what they did. When they started with 500 hours, they did a typical O&M cycle based on industry estimating data and then they escalated the number of operating hours out to about 2,000 hours towards the end of the 20-year life of the project. And then they PW'd it back.

Wayne Porter

I understand it doesn't solve all the problems.

Moderator –
Judy Gignac

Thank you. Terry Murrietta?

Terry Murrietta

Well, almost everybody here knows me. I've lived here all my life. My grandparents – my husband's grandparents have lived here as long as most of these people. We have had electricity from SSVEC probably from the time they put it in.

My main thing is, I think, no insinuation to anybody here, but a lot of people here – I'm concerned because I want electricity here because my family's been here forever and my children will be here forever, and I think their grandchildren will be – my grandchildren. And I want them to have power. I want to give them 5 acres of my land. I want them to have power. And the only way we're going to get it is by building the line.

I would like it to come down 82. I live on 82. But that's not reasonable. You guys have decided through your studies, which you know more about – I don't know anything about that stuff – that it needs to come that way. So, in my mind, that's the way it should come, for progress. Jane gave that example. I went to school, in Elgin School, and there were maybe 30 children at Elgin School. Now there's a 150. I'm like Jane. There was a time when we said, maybe we don't want the new people to come live here and crowd up with our houses and stuff. But we didn't stop them. And now it appears to me that many of the new people want to stop other people from coming, when we didn't stop them.

Audience

[Applause]

Moderator –
Judy Gignac

Thank you. Jean Karstmen?

Jean Karstmen

I'm a Sonoita resident, and I won't go into great deal about my opinion about the power line for ad nauseum. But I do want to make one comment that the people that are against the line are not against the power line. They are against the location. We all want power. We want reliable power. So, take that as you will.

I do have a question that was just brought up. I don't understand. You say the diesel backup generator would have to run 500 hours? That's 20 days. Our average outages are three hours. How do you get 500 hours to run a diesel generator? Could you explain that, please?

Pat Scharff

The diesel generator is intended to be a peaking unit to upload the load on the

Huachuca West Substation. If you look at the feasibility study, in that feasibility study there is a load duration curve. And, in essence, what that load duration curve is showing you is how many hours out of the year, how much power is being used. And the number of hours that you must run the generator is a function of how many hours the load exceeds a certain point. That generator will have to run all the hours that you are above the rating of the transformer.

- Jean Karstmen So, essentially, we are – 500 hours we spend a year over that 7 MW?
- Pat Scharff I believe that that would be what the report says. I haven't got the report up here right now, but I could look at it and tell you. Have you looked at the report?
- Jean Karstmen Yes, I have.
- Pat Scharff Did you look at the load duration curve?
- Jean Karstmen I don't remember the details.
- Pat Scharff Okay. If you'll allow me, let me get the report up here.
- Deborah White I've got it.
- Pat Scharff I need the page.
- Jean Karstmen Well, I'll go on with my other statement here, for a question.
- Moderator –
Judy Gignac That's fine. Thank you.
- Jean Horseman Under the recommendations and proposed mitigation, it mentions, "accordingly, an archaeological survey of the proposed project area will be necessary for the project to move forward. What are your plans for an archaeological survey?"
- Deborah White Page 81, third paragraph. Could you go ahead and pull that up? Could you also pull up page 80, I guess. Let's do that, because that'll be my response.
- Moderator –
Judy Gignac Okay, you want page 81 or 80?
- Deborah White Let's 80 real quick.
- The first paragraph, under previous investigations, okay, will give some information in regards to the T-1 line, which is SSVEC's proposed route across the land grant. And it does state on there that SSVEC did retain an environmental company to perform a cultural resource survey of the route. That survey was done in 2000 – it was actually done in 2007. This is, the date is 2009. It has an update on it.
- Your comment – on page 81, in regards to an archaeological survey would need to be performed. The company that came out and reviewed this – reviewed environmental for all options, that – the last five options, okay, that were – that it was broken down to. For them to do environmental analysis for all 20 options would not have been feasible. So they did the

environmental for those five options. So if any one of those options were chosen, whether it would be the T-1 option, which SSVEC has performed an archaeological survey on, or the T-2 option, which would be down 82, or a diesel generator option – because we did find that there are some – that a couple of demands side management options would not need any environmental. But, for the, for the diesel generator, or even a natural gas generator, or the T-2 option, because there have been no surveys done, if those options were chose as an alternative, then surveys would have to be done for those.

- Jean Horseman Could you explain to me why the general manager of the ranch, Babacomari Ranch, and the ranch manager, know nothing about the survey?
- Deborah White At this point, I am not really – I have not spoken to the general manager of the Ranch. They have not told me that. That would be a hearsay situation.
- Audience – Ann Gibson Could you repeat what she said, because we're not hearing that.
- Jean Horseman Miss Ann Gibson has spoken, and she has said that she is a partner in the Ranch, and is part of the management, and that she has not seen a copy of the study.
- Deborah White Part of the ownership, yes – not a part of the management of the Ranch. However, at this point, that – the study has been provided, as is my understanding, all right? Actually, I know for sure because I have a copy of it – to the Ranch management. So you may want to inquire to the Ranch management as to whether – okay. Well, it probably would be good for them to contact me, and we can discuss it.
- Moderator – Judy Gignac Let's get to a – there was another question. I don't think it was for Deborah. I think it was, it was a technical question that Pat was going to answer.
- Pat Scharff [*cross talk re page of report*] I know that's 18. We're going to want to come back to page 18. 27.
- Moderator – Judy Gignac Okay. Do you want – 27? Okay.
- Pat Scharff Can you zoom me in on that? On the, uh --
- Panelists [*more cross talk about getting page up on projector*] Be patient; I'm getting it larger. [*more cross talk*]
- Pat Scharff That's page 27.
- Moderator – Judy Gignac It's page 27 on the bottom of the page, and this is page 35 as far as the --
- Jean Horseman Yeah, page 35 is the Adobe, the pdf, because there's some blank pages.
- Pat Scharff Page 27 is the page number in the actual hard copy report.
- Jean Horseman It could be the way it printed off.

Pat Scharff Could you scroll down just a bit? Bring that graph up towards the top of the page. Keep going, keep going. There you go. That's it.

 That's the load duration curve. Stacks up the hours. The distributive generator must run --

Moderator – Into the microphone.
Judy Gignac

Pat Scharff Unfortunately, this microphone is – how's that?

Moderator – Okay.
Judy Gignac

Pat Scharff How's that? There we go. The distributed generation must run for two reasons. One, to minimize overloading on the substation transformer and keep it within the rated limits. Secondly, one of the problems it helps to solve is voltage problems. And in doing the analysis to solve the voltage problems as well as the loading problems on the substation transformer, you need to keep a load limit in the neighborhood of about 4500 KW.

 Right now, on this feeder, the co-op has four voltage regulators in series. REA (or RUS, however you want to refer to them) specifies two voltage regulators in series. When you have more than that, you have many, many problems managing voltage within the ANSI Grade A limits that are prescribed for service. So, in order to maintain the voltage and to keep the loads on the transformer within acceptable limits, you need to begin running the generator at about a level when the load gets to 4500 a month, 4500 KW - - 4½ megawatts. That's right about, right in there.

 You're right. That's 20 days.

Jean Horseman Well, if I look at the 500 hours and follow that out, that hits at 4000. 4500 looks to me like it's maybe 200 hours. Right there, about 200 hours. Not 500. Do you follow that 500 line straight up? That gets it about 4000.

Pat Scharff If you read, yeah. Regardless of whatever optical thing may be going on with the graphic, read the last line of this paragraph right here.

Jean Horseman That's why I was trying to understand why it says 500. The graphic doesn't back that up.

Pat Scharff 500 – actually --

JeanHorseman Are you looking at customer load or are you looking at total load?

Pat Scharff You have to look – the total load is the customer load plus the losses. When the generator runs, you're actually reducing the losses somewhat. Remember, at the margin, we're looking at 50% on losses. As soon as the generator begins running, you start reducing losses, and instead of having the total customer load, plus losses, as the top curve shows, you're beginning to have a curve that's closer to the customer load.

 So you are, in fact, [inaudible] this range for about 500 hours. It's 501, 502.

did they round it off? I don't know. But it isn't 200, and it isn't 700.

Jean Horseman
Ann Gibson –
out of turn

Okay. Thank you. It wasn't obvious on the graph. I appreciate your explanation.

I am a partner and part of ownership of the ranch and I have not seen environmental study.

Moderator –
Judy Gignac

Thank you, Jean.

Okay, I want to ask if Bob Owens or Charles Kinter have come back in the room. Okay, if not –

I indicated to Seth that if people had additional questions, that I would put them at the end of the line, when we had somebody before. And so, I'm asking if we have any further questions. Okay. All right. Then we have completed those who have filled out a form. And I appreciate your patience and your courtesy.

Gale (*but sounded like "Daly"*), you had an additional question or a statement?

Gale Getzwiller

I did.

Moderator –
Judy Gignac

I need you to come up to the mike, please.

Gale Getzwiller

Last time I came up, I was a little upset with the statements beforehand, and I actually was going to say something now. One thing I going to say is that there is a little bit of difference between tonight's presentation and the presentation that we had in Patagonia. I really missed the 60 SSVEC employees that were in Patagonia, and where they are tonight. They added a lot to the meeting in Patagonia. I wanted to talk to them a little bit. I was hoping to find somebody who might have some empathy for the people who live in this area and could maybe talk with the administration, because we don't seem to be able to have a dialogue. You talk at us and we talk at you, and that seems to be as far as it goes.

I would like to take exception with Ron Orozco's statement that the ASS, or the ACC, told SSVEC not to build the substation. I do not believe that that was in any order that they gave to you.

The power outage on December 23 – we had a big snow storm that she was talking about earlier. That was, I think it was all storm-related. Whether it was poles blew done, ice – those are things that are going to happen here. And as I understand, Sierra Vista was out all night at that time. So that, I mean, you have, you have just as bad as outages as other areas, you know. We're more rural and we were not as long as you were in Sierra Vista.

Pete Swiatek
Ann Gibson

Different day, different hour.

Okay, well, and then we were, we were not out as long as Sierra Vista was,

though, at that – on that day. Was that December 8th? What day was it?

Pat Scharff

January.

Gale Getzwiller

Oh, it was in January? But Sierra Vista was out longer that we were, right?

Pete Swiatek

[*inaudible*]

Gale Getzwiller

We were not out overnight [*inaudible*], and they were. I have another point to make. Oh, the robocall – Wayne Crane – that you sent [*inaudible*], you know – recorded Wayne Crane's voice to send us a robocall about the 23rd outage that you said was because we didn't have the 69 kV line then. And that was not true. We were going to have an outage whether the 69 kV line was in or not.

We're not saying we don't want reliable power in Sonoita and Elgin and Patagonia. And that, that shouldn't be twisted like that. We want reliable power. We just want to have power that is going to take care of us in the future, not a coal-fired plant that's going to break down that is in Wilcox. We want to have locally-generated, renewable energy power of the future. That's what I have to say.

Moderator –
Judy Gignac

Thank you, ma'am.

That concludes, then, this evening, and I want to thank you all for your courtesy and for your patience and for coming here this evening. Thank you so much.

END OF RECORDING

Exhibit J

SSVEC MEETING IN ELGIN MARCH 11, 2009

I would like to say a few words in behalf of our Cooperative, which is often affectionately identified as "Poor Old Suffering Springs." I came to Sierra Vista in 1963 as an engineer for the Army's Proving Ground. I have witnessed the nearly fifty-year explosive growth of our Coop, which has had to design, build and operate an electric distribution system in the area for a population growth of fifteen fold and over a four-fold growth in member meters. Any way you look at it, when examining the Coop's growth, it has been a marvelous engineering accomplishment, especially when you consider it serves a geographical region larger than the combined area of several eastern states. When designing an electric utility, there are two completely separate engineering functions that cannot be mixed together:

First: Power Generation

Second: Power Distribution from the power source to the meter.

SSVEC is a member-owned distribution system. Electrical power distribution design is nationally regulated by the *National Electrical Safety Code* published by the American National Standards Association (ANSI). Our cooperative must comply with these standards and those of the Federal Rural Electric Administration (REA). To ensure for an environmentally friendly and reliable system design that will function for years while accommodating foreseeable population growth, both federal and state laws require that the design be developed by licensed professional engineers (PE's). Further, to obtain equity funding, the design and specifications must be signed by licensed professional electrical engineers as meeting these standards and that environmental and safety considerations are held paramount to protect the public. To do otherwise is to invite chaos and costly failures.

The *National Electric Code* (NEC) published by the National Fire Protection Association (NFPA) provides standards to protect those using the electrical power. This Code allows the consumer to fund and include alternate energy sources. SSVEC has served well as a business conduit to channel federal funds by giving rebates to its members who adopt energy efficient and alternate sources of electrical power. In most instances, power generation from wind and solar is very costly and is not a reliable power source that can effectively accommodate high-energy use peaking demands. Further, the wind in this area is intermittent and the semi-arid climate with cloud cover often compromises the generation of solar power. The cost of these systems would be a wrongful economic burden for our members.

Our Cooperative is a member-owned enterprise, governed by thirteen board members elected for three-year terms from thirteen districts based on the concept of one meter/one vote. These directors are primarily responsible for ensuring that the design and operation of the distribution system meets all applicable requirements. Members who have concerns about the design can always give their written comments

to the elected director in their district who will forward them to the staff design engineers for review and comment.

As a member of the Coop, I feel that good old Sulphur Springs has had enough *suffering* on the issue of the transmission line into the Sonoita/Patagonia district. The staff engineers deserve a round of applause for the great work they have done.

Thank you,



David V. MacCollum, P.E., CSP

Exhibit K

E-01575A-08-0328
E-01575A-09-0453

ORIGINAL

RECEIVED

JUDITH A. GIGNAC

1425 VIA VIENTO
SIERRA VISTA, ARIZONA 85635
VOICE: 520.458.0743

2010 MAR 15 P 4: 50 EMAIL: JUDYGIGNAC@COX.NET

March 12, 2010

AZ CORP COMMISSION
DOCKET CONTROL

Jane J. Rodda
Administrative Law Judge
Hearing Division
Arizona Corporation Commission
400 W. Congress
Tucson, AZ 85701-1347

Re: SSVEC Public Forums as ordered in Decision #71274

Dear Judge Rodda;

In response to Decision #71274, SSVEC requested that I serve as moderator of two forums: March 9, 2010 at Patagonia High School, and March 11, 2010 at Elgin Elementary School.

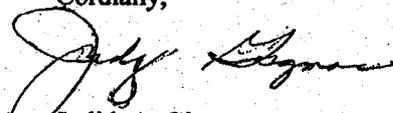
I thought it would be appropriate to inform you of my observations regarding these forums and to provide you with a copy of my formal comments to those attending.

The first part of the forum was devoted to presentations by SSVEC and TRC regarding the several procedures with the Commission, the purpose of the Sonoita Reliability Project, the results of the Independent Feasibility Study, remarks concerning renewable energy generation plans of SSVEC, and the results of an independent public opinion poll on several issues regarding the project and SSVEC in general. The remainder of the forum was devoted to questions, comments and statements from public members in attendance.

Although not all members of the public went away fully satisfied that change would occur based upon their comments, it was my intent as moderator and my observation that all who wanted to speak were given ample opportunity to do so and that the utility presenters provided appropriate information and answers to all questions. This included some follow-up with individuals regarding specific problems outside of the forum's agenda.

Should you have any questions, please do not hesitate to contact me.

Cordially,

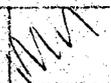

Judith A. Gignac

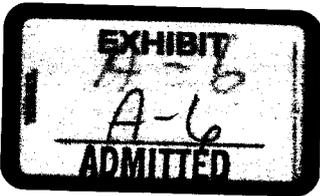
Arizona Corporation Commission

DOCKETED

MAR 15 2010

cc: Kristin K. Mayes, Chair, ACC
Gary Pierce
Paul Newman
Sandra Kennedy
Bob Stump

DOCKETED BY 



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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

KRISTIN K. MAYES, Chairman
GARY PIERCE
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP

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-08-0328

IN THE MATTER OF THE APPLICATION
OF SULPHUR SPRINGS VALLEY
ELECTRIC COOPERATIVE, INC. FOR AN
ORDER INSTITUTING A MORATORIUM
ON NEW CONNECTIONS TO THE V-7
FEEDER LINE SERVING THE
WHETSTONE, RAIN VALLEY, ELGIN,
CANELO, SONOITA, AND PATAGONIA,
ARIZONA AREAS.

DOCKET NO. E-01575A-09-0453

**PRE-FILED DIRECT TESTIMONY OF DEBORAH WHITE, SR/WA-NAC
ON BEHALF OF SULPHUR SPRINGS
VALLEY ELECTRIC COOPERATIVE, INC.
(A.R.S. §40-252 Proceeding)**

FEBRUARY 23, 2010

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Deborah White, and my business address is 350 North Haskell
3 Avenue, Willcox, Arizona 85643.
4

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

6 A. I am employed by Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or
7 the "Cooperative") as its Real Property/GIS Manager.
8

9 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
10 **WORK EXPERIENCE.**

11 A. My background includes 15 years of experience in electric utility distribution
12 systems. It includes electric distribution planning and analysis, reliability
13 assessment, special equipment performance evaluation, SCADA implementation,
14 land rights analysis, corridor planning, property negotiation and acquisition, asset
15 management, conflict management, land surveying for utility purposes,
16 environmental planning and compliance, and Geographic Information Systems
17 management and implementation. I have performed and managed projects for
18 analysis of electric utility distribution capacity, reliability and performance;
19 performed and managed acquisition of land rights for electric distribution,
20 transmission, substation, and private properties. I am a member of the
21 International Right of Way Association with a Senior Right of Way Agent
22 designation which incorporates disciplines in land appraisal, asset management,
23 engineering, environmental, legal land rights, negotiation/acquisition, surveying,
24 and title.

25 ...

26 ...

1 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE ARIZONA**
2 **CORPORATION COMMISSION (“COMMISSION”)?**

3 A. No. I have, however, attended various Commission hearings, procedural
4 conferences and Open Meetings.

5
6 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS MATTER?**

7 A. I am testifying on behalf of SSVEC.

8
9 **Q. ARE YOU AUTHORIZED TO TESTIFY ON BEHALF OF SSVEC?**

10 A. Yes, I am.

11
12 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
13 **PROCEEDING?**

14 A. The purpose of my testimony is to provide an overview of my role in the Sonoita
15 Reliability Project (“Project”).

16
17 **Q. WHAT IS AND HAS BEEN YOUR ROLE WITH RESPECT TO THE**
18 **PROJECT?**

19 A. As a member of the Project Team, my role was multifunctional and incorporated
20 Project coordination of analysis by internal staff members, coordination of/with
21 external contractors/consultants, analysis and planning of routes, assessment and
22 acquisition of land rights, evaluation of environmental factors, reliability analysis,
23 review of operational and performance recommendations, coordination of
24 presentations to members, and collaboration of communications with members.
25 After the issuance of the Commission’s Rate Case Decision 71274, I was
26 responsible for coordination of the Independent Feasibility Study Request for

1 Proposal (“RFP”) and data collection.

2
3 **Q. DESCRIBE THE PROCESS FOR COMMUNICATING THE PROJECT**
4 **WITH COOPERATIVE MEMBERS.**

5 A. Communication with members occurred on many different levels, from simple
6 telephone calls to individual homeowner meetings to mass mailed letters to full
7 community outreach presentations. As shown in the attached Exhibit A, SSVEC
8 began mass mail communications in the Affected Areas in March 2008. During
9 the one-year period leading up to the April 2009 Rate Case Hearing, SSVEC
10 provided six (6) mass mail communication updates regarding the Project in the
11 Affected Areas. One in particular, dated September 22, 2008, was over 50 pages
12 and included a 16-page explanation of the Project details, as well as a copy of a full
13 Power Point presentation from community outreach meetings.¹

14 Exhibit A to my testimony further indicates SSVEC’s community outreach
15 meetings, neighborhood meetings, and meetings with the local town council. It
16 further identifies communications with small groups of members, as well as with
17 individual members. Albeit a considerable amount of communication, it does not
18 include those informal telephone or on-site conversations which occurred with
19 myself directly or with various other SSVEC personnel.

20 ...
21 ...
22 ...
23 ...
24 ...

25 _____
26 ¹ This same document was also provided to the Commission at the April 2008 Rate Case Hearing and was admitted into evidence as SSVEC Exhibit A-3.

1 Q. THE COOPERATIVE'S 252 PETITION REFERENCES TWO
2 SIGNIFICANT OUTAGES IN THE AFFECTED AREAS IN DECEMBER,
3 2009, WHICH TOTALED MORE THAN SIX (6) HOURS OUT AND MORE
4 THAN 11,500 CUSTOMER HOURS OUT. THE PETITION STATES THAT
5 IF THE PROJECT WAS IN PLACE, THE OUTAGES WOULD HAVE
6 BEEN MINIMIZED. PLEASE EXPLAIN THESE STATEMENTS.

7 A. The outages experienced in December 2009 are perfect examples of the number of
8 customers which may be affected by an outage on the existing V7 feeder line
9 which currently serves the Affected Areas. Further, it doesn't matter *what* is
10 causing the outage - whether a natural occurrence of weather and/or animals/birds,
11 or by overload conditions, of which both occurred on one of these outages - the
12 issue is *how many* are affected. Not all *significant* outages in the Affected Areas
13 are full substation outages, rather those are minimal as shown in the Independent
14 Feasibility Study. However, in regard to the December 23, 2009, outage which
15 affected 2317 customers for nearly five (5) hours, and which was caused from a
16 natural weather occurrence, the outage terminated at a 3-phase protection device on
17 the main feeder line in Elgin. Because this device was near the 'beginning' of the
18 V7 feeder, once it operated, everyone from that point to the very end of the main
19 feeder and all the taps were out of power. The fault location was later identified to
20 be between Sonoita and Elgin. This outage exemplified how the implemented
21 Project would have reduced the statistics of the outage by the number of customers
22 affected and the number of hours out.

23 As stated in said September 22, 2008, mass mail communication in Exhibit
24 A, the proposed Project's Sonoita Substation will split the existing 360-mile V7
25 single feeder into four separate feeders of considerably lesser length and number of
26 customers per feeder. In the December 23, 2009, outage, with the fault location

1 being between Sonoita and Elgin, a protection device nearer to the proposed
2 Sonoita Substation, would have operated – which would have isolated the outage
3 solely to those people on that particular new feeder from the Sonoita Substation
4 which would serve Eastern Sonoita and some of Elgin. This would have reduced
5 the number of customers affected as the remaining feeders, which would serve the
6 Affected Areas of Canelo, Patagonia, North, South and West Sonoita, would have
7 remained in power.

8 Further, due to the shorter length and configuration of the new feeder from
9 the Sonoita Substation, the time necessary for SSVEC crews to conduct patrol to
10 locate the fault, repair as necessary, coordinate the protective equipment, and re-
11 energize the line would have reduced the number of outage hours significantly.

12
13 **Q. INTERVENOR SUSAN SCOTT'S RESPONSE IN OPPOSITION TO THE**
14 **PETITION TO AMEND DECISION NO. 71274 DOCKETED ON JANUARY**
15 **22, 2010, AT PAGE 3, LINES 19-23, STATES:**

16 "Facts in the Feasibility Study that do not support SSVEC's
17 conclusions include:

18 *a. Figure 2: Annual Average Outage Hours per Customer for*
19 *the past 10 Years equals 3 hours, not the 270 hours that*
20 *SSVEC stated in its Rate Case and letters to the Commission."*

21 **PLEASE EXPLAIN THE DIFFERENCE IN THESE NUMBERS.**

22 A. As stated in SSVEC's Reply to Ms. Scott's Response in Opposition, Docketed
23 January 26, 2010, there are multiple indices used for reporting outage data, each for
24 specific analysis purposes. SSVEC's 270 Average Total Hours Out is a total
25 system analysis index which calculates and compares the performance of all
26 SSVEC's feeders (this analysis/comparison is shown in said September 22, 2008,

1 mass mail communication in Exhibit A, in graph titled "V7 Feeder Outages and
2 Length in Miles as Compared to all SSVEC Feeders"). The Independent
3 Feasibility Study's 3 Annual Average Outage Hours per Customer is a calculation
4 for specific feeder analysis. Therefore, the two indices are not comparable, and as
5 the Independent Feasibility Study only provided for analysis of the V7 Feeder,
6 Navigant Consulting, Inc ("Navigant") would not have made these comparisons.
7

8 **Q. PLEASE DESCRIBE THE PROCESS FOR INITIATING THE**
9 **INDEPENDENT FEASIBILITY STUDY FOR SUBMITTAL BY**
10 **DECEMBER 31, 2009.**

11 A. Upon receipt of the Rate Case Decision, SSVEC identified the significant amount
12 of its staff time that would be necessary for the process to prepare the appropriate
13 requirements of a Statement of Work ("SOW"), RFP, Bidding Documents ("BID"),
14 RFP review, Bid issuance, Coordination with Independent Third Party ("I3P"),
15 Coordination with Community Opposition Group ("3SEG"), Coordination with
16 Commission Staff – as well as continue with its daily duties to 'keep the lights on'
17 for its customers.

18 Further, in order to remain beyond reproach insofar as the *independence* of
19 the Independent Feasibility Study, SSVEC decided to obtain the services of an
20 additional party, TRC Companies, Inc ("TRC"), a nationally recognized consulting
21 firm with extensive experience in utility infrastructure engineering, energy, and
22 environmental planning, to facilitate all aspects of the Independent Study and be
23 the only communicator with the I3P during the entire process until the Independent
24 Study's completion and filing with the Commission. Further, TRC could act as the
25 representative for the Independent Study's discussion in the Commission-required
26 Public Forums. TRC immediately assembled an expert staff and arranged meetings

1 with SSVEC and 3SEG in order to compile a SOW that would meet the
2 requirements of the Rate Case Decision and include requests by 3SEG to be
3 included in the Independent Study.

4 TRC assembled a list of qualified bidders based upon the requirements of
5 the SOW; the bidders would be nationally recognized firms that would have the
6 appropriate staff to meet the study requirements in scope along with the allowable
7 time frame. Bidders were contacted by TRC prior to release of the RFP to
8 ascertain appropriate contacts and address information so RFP's were received in a
9 timely manner and by the appropriate divisions of each firm. TRC finalized the
10 SOW on October 12, 2009. The SOW contained 14 tasks to be performed. It
11 specifically identified that communications with SSVEC, local communities, other
12 utilities, or Commission Staff were not tasks that were requested. The SOW
13 provided a minimum list of 27 data requirements, outlined deliverables required in
14 final report, and specific deadlines for report finalization.

15 Pursuant to the August 2009 Open Meeting wherein the Commission
16 requested SSVEC to keep Commission Staff informed, on October 13, 2009, an
17 SSVEC representative met with a representative of Staff to discuss the RFP, SOW,
18 and the process that SSVEC had engaged in to that point. Staff was informed that
19 TRC had been obtained to facilitate the Independent Study, that TRC had met with
20 both SSVEC and 3SEG to solicit input on the SOW, and copy of the SOW and list
21 of fourteen (14) qualified bidders were presented and discussed with Staff. Based
22 upon Staff's acknowledgement that SSVEC's process was sound, TRC issued the
23 RFP for the bid that very afternoon. After the RFP documents were released for
24 bidding, the bidders were required to submit an 'Intent to Bid.' Moreover, TRC
25 facilitated a pre-bid conference call with all Bidders in order to clarify any
26 questions prior to the bid due date of October 27, 2009.

1 While waiting for the return of Bids, I was assigned responsibility for
2 coordination and compilation of all requests for information from TRC. I began
3 assigning the 27 data requirements to SSVEC's staff in order to have them fully
4 compiled by award of bid. Two (2) bid proposals were received and reviewed by
5 TRC on October 27, 2009, and TRC prepared a written summary of the
6 qualifications and quotes for the Independent Study by each bidder.

7 On October 28, 2009, SSVEC Engineering Manager, Ron Orozco, and I met
8 with Commission Staff. We presented TRC's RFP summary, the SOW, discussed
9 the RFP process and subsequent responders, and SSVEC's intended selection of
10 Navigant Consulting, Inc. for bid award. Staff was in agreement that SSVEC
11 should move forward with the bid to Navigant, and the bid was awarded by TRC
12 on November 2, 2009. This meeting (as well as the prior October 13, 2009,
13 meeting with Staff) was summarized in a letter from Ron Orozco to Commission
14 Staff Engineer Prem Bahl, which was docketed with the Commission on November
15 20, 2009, and is attached to the Petition as Attachment A, and to this testimony as
16 Exhibit B.

17 During the day of the Commission Staff/SSVEC meeting, an in-depth
18 review of the bids by TRC identified a lack of credentials in the Navigant bid
19 regarding the SOW environmental requirements. Navigant was asked to provide
20 additional information pertaining to environmental resources and experience levels,
21 which was submitted in a Supplemental Bid Document on November 2, 2009.
22 This fully satisfied the requirements of the RFP and led to a finalized award of bid
23 on that very same day.

24 The data requirements which had been compiled to that date were forwarded
25 to TRC. During the course of the study period, TRC would contact me directly for
26 specific additional data requirements; again, I would assign to the appropriate

1 SSVEC personnel, and upon completion, would receive the data and forward to
2 TRC. TRC and Navigant held weekly status telephone conferences, of which I
3 would receive a summary document indicating progress points of the Study. I did
4 not, nor did anyone from SSVEC, participate in these telephone conferences.

5 On December 17, 2009, as per terms of the RFP, TRC forwarded a DRAFT
6 of the Independent Study to me for review. I forwarded it to SSVEC personnel for
7 review in order to ascertain that the Independent Study met all requirements as
8 specified in the SOW/RFP. SSVEC provided comments specifically related to the
9 SOW/RFP for Navigant's consideration. The DRAFT was returned to TRC on
10 December 23, 2009. On December 28, 2009, TRC forwarded to me a Final
11 DRAFT copy of the Independent Study, as well as confirmation that Navigant had
12 mailed the printed and bound copies of the Independent Study via Federal Express.

13 On December 30, 2009, TRC forwarded to me an electronic copy of the
14 Final Report. Upon review of this final copy, omissions were found that had
15 previously been in the draft report, and a modification was requested as to the
16 presentation format of the summaries. TRC coordinated with Navigant and these
17 adjustments were made to the Final Report. On December 31, 2009, the
18 Independent Feasibility Study was docketed with the Commission, as per the
19 requirements of the Rate Case Decision.

20
21 **Q. DOES THIS CONCLUDE YOUR TESIMONY?**

22 **A. Yes, it does.**

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24
25
26

Exhibit A



**Sulphur
Springs
Valley
Electric
Co-op**



*Every two to three
years, SSVEC
conducts an analysis
of its entire
electrical system for
performance,
reliability, and
improvements
requirements as part
of our construction
work plan study.*



What every member of Sulphur Springs Valley Electric Co-op should know about the Sonoita Reliability Project

In coming weeks, you may be hearing more about our plan to build a new 69,000 volt (69kV) sub-transmission line in the Sonoita area. Let me reassure you about several key points:

- We have thoroughly studied all reasonable alternatives.
- We have made extensive efforts to inform the public at every major step.
- We have listened to public comments and have modified our plans wherever possible, including moving a proposed substation to a better site suggested by area residents.
- The route we have chosen is the most cost-effective way to solve the growing reliability problems in Sonoita/Elgin/Patagonia area.
- The route we have chosen is the fairest to all of SSVEC's ratepayers.
- The chosen route affects the fewest landowners.
- The chosen route visually affects the fewest members.
- The construction of this line is absolutely necessary and must begin without further delay.

We are sending this letter to provide full details and to respond to several information requests we have received over the past few months from a variety of sources and as part of our promise to the Arizona Corporation Commission (ACC) to investigate alternatives and keep our members informed. The ACC is the part of state government that regulates electric utilities.

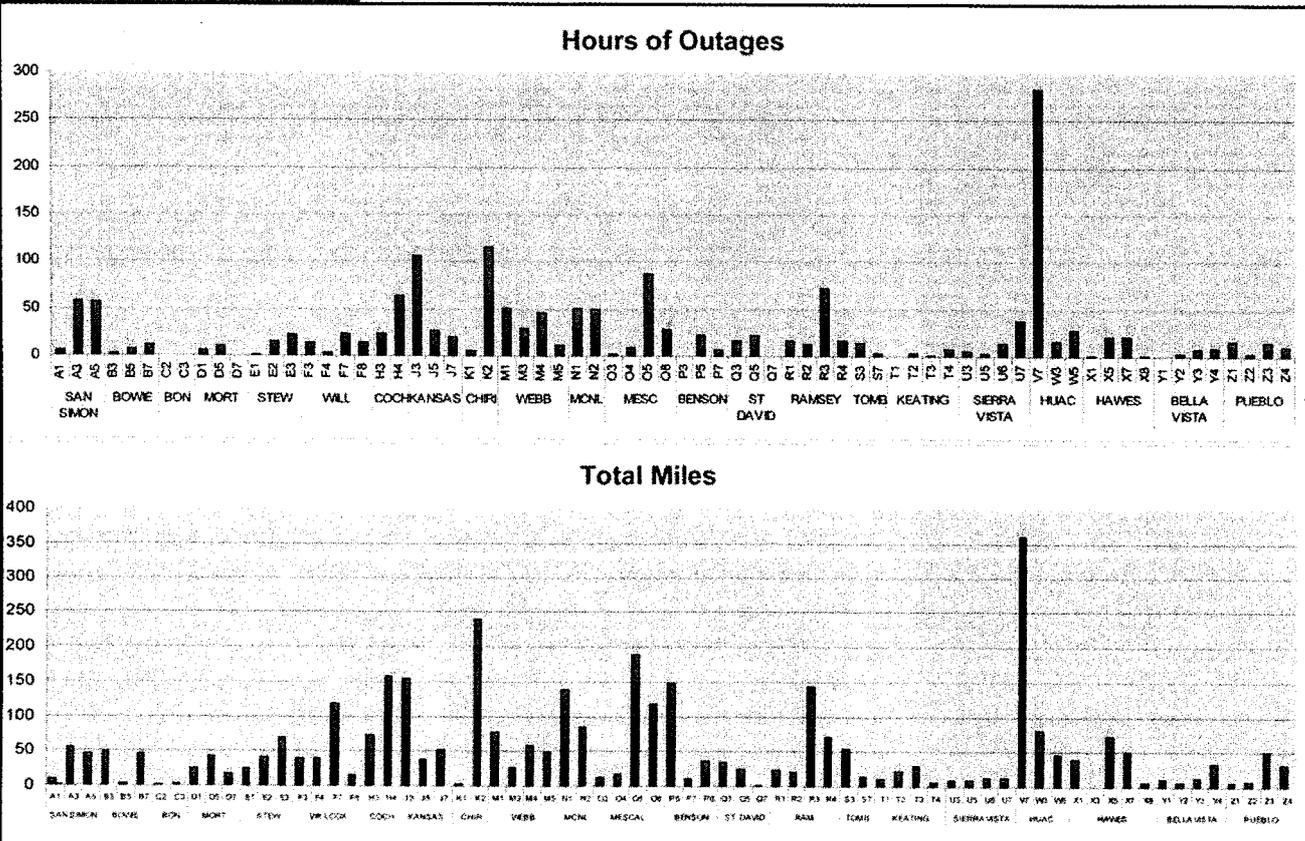
WHY A NEW LINE IS NEEDED

The Huachuca Substation, which is located near the junction of Highway 90 and Highway 82 in Whetstone, provides all of the power to Rain Valley, Elgin, Sonoita, Canelo, and Patagonia. It provides services to more than 2,400 meters and has more than 360 miles of line. This line is known as the "V-7 Feeder."

The V-7 is served by what we call a "radial" line, meaning that there is only one connection point to the power supply at the substation. The industry standard is to have two or more lines providing

service out of a substation, which provides back-up capability from one line to another. Such connections are called "loops." Currently, all of the power on the V-7 feeder comes directly from the one substation. If that substation or the line fails, all of the customers on this line lose power.

the potential for future electric reliability issues in the Sonoita/Elgin/Patagonia area. It is the policy of SSVEC to purchase and record easements far in advance of the actual construction of the line so that members who purchase land and build on the property can be aware that eventually a line could



V-7 Outages per Year and Length in Miles as compared to all SSEVC feeders

Much of this single line travels though diverse landscapes of open plains, rolling hills, dense oak forests, rugged mountains, and remote areas to serve small communities or just one customer. Outage times are often long because of the time required to get into the terrain and patrol the line looking for the cause of the outage. This is also the longest feeder line in our system and it has twice as many outages as the next worst feeder line.

be built on these easements. SSVEC does not build lines until they are actually needed. In the meantime all other options are explored, to be conservative with our members' money. In 1982, SSVEC purchased the 69 kV sub-transmission easements as well as substation property in the area and these were recorded with the appropriate governmental agencies.

SSVEC identified as early as 1980

Every two to three years, SSVEC conducts an analysis of its entire electrical system for performance,

reliability, and required improvements as part of our construction work plan study.

In 1991, as a result of our analysis, it was determined that the Sonoita/Elgin/Patagonia area growth was quickly approaching the maximum capacity of the existing current electric equipment. SSVEC began to explore the options available to ensure reliable power in the future for this area, including the possible construction of a new substation and 69 kV sub-transmission line.

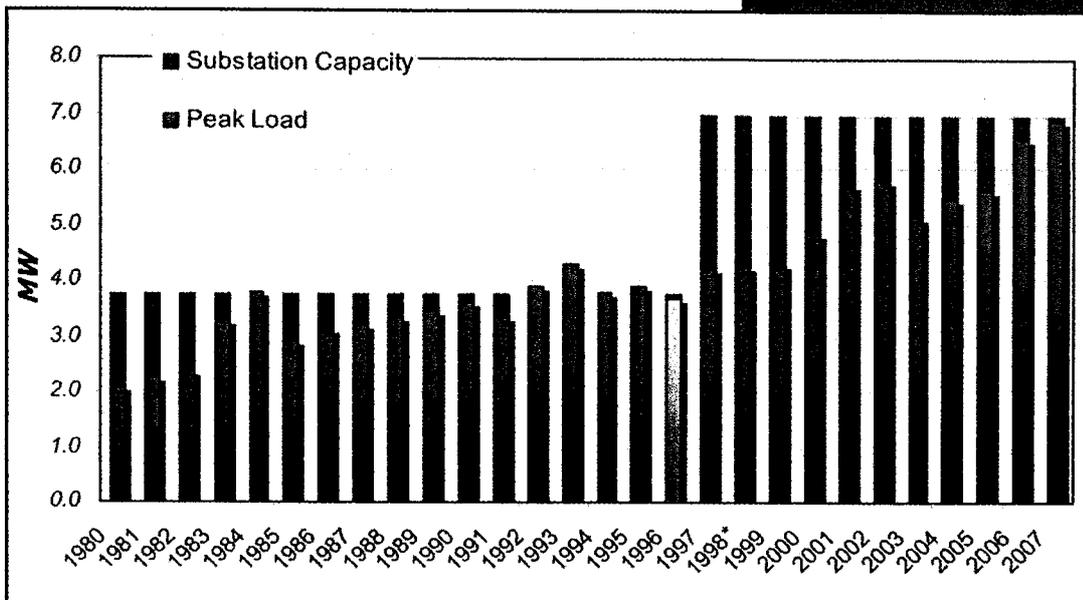
In 1996, SSVEC evaluated the situation and installed improved voltage regulation equipment on the V-7 feeder and upgraded the Huachuca Substation from a 3.75 megawatt (MW) transformer to a 7.0 MW transformer, deferring the significant cost of the substation and 69 kV sub-transmission line.

In other words, we took advantage of as many technological updates as possible to avoid building this line until absolutely necessary.

In 2005, due to increased growth in the area and the resulting increase in electricity use, the SSVEC system planning study identified the need to upgrade its infrastructure. This growth represents the addition of new members and the fact that each member typically now has more appliances that use

more electricity, compared to the past – more air conditioners, heat pumps, electric ranges, furnaces, water heaters, plasma televisions, computers, etc.

In 2007, SSVEC again conducted an in-depth analysis of all of the options to ensure electric reliability and concluded that the only remaining viable, cost-effective solution



was to construct the 69kV line and a substation in the Sonoita area. In 2007, the management of SSVEC presented that recommendation to the Board of Directors, who subsequently approved the funding for the Sonoita Reliability Project.

**Increasing Load vs. Capacity
Huachuca Substation Reaching Capacity**

The purpose of the Sonoita Reliability Project is to provide a solution to the current reliability issues affecting the V-7 feeder. The solution is to install a substation in the Sonoita area and eliminate the long radial length of the V-7 feeder by establishing four separate, shorter feeders. Each of the four feeders would then be:

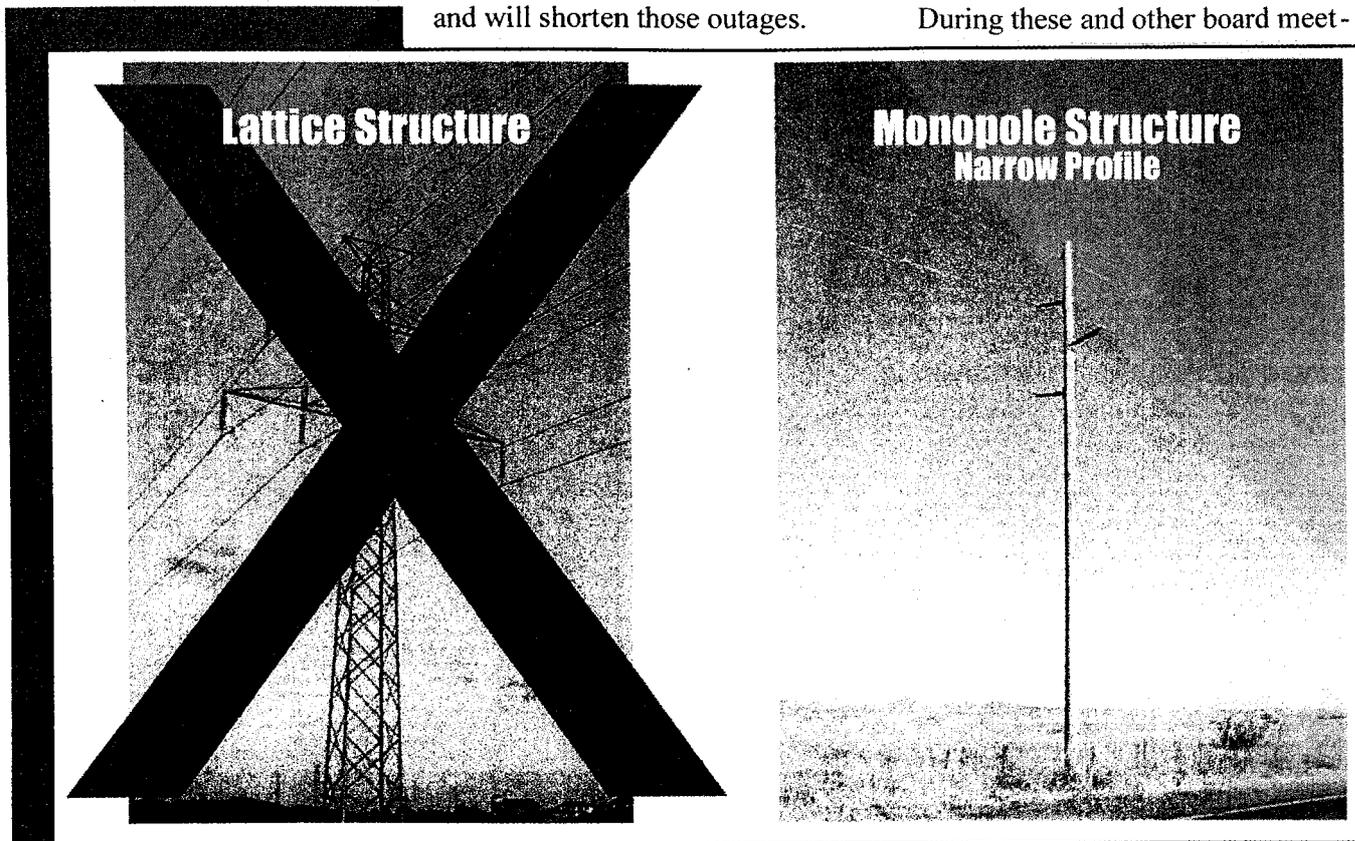
- Individually operated at the substation, with separate voltage regulators to adequately control the

distribution line voltages for the type of community load on each feeder.

- Sectionalized individually, meaning that if an outage occurs on one feeder, it will not interrupt any of the consumers on the other feeders. This will reduce the number of members who suffer power outages, and will shorten those outages.

only solution was to build the 69kV line and the substation, we prepared an initial engineering study and solicited input from our members who are affected by this line.

Two Board of Directors Meetings were held in Patagonia, one in 2008 and most recently in March 2009. During these and other board meet-



Overhead Structures

- “Tied” together where possible to reduce outages. This means that portions of an interrupted feeder may be transferred to another feeder so power availability is continued to our members while repairs are being made at the outage location.

These features will have an immediate and lasting positive impact on the quality of service to all SSVEC members in the Sonoita/Elgin/ Patagonia area.

KEEPING YOU INFORMED

Once SSVEC determined that the

ings over the past two years, members from the area spoke to our board, both in favor of and in opposition to this project. SSVEC took all of these comments under advisement.

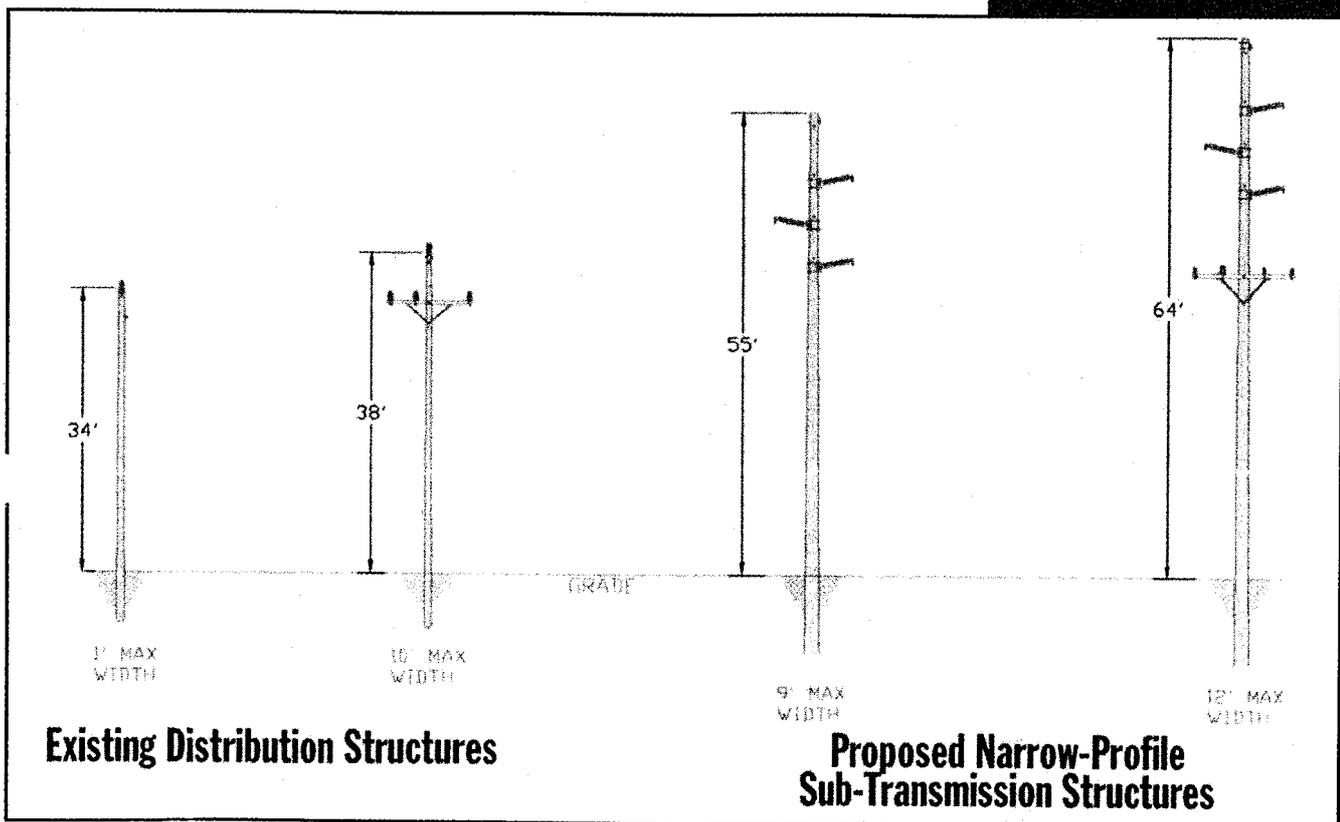
SSVEC also has held several public meetings in the community regarding this project: March 28, 2008 (meeting with community to discuss the project), July 22, 2008 (community presentation in Elgin), August 13, 2008 (neighborhood meeting with Sonoita residents), September 12, 2008 (meeting with the “community committee”), and

January 17, 2009 (meeting of the landowners who are impacted by the easement).

SSVEC employees have had scores of discussions, either one-on-one or in small groups. We have also reviewed many letters, e-mails, telephone calls, and other contacts. We have sent out six mailings about this subject to our members. These

location from a residential area to an industrial/commercial location. This new location will allow the substation to be concealed from residential neighborhoods.

- Using narrow-profile mono sub-poles with smaller arms. We will use pole colors that more easily blend in with the terrain. We will also use reduced glare conductors



mailings were on March 4, 2008; July 7, 2008; August 6, 2008; August 8, 2008; September 22, 2008 and December 1, 2008. All of this correspondence, including the PowerPoint presentation from July 22, 2008 was placed on our Web site for all SSVEC members to view.

Based on member input, SSVEC has made several changes in the 9kV line as well as the substation. Some of the major changes include:

- Moving the original substation

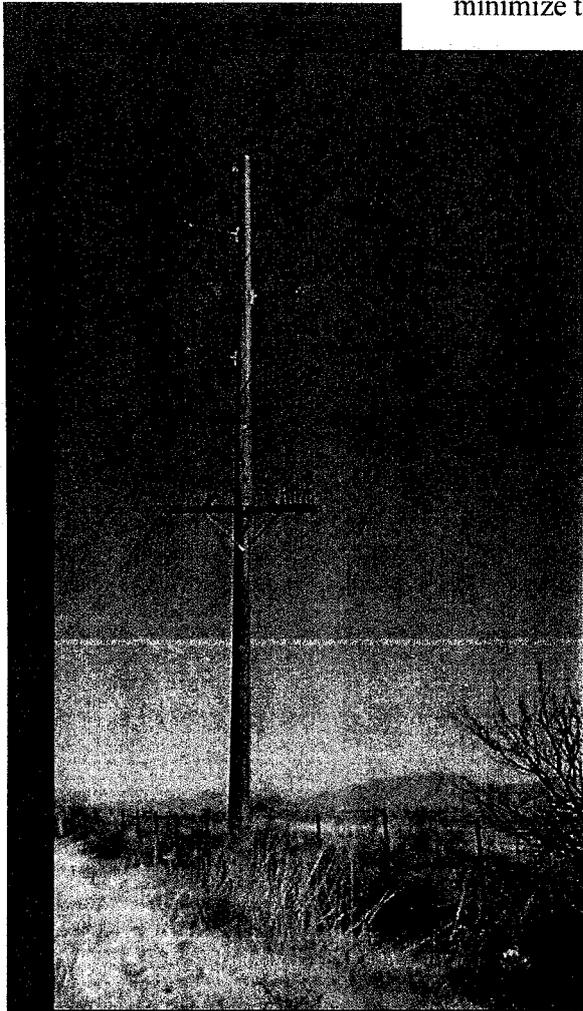
and longer spans for reduced visual impact. In short, we have reduced the visual impact as much as possible.

- On a portion of the route, the existing overhead distribution lines will be converted to underground to allow 69kV poles at least 10 feet shorter than originally planned. This will allow SSVEC to remove 46 existing distribution poles in the residential area of Sonoita Hills and replace them with 12 of the newly designed low profile 69kV poles. In net terms, this portion of the

Pole Height Comparisons

route will have 34 fewer poles than currently exist.

- Our engineers will work with residents affected by the line and make reasonable pole location adjustments whenever possible to minimize the visual impact.



Low-profile Sub-Transmission Pole with High Flat Distribution Crossarm

OPTIONS AND COSTS

By now I hope we have made it clear that SSVEC considered many options before making the final decision on where to build, and what kind of system to build, to ensure quality and reliable service to all of our members in the Sonoita/Elgin/Patagonia area.

The route that SSVEC has chosen (Option One – described above) is the most cost efficient route, affects the fewest members, and uses existing easements. The cost to build this route and substation is \$13.5 million. Other alternatives would be 1.8 to

4.1 times more expensive.

Option	Cost
<i>One</i>	\$13,500,000
<i>Two – Energized</i>	\$24,600,000
<i>Two A – De-energized</i>	\$19,600,000
<i>Three – Bury Line</i>	\$55,000,000
<i>Four – Original Substation</i>	\$13,300,000
<i>Five – TEP Interconnect</i>	Not Viable/ High Cost

The other routes and options considered included:

- *Option Two: Upgrading the exist-*

ing feeder line along Highway 82 and Elgin Road. This could be done either energized or by building it de-energized (build an adjacent line to the existing one).

Rebuilding the line while energized would be slow, expensive, and dangerous to our linemen as the line would have to be rebuilt with the lines energized. It would require the acquisition of right-of-ways from more than 80 landowners as the existing right-of-way does not include sub-transmission land rights. In addition, the majority of this route has been designated a part of the 2000 Las Cienegas Conservation Area, so special permitting from the Bureau of Land Management would be required. The cost of this option would be about \$24.6 million.

- *Option Two A:*
Rebuilding this line by building an adjacent line to the current one while safer for our linemen, will still require the right-of-ways mentioned above. The cost of this option is \$19.6 million.
- *Option Three: Build along the current option, but instead bury the 69 kV sub-transmission line underground.*

This option seems to be a simple solution, especially since many residential members have opted to install underground distribution lines. However, installing an underground sub-transmission line is a very complex issue and significant issues are involved: 1. The insulated cables used in underground sub-transmission lines require one or two large trenches, which lead to greater environmental disturbances. Also, concrete vaults or large manhole covers are required

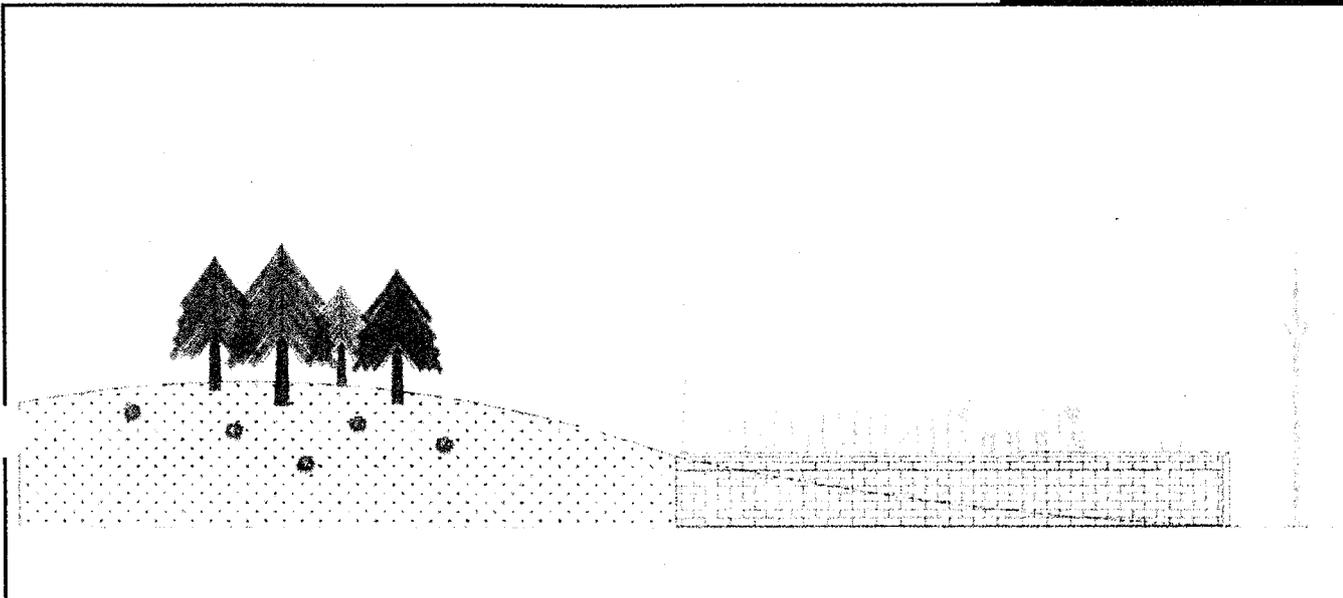
every 900 to 2,000 feet depending on terrain.

2. Underground electric conductors produce heat and for efficient operation this heat must be carried away from the conductors. (Air performs this function for overhead lines.) This requires special concrete caps around the soils and special thermal backfill material to move the

outages can last for weeks and even months.

The cost of underground 69kV sub-transmission line is estimated to be \$55 million plus the shorter life span and increased cost to repair over time.

• *Option Four: Build the substation at the original Buchanan Substation location.* After input from the community, it



heat away for the line. Once again, greater environmental damage would result.

3. The right-of-way must be kept clear of any vegetation due to the possible interference by root systems.

4. Studies have indicated the life span of underground conductors is half of that of overhead lines thus increasing costs over time.

5. Any failures in underground transmission lines are extremely costly, disruptive, and time expensive to repair. Underground

was determined that moving this substation to an industrial/commercial location would impact fewer people. If SSVEC were to use this site, it would require the building of not only a substation, but also one triple-circuit and one single-circuit large conductor feeders through the Sonoita Hills Subdivision. It will also not change the route of the 69kV line through the ranch area. This option would cost \$13.3 million, but was not chosen because for \$200,000 more we could move the substation and the lines to an industrial/commercial location.

Substation Screening

• *Option Five: Interconnect with the Tucson Electric Power (TEP) 46kV sub-transmission line.* This line was built in the 1940's. Several issues were identified with this alternative:

1. This power line serves Fort Huachuca and does not have enough capacity available for a substation to carry the additional load of the Sonoita/Elgin/Patagonia area.

2. TEP is bound through their Certificate of Convenience and Necessity by a special bonding

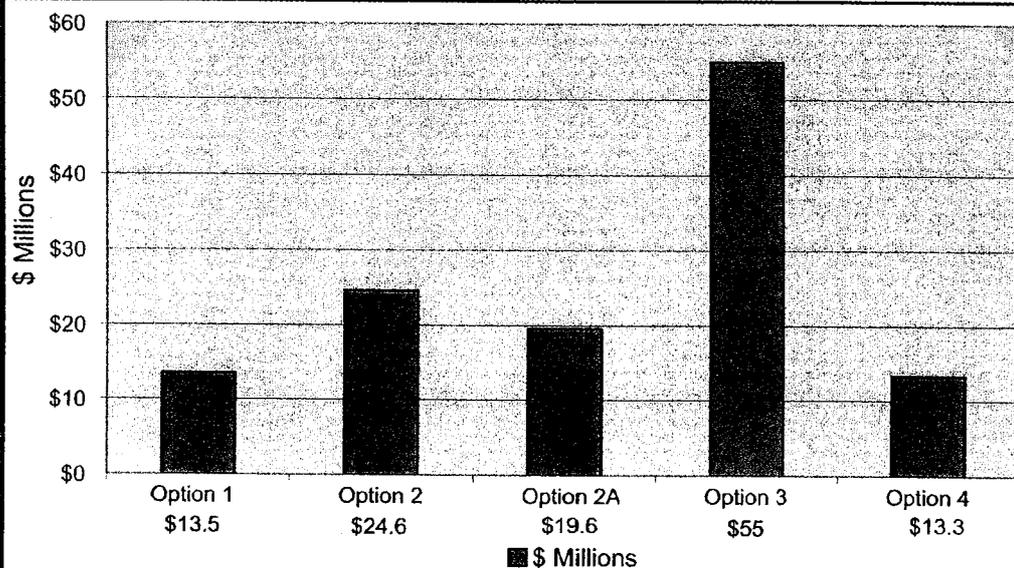
IN SUMMARY

SSVEC listened to the community input and wherever possible made changes.

The V-7 feeder has reached its maximum capacity, and, in fact, has exceeded it several times recently, which resulted in reduced-voltage (brownouts), blinks, and some outages. The new substation and 69kV line must be built now. Without this critical new infrastructure, SSVEC will have no choice but to invoke a moratorium on new

services in this area – and keep in mind that this action would still not resolve the current reliability problems.

SSVEC considered many options before making its final decision on what the best solution was for the all of the members served by the V-7 feeder. SSVEC strongly believes that it made the best, most



Cost of Options

arrangement which strictly limits their ability to serve outside two counties. TEP's management in 1993 and in 2007 indicated a joint project may violate their bonding agreement.

3. Additional rights-of-way adjacent to the TEP line would be required which will be expensive.

4. SSVEC's short cost analysis also indicates that this option will be much more expensive than the route chosen.

**Option Five was not a viable option and was not estimated.*

cost-effective decision and the one that visually affects the fewest members. This solution will greatly improve power quality and reliability to all members in the Sonoita/Elgin/Patagonia area as well as being just and equitable to all SSVEC members.

Sincerely,

Creden Huber

Chief Executive Officer
Sulphur Springs Valley Electric
Cooperative



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 

March 9, 2009

Mr. and Mrs. Getzwiller
Mr. Steve Mann
Ms. Sue Downing
Mr. Rob Horsmann

Thank you for attending SSVEC's Board meeting on February 25th. We appreciate and support your comments on renewable energy. We have had our renewable energy program in place since 2005 and look forward to more member participation in the Sonoita/Elgin/Patagonia area. We are proud of our solar program and our school solar shade project which installed solar panels in Elgin and Patagonia and other areas in our service territory. Our goal still remains to have the infrastructure in place to support our member load in the area and the needed infrastructure to support renewable energy.

We are also supportive of your comments on the impact of rate increases on our members and for every project we support the least cost approach to minimize the future rate impact of our members. Rob we are in receipt of the letter you left requesting cost information on the various options and the previous letter from Jeanne Horsmann. We are working on updating the various cost options and will send them out to in a general membership letter once completed.

The Sonoita Reliability Project was envisioned 1982 when SSVEC saw the need for increased infrastructure in Sonoita/Elgin/Patagonia due to load growth and increasing population in the area. Your group is the perfect example of what has caused this need, as the Getzwiller's moved next to our 1982 easement in 2000, Sue Downing purchased property with our recorded sub-transmission easement on it in 1997, and the Horsmann's moved to the area in 2003. This increased load is the very reason the Sonoita Reliability Project needs to move forward.

We look forward to your attendance at our March Board meeting in Patagonia and to hear your specific proposals on renewable projects, including capacity, location, and your funding sources and estimated dates for operation of the projects you are considering. Please contact and coordinate any renewable issues with Jack Blair. Jack is in charge of our REST Plan.

Sincerely


Creden W. Huber
CEO, SSVEC

Xc: SSVEC Board
ACC
John Maynard



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 

February 2, 2009

Mrs. Gail Getzwiller
PO Box 103
Sonoita, AZ 85637

Dear Mrs. Getzwiller,

Thank you for your letter dated January 31, 2009. We received your letter on February 2, 2009 stating we refused to meet with you on February 3, 2009. This letter was the first notice SSVEC management had of any meeting proposed for February 3rd and we were never given the opportunity to respond before you publically announced that we refused to meet with you which is patently untrue. This is not the first time that you and others in Sonoita have unilaterally set a meeting date with SSVEC, and then notified us of the date on very short timing without coordinating with SSVEC and then informing others that SSVEC refused to meet. This letter was both false and misleading.

SSVEC is very committed to supporting renewable energy and look forward to meeting you and your group at the earliest possible date. Since I coordinate our renewable energy program, please give me a telephone call with some proposed dates (520-515-3470) and we will coordinate a time and a date. I might add that since large renewable projects must be located in close proximity to lines that can support their output, I will also have to coordinate with our engineering department.

I might also add that our website (www.ssvvec.org) has information on our renewable programs and that it might be a good idea to view this information in advance.

Finally, I would like to say that we are appreciative of the interest that the Sonoita area is finally showing in our renewable program as to date only 7 small projects have been completed in this area, which is far under the SSVEC average.

Sincerely,

Jack Blair
Chief Marketing Officer
Sulphur Springs Valley Electric Cooperative

cc: ACC
John Maynard
SSVEC Board of Directors



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy² Cooperative 

January 29, 2009

Jeanne Horsmann
PO Box 334
Sonoita Arizona 85637

Re: January 16, 2009 Correspondence with the Arizona Corporation Commission
Sonoita Reliability Project - Proposed 69 kV Transmission Line

Dear Ms. Horsmann:

Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC or "Cooperative") received from the Arizona Corporation Commission ("ACC") a copy of your e-mail to the ACC Commissioners regarding SSVEC's Sonoita Reliability Project ("Project") which includes a proposed 69kV sub-transmission line ("Proposed Line"). The ACC's Utilities Division has requested the Cooperative respond to your questions which are set forth below. Please note that the siting of the Proposed Line is not regulated by the ACC nor has SSVEC included the Project or Proposed Line as a component of its current rate case pending before the ACC. This notwithstanding, SSVEC makes every effort to be as responsive as possible to its members and the ACC. Accordingly, the Cooperative's responses to your questions are set forth below.

All public information regarding the Project has been presented in several community meetings and in the Community Information Letter mailed September 22, 2008, to all SSVEC members in the Sonoita/Elgin/Canelo/Patagonia service area. A copy of that Community Information Letter is available on SSVEC's website www.ssvvec.org under "Sonoita Reliability Project". Our responses below may refer to the Community Information Letter, nonetheless much of the information regarding this Project (or any other SSVEC project) is not considered public and is so stated herein where applicable.

1. SSVEC contracted an environmental survey on the project corridor in deference to the landowner – the findings of which is confidential information given its location on private property. However, SSVEC has publicly stated: *"These studies concluded that no threatened or endangered species exist in the project area, and that the project may*

proceed with no further need of archeological or biological review." Nonetheless, SSVEC has researched the cultural site, Babocomari River Village as referenced, and found its location is at the confluence of the Babocomari River and the San Pedro River – which is over ten (10) miles away from the Project.

2. SSVEC has consistently presented information regarding the constraints associated with each option analyzed – particularly the "Upgrade existing feeder line along Highway 82 and Elgin Road". Each project on SSVEC's system is unique in design and construction; the project along the Hwy 90 Bypass in Sierra Vista is not comparable to the Project.
3. SSVEC complies with all pertinent regulations during project design and construction as related to terrain considerations. SSVEC and the landowner of the Babocomari Ranch have a confidential agreement regarding access for construction and maintenance of the power line which is not a public document
4. See Item 3 above.
5. The Constructive Point Paper submitted by "Local concerned citizens, ratepayers, and customers" was stated by SSVEC, at the Patagonia Town Council Meeting December 23, 2008, to be *"technically unsound"*. This determination considers the following statement from page 5 of 8:

"Assumptions for Alternatives: The process of creating various Alternatives, involved looking at the above maps, and seeing potential connections with existing systems as preferred to avoid new expenses and to avoid additional environmental impacts. Some assumptions are always necessary".

Unfortunately, the "assumptions" provided in this Constructive Point Paper demonstrate an unfamiliarity with electric power systems, land rights, service territory agreements, voltage conversions, and the costs associated with these issues. *"Looking at maps and seeing potential connections"* with other electric power systems is not sound analysis for the Alternatives suggested. Furthermore several of the Alternatives require contractual agreements and regulatory review/approvals, power flow analysis, as well as significant financial investment by Southwest Transmission Cooperative, Tucson Electric Power, and/or Unisource Energy Services, none of which have utility service rights in this area.

6. As referenced in the Project documentation, the solution to improve reliability to the Sonoita/Elgin/Patagonia area is a new substation which divides the existing long radial feeder into four shorter individual feeders. The sub-transmission line must be constructed to power the substation; *"just upgrading the current line"* does not resolve the reliability issues associated with the extremely long feeder.
7. The chart that was already provided is a representation of engineering analysis. Your request for analysis data regarding specific customer reliability and outage information is not shared with the public for privacy reasons.

8. Distribution "loops" (or feeder ties) between the new feeders out of the substation will be designed for maximum efficiency and reliability. In the event new facilities are extended, the appropriate landowners will be contacted under SSVEC's policies and procedures. The maps requested contain private customer information and are not for use by the public.
9. See Item 1 above.
10. Any permits required for the Project will be submitted under the rules and regulations of the appropriate jurisdictional authority. SSVEC has stated that the existing distribution line from the Huachuca Substation will remain in place and will be used as a feeder tie to the new Sonoita Substation. SSVEC assures all residents that outages will be restored in timely manner.
11. SSVEC has stated the 69kV sub-transmission voltage is standard for connection between its substations. The new substation is located in Sonoita. Therefore, the Proposed Line will terminate at that location. The current line serving Patagonia will remain as is, although SSVEC is working on an unrelated pole maintenance project in that area.

Regards,



Deborah White
Right of Way Services Manager

Cc: Reg Lopez, ACC Utilities Division



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy³ Cooperative 

Arizona Corporation Commission
Kristin K. Mayes, Chairman
Paul Newman, Commissioner
Gary Pierce, Commissioner
Sandra D. Kennedy, Commissioner
Bob Stump, Commissioner
Commissioners Wing
1200 West Washington, Second Floor
Phoenix Arizona 85007

January 13, 2009

Dear Commissioner's and Staff,

Sulphur Springs Valley Electric Cooperative, Inc would like to present this documentation regarding the Sonoita Reliability Project, which is a planned electric system improvement project for the Sonoita, Elgin, Canelo and Patagonia communities of Santa Cruz County, Arizona.

In the past few months, your office has been copied by one or more SSVEC members with concerns regarding aspects of this project. SSVEC assures you that we are communicating with our members - since the commencement of this project in March of 2008, we have sent six letters to all members receiving service in the area, held two local community meetings, attended many other small group or individual meetings, met with a community liaison committee and answered numerous requests for information. SSVEC understands the apprehension our members have expressed, and are diligently working to address all reasonable concerns presented.

SSVEC has a large number of members in these communities who support the Sonoita Reliability Project and are encouraging construction of the 69kV sub-transmission line and substation as an improvement to their electric service quality; however we are doing our best to communicate and understand the position of those in opposition. We do believe we are making progress.

The documents enclosed are SSVEC's letters to all the members in the Sonoita area, and addresses the concerns presented in the aforementioned meetings/correspondence. We hope this demonstrates that SSVEC is truly going the extra mile to provide solid and accurate information regarding the project, to dispel negative and inaccurate rumors, and most importantly to continue communicating with all of our members.

SSVEC is an electric cooperative and is governed by member-elected Directors. These Directors live in Santa Cruz and Cochise County, and are committed to representing their respective members and making decisions in the best interest of SSVEC. This Board has been continually informed of progress and activities related to this project.

SSVEC understands your time is valuable and appreciates your review and consideration of this information. At any time you wish for additional information please do not hesitate to contact me directly at 520-384-5471.

Respectfully,



Deborah White, SR/WA
Right of Way Services Manager



EXECUTIVE SUMMARY

* Sonoita Reliability Project Purpose:

- o SSVEC Construction Work Plan review since 1980
o Substation transformer demand at maximum capacity, load has tripled since 1980
o Over 360 mile radial feeder – longest on SSVEC system
o Highest outage rate on SSVEC system
- nearly 300 hours in 2007
- 10-yr AVERAGE: 270 hours per year
o Voltage quality marginal and deteriorating

* Options to Improve Reliability Analysis:

- o New substation in Sonoita to divide single radial feeder into four separate feeders
o 69kV Sub-transmission line to serve substation
- Option 1: Use SSVEC Babacomari easement and related easements to property
- Option 2: Upgrade existing 3-phase feeder to 69kV with under-build

Table with 3 columns: ROUTE OPTION, # of Landowners Direct Impact, Cost (millions). Rows include Babacomari to Sonoita Sub, V7 upgrade to 69kV w/UB - Hot, V7 upgrade to 69kV w/UG - Cold, and 69kV underground.

* Alternative Route Analysis:

- o Tucson Electric Power (TEP) alignment
o Solar Alternative
o San Ignacio del Babocomari Land Grant (SIDBLG) Alternative
o Route options off SIDB easement

COMMUNITY COMMENTS:

* SSVEC not responding to Community:

- o Five public meetings
o Seven mass mailings to appx 2500 services
o Numerous email, letter, telephone, individual meetings
o RELOCATED SUBSTATION PROPERTY FROM RESIDENTIAL AREA TO INDUSTRIAL
o CONVERTING EXISTING OH LINES IN RESIDENTIAL SUBDIVISION TO UG ALONG 69kV ROUTE
- REMOVING 48 EXISTING POLES AND REPLACING WITH 12 NEW
- SHORTER POLES - LONGER SPANS - FEWER WIRES



Sulphur Springs Valley Electric Cooperative, Inc.

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- * SSVEC route will *“create significant environmental impact and severe visual impact to virgin grasslands”*:
 - SSVEC route shared by Qwest, previously disturbed in 1991 with buried fiber-optic cable – continues to receive maintenance traffic
 - Route on a well established private working cattle ranch – grasslands in grazing
 - SSVEC performed environmental studies for cultural resources and threatened and endangered species/habitat – no mitigation required.
 - Route will be reseeded with native grasses at termination of project.
- * SSVEC will negate 40-years of Audubon Society’s Appleton-Whittell Research Ranch studies in cross-fence comparisons:
 - Cross fence comparisons already compromised due to Qwest’s disturbance in 1991 with buried fiber-optic cable – continues to receive maintenance traffic
- * SSVEC is defacing the largest Mexican Land Grant in the United States:
 - The San Ignacio del Babocomari Land Grant is **privately owned** and operated by the Babacomari Ranch Company.
 - In 1982 the Babacomari Ranch Company SOLD the rights to construct a 69kV sub-transmission line across their property.
 - This easement has been on record for more than a quarter of a century.
 - The SIDBLG is NOT a registered conservation area
 - Extensive design considerations for power line aesthetics (narrow profile, colored poles, non-glare wire, protection of oak forests, riparian areas) 55’ poles/4-wires/600’ spans

Save the Scenic Sonoita/Elgin Grasslands Group: Constructive Point Paper Arguments

- * Alternatives Presented
 - Upgrade existing 3ph distribution line to 69kV sub-transmission with underbuild
 - Work must be performed energized – construction cost increases
 - Existing lines under ‘grandfathered’ rights, new right of way acquisition time/costs for approximately 23 miles
 - Additional impact/burden to the Las Cienegas National Conservation Area a **FEDERALLY** protected area.
 - Cost factors – construction cost alone for Save Scenic Grasslands favored route and SSVEC route is over \$6.4 MILLION
 - Route requires 65’ poles with 8-wires on appx 300’ spans along main roadway
 - Use SWTC 115kV or TEP 46kV as additional sources
 - Each require an additional substation (additional to proposed SSVEC) to reduce voltage (SSVEC / SWTC / TEP all incur costs)
 - SWTC 115kV intertie location does not reduce upgrade costs to exist line
 - TEP is legally restricted from providing service to Santa Cruz County



Save the Scenic Sonoita/Elgin Grasslands Group (3SEG)
CONSTRUCTIVE POINT PAPER – SSVEC RESPONSE

ALTERNATIVES PRESENTED

- * **ALTERNATIVE 1:** (3SEG: “easiest to implement and is preferred”)
 - o Upgrade existing 3ph distribution line to 69kV sub-transmission with underbuild
 - Work must be performed energized – construction cost increases 150%
 - Existing lines under ‘grandfathered’ rights – no ‘upgrade’ rights; new easement acquisition costs for approximately 23 miles / nearly 100 parcels
 - Additional environmental impact/burden to the Las Cienegas National Conservation Area - a **FEDERALLY** protected area. New environmental and permitting costs.
 - Cost factors – construction cost difference alone for Alternative 1 route vs SSVEC Chosen route (Alternative 2) is over \$2.6 MILLION **DOES NOT INCLUDE** right of way acquisition costs for 23 miles.
 - Somewhat reduces reliability as both power sources are on same pole line - if it goes down, no way to back-up service area.
 - With 69kV on a separate route, retain ability to back-up from Huachuca Sub.
- * **ALTERNATIVE 2:** (3SEG: “most expensive” and “significant environmental impacts with severe visual impacts in virgin grasslands”)
 - o 69kV sub-transmission only along SSVEC existing easement on Babocomari Land Grant
 - 20-mile easement purchased in 1982
 - Least construction cost
 - Work performed de-energized
 - 69kV only : no under-build
 - No protected environmental areas **ALL PRIVATE PROPERTY**
 - SSVEC voluntarily contracted environmental survey **NO IMPACT** to threatened/endangered species or habitat
 - Easement cleared in 1991 for fiber-optic cable installation maintenance traffic continues
 - Shared boundary with Audubon Society Appleton-Whittell Research Ranch of only 1-mile (of 20-mile easement)
 - Babacomari Ranch is a working cattle ranch: grasslands are fully grazed and managed.
- * **ALTERNATIVE 3:** (3SEG: “greater future options for SSVEC”)
 - o Use existing Southwest Transmission Cooperative (SWTCO) transmission lines as Source for Sonoita
 - Requires significant investment by SWTCO
 - New 115kV to 69kV substation
 - Property purchase for joint substation site
 - Reduces 69kV line by only 7.5miles (not enough to offset cost of 115/69 sub)
 - Same construction / easement cost and reliability constraints as Alternative 1.
- * **ALTERNATIVE 4:** (3SEG: “simple and least expensive but requires an agreement between two companies”)
 - o Use Tucson Electric Power (TEP) 46kV (upgraded to 69kV) lines as source for Sonoita
 - Requires significant investment by TEP
 - Upgrade existing 46kV line to 69kV from Greaterville to Hwy 83 intersection (appx 12 miles)



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy[®] Cooperative 

January 5, 2009

James and Elizabeth Allen
PO Box 432
Sonoita Arizona 85637-0432

Mr. and Mrs. Allen,

After months of planning, analysis, design consideration, cost estimation and community participation Sulphur Springs Valley Electric Cooperative has determined routing for the Sonoita Reliability Project 69kV sub-transmission line. The Sonoita/Elgin/Patagonia communities have been mailed a letter with a synopsis of the decision, which is known as 'Option 3'.

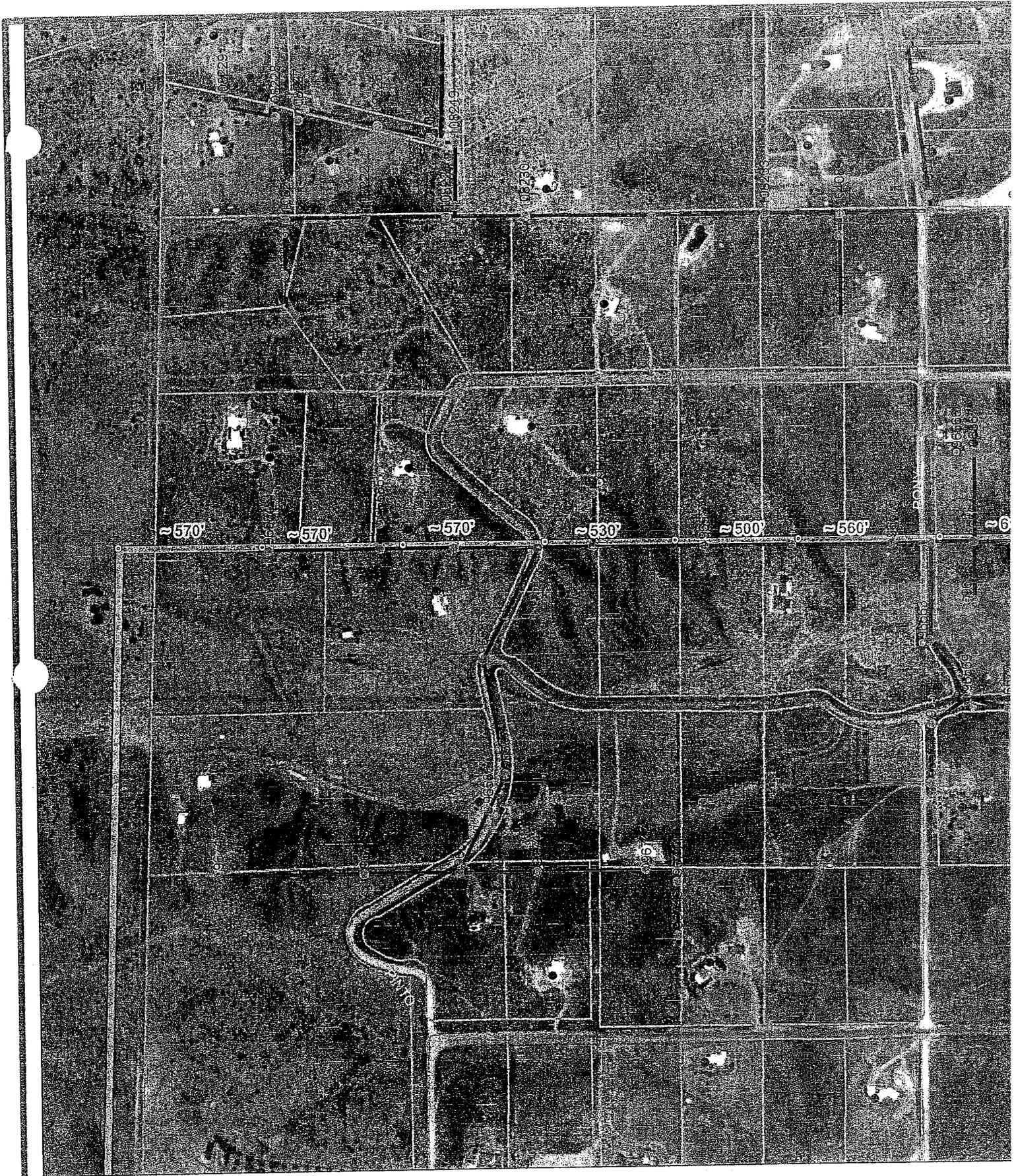
SSVEC understands this decision may be unfavorable to you and some of your neighbors in Sonoita Hills; however we are committed to lessening the impact of this line as much as possible on this community, and have additional mitigation measures which we would like to immediately present to the Sonoita Hills neighborhood as a group.

In an effort for the Sonoita Hills residents along Mustang Road and Broncho Trail to review SSVEC's proposal 'in the real world' and to participate with this offer, we would like to meet out on-site in order to visualize the route and the proposed modifications.

Unfortunately, this meeting scheduled for December 18th was canceled due to weather conditions, therefore SSVEC is rescheduling for Saturday, January 17, 2009. Please join us at 10:00am, we will gather at SSVEC's Buchanan property on the corner of Broncho Trail and Pony Trail in Sonoita Hills.

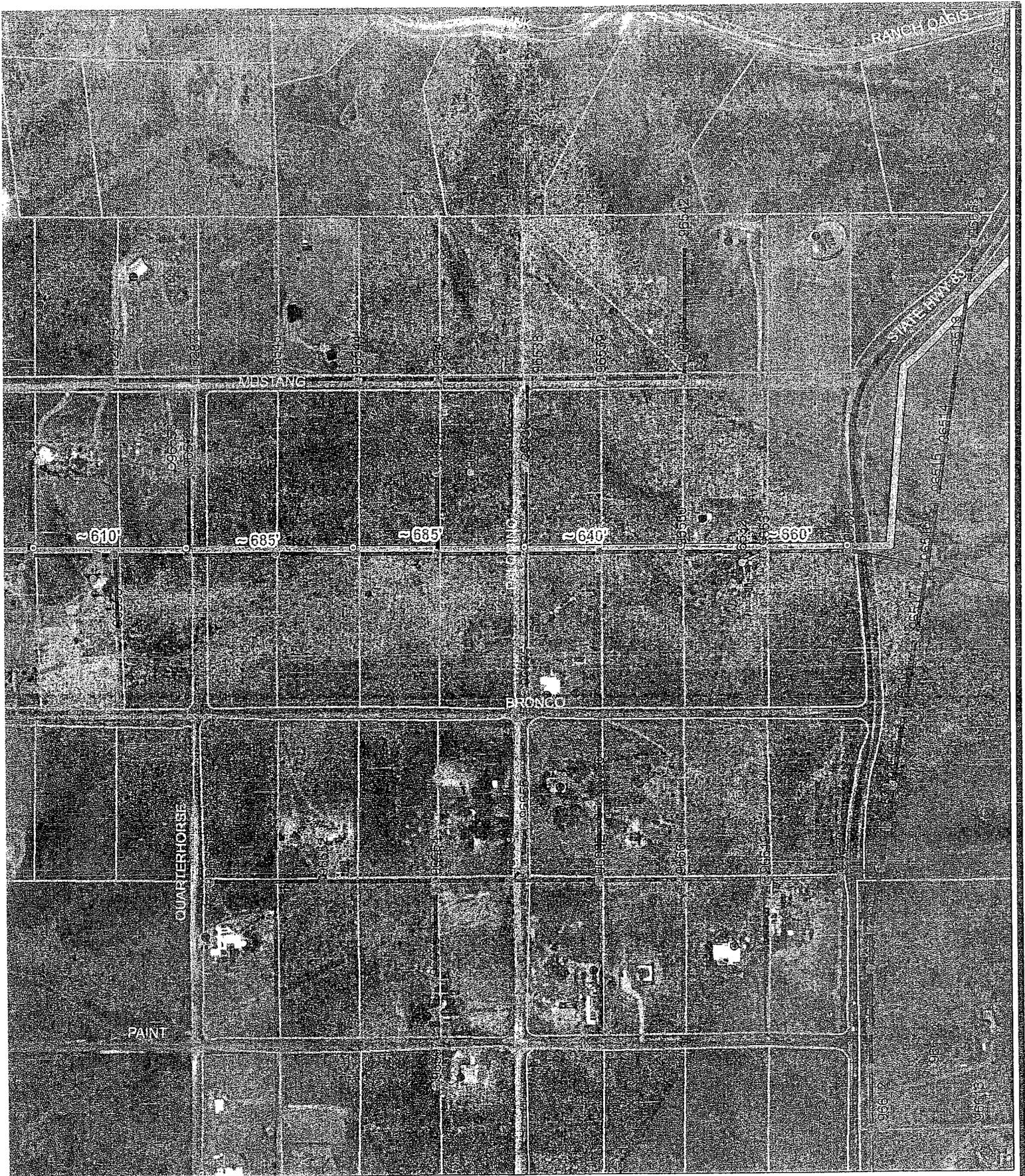
Sincerely,

Deborah White
Right of Way Services Manager



1 inch equals 500 feet

- | | | | |
|---|---------------|--------------|------------|
|  | Buchanan Site | UGPrimary, A | — — UGPrim |
|  | Secondary | UGPrimary, B | ≡≡≡ OHPrim |
|  | Primary | UGPrimary, C | ≡≡≡ OHPrim |



BILITY PROJECT

- OHPrimary, C
- OHPrimary, ABC
- ⊙ ServiceLocation
- OHSecondary
- UGSecondary
- ⊙ 69kV Pole (Proposed Locations Span Dimensions APPROXIMATE)
- Option Selected





Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 

December 28, 2008

Mayor Gary H. Gay
PO Box 767
Patagonia Arizona 85624

Dear Mayor Gay,

Sulphur Springs Valley Electric Cooperative appreciates the opportunity to discuss the Sonoita Reliability Project before the Town of Patagonia Council and residents.

SSVEC would like to take a moment to review key points of the Sonoita Reliability Project as related to the Town of Patagonia concerns:

- Patagonia, and other areas, served by the current feeder line experience approximately 300 hours of outage time per year (the highest outage feeder of all areas served by SSVEC). This is due to the excessively long radial feeder length.
- The quality of power voltage, especially at the end of the line in Patagonia, is marginal and deteriorating, which is seen by dimming of lights and performance issues with motors or other equipment at the Town of Patagonia's treatment plants. This again, is due to the excessively long radial feeder length.
- SSVEC has explored many alternatives and has concluded that a new substation located in Sonoita will divide the long radial feeder into four shorter feeders, which will provide better power quality and reliability to the area.
- The 69kV sub-transmission line to serve the substation has also been reviewed for alternative routes (including collaboration with Tucson Electric Power). Analysis has concluded that use of SSVEC's existing 1982 easement on the San Ignacio del Babocomari Land Grant from Huachuca City to Sonoita is the most logical and cost effective alignment to bring power to the new substation. SSVEC has no intention of extending the 69kV sub-transmission line from Sonoita to Patagonia.
- SSVEC has proven its responsiveness to community concerns. Several community meetings have been hosted by SSVEC to explain the project, and based upon input SSVEC has relocated the substation from a residential area to a commercial use area. Additionally, SSVEC has improved the aesthetics of the power line design by changing to a lower visibility profile and using colored poles to blend into the landscape.

- SSVEC has over 2400 services in the Sonoita/Elgin/Canelo and Patagonia area which are served by the current single feeder line, and the vast majority of these members are strongly in favor of the Sonoita Reliability Project and the improved service that it will bring.
- Finally, separate to the Sonoita Reliability Project, SSVEC will soon begin a major pole replacement project on the existing power poles between Sonoita and Patagonia. This is part of an SSVEC system-wide pole maintenance program.

SSVEC hopes the presentation on December 23rd, along with this letter, has provided answers to the Town of Patagonia's concerns. If there are additional questions or clarifications, please do not hesitate to contact us directly to discuss.

I will also be following up with you shortly regarding our conversation about the potential for solar projects in the Patagonia area.

SSVEC appreciates your support of the Sonoita Reliability Project.

Sincerely,

Jack Blair
Chief Member Services Officer

Cc: Meg Gilbert
Kevin McKay
Gilbert Quiroga
Randy Heiss, Town Clerk/Treasurer



Sulphur Springs Valley Electric Cooperative has been diligently working toward a solution to bring quality, reliable power to the Sonoita/Elgin/Patagonia communities. The Sonoita Reliability Project (SRP) has taken years of planning, analysis, design consideration, cost estimation, community participation, review, and has provided SSVEC the information necessary to make sound decisions based upon a balance of the community concerns and requirements of the Cooperative.

As initially identified, the solution to this area's reliability issues is a new substation in Sonoita. Based upon the community's concerns, SSVEC obtained a new substation property in a commercial land use area of Sonoita, rather than using its existing parcel in a residential subdivision. This new land was an additional expense to the project, but benefit to the community and to SSVEC, made it a worthy purchase. This compromise has been positively received by the community.

The 69kV sub-transmission line necessary to energize the substation, has been the most contentious and emotional issue on the SRP. The routing of this line has been the primary focus of the community, and SSVEC has conducted community meetings, met with representative groups and individual property owners, welcomed presentations to the Board of Directors, and received many emails and letters with opinions regarding the line location. Unfortunately there is no real clear choice from the community, which has created a division between neighborhoods.

As a non-partisan entity of this community, SSVEC compiled the route arguments and balanced such with basic aspects of business practices and cost analysis. With these facts in mind, SSVEC has determined the final route for the 69kV sub-transmission line will follow the existing easement along the San Ignacio del Babocomari (SIDB) Land Grant to that particular route known as 'Option 3', being within the Sonoita Hills Subdivision, to an east/west alignment of Highway 83, then to the new substation property on Old Sonoita Road. (see enclosed "Final Corridor Map")

The Pros and Cons of this route have previously been introduced; however, following is final synopsis for the route determination:

Easement establishment: The SIDB easement and affiliated easements to SSVEC's original substation property, Buchanan, have been on record for more than a quarter of a century. These easements are constructively on notice in the Santa Cruz County Recorder's office and the substation property has been signed "Future Home of the Buchanan Substation Site" providing actual notice of the intentions of SSVEC for years now. Many of the community comments have stated an awareness of this easement/substation site, which guided decisions regarding property purchases in this neighborhood – or away from it.

The Buchanan Substation site remains a valuable asset to SSVEC. Unforeseen technological advances in the future may very well allow this property to become an even greater asset to SSVEC's system, therefore alignment of the 69kV sub-transmission line adjacent to this property will allow for any reasonable future use.

Expense of Project: SSVEC's 1982 purchase of the nearly twenty mile SIDB easement, along with utilizing designated utility corridors, has allowed SSVEC to significantly reduce overall project costs due to acquisition of right-of-way. In fact, the savings made possible the purchase of the new substation site, along with the aesthetic design considerations proposed for the project.



As reviewed in prior presentations, the determined route minimizes power line and pole design configurations which create additional expense in material specifications and labor costs.

Community Concerns:

Expecting the "Not in my Back Yard" (NIMBY) argument for this project, SSVEC presented several route options to the community, with logical reasons for each option, in anticipation that the community would identify an option based upon facts and conclusions. After numerous presentations, emails and letters, it is clear the community is divided, with each neighborhood pushing the project to the other.

SSVEC has continuously affirmed its position regarding this particular alignment, and not foreseeing any further progress for a realistic alternative, believes it is best to move forward. In review of the criteria established for this project, SSVEC stands by the identification that this is the best route choice, with the least impact on the entire Sonoita community.

SSVEC realizes this solution will not please some in the community; however, in moving forward we are hopeful the community, as a whole, will support this decision which benefits all neighbors with improved power quality and reliability. In the coming weeks, SSVEC staff will be meeting with members along this route to discuss additional options that may further reduce impact to their properties and way of life in this community.

As previously mentioned, members have asked about SSVEC's intentions for the Buchanan property given the new substation site location. SSVEC is optimistic about proposals received from the community for use of this property, and is looking forward to hearing more opinions and options.

Finally, the new substation site 'Sonoita', will be undergoing transformation in the coming months. Per Santa Cruz County guidelines, the substation will require a 'solid' fence around the facility, such as a block wall, wood fence, or other material, as well as landscape screening. In presentations and correspondence, SSVEC has been asked about artistic representations for this screening and would like to open up to the community for suggestions as we move forward with design.

SSVEC Staff, Management, and Board of Directors are appreciative of all its members in this community who are so passionate with their concerns for the Sonoita Reliability Project, and look forward to continued association while working towards realizing the solution for quality, reliable electric service to the Sonoita/Elgin/Patagonia communities.

Sincerely,

A handwritten signature in cursive script, appearing to read "Creden W. Huber".

Crenden W. Huber
Chief Executive Officer

cc: SSVEC Board of Directors
Various Government Officials



Sulphur Springs Valley Electric Cooperative, Inc.

A Local Electric Energy Cooperative

September 22, 2008

Mike Gleason
Arizona Corporation Commission, Chairman
Commissioners Wing
1200 West Washington, Second Floor
Phoenix Arizona 85007

Dear Commissioner Gleason,

Sulphur Springs Valley Electric Cooperative, Inc would like to present this documentation regarding the Sonoita Reliability Project, which is a planned electric system improvement project for the Sonoita, Elgin, Canelo and Patagonia communities of Santa Cruz County, Arizona.

In the past few months, your office was copied by one or more SSVEC members with concerns regarding aspects of this project. SSVEC assures you that we are communicating with our members - since the commencement of this project in March of 2008, we have sent three letters to all members receiving service in the area, held two local community meetings, attended many other small group or individual meetings, met with a community liaison committee and answered numerous requests for information. SSVEC understands the apprehension our members have expressed, and are diligently working to address all reasonable concerns presented.

SSVEC has a large number of members in these communities who support the Sonoita Reliability Project and are encouraging construction of the 69kV sub-transmission line and substation as an improvement to their electric service quality; however we are doing our best to communicate and understand the position of those in opposition. We do believe we are making progress.

The document enclosed is SSVEC's latest letter to all the members in the Sonoita area, and addresses the concerns presented in the aforementioned meetings/correspondence. We hope this demonstrates that SSVEC is truly going the extra mile to provide solid and accurate information regarding the project, to dispel negative and inaccurate rumors, and most importantly to continue communicating with all of our members.

SSVEC is an electric cooperative and is governed by member-elected Directors. These Directors live in Santa Cruz and Cochise County, and are committed to representing their respective members and making decisions in the best interest of SSVEC. This Board has been continually informed of progress and activities related to this project.

SSVEC understands your time is valuable; therefore no additional letters or information regarding this project will be sent unless requested by you, or someone from your office. At any time you wish for additional information please do not hesitate to contact me directly at 520-384-5471. Thank you for your time and consideration.

Sincerely,

Deborah White, SR/WA
Right of Way Services Manager



Sulphur Springs Valley Electric Cooperative is continuing progress on the Sonoita Reliability Project and has received much feedback from the community through SSVEC hosted community meetings, email, telephone calls, written correspondence and presentations to our Board of Directors. Some responses have been supportive of SSVEC's intention to improve reliability in the area. Others are opposed to the project overall and still others opposed to certain portions of the project. SSVEC appreciates all who have contributed comments and assures you that we have listened to all concerns presented.

The intent of this letter is to respond to as many of the questions as practical in a general format for the benefit of all members in the area. Questions and comments have been categorized below with responses intended for general readership. Detail is presented where beneficial to dispel the rumor, correct misconceptions or non-fact, and to encourage communications that will move the project and the community forward in a cohesive manner.

On July 22, 2008, SSVEC presented to the community the Sonoita Reliability Project. This presentation identified the need for the project, along with relevant history, technical data, design criteria, routing criteria, and future plans. The presentation has been posted on SSVEC's website www.ssvvec.org and is included as an attachment to this letter.

PROJECT NEED:

One recurring statement from the community about the Project is that a *"clear purpose and need has not been presented"*.

In the Sonoita Reliability Project (SRP) Presentation the timeline indicates that SSVEC identified the potential for reliability concerns in the Sonoita/Patagonia/Elgin areas as early as 1980. Subsequently every two to three years this area, along with the remainder of the SSVEC electrical system, is analyzed for performance, reliability, and improvement requirements as per SSVEC's Construction Work Plan Studies. The 2005 and 2007 studies have identified this project as a 'priority need' for upgrade.

From the SRP Presentation, the graph titled "Increasing Load vs. Capacity" is a representation of the capacity limitations on the Huachuca Substation located at the Junction of Highway 90 and Highway 82 in Whetstone. The Huachuca substation is the source for all of the power from the Highway Junction to Rain Valley, Elgin, Sonoita, Canelo, and Patagonia, which is more than 2400 services over 360 miles of power line.

The graph indicates the consumer usage (load) demand has more than tripled since 1980. This consumer usage not only represents the addition of new customers to the power line, but the increase of products with a higher requirement of electrical use, such as air conditioning units, heat pumps, electric ranges, furnaces, water heaters, plasma televisions, computers, etc. All of these components have factored in the substation reaching its maximum capacity rating.



You may notice in 1996, the substation capacity increased from 3.75MW to 7.0MW; this capacity increase came from an upgrade of the substation transformer. ***“Why then, cannot SSVEC upgrade the substation transformer again?”*** A reasonable question, however, the substation is not the only component on this line at capacity – the other is the conductor (wire).

The conductor on the ‘feeder’ (main primary line) is sized in relation to the capacity rating of the substation, therefore the conductor which serves this geographical area is also at its maximum capacity. As SSVEC’s Manager of Engineering analogized, this conductor is like a garden hose, and no matter how large a pressure tank (substation transformer) you install at the source, the hose will still only allow a limited amount of water to flow out the end. This limitation in electric terms means low voltage which may cause damage to motors, appliances, and other electronic devices.

The substation and conductor could be upgraded; however there is one other major factor regarding the feeder which creates significant issues in maintaining reliable service to this community – the feeder length.

At over 360 miles of total length, this feeder (V-7) is a radial line which extends out of the Huachuca substation voltage source and does not connect, or loop, with another voltage source. All of the power on the feeder comes directly from the substation and if the substation fails, all customers on the feeder will lose electric power.

The V-7 feeder traverses a diverse landscape of open plains, rolling hills, dense oak forests, pine forests, and rugged mountains. Miles of line travel through remote areas to serve small communities or even just one customer, and outages may be long because of the time required to access and patrol the line looking for a fault location.

In addition to complete outages, consumers on V-7 experience numerous ‘blinks’, voltage dips/surges, and other transient power issues. Although these types of issues are considered normal in the industry, they are abnormally high on this feeder because of the vast length of line, which is abnormal in the industry.

As the graph titled “V-7 Feeder Outages per Year and Length in Miles as Compared to all SSVEC Feeders” shows, this feeder configuration is not typical per SSVEC standards. Typical electrical substations have a minimum of three to four feeders and are designed with length limitations for better service quality.

Therefore, the purpose of the Sonoita Reliability Project is to provide a solution to the current reliability issues affecting the V-7 feeder, the necessity of which has been clearly identified. The recommended solution to install a substation in the Sonoita area would eliminate the long radial length of the V-7 feeder and establish four separate, and shorter, feeders. Each of the four feeders would then be:



- a. individually operated at the substation, with separate voltage regulators to adequately control the distribution line voltages for the type of community load on each feeder.
- b. sectionalized individually, meaning that if an outage occurs on one feeder, it will not interrupt any of the consumers on the other feeders; this will improve not only the number of consumers interrupted, but the duration of the outages as well.
- c. 'looped' together where possible to reduce outages, meaning that portions of an interrupted feeder may be transferred to another feeder so power availability is continued to consumers while repairs are being made at an outage location.

These factors will ensure long-term quality of service to all of SSVEC consumers in the Sonoita/Elgin/Patagonia areas.

PROJECT HISTORY 1991-1993:

The recommendation of a substation within the Sonoita area is not new to SSVEC, or to the Community, as this same proposal was introduced in July 1991. In a letter to members the Executive Vice-President and General Manager of SSVEC, stated:

"The steady growth of the Patagonia, Sonoita and Elgin areas, along with customers' expectations of increased reliability of service, requires that we begin exploring construction of new facilities to serve your area. Based upon our projections, this will require building approximately 25 miles of new 69kV sub-transmission line plus a new low-profile distribution substation. Although we have obtained rights-of-way and a substation site over past years in anticipation of the day additional facilities are required, only conceptual plans exist at this time. We anticipate actual construction will be in the 1993-1995 time frame.

The substation which provides distribution service to your area is located at the intersection of Highways 82 and 90. Your service is provided over what is known as a "radial" line. This means that your electricity has only a single path (line) to arrive at your home, and anything that happens to this line affects everyone. More highly populated areas, such as cities, are served by "loop circuits" which give the utility two or more routes in which to provide electricity. As a result, service is generally more reliable."

Currently, SSVEC has received several statements referencing the project during the time frame from 1991 – 1993, most specifically questions regarding a 'loop' system, and accusation that recommendations from that period are not currently being considered.

In reviewing the associated documents, SSVEC found no evidence of consideration for a 69kV sub-transmission line 'loop' on the project. A looped 69kV sub-transmission line would require more easements, more line and millions more in additional costs. There is documentation, as SSVEC is currently advising, of distribution feeder 'loops' which would increase the reliability



by allowing electricity to be served in different directions due to ties made between feeders. Distribution loops are possible in the Sonoita area once the new substation is built. Furthermore SSVEC does intend to tie the existing V-7 feeder from Huachuca Substation to the new Sonoita Substation for back-up capabilities.

During the 1991-1993 time frame, an Advisory Committee was established *“as a representative voice for the general Cooperative membership and particularly the members in the areas to be affected by the system upgrade.”* The Advisory Committee met a total of five times between August 1992 and August 1993 and discussed several alternative options for the 69kV sub-transmission line routing; however there was no agreement and/or recommendation on one particular route reached by the Advisory Committee.

OPTIONS TO IMPROVE RELIABILITY ANALYSIS:

As performed in 1991-1993 and again in 2007, SSVEC evaluated and compared several options to improve overall reliability in the Sonoita/Patagonia/Elgin area. The solution for quality and reliable service for the area is to construct a substation within the load center, which is in Sonoita.

NEW SUBSTATION SITE:

As identified in the timeline, as well as the July 22nd presentation, SSVEC obtained a substation property in 1982 within the Sonoita Hills Subdivision. This particular parcel has long been identified as SSVEC property, and as a ‘Future Substation Site’. However, upon receipt of a petition from the community regarding their opposition to a substation in the neighborhood, and after careful evaluation of the site location, SSVEC had the opportunity to obtain another property in an area of more industrial/commercial land use. The new location will allow the substation to be concealed from residential neighborhoods, and will be constructed to meet the current need of the community, as well as for future needs as consumer usage and growth occurs. Community feedback to this compromise by SSVEC has been very positive.

69 kV SUB-TRANSMISSION LINE:

As part of the solution, the new substation must be connected to SSVEC’s 69kV sub-transmission system. Three options were analyzed as presented below. SSVEC has selected first option as most advantageous.

1. Construct new 69kV sub-transmission line in existing SSVEC right of way on San Ignacio del Babocomari Land Grant and in Sonoita Hills: Components such as narrow-profile mono-poles dyed a color complementary to the landscape, reduced glare conductor, longer spans to be used for reduced visual impact were considered. Advantages include utilization of an expansive length of previously acquired easement; an expedient construction capability; creative design options. Disadvantages include



acquisition of additional easements due to relocation of substation property; alignment through residential subdivisions. Approximately 23 miles of 69kV sub-transmission construction cost is about \$4.2 million.

2. Upgrade existing feeder line along Highway 82 and Elgin Road: The existing line would be replaced in the same location with a new sub-transmission line and distribution line on the same mono-pole structure. Advantages include keeping the new line in the same corridor, resulting in a modified visual impact of a new line in the same location. Disadvantages are the rebuild would be slow, expensive and dangerous to workers as the work would have to be performed while lines are energized; acquisition of right-of-way from more than 80 landowners as existing right-of-way does not include sub-transmission line rights, and as the majority of this route was designated a part of the 2000 Las Cienegas National Conservation Area, 42,000 acres of protected public lands managed by the Bureau of Land Management, special permitting conditions may apply. These factors combine to make this the most expensive overhead option with construction costs for approximately 23 miles at about \$6.8 million. Right-of-way acquisition/permitting costs were not factored into this estimate.
3. Underground 69kV sub-transmission: SSVEC investigated the possibility of using 69kV underground sub-transmission line. Though this seems to be a simple solution, especially as many residential customers have opted to install underground distribution line; however installing an underground sub-transmission line is a very complex issue. Following are significant issues involved:
 - a. The insulated cables used in underground sub-transmission require one, sometimes two, sizable trenches which leads to greater environmental disturbances. Concrete vaults or manholes up to 24' x 40' in size are required at regular intervals along the trench; depending on terrain every 900' to 2,000'.
 - b. Underground electrical conductors produce heat, from 167°F to 266°F, for efficient operation heat must be carried away from the conductors (air performs this function for overhead lines). As saturated soils conduct heat more easily than soils with air pockets or dry places, the soil nearest the underground line must not be allowed to dry out. Concrete 'caps' are poured around the conductors and the soils in the trench require a special backfill material that is thermally designed to move heat away from the line.
 - c. The right of way must be kept clear of any vegetation due to possible interference by root systems, and to avoid removal of soil moisture, which is necessary to cool the cables.
 - d. Studies have indicated the lifespan of underground conductors is estimated to be about half of overhead conductors.
 - e. Failures in underground transmission lines are infrequent; however, when they occur they are extremely costly, disruptive and time intensive to repair. Line outages can last for weeks or even months before final repairs are made.
 - f. Installation cost of underground transmission ranges from four to ten times as much as overhead. The SRP estimate for an overhead 69kV sub-transmission/distribution



underbuild line cost along route 'Option 3' is \$378,000 *per mile*; an estimate for 69kV underground sub-transmission was obtained for route 'Option 3' at \$2.48 million *per mile* – which is 6.5 times as much as the overhead. Additional costs incurred with terrain limitations such as rocky soil, drainage ways, and areas of heavy vegetation were not factored in this estimate.

ALTERNATE ROUTE ANALYSIS:

TEP ALTERNATIVE:

Route alternatives previously considered in 1991-1993, were once again reviewed for availability and viability in 2007. These alternatives involved the San Ignacio del Babocomari Land Grant (SIDB), a private property owned by a large family partnership, upon which SSVEC already encumbered with an easement in 1982. At least two options 'recommended' during the 1991-1993 period involved additional encumbrance of the SIDB, one would lie adjacent to the South boundary from Huachuca City to the Southwest corner of the SIDB; the other would lie adjacent to the Tucson Electric Power (TEP) transmission line which serves Fort Huachuca Military Reservation.

The SIDB South boundary option was dismissed due to its distant location to the existing and proposed substation properties.

The TEP option was explored in depth and involves the TEP 46kV sub-transmission line which was constructed in the 1940's and traverses through the SIDB. Several issues were identified with this alternative:

1. The 46kV power line serves the Fort Huachuca Military Reservation and does not have enough capacity available for a substation to carry the additional load of the Sonoita/Elgin/Patagonia areas.
2. Negotiations with TEP for 'shared-use' of poles along the 46kV route were unfruitful. Furthermore, if a shared-use agreement were to be considered, the contractual obligations would likely take years to legally establish rights/responsibilities for ownership interests, taxation, service back-up, maintenance duties, etc. As TEP is a for-profit investor-owned utility, and SSVEC is a non-profit member-owned cooperative, the proceeds from the sale of electricity from these lines are a significant hurdle with contract negotiation/preparation.
3. TEP is bound through their Certificate of Convenience and Necessity by a special bonding arrangement which strictly limits their ability to serve outside two counties. TEP's management, in 1993 and more recently in 2007, indicated a joint project may violate their bonding agreement.
4. Establishment of SSVEC's new 69kV sub-transmission line adjacent to the TEP line would require additional rights-of-way from the SIDB partnership. This proposal has gone through the negotiation process and has been abandoned.



SOLAR ALTERNATIVE:

Use of alternative energy sources such as solar has been suggested by the community to replace the need for the SRP. One comment ***“I think you (SSVEC) need to learn to think outside the box. With more support for solar panels at home sites maybe we wouldn’t need the extra line”*** may be addressed by the fact that SSVEC currently has two active solar photovoltaic (PV) promotion programs. SSVEC is currently installing 24 kW, grid-connected, solar electric systems on 41 schools in the service area including Elgin School, Patagonia Elementary, and Patagonia High Schools. When complete, this program will have installed nearly one megawatt (MW) of solar energy in the community. Details on this program are available at www.ssvec.org in the online Currents Excerpts for July 2008.

SSVEC also offers the SunWatts program to members. Details of the program are available at www.ssvec.org in the column on the left side of the homepage. This program has been available since 2005 though response from members has been lackluster. To date we have record of only nine members out of 2,400 services in the Sonoita/Patagonia area taking advantage of the program.

Another comment ***“I request that you (Arizona Corporation Commission (ACC)) require SSVEC to fulfill its obligation to purchase or provide 15% of its electric power from alternate energy sources”*** indicates misinterpretation of the regulatory mandates by the ACC regarding renewable energy requirements. Investor owned utilities such as TEP and Arizona Public Service are required by the ACC to have 15% of their generation assets provided by renewable energy sources by 2025. Cooperatives are not required to have a fixed percentage of their assets in renewable energy, but must submit a plan to use funds collected from customers to advance renewable energy. SSVEC submitted its plan, with a budget to fund rebates for residential and commercial programs, which was accepted by the ACC. The program approved by the ACC has 45% of the funds collected to pay for the PV for School project, 20% for Residential rebates, 13% for Commercial rebates, 15% for the loan fund, and the balance for supporting R&D, advertising, and administration. The complete Renewable Energy Surcharge and Tariff (REST) program is filed with the ACC. Again, this program has been available since 2005, and SSVEC records indicate only 9 members out of 2,400 services in the Sonoita/Elgin/Patagonia are taking advantage of the program.

“SSVEC should investigate the installation of a ‘Solar Farm’ to provide power to the substation instead of installing more ***“ugly poles”*** and ***“...trashing our landscape”*** are comments received by SSVEC. Large grid-connected solar systems are definitely becoming more prevalent in the US due to mandated requirements for renewable energy. However the installation of a utility solar farm requires significant investment in real estate and equipment, but may not provide the return the Sonoita community is expecting.

The substation being planned for Sonoita has a transformer size of 14MW (mega-watt) on a parcel of land approximately 2.5 acres in size. A 10MW solar farm would require approximately



100 acres of land in which to install thousands of solar panels. A typical 10MW system, for installation only, no land purchase, costs approximately \$70 - \$80 million.

A significant aspect of solar farms is they still **require a connection to a sub-transmission line** in order to feed power to a substation. Furthermore solar farms at this time, are not fully sustaining energy service, but are typically used as a support for the 'grid' electric system. Therefore this alternative would not alleviate the need for the sub-transmission line to Sonoita.

SSVEC supports renewable energy programs as presented above, and may in the future invest in this type of renewable energy support to its electric system; however this type of expenditure does not seem appropriate at this time and it is certainly not an alternative to the SRP.

SSVEC has entertained several proposals for large renewable energy systems in its service territory and is open to discussing any specific proposals for grid-connected renewable energy projects that members of the Sonoita community might present.

SAN IGNACIO DEL BABOCOMARI LAND GRANT ALTERNATIVE:

As indicated in the Sonoita Reliability Project Presentation timeline, in March 2006 SSVEC and the Babacomari Ranch Company, LLLP (the Ranch) entered into litigation to resolve claims against SSVEC's 1982 easement across the SIDB. After 2-½ years of legal proceedings, SSVEC and the Ranch came to a private settlement of the litigation on June 30, 2008. As the Babacomari Ranch is **privately owned**, the decisions made by the landowners are not subject to community involvement as a public lands suit may provide. SSVEC respects the decisions made by the Ranch, therefore **no further litigation or negotiation** is anticipated.

AS SSVEC REVIEWED THE ALTERNATIVES AND OPTIONS PREVIOUSLY ADDRESSED, IT IDENTIFIED THE MOST REASONABLE DECISION IS TO USE THE EXISTING 1982 EASEMENT ALONG THE SIDB FOR CONSTRUCTION OF THE 69KV SUB-TRANSMISSION LINE AND CONSTRUCT THE SUBSTATION IN THE NEW LOCATION WITHIN THE INDUSTRIAL AREA OF SONOITA.

ROUTE OPTIONS IN THE SONOITA AREA:

Perhaps the most contentious and emotional issue on the SRP is routing of the 69kV sub-transmission line from the San Ignacio del Babocomari Land Grant to the planned substation site.

As introduced in the July 22nd SRP Presentation, SSVEC identified four options meeting specific criteria for placement of the 69kV sub-transmission line off the SIDB. The four route options are shown on the enclosed map "69kV Sub-Transmission Route Options (from San Ignacio del Babocomari Land Grant)", sent to neighborhood members for the August 13th meeting. Subsequent to the August 13th meeting, SSVEC has narrowed the option considerations to a



modified Route 1, **now 1A**, and Route 3 (see map "Option Considerations: Route 1A and Route 3"). Following is a detailed synopsis of each option pro's and con's:

Option 1A:

Pros: Use of existing corridor where impact of roadway use is already established

1. The Community has stated "*put the line along the highway, where people expect to see power lines*" and "*There is already a power line along Highway 83*".

Cons: No existing overhead power-line on north/south alignment, additional impact

1. On the North/South portion of Highway 83, where it travels north from the SIDB boundary, there is **no overhead power line existing**.
2. The power line only exists on that portion of Highway 83 running East/West as an extension of Lower Elgin Road. The East/West portion will be used for the 69kV line upgrade into the new substation.

Alignment on ridge of hill – high visibility to community / visitors

1. On the North/South portion of Highway 83, where it travels north from the SIDB boundary, the ridge is the **second highest hill** in the Sonoita community at about 4970' in elevation.
 - a. The next highest ridge is at about 5000', which is approximately one-mile west along the Babocomari Land Grant boundary.
2. Installation of 69kV poles running parallel along this ridge will put the **entire pole line along the skyline** and in view of nearly the whole Sonoita community.

No designated corridor for utilities in the right of way

1. The Highway 83 right of way is fairly narrow (from 30' to 60') along this portion; therefore the power line would require placement on private properties on the route. As the majority of these properties are lots of 3 acres or less and oddly shaped, limiting their development capability, the additional easement on each lot creates less usable area on the lot for development.

Additional impact to the Las Cienegas National Conservation Area (LCNCA)

1. The modification of Route 1 to Route 1A, adds an additional limitation to the construction of the power line. Although SSVEC has an existing overhead distribution line in this area, it was 'grandfathered' in at the time of the 2000 signing of the LCNCA, and to upgrade this distribution line to a 69kV sub-transmission line will require re-application to the federal management of the LCNCA.

Residential neighborhood

1. The Sonoita Estates neighborhood has a higher density of existing build-out. Due to the power line location prominent along the ridge line, this entire



neighborhood will be impacted, along with the Rancho Vista area, and a portion of the Sonoita Hills Subdivision.

Option 3:

Pros: Use of established and designated utility easements

1. SSVEC obtained a 50' easement along the northern boundary of the SIDB in 1982; however in 2008 a portion of this segment of easement was modified to offset the boundary line a distance of 170 feet to provide additional clearance from those homes constructed near the boundary.
2. Designated easements for utilities within the Sonoita Hills Subdivision have been established since the late 1960's.
3. SSVEC obtained additional electric easements for the Buchanan Substation property.

Use of existing corridor where impact of power lines is already established

1. That portion of Option 3 within the Sonoita Hills Subdivision has an existing overhead distribution line utilizing nearly 100% of the easement. The new 69kV line would fully replace this line (old poles removed, wire line transferred to new poles).

Adjacent to SSVEC property

1. SSVEC obtained the Buchanan property in 1982. Although it has relocated the substation to another property in an industrial/commercial land use area, this site will remain under SSVEC ownership.

Parallel with parcel lines

1. The 69kV line would be installed parallel to existing parcel lines, therefore minimizing impact on full usage of property.
2. Furthermore, the Sonoita Hills Subdivision has a setback covenant requiring a minimum of 50 feet from the property line for any structural improvements by the landowner.
 - a. SSVEC's usage of the easement would impact only 25 feet of the property, leaving an additional 25 feet of setback requirement to be met by the landowner.
 - b. The covenant, and SSVEC, does not restrict usage of the easement for other purposes which do not require structures (grazing, gardening, landscaping, etc.)

Existing road for access

1. Improved roadways exist within the Sonoita Hills subdivision which would allow for convenient access to construct and maintain the power lines.
2. Access for that portion of Option 3 along the SIDB will be obtained through the Sonoita Hills easements, as well as by existing roads on the Babacomari Ranch. **SSVEC will not create a 'road' along the Ranch boundary to be used for maintenance or to be used by the public.**



Alignment lower on hill and in drainage valley

1. On the SIDB portion of Route 3, where it travels Westerly from the SIDB/Highway 83 intersection, the 69kV sub-transmission line will run perpendicular to the ridge lines along the Southern boundary of the Sonoita community. This perpendicular alignment will shield the entire power line from full view of the community by allowing it to drop from view into valleys along the corridor. Instead of seeing all poles along a ridge line, only poles on top of each ridge being crossed will be seen by the community at large.
2. In that portion of Route 3 where it travels North from the SIDB boundary, the 69kV poles will run parallel with a ridge – however the easement is near the bottom of the ridge, in a valley, which lowers the pole line from view against the skyline, and from the whole Sonoita community.
3. The elevation along this easement in Sonoita Hills is from about 4925 feet to 4800 feet, more than a **full pole height lower** than in Option 1A.

Cons: Residential neighborhood

1. The Sonoita Hills neighborhood has a lower density of existing build-out and the lot sizes are 4 acres or larger, with a symmetrical shape, allowing more options for development capability – but with the power line location low along the ridge line, and in the valley, this segment of the Sonoita Hills neighborhood will be impacted..

Of the four options, SSVEC identified “Option 3” as the ‘most logical route’ for the 69kV sub-transmission line in the July 22nd Sonoita Reliability Project Presentation. In review of the criteria shown above, SSVEC stands by the identification that Option 3 is the best route choice, with the **least impact on the entire Sonoita community**.

The most obvious disadvantage of all of these routes is their location within residential subdivisions. According to Santa Cruz County zoning maps, all options, including any of the former alternatives suggested by the community, will impact residential zoned lands and areas that are established neighborhoods. Impact to a residential neighborhood is unavoidable; however SSVEC is committed to minimize the effect of the 69kV sub-transmission line on these properties as much as possible.

For the August 13th presentation, SSVEC calculated estimated costs of each route based upon design factors such as length of route, number of in-line poles, number of angle poles, types of poles used, and basic terrain considerations (titled “Design Cost Comparisons per Option”). As the actual design for this project has not been completed, these are rough material and construction costs.

In the next few weeks however, decisions on this project will require finalization in order to achieve SSVEC’s initiative for this solution to be in place by early 2010.



ENVIRONMENTAL EVALUATION:

In preparation for use of the SIDB easement, SSVEC performed environmental assessments such as cultural and biological studies along the right of way. These studies concluded that no threatened or endangered species exist in the project area, and that the project may proceed with no further need of archeological or biological review. However, threatened and endangered species are not the only consideration for wildlife impact; avian protection is a significant design factor with this project. Furthermore SSVEC will take great care in design considerations to avoid disturbance to irreplaceable native vegetation such as oak forests and riparian areas, and, as part of the project, disturbance and/or clearing of the right-of-way will be re-seeded with native grasses upon completion of construction; this is intended to retain the natural grasslands character of the easement, and reduce the invasion of noxious weed species.

Currently SSVEC is proceeding with preparations of the SIDB easement for engineering design of the 69kV sub-transmission line. These preparations include minimal clearing of the SIDB easement – which is not a new occurrence either. SSVEC shares the SIDB easement with Qwest Communications who in 1991 significantly cleared and disturbed the easement with the installation of an underground fiber-optic line. This includes that portion of the SIDB easement lying adjacent to the Appleton-Whittell Research Ranch, which has recently submitted a letter expressing their concerns.

SSVEC respects and appreciates the importance of research conducted by the Research Ranch. However as previously mentioned this segment of the SIDB adjacent to the Research Ranch has been significantly disturbed at least once, and maybe twice, in the past 40 years by installation of standard telephone lines and fiber-optic lines. Furthermore, access pathways adjacent to the fence boundaries continue to be used for maintenance of the telephone facilities. SSVEC's disturbance to the SIDB easement would have no greater impact than the telephone installation, and the 69kV sub-transmission line itself should have no impact on cross-fence comparisons of range habitat.

HEALTH AND SAFETY:

SSVEC understands the community's concerns regarding environmental factors such as safety and health issues. SSVEC designs and constructs its facilities in compliance with the National Electric Code, the National Electric Safety Code, and other industry standards. Design considerations include protective equipment on the lines and appropriate grounding techniques on poles which greatly reduce possibilities for fire hazards on the sub-transmission route.

The study of Electromagnetic Fields (EMF) began in the 1970's and continues today. SSVEC encourages you to visit these informative websites to learn more about this issue:

World Health Organization - www.who.int



Electric Power Research Institute - www.epri.com

National Institute of Environmental Health Services - www.niehs.nih.gov

IMPACT ON PROPERTY:

The environmental impact to property by construction of a power line will be minimized by: utilizing mono-pole structures that require minimal ground disturbance for installation; locating structures in positions that reduce interference with existing views from homes; locating power lines along property lines to minimize impact on property use; using materials such as concrete, steel, or fiberglass with higher strength and longer life spans to reduce bending and warping, as well as property disturbance due to maintenance 'trips' along the right of way.

POSSIBLE USES OF THE BUCHANAN SITE

Several members asked about SSVEC's intentions for the Buchanan site given that a new substation site will be used. SSVEC intends to maintain ownership of the Buchanan site. SSVEC would entertain proposals from the community for use of this facility.

COST TO MEMBERS:

The Sonoita Reliability Project is currently funded through SSVEC's System Improvement loan through the Cooperative Finance Corporation. The SRP project is funded at \$7.9 million; this loan will be repaid over a period of time through rates collected from all SSVEC members throughout the entire service area. Therefore SSVEC has a responsibility to evaluate project needs, alternatives, and design based on sound engineering and economics acceptable to all the cooperative's members.

MYTHS AND RUMORS:

Finally, SSVEC would like to address some of the 'myths' being circulated regarding the Sonoita Reliability Project:

1. The 69kV sub-transmission line and substation is '*overkill*' for the small community of Sonoita – "*SSVEC is planning the line at this time to serve the Rosemont Mine*".
 - a. This statement is untrue. First, the 69kV voltage is standard on SSVEC's electric system for connecting its distribution substations which serve all of its communities – even very small rural areas such as San Simon or Elfrida.
 - b. Second the Rosemont Mine is not within SSVEC's service territory, thus is not eligible for service from SSVEC.
2. "*SSVEC is planning to send power to Mexico via this 69kV sub-transmission line*".



- a. This statement is untrue – SSVEC has no intentions of serving power to Mexico.
 - b. The 69kV sub-transmission line does not have the capacity for large wholesale transactions.
3. ***“SSVEC previously planned a ‘loop’ system which is now no longer planned.”***
- a. A 69kV ‘loop’ system has NEVER been planned for this project. A ‘loop’ system would require not only a new 69kV line coming from Huachuca City to the substation, but ALSO a 69kV line coming from Whetstone to the substation – basically creating a ‘loop’ or circle around the entire Sonoita area.
 - b. As stated herein, however, there will be distribution ‘loops’ between the new feeders out of the Sonoita substation. Furthermore SSVEC does intend to tie the existing V-7 feeder from Huachuca Substation to the new Sonoita Substation for back-up capabilities.
4. ***“SSVEC is refusing to meet with a Community Committee”***
- a. This statement is untrue – however, SSVEC delayed meeting with a Committee earlier in 2008 until representation has been determined – SSVEC is committed to discussing this project with ALL its members and is concerned that some interests may not be fully represented at this time. SSVEC has recently been advised by this Committee that it *“is not empowered to negotiate for the community, only to facilitate discussions between the cooperative and the community”*.
 - b. SSVEC held a meeting with the Community Committee on September 12, 2008. Agenda items included several of the issues discussed herein, and were covered in great detail. SSVEC entrusts the Committee will present the cooperative dialog held in this meeting to the Community.
5. ***“This project is being sponsored and PAC’D and rushed through by developers that want to build here without any moral concerns and appreciation for the environmental destruction of this special place...”***
- a. As indicated at the beginning of this letter, this project has been initiated by SSVEC to improve the quality and reliability of service to the Sonoita/Elgin/Patagonia areas. Service which is marginal and deteriorating as consumer usage increases; SSVEC has an obligation to maintain appropriate electric service to its communities.
 - b. This project is not ***‘promoting growth’***, nor permitting ***‘unplanned development’***. The community has a much stronger voice regarding development of the area with the Santa Cruz County Planning and Zoning Department, which regulates zoning density, and permitted uses of lands.



6. *"The proposed line would run right along the edge of the Audubon Research Ranch. Damage from work already begun has negatively impacted at least 40 long-term research projects, and one project has already been cancelled."*
 - a. First, SSVEC has not been notified by the Audubon Appleton-Whittell Research Ranch that 40 *projects* have been affected; the Audubon has indicated that 40 *years* of data accumulation on one particular type of research, namely cross-fence comparisons, may be affected.
 - b. However, as mentioned herein, the easement area is shared with Qwest Communications who in 1991 significantly cleared and disturbed the easement with the installation of an underground fiber-optic line, and continues with maintenance travel disturbance along the easement. SSVEC is unclear as to how this project affected the Research Ranch's 40 years of data accumulation, but the effect would likely be greater than SSVEC's installation of an overhead power line.

7. *"The Sulphur Springs Valley Electric Cooperative Board has indicated a willingness to reopen talks with the Babocomari Ranch with the goal of identifying new, far more acceptable power line routes than they have thus far proposed."*
 - a. The SSVEC Board of Directors has not issued any such statement to its staff, or to the community. Furthermore, several members have approached SSVEC's Board of Directors requesting an immediate stop-work order on the SRP; nonetheless Staff has been instructed to continue design functions and to continue evaluation and response to community input.

COMMUNITY:

There has been consternation from the community because of SSVEC's *'unwillingness'* to discuss the litigation, or future plans, prior to court judgment or settlement. This *'gag order'* was recommended by SSVEC's legal council as prudent to maintain respectful negotiations with a member of the cooperative and not contribute to speculation among the community.

Upon settlement with the Ranch on June 30th, SSVEC moved quickly forward with a direct mailing on July 7th to all Sonoita/Elgin/Canelo/Patagonia members advising of the SRP status, a full community presentation on July 22nd, a follow-up letter to the meeting for all members on August 8th, a neighborhood discussion on August 13th, and numerous telephone/email conversations regarding plans for the Sonoita Reliability Project. SSVEC's Board of Directors have attended the community meetings, heard three presentations from members, have been presented several letters and have been supportive of staff by allowing time to gather the information required to respond to all members' concerns. As evident from this document, SSVEC has been forthcoming with information regarding options for improved service, community concerns regarding the substation location, and visual impact of the 69kV sub-transmission line. SSVEC is by no means *'stone-walling'* discussions regarding this project as suggested by some community members.



Sulphur Springs Valley Electric Cooperative, Inc.

Member of the Electric Cooperative of Texas

SSVEC realizes this letter is significant in length, however it is only a brief representation of the hundreds of hours of research and review SSVEC has performed as its due diligence to the community, and we have tried to be clear and concise on issues that involve complex and technical details. We certainly hope the information contained within clarifies many of the questions surrounding the SRP, SSVEC's intentions to provide quality, reliable service to the Sonoita/Elgin/Patagonia areas, and especially SSVEC's commitment to its members and their concerns. We appreciate your continued support with the Sonoita Reliability Project.

A handwritten signature in black ink, appearing to read "Deborah White". The signature is fluid and cursive, with a large loop at the beginning.

Deborah White,
SR/WA Right of Way Services Manager

A handwritten signature in black ink, appearing to read "Ron Orozco". The signature is cursive and somewhat stylized, with a prominent loop at the end.

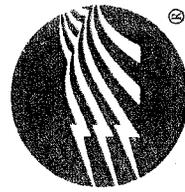
Ron Orozco,
Engineering Division Manager

cc: SSVEC Board of Directors
Creden W. Huber, Chief Executive Officer
Various Government Officials

Sonoita Reliability Project

Community Information Response

September 22, 2008



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 

SSVEC Sonoita Reliability Team Members:

Creden Huber – Chief Executive Officer

Jack Blair – Chief Member Services Officer

Anselmo Torres - Chief Operations and Engineering Officer

Ron Orozco, PE – Engineering Manager

Deborah White, SR/WA – Right of Way Services Manager

Ricardo Garcia – Construction Manager

Vic Plumb, Ms. E.E. Substation Engineer

Kurt Towler - Geographic Information Systems Coordinator

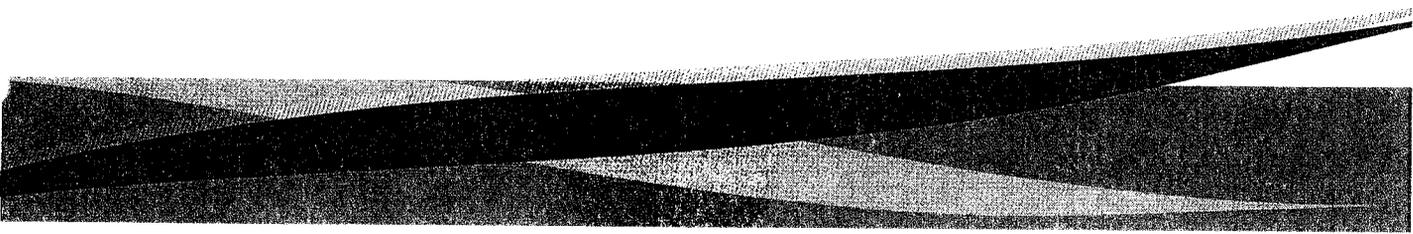
Wayne Crane – Public Relations Manager

Megan Resor – Right of Way Agent

Purpose of Community Meeting

- Introduce the Sonoita Reliability Project
- Provide Relevant Background and Project Purpose
- Review the need to improve the adequacy and reliability of electric supply to the Elgin/Sonoita/Canelo/Patagonia communities
- Present Solutions for meeting area reliability needs
- Review project criteria, plans and maps
- Address community concerns
- Questions & Answers

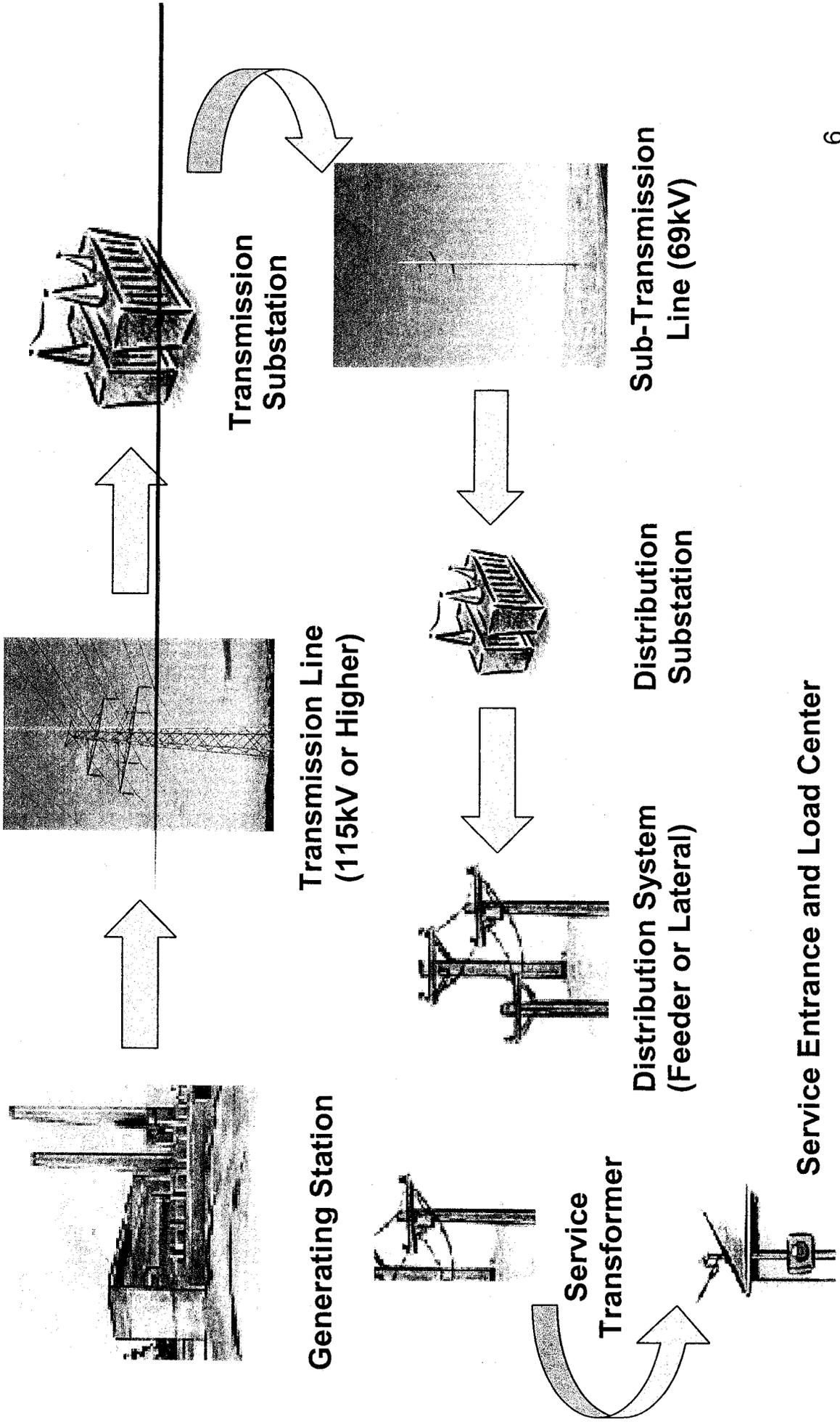
- 1980: Identification of service reliability concerns
- 1982: Acquisition of substation property and 69kV sub-transmission corridor.
- 1991: SSVEC proposes evaluation of substation site and 69kV sub-transmission route for 1992-1993 construction
- 1994: Project deferred due to availability of new technological improvements
- 1996: Huachuca Substation upgrade completed; addition of improved voltage regulation equipment
- 2005: System planning study identifies priority need for upgrade of service reliability
- 2006: Sub-Transmission easement on San Ignacio del Babocomari Land Grant disputed
- 2007: Sonoita Area Capacity Study evaluates service reliability solution – Project funded at \$7.9 million for 2008-2010
- JUNE 30, 2008: Sub-Transmission easement dispute settled



Why is Project Needed?

Ron Orozco, P.E.
Engineering Manager

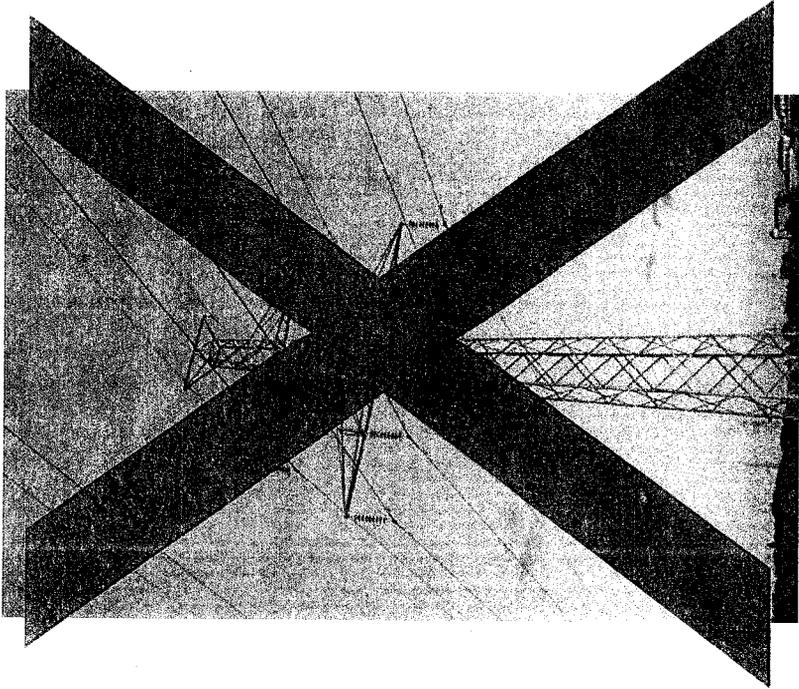
Key Electrical Terms



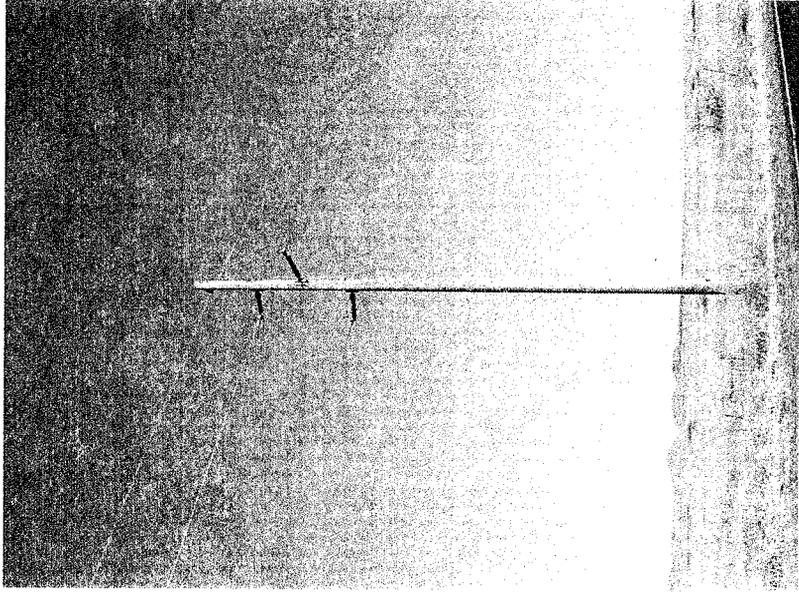
Key Electrical Terms (Cont'd)

Overhead Structures

Lattice Structure



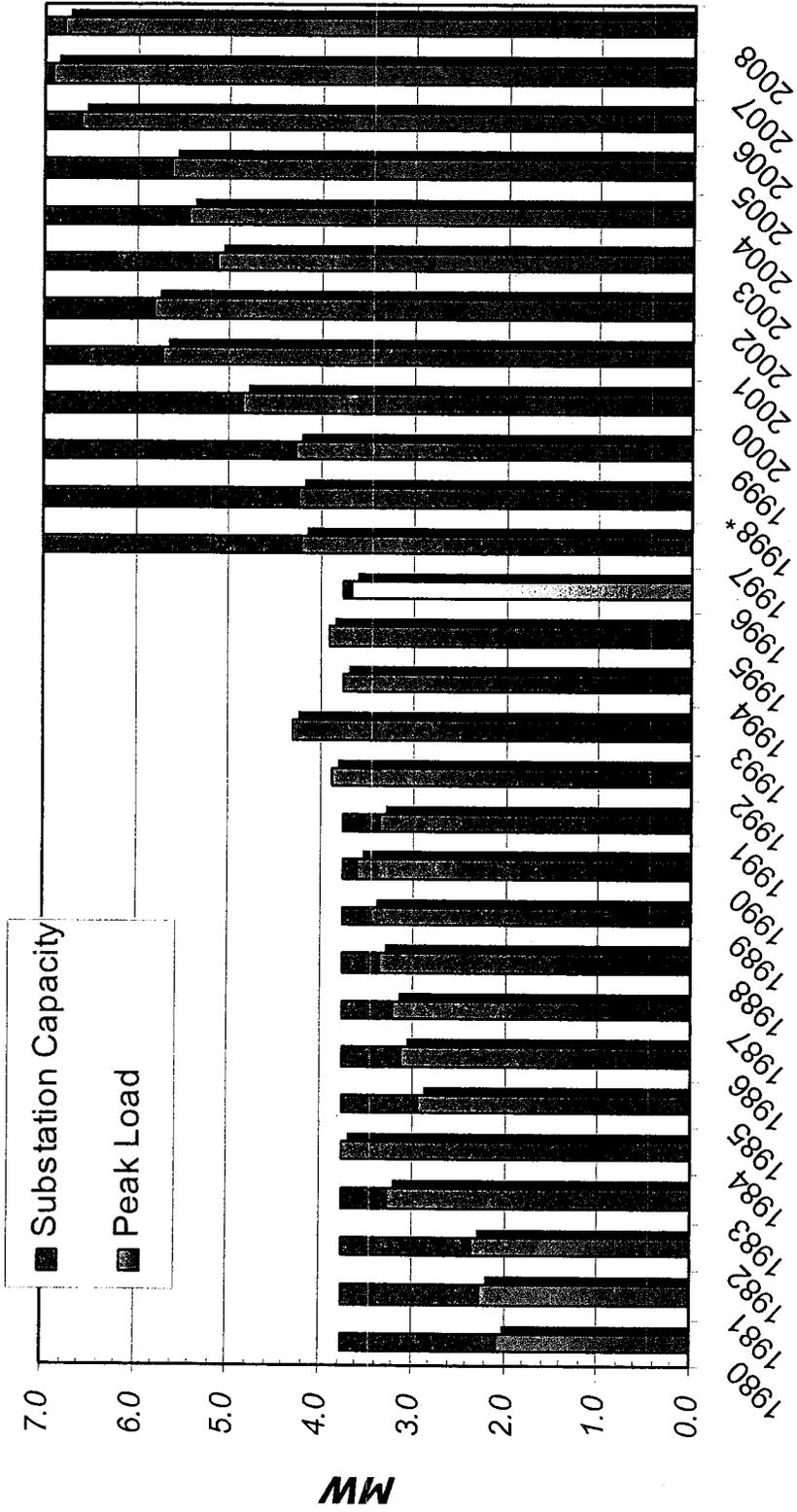
**Monopole Structure
(Narrow Profile)**



Capacity and Reliability

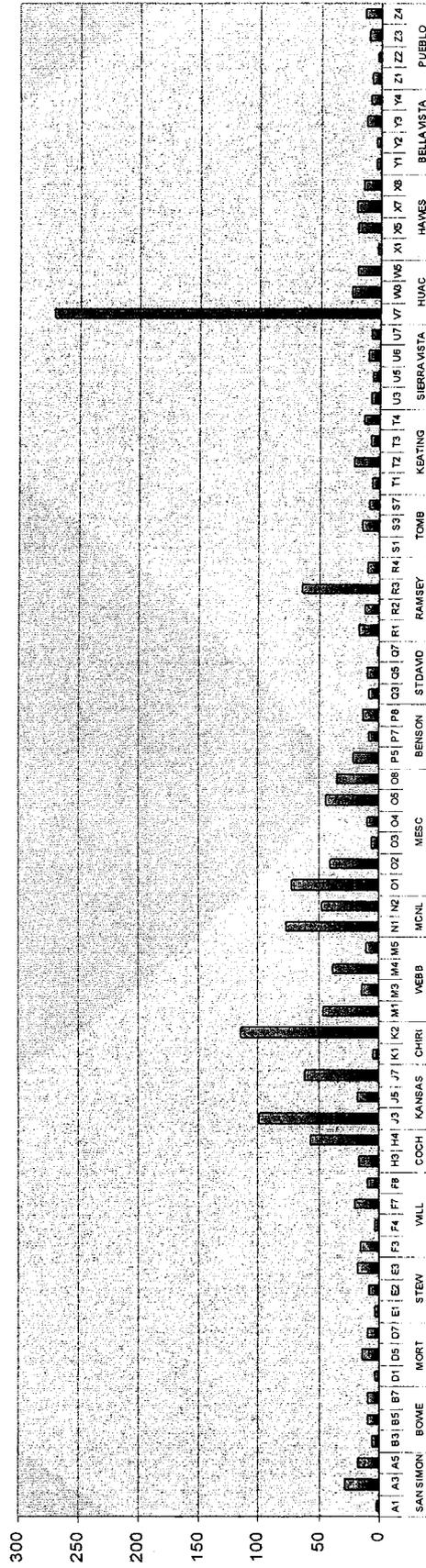
Increasing Load vs. Capacity

Huachuca Substation Reaching Capacity

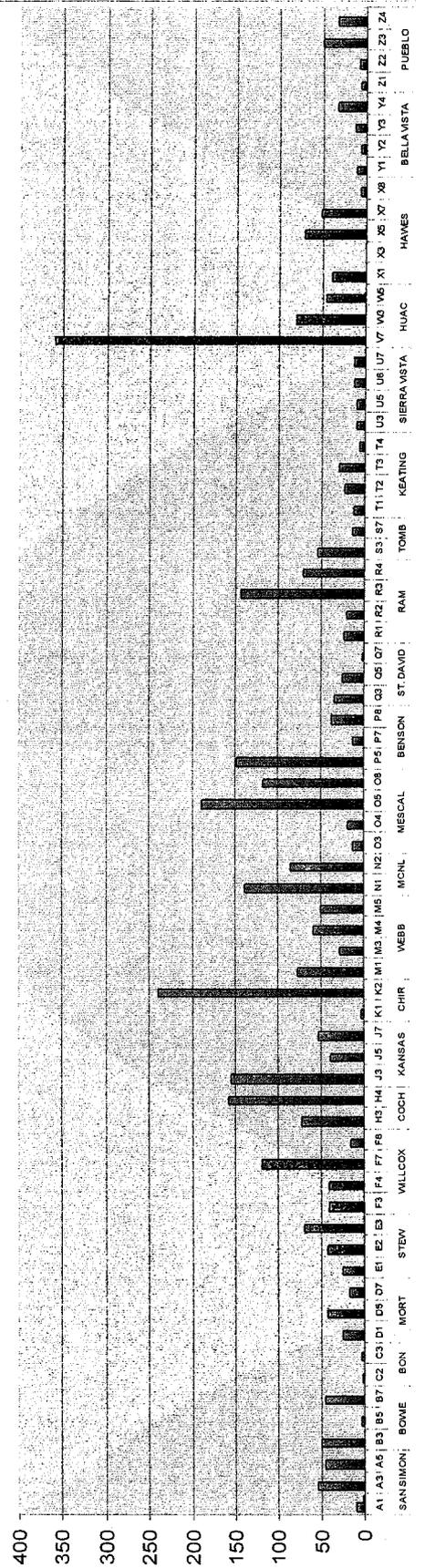


V-7 Feeder Outages and Length in Miles as Compared to all SSVEC feeders

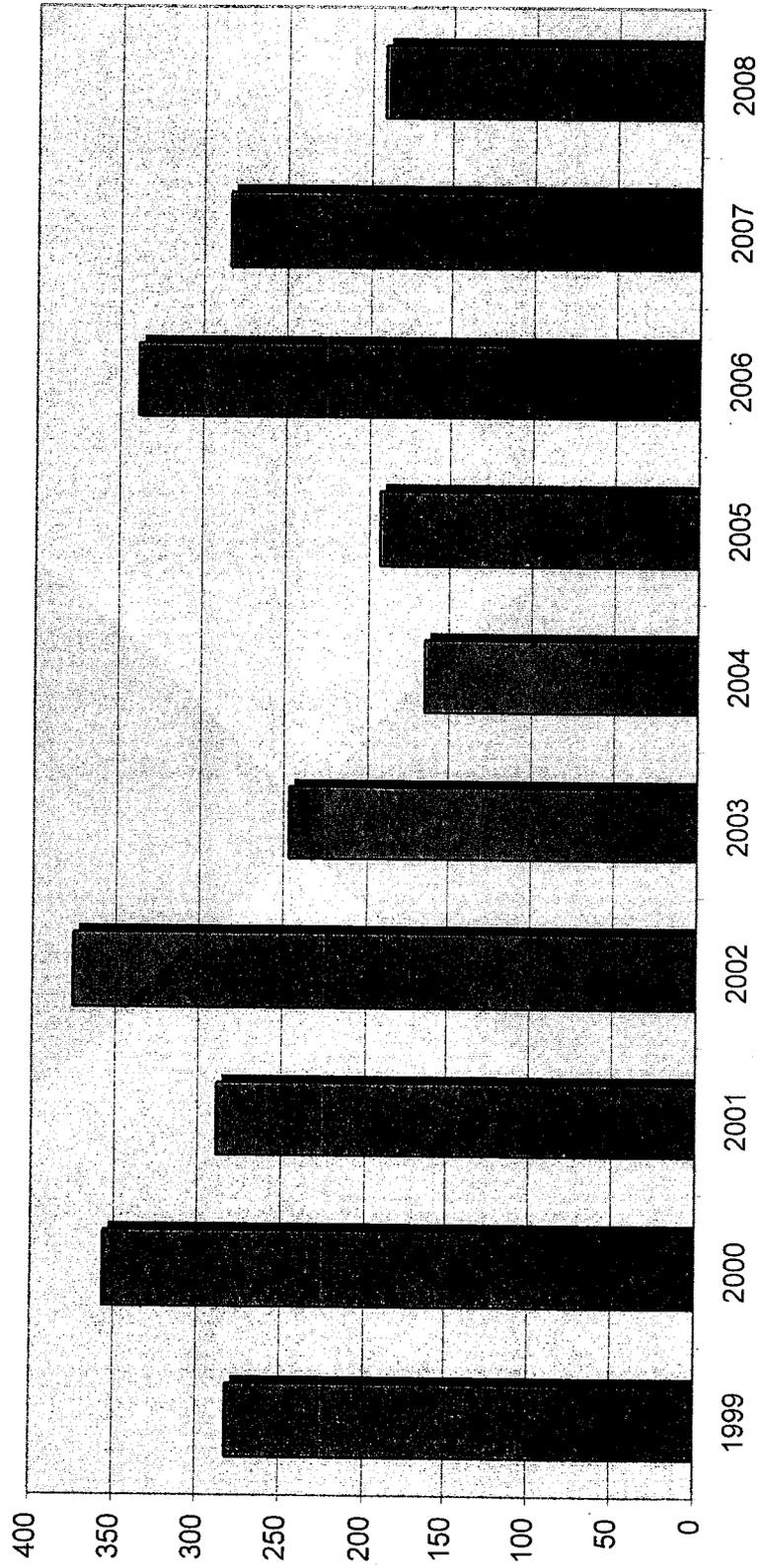
1999 - 2008 Average Annual Hours Out: SSVEC System

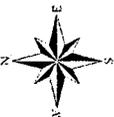
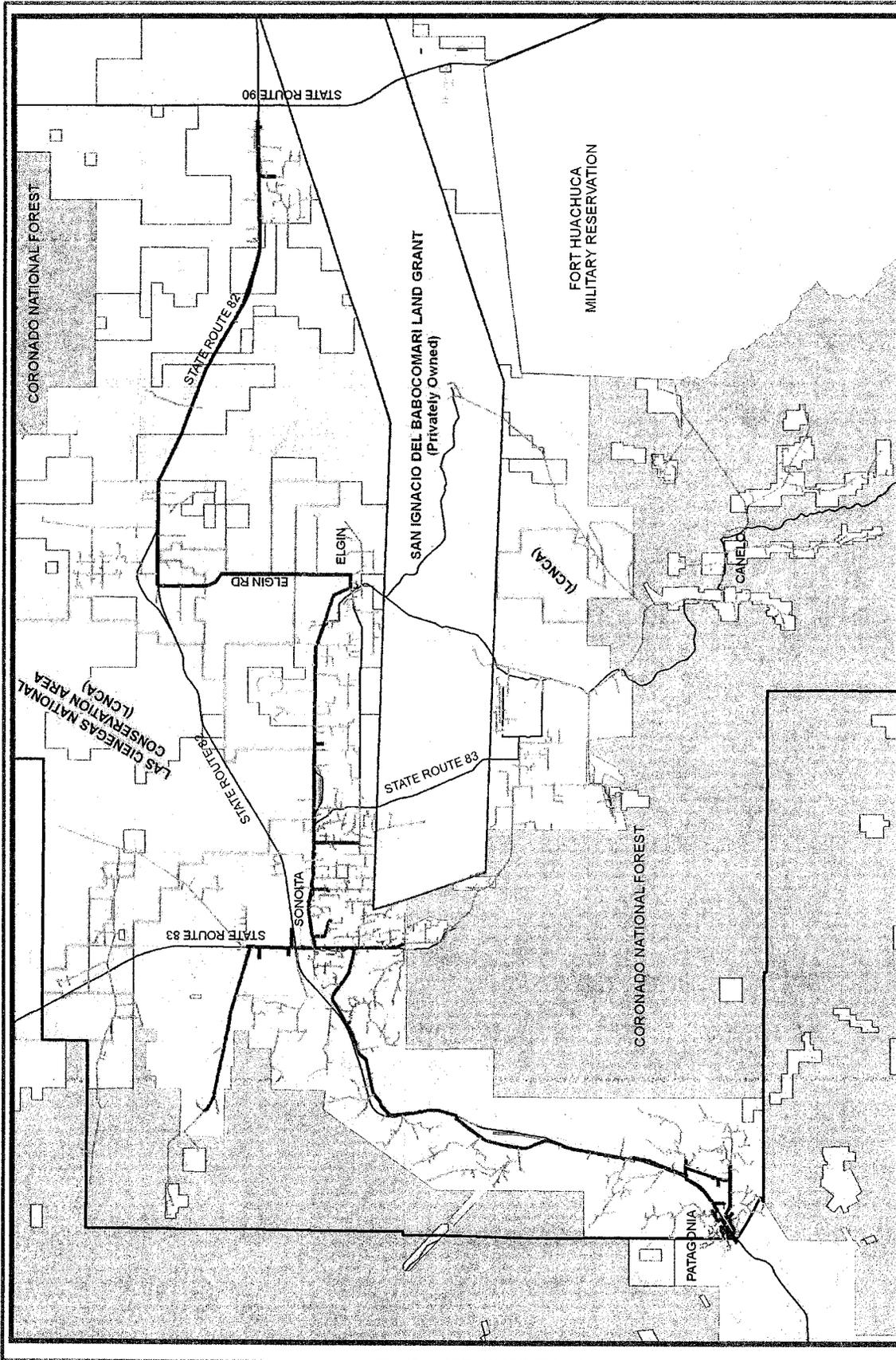


Total Miles



V-7 Feeder Outages: 10-year History

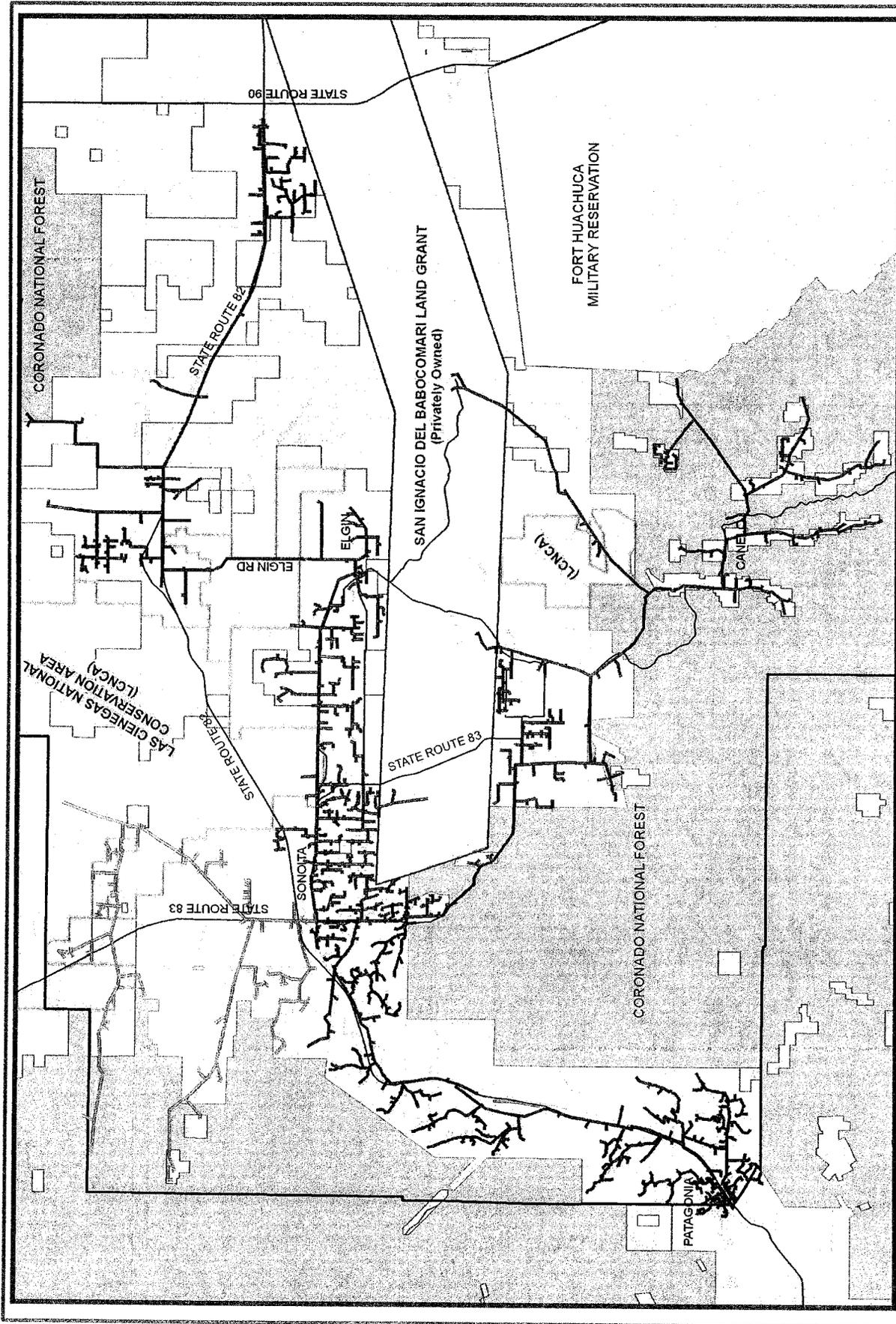




- Existing VT Feeder
- Buchanan Substation
- Sonoyta Substation
- SIDB Boundary
- LCNCA Boundary
- SSV/EC Service Area
- BLM
- Cost of State Parks
- Military
- Nat'l. Parks
- City
- County
- State Trust
- Wildlife

SONOITA RELIABILITY PROJECT





SONOITA RELIABILITY PROJECT

- Feeder 1
- Feeder 2
- Feeder 3
- Feeder 4
- Feeder-V7
- Bushman Substation
- Sonora Substation
- SIDB Boundary
- LCNCA Boundary
- SS/EC Service Area
- BLM Forest
- Private
- State Trust
- Wildlife
- Local or State Parks
- Military
- Nat'l. Parks
- Other



Substation Site Selection

Deborah White, SR/WA

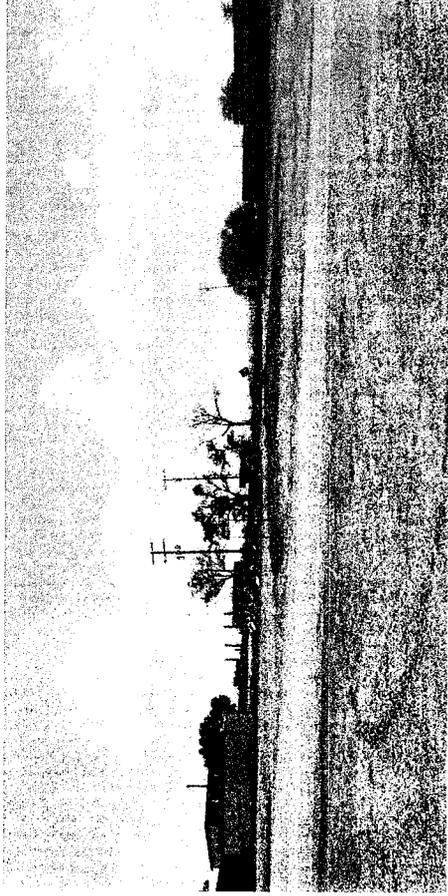


CRITERIA for SUBSTATION PROPERTY

- Central to Load Area
- Proximate to Main Feeder Lines
- Current and Proposed Land Use
- Parcel Size
- Accessibility
- Topography

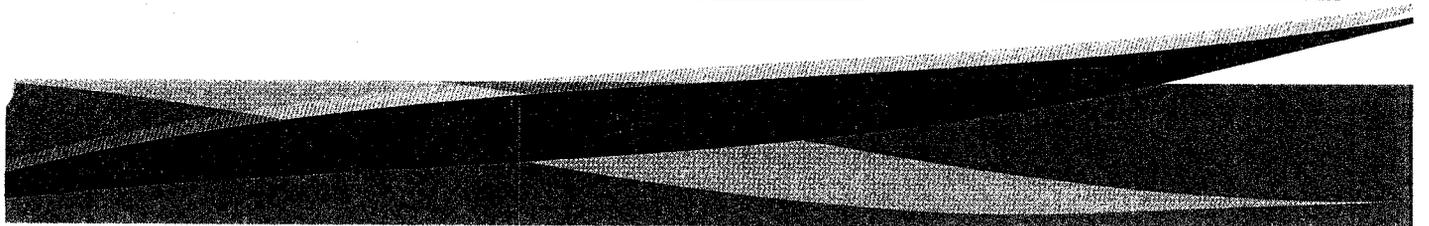
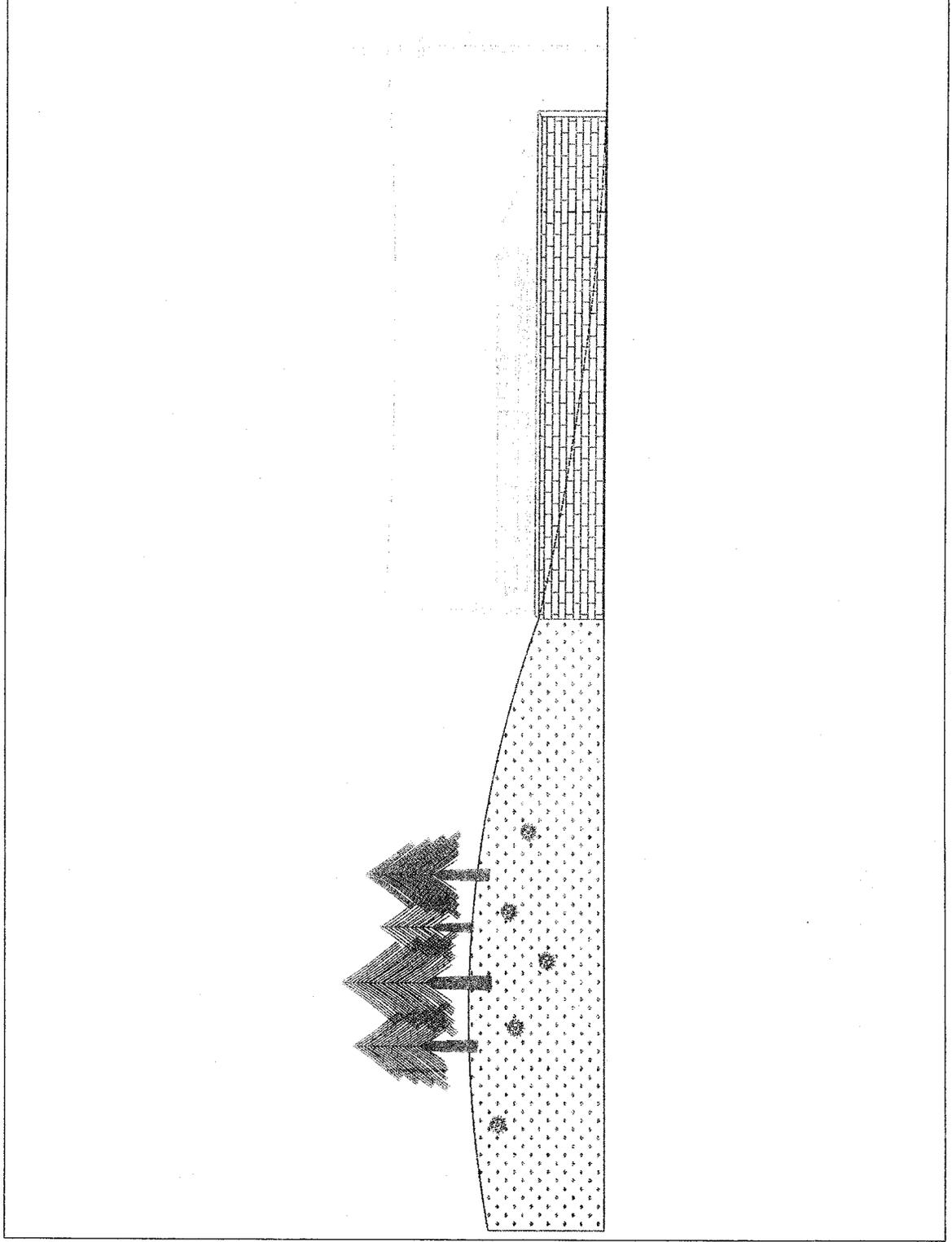
Existing Substation Property





New Substation Property

NEW SUBSTATION SCREENING

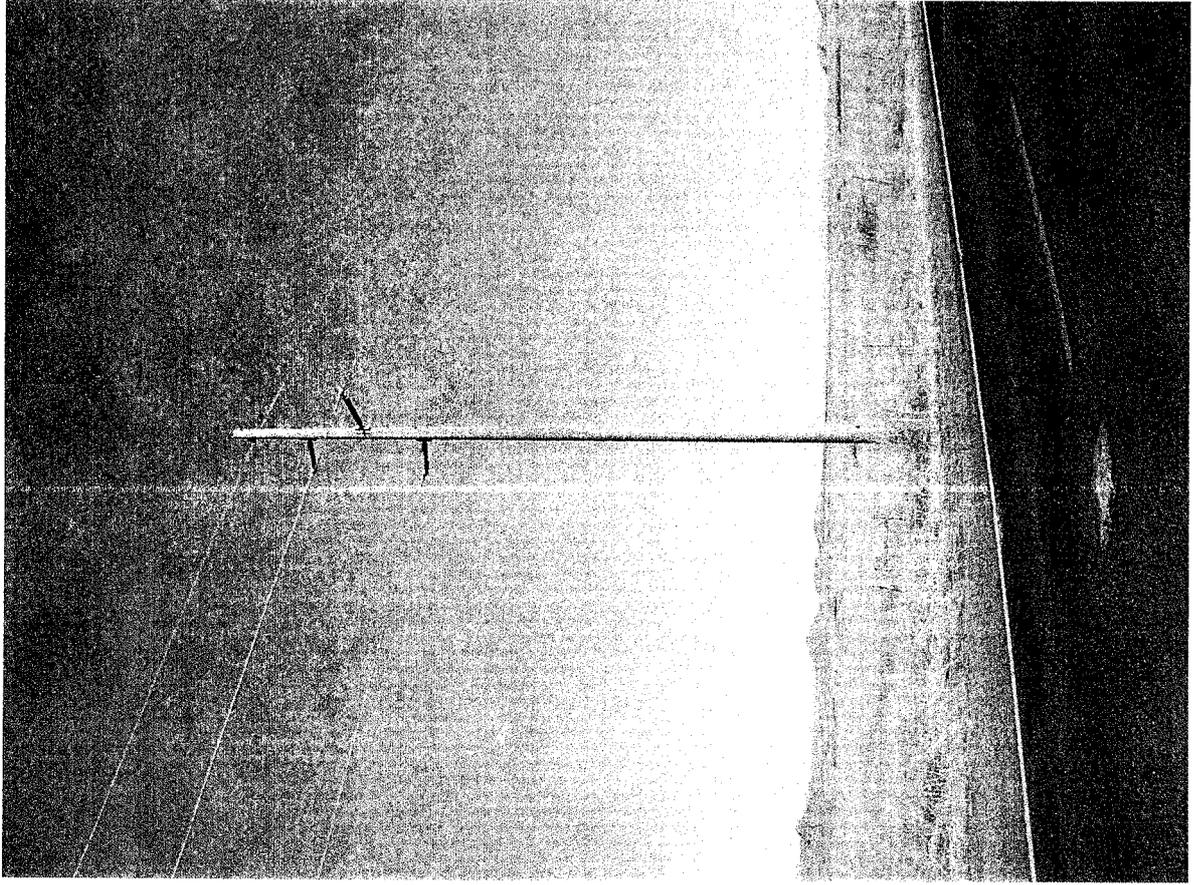


Sub-Transmission Line Design

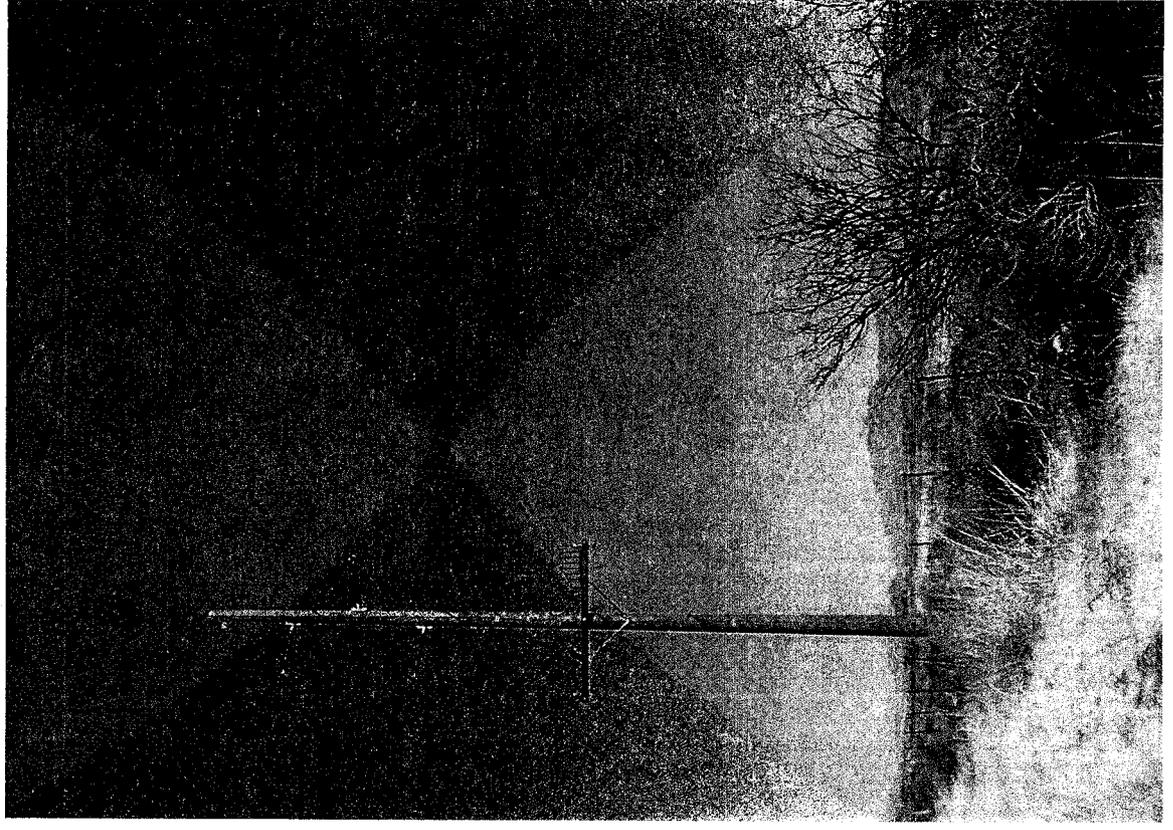
VISUAL IMPACT

- **VISUAL IMPACT OF THIS 69kV SUB-TRANSMISSION LINE IS OF CONCERN TO THE COMMUNITY**
- **SSVEC IS SENSITIVE TO THIS ISSUE WITH DESIGN PLANNING AND WILL USE COMPONENTS WITH IMPROVED AESTHETIC APPEARANCE.**

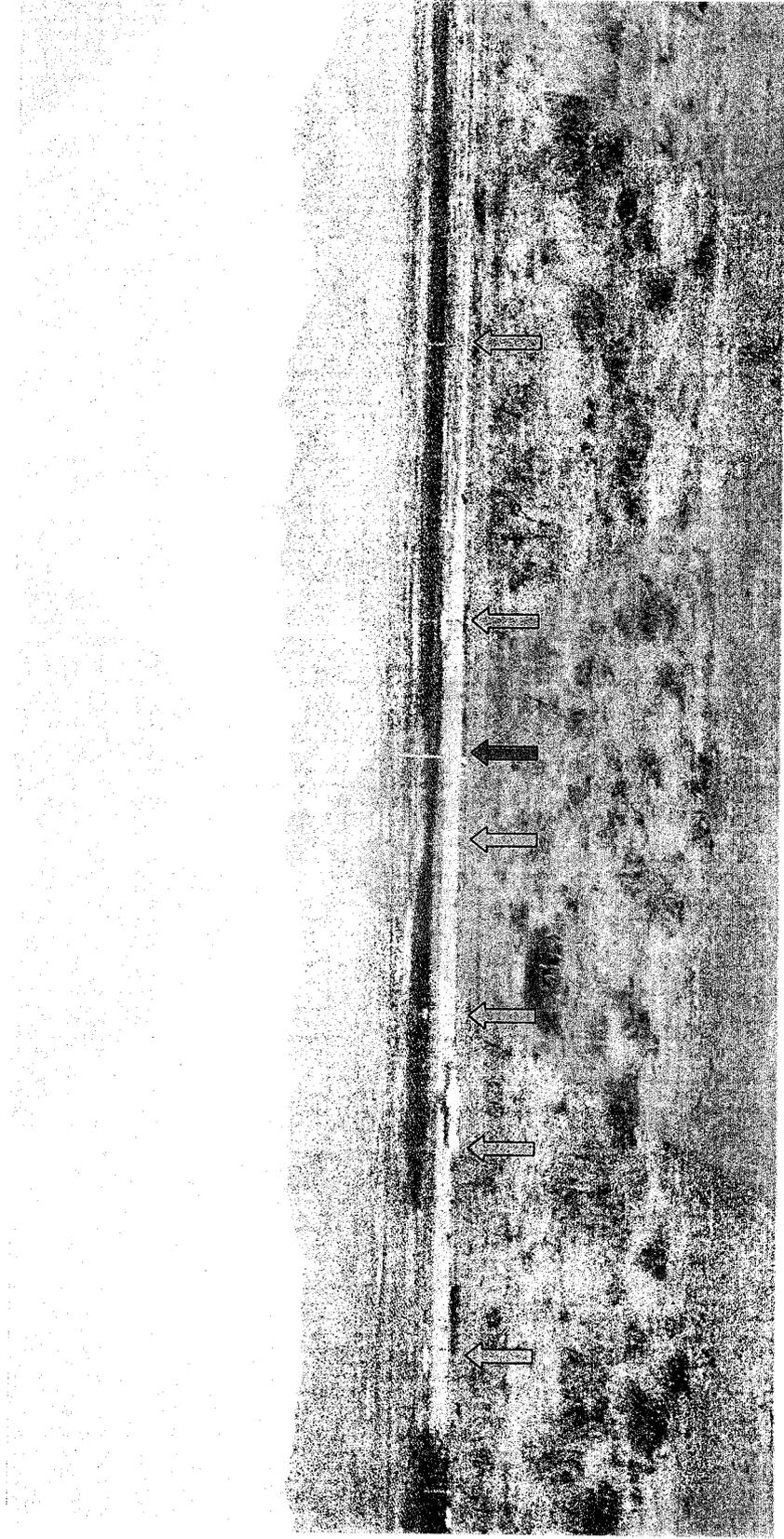
Narrow-Profile Sub Transmission Pole



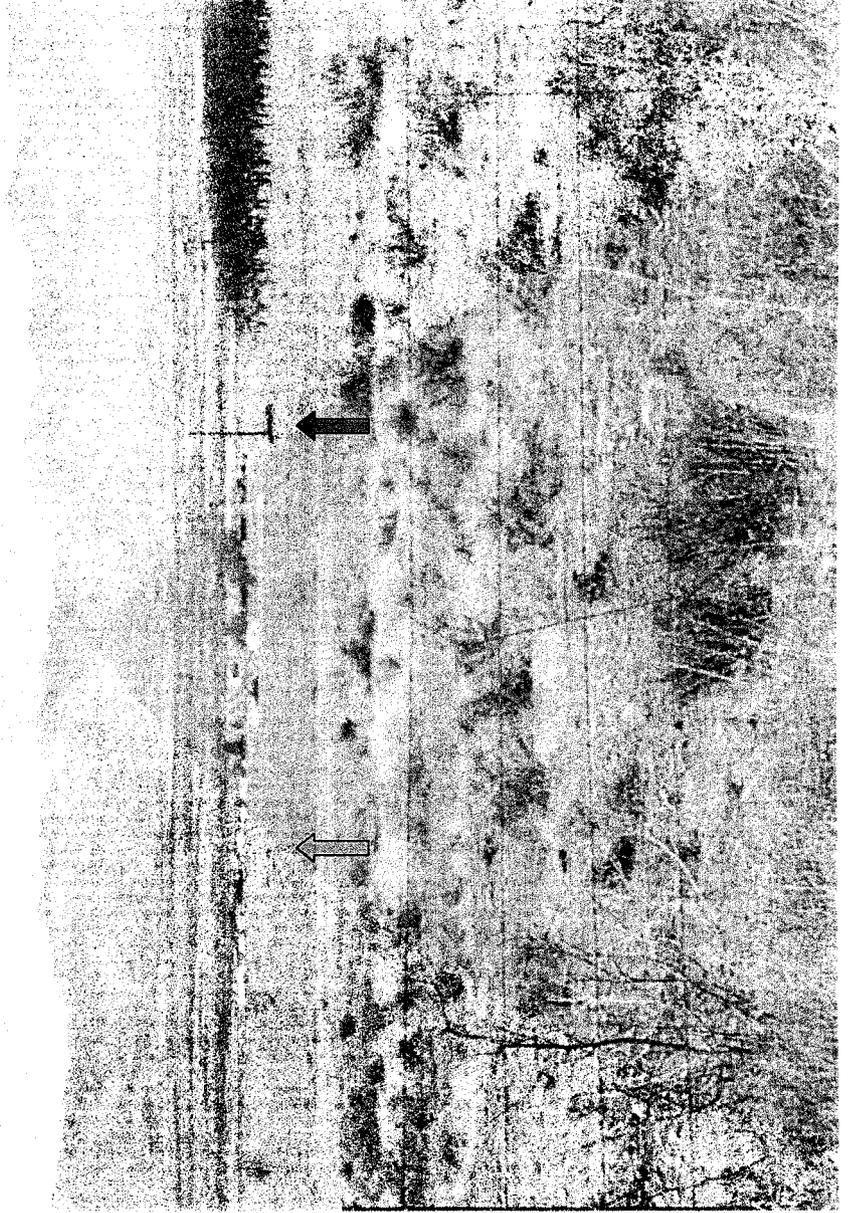
Narrow-Profile Sub-Transmission Pole with Flat Distribution Crossarm



Pole Color Test: Tan vs. Gray



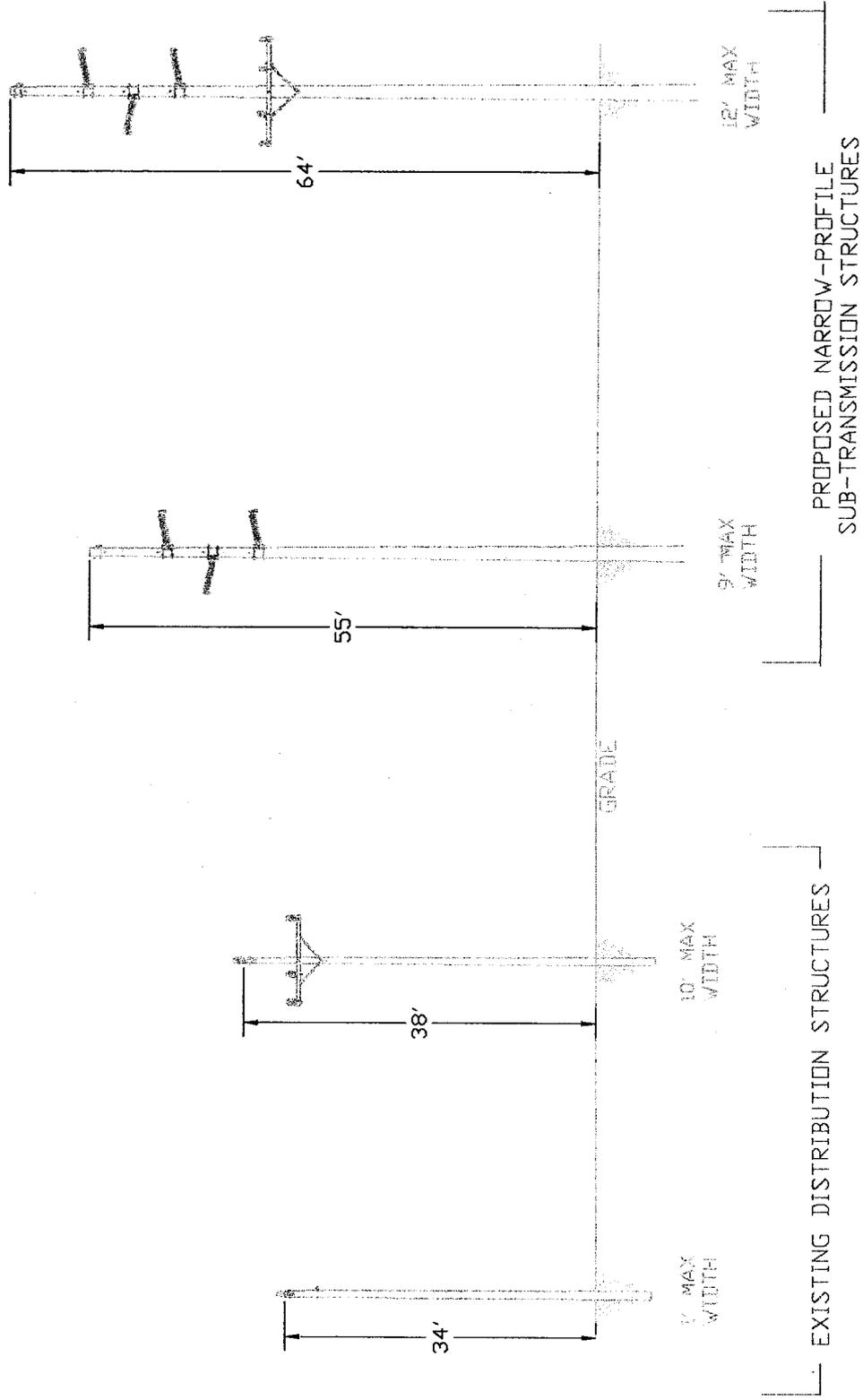
Pole Color Test: Rust vs. Gray



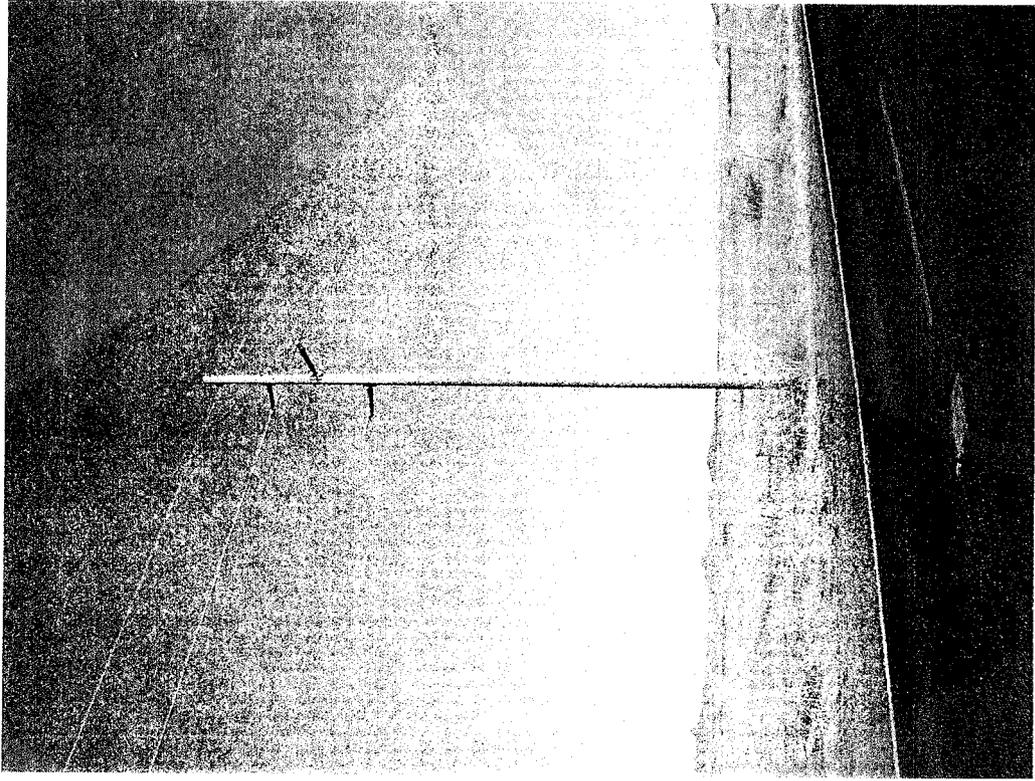
Poles with Viewshed Background



Pole Height Comparisons



Selected Pole Configuration



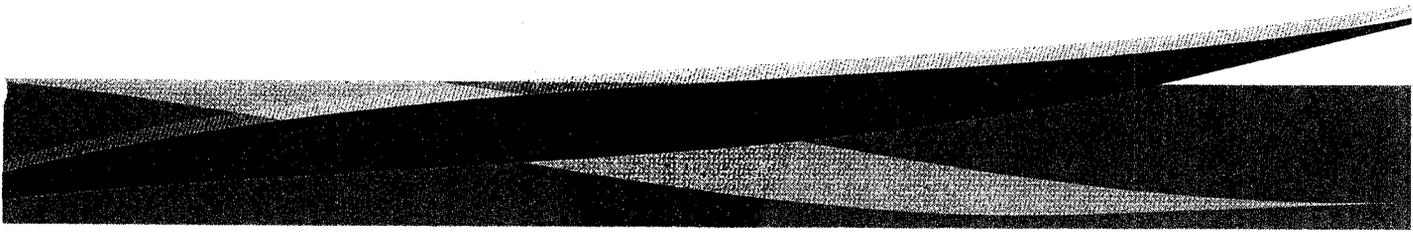
VISUAL IMPACT

Some visual impact will result from installation of electrical facilities -

THIS IMPACT CAN BE REDUCED BY PROPER CHOICE OF CONSTRUCTION TYPE, QUALITY OF CONSTRUCTION, LINE DESIGN AND EQUIPMENT CONFIGURATIONS AND ROUTE SELECTION.

Sub-Transmission

Line Route



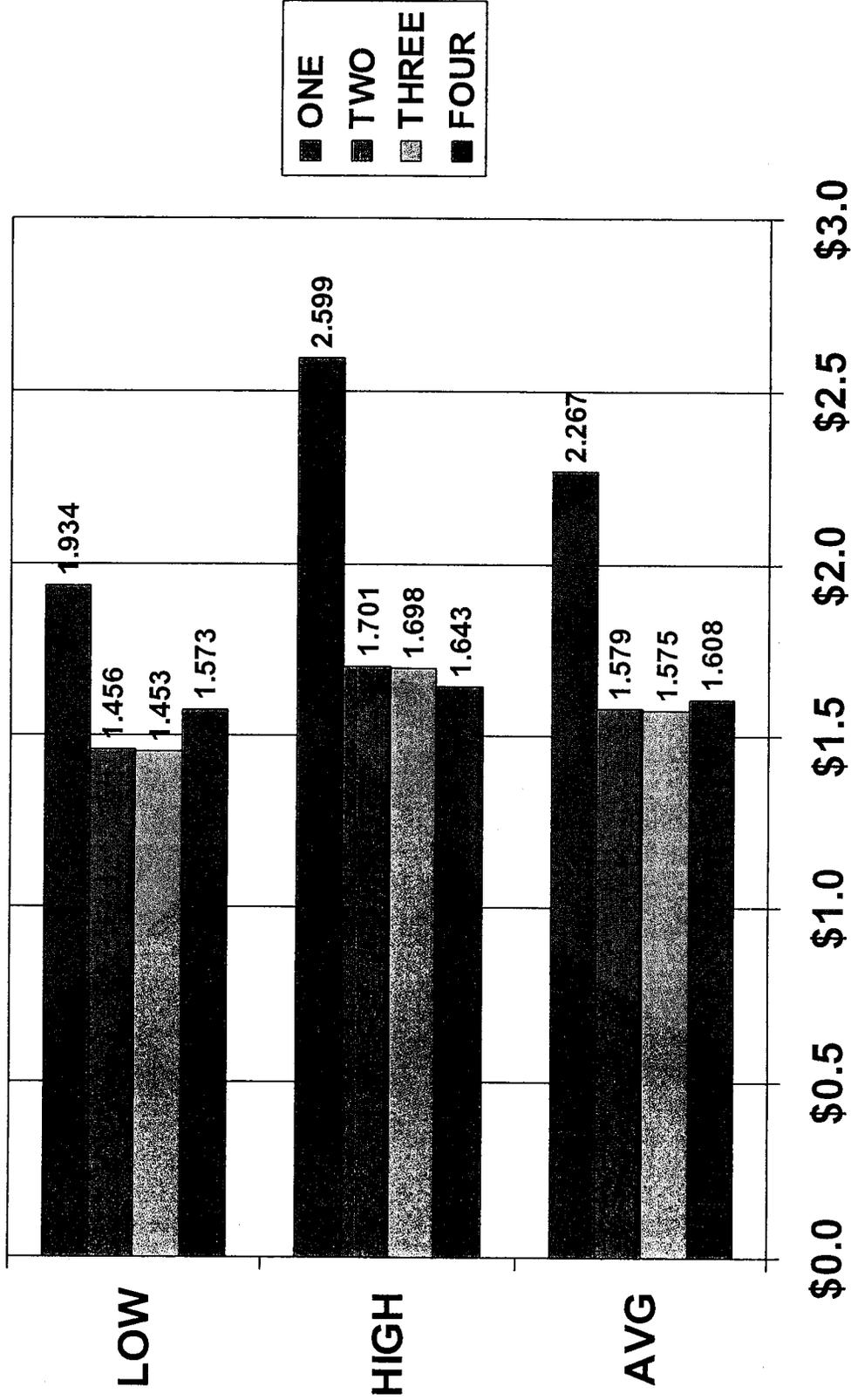
Right of Way Criteria for Sub-Transmission Line Routing

- Existing SSVEC Easements
- Designated Utility Easements
- Existing Roads / Highways
- Natural Landscape Features
- Existing Power Line Corridors
- Current and Proposed Land Use
- Property Orientation
- Minimize Angles

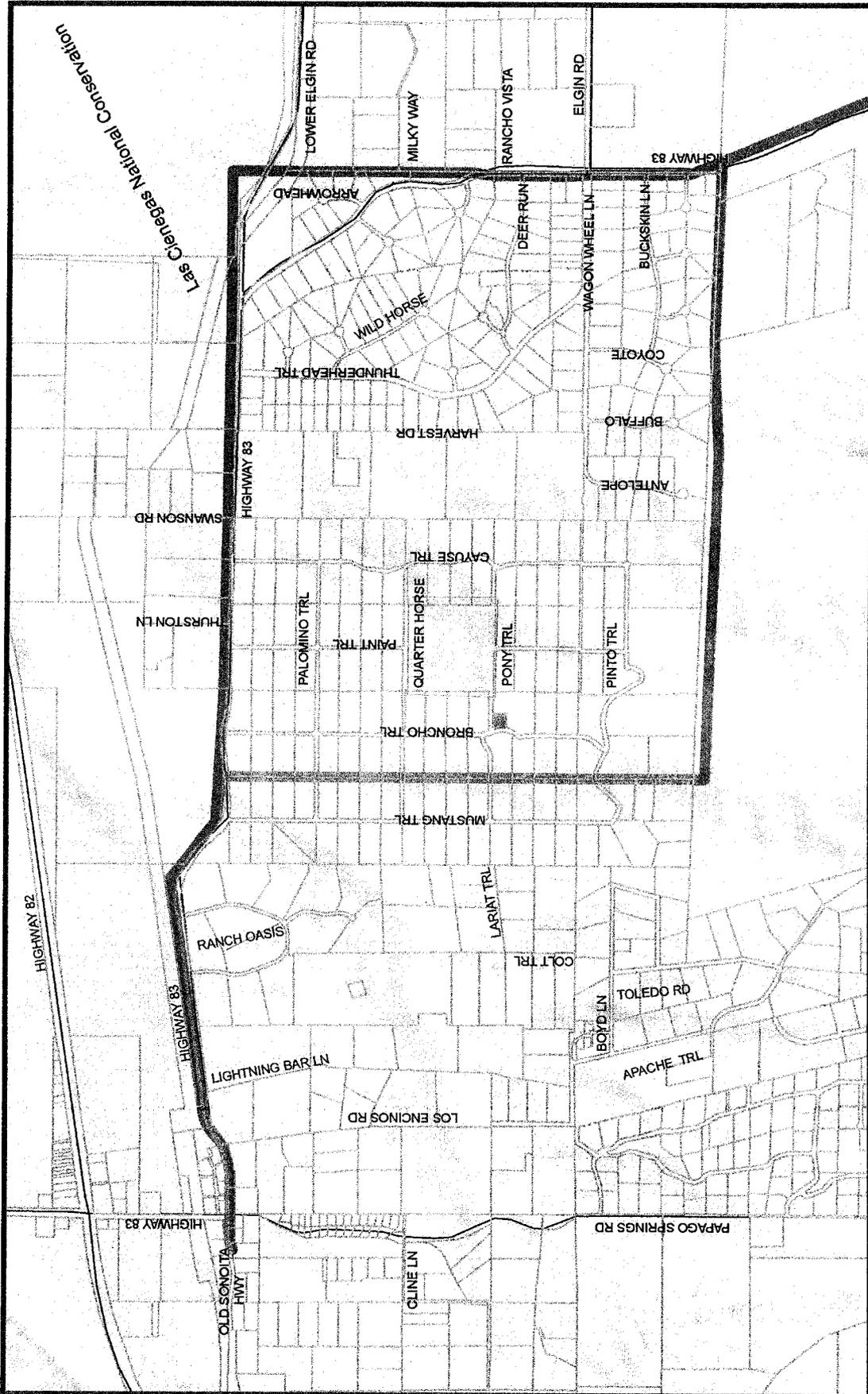
Right of Way Criteria for Sub-Transmission Line Routing

- **Existing SSVEC Easements** – Private/Exclusive and specific rights to our power lines
- **Designated Utility Easements** – Created through land development processes for use by All Utilities
- **Existing Roads / Highways** - Impact of roadway is already established
- **Natural Landscape Features** – Used to reduce visual impact of poles and power lines
- **Existing Power Line Corridors** – Impact of line is already established
- **Current and Proposed Land Use** – All adjoining land to SIDB is residential on this project
- **Property Orientation** – Adjacent to property lines to reduce impact on property
- **Minimize Angles in Pole Line** – Higher construction cost and increased number of poles

DESIGN COST COMPARISONS PER OPTION



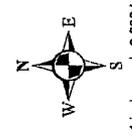
IN MILLIONS



Las Chingas National Conservation

Option Considerations Route 1A and Route 3
 69kV Sub-Transmission Route Options
 (from San Ignacio del Babocomari Land Grant)
SONOITA RELIABILITY PROJECT

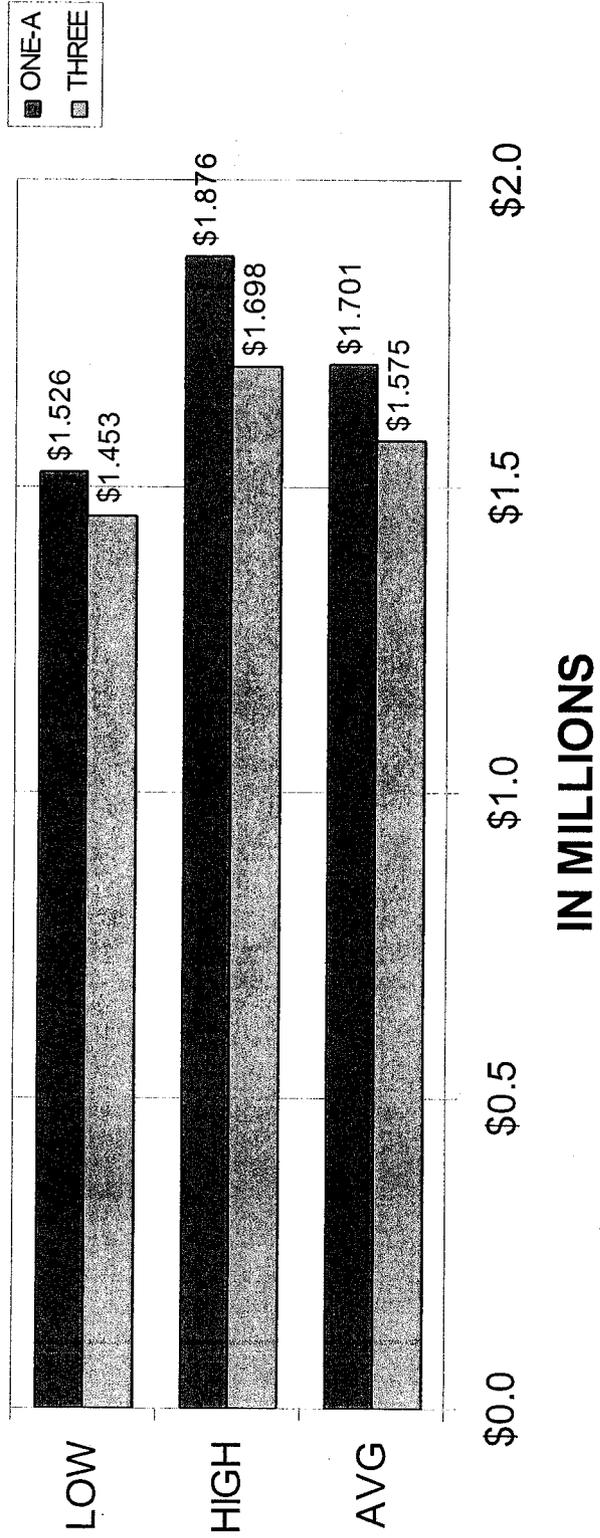
- | | | | |
|--|---------------------|--|----------------------|
| | Option 1A | | BLM |
| | Option 3 | | Forest |
| | SIDB Easement | | Local or State Parks |
| | Buchanan Substation | | Military |
| | Sonoita Substation | | Natl. Parks |
| | | | Other |
| | | | Private |
| | | | State Trust |
| | | | Wildlife |

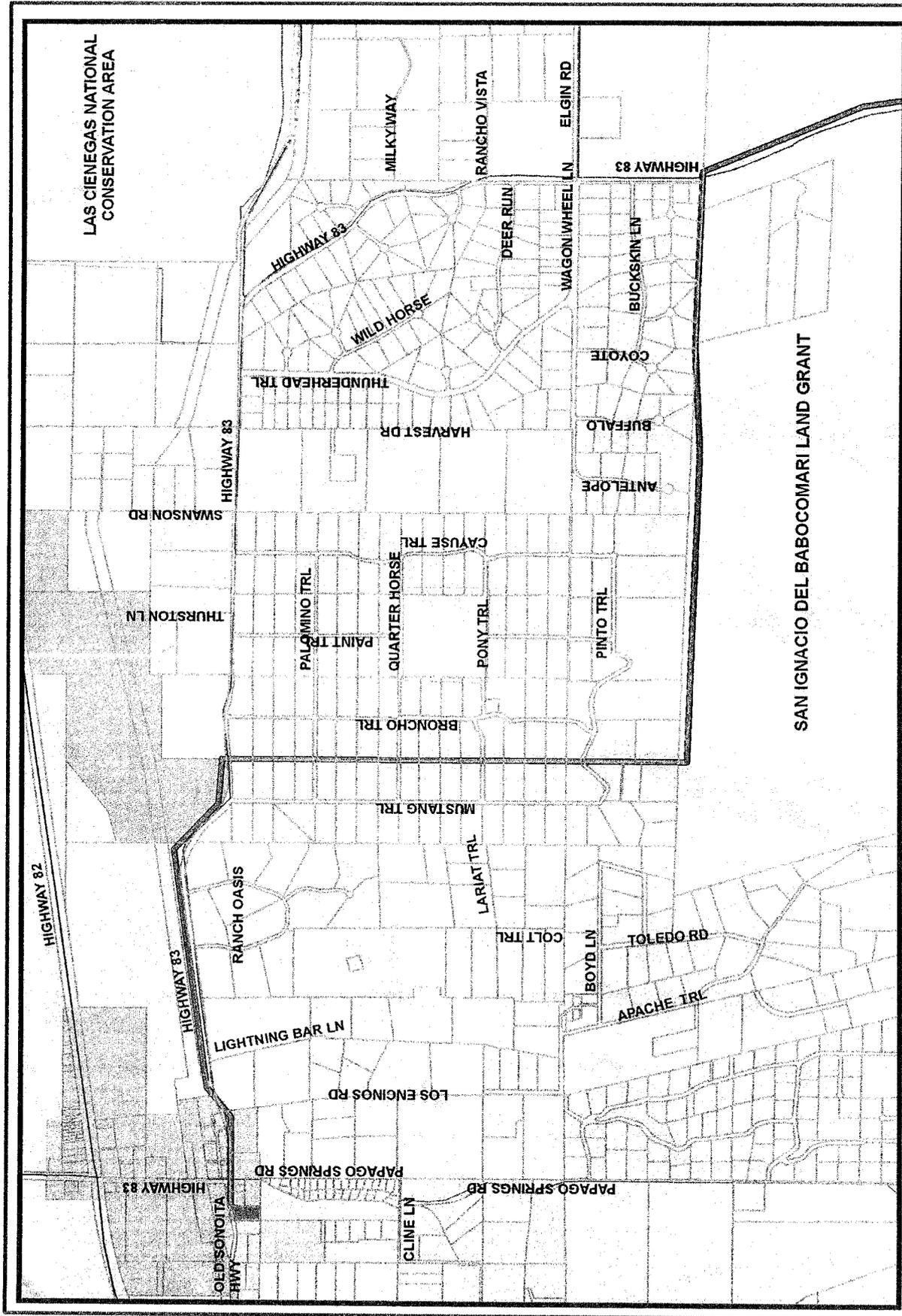


1 inch equals 2,000 feet



DESIGN COST COMPARISONS PER OPTION



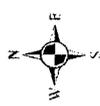


LAS CIÉNEGAS NATIONAL
CONSERVATION AREA

SAN IGNACIO DEL BABOCOMARI LAND GRANT

69kV Sub-Transmission Final Route
(from San Ignacio del Babocomari Land Grant)
SONOITA RELIABILITY PROJECT

- Legend**
- 61 Neighbored Business
 - 62 Farm
 - 63 General Business
 - 64 General Rural (180y)
 - 65 High Farm (60)
 - 66 Residential (20)
 - 67 Residential (10)
 - 68 Suburban Rural (120)
 - 69
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Community Information

SSVEC has been forthright with the community regarding plans for the Sonoita Reliability Project. SSVEC information has been disseminated to the entire service area in order to provide accurate representation of the project to our members.

- March 4, 2008: Meeting with Community group to discuss Project concerns
- March 4, 2008: Letter to community regarding reliability concerns in area
- July 7, 2008: Letter inviting community to attend Sonoita Reliability Project Presentation
- July 22, 2008: Community Presentation in Elgin
- August 6, 2008: Letter inviting Sonoita neighborhood to discuss route options
- August 8, 2008: Letter to community providing synopsis of July 22nd Presentation.
- August 13, 2008: Neighborhood Meeting for Sonoita residents
- September 12, 2008: Meeting with "Community Committee" to "facilitate discussions between the cooperative and the community"
- September 22, 2008: Letter to community providing detailed information regarding the Sonoita Reliability Project need, history, options, alternatives, myths & rumors.
- December 1, 2008: Letter to community regarding a final decision for routing of the 69kV sub-transmission line
- January 17, 2009: Sonoita Hills Neighborhood Meeting to offer underground conversion of existing distribution lines in order to reduce height and number of 69kV poles on route through neighborhood.

Numerous telephone conversations, email, personal meetings, and small group meetings during this period. 87

Myths & Rumors

Several 'myths' being circulated about the Sonoita Reliability Project:

- The 69kV sub-transmission line and substation is 'overkill' for the small community of Sonoita:
 - The 69kV voltage is SSVEC's business model and is the standard system for connecting its electric distribution substations which serve all of its communities - even very small rural areas such as San Simon or Elfrida.
- SSVEC previously planned a 'loop' system which is now no longer planned:
 - A 69kV 'loop' system has NEVER been planned for this project. A 'loop' system would require TWO new transmission lines, basically creating a circle around the entire Sonoita area
- SSVEC is refusing to meet with a Community Committee:
 - SSVEC met with a Community Committee on September 12, 2008. The meeting was to discuss the issues in-depth for the Committee to gain a thorough understanding of the project, so they in turn could redistribute the information to the Community. This was not a negotiation meeting or a directive by SSVEC for any further action. Unfortunately, the Committee commenced with a call for a vote among a small segment of the community, which created discord among other community members and outcry against SSVEC as the 'director' of the vote.

Myths & Rumors

- The proposed line would run right along the edge of the Audubon Research Ranch. Damage from work already begun has negatively impacted at least 40 long-term projects, and one project has already been cancelled:
 - * First, SSVEC has not been notified by the Audubon Appleton-Whittell Research Ranch that 40 projects have been affected; the Audubon has indicated that 40 years of data accumulation on one particular type of research, namely cross-fence comparisons, may be affected.
 - * However the easement area is shared with Qwest Communications, who in 1991 significantly cleared and disturbed the easement with the installation of an underground fiber-optic cable, and continues with maintenance travel disturbance along the easement.
- The new power line will create significant environmental impact and severe visual impact to virgin grasslands.
 - * As a responsible member of community, SSVEC has performed environmental studies of the new power line route along the San Ignacio del Babocomari easement; these studies have concluded that no sensitive, threatened or endangered species or habitat exist in the project area.
 - * SSVEC has taken great care with design considerations to avoid disturbance to irreplaceable native vegetation such as oak forests and riparian areas, and as part of the project, disturbance and/or clearing of the right-of-way will be re-seeded with native grasses upon completion of construction. This is intended to retain the natural grasslands character of the easement, and reduce the invasion of noxious weed species.

Myths & Rumors

- A Constructive Point Paper – Assumptions for Alternatives
 - This particular Paper created by *Local concerned citizens, ratepayers, and customers* is being circulated as a resolution to Important Electrical Reliability Issues. However, the Paper is technically unsound regarding SSVEC's capabilities, especially regarding Assumed and Backup Alternatives. Furthermore, the Alternatives suggested require substantial additional costs to be incurred, not only by SSVEC and its members, but by TEP or SWTC.
 - SSVEC has consistently provided information regarding its investigation and conclusions of these suggested alternatives in community meetings and documentation.
- The Constructive Point Paper and other letters of opposition to the 69kV power line route do not acknowledge that the San Ignacio del Babocomari Land Grant is privately held property; and in 1982 the SIDB landowner made a private decision to grant an easement across their private property specifically for the 69kV power line. This decision has been on public record for over a quarter of a century; it has recently been confirmed and is not a public matter.

What's Next?

- Complete the Substation and 69 kV Sub-Transmission Line Design
- Material Acquisition and Construction scheduling
- Proposed in-service date in early 2010
- Neighborhood input for design refinements

EMF

- Research on EMF began in the 1970's and continues today
- According to researchers, there are no confirmed health risks associated with EMF
- No Federal or Arizona State standards have been established for EMF levels or exposure

National Institute of Environmental Health Services

<http://www.niehs.nih.gov/emfrapid>

World Health Organization www.who.int

Electric Power Research Institute www.epri.com

EMF: Electromagnetic Fields

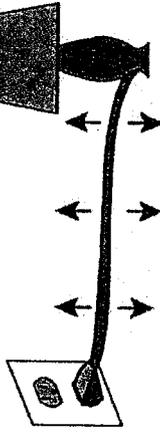
EMF's are produced by ALL devices which use, carry or Produce Electricity

Ex: computers, televisions, refrigerators, microwaves and alarm clocks

A Comparison of Electric and Magnetic Fields

Electric Fields

- Produced by voltage.

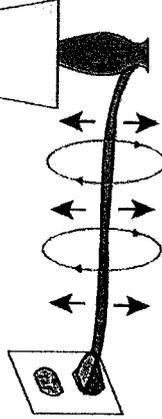


Lamp plugged in but turned off. Voltage produces an electric field.

- Measured in volts per meter (V/m) or in kilovolts per meter (kV/m).
- Easily shielded (weakened) by conducting objects such as trees and buildings.
- Strength decreases rapidly with increasing distance from the source.

Magnetic Fields

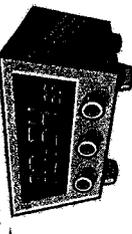
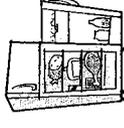
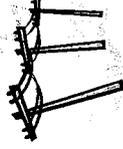
- Produced by current.



Lamp plugged in and turned on. Current now produces a magnetic field also.

- Measured in gauss (G) or tesla (T).
- Not easily shielded (weakened) by most material.
- Strength decreases rapidly with increasing distance from the source.

A Comparison of Household Appliances and 69kV Powerline

<p>Microwave</p>  <p>185 mG</p>	<p>Alarm Clock</p>  <p>8 mG</p>
<p>Refrigerator</p>  <p>2mG</p>	<p>69 kV Power Line</p>  <p>3mG</p>

Measurements taken at six inches from appliances. Measurement on power line was taken directly underneath wires.

An appliance that is plugged in and therefore connected to a source of electricity has an electric field even when the appliance is turned off. To produce a magnetic field, the appliance must be plugged in and turned on so that the current is flowing.



Sulphur Springs Valley
Electric Cooperative, Inc.

A Southern Electric Company

August 8, 2008

Sulphur Springs Valley Electric Cooperative (SSVEC) provides electric service to you and your neighbors in the Elgin, Sonoita, and Patagonia areas. The purpose of this letter is to update you on the status of the Sonoita Reliability Project and the community meeting that was held on July 22, 2008 to review this project.

We would like to thank those that attended the July 22 meeting. We had a small turnout and wanted to update those that were unable to attend. At the meeting we went over the history of the reliability project beginning in 1982 when we acquired the easement along the San Ignacio del Babocomari Land Grant and purchased the substation site. We discussed types of transmission structures, possible routes and introduced a new substation site.

We have listened to you and have taken action based on what we have heard. Concerns have been expressed about the environment, views, line locations and the substation location. We have heard you and will explain what we have done mitigate your concerns.

First, let me give you a short review of the information presented at the meeting. In 1980 we identified reliability issues with the distribution line that serves your area. In 1982 we purchased an easement and substation site in the Sonoita area with the intention of using the easement and site at the appropriate time in the future. In the early 90's technology and an upgrade of the Huachuca substation deferred the need for this project. In 2005 reliability and capacity issues rose again and in 2007 SSVEC included \$7.9 million in our 2008 - 2010 construction plan for a sub-transmission line and substation in Sonoita.

This project is needed because of the capacity of Huachuca substation and the capacity of the distribution line has nearly reached their limits. The load in the area has more then tripled with an increase from about 2 MW's in 1980 to almost 7 MW's in 2008. If the load had remained at 2 MW's we would not be considering this upgrade now. Increasing the size of the Huachuca substation will not solve the problem; the existing distribution line does not have the capacity to deliver the needed power to the area.

Your area is served by over 350 miles of line and is the longest in our system with over twice as many outages as the next highest line. This is an extremely long radial distribution line - meaning there is no connection to another distribution line for back-up during an outage. These factors contribute to reduced service reliability (i.e. more outages and blinks) in the area. The best way to solve both of these problems is to locate a substation in the high load area and create 4 distribution feeders and break up those 350 miles of line.

The location of the existing substation site, which was purchased in the early 80's, was a member concern. We reviewed an alternate site recommended by a few Sonoita members. This proposed site did not locate the substation close to the high load area where it is needed and we did not have the easements to get to and from the site, therefore the proposed site dropped from further consideration. We evaluated a third location in a commercial area. We listened to you and purchased a substation site near the intersection of Highway 83 and the Old Sonoita Highway in an area zoned commercial. This site is close to our existing lines and we can use the topography to help reduce the visibility. We did listen and move the substation from a residential neighborhood to a commercial area. The announcement of the new substation location was supported by the members attending the meeting.

The next part of the presentation reviewed the sub-transmission line route. Members have expressed concern over what the line will look like. We will use mono pole (single pole) structures. We ***will not*** be using lattice towers, like the ones you see along the interstate by Tucson. We have a few choices, other than wood, that will reduce their visibility. Also, these types of poles (steel, concrete, and fiberglass) are stronger which will allow for longer spans and fewer poles. Mono poles are sometimes called narrow profile since the insulators are attached to the pole and not a cross arm. We also showed pictures of existing poles and colors and showed how different colors blend into the scenery more readily. Grey poles blend into the landscape much better than other colors. The only other structure that will be used will be a slightly taller mono pole that will allow for a three phase distribution line to be attached. Some homes and businesses will be served off that line so we will not have to have two lines running side by side.

As we mentioned we have had an easement for our line across the San Ignacio del Babocomari Land Grant since 1982. There are no other viable options except to use the easement. We do have a few options when we get to the Sonoita area. When we need to build any line we consider the following items:

- Existing SSVEC Easements – Express Private/Exclusive and specific rights to our power lines
- Designated Utility Easements – Created through land development processes for use by all utilities.
- Existing Roads / Highways - Impact of the roadway is already established. In some cases utility rights-of-way exist or can be obtained along existing roadways.
- Natural Landscape Features – Used to reduce visual impact. An example would be using lower terrain vs. ridgeline placement of poles.
- Existing Power Line Corridors – Impact of line is already established
- Current and Proposed Land Use – Some State and Federal agencies allow utility easements while others are difficult or impossible to acquire easements from.
- Property Orientation – Whenever possible power lines are placed parallel to property boundaries rather than diagonal across properties.
- Minimize Angles in Pole Line – Angle poles require either guying or larger diameter poles.

Using the above criteria we reviewed 4 different routes from the Babacomari easement to the new substation site. The pros and cons of each of the proposed routes were considered. The option that was selected was based on the following considerations:

- Designated utility easements that were already impacted with overhead power lines
- Good roads for access
- Alignment in a drainage valley for least visual impact of all options considered
- Placing poles low in the Valley – out of view from the surrounding community.
- Lines run parallel with existing property lines that minimize impact of use
- Lowest residential build out of all the options considered.

We did listen to your concerns and selected a route that has the fewest members impacted. If another route was selected it would have impacted more members.

What is next? SSVEC Engineers will continue working on the substation and the 69kv sub-transmission line design. Materials for this project can take up to 18 months to acquire. Long lead-time items include the substation transformer, other substation equipment, poles, and conductor. Our best estimate for a completion date is early 2010. SSVEC will remain open to community input. We can mitigate some visibly by working with the individual members along the route for pole location which we will do. One other concern that was raised was the Rosemont mine. The proposed mine is not in our service territory and if it opens it will not be served by SSVEC.

We do have SSVEC crews in the area working on different projects. Our crews are not working on the transmission line at this time. We are doing some easement clearing on the San Ignacio del Babocomari Land Grant to facilitate engineering design and determining location of other utilities. SSVEC has worked diligently in evaluating options for improving reliability in this area. SSVEC has listened to your concerns about the impact of the line and is sensitive to the visual impact this new transmission line will have in the area.

We have listened to your concerns. We have moved the substation to a commercial area and have selected a sub-transmission route the impacts the fewest number of members and has the lowest visibility. We hope this letter was informative and look forward to improving your service.

Sincerely

Jack Blair
Chief Member Services Officer
Sulphur Springs Valley Electric Cooperative



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy Cooperative

August 6, 2008

Dear Member,

Sulphur Springs Valley Electric Cooperative would like to invite you to a follow-up meeting regarding the Sonoita Reliability Project. This meeting will be held Wednesday evening August 13, 2008 at 5:30 p.m. at the Elgin School.

This meeting is intended to be an informal neighborhood dialogue regarding the 69kV sub-transmission line route options presented at the Sonoita Community Outreach Meeting.

Included with this letter is a base map of the options presented during the first community meeting and their location according to Santa Cruz County property lines and roads/highways. SSVEC's Project Team members will have detailed maps available for review and in-depth discussion; we strongly encourage all landowners to attend.

An additional topic for discussion is recent communication to SSVEC from a group of Sonoita individuals indicating their election by the community to:

"...represent the community's interests and liason with SSVEC regarding the impact of this proposed project on Sonoita. The Committee members are: Steve Getzwiller, Sheila Dagucon, Gail Woodard, John Bodey, Susan Scott, Jeanne Horsmann, and Sue Downing. These people represent the major stakeholders in the community related to the SRP, such as the Community Crossroads Forum, Sonoita realtors, Sonoita Chamber of Commerce, and especially the property areas significantly affected by the proposed power line route (i.e.; Sonoita Hills, Sonoita Estates, Sunset Knolls)."

SSVEC wants to allow all landowners to have a voice in these discussions. If you, the community, have identified this group to be your voice, it should be confirmed at the time of this meeting.

The Project Team looks forward to participating in a productive discussion that will work towards a solution that is not only beneficial to SSVEC, but to the entire Community.

Again, please meet with us Wednesday, August 13th at 5:30 p.m. at the Elgin School.

Regards,

Deborah White, SR/WA-NAC
Right of Way Services Manager



Sulphur Springs Valley Electric Cooperative, Inc.
PO Box 830 Wilcox, AZ 85644-0830



July 7, 2008

The purpose of this letter is to update you on the status of the electric service that Sulphur Springs Valley Electric Cooperative (SSVEC) provides to you and your neighbors in the Elgin, Sonoita, and Patagonia areas. In our March letter to you we told you we would update you when the status of our litigation over the right-of-way easement to deliver power to you changed.

SSVEC has some good news to report. SSVEC and the Babacomari Ranch Company have reached a settlement agreement on the easement and electric line through their property. SSVEC is now prepared to proceed with the next steps in the Sonoita Electric Reliability Project. This project will ultimately result in additional electric capacity as well as improved quality of service.

To that end, SSVEC will hold an informational meeting on Tuesday, July 22, 2008 beginning at 6:30 p.m. at the Elgin School in Sonoita. At this meeting, SSVEC will:

- Introduce the SSVEC team members.
- Explain why this line is needed.
- Provide a history of this route and easement.
- Discuss the environmental considerations.
- Show examples of the pole types and wire.
- Share the design of the project as well as the route and the substation.
- Explain the safety aspects of the project.
- Share a tentative schedule.
- Answer questions.

Finally, while we wanted to communicate with our members, we could not discuss specifics of this line during the litigation with the Babocamari Ranch Company as we did not want to prematurely report items that were not settled and could have changed. However, during this period, we attended many meetings in the area and did listen to the community concerns about the Sonoita Electric Reliability Project, many of which we have incorporated in the plan which we will share with you on July 22.

SSVEC looks forward to your attendance and participation at this meeting.

Sincerely,

Creden W. Huber

Chief Executive Officer



Sulphur Springs Valley Electric Cooperative, Inc.
P.O. Box 820 Whiteoak, AZ 85611-0820



March 4, 2008

The purpose of this letter is to advise you on the status of the electric service that Sulphur Springs Valley Electric Cooperative (SSVEC) provides to you and your neighbors in the Elgin, Sonoita, and Patagonia areas.

For many years, SSVEC's planning program has included building a transmission line and substation that would support the existing distribution lines in your area. Due to the very large expense of this type of transmission line, SSVEC has focused on cost-efficient alternatives to increase capacity on the existing line in response to increasing demand in the area, thus postponing construction of the higher-cost transmission line and substation - until now.

Due to the growth in the area the distribution line into this area is now very near its capacity limit. This line is approximately 360 miles long and serves almost 2,400 meters. This is an extremely long radial distribution line - meaning there is no connection to another distribution line for back-up during an outage. These factors contribute to reduced service reliability (i.e. more outages and blinks) in the area. As a result, SSVEC must move forward with its plan to construct a new transmission line and substation to assure the continued reliability of service to you and to assure the availability of service to future members.

SSVEC purchased easements for a transmission line in 1982. SSVEC is currently in litigation regarding a portion of that easement. Due to this litigation, it is uncertain exactly when SSVEC will be able to build the new transmission line. As part of that litigation survey crews have been in the area. SSVEC is hoping for a timely resolution. In the meantime, SSVEC crews will be doing everything we can to maintain electrical service in the area at the highest level possible.

SSVEC has listened to your concerns about the impact of the line and is sensitive to the visual impact this new transmission line will have in the area. Although SSVEC has not begun design of this line due to the litigation, we intend to design the line to minimize this impact within the constraints of existing technology and good financial management.

SSVEC strives to keep our members informed on issues such as this. Due to the nature of litigation, it could be months and possibly over a year before the status of this situation changes. We will share more information with you as it becomes available.

Sincerely,

Creden W. Huber
Chief Executive Officer

Exhibit B



**Sulphur Springs Valley
Electric Cooperative, Inc.**

P.O. Box 820
Willcox, AZ 85644
Telephone (520) 384-2221 FAX (520) 384-5223

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AZ CORP COMMISSION
DOCKET CONTROL

ORIGINAL

November 20, 2009

Arizona Corporation Commission

DOCKETED

NOV 20 2009

HAND DELIVERED

Prem Bahl, Utility Engineer
Utilities Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

DOCKETED BY	<i>MM</i>
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**Re: Sulphur Springs Valley Electric Cooperative, Inc.'s Meetings with Staff
Regarding Independent Feasibility Study Required by Decision No. 71274
Docket No. E-01575A-08-0328**

Dear Mr. Bahl:

The purpose of this letter is to set forth the meetings that representatives of Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Cooperative") have had with Staff in connection with the Cooperative's compliance with the Arizona Corporation Commission's ("Commission") Decision No. 71274 issued on September 8, 2009 ("Decision") which prohibited SSVEC from constructing a 69 kV sub-transmission line and required the Cooperative to conduct and file an independent feasibility study ("Study") by December 31, 2009.

Background

As you know, pursuant to the Decision, SSVEC was ordered to have prepared by an independent third party a Study that included alternatives (including the use of distributed renewable generation) that could mitigate the need for construction of the proposed 69 kV power line project. At the August 17 and 25, 2009, Open Meetings of the Commission, the Commissioners had requested that SSVEC keep Staff informed as to the selection process the Cooperative would initiate relating to the Study.

Prem Bahl, Utility Engineer
November 20, 2009
Page 2

In order to assist SSVEC in the preparation and issuance of a Request for Proposal ("RFP"), SSVEC engaged the services of TRC Companies, Inc. ("TRC") of Albuquerque, New Mexico. TRC has extensive experience in Utility infrastructure, energy, and environmental planning and engineering. Although SSVEC was not expressly required to garner input from the Save the Scenic Sonoita Elgin Grasslands ("3SEG") group (aka Sonoita Mountain Empire) on the Scope of Work ("SOW") for the RFP, SSVEC invited representatives from the group to review the SOW and provide their requests for the Study. On or about October 12, 2009, TRC completed the RFP and final list of potential bidders. The bidder list was prepared by TRC, and included input from the 3SEG representatives. It was determined that in order to give potential bidders sufficient time to bid on the RFP, and for SSVEC to award the bid to provide sufficient time for the winning bidder to complete the Study for the December 31, 2009, compliance deadline, the RFP needed to be released as soon as possible.

October 13, 2009 Meeting with Staff

On or about October 12, 2009, SSVEC, 3SEG, and TRC completed the RFP and potential list of bidders. On October 13, 2009, Mr. Jack Blair, the Cooperative's Chief Member Services Officer, came to Phoenix and met with you to discuss the RFP and the process that SSVEC had engaged in to that point. Mr. Blair explained that there were two meetings with the 3SEG group which opposed the 69 kV line and who are interested in renewable alternatives. Input from those members was included in the SOW for the RFP and three additional entities were added to the potential list of bidders at their request. Mr. Blair indicated that although not expressly required, SSVEC wanted to be sure there was community involvement in the process to ensure that there would be no objection to the RFP or the Study that was ultimately prepared and filed. Mr. Blair then went over with you the entire process SSVEC went through including the selection of TRC, the contents of the RFP, and the list of potential bidders. Mr. Blair also provided you a copy of the RFP and list of bidders and indicated that it was SSVEC's intention to issue the RFP unless you had an objection. You indicated that the RFP was a very good document and that the list of potential bidders was very comprehensive and included those engineering firms that had the requisite expertise and standing to conduct the Study. Mr. Blair then indicated that SSVEC was going to move forward and issue the RFP, which was released for bid that very afternoon.

October 28, 2009 Meeting with Staff

Responses to the RFP were due on October 27, 2009. Accordingly, SSVEC pre-arranged to meet with you and Mr. Olea on October 28, 2009, to discuss the responses and the selection of the winning bidder. On October 28, 2009, Deborah White and I

Prem Bahl, Utility Engineer
November 20, 2009
Page 3

came to Phoenix for the meeting. In attendance for Staff were yourself, Del Smith and Elijah Abinah. We were told that Mr. Olea was unable to attend the meeting because he was on the "A Team" and was an advisor to the Commission.

At the meeting, we informed you, Mr. Smith, and Mr. Abinah that there were only two responses to the RFP from the 14 potential bidders. We then presented Staff with the attached TRC RFP Summary and Statement of Work and discussed the entire RFP process and subsequent responders, as well as the Cooperative's intended selection of Navigant Consulting Inc. ("Navigant") for bid award. We also discussed the following topics:

- Who TRC is; SSVEC's relationship with TRC; TRC's coordination with 3SEG.
- TRC's work in preparing the SOW and the SOW itself.
- The process and rationale for pre-qualifying bidders, as opposed to an open bid solicitation including:
 - a) SSVEC's effort to obtain nationally recognized firms with the staffing capabilities to meet the requirements with known comprehensive experience in fields of study that had the ability to respond in a timely manner; and
 - b) The avoidance of conflicts of interest.
- The list of 14 pre-qualified bidders including those specifically suggested by the 3SEG representatives.
- SSVEC's selection process of Sonoita representatives including the:
 - a) Names of the representatives;
 - b) Invitation process; and
 - c) Number of meetings.
- Bid estimates of costs, and other related costs for study.

During the meeting, we also provided detailed answers to questions posed by Mr. Abinah, and discussed issues associated with SSVEC's pending application for a moratorium. At the conclusion of the meeting, the Cooperative and Staff were in agreement that SSVEC should move forward to award the bid to Navigant which SSVEC has since done. Navigant has commenced work on the Study and is required to provide the Study to the Cooperative no later than December 29, 2009, to be filed with the Commission by December 31, 2009.

Prem Bahl, Utility Engineer
November 20, 2009
Page 4

The Cooperative is committed to continue working with Staff and keeping Staff informed in regard to this matter. If any of what I have stated above does not meet with your understanding, please do not hesitate to contact me. Thank you for the opportunity to work with you and Staff on this matter.

Respectfully,



Ron Orozco, P.E.
Engineering Manager
Sulphur Springs Valley Electric Cooperative, Inc.

Cc: Steve Olea, Director of Utilities
Elijah Abinah, Assistant Director of Utilities
Del Smith, Utilities Engineer
Docket Control (13 copies)

10815281.1



4221-A Balloon Park Road NE
Albuquerque, NM 87109

505.761.0099 PHONE
505.761.0208 FAX

www.TRCsolutions.com

October 27, 2009

Ms. Deborah White
Right-of-Way Services Manager
Sulphur Springs Valley Electric Cooperative
P.O. Box 820
Willcox, AZ 85644

Subject: Sonoita Reliability Project – Feasibility Study
Request for Proposal Response Results

Dear Ms. White,

TRC submitted the Sonoita Reliability Project – Feasibility Study Request for Proposal (RFP) to fourteen firms on October 13, 2009 with a response due date of October 27, 2009 at 2:00 pm MDT. The following is a summary of the responses from the fourteen firms that received the RFP.

Five companies responded that they did not intend to submit a proposal in response to the RFP. The five companies indicating no intent to bid were Synapse Energy Economics, Commonwealth Associates, Burns & McDonnell, URS and Stanley Consultants. The no bids were due mostly to staff unavailability due to the number of other projects currently underway.

Five companies did not provide any response to the RFP at all. The five companies that provided no response were Black & Veatch, HDR, Natural Capitalism, Ecos, and Sargent Lundy.

TRC received four responses of intent to bid. The four intent to bid responses were from Navigant, KEMA, CH2M HILL, and Eulteig. Only Navigant and Eulteig participated in the Pre-Bid conference call on October 16. Subsequent to the pre-bid conference call KEMA and CH2M HILL did not submit a proposal. KEMA notified TRC today they did not have time available to complete the project due to ongoing commitments. Bid proposals were received from Navigant Consulting and Uiteig.

Navigant Consulting is a publicly traded company (NYSE: NCI) with 28 offices and a local office in Phoenix, AZ. They have 1925 employees and 2008 revenues of \$810,000,000. Navigant's Energy Practice is organized around Power Systems & Pricing, Business Planning & Performance Improvement, and Emerging Technologies & Energy Efficiency. The staff that will be assigned to the project have experience in system planning,



4221-A Balloon Park Road NE
Albuquerque, NM 87109

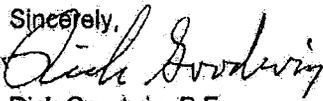
505.761.0099 PHONE
505.761.0208 FAX

www.TRCSolutions.com

reliability, and distributed energy resource technologies including distributed generation, photovoltaic, demand response and storage. However, Navigant did not address the resources in the company that would be working on the environmental tasks stated in the RFP. The environmental task in the RFP is an area that needs further clarification by Navigant. The price Navigant quoted for the study is \$126,000 for labor plus an estimated direct expense cost of 15 to 20 percent of labor. Including the upper end of the estimated expense cost, the total price from Navigant is \$151,200.

Ulteig is an employee owned firm of 350 professionals working in engineering, planning, energy, routing & permitting and right-of-way located in Minneapolis, MN. Their proposal did not include much information documenting the company's experience in renewable energy or distributed generation project experience and was not very substantive. Ulteig does have experience in system planning and reliability studies. The environmental resource assigned to the project was addressed but the project experience seems limited. The price quoted for the study was \$174,000 and included \$5,000 for two study team members to make a two day field visit to the Sonoita area.

If you need any additional information or have any questions, please call me at (505)-264-9539.

Sincerely,

Rick Goodwin, P.E.
Manager, New Mexico Operations
Power Delivery Engineering

REQUEST FOR PROPOSAL (RFP)

FOR

**Sulphur Springs Valley Electric Cooperative, Inc
Sonoita Reliability Project – Feasibility Study**

Issue Date: 10/13/09

**REQUEST FOR PROPOSAL
Sonoita Reliability Project – Feasibility Study**

SECTION 2 – Statement of Work

2.01 TASKS TO BE PERFORMED

The purpose of the Sonoita Reliability Project Feasibility Study is to perform an independent evaluation of the operational performance, and to identify deficiencies in the performance, of SSVEC's 24.9kV V-7 distribution circuit at current and projected peak load levels and to evaluate options to mitigate performance deficiencies. It is not the intent of the Feasibility Study to either rebut or support previous studies or recommendations contained in documents provided for background information purposes. All options and alternatives considered for mitigation of operational deficiencies must only be for mature, commercially available, economically viable technologies, must provide a long term solution to correct deficiencies and must be evaluated over a twenty year project life.

Communications with SSVEC staff, local communities, other utilities, or the ACC are not being required or requested as part of this scope of work.

1. Using data provided by SSVEC, assess the operational performance of the SSVEC 24.9kV distribution feeder circuit V-7 and Huachuca West Substation and identify operational deficiencies for current peak load conditions. Performance should be evaluated using RUS planning and operations criteria and other utility industry criteria if applicable.
2. Using historic peak load data and other data provided by SSVEC as well as data from other resources, forecast the peak load on circuit V-7 for 5, 10 and 20 years into the future.
3. Assess the operational performance of circuit V-7 and Huachuca West Substation under projected peak load conditions 5 years, 10 years and 20 years into the future and identify operational deficiencies. Performance should be evaluated using RUS planning and operations criteria and other utility industry criteria if applicable. If necessary, interpolate the projected peak load on circuit V-7 to identify the specific year or load level at which deficiencies initially occur.
4. Review the outage and interruption history for circuit V-7 and Huachuca West Substation for the past 5 and 10 year periods. Calculate outage indices using RUS indices such as CHPC as well as SAIDI, SAIFI and CAIDI indices.
5. Evaluate the technical ability of renewable energy distributed generation technologies, either utility or non utility-owned, to mitigate existing and future deficiencies in the operational performance of circuit V-7 and Huachuca West Substation. Renewable energy technologies considered should include at a minimum solar and wind resources. Solutions should have a twenty year project life to be considered viable.
6. Evaluate the technical ability of fossil fuel distributed generation resource technologies to mitigate existing and future deficiencies in the performance of circuit V-7 and Huachuca West Substation. In addition to operational performance, capital costs and operating costs include an assessment of the potential environmental impacts of air emissions, water consumption and noise levels in the evaluation. Solutions should have a twenty year project life to be considered viable.

7. Evaluate the applicability and cost impact of mature, commercially available energy storage technologies to compliment renewable energy or fossil fuel distributed generation technologies mentioned above to replace the need for the proposed 69kV line and substation. Solutions should have a twenty year project life to be considered viable.
8. Evaluate the ability and feasibility of the 24.9kV distribution line options identified by SSVEC in its studies to mitigate the existing and future deficiencies in the operational performance of circuit V-7 and Huachuca West Substation. Previously identified SSVEC options include 24.9kV line upgrades, new 24.9kV express feeder construction, connection to foreign 13.8kV distribution circuit and connection to a foreign 46kV line. Technical analyses of the operational performance of foreign 13.8kV and 46kV lines are not being required for these evaluations. Solutions should have a twenty year project life to be considered viable.
9. Evaluate the ability of the new 69kV transmission line and new 69kV-24.9kV substation options identified by SSVEC in its studies to mitigate the existing and future deficiencies in the operational performance of circuit V-7 and Huachuca West Substation over a twenty year project life.
10. Identify feasible construction options, if any, not considered by SSVEC in its previous studies of the V-7 circuit and evaluate their ability to mitigate existing and future operational deficiencies in the performance of circuit V-7 and Huachuca West Substation. Solutions should have a twenty year project life to be considered viable.
11. Based on available information, evaluate potential impacts to cultural, biological and aesthetic resources resulting from the feasible line construction, distributed generation and renewable energy alternatives considered for mitigating operational deficiencies in circuit V-7 and Huachuca West Substation. Feasible suggestions to reduce any substantial impacts should be provided as part of the evaluations.
12. Consider the potential impact, if any, of EMF from renewable energy, distributed generation and line construction alternatives considered for mitigating operational deficiencies in V-7 and Huachuca West Substation. Literature search findings are sufficient for this task. Quantitative studies of EMF levels for alternatives considered are not being required as part of this task.
13. Using substation and line construction cost data provided by SSVEC, as well as cost data not provided by SSVEC, prepare a present worth economic comparison of technologically feasible distributed generation and electric system construction options identified above to mitigate existing and future deficiencies in the performance of circuit V-7 and Huachuca West Substation. Economic comparisons should be based on a 30 year project life.
14. Identify potential contractual, regulatory, rights-of-way or legal issues that could cause either significant delays in completing technologically feasible options or which could significantly increase costs.

2.02 TASKS NOT REQUIRED

Communications with SSVEC staff, local communities, other utilities, or the ACC are not being required or requested as part of this scope of work.

2.03 AVAILABLE DATA

Data to be provided for the feasibility study include, but are not necessarily limited to:

- Capacity Study of Huachuca West Substation V-7 Feeder prepared by SSVEC Engineering Division, April 2007 – available for background information purposes only
- Preliminary Option & Cost Estimates and Solution Evaluation Factors prepared by SSVEC Engineering Division, February 1993 – available for background information purposes only
- 15 minute interval SCADA data for 2007, 2008 and through September 2009 for Huachuca West Substation and circuit V-7
- Recommendations For Request for Proposal prepared by the Citizens of the Mountain Empire dated October 4, 2009 – available for background information purposes only
- SSVEC comments on alternatives proposed by 3SEG to the Arizona Corporation Commission on July 22, 2009 – available for background information purposes only
- 10 years of outage history for circuit V-7
- A summary of significant efforts to improve the reliability of circuit V-7 over the past 10 years.
- Historical peak load data for 1998 through September 2009 for circuit V-7 and Huachuca West Substation. Additional historic peak load data will be provided if required and available.
- Average number of meters connected to circuit V-7 for the years included in studies.
- A summary of known new loads anticipated for circuit V-7 and their timing
- Available land use comprehensive plans
- Voltage data for peak load periods from remotely read meters (Turtle System) installed along circuit V-7
- Regulator settings for all voltage regulators on circuit V-7
- Settings for all reclosers and sectionalizers on circuit V-7
- MilSoft WindMil reduced circuit model of circuit V-7 for 2007 load data, including equipment database, in ZIP file format
- MilSoft WindMil detailed circuit model of 2007 circuit V-7 with 2008 allocated load data, including equipment database, in ZIP file format
- GIS data base for circuit V-7
- SCADA data and WindMil circuit model for SSVEC circuits included in study work
- System maps and drawings showing SSVEC circuit V-7, adjacent SSVEC distribution lines, SSVEC 69kV lines as well as foreign 13.8kV distribution and 46kV transmission lines and documentation concerning their availability from the line owners
- Rights-of-way and easement data for existing SSVEC lines and proposed line route options.
- SSVEC current discount rate to be used for economic evaluations
- SSVEC 24.9kV and 69kV unit construction standards
- RUS and NRECA Bulletins applicable to system analysis and planning
- History of the Babocomari Ranch
- Book - The Babocomari Village Site on the Babocomari River of SE Arizona
- Sonoita Service Improvement Project Advisory Committee Meeting Notes- May 12, 1993
- Sonoita Service Improvement Project Advisory Committee Meeting Notes- August 25, 1993

Respondents should identify any additional data that will be required to be provided by SSVEC to complete the circuit performance studies and load projections.

SECTION 3 – Deliverables

3.01 Final Report

The deliverable for this project is a final report that documents:

- The performance of SSVEC's circuit V-7 and Huachuca West Substation for current and future load conditions
- The outage history of SSVEC's circuit V-7 and Huachuca West Substation and SSVEC's projects to improve the reliability of circuit V-7
- Technically feasible options, including fossil fuel and renewable energy distributed generation, to correct deficiencies in the performance and reliability of SSVEC's circuit V-7 for existing and projected future loads
- The methodologies used to identify performance and reliability deficiencies in circuit V-7 and Huachuca West Substation
- The data used to evaluate circuit performance and reliability
- The data used to evaluate the efficacy of options considered as feasible solutions for identified operational and reliability deficiencies
- Potential options considered but not practicable with summary explanation why they were ruled out

Evaluation of technically feasible solutions considered in the deliverable report shall include documentation of:

- The efficacy of each option in correcting identified deficiencies
- Routing alternatives for line construction options including a discussion of easement acquisition, feasibility, timeline, and costs
- The length of time required to implement each option
- The length of time that each option provides a solution for deficiencies
- The potentially substantial impacts for each option, if any, to cultural, biological, aesthetic, air quality and water resources and feasible suggestions to reduce these impacts
- EMF and noise considerations for each option
- Potential regulatory, right-of-way, contractual, legal or other issues that could significantly delay or increase the cost of each option
- The Present Worth cost of each option, including estimated O&M costs, for a thirty year project life

The deliverable final report shall include either a separate section or appendix that contains short, summary discussions of each technically feasible option considered. Each of the option summaries should be no more than one page in length.

The deliverable report shall include a summary of the technically feasible options in a table or matrix format as either a separate section contained in the body of the report or as an appendix.

1. A draft of the deliverable final report shall be provided TRC and SSVEC in both PDF and Microsoft Word document formats no later than 5:00 PM MST on December 17, 2009.

2. The deliverable final report shall be sealed by a professional engineer qualified to carry out and direct the analyses and evaluations contained in the deliverable report.
3. Ten bound copies of the deliverable final report and an electronic copy of the final report and all supporting data, including circuit models, shall be delivered to SSVEC in Willcox, Arizona no later than 5:00 PM MST on December 29, 2009.



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy[®] Cooperative 

EXHIBIT
A-7
ADMITTED

July 14, 2008

Susan Scott

~~PO Box 170~~

~~Sonoita, Arizona 85637~~

Dear Ms. Scott,

Sulphur Springs Valley Electric Cooperative, Inc. has received your letter of July 2, 2008, and would like to respond to your concerns. SSVEC understands the frustration you have expressed, and have on several occasions conveyed to the community that we are listening to the concerns presented.

Unfortunately, during the last two years there has been an issue involving the 'unknown' resolution of an easement dispute between SSVEC and the Babacomari Ranch Company, which has not allowed SSVEC to plan or prepare, with any type of certainty, the power line route.

This of course has created frustration with SSVEC as well. SSVEC has a responsibility to serve its members, and in 1982 was preparing for this service by acquiring the rights for a future power line into the area. However at the time SSVEC needed to use these rights, as the Sonoita area electrical service was beginning to show critical signs of overload, the dispute commenced and has been in effect for more than two years.

I and other SSVEC staff members have attended many meetings in the Sonoita/Patagonia area in the past few years to listen to our members. We have repeatedly stated we were not in a position to discuss many of the issues that were raised since they could change during the litigation/negotiation process. The location of the substation was dependent on the outcome of the litigation.

We sent a letter dated March 4, 2008 (a copy is enclosed) to all of our members in this area updating them as to the status of the Sonoita Electric Reliability Project and promised when the situation change and more information became available it would be shared with them.

In early 2008 when there was some movement in the litigation we did agree to meet with you and others from the "Cross Roads Forum" which we did on March 4, 2008. We did agree at that time to meet with a group representing a "cross section of the community" and we were serious about meeting with this group.

Also recall that our first meeting was going to be an organizational meeting. When Mr. Strom finally informed me that a committee had been chosen I asked for the names of the members. Needless to say I was surprised when I finally got the list of names only to find out that three of the selectees were on the witness list of the Babacomari Ranch Company and were scheduled to testify against SSVEC. On advice of legal counsel we requested a committee of members not involved in active litigation with SSVEC. Mr. Strom and I communicated several times via e-mail over this issue. SSVEC was willing to meet with the group and we offered up three choices: permanently substitute for the individuals on the list who were going to testify against SSVEC or temporarily substitute until the litigation is resolved or wait until the case is resolved. We never received a response on this issue.

Your letter states also that SSVEC has chosen 'the least favored route from a 1994 community meeting'; this statement does not give consideration to the fact that the route mentioned involves another party – and their private property.

In fact, Ms. Scott, you, personally discussed this with our Board of Directors at our March 2008 Board meeting in Patagonia. Your proposed solution was to have our 69kv cross the Babacomari Ranch and end with a substation at the town dump. You stated at that Board meeting the Babacomari Ranch would present that proposal to us. We have no expectation that we would get the required easements for that route and the proposed location of the substation is too far from the load and would require many additional miles of three phase distribution lines and more easements. We owe it to all SSVEC members to build the line in the most cost efficient manner possible.

As of June 30, 2008, SSVEC and this private party have come to an agreement as to the best solution for both entities and the rights that each of them are legally entitled to. Immediately upon this agreement SSVEC initiated, with a level of surety and ability to honestly discuss the power line route, an invitation to the Sonoita, Patagonia, and Elgin communities to attend a public outreach meeting to discuss the project as we promised in our March 4th letter, a copy is enclosed. This invitation was sent to our printer on July 3, 2008, merely three days after the agreement was finalized and was mailed on July 7th because of the 4th of July holiday weekend.

At this community meeting, SSVEC would like the opportunity to demonstrate that it has been listening to the communities concerns and is willing to discuss plans openly and honestly, without a possible litigious reversal looming overhead.

As your letter states an understanding of the need for SSVEC to provide reliable service to the community, SSVEC truly would appreciate your support and involvement toward this goal, and will look forward to addressing all concerns at the community meeting on July 22, 2008 at the Elgin School in Sonoita.

Sincerely,

Jack Blair
Chief Member Services Officer
Sulphur Springs Valley Electric Cooperative

Cc: Mr. Creden Huber
SSVEC Board of Directors
Mike Gleason, ACC Chairman
Senator Tim Bee
Congresswoman Gabrielle Giffords
Representative Marian McClure
Mr. John Maynard
Mr. Steve Strom
Mr. Keith Barth
Mr. Doug Sposito
Mr. Joe Furno
Ms. Nancy McCoy
Mr. Manny Coppola

Enclosure: March 4, 2008 Letter
July 7, 2008 Letter

ARIZONA CORPORATION COMMISSION
UTILITY COMPLAINT FORM

community meeting was held in Sonoita and individuals were selected for this committee. Three months have transpired and SSVEC continues to refuse to meet with us. You say in a letter dated June 2, 2008 to Mr. John Bodey that "SSVEC has been working with a group in the area called the Cross roads forum and are currently working on the composition and attendees". This is simply not true. While you have been welcoming to us at your board meetings and listening to us, we have had no response.

You cite the "on-going litigation with the Babacomari Ranch for your inability to comment on any part of the line. First, it is our understanding that this litigation has been resolved and that grading of the easement may start in the coming months. Secondly, the litigation has nothing to do with the proposed site of the substation which you also refuse to discuss. We believe that you are simply stonewalling the community until so much work has been done on the line and substation that our input will be meaningless.

We were surprised and delighted to read in the Arizona Daily Star newspaper about the work by Tucson Electric Power to satisfy its Vail customers on the citing of a proposed substation. TEP moved the substation not once but twice at the request of the residents. The fact that you have now chosen the least favored route from a 1994 community meeting simply rubs salt into the wounds. It appears to us that you have given no consideration to community needs.

It is important for you to know that this is a broad community concern. The attached signed petitions clearly demonstrates the community's support. It is not about NIMBY (Not in My Backyard). It is about what is best for the entire community. You need to meet now to try to rebuild your relationship with the Sonoita, Elgin, Patagonia communities.

Sincerely,

Susan Scott
Committee Member
Electrical Review Committee
Sonoita, Elgin, Patagonia

Cc (without signed petitions with 114 signatures requesting that SSVEC meet with the community working group to review SSVEC's plans):

Creden W. Huber, Chief Executive Officer, Sulphur Springs Valley Electric Cooperative
Mike Gleason, Chair, Arizona Corporation Commission
Senator Tim Bee
The Honorable Gabrielle Giffords
Representative Marian McClure
John Maynard, Santa Cruz County Supervisor, District 3
Steve Strom, President, Sonoita Crossroads Community Forum
Keith Barth, President, Patagonia-Sonoita Rotary Club
Doug Sposito, President, Sonoita-Elgin Chamber of Commerce
Joe Furno, Board of Directors, Sulphur Springs Valley Electric Cooperative
Nancy McCoy, President, Patagonia Area Business Association
ERC members: Leslie Kramer, Steve Strom, Steve Getzwiller, Sheila Getzwiller, Sheila Dagucon, Jeanne Horseman and Sally Greenleaf
End of Complaint

Utilities' Response:

Investigator's Comments and Disposition:

Pending
End of Comments

ARIZONA CORPORATION COMMISSION
UTILITY COMPLAINT FORM

Date Completed:

Complaint No. 2008 - 69860

March 4, 2008

The purpose of this letter is to advise you on the status of the electric service that Sulphur Springs Valley Electric Cooperative (SSVEC) provides to you and your neighbors in the Elgin, Sonoita, and Patagonia areas.

For many years, SSVEC's planning program has included building a transmission line and substation that would support the existing distribution lines in your area. Due to the very large expense of this type of transmission line, SSVEC has focused on cost-efficient alternatives to increase capacity on the existing line in response to increasing demand in the area, thus postponing construction of the higher-cost transmission line and substation - until now.

Due to the growth in the area the distribution line into this area is now very near its capacity limit. This line is approximately 360 miles long and serves almost 2,400 meters. This is an extremely long radial distribution line - meaning there is no connection to another distribution line for back-up during an outage. These factors contribute to reduced service reliability (i.e. more outages and blinks) in the area. As a result, SSVEC must move forward with its plan to construct a new transmission line and substation to assure the continued reliability of service to you and to assure the availability of service to future members.

SSVEC purchased easements for a transmission line in 1982. SSVEC is currently in litigation regarding a portion of that easement. Due to this litigation, it is uncertain exactly when SSVEC will be able to build the new transmission line. As part of that litigation survey crews have been in the area. SSVEC is hoping for a timely resolution. In the meantime, SSVEC crews will be doing everything we can to maintain electrical service in the area at the highest level possible.

SSVEC has listened to your concerns about the impact of the line and is sensitive to the visual impact this new transmission line will have in the area. Although SSVEC has not begun design of this line due to the litigation, we intend to design the line to minimize this impact within the constraints of existing technology and good financial management.

SSVEC strives to keep our members informed on issues such as this. Due to the nature of litigation, it could be months and possibly over a year before the status of this situation changes. We will share more information with you as it becomes available.

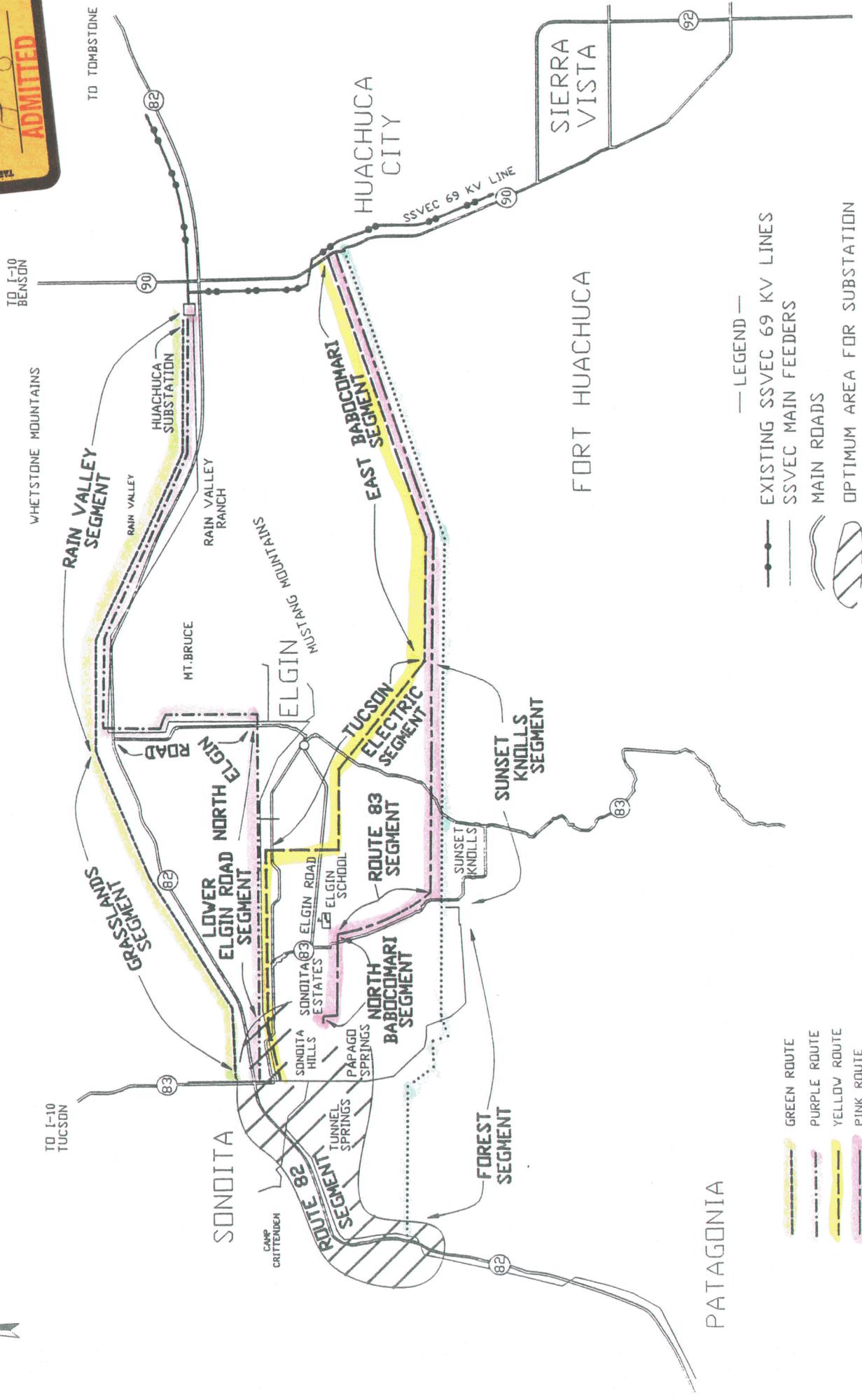
Sincerely,

Creden W. Huber
Chief Executive Officer

FIVE LINE ROUTE OPTIONS

EXHIBIT
A-8
ADMITTED

A-8



- LEGEND —
- EXISTING SSVEC 69 KV LINES
 - SSVEC MAIN FEEDERS
 - MAIN ROADS
 - OPTIMUM AREA FOR SUBSTATION

- GREEN ROUTE
- PURPLE ROUTE
- YELLOW ROUTE
- PINK ROUTE
- BLUE ROUTE

PATAGONIA

FORT HUACHUCA

HUACHUCA CITY

SIERRA VISTA

SONDITA

TO I-10
BENSON

WHETSTONE MOUNTAINS

TO I-10
TUCSON

TO TOMBSTONE

MT. BRUCE

MUSTANG MOUNTAINS

FOREST SEGMENT

SUNSET KNOLLS SEGMENT

EAST BABCOMARI SEGMENT

TUCSON ELECTRIC SEGMENT

ELGIN ROAD

LOWER NORTH ELGIN ROAD SEGMENT

RAIN VALLEY SEGMENT

GRASSLANDS SEGMENT

SONDITA HILLS

PAPAGO SPRINGS

TUNNEL SPRINGS

CAMP CRITTENDEN

ROUTE 82

ROUTE 83

ROUTE 88

ROUTE 92

ROUTE 90

ROUTE 83

ROUTE 82

ROUTE 83

ROUTE COMPARISONS

SSVEC is obligated to reduce outages and blinks and energy losses on overloaded lines and provide for future growth in your area. The advisory committee of Sonoita area residents and SSVEC staff are asking for your opinion regarding route options for the planned service upgrade to the Sonoita-Patagonia-Elgin-Canelo-Rain Valley areas. The upgrade would consist of: a 69,000 volt sub-transmission wood pole line from highway 90 to a substation near Sonoita which would reduce the voltage to distribution levels; new or rebuilt distribution lines to connect the substation to existing distribution lines. This is a long term solution to serve present and future electric loads for a period of forty years or more without further transmission expansion.

For questions or comments you are welcome to call SSVEC Supervisor Jim Sober at **1-800-422-9288** or contact active advisory committee members Georgia L. Aria, John Bevan, Sue Downing, John Everhart, Joe Furno, John Hoffman, Don Lackman, Cynthia Lunine, Mary Ellen Morbeck, or SSVEC Director Lee Sims.

Because of the special scenic concerns in the greater Sonoita area, great care is being taken in planning to reduce as much as practical the visual impact of the needed improvements. Many options are available in substation design and construction to make it compatible with area development and to blend in so it is nearly unrecognizable. Options are also available in line design to lessen the impact. Route selection has the biggest impact. Factors affecting route selection include: scenic views, aesthetics, property values, electric and magnetic fields (EMFs), costs, technical effectiveness, reliability, area growth, environmental sensitivity, use of terrain features to hide line as much as possible, safety, service quality, compliance with regulatory requirements of various agencies and available right of way. The five routes shown on the map are described as follows:

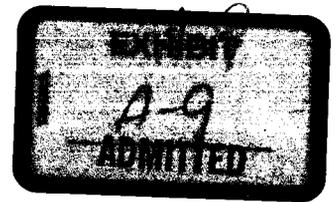
PURPLE ROUTE: The existing distribution line would be replaced in approximately the same location with a new sub-transmission line and new distribution line on the same new poles which would somewhat reduce reliability. Would require obtaining right-of-way from about eighty property owners. Advantages include keeping the new line in the same corridor as the old line. The visual result would be a modified line in the same location as an old line. This is the most expensive route option. The line rebuild and replacement would be slow, expensive and dangerous to line workers as they worked near energized wires to avoid as many power outages as possible during construction. This route would pass within view of the largest number of residences, about 85.

GREEN ROUTE: The same route as purple except sub-transmission line would continue westward to Sonoita along highway 82 past Elgin turnoff. Arizona Department of Transportation (ADOT) may or may not grant a permit to locate inside the highway right of way. If they did, the line would be subject to removal at Cooperative ratepayers' expense should ADOT later want the line moved to widen the highway or for other purposes. The line would be visible to 1800 vehicles per day (1991 ADOT traffic count) driving along highway 82 east of Sonoita. Within view of about 50 houses.

YELLOW ROUTE: Sixty nine KV line would follow SSVEC's easement in the south edge of the Babocomari Ranch from Huachuca City then along Tucson Electric Power's line in a new easement to be obtained from the Brophy Ranch Corporation. Additional easements would be required north of the ranch to get the line to a point of intersection of the existing distribution line along the Lower Elgin Road. The existing distribution line would be rebuilt and proceed westward as in the purple route. Within view of about 45 houses.

PINK ROUTE: This route is in the easement purchased by SSVEC in the early 1980's on the Babocomari Ranch. It is in relatively isolated areas except passing adjacent to Sunset Knolls and Sonoita Estates subdivisions and into Sonoita Hills Subdivision. Within view of about 65 houses.

BLUE ROUTE: Similar to the pink route except it would continue parallel to the south boundary of the Babocomari Ranch to the National Forest and then westerly to a substation site connecting with the existing power line along highway 82. The U. S. Forest Service would require a public hearing and extensive environmental review before a permit would be issued. This should be the least expensive and most isolated route. Within view of about 45 houses. The least amount of distribution line construction would be required for this route.



ARIZONA CORPORATION COMMISSION

Priority: Respond Within Five Days

Complaint No. 2009 - 82699 Date: 10/27/2009
First: 19ZComplaint Description: Other Not Applicable Last: UTILITY COMPLAINT FORM
Complaint By: Jeanne Horsmann

Street: Jeanne Horsmann Home: (520) 455-5487
City: Sonoita Work:
State: AZ Zip: 85607 GPR: bugle2@earthlink.com is: E-Mail

Investigator: Richard Martinez Phone: (520) 628-6555 Fax: (520) 628-6559

Utility Company: Sulphur Springs Valley Electric Cooperative, Inc. Division: Electric

Contact Name: Lainie Keltner Contact Phone: (520) 515-3440

Nature of Complaint:

From: Jeanne & Rob Horsmann [mailto:bugle2@earthlink.net] Sent: Thursday, October 22, 2009 1:20 PM To: Stump-Web; Pierce-Web; Mayes-WebEmail; Newman-Web; Kennedy-Web Subject: RE: E-01575A-09-0453 SSVEC Moratorium

Dear Chairman Mayes and Commissioners:

SSVEC has stated that the growth in the Sonoita, Elgin and Patagonia areas are causing the V-7 feeder to max out. What they have neglected to mention is that the Whetstone area is also on the V-7 feeder and that the growth in this area far outstrips the growth in our area.

The current plan is to cut the V-7 feeder (approximately 23 miles long from the Huachuca substation in Whetstone to the Sonoita substation) before Elgin and use it to service the Whetstone and Rain Valley areas. The new 69 kV line will service the Sonoita, Elgin and Patagonia areas. From the Kartchner substation in Sierra Vista to the substation in Sonoita, this new 69 kV line will be approximately 30 miles long (7 miles longer than the current V-7 feeder) and be very hard to maintain.

Instead, why not:

ARIZONA CORPORATION COMMISSION
UTILITY COMPLAINT FORM

Remove the Whetstone area from the V-7 feeder and run a new line from the Kartchner substation in Sierra Vista to Whetstone, a distance of approximately 10 miles. This will: 1. Remove a large part of the load on the V-7 feeder allowing it to cover any future growth in the Sonoita, Elgin, Patagonia and Rain Valley areas, and 2. Allow the faster installation of a shorter line (20 miles shorter than the planned 69 kV line) to service Whetstone. There are poles and easements already in existence from the Kartchner substation to Whetstone.

This will remove any need for a moratorium, provide for future growth in all areas and save members money.

I also would like the answers to the following two questions.

1. 1. On the V-7 feeder, how many meters are hooked up in Sonoita, in Elgin, in Patagonia, and in Whetstone?
2. 2. How many hook up commitments has SSVEC made in Sonoita, in Elgin, in Patagonia, and in Whetstone?

Thank you for your consideration.

Jeanne Horsmann

PO Box 334

Sonoita, AZ 95637

520-455-5137

SSVEC, please answer the two questions that customer is asking at the bottom of the email she submitted to the ACC. *End of Complaint*

Utilities' Response:

In response to Ms. Jeanne Horsmann's letter of October 27, 2009:

Ms. Horsmann's statements are once again unsubstantiated, misleading and filled with incorrect information.

SSVEC has stated growth on the V7 Feeder is continuing to add to the capacity and power quality degradation of electric service provided in these affected areas. Ms. Horsmann's statement that the Whetstone area is also on the V7 feeder, and has growth that 'far outstrips' the growth in the Sonoita, Elgin, Canelo, and Patagonia area, is unsubstantiated and mostly incorrect.

The truth is the majority of the Whetstone area is being served by another Substation which, by the way, operates at a completely different distribution voltage than the V7 Feeder. Of the 2,571 customers on the V7 feeder, only 125 customers - less than 5% of the total - are served off the V7 feeder in the Whetstone area. Thus Ms. Horsmann's proposal to remove the Whetstone area from the V7 feeder is just another "suggestion" with no technical merit and reflects a lack of understanding of electric power system design.

In SSVEC's proposed plan, a new substation will be constructed in Sonoita and will provide four separate feeders to serve the Patagonia, Sonoita, Canelo, and Elgin areas. Service to the Whetstone and Rain Valley areas will continue to be served from the existing Huachuca West substation. A 'feeder tie' between the new Sonoita Substation and the existing Huachuca West substation will allow some back-up capability between these substations.

Ms. Horsmann states, "From the Kartchner substation in Sierra Vista to the substation in Sonoita, this new 69kV line will be approximately 30-miles long (7 miles longer than the current V-7 feeder)..." Apparently Ms. Horsmann has assumed that SSVEC intends to build a new line from the Kartchner substation to the beginning of the new Sonoita line - she is wrong. SSVEC has consistently and correctly stated that the proposed 69kV line is 23-miles in length.

Furthermore, Ms. Horsmann's suggestion to "run a new line from the Kartchner substation in Sierra Vista to Whetstone, a distance of approximately 10-miles" demonstrates two things: 1) her lack of understanding of basic electric power system design and lack of knowledge of the existing electric facilities in the area, and 2) her apparent willingness to build new 69kV lines as long as they are not in her back yard! Adding the new line she proposes is redundant, unreasonable, and totally unnecessary.

Ms. Horsmann states "this new 69kV line....will be very hard to maintain", this, again, is unsubstantiated. Further, SSVEC operates and maintains over 4,000 miles of distribution and 69kV line across nearly 6,000 square miles of service territory in all types of terrain. Additionally, the proposed 69kV line to Sonoita, as with all of SSVEC's new 69kV lines, is designed to minimize maintenance with the use of long-life, high strength materials such as steel poles, offset insulators, and a framing design with increased spacing and insulation levels to increase system reliability and minimize routine maintenance.

None of Ms. Horsmann's suggestions eliminate the necessity for an immediate moratorium on new connects on the V7 feeder, nor do they provide for electric facilities to meet future growth in the area, furthermore they do not save money for SSVEC's members.

In response to specific questions submitted:

1. On the V7 Feeder, how many meters are hooked up in Sonoita, in Elgin, in Patagonia, and in Whetstone?

<u>LOCATION</u>	<u>SERVICES</u>	<u>% of TOTAL</u>
Sonoita	910	35%
Patagonia	836	33%
Elgin	357	14%
Canelo	187	7%
Rain Valley	156	6%
Whetstone	125	5%

2. How many hook-up commitments has SSVEC made in Sonoita, in Elgin, in Patagonia, and in Whetstone?

<u>LOCATION</u>	<u>SERVICES</u>
Sonoita	24
Patagonia	222
Elgin	9
Canelo	2
Rain Valley	4
Whetstone	3

Investigator's Comments and Disposition:

Pending *End of Comments*

Date Completed:

ARIZONA CORPORATION COMMISSION UTILITY COMPLAINT

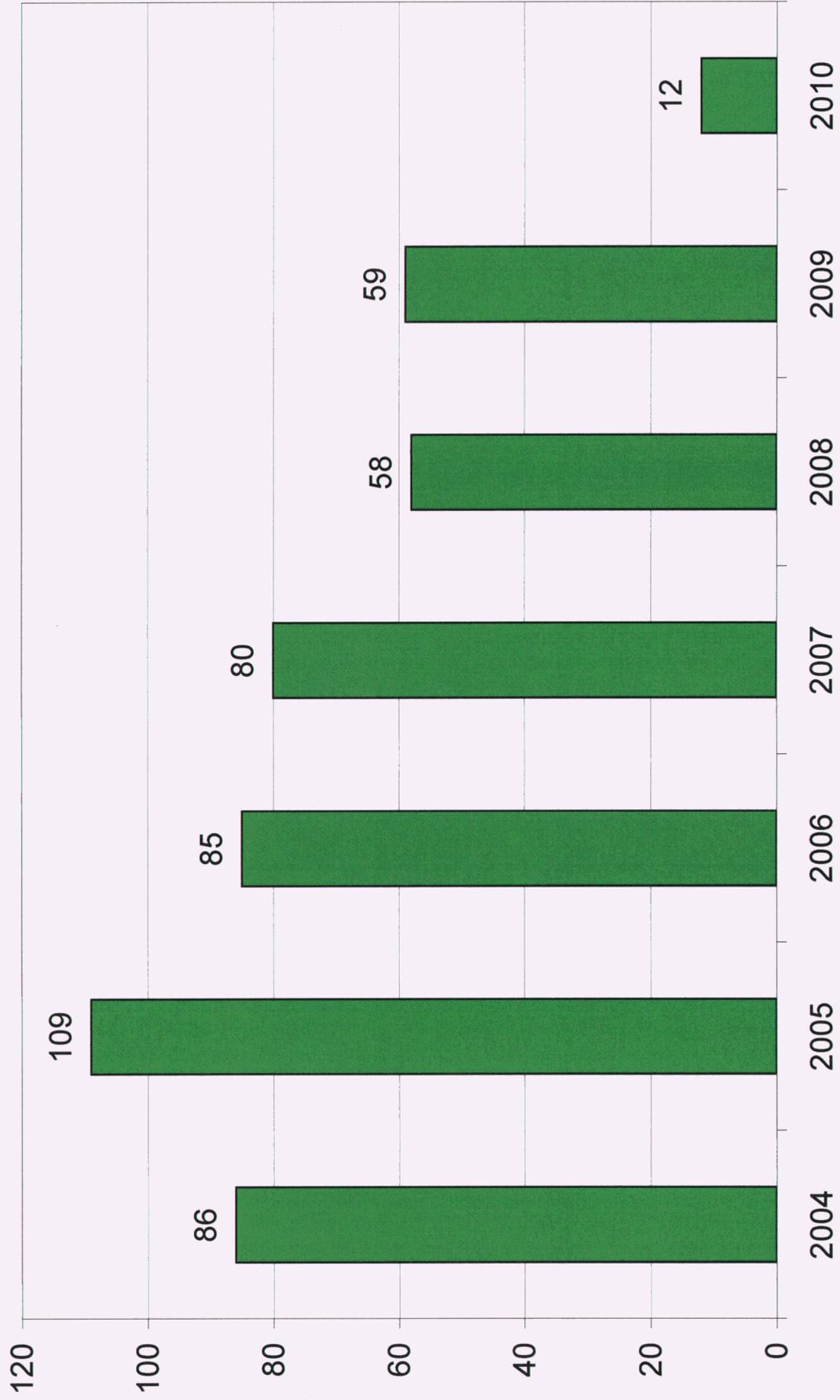
FORM Complaint No. 2009 -82699

DR1-8:

Provide a list of all pending electric applications that the moratorium would impact including
**** Note: SSVEC has agreed to provide a summary of the number of service**
January 29, 2010: SSVEC will provide size, and phase

<u>SERVICE SIZE</u> <u>(AMP)</u>	<u>PHASE</u>
200	1
200	1
400	1
200	1
200	1
200	1
200	1
200	1
200	1
100	1
100	1
400	1
200	1
400	1
200	1
400	1
200	1
200	1
200	1
200	1
200	1
400	1
400	1
3800	1
REQUESTED LOAD (Amps)	9700
# of Pending Application	26

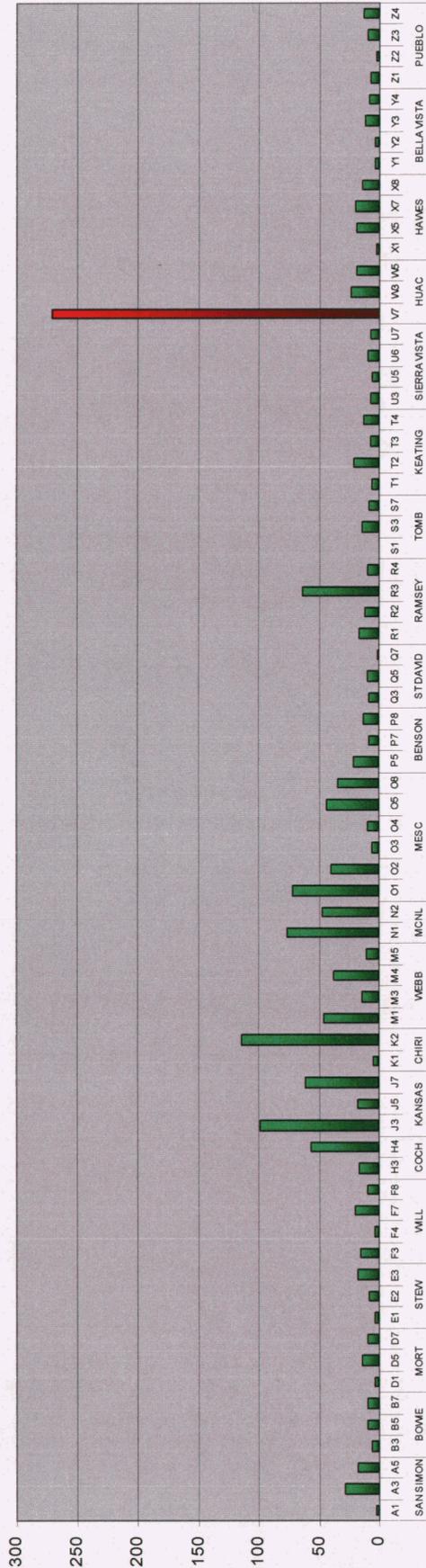
V7 New Services Added 2004 - 2010 (YTD)



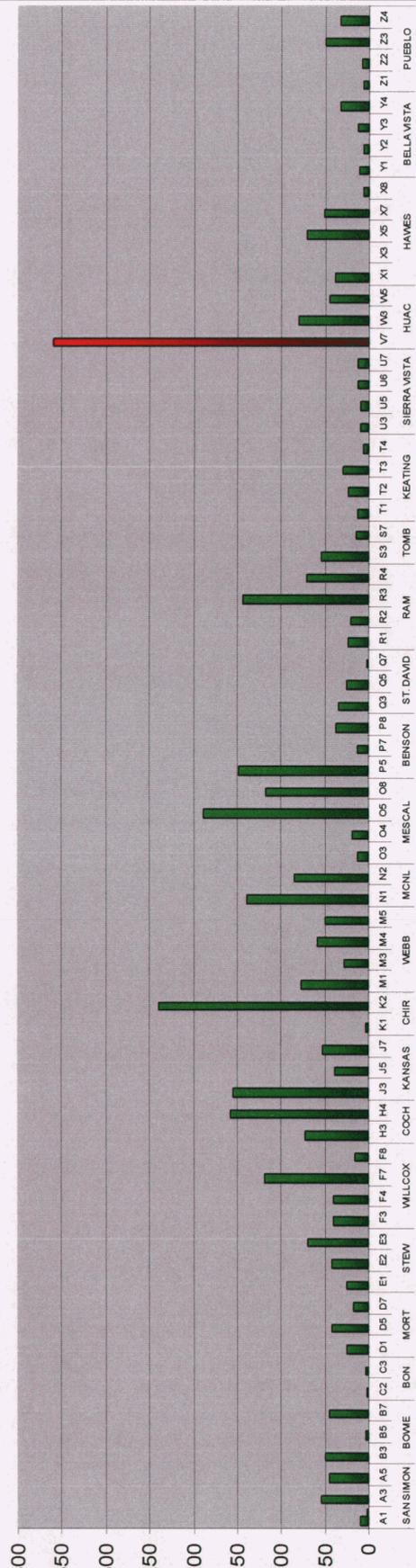
V-7 Feeder Outages and Length in Miles as Compared to all SSVEC feeders

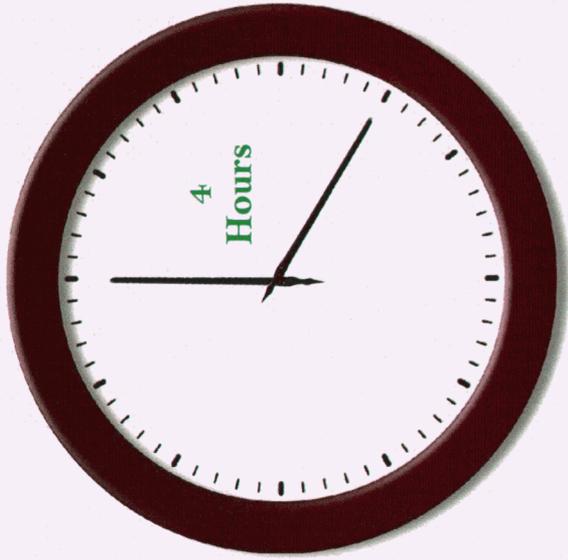


1999 - 2008 Average Annual Hours Out: SSVEC System



Total Miles





Example of Outage Analysis

Consumer Hours per Consumer vs. Total Hours Out
Considering 100 Consumers on Feeder

1 Outage 20 Consumers Impacted
Lasting 4 Hours 80 Consumer Hour Outage

$$\text{CHPC } 0.8 = \frac{4 \text{ Hours} * 20 \text{ Consumers}}{100 \text{ Consumers on Feeder}}$$



Navigant Metric

Consumer Hours per Consumer
 $80 / 100 = .8 \text{ hours}$



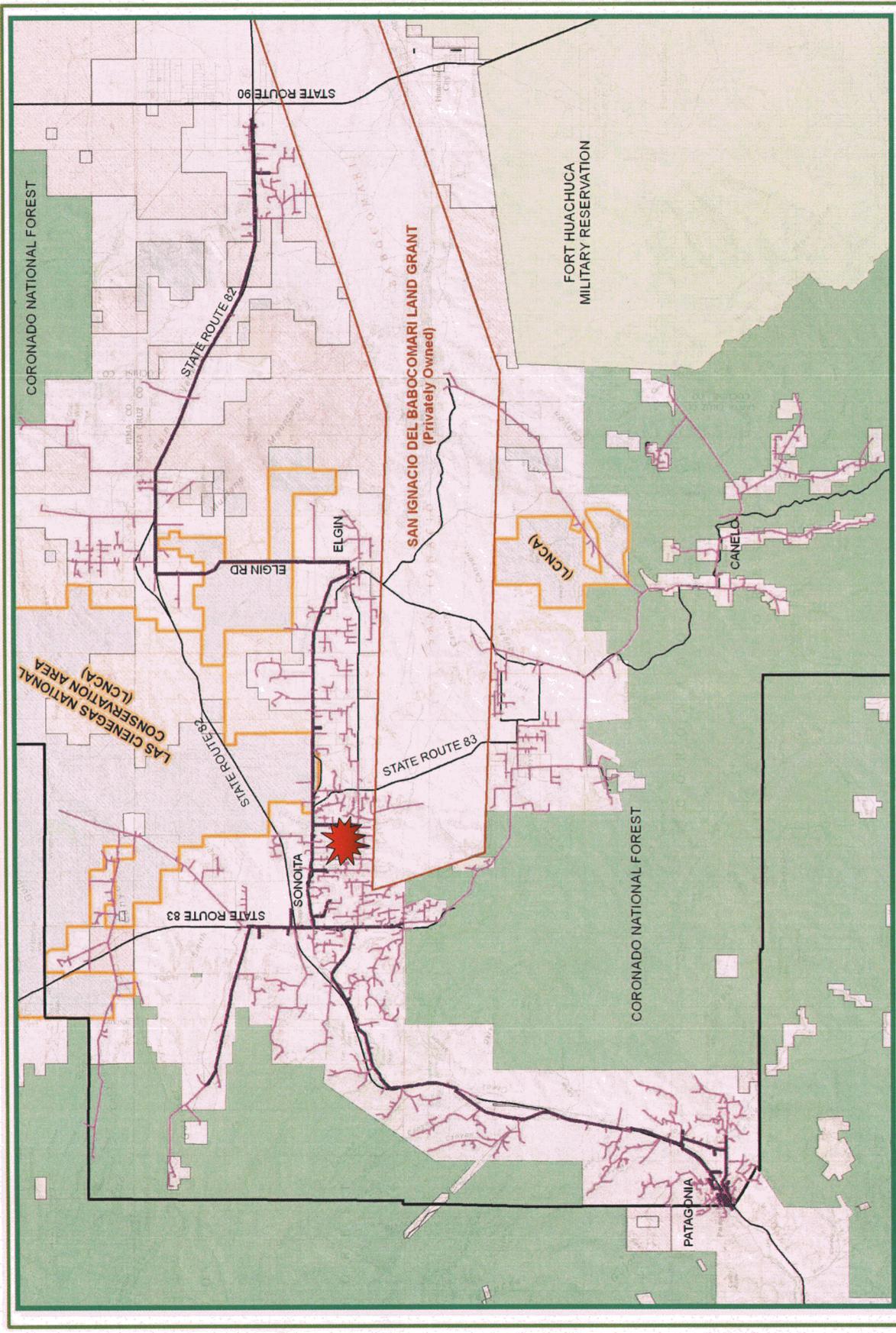
SSVEC Metric

Total Hours Out
4 hours

The important point is not the metric itself. The important points are that the metric is appropriate, that the metric is accurately calculated and that the metric is applied consistently by the analyst throughout the analyses.

ie: Miles vs Meters; both measure distance, both are accurate and both are valid.



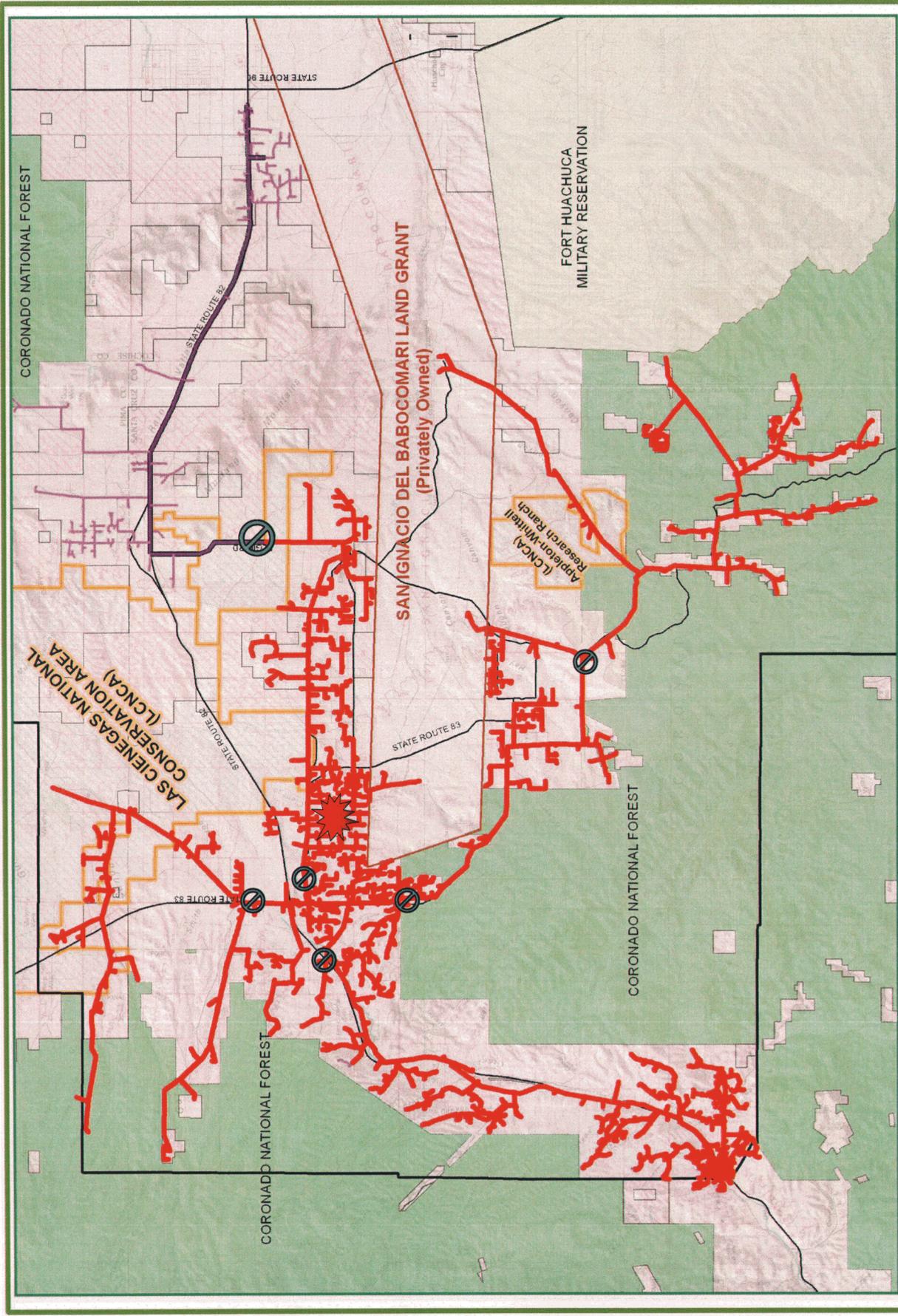


- Existing V7 Feeder**
- Buchanan Substation
 - Sonoma Substation
 - SIDA Boundary
 - LCNCA Boundary
 - SSVCC Service Area
- BLM Forest
 - Local or State Parks
 - Local Trust
 - Wildlife
- Other
 - Private
 - Well



SONOMA RELIABILITY PROJECT





Existing V7 Feeder

1-Phase

3-Phase

Substation

Buchanan Substation

Sonoita Substation

SSVEC Service Area

LCNCA Boundary

Land Use

BLM Forest

Local or State Parks

Military

Nat. Parks

Ownership

Other

Private

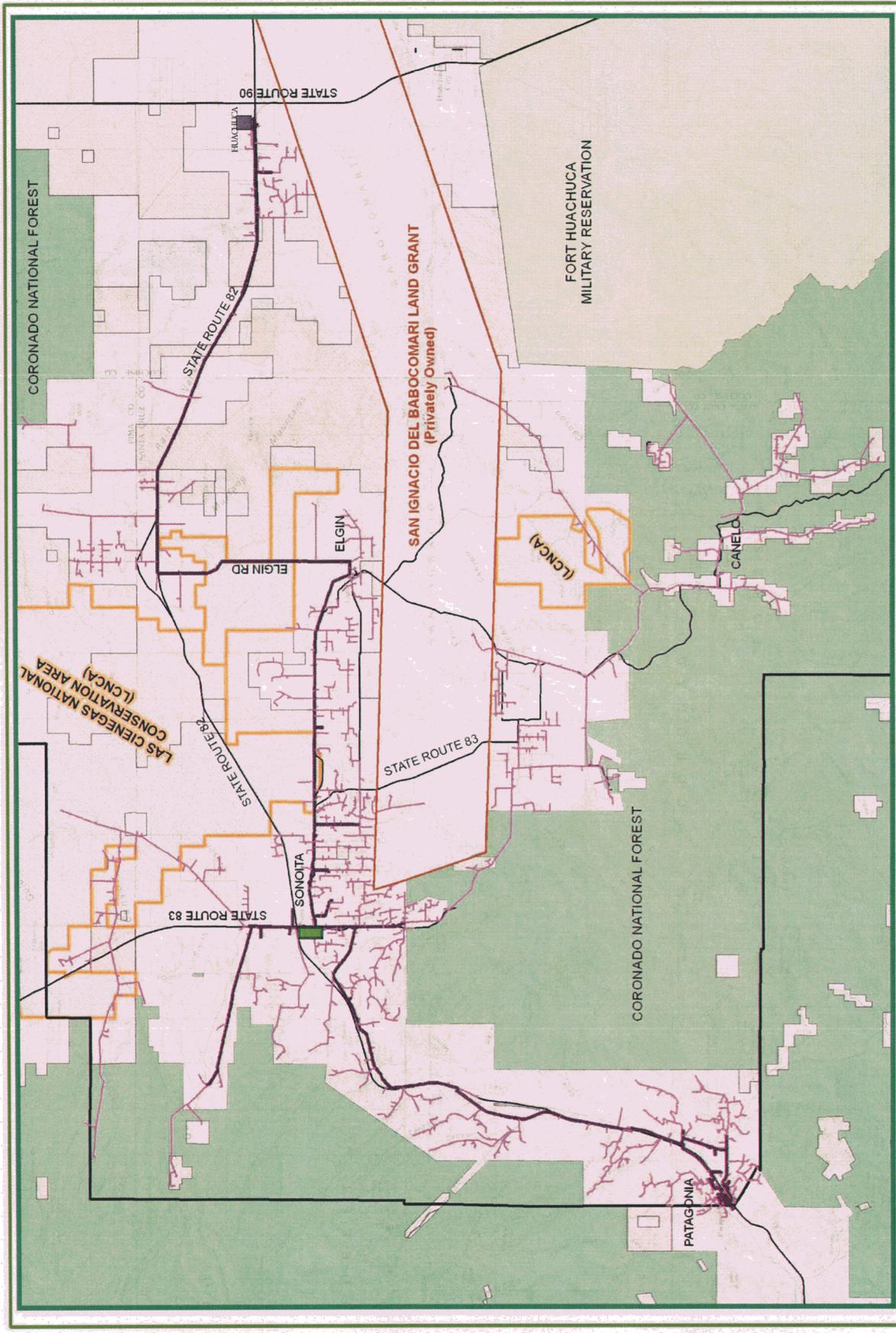
State Trust

Wildlife



Sulphur Springs Valley Electric Cooperative, Inc.
A Division of Sulphur Springs Valley Electric Cooperative, Inc.
Sulphur Springs Valley Electric Cooperative, Inc.
A Division of Sulphur Springs Valley Electric Cooperative, Inc.

SONOITA RELIABILITY PROJECT



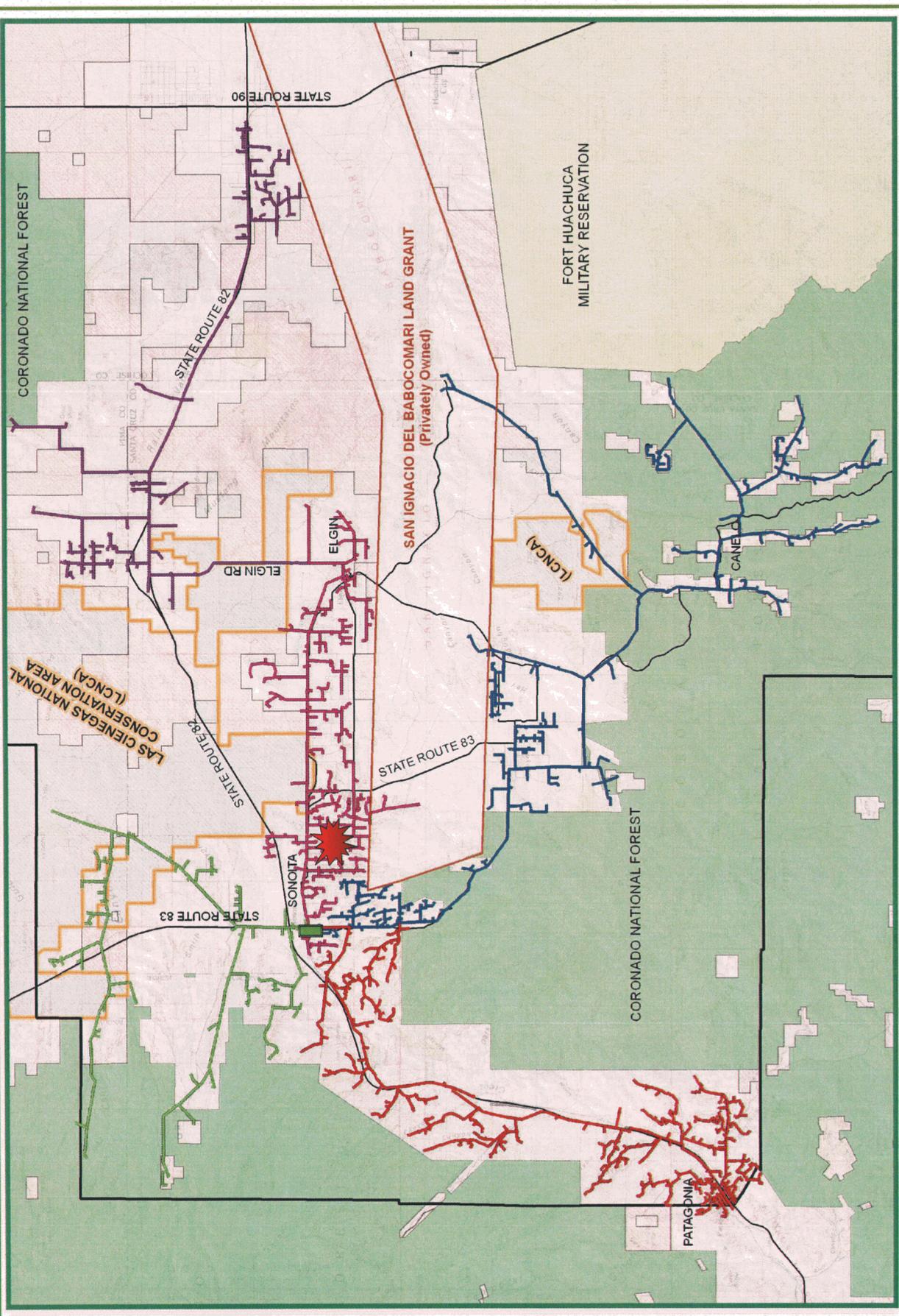
- Existing V7 Feeder**
- Buchanan Substation
 - Sonoita Substation
 - Local or State Parks
 - Military Reservations
 - LCNCA Boundary
 - SSVCC Service Area
- Other
 - Private
 - State Trust
 - Wildlife



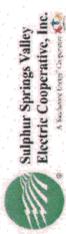
SONOITA RELIABILITY PROJECT



Sign of Road Construction Division



SONOITA RELIABILITY PROJECT



Sulphur Springs Valley
Electric Cooperative, Inc.
Member of the Valley Electric System
Right of Way Administration

Legend:

- Feeder 1
- Feeder 2
- Feeder 3
- Feeder 4
- Feeder V7
- Buchanan Substation
- Sonoita Substation
- SIDB Boundary
- LCNCA Boundary
- SSVEC Service Area
- BLM
- Forest
- Local or State Parks
- Military
- Rail Parks
- Other
- Private
- State Trust
- Waste



A-R

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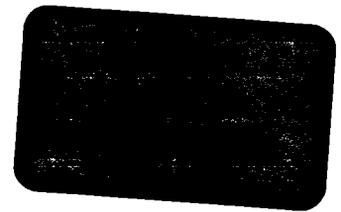
ONE S. CHURCH AVE., SUITE 1900 TUCSON, ARIZONA 85701-1627 TELEPHONE 520-628-7070 FACSIMILE 520-624-3849

Robert M. Savage 520-388-4785 rsavage@gustlaw.com

March 23, 2010

Personally Received

Deborah White SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC 311 East Wilcox Drive Sierra Vista, AZ 85635



Re: SSVEC / Sonoita Valley Reliability Project

Dear Deborah:

Last week we discussed the viability of replacing an existing distribution line ("Distribution Line") with a 69 kV transmission line with underbuilt distribution. The Distribution Line is in the Sonoita area. As you know, SSVEC does not have a formally memorialized easement on the properties over which the Distribution Line crosses. As such, SSVEC's rights to use those properties most likely fall within the nature of a prescriptive easement.

Prescriptive easements are an outgrowth of A.R.S. § 12-526(A), which declares:

A person who has a cause of action for recovery of any lands, tenements or hereditaments from a person having peaceable and adverse possession thereof, cultivating, using and enjoying such property, shall commence an action therefor within ten years after the cause of action accrues, and not afterward.

Prescriptive easements are not favored by the courts. Krencicki v. Petersen, 22 Ariz. App. 1, 3, 522 P.2d 762, 764 (App. 1974). Accordingly, a "party claiming an easement by prescription "must establish that the land in question has actually and visibly been used for ten years, that the use began and continued under a claim of right, and [that] the use was hostile to the title of the true owner." Spaulding v. Pouliot, 218 Ariz. 196, ¶14, 181 P.3d 243, ¶14 (App. 2008), quoting Paxson v. Glovitz, 203 Ariz. 63, ¶ 22, 50 P.3d 420, 424 (App.2002), quoting Harambasic v. Owens, 186 Ariz. 159, 160, 920 P.2d 39, 40 (App. 1996). Permissive use of property will not give rise to a prescriptive easement because it is neither made under a claim of

right nor hostile to title. *Spaulding*, 218 Ariz. 196, ¶15, 181 P.3d 243, ¶15. Once the ten-year prescriptive period has run, the prescriptive right is established, though it may be necessary to obtain a judgment confirming that right.

As noted above, SSVEC has likely acquired a prescriptive easement for the Distribution Line. That does not mean, however, that SSVEC can simply increase the burden on that prescriptive easement by replacing the Distribution Line with a transmission line and the attendant infrastructure, including taller poles. If SSVEC attempted to unilaterally do so, it would likely trigger litigation over the prescriptive easement itself and the scope of that claimed right. As you know, there are no guarantees in litigation. Thus, the fallout of this proposed course of action could include the loss of the prescriptive easement for any purpose.

Even assuming a court confirmed the prescriptive easement, it would not mean that SSVEC could make unlimited use of it. As noted above, prescriptive easements are not favored and, therefore, narrowly tailored based on the use through which they were acquired. Thus, in *Inch v. McPherson*, 176 Ariz. 132, 859 P.2d 755 (App. 1992), a property owner who had obtained a prescriptive easement for his driveway was prohibited from installing a block wall along that easement. In short, the court held that a party claiming a prescriptive easement "may not exceed the uses through which they acquired the easement." *Id.* at 136, 850 P.2d at 759. *See also Stamatis v. Johnson*, 71 Ariz. 134, 138, 224 P.2d 201, 203 (1950) ("The scope of a prescriptive easement is determined by the use through which it is acquired. A person using the land of another for the prescriptive period may acquire the right to continue such use, but does not acquire the right to make other uses of it.").

Perhaps the most dramatic example of this reasoning occurred in *United States on Behalf of Zuni Tribe of New Mexico v. Platt*, 730 F. Supp. 318, 324 (D. Ariz. 1990). In that case, the Federal Court applied Arizona law to determine the scope of a prescriptive easement claimed by the Zuni Tribe for a religious pilgrimage. Because the scope was necessarily limited by the use that gave rise to the prescriptive easement, the tribe's use was constrained to no more than 60 travelers on foot or horseback for two consecutive days every four years during the summer solstice. 730 F. Supp. at 324. In short, use giving rise to the prescriptive easement was the only use that could be made of it. This included the intensity of the use in as much as the tribe was not allowed to expand the number of pilgrims historically using the easement.

If the Zuni Tribe was unable to increase its number of pilgrims, it seems equally unlikely that SSVEC would be able to engage in a more intense use. While voltage and pole height are the most obvious ways in which intensity would be increased, there are other collateral effects such as an increased fall area and increased width of the claimed easement for maintenance. It is unlikely that a court would be comfortable in foisting these added burdens on unwilling property owners. In sum, attempting to expand a prescriptive easement is fraught with risk and uncertainty. It is simply not advisable.

Sulphur Springs Valley Electric Cooperative, Inc.

March 23, 2010

Page 3

If SSVEC were to expand the Distribution Line, the most palatable alternatives are: (1) reach appropriate agreements for the conveyance of easements over each of the ninety-eight affected properties or (2) take the easement through the power of eminent domain. The first alternative would require additional time to negotiate easement terms. Both alternatives would include the expense of acquiring easement rights in addition to the complete re-design of SSVEC's planned transmission line.

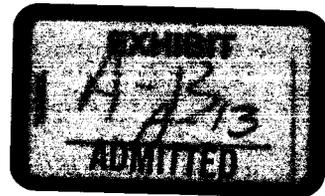
Seeking permission to replace the Distribution Line is not a viable alternative. First, it is unlikely that SSVEC could get the unanimous permission that would be required. Second, permissive use is the antithesis of a prescriptive easement or other permanent right. Instead, permissive use is usually considered to be in the nature of a license that can be revoked at any time. It simply would not make sense to construct a transmission line based on such a transitory right.

Very truly yours,



Robert M. Savage
For the Firm

RS2:mes



1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2 COMMISSIONERS

3 KRISTIN K. MAYES—Chairman
4 GARY PIERCE
5 PAUL NEWMAN
6 SANDRA D. KENNEDY
7 BOB STUMP

8 IN THE MATTER OF THE APPLICATION
9 OF SULPHUR SPRINGS VALLEY
10 ELECTRIC COOPERATIVE, INC. FOR A
11 HEARING TO DETERMINE THE FAIR
12 VALUE OF ITS PROPERTY FOR
13 RATEMAKING PURPOSES, TO FIX A
14 JUST AND REASONABLE RETURN
15 THEREON, TO APPROVE RATES
16 DESIGNED TO DEVELOP SUCH RETURN
17 AND FOR RELATED APPROVALS.

DOCKET NO. E-01575A-08-0328

**PETITION TO AMEND
DECISION NO. 71274 PURSUANT
TO A.R.S. §40-252 AND FOR
RELATED AUTHORIZATION**

Expedited Consideration Requested

18 Pursuant to A.R.S. §40-252 and Arizona Corporation Commission Decision 71274
19 dated September 8, 2009 (the “Decision”), Sulphur Springs Valley Electric Cooperative,
20 Inc. (“SSVEC” or “Cooperative”), through counsel undersigned, hereby:

- 21 1. Petitions the Arizona Corporation Commission (“Commission”) for an
22 order amending the Decision to modify a condition which SSVEC must
23 comply with before the Cooperative may seek authorization from the
24 Commission to construct the 69 kV sub-transmission power line referenced
25 in the Decision (the “69 kV line”); and
26 2. Requests, pursuant to the Decision, authorization to commence construction
of the 69 kV line.¹

¹ By seeking this authorization, SSVEC neither concedes that the Commission had legal authority to prohibit the Cooperative from constructing the 69 kV line when the Commission adopted the Decision, nor does SSVEC waive any of its rights to continue asserting at the Commission, or in a court of competent jurisdiction, that the Commission does not have legal authority to prohibit the siting and construction of a transmission line less than 115 kV if the requested relief herein is not granted. See, A.R.S. §361. SSVEC hereby incorporates by reference Section IV of its *Application for Rehearing and Reconsideration* filed in this Docket on September 28, 2009, relating to the 69 kV line.

1 SSVEC further requests, for the reasons set forth herein, that the Commission find
2 that the relief requested herein is in the public interest, and consider this Petition as
3 expeditiously as possible, but in no event, later than its February 2 and 3, 2010, Open
4 Meeting.

5 In support of its petition and request, SSVEC states the following:

6 **I. BACKGROUND AND PROCEDURAL HISTORY.**

7 On September 8, 2009, the Commission issued the Decision in Docket No. E-
8 01575A-08-0328 (the "Rate Case Docket") which expressly prohibits ("until further
9 order of the Commission") SSVEC from constructing the proposed 69 kV line to serve
10 the Whetstone, Rain Valley, Elgin, Canelo, Sonoita, and Patagonia, Arizona areas
11 (collectively the "Affected Areas"). SSVEC had previously planned and scheduled
12 principle construction of the 69 kV line in the fall of 2009 because the Cooperative's
13 documentation and analysis clearly determined it necessary to alleviate significant power
14 quality, reliability, and capacity constraints resulting in power fluctuations and outages in
15 the Affected Areas that are currently served by the Cooperative's existing V-7 Feeder
16 Line.

17 The Decision further ordered SSVEC to: (i) commission an independent feasibility
18 study regarding alternatives (including use of distributed renewable energy) that could
19 mitigate the need for construction of the 69 kV line (hereinafter referred to as the
20 "Independent Study") and to report the findings of such Independent Study to the
21 Commission by December 31, 2009; (ii) conduct public forums in the Affected Areas to
22 include topics relating to the results of the Independent Study and addressing how
23 renewable energy generation (in particular, distributed generation) could be incorporated
24 into the generation plans to serve the area covered by the planned 69 kV line and
25 associated upgrades; and (iii) prepare a report to be filed with the Commission by July 30,
26 2010, that discusses the outcome of the public forums.

1 As a consequence of the Commission's decision to prohibit SSVEC from
2 constructing the 69 kV line, on September 18, 2009, SSVEC filed an Application for a
3 Moratorium in Docket No. E-01575A-09-0453 ("Moratorium Application") for the
4 Commission to issue an order authorizing the Cooperative to institute a moratorium on
5 new and/or expanded service connections to its V-7 Feeder Line so the power quality,
6 reliability, and capacity problem resulting in power fluctuations and outages that will
7 continue to exist within the Affected Areas will not be further exacerbated or further
8 degrade the service to existing members. The Moratorium Application is currently
9 pending before the Commission.

10 On September 28, 2009, pursuant to A.R.S. §40-253, SSVEC filed an Application
11 for Rehearing and Reconsideration of the Decision ("Reconsideration Application"). The
12 Reconsideration Application requests the Commission to reconsider three specific areas of
13 the Decision related to: (i) The Commission prohibiting SSVEC from constructing the 69
14 kV line; (ii) the authorized revenue requirement; and (iii) the administration of the
15 Cooperative's Wholesale Power and Fuel Adjustor. On October 13, 2009, the
16 Commission voted to grant the Reconsideration Application, which is also currently
17 pending before the Commission in the instant Rate Case Docket.

18 In compliance with the Decision, on October 30, 2009, SSVEC filed a report
19 regarding the public forums SSVEC intends to conduct in the communities serviced by
20 the planned 69 kV line and associated upgrades. The report states that SSVEC intends to
21 conduct such public forums commencing in February 2010 and concluding at the end of
22 March 2010.

23 Since the Decision ordered SSVEC to commission and file a comprehensive
24 independent study in a relatively short period of time, following the issuance of the
25 Decision, SSVEC immediately engaged the services of TRC Companies, Inc. ("TRC") to
26 assist in the preparation and issuance of a Request for Proposal ("RFP"). TRC has

1 extensive experience in utility infrastructure, energy, environmental planning, and
2 engineering. SSVEC also sought and obtained input from the Save the Scenic Sonoita
3 Elgin Grasslands (“3SEG”)² group on the Scope of Work for the RFP, and invited
4 representatives from 3SEG to review the Statement of Work and provide their requests to
5 be included in the RFP for the Independent Study. At the August 17 and 25, 2009 Open
6 Meetings, the Commission specifically requested SSVEC to keep Staff informed as to
7 process for the commissioning of the Independent Study. Thus, on October 12, 2009,
8 SSVEC met with a representative of Staff to provide: (i) a summary of the process to
9 develop the RFP, including meetings the Cooperative had with 3SEG and the input from
10 3SEG that was included in the RFP; and (ii) a copy of the RFP and the list of potential
11 bidders was developed with the assistance of TRC and 3SEG. The RFP was issued, and
12 on October 27, 2009, SSVEC received responses from two of the potential 14 bidders. On
13 October 28, 2009, SSVEC again met with representatives from Staff and presented an
14 RFP Summary and the Statement of Work, as well as additional information regarding the
15 RFP and selection process. Based upon the qualifications and quality of proposals,
16 Navigant Consulting, Inc (“Navigant”) was identified by SSVEC and approved by Staff
17 for bid award to conduct the Independent Study.³ SSVEC estimates that the total costs of
18 the Independent Study, including the fees paid to Navigant and TRC, as well as the
19 Cooperative’s internal costs to support the Independent Study and its filing, to be
20 approximately \$360,000.

21 Pursuant to the Decision, on December 31, 2009, SSVEC filed the Independent
22 Study with the Commission.⁴ The Independent Study was prepared by Navigant and is
23 based entirely upon the RFP and Scope of Work (which was drafted with 3SEG input),
24

25 ² The 3SEG group opposed the 69 kV line and is interested in the exploration of renewable alternatives.

26 ³ See letter to Prem Bahl dated November 20, 2009, that was filed in the Rate Case Docket attached hereto as Attachment A.

⁴ SSVEC hereby incorporates the Independent Study, which was filed in this Rate Case Docket.

1 completely independent from the competing concerns. The Independent Study confirms
2 this by stating from the outset that:

3 *All findings presented herein were prepared independently, without bias*
4 *or prior knowledge of feeder performance issues or concerns raised by*
5 *customers and other interested parties. Methods employed to evaluate*
6 *performance and supply alternatives are consistent and common utility*
7 *practices and applicable industry design, performance and evaluation*
8 *standards. The analysis was completed without direct or indirect*
9 *participation from SSVEC staff, management or its customers.*⁵

10 As discussed in detail below, the Independent Study confirms the evidence
11 presented by SSVEC in the Rate Case Docket that expeditious construction of the 69 kV
12 line is the only proven and viable solution from a technical and economic standpoint to
13 alleviate the performance, reliability and capacity constraints of the existing V-7 Feeder
14 Line currently serving the Affected Areas. The Independent Study also confirms the
15 Cooperative's findings that despite the claims of several residents within the Affected
16 Areas that renewable generation could negate the need for construction of the 69 kV line,
17 in fact, renewable generation alternatives cannot adequately address this serious problem.

18 Moreover, the Independent Study affirms SSVEC's assertion that immediate action
19 must be taken to affect a solution to the problems of the existing V-7 Feeder Line
20 currently serving the Affected Areas:

21 *The results of NCI's investigation indicate SSVEC should take immediate*
22 *action to address current performance issues and capacity limits,*
23 *including carefully assessing the impact of customer requests for new or*
24 *expanded service on V-7 feeder performance capacity.*⁶

25 The Decision provides the following two provisions relating to conducting public
26 forums, which would appear to prohibit SSVEC from seeking Commission authorization
to commence construction of the 69 kV line, which will result in further delay and

⁵ Independent Study at page 1.

⁶ *Id.* at page 3 (emphasis added.)

1 additional costs:

2 *We believe a feasibility study prepared on behalf of the Cooperative by an*
3 *independent third party is necessary for further analysis and consideration*
4 *of the issues presented, prior to proceeding with construction of the*
5 *project. Therefore, we will require the Cooperative to docket a feasibility*
6 *study on the project and possible alternatives and hold public forums in the*
7 *impacted communities. The public forums shall include an opportunity for*
8 *community members' discussion on the feasibility study, including*
9 *alternatives prior to construction of the project. At the conclusion of the*
10 *public forums,⁷ the Cooperative shall docket a report and minutes of the*
11 *public forums.*

12 *IT IS FURTHER ORDERED that Sulphur Springs Valley Electric*
13 *Cooperative, Inc. shall not commence construction of the referenced 69kV*
14 *line until the public has had an opportunity to review and comment on the*
15 *report and until further order of the Commission.⁸*

16 Because the Independent Study confirms that renewable generation is not a
17 practical alternative to construction of the 69 kV line, as well as provides confirmation
18 that the other alternatives are not proven, viable solutions to the problem, and that
19 immediate action should be taken to effect a solution to the problems, it is not in the
20 public interest for the Commission to further delay SSVEC from constructing the 69 kV
21 line. However, based upon the quoted language from the Decision cited above, because it
22 appears the Decision requires SSVEC to first conduct public forums that will address the
23 results of the Independent Study and file a report with the Commission before the
24 Commission will authorize SSVEC to proceed with the construction of the line, the
25 Decision would have to be modified to remove this prerequisite. Accordingly, in light of
26 the Independent Study's conclusions and recommendations, SSVEC is seeking an
amendment of the Decision pursuant to A.R.S. §40-252 to remove the apparent
requirement to conduct public forums and file a report before the Commission will
consider granting SSVEC authority to commence construction of the line. SSVEC is also
seeking Commission authorization to commence construction of the 69 kV line pursuant

⁷ Decision at page 39, lines 12-19 (emphasis added.)

⁸ *Id.* page 48, lines 24-26 (emphasis added.)

1 to the Decision.

2 In requesting this relief, SSVEC will still conduct public forums consistent with the
3 Decision to discuss “how renewable generation (in particular, distributed generation)
4 could be incorporated into the generation plans to serve the area covered by the planned
5 69 kV line and associated upgrades.”⁹ SSVEC will still file a report discussing the
6 outcome of the public forums on such topics. SSVEC is merely seeking a change that
7 would allow it to immediately commence construction of the 69 kV line without the need
8 to *first* conduct the public forums (which will not change the outcome) and file a report in
9 light of the Independent Study’s findings and the existing exigent circumstances.

10 **II. THE INDEPENDENT STUDY CONFIRMS THAT THE 69 KV LINE**
11 **SHOULD BE BUILT.**

12 After reviewing all of the potential options to alleviate the capacity and reliability
13 problems in the Affected Areas, including the use of renewable resources, the Independent
14 Study is unequivocal in its findings and conclusions. After reviewing all of the
15 alternatives, the Independent Study concluded that:

16 *The preferred alternative based on feeder performance and firm capacity*
17 *requirements is the construction of the new 69kV line along the Ranch*
18 *where SSVEC has easement rights.*¹⁰

19 Additionally, despite the written and oral claims asserted in the Rate Case Docket
20 regarding the visual impacts of the proposed 69 kV line to the contrary, the Independent
21 Study confirmed SSVEC’s analysis and stated:

22 *...the T-1 route has the least visual constraints due to its relatively lower*
23 *exposure to residential and roadway views. In addition, most of this route*
24 *variation follows existing distribution lines which would tend to decrease*
25 *the degree of noticeable visual change.*¹¹

26 ⁹ *Id.* at page 48, lines 9-11.

¹⁰ Independent Study at page 5.

¹¹ *Id.* at page 72 (emphasis added.) The referenced T-1 route is the route that SSVEC has chosen for the proposed 69 kV line.

1 The Independent Study also looked at renewable options, including the use of
2 distributed renewable generation. The Independent Study confirmed the SSVEC and Staff
3 conclusions that:

4 Most renewable energy options, including wind and solar photovoltaic,
5 did not provide sufficient coincident peak load reduction to be feasible –
6 the feeder peak occurs during cold winter mornings when the sun is low
on the horizon.¹²

7 Finally, the Independent Study affirms SSVEC's position of urgency and need for
8 a moratorium on new hook-ups if there is going to be further delay and finds:

9 The results of NCI's investigation indicates SSVEC should take immediate
10 action to address current performance issues and capacity limits,
11 including carefully assessing the impact of customer requests for new or
expanded service on V-7 feeder performance capacity.¹³

12 In the Rate Case Docket leading up to the adoption of the Decision, SSVEC
13 steadfastly maintained that it had spent considerable time, money and resources exploring
14 all viable alternatives to construction of the 69 kV line (including renewable generation)
15 and that the proposed 69 kV line was the best possible option to address the capacity and
16 reliability problems within the Affected Areas. Staff concurred with that analysis and the
17 Administrative Law Judge ("ALJ") who heard and considered all of the evidence
18 presented in the Rate Case Docket, proposed a Recommended Opinion and Order
19 ("ROO"), and found that:

20 It is not in the public interest, however, to order SSVEC to delay the
21 planned upgrade.¹⁴

22 However, several members of the public requested that SSVEC's conclusions be
23 confirmed by an independent third-party study and that other potential alternatives should
24 be looked at in conjunction with such Independent Study. As a result, and despite the

25 ¹² *Id.* at page 5 (emphasis added.)

26 ¹³ *Id.* at page 3 (emphasis added.)

¹⁴ ROO at page 39, lines 3-4 (emphasis added.)

1 additional costs to all of SSVEC's members (not just those within the Affected Areas), the
2 Commission ordered that the Independent Study be conducted to verify SSVEC findings
3 and to ensure that all of the alternatives had been reviewed and evaluated by an
4 independent third party. The Commission stated in the Decision that:

5 *However, we are concerned that once constructed, the project will*
6 *permanently change the landscape for the impacted communities and the*
7 *manner in which electric service is provided to the Cooperative's*
8 *customers. We need to ensure that the goals of some in the local*
9 *communities who want more investment in renewable generation to*
10 *mitigate the need for the project have been fully considered by the*
11 *Cooperative. We believe a feasibility study prepared on behalf of the*
12 *Cooperative by an independent third party is necessary for further analysis*
13 *and consideration of the issues presented, prior to proceeding with*
14 *construction of the project.*¹⁵

15 The Independent Study has now been completed and docketed and the conclusions
16 and recommendations reached by SSVEC (as well as Staff and the ALJ in the ROO) in the
17 Rate Case Docket have been confirmed. Accordingly, there is no basis for the
18 Commission to further delay construction of the 69 kV line based upon the overwhelming
19 evidence already in the Rate Case Docket and results of the Independent Study.
20 Moreover, the Cooperative submits that that immediate commencement of construction of
21 the 69 kV line is in the overall best interest of the public and the Commission should
22 authorize SSVEC to commence construction.

23 **III. IN LIGHT OF THE INDEPENDENT STUDY, THE DECISION SHOULD**
24 **BE AMENDED TO ELIMINATE THE REQUIREMENT TO HOLD**
25 **PUBLIC FORUMS BEFORE SSVEC BUILDS THE 69 KV LINE.**

26 The Independent Study confirms evidence presented by SSVEC to the Commission
in the Rate Case Docket that the construction of the 69 kV line is the best viable proven
option at the least cost and it impacts the least number of members. It also confirms
SSVEC's findings that renewable generation will not solve the reliability and capacity

¹⁵ Decision at page 39, lines 8-14 (emphasis added.)

1 problems for the Affected Areas. In light of this independent verification of SSVEC's
2 conclusions, SSVEC's ability to commence construction of the 69 kV line should not be
3 further delayed until such time that it has conducted public forums and files a report. The
4 outcome of the public forums will not in any way change the Independent Study's
5 conclusions and recommendations. Moreover, per the Cooperative's and the Independent
6 Study's recommendations that there is a need for immediate action to address the
7 performance and capacity issues in the Affected Areas, the longer commencement of
8 construction of the 69 kV line is delayed, the more the problems in the Affected Areas
9 will be exacerbated and the need for a new hook-up moratorium will become more acute.
10 Therefore, any further delay is simply not in the public interest as the public forums will
11 not change the Independent Study's conclusions, which comport with those already
12 reached by the Cooperative, Staff, and the ALJ based on the evidence presented in the
13 Rate Case Docket.

14 Because the Decision prohibits SSVEC from constructing the 69 kV line until after
15 it conducts the public forums *and* until further order of the Commission, it appears that the
16 provisions set forth in the Decision cited above would need to be modified so the
17 Commission could provide the necessary authorization to SSVEC to commence
18 construction. For the Commission's convenience, SSVEC has attached a proposed form
19 of order as Attachment B that would accomplish this.

20 **IV. SSVEC REQUESTS THE COMMISSION TO AUTHORIZE THE**
21 **COOPERATIVE TO COMMENCE CONSTRUCTION OF THE 69 KV**
22 **LINE PURSUANT TO THE DECISION.**

23 The Independent Study clearly confirms the evidence presented by SSVEC in the
24 Rate Case Docket and the recommendations and conclusions of Staff (and the ALJ in the
25 ROO) for the necessity of the construction of the 69 kV line as the best available and
26 proven option to alleviate the reliability and capacity conditions within the Affected
Areas.

1 Following the issuance of the Decision prohibiting the Cooperative from
2 constructing the 69 kV line, on December 8, 2009, and again on December 23, 2009,
3 SSVEC experienced two significant outages in the Affected Areas. These outages totaled
4 over six hours, representing 11,500 customer hours of outage. The December 8, 2009,
5 outage affected approximately 2,400 customers and lasted almost two hours. Had the 69
6 kV line been in place at the time of this outage, only 280 customers would have been
7 affected. The December 23, 2009, outage affected 2,317 customers and lasted for almost
8 five hours. Had the 69 kV line been in place at this time of this outage, only 374
9 customers would have been affected for approximately two hours.

10 Moreover, the Commission's authorization for SSVEC to immediately commence
11 construction of the 69 kV line, will allow SSVEC to take advantage of a \$6 million Clean
12 Renewable Energy Bond (CREB) offering to construct a large solar project co-located
13 with the new substation. Additionally, SSVEC will be able to take advantage of
14 approximately \$1.1 million of federal American Relief and Recovery Act ("ARRA")
15 approved grant money for smart grid infrastructure in the Affected Areas, if the
16 Cooperative can immediately commence construction of the new 69 kV line and the
17 substation. As part of the ARRA grant, SSVEC will utilize this infrastructure to leverage
18 additional residential and small business Demand Side Management ("DSM") programs
19 for the Affected Areas. Without this critical infrastructure, SSVEC will be severely
20 limited in its ability to deploy such DSM programs within the Affected Areas. Further
21 delay of the 69 kV line will significantly jeopardize the Cooperative's ability to use this
22 money within the Affected Areas given the hard and fast deadlines associated with the
23 grants.

24 Based upon the discussion held at the August 17, 2009, Open Meeting, the
25 Commissioners, by a vote of 4-1, approved the amendment to the ROO prohibiting
26 construction of the line in response to requests made by several members of the public that

1 the Independent Study first be conducted to provide analysis regarding SSVEC's proposal
2 and other alternatives for the need for the line before construction commenced.¹⁶

3 At the August 17, 2009, Special Open Meeting, Commissioner Newman stated:

4 *I really truly believe that there should be an independent third party*
5 *looking at the kV line.*¹⁷

6 This has now been completed. The Commission afforded those members of the public
7 which opposed the 69 kV line the assurance they sought with the Independent Study by an
8 independent third party conducted before any construction commenced. The Independent
9 Study has provided affirmation of SSVEC's conclusions. At this juncture, there is no
10 reason for further delay in the authorization for the Cooperative to commence construction
11 of the 69 kV line.

12 While asking a legal question about the Commission's authority in regard to the
13 Independent Study, Commissioner Pierce stated:

14 *So what I am concerned about is, let's say that a third party is hired and*
15 *that third party comes back and says, you know, the company is right, at*
16 *what point can the company then go on as they normally would, if that*
*were to happen?"*¹⁸

17 The Independent Study has since confirmed that the Cooperative should not be delayed in
18 moving forward with the construction of the 69 kV line.

19 In voting for the amendment ordering the study and prohibiting construction of the
20 line, Chairman Mayes stated:

21 *And I wanted to make sure that this study is done within the time frame*
22 *allotted and that the Commission can come back and look at this issue a*
*year from now and determine whether or not this line needs to be built.*¹⁹

23 ...

24

25 ¹⁶ *Id.* at lines 12-14.

26 ¹⁷ Transcript of August 17, 2009, Special Open Meeting at page 140, lines 16-18.

¹⁸ *Id.* at page 144, lines 14-18.

¹⁹ *Id.* at page 184, lines 11-15.

1 SSVEC completed the Independent Study within the time frame allotted. The
2 Independent Study has affirmed SSVEC's conclusions and supports the need for
3 immediate action. The Commission should not delay in determining that the line does
4 need to be built.

5 Commissioner Stump, who voted against the amendment to prohibit the
6 construction of the line and the commissioning of the Independent Study, stated:

7 *...every community in Arizona deserves reliable power, including rural*
8 *Arizona. And they deserve it without delay.*²⁰

9 The Independent Study did, in fact, confirm the evidence presented at the hearing for the
10 need for the 69 kV line. It further corroborated the need for immediate action to resolve
11 the performance and capacity issues in the Affected Areas. Continued delay in granting
12 SSVEC authority to commence construction of the 69 kV line, increases the risk of
13 outages and unreliable service, as well as increases costs to SSVEC members; neither of
14 which are in the public interest.²¹

15 Finally, Chairman Mayes referenced the issue of the 69 kV line in voting for the
16 Decision by stating:

17 *I share Commissioner Stump's concerns about the reliability issues*
18 *surrounding the 69 kV line. I think the process we laid out should go*
19 *forward. But at some point the energy needs of the area are also going to*
*need to be met.*²²

20 SSVEC submits that in light of the Independent Study's findings, including the
21 need to take immediate action, that point is now and the Commission should authorize
22 SSVEC to proceed with the construction of the 69 kV line.

23 _____
24 ²⁰ Transcript of August 25, 2009, Open Meeting at page 336, lines 5-7.

25 ²¹ In addition to the money already spent by the Cooperative to perform the Independent Study, the
26 Independent Study found that the unreliability of the V-7 Feeder Line, in terms of line losses, costs
SSVEC an additional \$230,000 per year based on 2010 revenue forecasts for energy and demand. See
Independent Study at page 24.

²² Transcript of August 25, 2009, Open Meeting at page 341, lines 18-22 (emphasis added.)

1 **V. THE COOPERATIVE IS WILLING TO WITHDRAW ITS APPLICATION**
2 **FOR RECONSIDERATION AND APPLICATION FOR A MORATORIUM.**

3 In consideration of the Commission granting the relief requested herein, SSVEC
4 would be willing to withdraw its entire Reconsideration Application and its Moratorium
5 Application (collectively "Applications"). SSVEC would file its request to withdraw such
6 applications within ten (10) business days after the final order granting the requested relief
7 becomes a final non-appealable order. The Cooperative submits that due to resource,
8 economic, and time constraints, both the Commission and SSVEC will experience as a
9 result of moving forward with these Applications, as well as SSVEC members being
10 assured that all analysis of the 69 kV line and alternatives have been confirmed, and that
11 the rates authorized in the Decision will not further increase until after SSVEC's next rate
12 case, the granting of the relief requested herein, which will result in SSVEC's withdrawal
13 of these Applications, would also be in the public interest.

14 **VI. CONCLUSION.**

15 At the time the Commission considered ordering the Independent Study, it
16 acknowledged that the Independent Study's results might confirm SSVEC's position that
17 the construction of the 69 kV line as proposed by the Cooperative would be affirmed.
18 Pursuant to the Commission's Decision, the Cooperative expended approximately
19 \$360,000 to have the Independent Study conducted by a reputable, experienced,
20 independent third party within the timeframe ordered by the Commission. The results of
21 the Independent Study do, in fact, further corroborate the Cooperative's position as
22 supported by the evidence in the Rate Case Docket that the routing of the proposed 69 kV
23 line will impact the least amount of SSVEC members. The Independent Study also
24 confirms that the other alternatives considered by the Cooperative (and proposed by
25 others) are either not feasible, are not proven, or could only be implemented at costs that
26

1 would unduly and unfairly increase rates for *all* SSVEC members. The Independent
2 Study further confirms that due to the capacity and reliability needs of the Affected Areas,
3 renewable generation, including the use of distributed generation resources, will not
4 alleviate the performance and reliability problems, as well as the outages that have, and
5 will, continue to plague the Affected Areas. Moreover, the Affected Areas stand to lose
6 significant ARRA grant money for smart grid infrastructure and DSM if the 69 kV line is
7 further delayed. Finally, the Independent Study confirms the need for "*immediate action*
8 *to address the current performance issues and capacity limits*" of the existing V-7 Feeder
9 which serves the Affected Areas. Accordingly, there is no reason for the Commission to
10 further delay SSVEC's ability to expeditiously construct the 69 kV line which SSVEC's
11 management has determined is in the best interest of all of its members.

12 If the Commission authorizes SSVEC to construct the 69 kV line, SSVEC will still
13 move forward to conduct public forums in the Affected Areas to discuss the proliferation
14 of renewable generation as required by the Decision. However, as further evidenced by
15 the Independent Study, since renewable generation cannot supplant the need to construct
16 the 69 kV line, SSVEC should not be further delayed by the Decision's apparent
17 requirement that public forums must be held and SSVEC must file a report before it may
18 seek authorization from the Commission to commence construction of the line.
19 Therefore, the Decision should be amended pursuant to A.R.S. §40-252 to remove this
20 requirement so the Commission can issue its order permitting SSVEC to move forward
21 with the construction of the 69 kV line.

22 In consideration of the granting of the requested relief, SSVEC will withdraw its
23 Applications within ten (10) business days of the order granting the requested relief herein
24 becoming a final, non-appealable order. This will eliminate the necessity of the
25 Commission and the Cooperative to expend additional time, resources, and money on
26 these two Applications and guarantee that SSVEC members will not see an increase in

1 their rates prior to the conclusion of the next rate case.

2 On the basis of the foregoing, SSVEC requests that the Commission grant the relief
3 requested herein to amend the Decision and authorize SSVEC to move forward with
4 construction of the 69 kV line at its February 2 and 3, 2010, Open Meeting.

5 RESPECTFULLY SUBMITTED this 14th day of January, 2010.

6 SNELL & WILMER LLP.

7 
8 By _____

9 Bradley S. Carroll
10 One Arizona Center
11 400 East Van Buren
12 Phoenix, Arizona 85004-2202
13 Attorneys for Sulphur Springs Valley
14 Electric Cooperative, Inc.

13 ORIGINAL and 13 copies of the foregoing
14 filed this 14th day of January, 2010, with:

15 Docket Control
16 ARIZONA CORPORATION COMMISSION
17 1200 West Washington
18 Phoenix, Arizona 85007

17 COPIES of the foregoing hand-delivered
18 this 14th day of January, 2010, to:

19 Kristin K. Mayes, Chairman
20 ARIZONA CORPORATION COMMISSION
21 1200 West Washington Street
22 Phoenix, Arizona 85007

21 Gary Pierce, Commissioner
22 ARIZONA CORPORATION COMMISSION
23 1200 West Washington Street
24 Phoenix, Arizona 85007

24 Paul Newman, Commissioner
25 ARIZONA CORPORATION COMMISSION
26 1200 West Washington Street
Phoenix, Arizona 85007

1 Sandra D. Kennedy, Commissioner
ARIZONA CORPORATION COMMISSION
2 1200 West Washington Street
Phoenix, Arizona 85007

3
4 Bob Stump, Commissioner
ARIZONA CORPORATION COMMISSION
5 1200 West Washington Street
Phoenix, Arizona 85007

6 Steve Olea, Director
Utilities Division
7 ARIZONA CORPORATION COMMISSION
1200 West Washington Street
8 Phoenix, Arizona 85007

9 Wesley C. Van Cleve, Attorney
Legal Division
10 ARIZONA CORPORATION COMMISSION
1200 West Washington Street
11 Phoenix, Arizona 85007

12 COPY of the foregoing mailed/emailed
this 14th day of January, 2010, to:

13
14 Jane Rodda, Administrative Law Judge
Hearing Division
ARIZONA CORPORATION COMMISSION
15 400 West Congress
Tucson, AZ 85701-1347

16 Susan Scott
17 P.O. Box 178
Sonoita, AZ 85637

18
19 By *Gmitz*

20 11053949.7

21
22
23
24
25
26

Attachment A



**Sulphur Springs Valley
Electric Cooperative, Inc.**

P.O. Box 820
Willcox, AZ 85644
Telephone (520) 384-2221 FAX (520) 384-5223

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ORIGINAL

November 20, 2009

HAND DELIVERED

Prem Bahl, Utility Engineer
Utilities Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Arizona Corporation Commission
DOCKETED

NOV 20 2009

DOCKETED BY	<i>MM</i>
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**Re: Sulphur Springs Valley Electric Cooperative, Inc.'s Meetings with Staff
Regarding Independent Feasibility Study Required by Decision No. 71274
Docket No. E-01575A-08-0328**

Dear Mr. Bahl:

The purpose of this letter is to set forth the meetings that representatives of Sulphur Springs Valley Electric Cooperative, Inc. ("SSVEC" or "Cooperative") have had with Staff in connection with the Cooperative's compliance with the Arizona Corporation Commission's ("Commission") Decision No. 71274 issued on September 8, 2009 ("Decision") which prohibited SSVEC from constructing a 69 kV sub-transmission line and required the Cooperative to conduct and file an independent feasibility study ("Study") by December 31, 2009.

Background

As you know, pursuant to the Decision, SSVEC was ordered to have prepared by an independent third party a Study that included alternatives (including the use of distributed renewable generation) that could mitigate the need for construction of the proposed 69 kV power line project. At the August 17 and 25, 2009, Open Meetings of the Commission, the Commissioners had requested that SSVEC keep Staff informed as to the selection process the Cooperative would initiate relating to the Study.

Prem Bahl, Utility Engineer

November 20, 2009

Page 2

In order to assist SSVEC in the preparation and issuance of a Request for Proposal ("RFP"), SSVEC engaged the services of TRC Companies, Inc. ("TRC") of Albuquerque, New Mexico. TRC has extensive experience in Utility infrastructure, energy, and environmental planning and engineering. Although SSVEC was not expressly required to garner input from the Save the Scenic Sonoita Elgin Grasslands ("3SEG") group (aka Sonoita Mountain Empire) on the Scope of Work ("SOW") for the RFP, SSVEC invited representatives from the group to review the SOW and provide their requests for the Study. On or about October 12, 2009, TRC completed the RFP and final list of potential bidders. The bidder list was prepared by TRC, and included input from the 3SEG representatives. It was determined that in order to give potential bidders sufficient time to bid on the RFP, and for SSVEC to award the bid to provide sufficient time for the winning bidder to complete the Study for the December 31, 2009, compliance deadline, the RFP needed to be released as soon as possible.

October 13, 2009 Meeting with Staff

On or about October 12, 2009, SSVEC, 3SEG, and TRC completed the RFP and potential list of bidders. On October 13, 2009, Mr. Jack Blair, the Cooperative's Chief Member Services Officer, came to Phoenix and met with you to discuss the RFP and the process that SSVEC had engaged in to that point. Mr. Blair explained that there were two meetings with the 3SEG group which opposed the 69 kV line and who are interested in renewable alternatives. Input from those members was included in the SOW for the RFP and three additional entities were added to the potential list of bidders at their request. Mr. Blair indicated that although not expressly required, SSVEC wanted to be sure there was community involvement in the process to ensure that there would be no objection to the RFP or the Study that was ultimately prepared and filed. Mr. Blair then went over with you the entire process SSVEC went through including the selection of TRC, the contents of the RFP, and the list of potential bidders. Mr. Blair also provided you a copy of the RFP and list of bidders and indicated that it was SSVEC's intention to issue the RFP unless you had an objection. You indicated that the RFP was a very good document and that the list of potential bidders was very comprehensive and included those engineering firms that had the requisite expertise and standing to conduct the Study. Mr. Blair then indicated that SSVEC was going to move forward and issue the RFP, which was released for bid that very afternoon.

October 28, 2009 Meeting with Staff

Responses to the RFP were due on October 27, 2009. Accordingly, SSVEC pre-arranged to meet with you and Mr. Olea on October 28, 2009, to discuss the responses and the selection of the winning bidder. On October 28, 2009, Deborah White and I

Prem Bahl, Utility Engineer
November 20, 2009
Page 3

came to Phoenix for the meeting. In attendance for Staff were yourself, Del Smith and Elijah Abinah. We were told that Mr. Olea was unable to attend the meeting because he was on the "A Team" and was an advisor to the Commission.

At the meeting, we informed you, Mr. Smith, and Mr. Abinah that there were only two responses to the RFP from the 14 potential bidders. We then presented Staff with the attached TRC RFP Summary and Statement of Work and discussed the entire RFP process and subsequent responders, as well as the Cooperative's intended selection of Navigant Consulting Inc. ("Navigant") for bid award. We also discussed the following topics:

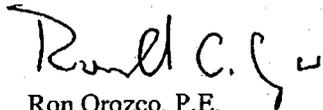
- Who TRC is; SSVEC's relationship with TRC; TRC's coordination with 3SEG.
- TRC's work in preparing the SOW and the SOW itself.
- The process and rationale for pre-qualifying bidders, as opposed to an open bid solicitation including:
 - a) SSVEC's effort to obtain nationally recognized firms with the staffing capabilities to meet the requirements with known comprehensive experience in fields of study that had the ability to respond in a timely manner; and
 - b) The avoidance of conflicts of interest.
- The list of 14 pre-qualified bidders including those specifically suggested by the 3SEG representatives.
- SSVEC's selection process of Sonoita representatives including the:
 - a) Names of the representatives;
 - b) Invitation process; and
 - c) Number of meetings.
- Bid estimates of costs, and other related costs for study.

During the meeting, we also provided detailed answers to questions posed by Mr. Abinah, and discussed issues associated with SSVEC's pending application for a moratorium. At the conclusion of the meeting, the Cooperative and Staff were in agreement that SSVEC should move forward to award the bid to Navigant which SSVEC has since done. Navigant has commenced work on the Study and is required to provide the Study to the Cooperative no later than December 29, 2009, to be filed with the Commission by December 31, 2009.

Prem Bahl, Utility Engineer
November 20, 2009
Page 4

The Cooperative is committed to continue working with Staff and keeping Staff informed in regard to this matter. If any of what I have stated above does not meet with your understanding, please do not hesitate to contact me. Thank you for the opportunity to work with you and Staff on this matter.

Respectfully,



Ron Orozco, P.E.
Engineering Manager
Sulphur Springs Valley Electric Cooperative, Inc.

Cc: Steve Olea, Director of Utilities
Elijah Abinah, Assistant Director of Utilities
Del Smith, Utilities Engineer
Docket Control (13 copies)

10815281.1



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October 27, 2009

Ms. Deborah White
Right-of-Way Services Manager
Sulphur Springs Valley Electric Cooperative
P.O. Box 820
Willcox, AZ 85644

**Subject: Sonoita Reliability Project – Feasibility Study
Request for Proposal Response Results**

Dear Ms. White,

TRC submitted the Sonoita Reliability Project – Feasibility Study Request for Proposal (RFP) to fourteen firms on October 13, 2009 with a response due date of October 27, 2009 at 2:00 pm MDT. The following is a summary of the responses from the fourteen firms that received the RFP.

Five companies responded that they did not intend to submit a proposal in response to the RFP. The five companies indicating no intent to bid were Synapse Energy Economics, Commonwealth Associates, Burns & McDonnell, URS and Stanley Consultants. The no bids were due mostly to staff unavailability due to the number of other projects currently underway.

Five companies did not provide any response to the RFP at all. The five companies that provided no response were Black & Veatch, HDR, Natural Capitalism, Ecos, and Sargent Lundy.

TRC received four responses of intent to bid. The four intent to bid responses were from Navigant, KEMA, CH2M HILL, and Eulteig. Only Navigant and Eulteig participated in the Pre-Bid conference call on October 16. Subsequent to the pre-bid conference call KEMA and CH2M HILL did not submit a proposal. KEMA notified TRC today they did not have time available to complete the project due to ongoing commitments. Bid proposals were received from Navigant Consulting and Ulteig.

Navigant Consulting is a publicly traded company (NYSE: NCI) with 28 offices and a local office in Phoenix, AZ. They have 1925 employees and 2008 revenues of \$810,000,000. Navigant's Energy Practice is organized around Power Systems & Pricing, Business Planning & Performance Improvement, and Emerging Technologies & Energy Efficiency. The staff that will be assigned to the project have experience in system planning,



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reliability, and distributed energy resource technologies including distributed generation, photovoltaic, demand response and storage. However, Navigant did not address the resources in the company that would be working on the environmental tasks stated in the RFP. The environmental task in the RFP is an area that needs further clarification by Navigant. The price Navigant quoted for the study is \$126,000 for labor plus an estimated direct expense cost of 15 to 20 percent of labor. Including the upper end of the estimated expense cost, the total price from Navigant is \$151,200.

Ulteig is an employee owned firm of 350 professionals working in engineering, planning, energy, routing & permitting and right-of-way located in Minneapolis, MN. Their proposal did not include much information documenting the company's experience in renewable energy or distributed generation project experience and was not very substantive. Ulteig does have experience in system planning and reliability studies. The environmental resource assigned to the project was addressed but the project experience seems limited. The price quoted for the study was \$174,000 and included \$5,000 for two study team members to make a two day field visit to the Sonoita area.

If you need any additional information or have any questions, please call me at (505)-264-9539.

Sincerely,

A handwritten signature in cursive script that reads "Rick Goodwin".

Rick Goodwin, P.E.
Manager, New Mexico Operations
Power Delivery Engineering

REQUEST FOR PROPOSAL (RFP)

FOR

**Sulphur Springs Valley Electric Cooperative, Inc
Sonoita Reliability Project – Feasibility Study**

Issue Date: 10/13/09

REQUEST FOR PROPOSAL
Sonoita Reliability Project – Feasibility Study

SECTION 2 – Statement of Work

2.01 TASKS TO BE PERFORMED

The purpose of the Sonoita Reliability Project Feasibility Study is to perform an independent evaluation of the operational performance, and to identify deficiencies in the performance, of SSVEC's 24.9kV V-7 distribution circuit at current and projected peak load levels and to evaluate options to mitigate performance deficiencies. It is not the intent of the Feasibility Study to either rebut or support previous studies or recommendations contained in documents provided for background information purposes. All options and alternatives considered for mitigation of operational deficiencies must only be for mature, commercially available, economically viable technologies, must provide a long term solution to correct deficiencies and must be evaluated over a twenty year project life.

Communications with SSVEC staff, local communities, other utilities, or the ACC are not being required or requested as part of this scope of work.

1. Using data provided by SSVEC, assess the operational performance of the SSVEC 24.9kV distribution feeder circuit V-7 and Huachuca West Substation and identify operational deficiencies for current peak load conditions. Performance should be evaluated using RUS planning and operations criteria and other utility industry criteria if applicable.
2. Using historic peak load data and other data provided by SSVEC as well as data from other resources, forecast the peak load on circuit V-7 for 5, 10 and 20 years into the future.
3. Assess the operational performance of circuit V-7 and Huachuca West Substation under projected peak load conditions 5 years, 10 years and 20 years into the future and identify operational deficiencies. Performance should be evaluated using RUS planning and operations criteria and other utility industry criteria if applicable. If necessary, interpolate the projected peak load on circuit V-7 to identify the specific year or load level at which deficiencies initially occur.
4. Review the outage and interruption history for circuit V-7 and Huachuca West Substation for the past 5 and 10 year periods. Calculate outage indices using RUS indices such as CHPC as well as SAIDI, SAIFI and CAIDI indices.
5. Evaluate the technical ability of renewable energy distributed generation technologies, either utility or non utility-owned, to mitigate existing and future deficiencies in the operational performance of circuit V-7 and Huachuca West Substation. Renewable energy technologies considered should include at a minimum solar and wind resources. Solutions should have a twenty year project life to be considered viable.
6. Evaluate the technical ability of fossil fuel distributed generation resource technologies to mitigate existing and future deficiencies in the performance of circuit V-7 and Huachuca West Substation. In addition to operational performance, capital costs and operating costs include an assessment of the potential environmental impacts of air emissions, water consumption and noise levels in the evaluation. Solutions should have a twenty year project life to be considered viable.

7. Evaluate the applicability and cost impact of mature, commercially available energy storage technologies to compliment renewable energy or fossil fuel distributed generation technologies mentioned above to replace the need for the proposed 69kV line and substation. Solutions should have a twenty year project life to be considered viable.
8. Evaluate the ability and feasibility of the 24.9kV distribution line options identified by SSVEC in its studies to mitigate the existing and future deficiencies in the operational performance of circuit V-7 and Huachuca West Substation. Previously identified SSVEC options include 24.9kV line upgrades, new 24.9kV express feeder construction, connection to foreign 13.8kV distribution circuit and connection to a foreign 46kV line. Technical analyses of the operational performance of foreign 13.8kV and 46kV lines are not being required for these evaluations. Solutions should have a twenty year project life to be considered viable.
9. Evaluate the ability of the new 69kV transmission line and new 69kV-24.9kV substation options identified by SSVEC in its studies to mitigate the existing and future deficiencies in the operational performance of circuit V-7 and Huachuca West Substation over a twenty year project life.
10. Identify feasible construction options, if any, not considered by SSVEC in its previous studies of the V-7 circuit and evaluate their ability to mitigate existing and future operational deficiencies in the performance of circuit V-7 and Huachuca West Substation. Solutions should have a twenty year project life to be considered viable.
11. Based on available information, evaluate potential impacts to cultural, biological and aesthetic resources resulting from the feasible line construction, distributed generation and renewable energy alternatives considered for mitigating operational deficiencies in circuit V-7 and Huachuca West Substation. Feasible suggestions to reduce any substantial impacts should be provided as part of the evaluations.
12. Consider the potential impact, if any, of EMF from renewable energy, distributed generation and line construction alternatives considered for mitigating operational deficiencies in V-7 and Huachuca West Substation. Literature search findings are sufficient for this task. Quantitative studies of EMF levels for alternatives considered are not being required as part of this task.
13. Using substation and line construction cost data provided by SSVEC, as well as cost data not provided by SSVEC, prepare a present worth economic comparison of technologically feasible distributed generation and electric system construction options identified above to mitigate existing and future deficiencies in the performance of circuit V-7 and Huachuca West Substation. Economic comparisons should be based on a 30 year project life.
14. Identify potential contractual, regulatory, rights-of-way or legal issues that could cause either significant delays in completing technologically feasible options or which could significantly increase costs.

2.02 TASKS NOT REQUIRED

Communications with SSVEC staff, local communities, other utilities, or the ACC are not being required or requested as part of this scope of work.

2.03 AVAILABLE DATA

Data to be provided for the feasibility study include, but are not necessarily limited to:

- Capacity Study of Huachuca West Substation V-7 Feeder prepared by SSVEC Engineering Division, April 2007 – available for background information purposes only
- Preliminary Option & Cost Estimates and Solution Evaluation Factors prepared by SSVEC Engineering Division, February 1993 – available for background information purposes only
- 15 minute interval SCADA data for 2007, 2008 and through September 2009 for Huachuca West Substation and circuit V-7
- Recommendations For Request for Proposal prepared by the Citizens of the Mountain Empire dated October 4, 2009 – available for background information purposes only
- SSVEC comments on alternatives proposed by 3SEG to the Arizona Corporation Commission on July 22, 2009 – available for background information purposes only
- 10 years of outage history for circuit V-7
- A summary of significant efforts to improve the reliability of circuit V-7 over the past 10 years.
- Historical peak load data for 1998 through September 2009 for circuit V-7 and Huachuca West Substation. Additional historic peak load data will be provided if required and available.
- Average number of meters connected to circuit V-7 for the years included in studies.
- A summary of known new loads anticipated for circuit V-7 and their timing
- Available land use comprehensive plans
- Voltage data for peak load periods from remotely read meters (Turtle System) installed along circuit V-7
- Regulator settings for all voltage regulators on circuit V-7
- Settings for all reclosers and sectionalizers on circuit V-7
- MilSoft WindMil reduced circuit model of circuit V-7 for 2007 load data, including equipment database, in ZIP file format
- MilSoft WindMil detailed circuit model of 2007 circuit V-7 with 2008 allocated load data, including equipment database, in ZIP file format
- GIS data base for circuit V-7
- SCADA data and WindMil circuit model for SSVEC circuits included in study work
- System maps and drawings showing SSVEC circuit V-7, adjacent SSVEC distribution lines, SSVEC 69kV lines as well as foreign 13.8kV distribution and 46kV transmission lines and documentation concerning their availability from the line owners
- Rights-of-way and easement data for existing SSVEC lines and proposed line route options.
- SSVEC current discount rate to be used for economic evaluations
- SSVEC 24.9kV and 69kV unit construction standards
- RUS and NRECA Bulletins applicable to system analysis and planning
- History of the Babocomari Ranch
- Book - The Babocomari Village Site on the Babocomari River of SE Arizona
- Sonoita Service Improvement Project Advisory Committee Meeting Notes- May 12, 1993
- Sonoita Service Improvement Project Advisory Committee Meeting Notes- August 25, 1993

Respondents should identify any additional data that will be required to be provided by SSVEC to complete the circuit performance studies and load projections.

SECTION 3 – Deliverables

3.01 Final Report

The deliverable for this project is a final report that documents:

- The performance of SSVEC's circuit V-7 and Huachuca West Substation for current and future load conditions
- The outage history of SSVEC's circuit V-7 and Huachuca West Substation and SSVEC's projects to improve the reliability of circuit V-7
- Technically feasible options, including fossil fuel and renewable energy distributed generation, to correct deficiencies in the performance and reliability of SSVEC's circuit V-7 for existing and projected future loads
- The methodologies used to identify performance and reliability deficiencies in circuit V-7 and Huachuca West Substation
- The data used to evaluate circuit performance and reliability
- The data used to evaluate the efficacy of options considered as feasible solutions for identified operational and reliability deficiencies
- Potential options considered but not practicable with summary explanation why they were ruled out

Evaluation of technically feasible solutions considered in the deliverable report shall include documentation of:

- The efficacy of each option in correcting identified deficiencies
- Routing alternatives for line construction options including a discussion of easement acquisition, feasibility, timeline, and costs
- The length of time required to implement each option
- The length of time that each option provides a solution for deficiencies
- The potentially substantial impacts for each option, if any, to cultural, biological, aesthetic, air quality and water resources and feasible suggestions to reduce these impacts
- EMF and noise considerations for each option
- Potential regulatory, right-of-way, contractual, legal or other issues that could significantly delay or increase the cost of each option
- The Present Worth cost of each option, including estimated O&M costs, for a thirty year project life

The deliverable final report shall include either a separate section or appendix that contains short, summary discussions of each technically feasible option considered. Each of the option summaries should be no more than one page in length.

The deliverable report shall include a summary of the technically feasible options in a table or matrix format as either a separate section contained in the body of the report or as an appendix.

1. A draft of the deliverable final report shall be provided TRC and SSVEC in both PDF and Microsoft Word document formats no later than 5:00 PM MST on December 17, 2009.

-
2. The deliverable final report shall be sealed by a professional engineer qualified to carry out and direct the analyses and evaluations contained in the deliverable report.
 3. Ten bound copies of the deliverable final report and an electronic copy of the final report and all supporting data, including circuit models, shall be delivered to SSVEC in Willcox, Arizona no later than 5:00 PM MST on December 29, 2009.

Attachment B

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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

KRISTIN K. MAYES—Chairman
GARY PIERCE
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP

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-08-0328

DECISION NO. _____

ORDER

Open Meeting
February 2 and 3, 2010
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Sulphur Springs Valley Electric Cooperative, Inc. (“SSVEC” or “Cooperative”) is a member-owned non-profit cooperative that provides electric distribution service pursuant to a Certificate of Convenience and Necessity granted by the Arizona Corporation Commission (“Commission”).

2. On January 14, 2009, SSVEC filed a Petition to Amend Decision No. 71274 pursuant to A.R.S. §40-252 and for Related Authorization (“Petition”). In the filing, SSVEC requests that the Commission revise the Decision to remove the requirement that SSVEC conduct public forums in the areas within its service territory (“Affected Areas”) impacted by its proposed 69 kV sub-transmission line (“69 kV line”) before it seeks authorization from the Commission to commence construction of the 69 kV line. SSVEC

1 further requests that the Commission authorize the Cooperative to commence construction
2 of the 69 kV line.

3 3. SSVEC's Petition states that the Cooperative will still conduct public
4 forums consistent with the requirements of the Decision. However, SSVEC states that in
5 light of the results of the independent feasibility study ("Independent Study") ordered by
6 the Decision that was docketed on December 31, 2009, construction of the 69 kV line
7 should not be further delayed. The Petition further states that SSVEC will withdraw its
8 Application for Rehearing and Reconsideration currently pending in this docket, as well
9 as its Application for an Order Instituting a Moratorium on New Connections to the V-7
10 Feeder Line Serving the Affected Areas in Docket No. E-01575A-09-0453 within ten (10)
11 business days after the order granting the relief set forth in its Petition becomes a final,
12 non-appealable order of the Commission.

13 4. Per the requirements of the Decision, the Independent Study was prepared
14 by Navigant Consulting, Inc., an independent third party chosen following a request for
15 proposal (RFP) process. The Independent Study corroborates the evidence presented by
16 SSVEC in this docket, as well as the recommendations of Staff set forth in its testimony.
17 After examining all viable options, including the use of renewable generation resources as
18 a possible alternative to address capacity and reliability issues on the Cooperative's V-7
19 Feeder currently serving the Affected Areas, the Independent Study concludes that "the
20 preferred alternative based on feeder performance and firm capacity requirements is the
21 construction of new 69 kV line along the Ranch where SSVEC has easement rights."¹

22 5. The Commission ordered a delay of the construction of the 69 kV line, in
23 part, because of requests from SSVEC members residing within the Affected Areas who
24 requested independent third-party verification that all viable alternatives, including the use
25 of renewable generation, had been explored prior to construction of the proposed 69 kV

26 ¹ Independent Study at page 5.

1 line. In light of the Independent Study's analysis, conclusions, and recommendations, the
2 Commission finds that SSVEC should be permitted to move forward with construction of
3 the 69 kV line without further delay in order to address capacity and reliability problems
4 within the Affected Areas resulting in power outages and additional expense to the
5 Cooperative.

6 6. The Decision should be revised as follows:

7 **On page 39, line 17, DELETE** "prior to construction of the project" and **INSERT**
8 **“.”** after "alternatives".

9 **On page 48, line 26, DELETE** the second "and" and **REPLACE** with "or".

10 **CONCLUSIONS OF LAW**

11 1. Sulphur Springs Valley Electric Cooperative, Inc. is a public service
12 corporation within the meaning of Article XV, Section 2, of the Arizona Constitution.

13 2. The Commission has jurisdiction over Sulphur Springs Valley Electric
14 Cooperative, Inc. and the subject matter of the Petition pursuant to A.R.S. §40-252 and
15 Decision No. 71274.

16 3. The relief requested by Sulphur Springs Valley Electric Cooperative, Inc. in
17 its Petition is reasonable, in the public interest, and should be granted.

18 4. Decision No. 71274 should be revised as discussed in Findings of Fact No.
19 6.

20 **ORDER**

21 **IT IS THEREFORE ORDERED** that Decision No. 71274 be revised as discussed
22 in Findings of Fact No. 6.

23 **IT IS THEREFORE ORDERED** that Sulphur Springs Valley Electric Cooperative,
24 Inc. is hereby authorized to construct the 69 kV line as discussed herein and in the
25 Decision.

26 **IT IS FURTHER ORDERED** that this Decision become effective immediately.

1 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

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5 **CHAIRMAN**

COMMISSIONER

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9 **COMMISSIONER**

COMMISSIONER

COMMISSIONER

10
11 IN WITNESS ERNEST G. JOHNSON, Executive
12 Director of the Arizona Corporation Commission,
13 have hereunto, set my hand and caused the official
14 seal of the Commission to be affixed at the Capitol, in
15 the City of Phoenix, this ____ day of _____, 2010.

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ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

DISSENT: _____

DISSENT: _____

ORIGINAL



**Sulphur Springs Valley
Electric Cooperative, Inc.**

P.O. Box 820
Willcox, AZ 85644
Telephone (520) 384-2221 FAX (520) 384-5223

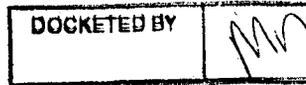
January 27, 2010

Arizona Corporation Commission
DOCKETED

JAN 27 2010

HAND DELIVERED

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007



ARIZONA CORPORATION
COMMISSION
DOCKET CONTROL

2010 JAN 27 P 2:08

RECEIVED

**Re: Additional Information in Support of Petition Amend Decision No. 71274
Pursuant to A.R.S. §40-252 and for Related Authorization -
Member Survey Report
Docket No. E-01575A-08-0328.**

To Whom It May Concern:

The purpose of this letter is to provide the Arizona Corporation Commission ("Commission") with additional information in support of Sulphur Springs Valley Electric Cooperative, Inc.'s ("SSVEC" or "Cooperative") *Petition to Amend Decision No. 71274 Pursuant to A.R.S. §40-252 and for Related Authorization* ("Petition") that was not available at the time of the January 14, 2010, filing of the Petition. The Cooperative believes this information is relevant to the public interest considerations that the Commission is currently considering with respect to its determination as to whether to grant the relief requested in the Petition.

Background

Prior to the filing of SSVEC's last rate case, the Cooperative (and the Commission) rarely received any complaints from its members regarding the Cooperative's relationship with its members. However, because of SSVEC's plans to construct the 69 kV line in the Sonoita/Patagonia area, a well-organized small group of members who own property along the 69 kV route, who purchased their property with full knowledge that SSVEC had an easement to construct a power line that would be visible from their property, orchestrated a campaign at the Commission (using the rate case docket) to stop construction of the line. As part of this campaign, those in opposition to the line made oral claims to the Commission, e-mailed Commissioners, and filed numerous letters,

comments, and complaints in the docket alleging, among other things, that (i) SSVEC was not cooperating with its members, (ii) SSVEC was providing inaccurate information to its members and to the Commission, and (iii) the vast majority of SSVEC members in the Sonoita/Patagonia area opposed the 69 kV line. As a result, the Commission stopped SSVEC from constructing the 69 kV line pending the filing of an independent feasibility study ("Independent Study") and has ordered further proceedings. These actions have already cost SSVEC member/ratepayers hundreds of thousands of dollars and if this matter continues it will cost SSVEC member/ratepayers considerably more money. Moreover, at recent Open Meetings of the Commission, various Commissioners have told SSVEC representatives that they are concerned about the level of complaints they continue to receive and that the Cooperative does not appear to have a good relationship with its members.

This greatly concerned SSVEC's member-elected Board of Directors and management and prompted the Cooperative to initiate an independent survey of its membership to primarily address how the members feel about their Cooperative, as well as test the vehement claims of those that oppose the 69 kV line, that the approximately 2,500 members in the Sonoita/Patagonia area oppose the construction of the line. The Survey was conducted by RBI Strategies and Research and Severson & Associates at no cost to SSVEC thanks to the assistance of TWN, the internet partner of SSVEC to whom the cost of this survey will be billed.

Survey Results

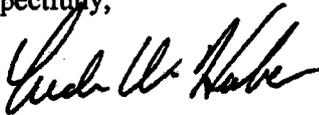
Attached for your consideration is a copy of the Survey Report. Suffice it to say, the Survey Report by an overwhelming margin confirms that SSVEC's membership, including those members from the Sonoita/Patagonia area, give their Cooperative high marks regarding customer relations, rates, environmental stewardship, and communication. Additionally, the poll also refutes the claims made by those who oppose the 69 kV line that a majority of members residing within the Sonoita/Patagonia area oppose the line. To the contrary, after hearing the pros and cons, 83% percent of SSVEC's total membership supports the proposed line, while 8% oppose it and the remainder are undecided. Within the Sonoita/Elgin/Patagonia area, 72% support construction of the 69 kV line, 22% oppose it, and 6% are undecided. The survey found that while SSVEC received good marks for electric service reliability in the service territory as a whole, the electric service reliability scores in the Sonoita/Elgin/Patagonia area were the worst the polling company has seen in two decades of polling cooperative memberships around the nation.

Arizona Corporation Commission
January 27, 2010
Page 3 of 3

Conclusion

Given the results of the Independent Study, the Survey Report, and the reasons set forth in the Petition, SSVEC respectfully requests that the Commission find that construction of the line is in the overall best interest of SSVEC members and grant the relief requested in its Petition.¹

Respectfully,



Creden W. Huber
Chief Executive Officer
Sulphur Springs Valley Electric Cooperative, Inc.

Cc: Kristin K. Mayes, Chairman
Gary Pierce, Commissioner
Paul Newman, Commissioner
Sandra D. Kennedy, Commissioner
Bob Stump, Commissioner
Steve Olea, Director of Utilities
Wesley C. Van Cleve, Attorney
Jane Rodda, Administrative Law Judge (via mail)
Susan Scott, Intervenor (via mail)
Susan J. Downing, Intervenor (via mail)
James F. Rowley, III, Intervenor (via mail)
Docket Control (13 copies)

¹ In consideration of the granting of the relief requested in the Petition, SSVEC will withdraw its Application for Reconsideration and its Application for a Moratorium.

SSVEC Survey Report - Executive Summary -January 26, 2010

TO: Jack Blair
FROM: Jody Severson / Severson & Associates

By landslide margins, the member-owners of SSVEC favor building the 69kV line to the Sonoita, Elgin and Patagonia area (SEP). Within that area itself, ground zero for the opposition, the new line is favored by 70% with 18% opposed and 11% undecided. Among the entire membership, 63% favor the line while 8% oppose it and 29% are undecided.

Within the SEP area, SSVEC receives the lowest scores for the reliability of its service that we have seen in more than 20 years of polling electric cooperative memberships around the nation.

In that area, merely 46% give SSVEC a positive rating for "keeping blinks and momentary outages to a minimum," while 24% give the co-op a negative rating. On "keeping longer outages to a minimum," the score is 58% positive to 15% negative, and on "restoring power quickly after an outage," the score is 65% positive and 15% negative.

These questions were asked with the same wording and methodology we've used through the years, at co-ops large and small, rural and suburban. Typically a co-op would expect to see its positive ratings on these questions in the mid-to-high 80s and the negatives in the single digits, occasionally breaking into double digits. You're below the national norm in the SEP area by 30 to 50 points on these reliability questions. It's not surprising that they want that new line by such overwhelming numbers.

We used the same technique in this poll that is often used in political campaign polling. Without indicating who was paying for the survey, we asked to speak to the person responsible for paying the electric bills.

We then asked an open-ended question, "*What would you say is the most important issue facing your community today?*" As would be expected, "jobs and

the economy" top the list, with immigration trailing a far distant second, utility and electric bills coming in behind that, and a smattering of other issues getting a mention (schools, government spending, crime, health care, taxes, etc.).

By way of introducing the topic for this evening's poll, we then asked the standard question about overall member satisfaction with SSVEC, and received an 88% positive rating over 7% negative, which is slightly above average.

We then asked members how much they had heard about SSVEC's plans to build a new power line to the SEP area. As would be expected, 95% of those in the area had heard about it, including 58% who said they have heard "a lot." For the membership as a whole, 48% said they've heard either a lot or a fair amount about the line, while 52% had heard not much or nothing.

Then we asked the "first horse race" question. Without explaining any of the justification for the line or any of the reasons given to oppose it we asked, *"Based on everything you've heard about this issue so far, do you think the new power line to the Sonoita / Elgin / Patagonia area should be allowed to built or not?"* People who were uncertain were asked which way they lean (standard technique). That produced the result referred to a moment ago: among all members, the new line is favored 63% to 8% and in the SEP area it is favored 70% to 18%.

If an election were held tomorrow, it would be a landslide of those proportions. That's the score as it stands right now.

We then asked a series of standard questions to probe member attitudes about the co-op's performance (including those reliability questions).

Then we introduced the Sonoita line. We gave them some background information, explaining that only one feeder line serves the area, that it has 270 hours of outages per year compared to under 3 for the rest of the system, and that SSVEC requested a ban on new hookups because the line is overloaded. We told them that the co-op wants to build a second line to relieve

the overloading and provide a backup route for power. Little of this would be news to anyone in the SEP area, nor would it be news to about half of the other members.

We then tested four sets of pro and con arguments, juggling the order in which they were asked as much as practical from one interview to the next so as to minimize the bias that naturally comes when people hear questions and the information presented by the questions in sequence.

We asked about the view-shed issue versus SSVEC's right of way, as follows:

"Opponents say that the new line will hurt their property values because it will interfere with their view of the mountains. The cooperative says that it has owned the right of way to build that line for 28 years and that it was public record when property owners bought their property. As regards concerns about the view of the mountains, which of these two sides do you most agree with -- even if neither is exactly your opinion?"

By 81% to 12%, the overall membership sided with SSVEC and 12% sided with the opponents. Within the SEP area, 71% sided with SSVEC while 18% sided with the opponents. In the affected area, then, the opponents' view-shed argument nets about 16 points better than it does overall, but it's still a blowout. Please note that our statement of the opponents' position deliberately referenced the protection of property values, which we thought would play favorably in a conservative place like Arizona. Our goal in writing these questions is to allow both sides to put their best foot forward.

We asked the view-shed argument another way, this time raising the issue of unfairness visited upon property owners, versus the study's finding that the chosen route affects the fewest people. The exact wording:

"Opponents say that putting the new line in the view of the mountains is unfair to them because one of the primary reasons they bought their property was the view of the mountains. The cooperative says that the path they chose for

the new line is the path that affects the fewest number of people, a statement with which an independent study has agreed."

Among all members, 80% side with the co-op and 12% with the opponents. In the SEP area, again the opponents did a little better (72% for the co-op, 19% for opponents), but still a landslide. Please note that we are not using any hot-button language to describe opponents, such as "a small handful" or "tiny minority" or "extremists" or even "environmentalist." Indeed, by referring to the "unfairness" cited by opponents, we perhaps gave them whatever advantage there may be in being seen as the underdog against the big utility.

We then tested another major pairing of pro and con statements, as follows:

"Opponents say that alternative energy sources, like wind or solar power, could take care of much of the problem. They want the cooperative to build enough alternative energy sources in the area to reduce the need for a new line and say that would be positive for the environment as well. The cooperative says that renewable energy would not solve the reliability and power quality problems caused by having only one line into the area, would not provide enough electricity when it is needed, would be only a short term fix and would be far more expensive, a statement with which an independent study on the matter has agreed."

Overall the membership sided with the co-op by 78% to 14%, and in the SEP area they sided with the co-op 74% to 21% for the opponents.

Next we related the findings of the Navigant study and paired that against the notion of further studies, as follows:

"I'd like to ask your opinion on another issue. Opponents of the Sonoita/ Elgin/ Patagonia line asked the Arizona Corporate Commission, which regulates electric utilities, to order Sulphur Springs Valley Electric Cooperative to conduct an independent, third party study of the alternatives to building a new feeder

line, including wind and solar power. That study has just been completed and found that the proposed new feeder line is the most realistic, affordable and long term way to solve the reliability and power quality problems. Opponents are expected to criticize the study or ask for more studies of the various alternatives. The cooperative says that further delays will significantly increase costs to put in the new line to the Sonoita/ Elgin/ Patagonia area and that such cost increases are unfair to all other ratepayers who have to pay for the new line."

Overall the membership sided with the co-op 84% to 11%, and in the SEP area 75% to 17%.

Overall, members gave SSVEC a solid ranking on "being good stewards of the environment," with 58% rating the co-op "pretty good" or "excellent" on this issue. Merely 7% gave SSVEC a negative rating on environmental stewardship. In the SEP area it was a tad softer: 51% positive, 18% negative.

When political campaigns use this polling technique, they do what we've done. First, almost immediately into the survey and with the minimum amount of information introduced to bias the answers, they ask which side the respondent will support. Then they test a variety of issues, as we just did. Then they ask a "re-vote" question to see what has happened now that respondents have spent a little more time thinking about the issue and after having heard more of the pros and cons. Here's the wording (again, it's a standard way of phrasing the question):

"Sometimes, over the course of a survey like this one, with more information, people change their minds. Do you think the new power line to the Sonoita/ Elgin/ Patagonia area should be allowed to be built or not? (IF OPINION GIVEN:) Is that strongly SUPPORT/OPPOSE or just somewhat SUPPORT/OPPOSE? (IF UNDECIDED:) Well, which way would you say you lean?"

Severson & Associates

Among all members, support for the line is overwhelming: 83% in favor, 8% opposed. In the SEP area, only slightly less overwhelming: 72% favor the line 22% oppose it.

Taken together, this means that when the entire membership hears the pros and cons, support for the line rises from its initial 63% to an astounding 83%, while opposition remains the same at 8%. The undecideds fell 20 points and support for the line gained 20 points.

In the SEP area, after hearing all the pros and cons, support for the line rose by 2 points from its initial standing while opposition to the line increased by 4 points. Residents of the area favored the line by 3 to 1 after hearing the pros and cons, with 72% favoring it, 22% opposed, and 5% undecided.

In designing the questions, we wanted to test what appeared to be the most effective arguments advanced by the opposition (property rights, unfairness, renewables, environment). If indeed that's the best they've got, then opponents don't yet have a case with any prayer of prevailing. That's a key point to remember in a utility that is 100% owned by its members. Cooperative members cast 100% of the votes for the board of directors that governs the organization.

Fewer than 1 in 10 members oppose the line, and in the SEP area itself, one in five. In the minds of the members, SSVEC's responses powerfully overwhelm the concerns raised by opponents.

If we were to offer consolation to opponents, it would be to say that it's possible they might fare better if the economy were not such a large concern and if people in the affected area were not as torqued off about blinks and outages as they appear to be, but based on years of experience reading such polls and absent an earth-shattering new event, we don't think that would change the final outcome.

For whatever it may be worth as your rate case moves forward, members give SSVEC a 2:1 positive over negative rating on "working to keep rates low."

Severson & Associates

Fully 45% said you are either "pretty good" or excellent in your efforts to keep rates low, while 21% rated SSVEC either "fair" or "very poor." Since no one will ever tell a pollster, "Your service is so good you ought to raise my rates," this 2:1 positive is about as good as it ever gets on the rate question. Occasionally we see a system that does slightly better than this, and often we see worse.

In the SEP area, it was 38% positive over 25% negative on "working to keep rates low." In such surveys, sentiment about rates is always correlated to sentiment about the quality of the service. The more outages you have, the more it seems your rates are too high. You have way too many outages in the SEP area to expect a strong rating on your rates.

Methodology

This survey was jointly sponsored by Transworld Network and Sulphur Springs Valley Electric. The Transworld portion of the survey measured customer awareness of, interest in, satisfaction with, and market penetration levels of its Internet and digital phone service. Those findings have been provided to Transworld in a separate written report.

The survey was conducted by Severson & Associates and RBI Strategies & Research. We completed 600 interviews of SSVEC residential members, limited to people who indicated that they were the person in the household responsible for paying the household electric bill.

A total of 500 interviews was conducted among a statistically valid cross-section of all residential members of SSVEC. In order to increase the statistical validity of the Sonoita, Elgin, and Patagonia area, an oversample of 100 interviews was conducted among only SSVEC members in director district seven. The base sample and subsample have margin of errors of +/-4.4% and +/-8.5% at the 95% confidence level respectively. Survey interviews were conducted from January 18 – January 20, 2010 by professional telemarketers using a statistically valid random sample drawn from a list of SSVEC member households.

Severson & Associates

Severson & Associates has provided polling and communication services to electric and telecom cooperatives since 1987 through electric cooperative statewide associations, generation & transmission cooperatives, the co-ops' national trade association (NRECA), the National Rural Utilities Cooperative Finance Corporation (CFC), and a host of individual cooperatives facing territorial, rate, facility siting, board controversies, and other challenges, from Delaware to Hawaii and from the north woods of Minnesota to Louisiana bayous.

On the political side, Severson's clients have included current or former Presidential candidates, U.S. Senators and U.S. Representatives Tom Daschle, James Abourezk, George McGovern, Ben Nelson, Robert Kerrey, J.J. Exon, Gary Hart, Dick Gephardt, and Tim Johnson, among others. The roster also includes scores of progressive or moderate candidates for Legislature, statewide office, and local office (and a few conservatives here and there). Ballot issues include voter approval of the Denver International Airport and a series of successful statewide ballot initiatives aimed at limiting open pit mining, nuclear waste disposal, and industrial garbage dumps in the Black Hills of South Dakota.

RBI's clients have included Congressman Mark Udall, the National Wildlife Action Fund, the National Wildlife Federation, Coloradans United for Bears, Colorado Conservation Voters, Bill Bradley for President, the Colorado Council of Teamsters, the AFL-CIO, Howard Dean for President, the Democratic National Committee, Social Democrats of Sweden, AFSCME, Trust for Public Lands, the Leadership Conference on Civil Rights, Fund for Animals, and the Sierra Club.

Public Opinion in Sulphur Springs Valley, Arizona
 Transworld Network
 A Survey by RBI Strategies and Research / Severson & Associates
 Survey Conducted January 18 – January 20, 2010
 N=600; Base Sample Margin of Error is ±4.4% | Oversample Margin of Error is ±8.5%

TOPLINE REFERENCE
 BASE SAMPLE | OVERSAMPLE

Screen

My name is _____ from Standage Market Research, a public opinion polling firm. We're not selling anything. We are conducting a survey about some issues people have been talking about lately. It will take only a few minutes and all responses will remain anonymous and used only for research purposes.

ASK IF THEY ARE THE PERSON IN THE HOUSEHOLD IN CHARGE OF PAYING ELECTRIC BILLS.

IF YES: PROCEED WITH SURVEY

IF NO: ASK FOR THE PERSON IN THE HOUSEHOLD IN CHARGE OF PAYING ELECTRIC BILLS.

Mood of Consumers

1. What would you say is the most serious problem facing your community today? (OPEN ENDED WITH PRECODES)

Jobs and the economy	39%	40%
Immigration	11	8
Utility bills/ electric bills	8	18
Schools/ education	6	4
Government spending/budget	5	5
Crime	4	-
Health care	3	1
Bills (general)	2	1
Taxes	2	0
Roads and public transportation	1	-
City services	1	-
Other	6	8
REFUSED	1	-
DK/NA	12	15

2. Please consider all your experiences to date with Sulphur Springs Valley Electric Cooperative. Can you tell me if you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied or very dissatisfied with Sulphur Springs Valley Electric Cooperative?

Very satisfied	59%	46%	TOTAL SATISFIED: 88% 75%
Somewhat satisfied	29	29	
Neither satisfied nor dissatisfied	5	9	TOTAL DISSATISFIED: 7% 15%
Somewhat dissatisfied	5	10	
Very dissatisfied	2	5	
Unsure (VOL.)	-	2	
REFUSED	-	-	
DK/NA	-	-	

Power line

3. Recently, there has been some publicity you may or may not have heard about Sulphur Springs Valley Electric Cooperative's plans to build a new power line to the Sonoita (sun-OY-tah) / Elgin (EL-jin)/ Patagonia (pat-uh-GO-nyuh) area. How much would you say you have heard about this: (READ LIST)

A lot	18%	58%	TOTAL HIGH INFO: 48% 95%
A fair amount	30	37	
Not much	30	5	TOTAL LOW INFO: 52% 5%
Nothing at all	21	-	
Unsure (VOL.)	-	-	
REFUSED	-	-	
DK/NA	-	-	

4. Based on everything you have heard about this issue so far, do you think the new power line to the Sonoita/ Elgin/ Patagonia area should be allowed to be built or not? (IF UNSURE:) Well, which way would you say you lean?

Build	52%	64%	TOTAL BUILD: 63% 70%
Lean build	11	6	
Lean not built	2	2	TOTAL NOT BUILD: 8% 18%
Not build	7	16	
Hard undecided (VOL.)	24	11	
REFUSED	-	-	
DK/NA	5	-	

Basic Performance

I'm going to read you a list of qualities that might be used to evaluate an electric utility. I'd like you to use a scale from 1 to 5 to rate how well Sulphur Springs Valley Electric Cooperative is performing on each one. Give a rating of 1 if you think it does a very poor job, 2 for only a fair job, 3 for an average job, 4 for a pretty good job or 5 for an excellent job. Here's the first question: how would you rate Sulphur Springs Valley Electric Cooperative on:

ALL AREAS

ROTATE ALL	TOTAL GOOD/EXC	TOTAL FAIR/POOR	Very Poor	Fair	Avg	Pretty good	Exclnt	Unsure	DK
5.a. Keeping blinks and momentary outages to a minimum	78%	5%	1%	4%	14%	35%	43%	2%	1%
6.a. Restoring power quickly after an outage	77%	5%	1	4	12	34	43	4	2
7.a. Communicating with you and keeping you informed	67%	12%	5	8	18	33	34	1	1
8.a. Handling customer questions and complaints	58%	7%	3	4	13	25	33	12	10
9.a. Working to keep rates low.	45%	21%	9	12	25	25	20	6	3
10.a. Being good stewards of the environment.	57%	7%	2	5	17	29	28	12	7
11.a. Keeping longer power outages to a minimum.	80%	4%	1	3	11	34	46	3	2

ONLY SONOITA/ PATAGOINA/ ELGIN AREA

ROTATE ALL	TOTAL GOOD/EXC	TOTAL FAIR/POOR	Very Poor	Fair	Avg	Pretty good	Exclnt	Unsure	DK
5.b. Keeping blinks and momentary outages to a minimum	46%	24%	11%	13%	29%	30%	16%	2%	%
6.b. Restoring power quickly after an outage	65%	15%	5	10	20	45	20	1	-
7.b. Communicating with you and keeping you informed	73%	16%	10	6	10	30	43	-	1
8.b. Handling customer questions and complaints	55%	12%	6	6	17	20	35	8	9
9.b. Working to keep rates low.	38%	25%	13	12	28	24	14	5	5
10.b. Being good stewards of the environment.	51%	18%	12	6	16	28	23	9	6
11.b. Keeping longer power outages to a minimum.	58%	15%	6	9	24	35	23	2	-

Sonoita Line

I want to ask a few questions about the proposed power line to the Sonoita/ Elgin/ Patagonia area but first let me give you some background information. There is currently only one feeder line serving the Sonoita, Patagonia and Elgin area and the electric cooperative says demand for electricity there has outgrown the line. As a result, that area has averaged 270 hours of outages a year, compared with an average of under 3 hours of outages in the rest of their service territory. Sulphur Springs Valley Electric Cooperative requested a ban on new hookups in the area because the feeder line serving the Sonoita, Elgin and Patagonia area is overloaded.

The co-op wants to build a second feeder line to the area to relieve that overloading and provide a backup route to deliver electricity and protect power quality. As you may have heard, some opposition to the proposed new line has arisen. I am going to read you some statements made by supporters and by opponents of the proposed new power line.

(ROTATE Q12 AND Q13)

12. Opponents say that the new line will hurt their property values because it will interfere with their view of the mountains. The cooperative says that it has owned the right-of-way to build that line for 28 years and that was public record when property owners bought their property. As regards concerns about the view of the mountains, which of these two sides do you most agree with -- the co-op or the opponents -- even if neither is exactly your opinion? (IF UNDECIDED:) Well, which way do you lean?

Coop	73%	67%	TOTAL COOP: 81% 71%
Lean coop	8	4	
Lean opponents	2	-	TOTAL OPPONENTS: 12% 18%
Opponents	9	18	
Undecided (VOL.)	7	9	
REFUSED	-	-	
DK/NA	-	2	

13. Opponents say that putting the new line in the view of the mountains is unfair to them because one of the primary reasons they bought their property was the view of the mountain. The cooperative says that the path they chose for the new line is the path that will affect the fewest number of people, a statement with which an independent study on the matter has agreed. As regards concerns about the view of the mountains, which of these two sides do you most agree with -- the co-op or the opponents -- even if neither is exactly your opinion? (IF UNDECIDED:) Well, which way do you lean?

Coop	74%	66%	TOTAL COOP: 80% 72%
Lean coop	6	6	
Lean opponents	3	2	TOTAL OPPONENTS: 12% 19%
Opponents	10	17	
Undecided (VOL.)	7	8	
REFUSED	-	-	
DK/NA	-	-	

14. Opponents say that alternative energy sources, like wind or solar power, could take care of much of the problem. They want the cooperative to build enough alternative energy sources in the area to reduce the need for a new line and say that would be positive for the environment as well. The cooperative says that renewable energy would not solve the reliability and power quality problems caused by having only one line into the area, would not provide enough electricity when it is needed, would be only a short term fix and would be far more expensive, a statement with which an independent study on the matter has agreed. As regards the idea of using renewable energy to reduce the need for a new line, which of these two views do you most agree with -- the cooperative or the opponents -- even if neither is exactly your opinion? (IF UNDECIDED:) Well, which way do you lean?

Coop	70%	68%	TOTAL COOP: 78% 74%
Lean coop	8	6	
Lean opponents	3	2	TOTAL OPPONENTS: 14% 21%
Opponents	11	19	
Undecided (VOL.)	7	8	
REFUSED	-	-	
DK/NA	1	2	

Third Party Study

15. I'd like to ask your opinion on another issue. Opponents of the Sonoita/ Elgin/ Patagonia line asked the Arizona Corporate Commission, which regulates electric utilities, to order Sulphur Springs Valley Electric Cooperative to conduct an independent, third party study of the alternatives to building a new feeder line, including wind and solar power. That study has just been completed and found that the proposed new feeder line is the most realistic, affordable and long term way to solve the reliability and power quality problems. Opponents are expected to criticize the study or ask for more studies of the various alternatives. The cooperative says that further delays will significantly increase costs to put in the new line to the Sonoita/ Elgin/ Patagonia area and that such cost increases are unfair to all other ratepayers who have to pay for the new line.

As regards conducting more studies of the issue, which of these two views do you most agree with -- the cooperative or the opponents -- even if neither is exactly your opinion? (IF UNDECIDED:) Well, which way do you lean?

Coop	77%	72%	TOTAL COOP: 84% 75%
Lean coop	6	3	
Lean opponents	2	2	TOTAL OPPONENTS: 11% 17%
Opponents	9	15	
Undecided (VOL.)	4	4	
REFUSED	-	-	
DK/NA	-	4	

Revote

16. Sometimes, over the course of a survey like this one, with more information, people change their minds. Do you think the new power line to the Sonoita/ Elgin/ Patagonia area should be allowed to be built or not? (IF OPINION GIVEN:) Is that strongly SUPPORT/OPPOSE or just somewhat SUPPORT/OPPOSE? (IF UNDECIDED:) Well, which way would you say you lean?

Strong build	66%	63%	TOTAL BUILD: 83% 72%
Somewhat build	13	7	
Lean build	3	2	
Lean not built	1	2	TOTAL NOT BUILD: 8% 22%
Somewhat not build	1	2	
Strong not build	6	18	
Hard undecided (VOL.)	9	5	
REFUSED	-	-	
DK/NA	-	-	

17. **IF SUPPORT:** In your opinion, what is the best reason to support building a new power line to the Sonoita, Patagonia, and Elgin area? (OPEN ENDED)

SEE VERBATIMS

18. **IF OPPOSE:** In your opinion, what is the best reason to oppose building a new power line to Sonoita, Patagonia, and Elgin area? (OPEN ENDED)

SEE VERBATIMS

19. **IF UNDECIDED:** Of all of the things you have heard about the proposed new power line, whether in this survey or anywhere else, what are the one or two things that you think are the most important points to consider when deciding whether to build a new power line to the Sonoita, Patagonia, and Elgin area? (OPEN ENDED)

SEE VERBATIMS

Heating and Cooling Systems

20. What is the primary way you heat your home -- do you heat your home with electric heat, natural gas, propane, wood, solar, or something else?

Electric heat	31%	39%	(GO TO Q21)
Natural gas	46	17	(GO TO Q22)
Propane	13	19	(GO TO Q22)
Wood	6	23	(GO TO Q22)
Solar	-	1	(GO TO Q22)
Something else	2	1	(GO TO Q22)
REFUSED	-	-	(GO TO Q22)
DK/NA	-	2	(GO TO Q22)

21. **(ONLY ASK IF ELECTRIC IN Q20)** About how many years old is your electric heating system?
(N=156)

Several months	4%	4%	% OF TOTAL: 1%	2%
About a year	9	12	% OF TOTAL: 3%	5%
Between a year and 3 years	23	18	% OF TOTAL: 7%	7%
Older than 4 years	47	63	% OF TOTAL: 15%	24%
Unsure (VOL.)	14	2		
REFUSED	1	-		
DK/NA	2	-		

22. Do you have a central air conditioning and heating system?

Yes	62%	54%
No	37	45
Unsure (VOL.)	-	-
REFUSED	-	-
DK/NA	-	1

Transworld Network

23. Again, we are not selling anything and these questions are for research purposes only. Are you aware that Sulphur Springs Valley Electric Cooperative offers Wi-power high speed internet and digital phone service throughout Cochise county?

(REGARDLESS OF RECORDED RESPONSE ON THIS QUESTION, IF RESPONDENT IS IN PATAGONIA/ ELGIN/ SONOITA AREA, ASK Q25; ALL OTHERS FOLLOW SKIP PATTERN)

Yes	59%	57%	
No	40	43	(GO TO Q29)
Unsure (VOL.)	1	1	(GO TO Q29)
REFUSED	1	-	(GO TO Q29)
DK/NA	-	-	(GO TO Q29)

24. **(SKIP IF IN PATAGONIA/ ELGIN/ SONOITA AREA)** Do you currently subscribe to this service?

Yes	18%	-	(GO TO Q26)	% OF TOTAL: 10%
No	79	-	(GO TO Q28)	
Unsure (VOL.)	3	-	(GO TO Q29)	
REFUSED	-	-	(GO TO Q29)	
DK/NA	-	-	(GO TO Q29)	

25. **(ONLY ASK IF IN PATAGONIA/ ELGIN/ SONOITA AREA)** If Wi-power high speed internet and digital phone service were available in your area, how likely would you be to subscribe in the next twelve months.

Extremely likely	-	23%	(GO TO Q29)
Somewhat likely	-	22	(GO TO Q29)
Not very likely	-	43	(GO TO Q29)
Not sure (VOL.)	-	12	(GO TO Q29)
REFUSED	-	-	(GO TO Q29)
DK/NA	-	-	(GO TO Q29)

26. How satisfied are you with your internet and/or digital phone service? Please rate your satisfaction level on a scale of 1-5 where 1 is "extremely dissatisfied" and 5 means "extremely satisfied".

Very dissatisfied	6%	-	(GO TO Q27)
Somewhat dissatisfied	5	-	(GO TO Q27)
Neither satisfied nor dissatisfied	6	-	(GO TO Q29)
Somewhat satisfied	27	-	(GO TO Q29)
Very satisfied	56	-	(GO TO Q29)
Unsure (VOL.)	1	-	(GO TO Q29)
REFUSED	-	-	(GO TO Q29)
DK/NA	-	-	(GO TO Q29)

27. Why do you say that? (OPEN ENDED)

SEE VERBATIMS

(SKIP TO Q29)

28. What is the main reason you have chosen not to subscribe to this service? (OPEN ENDED)

SEE VERBATIMS

Demographics

I only have a few questions left for statistical purposes.

29. Is your home in this area a seasonal residence or your primary residence?

Primary	94%	93%
Seasonal	5	6
Both (VOL.)	1	1
REFUSED	1	-
DK/NA	-	-

30. Which of the following age groups do you fall into?

18-34	14%	5%
35-44	9	7
45-54	15	19
55-64	19	28
65+	42	39
REFUSED	1	1
DK/NA	-	2

31. Would you please tell me if you or one of your immediate family members is from a Hispanic or Spanish-speaking background?

Hispanic	15%	18%
Not Hispanic	83	78
REFUSED	1	1
DK/NA	-	3

32. How would you describe your race? (READ LIST)

White/Caucasian	81%	85%	White non-Hispanic: 75% 75%
Hispanic/Latino	8	1	Hispanic/Latino: 15% 18%
Black/African-American	2	6	Black non-Hispanic: 2% -
Asian	2	-	
Other	4	4	
REFUSED	2	2	
DK/NA	1	3	

33. What was your approximate household income for 2008 before taxes? (READ LIST)

Under \$25,000	18%	15%
\$25,000 to \$49,999	24	21
\$50,000 to \$74,999	19	17
\$75,000 to \$99,999	10	12
\$100,001 to \$150,000	7	9
Over \$150,000	4	6
DK/NA/REFUSED	18	20

34. What is the highest level of education you have completed?

Less than high school	5%	3%
High school grad	18	11
Some college	28	21
College grad	22	28
Grad school or advanced degree	22	33
Technical/junior college	3	2
DK/NA/REFUSED	2	2

35. Are you currently a student, unemployed, employed, retired or a homemaker? (IF EMPLOYED:) Is that fulltime or part time?

Full time	34%	37%
Part time	6	7
Unemployed	4	4
Student	1	1
Retired	48	45
Homemaker	6	5
REFUSED	1	-
DK/NA	-	2

That concludes our survey. Thank you VERY MUCH for your time.

CODE THE FOLLOWING

36. GENDER

Male	51%	49%
Female	49	51

37. CON DATE

2008 or after	26%	N/A
2005 - 2007	23	N/A
1998 - 2004	23	N/A
1997 or before	28	N/A

38. DISTRICT

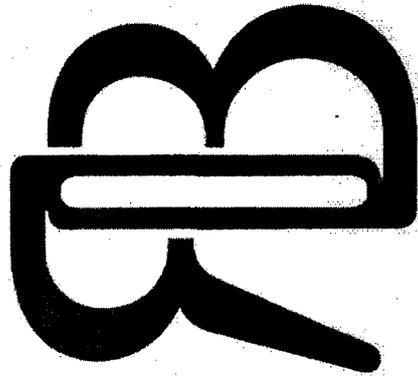
Sierra Vista	59%	%
Benson	20	-
Wilcox	8	-
Elgin Sonoita Patagonia	4	100
Sunsites/Elfrida	8	-

39. BILL

0 - 55	23%	20%
56 - 85	23	19
86 - 130	26	21
130+	28	40

40. PATAGONIA SONOITA ELGIN

Y	4%	100%
N	96	-



**RBI Strategies
& Research**

Crosstabs – SSVEC Survey

January 2010

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 2: Please consider all your experiences to date with Sulphur Springs Valley Electric Cooperative. Can you tell me if you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied or very dissatisfied with Sulphur Springs Valley Electric Cooperative?

	Gender		Age			Race/Ethnicity			Patagonia Sonoyita Elgin Area			What was your approximate household income for 2008 before taxes?				
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	599	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	95 16%	51 9%	127 21%	472 79%	106 18%	141 24%	113 19%	128 21%	111 19%
Very satisfied	342 57%	169 49%	173 51%	55 16%	117 53%	163 48%	258 75%	53 15%	31 9%	58 17%	284 83%	62 18%	86 25%	65 19%	69 20%	60 18%
SW satisfied	175 29%	86 29%	89 51%	45 26%	77 44%	52 30%	134 77%	31 18%	10 6%	37 21%	138 79%	34 18%	36 21%	34 19%	41 23%	30 17%
Neither satisfied nor dissatisfied	33 6%	21 7%	12 4%	11 9%	16 7%	5 2%	22 5%	6 3%	5 2%	11 9%	22 67%	3 3%	7 21%	7 21%	9 27%	7 21%
SW dissatisfied	33 6%	20 7%	13 4%	8 24%	5 15%	20 61%	27 82%	3 9%	3 9%	13 39%	20 61%	6 18%	6 18%	5 15%	6 18%	10 30%
Very dissatisfied	13 2%	4 1%	9 3%	2 15%	5 38%	6 46%	10 77%	2 15%	1 8%	6 46%	7 54%	1 8%	5 38%	2 15%	3 23%	2 15%
Unsure	3 1%	0 0%	3 1%	0 0%	1 33%	2 67%	2 67%	0 0%	1 33%	2 67%	1 33%	0 0%	1 33%	0 0%	0 0%	2 67%
REF	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
DK	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
Mean	1.68	1.68	1.68	1.82	1.67	1.63	1.68	1.63	1.75	2.04	1.58	1.58	1.66	1.63	1.70	1.83
Chi Square		8.96 .111		35.74 .001		8.16 .613		21.69 .001		15.57 .743						

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 2b: Please consider all your experiences to date with Sulphur Springs Valley Electric Cooperative. Can you tell me if you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied or very dissatisfied with Sulphur Springs Valley Electric Cooperative?

	DISTRICT				CON DATE			BILL			Central Air and Heating?				
	Sierra Vista	Benson	Wilcox	Elgin Sonoma/ Patagonia	Snsites/ Elfrida	2008 or after	2005-20 07	1998-20 04	1997 or before	\$0 - \$55	\$56 - \$85	\$86 - \$130	\$130+	Yes	No
Base	Total 599	264 44%	114 19%	30 5%	125 21%	66 11%	124 21%	118 20%	142 24%	136 23%	135 23%	150 25%	178 30%	365 61%	230 38%
Very satisfied	342 57%	157 59%	74 65%	18 60%	55 44%	38 58%	65 52%	67 58%	74 63%	86 63%	82 61%	84 56%	90 51%	216 59%	124 54%
SW satisfied	175 29%	72 27%	31 27%	9 30%	37 30%	26 39%	46 37%	36 31%	37 26%	30 22%	40 30%	47 31%	58 33%	105 29%	69 30%
Neither satisfied nor dissatisfied	33 6%	17 6%	3 3%	1 3%	11 9%	1 2%	7 6%	3 3%	8 7%	4 3%	5 4%	9 8%	15 8%	20 5%	13 6%
SW dissatisfied	33 6%	13 5%	5 4%	2 7%	13 10%	0 0%	6 5%	5 4%	7 5%	9 7%	7 5%	9 6%	8 4%	17 5%	15 7%
Very dissatisfied	13 2%	4 2%	1 1%	0 0%	7 6%	1 2%	0 0%	4 3%	4 3%	4 3%	1 1%	1 1%	7 4%	6 2%	7 3%
Unsure	3 1%	1 0%	0 0%	0 0%	2 2%	0 0%	0 0%	0 0%	0 0%	3 2%	0 0%	0 0%	0 0%	1 0%	2 1%
REF	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
DK	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
Mean	1.68	1.63	1.49	1.57	2.09	1.48	1.63	1.60	1.59	1.71	1.56	1.64	1.79	1.62	1.77
Chi Square															
		37.55						17.57						27.83	3.93
		.010						.286						.023	.559

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 2c: Please consider all your experiences to date with Sulphur Springs Valley Electric Cooperative. Can you tell me if you are very satisfied, somewhat satisfied, neither satisfied nor dissatisfied or very dissatisfied with Sulphur Springs Valley Electric Cooperative?

	Employment Status			Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Built/Lean	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood	
																35%
Base	599	237 40%	291 49%	71 12%	517 86%	79 13%	383 64%	60 10%	156 26%	486 81%	62 10%	201 34%	234 39%	84 14%	59 10%	
Very satisfied	342 57%	110 46%	196 67%	36 51%	342 66%	0 0%	248 73%	18 5%	76 22%	305 89%	17 5%	109 32%	153 45%	44 13%	28 8%	
SW satisfied	175 29%	91 38%	62 35%	22 13%	175 100%	0 0%	101 58%	23 13%	51 29%	129 74%	26 15%	62 35%	56 32%	26 15%	24 14%	
Neither satisfied nor dissatisfied	33 6%	19 8%	7 2%	7 10%	0 0%	33 100%	12 36%	3 9%	18 55%	26 79%	5 15%	12 36%	10 30%	7 21%	3 9%	
SW dissatisfied	33 6%	11 5%	17 6%	5 7%	0 0%	33 100%	18 55%	7 21%	8 24%	22 67%	6 18%	15 45%	9 27%	4 12%	1 3%	
Very dissatisfied	13 2%	5 2%	7 5%	1 1%	0 0%	13 100%	3 23%	8 62%	2 15%	3 23%	6 46%	3 23%	4 31%	2 15%	3 23%	
Unsure	3 1%	1 0%	2 1%	0 0%	0 0%	0 0%	1 33%	1 33%	1 33%	1 33%	2 67%	0 0%	2 67%	1 33%	0 0%	
REF	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	
DK	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	
Mean	1.68	1.79	1.57	1.77	1.34	3.75	1.51	2.45	1.79	1.54	2.42	2.08	1.71	1.55	1.77	1.76
Chi Square			35.53 .001		596.00 .001		76.39 .001				66.38 .001		21.45 .123			

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 3: Recently, there has been some publicity you may or may not have heard about Sulphur Springs Valley Electric Cooperative's plans to build a new power line to the Sonoita / Elgin / Patagonia area. How much would you say you have heard about this:

	Gender		Age			Race/Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic		All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
							White	non-Hispanic								
Base	599	300	299	121	221	248	453	95	51	127	472	106	141	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
A lot	152	85	67	13	54	83	114	25	13	74	78	19	35	29	36	33
	25%	28%	22%	11%	24%	33%	25%	26%	25%	58%	17%	18%	25%	26%	28%	30%
		56%	44%	9%	36%	55%	75%	16%	9%	49%	51%	13%	23%	19%	24%	22%
A fair amount	187	93	94	25	79	80	144	30	13	47	140	27	50	42	36	32
	31%	31%	31%	21%	36%	32%	32%	32%	25%	37%	32%	25%	35%	37%	28%	29%
	50%	50%	50%	13%	42%	43%	77%	16%	7%	25%	75%	14%	27%	22%	19%	17%
Not much	157	72	85	33	59	62	123	16	18	6	151	37	35	21	37	27
	26%	24%	28%	27%	27%	25%	27%	17%	35%	5%	32%	35%	25%	19%	29%	24%
		46%	54%	21%	38%	39%	78%	10%	11%	4%	96%	24%	22%	13%	24%	17%
Nothing at all	102	49	53	50	29	22	71	24	7	0	102	22	21	21	19	19
	17%	16%	18%	41%	13%	9%	16%	25%	14%	0%	22%	21%	15%	19%	15%	17%
		48%	52%	49%	28%	22%	70%	24%	7%	0%	100%	22%	21%	21%	19%	19%
Unsure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
REF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
DK	1	1	0	0	0	1	1	0	0	0	1	1	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
		100%	0%	0%	0%	100%	100%	0%	0%	0%	100%	100%	0%	0%	0%	0%
Mean	2.36	2.30	2.41	2.99	2.29	2.11	2.34	2.41	2.37	1.46	2.60	2.63	2.30	2.30	2.30	2.29
Chi Square		4.37	.358	77.43	.001		10.49	.232		126.55			19.95			
																.223

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 3b: Recently, there has been some publicity you may or may not have heard about Sulphur Springs Valley Electric Cooperative's plans to build a new power line to the Sonoita / Elgin / Patagonia area. How much would you say you have heard about this:

	DISTRICT						CON DATE				BILL				Central Air and Heating?	
	Sierra Vista	Benson	Wilcox	Elgin Sonoita Patagonia	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No	
Total	599	114	30	125	66	124	115	118	142	136	135	150	178	365	230	
Base	44%	19%	5%	21%	11%	21%	19%	20%	24%	23%	25%	30%	38%	61%	38%	
A lot	152	47	4	71	15	5	22	25	41	29	34	45	92	25%	59	
	25%	18%	13%	57%	23%	4%	19%	21%	29%	21%	25%	30%	25%	25%	26%	
	31%	10%	3%	47%	10%	3%	14%	16%	27%	19%	22%	30%	61%	39%	39%	
A fair amount	187	35	12	47	21	41	31	34	46	54	35	40	58	111	74	
	31%	27%	40%	38%	32%	33%	27%	29%	32%	40%	26%	27%	33%	30%	32%	
	39%	19%	6%	25%	11%	22%	17%	18%	25%	29%	19%	21%	31%	59%	40%	
Not much	157	43	7	6	20	33	36	37	45	30	40	40	47	101	56	
	26%	38%	23%	5%	30%	27%	31%	31%	32%	22%	30%	27%	28%	28%	24%	
	52%	27%	4%	4%	13%	21%	23%	24%	29%	19%	25%	25%	30%	64%	36%	
Nothing at all	102	21	6	1	10	44	26	22	10	23	26	25	28	61	40	
	17%	18%	20%	1%	15%	35%	23%	19%	7%	17%	19%	17%	16%	17%	17%	
	63%	21%	6%	1%	10%	43%	25%	22%	10%	23%	25%	25%	27%	60%	39%	
Unsure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
REF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
DK	1	0	0	0	0	1	0	0	0	0	0	0	1	0	1	
	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%	0%	
	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	
Mean	2.36	2.61	2.61	1.50	2.38	2.98	2.57	2.47	2.17	2.35	2.43	2.30	2.36	2.36	2.36	
Chi Square				143.86			54.02				12.09			2.37		
				.001			.001				.439			.668		

Prepared by RBI Strategies and Research

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 3c: Recently, there has been some publicity you may or may not have heard about Sulphur Springs Valley Electric Cooperative's plans to build a new power line to the Sonoma / Elgin / Patagonia area. How much would you say you have heard about this:

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood
Base		40%	49%	12%	86%	13%	64%	10%	26%	81%	9%	34%	39%	14%	10%
A lot	152	53	88	11	128	23	122	20	10	127	4	52	50	26	21
	25%	22%	30%	15%	25%	29%	32%	33%	6%	26%	8%	26%	21%	31%	36%
		35%	58%	7%	84%	15%	80%	13%	7%	84%	3%	34%	33%	17%	14%
A fair amount	187	66	101	20	160	26	133	22	32	154	11	67	73	22	21
	31%	28%	35%	28%	31%	33%	35%	37%	21%	32%	22%	33%	31%	26%	36%
		35%	54%	11%	86%	14%	71%	12%	17%	82%	6%	36%	39%	12%	11%
Not much	157	60	76	21	139	17	92	13	52	124	15	47	68	22	13
	26%	25%	26%	30%	27%	22%	24%	22%	33%	26%	24%	23%	29%	26%	22%
		38%	48%	13%	89%	11%	59%	8%	33%	79%	10%	30%	43%	14%	8%
Nothing at all	102	57	26	19	89	13	36	5	61	80	4	35	43	14	4
	17%	24%	9%	27%	17%	16%	9%	8%	39%	16%	6%	17%	18%	17%	7%
		56%	25%	19%	87%	13%	35%	5%	60%	78%	4%	34%	42%	14%	4%
Unsure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
REF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
DK	1	1	0	0	1	0	0	0	1	1	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
		100%	0%	0%	100%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%
Mean	2.36	2.53	2.14	2.68	2.38	2.25	2.11	2.05	3.08	2.33	2.03	2.32	2.44	2.29	2.00
Chi Square		32.42	.001		1.53	.822		105.18	.001	26.15	.001	11.80	.462		

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A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 4: Based on everything you have heard about this issue so far, do you think the new power line to the Sonoita/ Elgin/ Patagonia area should be allowed to be built or not?

	Gender		Age				Race/ Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?				
	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK	
Base	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%	
Build	323 54%	145 48%	58 18%	111 34%	150 46%	249 77%	55 17%	19 6%	81 25%	242 75%	47 15%	76 24%	66 20%	82 25%	52 16%	
Lean build	61 10%	34 11%	13 21%	23 38%	24 39%	42 69%	7 11%	12 20%	8 13%	52 85%	9 15%	23 38%	11 18%	8 13%	10 16%	
Lean not build	13 2%	6 2%	2 15%	6 46%	5 38%	8 62%	3 23%	2 15%	3 23%	10 77%	4 31%	2 15%	3 23%	3 23%	1 8%	
Not build	47 8%	32 11%	6 13%	21 45%	20 43%	35 74%	8 17%	4 9%	20 43%	27 57%	12 26%	11 23%	7 15%	7 15%	10 21%	
Hard undecided	130 22%	68 23%	31 26%	55 42%	41 32%	97 75%	21 16%	12 9%	14 11%	116 89%	30 28%	24 17%	22 19%	20 16%	34 31%	
REF	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	
DK	26 4%	14 5%	11 42%	5 19%	8 31%	22 85%	2 8%	2 8%	1 4%	25 96%	4 15%	6 23%	4 15%	8 31%	4 15%	
Mean	2.51	2.35	2.67	2.57	2.23	2.51	2.39	2.73	2.07	2.63	2.86	2.35	2.33	2.27	2.82	
Chi Square	11.09 .050		20.63 .024		16.05 .098		31.14 .001		30.56 .061							

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 4b: Based on everything you have heard about this issue so far, do you think the new power line to the Sonoita/ Elgin/ Patagonia area should be allowed to be built or not?

	DISTRICT				CON DATE				BILL				Central Air and Heating?		
	Sierra Vista	Benson	Wilcox	Elgin Sonoita Patagonia	Snsites/ Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Total	600	115	30	125	66	125	115	118	142	136	135	150	179	365	231
Base	44%	19%	5%	21%	11%	21%	19%	20%	24%	23%	23%	25%	30%	61%	39%
Build	323	60	18	79	27	54	57	63	82	74	69	80	100	205	118
	54%	52%	60%	63%	41%	43%	50%	53%	58%	54%	51%	53%	56%	56%	51%
	43%	19%	6%	24%	8%	17%	18%	20%	25%	23%	21%	25%	31%	63%	37%
Lean build	61	16	1	8	9	16	16	6	17	16	13	17	15	36	23
	10%	14%	3%	6%	14%	13%	14%	5%	12%	12%	10%	11%	8%	10%	10%
	44%	26%	2%	13%	15%	26%	26%	10%	28%	26%	21%	28%	25%	59%	38%
Lean not build	13	4	0	3	2	2	3	3	2	3	2	5	3	9	4
	2%	3%	0%	2%	3%	2%	3%	3%	1%	2%	1%	3%	2%	2%	2%
	31%	31%	0%	23%	15%	15%	23%	23%	15%	23%	15%	38%	23%	69%	31%
Not build	47	5	1	20	4	8	7	8	11	13	9	12	13	24	23
	8%	4%	3%	16%	6%	6%	6%	7%	8%	10%	7%	8%	7%	7%	10%
	36%	11%	2%	43%	9%	17%	15%	17%	23%	28%	19%	26%	28%	51%	49%
Hard undecided	130	26	9	14	21	32	27	33	28	25	31	29	45	71	57
	22%	23%	30%	11%	32%	26%	23%	28%	20%	18%	23%	19%	25%	19%	25%
	46%	20%	7%	11%	16%	25%	21%	25%	22%	19%	24%	22%	35%	55%	44%
REF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
DK	26	4	1	1	3	13	5	5	2	5	11	7	3	20	6
	4%	3%	3%	1%	5%	10%	4%	4%	1%	4%	8%	5%	2%	5%	3%
	65%	15%	4%	4%	12%	50%	19%	19%	8%	19%	42%	27%	12%	77%	23%
Mean	2.51	2.62	2.45	2.53	2.09	3.00	2.57	2.68	2.25	2.40	2.73	2.47	2.44	2.45	2.58
Chi Square				43.56			22.28				13.53			7.57	
				.002			.101				.562			.182	

Prepared by RBI Strategies and Research

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 4c: Based on everything you have heard about this issue so far, do you think the new power line to the Sonoita/Elgin/ Patagonia area should be allowed to be built or not?

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfied	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood	
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	51 9%	234 39%	84 14%	60 10%	
Build	323 54%	119 50%	174 60%	30 42%	292 56%	30 38%	323 84%	0 0%	0 0%	312 64%	6 2%	106 53%	138 59%	45 54%	29 48%	
Lean build	61 10%	31 13%	26 9%	4 6%	57 11%	3 4%	61 16%	0 0%	0 0%	54 11%	3 5%	22 11%	24 10%	6 7%	6 10%	
Lean not build	13 2%	5 2%	6 2%	2 3%	9 2%	4 5%	0 0%	13 22%	0 0%	3 1%	6 10%	4 2%	3 1%	5 6%	0 0%	
Not build	47 8%	16 7%	26 9%	5 7%	32 6%	14 18%	0 0%	47 78%	0 0%	9 2%	31 49%	13 6%	12 5%	8 10%	9 15%	
Hard undecided	130 22%	56 24%	49 17%	25 35%	105 20%	25 32%	0 0%	0 0%	130 83%	90 19%	16 25%	45 22%	45 19%	19 23%	14 23%	
REF	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	
DK	26 4%	11 5%	10 3%	5 7%	22 4%	3 4%	0 0%	0 0%	26 17%	18 4%	1 2%	11 5%	12 5%	1 1%	2 3%	
Mean	2.51	2.59	2.28	3.15	2.40	3.16	1.16	3.78	5.33	2.14	3.83	2.57	2.36	2.45	2.68	
Chi Square			20.47 .025		27.25 .001			1000+ .001			274.11 .001			21.13 .133		

Prepared by RBI Strategies and Research

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 5.1: Basic Performance
Keeping blinks and momentary outages to a minimum

	Gender		Age			Race/ Ethnicity			Patagonia Sonora Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300	299	121	221	248	453	96	51	127	472	106	142	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
V Poor	16	5	11	2	10	4	12	2	2	14	2	3	5	1	2	5
	3%	2%	4%	2%	5%	2%	3%	2%	4%	11%	0%	3%	4%	1%	2%	5%
		31%	69%	13%	63%	25%	75%	13%	13%	88%	13%	19%	31%	6%	13%	31%
Fair	35	10	24	7	10	16	25	4	6	16	18	7	7	6	7	8
	6%	3%	8%	6%	5%	6%	6%	4%	12%	13%	4%	7%	5%	5%	5%	7%
		29%	69%	20%	29%	46%	71%	11%	17%	46%	51%	20%	20%	17%	20%	23%
Avg	100	45	55	17	42	40	76	15	9	37	63	21	22	15	24	18
	17%	15%	18%	14%	19%	16%	17%	16%	18%	22%	13%	20%	15%	13%	19%	16%
		45%	55%	17%	42%	40%	76%	15%	9%	37%	63%	21%	22%	15%	24%	18%
Good	203	121	82	41	78	83	157	31	15	38	165	36	45	35	47	40
	34%	40%	27%	34%	35%	33%	35%	32%	29%	30%	35%	34%	32%	30%	37%	36%
		60%	40%	20%	38%	41%	77%	15%	7%	19%	81%	18%	22%	17%	23%	20%
Exclnt	229	109	120	54	76	94	169	42	18	20	209	38	58	52	46	35
	38%	36%	40%	45%	34%	38%	37%	44%	35%	16%	44%	36%	41%	46%	36%	32%
		48%	52%	24%	33%	41%	74%	18%	8%	9%	91%	17%	25%	23%	20%	15%
Unsure	12	7	5	0	4	8	10	2	0	2	10	1	3	3	1	4
	2%	2%	2%	0%	2%	3%	2%	2%	0%	2%	1%	1%	2%	3%	1%	4%
		58%	42%	0%	33%	67%	83%	17%	0%	17%	83%	8%	25%	25%	8%	33%
DK	5	3	2	0	1	3	4	0	1	0	5	0	2	1	1	1
	1%	1%	1%	0%	0%	1%	1%	0%	2%	0%	1%	0%	1%	1%	1%	1%
		60%	40%	0%	20%	60%	80%	0%	20%	0%	100%	0%	40%	20%	20%	20%
Mean	4.08	4.17	4.00	4.14	3.98	4.14	4.09	4.18	3.88	3.31	4.29	3.96	4.13	4.27	4.05	3.97
Chi Square		17.57			14.87		8.28			94.19				15.67		
		.007			.249		.763			.001				.900		

Prepared by RBT Strategies and Research

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 5.1b: Basic Performance
Keeping blinks and momentary outages to a minimum

	DISTRICT				CON DATE				BILL				Central Air and Heating?		
	Sierra Vista	Benson	Wilcox	Elgin	Sonita/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Total	600	115	30	125	66	125	115	118	142	136	135	150	179	365	231
Base	44%	19%	5%	21%	11%	21%	19%	20%	24%	23%	25%	30%	30%	61%	39%
V Poor	0	1	1	14	0	0	0	2	1	4	4	4	7	9	7
	3%	1%	3%	11%	0%	0%	0%	2%	1%	3%	3%	3%	4%	2%	3%
	0%	6%	6%	88%	0%	0%	0%	13%	6%	25%	6%	25%	44%	56%	44%
Fair	11	4	1	16	3	4	5	7	6	5	10	8	12	23	12
	6%	3%	3%	13%	5%	3%	4%	6%	4%	4%	7%	5%	7%	6%	5%
	31%	11%	3%	46%	9%	11%	14%	20%	17%	14%	29%	23%	34%	66%	34%
Avg	31	18	3	37	11	15	18	17	24	25	16	28	31	53	46
	17%	16%	10%	30%	17%	12%	16%	14%	17%	18%	12%	19%	17%	15%	20%
	31%	18%	3%	37%	11%	15%	18%	17%	24%	25%	16%	28%	31%	53%	46%
Good	91	40	9	37	26	39	44	41	51	38	40	49	76	133	70
	34%	35%	30%	30%	39%	31%	38%	35%	36%	28%	30%	33%	42%	36%	30%
	45%	20%	4%	18%	13%	19%	22%	20%	25%	19%	20%	24%	37%	66%	34%
Exclrt	124	47	15	19	24	60	46	48	57	56	65	57	51	137	89
	47%	41%	50%	15%	36%	48%	40%	41%	40%	41%	48%	38%	28%	38%	39%
	54%	21%	7%	8%	10%	26%	20%	21%	25%	24%	28%	25%	22%	60%	39%
Unsure	12	3	1	2	2	4	1	3	2	6	2	3	1	8	4
	2%	3%	3%	2%	3%	3%	1%	3%	1%	4%	1%	2%	1%	2%	2%
	33%	25%	8%	17%	17%	33%	8%	25%	17%	50%	17%	25%	8%	67%	33%
DK	5	2	0	0	0	3	1	0	1	2	1	1	1	2	3
	1%	2%	0%	0%	0%	2%	1%	0%	1%	1%	1%	1%	1%	1%	1%
	60%	40%	0%	0%	0%	60%	20%	0%	20%	40%	20%	20%	20%	40%	60%
Mean	4.08	4.33	4.26	4.30	4.17	4.43	4.20	4.14	4.18	4.20	4.24	4.07	3.89	4.09	4.06
Chi Square															
		104.87					14.09				28.65			5.64	
		.001					.723				.053			.465	

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Table 5.1c: Basic Performance
Keeping blinks and momentary outages to a minimum

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood	
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	63 11%	51 9%	201 34%	234 39%	84 14%	60 10%
V Poor	16 3%	6 3%	7 2%	3 4%	8 2%	6 8%	8 2%	6 10%	2 1%	2 4%	2 4%	5 2%	4 2%	1 1%	6 10%
Fair	35 6%	16 7%	13 4%	6 8%	23 4%	10 13%	17 4%	6 10%	12 8%	6 10%	6 12%	17 8%	7 3%	5 6%	5 8%
Avg	100 17%	44 18%	46 16%	10 14%	77 15%	23 29%	54 14%	19 32%	27 17%	18 29%	11 22%	31 15%	35 15%	16 19%	12 20%
Good	203 34%	82 34%	95 33%	26 13%	180 89%	23 11%	124 61%	14 23%	65 42%	22 35%	15 29%	68 34%	77 33%	28 33%	22 37%
Exclnt	229 38%	87 37%	117 40%	25 11%	216 94%	13 6%	171 75%	12 20%	46 20%	7 11%	15 29%	75 37%	102 44%	32 38%	14 23%
Unsure	12 2%	2 1%	10 3%	0 0%	10 2%	2 3%	7 2%	3 5%	2 1%	2 5%	1 2%	3 1%	6 3%	2 2%	1 2%
DK	5 1%	1 0%	3 1%	1 2%	3 1%	2 40%	3 1%	0 0%	2 40%	0 0%	1 2%	2 1%	3 60%	0 0%	0 0%
Mean	4.08	4.00	4.18	3.96	4.19	3.52	4.21	3.48	3.99	4.20	3.82	4.03	4.26	4.08	3.60
Chi Square		11.59 .479	42.59 .001	48.87 .001	52.72 .001	28.47 .055									

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Table 5.2: Basic Performance
Restoring power quickly after an outage

	Gender		Age			Race/ Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?				
	Male	Female	18-44	45-64	65+	White non-Hisp	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
V Poor	6 2%	7 2%	2 2%	6 3%	5 2%	10 2%	1 1%	2 4%	6 5%	7 1%	1 1%	3 2%	2 2%	2 2%	5 5%
Fair	11 4%	18 6%	7 6%	14 3%	7 3%	16 4%	8 8%	6 12%	13 10%	16 3%	8 8%	4 4%	0 0%	6 5%	10 9%
Avg	36 12%	46 15%	15 12%	30 14%	35 14%	62 14%	11 11%	9 18%	25 20%	57 12%	15 14%	17 12%	16 14%	16 13%	18 16%
Good	120 40%	97 32%	38 31%	82 37%	95 38%	173 38%	28 29%	16 31%	57 45%	160 34%	41 39%	56 39%	37 33%	45 35%	38 34%
Exclnt	110 37%	121 40%	50 41%	81 37%	96 39%	169 37%	44 46%	18 35%	25 20%	206 44%	38 36%	54 38%	51 45%	49 38%	39 35%
Unsure	13 4%	4 1%	5 4%	5 2%	7 3%	16 4%	1 1%	0 0%	1 1%	16 3%	0 0%	4 3%	4 4%	8 6%	1 1%
DK	10 2%	6 2%	4 3%	3 1%	3 1%	7 2%	3 3%	0 0%	0 0%	10 2%	3 3%	2 1%	3 3%	2 2%	0 0%
Mean	4.19	4.24	4.31	4.11	4.22	4.22	4.26	3.82	3.67	4.33	4.12	4.21	4.41	4.29	3.89
Chi Square	11.11 .095	8.88 .713	20.19 .064	42.07 .001	31.93 .129										

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Table 5.2c: Basic Performance

Restoring power quickly after an outage

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Total	Full/part time	Retired	V + SW Satisfied	Neutral or dissatis	Build/Lean	Und/DK	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood		
														Other	Not Built/Lean
Base	600	238 40%	291 49%	517 86%	79 13%	384 64%	156 26%	486 81%	51 9%	201 34%	234 39%	84 14%	60 10%		
V Poor	13 2%	4 2%	7 54%	2 3%	8 62%	3 23%	3 23%	3 23%	6 46%	3 23%	4 31%	3 23%	3 23%		
Fair	30 5%	15 6%	10 3%	22 4%	6 8%	11 3%	13 20%	18 48%	5 17%	10 5%	8 3%	1 1%	8 13%		
Avg	82 14%	37 16%	37 45%	63 12%	18 22%	46 56%	33 28%	57 70%	17 21%	23 28%	32 39%	16 20%	7 9%		
Good	217 36%	81 34%	107 37%	187 36%	30 38%	138 64%	19 9%	179 82%	23 7%	81 40%	70 32%	31 14%	27 12%		
Exclnt	231 39%	85 36%	120 41%	218 42%	13 16%	171 74%	12 5%	208 90%	9 4%	14 27%	103 44%	30 13%	15 6%		
Unsure	17 3%	9 4%	7 41%	14 3%	3 18%	9 53%	2 12%	14 82%	2 3%	1 2%	4 5%	2 2%	0 0%		
DK	10 2%	7 3%	3 30%	9 2%	1 10%	6 60%	1 10%	7 70%	1 20%	3 30%	6 60%	1 10%	0 0%		
Mean	4.19	4.19	4.22	4.30	3.59	4.34	3.55	4.32	3.57	4.21	4.35	4.12	3.72		
Chi Square				49.19 .001			55.13 .001		66.64 .001				35.59 .008		

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Table 5.3: Basic Performance

Communicating with you and keeping you informed

	Gender		Age			Race/ Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hisp	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300	299	121	221	248	453	96	51	127	472	106	142	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
V Poor	36	14	22	9	16	11	27	5	4	13	23	5	11	7	5	8
	6%	5%	7%	7%	7%	4%	6%	5%	8%	10%	5%	5%	8%	6%	4%	7%
	39%	39%	61%	25%	44%	31%	75%	14%	11%	36%	64%	14%	31%	19%	14%	22%
Fair	46	25	21	7	20	19	41	2	3	8	38	6	13	5	10	12
	8%	8%	7%	6%	9%	8%	9%	2%	6%	6%	8%	6%	9%	4%	8%	11%
	54%	54%	46%	15%	43%	41%	89%	4%	7%	17%	83%	13%	28%	11%	22%	26%
Avg	96	47	48	26	37	30	75	13	8	13	82	21	20	14	21	20
	16%	16%	16%	21%	17%	12%	17%	14%	16%	10%	17%	20%	14%	12%	16%	18%
	49%	49%	50%	27%	39%	31%	78%	14%	8%	14%	85%	22%	21%	15%	22%	21%
Good	191	104	87	41	68	80	139	35	17	38	153	40	41	33	50	27
	32%	35%	29%	34%	31%	32%	31%	36%	33%	30%	32%	38%	29%	20%	39%	24%
	54%	54%	46%	21%	36%	42%	73%	18%	9%	20%	80%	21%	21%	17%	26%	14%
Exclnt	217	102	115	34	76	103	160	39	18	54	163	32	57	51	39	38
	36%	34%	38%	28%	34%	42%	35%	41%	35%	43%	35%	30%	40%	45%	30%	34%
	47%	47%	53%	16%	35%	47%	74%	18%	8%	25%	75%	15%	26%	24%	18%	18%
Unsure	6	6	0	1	2	3	5	1	0	0	6	0	0	2	3	1
	1%	2%	0%	1%	1%	1%	1%	1%	0%	0%	1%	0%	0%	2%	1%	1%
	100%	100%	0%	17%	33%	50%	83%	17%	0%	0%	100%	0%	0%	33%	50%	17%
DK	8	2	6	3	2	2	6	1	1	1	7	2	0	1	0	5
	1%	1%	2%	2%	1%	1%	1%	1%	2%	1%	1%	2%	0%	1%	0%	5%
	25%	25%	75%	38%	25%	25%	75%	13%	13%	13%	88%	25%	0%	13%	0%	63%
Mean	3.93	3.94	3.92	3.82	3.82	4.06	3.89	4.13	3.90	3.91	3.93	3.91	3.85	4.12	3.91	3.88
Chi Square		12.43		14.71			8.36			12.34			37.84			
		.053		.258			.756			.055			.036			

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Table 5.3c: Basic Performance
Communicating with you and keeping you informed

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfied	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Und/DK	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	51 9%	201 34%	234 39%	84 14%	60 10%
V Poor	36 6%	15 6%	17 6%	4 11%	20 4%	15 4%	10 3%	16 27%	10 6%	14 3%	13 21%	9 18%	7 3%	10 4%	11 13%	6 10%
Fair	46 8%	18 8%	24 52%	4 9%	32 70%	14 30%	23 50%	4 7%	19 41%	31 67%	7 15%	8 17%	17 37%	14 30%	10 22%	3 5%
Avg	96 16%	45 19%	34 12%	17 18%	77 80%	18 19%	52 54%	13 22%	31 20%	81 17%	11 17%	4 8%	35 17%	29 12%	12 14%	12 20%
Good	191 32%	83 35%	88 30%	20 10%	167 87%	24 13%	123 64%	15 25%	53 28%	154 81%	20 32%	17 33%	64 32%	80 34%	23 27%	20 33%
Exclt	217 36%	70 29%	121 42%	26 12%	210 97%	5 2%	171 79%	11 18%	35 22%	199 41%	10 16%	8 16%	72 36%	94 40%	27 32%	19 32%
Unsure	6 1%	3 1%	3 1%	0 0%	4 67%	2 33%	1 17%	1 17%	4 67%	2 33%	1 17%	3 50%	3 18%	3 50%	0 0%	0 0%
DK	8 1%	4 2%	4 1%	0 0%	7 88%	1 13%	4 50%	0 0%	4 50%	5 63%	1 13%	2 25%	3 38%	4 50%	1 13%	0 0%
Mean	3.93	3.84	4.02	3.85	4.07	3.00	4.15	3.07	3.72	4.07	3.22	3.47	3.99	4.11	3.58	3.72
Chi Square			16.65 .163		65.68 .001			90.83 .001			83.73 .001			24.28 .146		

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Table 5.4: Basic Performance

Handling customer questions and complaints

	Gender		Age			Race/Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-His p	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
V Poor	19 3%	8 3%	11 4%	5 2%	8 4%	6 2%	14 3%	3 3%	2 4%	8 6%	11 2%	1 1%	2 1%	4 4%	7 5%	5 5%
Fair	25 4%	14 5%	11 4%	3 2%	14 6%	8 3%	21 5%	2 2%	2 4%	7 6%	18 4%	5 5%	9 6%	4 4%	3 2%	4 4%
Avg	83 14%	42 14%	41 49%	18 22%	36 16%	27 33%	64 77%	9 9%	10 12%	21 25%	62 75%	12 14%	22 27%	15 18%	19 23%	15 18%
Good	146 24%	80 27%	65 45%	33 23%	54 37%	58 40%	105 72%	30 21%	11 8%	26 18%	119 82%	26 18%	41 28%	32 22%	26 18%	21 14%
Excint	201 34%	101 34%	100 50%	36 18%	69 34%	90 45%	153 76%	33 16%	15 7%	44 35%	157 78%	33 16%	42 21%	42 21%	48 24%	36 18%
Unsure	66 11%	26 9%	40 61%	12 18%	21 32%	32 48%	52 79%	9 14%	5 8%	10 15%	56 85%	17 26%	14 21%	4 6%	15 23%	16 24%
DK	60 10%	29 10%	31 52%	14 23%	19 32%	27 45%	44 73%	10 17%	6 10%	11 18%	49 82%	12 20%	12 20%	10 17%	10 17%	14 23%
Mean	4.54	4.49	4.59	4.52	4.36	4.70	4.53	4.61	4.45	4.30	4.60	4.74	4.42	4.45	4.48	4.65
Chi Square		5.44 .489		11.52 .485		7.17 .846		9.22 .161	27.22 .294							

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Table 5.4b: Basic Performance
 Handling customer questions and complaints

	DISTRICT				CON DATE				BILL				Central Air and Heating?		
	Sierra Vista	Benson	Wilcox	Elgin Sonoita Patagon	Snsites/ Efrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0 - \$55	\$56 - \$85	\$86 - \$130	\$130+	Yes	No
	Total														
Base	600	264 115 44%	115 19%	30 5%	125 21%	66 11%	115 19%	118 20%	142 24%	136 23%	135 23%	150 25%	179 30%	365 61%	231 39%
V Poor	19	9	2	0	8	0	1	5	3	4	5	0	10	7	11
	3%	3%	2%	0%	6%	0%	1%	4%	2%	3%	4%	0%	6%	2%	5%
	47%	11%	0%	0%	42%	0%	5%	26%	16%	21%	26%	0%	53%	37%	58%
Fair	25	5	7	2	7	4	4	5	7	1	5	8	11	11	14
	4%	2%	6%	7%	6%	6%	3%	4%	5%	1%	4%	5%	8%	3%	6%
	20%	28%	8%	8%	28%	16%	16%	20%	28%	4%	20%	32%	44%	44%	56%
Avg	83	35	17	3	21	7	16	13	19	18	15	25	25	50	32
	14%	13%	15%	10%	17%	11%	14%	11%	13%	13%	11%	17%	14%	14%	14%
	42%	42%	20%	4%	25%	8%	19%	16%	23%	22%	18%	30%	30%	60%	39%
Good	146	65	32	7	26	16	37	31	30	39	26	35	46	96	49
	24%	25%	28%	23%	21%	24%	32%	26%	21%	29%	19%	23%	26%	26%	21%
	45%	45%	22%	5%	18%	11%	25%	21%	21%	27%	18%	24%	32%	27%	34%
Exclnt	201	88	35	12	43	23	40	41	52	49	53	49	50	118	82
	34%	33%	30%	40%	34%	35%	32%	35%	37%	36%	39%	33%	28%	32%	35%
	44%	44%	17%	6%	21%	11%	20%	20%	26%	24%	26%	24%	25%	59%	41%
Unsure	66	35	8	4	9	10	15	13	17	12	21	17	16	41	25
	11%	13%	7%	13%	7%	15%	12%	11%	12%	9%	16%	11%	9%	11%	11%
	53%	53%	12%	6%	14%	15%	23%	20%	26%	18%	32%	26%	24%	62%	38%
DK	60	27	14	2	11	6	17	10	14	13	10	16	21	42	18
	10%	10%	12%	7%	9%	9%	14%	8%	10%	10%	7%	11%	12%	12%	8%
	45%	45%	23%	3%	18%	10%	28%	17%	23%	22%	17%	27%	35%	70%	30%
Mean	4.54	4.63	4.49	4.63	4.28	4.70	4.67	4.59	4.61	4.59	4.63	4.60	4.38	4.64	4.40
Chi Square		24.52						13.33			27.26			10.81	
		.432						.772			.074			.094	

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Table 5.4c: Basic Performance

Handling customer questions and complaints

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatisd	Build/Lean	Und/DK	Not Build/Lean	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	201 34%	234 39%	84 14%	60 10%
V Poor	19 3%	11 5%	7 2%	1 5%	4 21%	14 74%	5 26%	10 53%	4 21%	10 53%	8 42%	1 5%	4 26%	5 26%	3 16%
Fair	25 4%	13 5%	10 3%	2 8%	15 60%	10 40%	10 40%	5 20%	10 40%	16 64%	6 24%	10 40%	8 32%	3 12%	1 4%
Avg	83 14%	38 16%	35 12%	10 42%	59 71%	24 29%	47 57%	9 11%	27 33%	64 77%	10 12%	27 33%	33 40%	11 13%	10 12%
Good	146 24%	61 26%	71 24%	14 10%	134 92%	11 14%	99 68%	13 22%	34 23%	119 82%	17 12%	53 36%	55 38%	17 12%	14 10%
Exclnt	201 34%	69 29%	104 36%	28 14%	194 97%	6 8%	151 75%	9 4%	41 20%	183 91%	10 5%	78 39%	70 35%	28 14%	22 11%
Unsure	66 11%	24 10%	33 11%	9 13%	59 89%	7 11%	37 56%	9 14%	20 30%	49 74%	8 12%	12 18%	37 56%	10 15%	6 9%
DK	60 10%	22 9%	31 11%	7 12%	52 87%	7 12%	35 58%	5 8%	20 33%	45 75%	4 7%	17 28%	26 11%	10 12%	4 7%
Mean	4.54	4.36	4.64	4.70	4.71	3.43	4.65	3.88	4.53	4.60	3.87	4.47	4.68	4.55	4.42
Chi Square		10.00 .616			121.28 .001			64.75 .001			51.02 .001			21.37 .261	

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Table 5.5: Basic Performance

Working to keep rates low.

	Gender		Age			Race/Ethnicity			Patagonia Sonoma Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hisp	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
V Poor	57 10%	26 9%	31 10%	15 28%	18 32%	23 40%	43 75%	6 11%	8 14%	16 28%	41 72%	12 21%	19 33%	6 11%	8 14%	12 21%
Fair	74 12%	33 45%	41 55%	15 20%	35 47%	22 30%	51 69%	14 19%	9 12%	15 20%	59 80%	14 19%	10 19%	14 19%	11 15%	21 28%
Avg	148 25%	83 56%	65 44%	28 19%	57 39%	61 41%	122 82%	17 11%	9 6%	35 24%	113 76%	21 14%	39 26%	26 18%	39 26%	23 16%
Good	151 25%	71 47%	80 53%	34 23%	52 34%	64 42%	112 74%	27 18%	12 8%	31 21%	120 79%	29 19%	34 23%	30 20%	33 22%	25 17%
Excint	115 19%	59 20%	55 18%	22 18%	42 37%	48 42%	81 70%	26 23%	8 7%	18 16%	96 83%	20 17%	25 22%	28 24%	26 23%	16 14%
Unsure	34 6%	17 6%	17 50%	5 15%	12 35%	17 50%	27 79%	3 9%	4 12%	6 18%	28 82%	7 21%	7 21%	5 15%	8 24%	7 21%
DK	21 4%	11 4%	10 48%	2 10%	5 24%	13 62%	17 81%	3 14%	1 5%	6 29%	15 71%	3 14%	4 19%	4 19%	3 14%	7 33%
Mean	3.63	3.66	3.60	3.46	3.55	3.79	3.63	3.77	3.37	3.49	3.67	3.60	3.49	3.81	3.73	3.55
Chi Square		4.22 .648		12.64 .395			15.29 .226			5.16 .524				24.71 .422		

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Table 5.5b: Basic Performance

Working to keep rates low.

	DISTRICT				CON DATE				BILL				Central Air and Heating?		
	Sierra Vista	Benson	Wilcox	Elgin Sonoma Patagon	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Base	600	264 44%	115 19%	30 5%	66 11%	125 21%	115 19%	118 20%	142 24%	136 23%	135 23%	150 25%	179 30%	365 61%	231 39%
V Poor	57 10%	20 8%	12 25%	1 2%	5 9%	7 16%	11 19%	10 18%	15 26%	13 23%	5 9%	13 23%	26 46%	30 53%	26 46%
Fair	74 12%	30 11%	11 10%	8 27%	10 14%	15 26%	12 16%	14 19%	15 20%	12 16%	19 26%	18 24%	25 34%	43 58%	31 42%
Avg	148 25%	64 24%	28 19%	8 5%	15 10%	33 22%	29 20%	39 26%	26 18%	29 20%	31 21%	36 24%	52 35%	101 68%	46 31%
Good	151 25%	68 45%	31 21%	5 3%	17 11%	25 17%	36 24%	26 17%	36 24%	36 24%	34 23%	45 30%	36 24%	97 64%	54 36%
Exclnt	115 19%	56 21%	23 20%	7 6%	11 17%	27 23%	18 16%	20 17%	36 31%	34 30%	33 29%	28 24%	20 17%	62 54%	52 45%
Unsure	34 6%	20 8%	4 12%	0 0%	4 12%	8 24%	7 21%	6 18%	7 21%	7 21%	12 35%	7 21%	8 24%	21 62%	12 35%
DK	21 4%	6 2%	4 19%	1 5%	4 19%	4 19%	2 10%	3 14%	7 33%	5 24%	1 5%	3 2%	12 57%	11 52%	10 48%
Mean	3.63	3.73	3.57	3.43	3.71	3.66	3.58	3.53	3.79	3.79	3.82	3.60	3.40	3.62	3.65
Chi Square															
				23.48			17.96				40.01			8.75	.188
				.492			.458				.002				

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Table 5.5c: Basic Performance

Working to keep rates low.

	Employment Status			Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or disstatis	Build/Lean	Und/DK	Build/Lean	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood	
																71
Base	600	238 40%	291 49%	71 12%	86%	13%	64%	10%	26%	81%	11%	9%	34%	39%	14%	10%
V Poor	57 10%	25 11%	98 44%	7 12%	36 63%	20 35%	7 49%	11 19%	18 32%	34 60%	13 23%	10 18%	18 32%	8 18%	10 18%	8 14%
Fair	74 12%	34 46%	26 35%	14 19%	47 64%	27 36%	31 42%	11 15%	32 43%	52 70%	15 20%	7 9%	32 43%	19 26%	10 14%	8 11%
Avg	148 25%	68 29%	67 45%	13 9%	133 90%	15 10%	92 62%	17 11%	39 26%	118 80%	17 11%	13 9%	43 29%	68 46%	21 14%	11 7%
Good	151 25%	52 34%	79 52%	20 13%	140 93%	9 6%	111 74%	11 7%	29 19%	132 87%	9 6%	10 7%	58 39%	59 39%	16 11%	16 11%
Exclt	115 19%	44 18%	61 53%	10 9%	114 99%	0 0%	89 77%	7 6%	19 17%	106 92%	6 5%	3 3%	31 27%	51 44%	18 16%	12 10%
Unsure	34 6%	8 24%	21 62%	5 15%	28 82%	6 18%	21 62%	1 3%	12 35%	27 79%	1 3%	6 18%	7 21%	15 44%	7 21%	4 12%
DK	21 4%	7 33%	12 57%	2 10%	19 90%	2 10%	12 57%	2 10%	7 33%	17 81%	2 10%	2 10%	12 57%	4 19%	2 10%	1 5%
Mean	3.63	3.45	3.81	3.49	3.79	2.59	3.82	3.05	3.40	3.77	2.86	3.29	3.60	3.71	3.61	3.53
Chi Square			17.65 .127		85.54 .001			42.19 .001			44.09 .001			26.37 .092		

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Table 5.6: Basic Performance

Being good stewards of the environment.

	Gender		Age				Race/Ethnicity			Patagonia Soncita Elgin Area		What was your approximate household income for 2008 before taxes?				
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300	299	121	221	248	453	96	51	127	472	106	142	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
V Poor	22	13	9	4	12	5	15	3	4	15	7	3	6	1	7	5
	4%	4%	3%	3%	5%	2%	3%	3%	8%	12%	1%	3%	4%	1%	5%	5%
	5%	5%	4%	18%	55%	23%	68%	14%	18%	68%	32%	14%	27%	5%	32%	23%
Fair	30	8	22	3	10	16	27	2	1	8	22	7	7	5	5	6
	5%	3%	7%	2%	5%	6%	6%	2%	2%	6%	5%	7%	5%	4%	4%	5%
	27%	27%	73%	10%	33%	53%	90%	7%	3%	27%	73%	23%	23%	17%	17%	20%
Avg	100	55	45	23	35	41	78	12	10	20	80	14	25	19	22	20
	17%	18%	15%	19%	16%	17%	17%	13%	20%	16%	17%	13%	18%	17%	17%	18%
	55%	55%	45%	23%	35%	41%	78%	12%	10%	20%	80%	14%	25%	19%	22%	20%
Good	175	96	78	39	63	71	131	35	9	35	139	28	43	32	37	35
	29%	32%	26%	32%	29%	29%	29%	36%	18%	28%	29%	26%	30%	28%	29%	32%
	55%	55%	45%	22%	36%	41%	75%	20%	5%	20%	79%	16%	25%	18%	21%	20%
Exclnt	164	83	81	24	62	75	122	30	12	29	135	29	37	38	35	25
	27%	28%	27%	20%	28%	30%	27%	31%	24%	23%	29%	27%	26%	34%	27%	23%
	51%	51%	49%	15%	38%	46%	74%	18%	7%	18%	82%	18%	23%	23%	21%	15%
Unsure	66	27	39	19	28	18	49	10	7	12	54	14	18	8	16	10
	11%	9%	13%	16%	13%	7%	11%	10%	14%	9%	11%	13%	13%	7%	13%	9%
	41%	41%	59%	29%	42%	27%	74%	15%	11%	18%	82%	21%	27%	12%	24%	15%
DK	43	18	25	9	11	22	31	4	8	8	35	11	6	10	6	10
	7%	6%	8%	7%	5%	9%	7%	4%	16%	6%	7%	10%	4%	9%	5%	9%
	42%	42%	56%	21%	26%	51%	72%	9%	19%	19%	81%	26%	14%	23%	14%	23%
Mean	4.33	4.27	4.39	4.40	4.27	4.36	4.30	4.39	4.51	3.97	4.43	4.50	4.24	4.46	4.25	4.25
Chi Square		13.47			19.45			19.16		31.56				17.62		
		.036			.078			.085		.001				.821		

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Table 5.6c: Basic Performance
Being good stewards of the environment.

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Total	Full/part time	Retired	Other	V + SW Satisfied	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	51 9%	201 34%	234 39%	84 14%	60 10%
V Poor	22 4%	12 5%	8 3%	2 3%	10 2%	11 14%	1 0%	15 25%	6 4%	5 1%	16 2%	6 3%	3 1%	4 5%	6 10%
Fair	30 5%	10 4%	16 5%	4 6%	21 4%	8 10%	15 4%	5 8%	10 10%	19 4%	6 10%	12 6%	11 5%	3 4%	3 5%
Avg	100 17%	42 18%	42 42%	16 23%	80 80%	20 20%	62 62%	11 11%	27 27%	80 80%	12 12%	8 36%	40 40%	13 13%	7 7%
Good	175 29%	76 43%	79 45%	20 11%	156 89%	18 10%	124 71%	10 6%	41 23%	152 87%	11 7%	62 35%	70 40%	20 11%	18 10%
Exclnt	164 27%	52 32%	99 60%	13 8%	160 98%	4 2%	139 85%	7 4%	18 11%	156 95%	2 1%	54 33%	68 41%	24 15%	15 9%
Unsure	66 11%	26 11%	27 9%	13 18%	56 11%	10 13%	27 7%	5 8%	34 52%	46 70%	9 14%	15 7%	25 23%	14 21%	8 12%
DK	43 7%	20 47%	20 47%	3 7%	34 7%	8 19%	16 37%	7 16%	20 47%	28 65%	7 16%	16 37%	17 40%	6 14%	3 5%
Mean	4.33	4.28	4.40	4.25	4.43	3.73	4.38	3.53	4.52	4.41	4.61	4.27	4.42	4.46	4.15
Chi Square		21.20 .048			56.50 .001		161.21 .001			138.08 .001			20.83 .288		

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Table 5.7: Basic Performance
 Keeping longer power outages to a minimum.

	Gender		Age			Race/ Ethnicity			Patagonia Sonotita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
V Poor	10 2%	3 1%	7 2%	2 2%	5 2%	3 1%	9 2%	0 0%	1 2%	8 6%	2 0%	2 2%	3 0%	0 0%	2 2%	3 3%
Fair	24 4%	6 2%	18 6%	4 3%	7 3%	12 5%	18 4%	4 4%	2 4%	11 9%	13 3%	5 5%	6 4%	1 1%	5 4%	7 6%
Avg	81 14%	34 11%	47 16%	12 10%	37 17%	30 12%	59 13%	10 10%	12 24%	31 24%	50 11%	15 14%	17 12%	10 9%	21 16%	18 16%
Good	206 34%	117 39%	88 29%	45 37%	75 34%	84 34%	158 35%	34 27%	14 27%	45 35%	160 34%	30 28%	57 40%	39 35%	41 32%	39 35%
Exclnt	250 42%	122 49%	128 51%	50 20%	90 36%	106 42%	185 74%	44 18%	21 8%	29 12%	221 88%	47 19%	54 22%	57 23%	53 21%	39 16%
Unsure	20 3%	12 4%	8 3%	4 20%	7 35%	8 40%	17 85%	2 10%	1 5%	3 15%	17 85%	5 25%	2 10%	4 20%	6 30%	3 15%
DK	9 2%	6 2%	3 1%	4 44%	0 0%	5 56%	7 78%	2 22%	0 0%	0 0%	9 100%	2 22%	3 33%	2 22%	0 0%	2 22%
Mean	4.26	4.36	4.16	4.36	4.17	4.30	4.26	4.38	4.08	3.67	4.42	4.30	4.20	4.52	4.22	4.09
Chi Square		15.73 .015			11.70 .470		9.68 .644			60.28 .001				22.82 .531		

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Table 5.7b: Basic Performance.
Keeping longer power outages to a minimum.

	DISTRICT				CON DATE				BILL				Central Air and Heating?		
	Sierra Vista	Benson	Wilcox	Elgin Sonoita Patagon	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Base	264 44%	115 19%	30 5%	125 21%	66 11%	125 21%	115 19%	118 20%	142 24%	136 23%	135 23%	150 25%	179 30%	365 61%	231 39%
V Poor	0 0%	2 0%	0 0%	8 6%	0 0%	0 0%	0 0%	2 2%	2 1%	4 3%	0 0%	2 1%	4 2%	4 1%	6 3%
Fair	5 2%	4 0%	0 0%	10 8%	4 6%	2 2%	3 3%	4 3%	5 4%	5 4%	9 7%	5 3%	5 3%	15 4%	9 4%
Avg	81 14%	29 36%	8 10%	31 25%	10 12%	15 12%	13 11%	14 12%	14 10%	14 10%	9 7%	28 17%	30 17%	48 59%	32 40%
Good	206 34%	89 30%	13 43%	44 35%	25 38%	40 32%	42 37%	47 40%	44 31%	42 31%	50 33%	50 24%	72 35%	126 35%	79 34%
Exclnt	42 51%	51 24%	5 17%	28 11%	23 9%	57 23%	51 20%	48 19%	70 28%	61 24%	66 26%	59 24%	64 26%	155 62%	93 37%
Unsure	20 3%	9 3%	4 20%	3 2%	3 15%	6 5%	3 15%	3 15%	5 25%	6 4%	6 4%	6 3%	2 1%	12 3%	8 4%
DK	9 2%	5 2%	2 22%	1 1%	1 11%	5 56%	2 22%	0 0%	2 22%	4 44%	3 33%	0 0%	2 22%	5 56%	4 44%
Mean	4.26	4.46	4.43	4.40	4.21	4.52	4.37	4.22	4.39	4.36	4.44	4.18	4.12	4.28	4.23
Chi Square	70.19				14.92				32.40				2.27		
	.001				.667				.020				.893		

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Table 5.7c: Basic Performance
 Keeping longer power outages to a minimum.

	Employment Status			Satisfaction with SSVSEC		Should Line be Built?		Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisf'd	Neutral or dissatis	Build/Lean	Und/DK	Build/Lean	Und/DK	Not Build/Lean	Electric heat	Natural gas	Propane	Wood
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	156 26%	486 81%	51 9%	63 11%	201 34%	234 39%	84 14%	60 10%
V Poor	10 2%	3 1%	5 2%	2 3%	4 1%	5 6%	4 1%	4 2%	4 1%	4 10%	4 50%	1 0%	1 1%	2 2%	5 8%
Fair	24 4%	9 4%	13 4%	2 3%	14 3%	9 11%	11 3%	6 4%	13 3%	5 12%	5 8%	7 3%	9 4%	5 6%	1 2%
Avg	81 14%	41 17%	30 10%	10 14%	60 12%	20 25%	39 10%	15 17%	50 10%	19 24%	30 23%	30 15%	25 11%	10 12%	7 12%
Good	206 34%	80 34%	96 33%	30 42%	174 34%	31 39%	132 34%	16 27%	172 35%	22 24%	22 35%	74 37%	73 31%	35 42%	21 35%
Exclht	250 42%	94 39%	132 45%	24 34%	241 47%	9 11%	190 49%	13 22%	232 48%	6 2%	6 10%	79 39%	114 49%	29 35%	22 37%
Unsure	20 3%	7 3%	10 3%	3 4%	16 3%	4 5%	4 1%	5 8%	10 2%	6 10%	6 10%	6 3%	6 3%	3 4%	4 7%
DK	9 2%	4 2%	5 2%	0 0%	8 2%	1 1%	4 1%	0 0%	5 1%	0 0%	0 0%	4 2%	5 2%	0 0%	0 0%
Mean	4.26	4.22	4.33	4.14	4.38	3.58	4.36	3.70	4.25	4.10	3.59	4.28	4.39	4.11	4.10
Chi Square			11.16		58.71		70.08		103.60		33.70				.014
			.515		.001		.001		.001						

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Table 6: STATEMENT A OR STATEMENT B -- Opponents say that the new line will hurt their property values because it will interfere with their view of the mountains. The cooperative says that it has owned the right-of-way to build that line for 28 years and that was public record when property owners bought their property.

	Gender		Age			Race/Ethnicity			Patagonia Sonota Elgin Area			What was your approximate household income for 2008 before taxes?				
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25K	25K-50K	50K-75K	75K+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
Coop	434 72%	222 74%	212 71%	93 77%	150 68%	187 75%	331 73%	72 17%	31 7%	85 67%	349 74%	75 71%	111 78%	84 74%	95 74%	69 62%
Lean Coop	43 7%	23 8%	20 7%	6 5%	21 10%	15 6%	33 7%	4 9%	6 14%	5 12%	38 8%	10 9%	9 8%	9 21%	6 5%	9 8%
Lean opponents	12 2%	5 2%	7 58%	2 17%	6 3%	4 2%	10 2%	2 17%	0 0%	0 0%	12 100%	1 8%	3 2%	2 17%	3 2%	3 2%
Opponents	64 11%	28 9%	35 12%	11 9%	25 11%	25 10%	49 11%	11 17%	4 6%	23 36%	40 63%	9 8%	14 10%	12 11%	14 11%	15 14%
Undecided	42 7%	19 6%	23 8%	9 21%	17 8%	14 6%	25 6%	7 17%	10 24%	11 26%	31 7%	9 8%	3 2%	6 5%	10 8%	14 13%
REF	1 0%	1 0%	0 0%	0 0%	0 0%	1 100%	1 100%	0 0%	0 0%	0 0%	1 100%	0 0%	1 100%	0 0%	0 0%	0 0%
DK	4 1%	2 1%	2 50%	0 0%	2 50%	2 50%	4 100%	0 0%	0 0%	3 75%	1 25%	2 50%	1 25%	0 0%	0 0%	1 25%
Mean	1.76	1.70	1.81	1.65	1.85	1.69	1.73	1.72	2.14	2.07	1.67	1.82	1.56	1.65	1.73	2.10
Chi Square		2.93 .818		8.65 .732			19.99 .067			22.93 .001				25.09 .401		

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Table 6c: STATEMENT A OR STATEMENT B -- Opponents say that the new line will hurt their property values because it will interfere with their view of the mountains. The cooperative says that it has owned the right-of-way to build that line for 28 years and that was public record when property owners bought their property.

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Retired		V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Build/Lean	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood		
		Full/part time	Retired												Other	Build/Lean
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	51 9%	201 34%	234 39%	84 14%	60 10%
Coop	434 72%	167 70%	219 75%	48 11%	392 90%	41 9%	334 77%	12 3%	88 20%	413 95%	9 2%	12 3%	149 34%	178 41%	56 13%	39 9%
Lean Coop	43 7%	20 8%	18 6%	5 12%	35 81%	8 19%	17 40%	5 12%	21 49%	30 70%	3 7%	10 23%	16 37%	16 7%	4 5%	5 8%
Lean opponents	12 2%	5 2%	6 2%	1 8%	11 92%	1 8%	2 17%	2 17%	8 67%	7 58%	1 8%	4 33%	4 33%	3 25%	4 33%	0 0%
Opponents	64 11%	24 10%	30 10%	10 16%	40 63%	22 34%	10 16%	34 53%	20 31%	16 25%	39 62%	9 14%	17 27%	15 23%	14 22%	13 20%
Undecided	42 7%	20 8%	15 5%	7 17%	34 81%	7 17%	19 45%	7 17%	16 38%	18 43%	9 21%	15 36%	13 31%	20 48%	6 14%	2 3%
REF	1 0%	0 0%	1 100%	0 0%	1 100%	0 0%	1 100%	0 0%	0 0%	0 0%	1 100%	0 0%	0 0%	1 100%	0 0%	0 0%
DK	4 1%	2 1%	2 50%	0 0%	4 100%	0 0%	1 25%	0 0%	3 75%	2 50%	1 25%	1 25%	2 50%	1 25%	0 0%	1 25%
Mean	1.76	1.82	1.68	1.92	1.66	2.32	1.36	3.32	2.15	1.36	3.68	3.18	1.69	1.68	1.93	1.97
Chi Square		7.21 .844			34.65 .001			219.95 .001		320.76 .001			28.06 .061			

Prepared by RBI Strategies and Research

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Table 7: STATEMENT A OR STATEMENT B -- Opponents say that putting the new line in the view of the mountains is unfair to them because one of the primary reasons they bought their property was the view of the mountain. The cooperative says that the path they chose for the new line is the path that will affect the fewest number of people, a statement with which an independent study on the matter has agreed.

	Gender		Age			Race/Ethnicity			Patagonia Sonota Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
Coop	435 73%	224 51%	211 49%	90 21%	150 34%	190 44%	328 75%	73 17%	34 8%	84 19%	351 81%	75 17%	109 25%	83 19%	97 22%	71 16%
Lean Coop	37 6%	19 6%	18 49%	5 14%	18 49%	14 38%	28 76%	4 11%	5 14%	7 19%	30 81%	8 22%	10 27%	6 16%	7 19%	6 5%
Lean opponents	15 3%	10 3%	5 33%	3 20%	7 47%	5 33%	11 73%	4 27%	0 0%	3 20%	12 80%	0 0%	4 27%	5 33%	2 2%	4 4%
Opponents	65 11%	29 10%	36 55%	11 17%	27 42%	25 38%	55 85%	6 9%	4 6%	21 32%	44 68%	9 14%	17 26%	13 20%	8 12%	18 16%
Undecided	44 7%	16 5%	27 61%	10 23%	18 41%	13 30%	27 61%	9 20%	8 18%	10 23%	33 75%	12 27%	2 5%	6 14%	13 30%	11 25%
REF	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
DK	4 1%	2 1%	2 50%	2 50%	1 25%	1 25%	4 100%	0 0%	0 0%	2 50%	2 50%	2 50%	0 0%	0 0%	1 25%	1 25%
Mean	1.77	1.67	1.86	1.79	1.86	1.63	1.77	1.69	1.96	2.01	1.70	1.90	1.54	1.70	1.73	2.06
Chi Square		5.65 .342		8.95 .537			15.33 .120			7.95 .159				30.45 .063		

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Table 7c: STATEMENT A OR STATEMENT B -- Opponents say that putting the new line in the view of the mountains is unfair to them because one of the primary reasons they bought their property was the view of the mountain. The cooperative says that the path they chose for the new line is the path that will affect the fewest number of people, a statement with which an independent study on the matter has agreed.

	Employment Status			Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood		
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	51 9%	201 34%	234 39%	84 14%	60 10%
Coop	435 73%	173 73%	218 75%	44 62%	390 75%	44 10%	337 77%	16 4%	82 19%	409 94%	14 3%	12 3%	150 34%	183 42%	54 12%	36 8%
Lean Coop	37 6%	16 7%	14 5%	7 10%	32 6%	5 6%	17 4%	2 3%	18 12%	30 6%	1 2%	6 12%	15 7%	16 7%	1 1%	5 8%
Lean opponents	15 3%	6 3%	9 3%	0 0%	11 2%	4 5%	4 1%	3 5%	8 5%	9 2%	2 3%	4 8%	5 2%	3 1%	6 7%	0 0%
Opponents	65 11%	23 10%	32 11%	10 14%	45 9%	19 24%	7 2%	32 53%	26 17%	16 3%	15 62%	10 20%	19 9%	14 6%	14 17%	13 22%
Undecided	44 7%	17 7%	10 6%	10 14%	35 7%	7 16%	18 41%	7 16%	19 13%	19 43%	6 14%	19 43%	10 23%	17 39%	9 20%	5 11%
REF	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
DK	4 1%	3 1%	1 0%	0 0%	4 1%	0 0%	1 2%	0 0%	3 7%	3 7%	1 2%	0 0%	2 5%	1 2%	0 0%	1 2%
Mean	1.77	1.77	1.69	2.08	1.68	2.24	1.32	3.20	2.32	1.39	3.41	3.35	1.67	1.59	2.08	2.17
Chi Square		14.56 .149			22.08 .001			206.27 .001			311.86 .001		38.00 .001			

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Table 8: STATEMENT A OR STATEMENT B – Opponents say that alternative energy sources, like wind or solar power, could take care of much of the problem. They want the cooperative to build enough alternative energy sources in the area to reduce the need for a new line and say that would be positive for the environment as well. The cooperative says that renewable energy would not solve the reliability and power quality problems caused by having only one line into the area, would not provide enough electricity when it is needed, would be only a short term fix and would be far more expensive, a statement with which an independent study on the matter has agreed.

	Gender		Age				Race/ Ethnicity			Patagonia Sonora Elgin Area		What was your approximate household income for 2008 before taxes?				
	Total	Male	Female	18-44	45-64	65+	White non-His p	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
Coop	416 69%	224 75%	192 64%	81 67%	157 71%	174 70%	319 77%	66 16%	31 7%	86 21%	330 79%	59 14%	99 24%	86 21%	101 24%	71 17%
Lean Coop	47 8%	21 7%	26 9%	9 7%	16 7%	22 9%	33 7%	11 23%	3 6%	7 6%	40 8%	8 8%	14 10%	8 7%	7 5%	10 9%
Lean opponents	17 3%	10 3%	7 4%	3 2%	8 4%	6 2%	12 3%	4 4%	1 2%	2 2%	15 3%	7 7%	2 1%	2 2%	2 2%	4 4%
Opponents	73 12%	29 10%	43 14%	17 14%	24 11%	28 11%	55 12%	8 8%	10 20%	24 19%	48 10%	16 15%	22 15%	11 10%	9 7%	15 14%
Undecided	41 7%	14 5%	27 9%	9 7%	13 6%	17 7%	28 6%	7 7%	6 12%	6 5%	35 7%	14 13%	4 3%	5 4%	7 5%	11 10%
REF	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
DK	6 1%	2 1%	4 1%	2 2%	3 1%	1 0%	6 1%	0 0%	0 0%	2 3%	4 1%	2 2%	1 1%	1 1%	2 2%	0 0%
Mean	1.83	1.65	2.01	1.94	1.79	1.77	1.82	1.74	2.16	1.94	1.80	2.30	1.75	1.63	1.61	1.96
Chi Square		11.03 .051		4.03 .946			11.00 .358			10.03 .075				35.97 .015		

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Table 8c: STATEMENT A OR STATEMENT B -- Opponents say that alternative energy sources, like wind or solar power, could take care of much of the problem. They want the cooperative to build enough alternative energy sources in the area to reduce the need for a new line and say that would be positive for the environment as well. The cooperative says that renewable energy would not solve the reliability and power quality problems caused by having only one line into the area, would not provide enough electricity when it is needed, would be only a short term fix and would be far more expensive, a statement with which an independent study on the matter has agreed.

	Employment Status			Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Total	Full/part time	Retired	Other	V + SW Satisfied	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	201 34%	234 39%	84 14%	60 10%
Coop	416 69%	162 68%	204 70%	50 12%	378 91%	38 9%	323 78%	15 4%	78 19%	392 94%	11 3%	139 33%	167 40%	58 14%	39 9%
Lean Coop	47 8%	19 8%	22 8%	6 13%	38 81%	9 11%	23 49%	3 5%	21 45%	39 83%	2 4%	18 38%	18 38%	7 15%	2 3%
Lean opponents	17 3%	8 3%	8 47%	1 6%	12 71%	5 29%	2 12%	5 29%	10 59%	8 47%	6 35%	5 29%	7 41%	2 12%	3 18%
Opponents	73 12%	29 12%	35 12%	9 12%	49 67%	20 27%	20 27%	30 41%	23 32%	22 30%	40 55%	11 22%	24 11%	11 13%	10 17%
Undecided	41 7%	14 6%	22 8%	5 12%	35 85%	6 15%	13 32%	7 17%	21 51%	22 54%	3 7%	13 68%	17 41%	6 15%	5 12%
REF	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
DK	6 1%	6 3%	0 0%	0 0%	5 83%	1 17%	3 50%	3 0%	3 50%	3 50%	1 2%	2 67%	4 17%	0 0%	1 2%
Mean	1.83	1.90	1.79	1.77	1.73	2.38	1.41	3.18	2.36	1.47	3.41	1.85	1.76	1.81	2.07
Chi Square			10.60 .389		26.40 .001			174.40 .001			282.23 .001				9.20 .867

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Table 9: STATEMENT A OR STATEMENT B – Opponents of the Sonoita/ Elgin/ Patagonia line asked the Arizona Corporate Commission, which regulates electric utilities, to order Sulphur Springs Valley Electric Cooperative to conduct an independent, third party study of the alternatives to building a new feeder line, including wind and solar power. That study has just been completed and found that the proposed new feeder line is the most realistic, affordable and long term way to solve the reliability and power quality problems. Opponents are expected to criticize the study or ask for more studies of the various alternatives. The cooperative says that further delays will significantly increase costs to put in the new line to the Sonoita/ Elgin/ Patagonia area and that such cost increases are unfair to all other ratepayers who have to pay for the new line.

	Gender		Age			Race/ Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
Coop	461 77%	247 82%	214 72%	90 74%	169 76%	197 79%	351 76%	78 17%	32 7%	92 20%	369 80%	69 15%	113 25%	88 19%	112 24%	79 17%
Lean Coop	34 6%	12 4%	22 7%	11 9%	13 6%	10 4%	26 6%	5 15%	3 9%	4 12%	30 88%	5 15%	10 26%	9 26%	5 15%	5 15%
Lean opponents	12 2%	6 50%	6 50%	1 8%	4 33%	7 58%	10 83%	1 8%	1 8%	2 17%	10 83%	3 25%	3 25%	1 8%	2 17%	3 25%
Opponents	62 10%	28 9%	33 11%	9 7%	27 12%	22 9%	45 10%	6 10%	11 22%	19 15%	42 9%	17 16%	12 8%	9 8%	7 5%	17 15%
Undecided	25 4%	6 2%	19 6%	8 7%	6 3%	10 4%	16 4%	5 20%	4 16%	5 20%	20 80%	11 44%	1 4%	4 16%	2 8%	7 28%
REF	1 0%	1 100%	0 0%	0 0%	0 0%	1 100%	1 100%	0 0%	0 0%	0 0%	1 100%	0 0%	1 100%	0 0%	0 0%	0 0%
DK	5 1%	0 0%	5 100%	2 40%	2 40%	1 20%	4 80%	1 20%	0 0%	5 100%	0 0%	1 20%	2 40%	2 40%	0 0%	0 0%
Mean	1.63	1.46	1.80	1.69	1.62	1.57	1.60	1.53	2.06	1.91	1.55	2.06	1.51	1.58	1.30	1.81
Chi Square		18.47 .005		13.63 .325		13.17 .357		24.87 .001		42.88 .010						

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Table 9b: STATEMENT A OR STATEMENT B -- Opponents of the Sonoita/Elgin/ Patagonia line asked the Arizona Corporate Commission, which regulates electric utilities, to order Sulphur Springs Valley Electric Cooperative to conduct an independent, third party study of the alternatives to building a new feeder line, including wind and solar power. That study has just been completed and found that the proposed new feeder line is the most realistic, affordable and long term way to solve the reliability and power quality problems. Opponents are expected to criticize the study or ask for more studies of the various alternatives. The cooperative says that further delays will significantly increase costs to put in the new line to the Sonoita/Elgin/ Patagonia area and that such cost increases are unfair to all other ratepayers who have to pay for the new line.

	DISTRICT				CON DATE				BILL				Central Air and Heating?		
	Sierra Vista	Benson	Wilcox	Elgin Sonoita Patagonia	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Total	600	264 44%	115 19%	30 5%	125 21%	66 11%	115 19%	118 20%	142 24%	136 23%	135 23%	150 25%	179 30%	365 61%	231 39%
Base	461 77%	207 78%	88 77%	25 83%	90 72%	51 77%	93 81%	87 74%	110 77%	100 74%	106 79%	114 76%	141 79%	289 79%	170 74%
Coop	34 6%	18 7%	5 4%	2 7%	4 6%	4 6%	3 3%	11 9%	8 6%	8 6%	8 6%	5 3%	13 7%	23 6%	11 5%
Lean Coop	12 2%	5 4%	5 4%	0 0%	2 2%	0 0%	4 4%	2 2%	4 3%	4 3%	1 1%	4 3%	3 2%	9 2%	3 1%
Lean opponents	62 10%	21 8%	13 11%	3 10%	18 14%	7 11%	11 10%	10 8%	13 9%	20 15%	11 8%	18 12%	13 7%	31 8%	30 13%
Opponents	25 4%	12 5%	4 3%	0 0%	5 4%	4 6%	4 3%	7 6%	6 4%	4 3%	9 7%	7 5%	5 3%	11 3%	14 6%
Undecided	48 8%	58 48%	38 16%	0 0%	48 20%	16 16%	16 16%	28 28%	24 24%	16 16%	36 36%	28 28%	20 20%	44 44%	56 56%
REF	1 0%	1 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 1%	0 0%	0 0%	1 1%	0 0%	1 0%	0 0%
DK	5 1%	0 0%	0 0%	0 0%	5 4%	0 0%	0 0%	1 1%	0 0%	0 0%	0 0%	1 1%	4 4%	1 0%	3 1%
Mean	1.63	1.55	1.61	1.37	1.90	1.62	1.52	1.67	1.59	1.66	1.59	1.71	1.57	1.52	1.78
Chi Square							13.35				22.84			10.89	
							.771				.197			.092	

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Table 9c: STATEMENT A OR STATEMENT B -- Opponents of the Sonoita/ Egin/ Patagonia line asked the Arizona Corporate Commission, which regulates electric utilities, to order Sulphur Springs Valley Electric Cooperative to conduct an independent, third party study of the alternatives to building a new feeder line, including wind and solar power. That study has just been completed and found that the proposed new feeder line is the most realistic, affordable and long term way to solve the reliability and power quality problems. Opponents are expected to criticize the study or ask for more studies of the various alternatives. The cooperative says that further delays will significantly increase costs to put in the new line to the Sonoita/ Egin/ Patagonia area and that such cost increases are unfair to all other ratepayers who have to pay for the new line.

	Employment Status			Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisf'd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood		
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	51 9%	234 39%	84 14%	60 10%	
Coop	461 77%	180 76%	234 80%	47 66%	415 80%	45 57%	347 90%	16 27%	98 63%	434 89%	7 11%	20 39%	159 79%	62 81%	39 65%	
Lean Coop	34 6%	15 6%	10 3%	9 13%	24 5%	10 13%	11 3%	3 5%	20 13%	23 5%	3 5%	8 6%	14 7%	3 4%	3 5%	
Lean opponents	12 2%	5 42%	7 58%	0 0%	8 67%	4 33%	5 42%	5 42%	2 17%	7 58%	2 17%	3 25%	6 50%	2 17%	0 0%	
Opponents	62 10%	23 10%	27 9%	12 17%	44 71%	16 26%	13 21%	30 48%	19 31%	12 19%	43 68%	7 11%	18 29%	16 13%	10 17%	
Undecided	25 4%	11 5%	11 4%	3 12%	22 88%	2 8%	5 20%	4 16%	16 64%	9 36%	4 16%	12 48%	3 12%	11 44%	5 20%	
REF	1 0%	0 0%	1 0%	0 0%	1 100%	0 0%	1 100%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	
DK	5 1%	4 80%	1 20%	0 0%	3 60%	2 40%	2 40%	2 40%	1 20%	1 20%	3 60%	1 20%	1 20%	1 20%	3 60%	
Mean	1.63	1.68	1.55	1.80	1.55	2.09	1.25	3.18	1.97	1.24	3.78	2.75	1.49	1.50	2.18	
Chi Square			20.27 .062		29.91 .001			203.36 .001			379.87 .001		34.06 .012			

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Table 10: Sometimes, over the course of a survey like this one, with more information, people change their minds. Do you think the new power line to the Sonoita/ Elgin/ Patagonia area should be allowed to be built or not?

	Gender		Age			Race/ Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300	299	121	221	248	453	96	51	127	472	106	142	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
Strong build	394	220	174	77	141	173	302	63	29	80	314	60	97	79	97	61
	66%	73%	58%	64%	70%	67%	68%	57%	7%	63%	67%	57%	68%	70%	76%	55%
		56%	44%	20%	36%	44%	77%	16%	7%	20%	80%	15%	25%	20%	25%	15%
SW build	74	28	46	19	27	26	54	12	8	9	65	18	19	15	9	13
	12%	9%	15%	16%	12%	10%	12%	13%	16%	7%	14%	17%	13%	13%	7%	12%
		38%	62%	26%	36%	35%	73%	16%	11%	12%	88%	24%	26%	20%	12%	18%
Lean build	18	8	10	7	8	3	12	5	1	3	15	1	2	5	6	4
	3%	3%	3%	6%	4%	1%	3%	5%	2%	2%	3%	1%	1%	4%	5%	4%
		44%	56%	39%	44%	17%	67%	28%	6%	17%	83%	6%	11%	28%	33%	22%
Lean not build	7	4	2	1	2	2	5	1	1	3	3	2	2	1	1	1
	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	1%	2%	1%	1%	1%	1%
		57%	29%	14%	29%	29%	71%	14%	14%	43%	43%	29%	29%	14%	14%	14%
SW not build	7	2	5	3	2	2	3	2	2	3	4	2	3	0	0	2
	1%	1%	2%	2%	1%	1%	1%	2%	4%	2%	1%	2%	0%	0%	2%	2%
		29%	71%	43%	29%	29%	43%	29%	29%	43%	57%	29%	43%	0%	0%	29%
Strong not build	49	20	29	6	23	18	36	6	7	23	26	12	11	5	7	14
	8%	7%	10%	5%	10%	7%	8%	6%	14%	18%	6%	11%	8%	4%	5%	13%
		41%	59%	12%	47%	37%	73%	12%	14%	47%	53%	24%	22%	10%	14%	29%
Undecided	49	17	32	7	17	24	39	7	3	6	43	11	8	8	7	15
	8%	6%	11%	6%	8%	10%	9%	7%	6%	5%	9%	10%	6%	7%	5%	14%
		35%	65%	14%	35%	49%	80%	14%	6%	12%	88%	22%	16%	16%	14%	31%
REF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
DK	2	1	1	1	1	0	2	0	0	0	2	0	0	0	1	1
	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%
		50%	50%	50%	50%	0%	100%	0%	0%	0%	100%	0%	0%	0%	50%	50%

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 10: Sometimes, over the course of a survey like this one, with more information, people change their minds. Do you think the new power line to the Sonoita/ Elgin/ Patagonia area should be allowed to be built or not?

	Gender		Age			Race/Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hisp	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
Mean	2.19	1.91	2.46	2.06	2.28	2.13	2.18	2.09	2.45	2.47	2.11	2.51	2.01	1.89	1.85	2.80
Chi Square		18.17 .011			17.28 .242			11.99 .607		31.29 .001				38.22 .094		

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A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 10b: Sometimes, over the course of a survey like this one, with more information, people change their minds. Do you think the new power line to the Sonoita/Elgin/ Patagonia area should be allowed to be built or not?

	DISTRICT						CON DATE				BILL				Central Air and Heating?	
	Sierra Vista	Benson	Wilcox	Elgin Sonoita Patagonia	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No	
Base	Total	600	264 44%	115 19%	30 5%	125 21%	66 11%	118 20%	142 24%	136 23%	135 23%	150 25%	179 30%	365 61%	231 39%	
Strong build	394 66%	180 68%	74 64%	23 77%	78 62%	39 59%	83 66%	78 66%	94 66%	88 65%	90 67%	95 63%	121 68%	244 67%	148 64%	
SW build	74 12%	33 13%	16 4%	4 13%	9 7%	12 18%	21 17%	15 13%	17 12%	13 10%	20 15%	18 12%	23 13%	46 13%	27 12%	
Lean build	18 3%	11 4%	3 3%	0 0%	3 2%	1 2%	4 3%	4 3%	4 3%	4 3%	4 3%	4 3%	6 4%	13 4%	5 2%	
Lean not build	7 1%	2 1%	2 2%	0 0%	3 2%	0 0%	2 2%	1 0%	1 1%	1 1%	1 1%	1 1%	4 2%	4 1%	3 1%	
SW not build	7 1%	2 1%	2 2%	0 0%	3 2%	0 0%	1 1%	1 1%	1 1%	3 2%	2 1%	2 1%	0 0%	3 1%	4 2%	
Strong not build	49 8%	12 5%	8 7%	1 3%	22 18%	6 9%	5 4%	11 9%	11 8%	13 10%	5 4%	16 11%	15 8%	24 7%	24 10%	
Undecided	49 8%	22 8%	10 9%	2 7%	7 6%	8 12%	12 18%	9 8%	14 10%	13 10%	13 9%	13 9%	9 5%	29 8%	20 9%	
REF.	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	
DK	2 0%	2 1%	0 0%	0 0%	0 0%	0 0%	2 100%	0 0%	0 0%	0 0%	0 0%	1 50%	1 50%	2 100%	0 0%	
Mean	2.19	2.05	2.18	1.70	2.50	2.39	1.94	2.37	2.15	2.20	2.36	2.05	2.35	2.03	2.11	
Chi Square																
		39.88						13.99		17.73				6.13		
		.068						.870		.666				.524		

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 10c: Sometimes, over the course of a survey like this one, with more information, people change their minds. Do you think the new power line to the Sonoita/Elgin/ Patagonia area should be allowed to be built or not?

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissats	Build/Lean	Und/DK	Not Built/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood	
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	63 11%	201 34%	234 39%	84 14%	60 10%	
Strong build	394 66%	153 64%	200 69%	41 58%	359 91%	34 9%	321 81%	9 2%	64 16%	0	135 67%	162 41%	51 13%	36 9%	
SW build	74 12%	32 43%	30 41%	12 16%	60 81%	14 19%	40 54%	2 3%	32 43%	0	27 36%	29 39%	9 12%	7 9%	
Lean build	18 3%	12 67%	3 17%	3 17%	15 83%	3 17%	5 28%	1 6%	12 67%	0	8 44%	7 39%	2 11%	0 0%	
Lean not build	7 1%	4 57%	3 43%	0 0%	5 71%	1 14%	3 43%	1 14%	3 43%	7 100%	2 29%	2 29%	0 0%	3 43%	
SW not build	7 1%	2 29%	3 43%	2 29%	4 57%	2 29%	2 29%	2 29%	3 43%	0	1 14%	4 57%	0 0%	1 14%	
Strong not build	49 8%	17 35%	24 49%	8 16%	34 69%	14 29%	4 8%	34 69%	11 22%	49 100%	11 22%	11 22%	10 20%	10 20%	
Undecided	49 8%	17 35%	28 57%	4 8%	39 80%	10 20%	8 16%	11 22%	30 61%	0	17 35%	18 37%	11 22%	3 6%	
REF	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	
DK	2 0%	1 50%	0 0%	1 50%	1 50%	1 50%	1 50%	1 50%	1 50%	0	0	1	1	0	
Mean	2.19	2.14	2.19	2.38	2.03	3.14	1.37	5.18	3.05	1.23	2.04	2.01	2.63	2.47	
Chi Square		20.57 .113			26.75 .001		337.66 .001		1000+ .001		7.08	33.86 .037			

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 11: What is the primary way you heat your home -- do you heat your home with electric heat, natural gas, propane, wood, solar, or something else?

	Gender		Age			Race/Ethnicity			Patagonia Sonoita Egin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300	299	121	221	248	453	96	51	127	472	106	142	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
Electric heat	201	106	95	46	75	107	149	33	19	49	152	32	46	43	41	39
	34%	35%	32%	38%	34%	31%	33%	34%	37%	39%	32%	30%	32%	38%	32%	35%
		53%	47%	23%	37%	38%	74%	16%	9%	24%	76%	16%	23%	21%	20%	19%
Natural gas	234	111	123	48	76	107	180	35	19	21	213	36	56	44	55	43
	39%	37%	41%	40%	34%	43%	40%	36%	37%	17%	45%	34%	39%	39%	43%	39%
		47%	53%	21%	32%	46%	77%	15%	8%	9%	91%	15%	24%	19%	24%	18%
Propane	84	43	41	9	34	40	65	14	5	24	60	13	20	12	20	19
	14%	14%	14%	7%	15%	16%	14%	15%	10%	19%	13%	12%	14%	11%	16%	17%
		51%	49%	11%	40%	48%	77%	17%	6%	29%	71%	15%	24%	14%	24%	23%
Wood	60	30	29	11	31	16	44	11	5	29	30	17	15	12	10	6
	10%	10%	10%	9%	14%	6%	10%	11%	10%	23%	6%	16%	11%	11%	8%	5%
		50%	48%	18%	52%	27%	73%	18%	8%	48%	50%	28%	25%	20%	17%	10%
Solar	2	2	0	1	0	1	1	1	0	1	1	0	1	1	0	0
	0%	1%	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%	1%	1%	0%	0%
		100%	0%	50%	0%	50%	50%	0%	0%	50%	50%	0%	50%	50%	0%	0%
Something else	13	6	7	3	4	6	12	0	1	1	12	6	3	1	1	2
	2%	2%	2%	2%	2%	2%	3%	0%	2%	1%	3%	6%	2%	1%	1%	2%
		46%	54%	23%	31%	46%	92%	0%	8%	8%	92%	46%	23%	8%	8%	15%
REF	2	2	0	1	0	0	0	0	2	0	2	0	0	0	0	2
	0%	1%	0%	1%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	2%
		100%	0%	50%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%
DK	4	0	4	2	1	1	2	2	0	2	2	2	1	0	1	0
	1%	0%	1%	2%	0%	0%	0%	2%	0%	2%	0%	2%	1%	0%	1%	0%
		0%	100%	50%	25%	25%	50%	50%	0%	50%	50%	50%	25%	0%	25%	0%
Mean	2.16	2.12	2.19	2.14	2.19	2.11	2.15	2.19	2.20	2.41	2.09	2.48	2.18	2.00	2.07	2.09
Chi Square		9.36		23.09		30.96				57.41			35.06			
		.228		.059		.006				.001			.168			

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A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 11b: What is the primary way you heat your home – do you heat your home with electric heat, natural gas, propane, wood, solar, or something else?

	DISTRICT					CON DATE					BILL				Central Air and Heating?	
	Total	Sierra Vista	Benson	Wilcox	Elgin Sonoita Patagoni	Snsites/Elfrida	2008 or after	2005-20 07	1998-20 04	1997 or before	\$0 - \$55	\$56 - \$85	\$86 - \$130	\$130+	Yes	No
Base	600	264 44%	115 19%	30 5%	125 21%	66 11%	125 21%	115 19%	118 20%	142 24%	136 23%	150 25%	179 30%	365 61%	231 39%	
Electric heat	201 34%	77 29%	42 37%	12 40%	47 38%	23 35%	48 38%	40 35%	31 26%	38 27%	38 28%	44 29%	91 51%	138 38%	63 27%	
Natural gas	234 39%	148 56%	38 33%	10 33%	22 18%	16 24%	52 42%	53 46%	54 46%	61 43%	64 47%	72 53%	60 40%	148 41%	85 37%	
Propane	84 14%	23 9%	18 25%	4 5%	23 27%	13 15%	9 11%	15 18%	21 25%	24 29%	21 25%	25 30%	23 27%	46 55%	37 44%	
Wood	60 10%	8 3%	7 13%	10 5%	29 48%	12 20%	8 13%	3 5%	10 17%	14 23%	8 13%	17 28%	14 23%	21 35%	39 65%	
Solar	2 0%	1 50%	0 0%	0 0%	1 50%	0 0%	1 50%	0 0%	0 0%	1 50%	1 50%	0 0%	1 50%	1 50%	1 50%	
Something else	13 2%	4 2%	4 38%	3 8%	1 8%	2 15%	5 38%	3 23%	2 15%	3 23%	2 15%	1 38%	5 38%	7 54%	6 46%	
REF	2 0%	1 50%	1 50%	0 0%	0 0%	0 0%	1 50%	0 0%	0 0%	1 50%	2 100%	0 0%	0 0%	0 0%	0 0%	
DK	4 1%	2 50%	0 0%	0 0%	2 50%	0 0%	1 25%	1 25%	0 0%	0 0%	2 50%	2 50%	0 0%	4 100%	0 0%	
Mean	2.16	1.99	2.17	2.07	2.42	2.33	2.09	1.99	2.15	2.24	2.15	2.27	1.98	2.01	2.34	
Chi Square				103.20 -001				23.47 .319				70.31 -001		26.69 -001		

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 11c: What is the primary way you heat your home -- do you heat your home with electric heat, natural gas, propane, wood, solar, or something else?

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood		
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	51 9%	201 34%	234 39%	84 14%	60 10%
Electric heat	201 34%	79 33%	92 32%	30 42%	171 33%	30 38%	128 33%	17 28%	56 36%	170 35%	14 22%	17 33%	201 100%	0 0%	0 0%	0 0%
Natural gas	234 39%	97 41%	115 40%	22 31%	209 40%	23 29%	162 42%	15 25%	57 37%	198 41%	17 27%	19 37%	0 0%	234 100%	0 0%	0 0%
Propane	84 14%	25 11%	52 18%	7 10%	70 14%	13 16%	51 13%	13 22%	20 13%	62 13%	10 16%	12 24%	0 0%	84 100%	0 0%	0 0%
Wood	60 10%	28 12%	25 9%	7 10%	52 10%	7 9%	35 9%	9 15%	16 10%	43 10%	14 22%	3 6%	0 0%	0 0%	0 0%	60 100%
Solar	2 0%	1 0%	1 0%	0 0%	1 0%	1 50%	0 0%	2 50%	0 0%	1 50%	1 2%	0 0%	0 0%	0 0%	0 0%	0 0%
Something else	13 2%	6 3%	5 2%	2 3%	11 2%	2 3%	4 1%	3 5%	6 4%	8 2%	5 8%	0 0%	0 0%	0 0%	0 0%	0 0%
REF	2 0%	1 0%	0 0%	1 50%	1 50%	1 50%	1 50%	0 0%	1 50%	1 50%	1 2%	0 0%	0 0%	0 0%	0 0%	0 0%
DK	4 1%	1 0%	1 0%	2 50%	2 50%	2 50%	3 75%	1 25%	0 0%	3 75%	1 25%	0 0%	0 0%	0 0%	0 0%	0 0%
Mean	2.16	2.17	2.13	2.23	2.13	2.32	2.08	2.63	2.16	2.07	2.92	2.02	1.00	2.00	3.00	4.00
Chi Square			20.62 .112		12.70 .080		36.85 .001				39.69 .001		1000+ .001			

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A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 12: About how many years old is your electric heating system?

	Gender		Age			Race/ Ethnicity			Patagonia Sonoma Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-His P	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	202	106 52%	95 47%	46 23%	75 37%	77 38%	149 74%	34 17%	19 9%	49 24%	152 75%	32 16%	47 23%	43 21%	41 20%	39 19%
Several months	9 4%	8 8%	1 1%	2 4%	5 7%	3 3%	5 3%	2 6%	2 11%	2 4%	7 5%	2 6%	3 6%	2 5%	2 5%	0 0%
About a year	20 10%	10 9%	10 50%	2 4%	11 15%	8 30%	16 80%	3 15%	1 5%	6 30%	14 70%	2 6%	4 9%	5 12%	4 10%	5 13%
Between a year and 3 years	43 21%	25 58%	18 42%	12 28%	13 30%	18 42%	36 84%	5 12%	2 5%	9 21%	34 79%	2 5%	13 30%	9 21%	10 23%	9 21%
Older than 4 years	102 50%	50 49%	52 51%	18 18%	37 36%	45 44%	75 74%	17 17%	10 10%	31 30%	71 70%	20 20%	21 45%	22 51%	20 20%	19 49%
Unsure	23 11%	11 48%	12 52%	10 43%	7 30%	6 26%	16 70%	4 17%	3 13%	1 4%	22 96%	6 19%	5 11%	5 12%	3 7%	4 10%
REF	1 0%	0 0%	1 100%	0 0%	1 100%	0 0%	0 0%	1 100%	0 0%	0 0%	1 100%	0 0%	0 0%	0 0%	0 0%	1 100%
DK	4 2%	2 50%	1 25%	2 50%	1 25%	0 0%	1 25%	2 50%	1 25%	0 0%	3 75%	0 0%	1 25%	0 0%	2 50%	1 25%
Mean	3.64	3.51	3.75	3.87	3.49	3.61	3.57	3.85	3.79	3.47	3.67	3.81	3.53	3.53	3.63	3.74
Chi Square		7.42 .284			18.93 .090		15.27 .227			8.94 .177				18.86 .760		

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 12b: About how many years old is your electric heating system?

	DISTRICT						CON DATE			BILL				Central Air and Heating?	
	Sierra Vista	Benson	Wilcox	Elgin Sonofita Patagon	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
	77 38%	43 21%	12 6%	47 23%	23 11%	49 24%	40 20%	31 15%	38 19%	38 19%	28 14%	44 22%	92 46%	138 68%	64 32%
Base	202	43	12	47	23	49	40	31	38	38	28	44	92	138	64
Several months	9 4%	2 5%	2 17%	2 4%	2 9%	1 2%	2 5%	1 3%	3 8%	2 5%	0 0%	3 7%	4 4%	6 4%	3 5%
About a year	20 10%	7 3%	3 0%	6 3%	4 17%	4 20%	1 3%	3 10%	7 18%	2 5%	4 14%	3 7%	11 12%	14 10%	6 4%
Between a year and 3 years	43 21%	18 23%	11 25%	8 17%	3 13%	9 18%	12 30%	4 13%	10 26%	7 18%	5 12%	10 23%	21 23%	32 23%	11 7%
Older than 4 years	102 50%	37 48%	5 42%	30 64%	10 43%	18 37%	20 50%	21 68%	15 39%	21 55%	14 50%	23 52%	44 48%	68 49%	34 53%
Unsure	23 11%	11 14%	2 17%	1 2%	4 17%	14 29%	4 10%	2 6%	2 5%	6 16%	4 14%	5 11%	8 9%	16 12%	7 11%
REF	1 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 3%	0 0%	1 4%	0 0%	0 0%	0 0%	1 2%
DK	4 2%	3 4%	0 0%	0 0%	0 0%	3 6%	1 3%	0 0%	0 0%	0 0%	0 0%	0 0%	4 4%	2 1%	2 3%
Mean	3.64	3.81	3.70	3.47	3.43	4.06	3.68	3.65	3.24	3.71	3.75	3.55	3.62	3.59	3.73
Chi Square															
		25.92	3.42	3.47	3.43	4.06	3.68	3.65	3.24	3.71	3.75	3.55	3.62	3.59	3.73
		.357					.016								.717

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 12c: About how many years old is your electric heating system?

	Employment Status			Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood		
Base	202	80 40%	92 46%	30 15%	171 85%	30 15%	129 64%	17 8%	56 28%	170 84%	15 7%	17 8%	201 100%	0 0%	0 0%	1 0%
Several months	9 4%	2 3%	5 5%	2 7%	7 4%	2 7%	5 4%	2 12%	2 4%	5 3%	3 20%	1 6%	9 4%	0 0%	0 0%	0 0%
About a year	20 10%	7 9%	10 11%	3 10%	19 11%	1 3%	16 12%	0 0%	4 7%	18 11%	2 13%	0 0%	20 10%	0 0%	0 0%	0 0%
Between a year and 3 years	43 21%	16 20%	21 23%	6 20%	39 23%	4 13%	29 22%	2 12%	12 21%	37 22%	1 7%	5 29%	43 21%	0 0%	0 0%	0 0%
Older than 4 years	102 50%	43 54%	49 53%	10 33%	84 49%	18 60%	63 49%	11 65%	28 50%	85 50%	8 53%	9 53%	102 51%	0 0%	0 0%	0 0%
Unsure	23 11%	10 13%	7 26%	6 30%	19 83%	4 17%	14 61%	2 9%	7 13%	21 12%	0 0%	2 12%	23 11%	0 0%	0 0%	0 0%
REF	1 0%	0 0%	1 1%	0 0%	1 1%	0 0%	0 0%	0 0%	1 2%	1 1%	0 0%	0 0%	1 0%	0 0%	0 0%	0 0%
DK	4 2%	2 3%	0 0%	2 50%	2 50%	1 25%	2 50%	0 0%	2 4%	3 2%	1 7%	0 0%	3 1%	0 0%	0 0%	1 100%
Mean	3.64	3.75	3.48	3.83	3.58	3.83	3.57	3.65	3.80	3.67	3.27	3.65	3.62	0.00	0.00	7.00
Chi Square		15.87 .197	4.68 .585	10.60 .563	17.21 .142	49.75 .001										

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Table 13: Do you have a central air conditioning and heating system?

	Gender		Age			Race/Ethnicity			Patagonia Sonoma Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25K	25k-50k	50k-75k	75k+	DK
Base	600	300	299	121	221	248	453	96	51	127	472	106	142	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
Yes	365	197	168	72	138	150	286	48	31	69	296	51	80	67	98	69
	61%	66%	56%	60%	62%	60%	63%	50%	61%	54%	63%	48%	56%	59%	77%	62%
		54%	46%	20%	38%	41%	78%	13%	8%	19%	81%	14%	22%	18%	27%	19%
No	231	101	129	46	83	98	166	47	18	57	173	55	61	45	30	40
	39%	34%	43%	38%	38%	40%	37%	49%	35%	45%	37%	52%	43%	40%	23%	36%
		44%	56%	20%	36%	42%	72%	20%	8%	25%	75%	24%	26%	19%	13%	17%
Unsure	1	0	1	1	0	0	1	0	0	0	1	0	0	1	0	0
	0%	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%	0%
REF	2	1	1	1	0	0	0	0	2	0	2	0	0	0	2	2
	0%	100%	0%	50%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%
DK	1	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0
	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%	0%	0%
Mean	1.41	1.36	1.45	1.45	1.38	1.40	1.37	1.53	1.47	1.48	1.38	1.52	1.46	1.42	1.23	1.41
Chi Square		9.71			11.88			32.62		7.44			38.36			
		.046			.156			.001		.114			.001			

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Table 13b: Do you have a central air conditioning and heating system?

	DISTRICT				CON DATE				BILL				Central Air and Heating?		
	Sierra Vista	Benson	Wilcox	Elgin	Sonita Patagon	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes
Total	264	115	30	125	66	125	115	118	142	136	135	150	179	365	231
Base	44%	19%	5%	21%	11%	21%	19%	20%	24%	23%	23%	25%	30%	61%	39%
Yes	170	72	19	66	38	79	85	80	65	78	80	98	109	365	0
	64%	63%	63%	53%	58%	63%	74%	68%	46%	57%	59%	65%	61%	100%	0%
	47%	20%	5%	18%	10%	22%	23%	22%	18%	21%	22%	27%	30%	100%	0%
No	93	41	11	58	28	43	30	38	76	56	54	52	69	0	231
	35%	36%	37%	46%	42%	34%	26%	32%	54%	41%	40%	35%	39%	0%	100%
	40%	18%	5%	25%	12%	19%	13%	16%	33%	24%	23%	23%	30%	0%	100%
Unsure	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0
	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%	0%	0%
	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%
REF	1	1	0	0	0	1	0	0	1	2	0	0	0	0	0
	0%	1%	0%	0%	0%	1%	0%	0%	1%	1%	0%	0%	0%	0%	0%
	50%	50%	0%	0%	0%	50%	0%	0%	50%	100%	0%	0%	0%	0%	0%
DK	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0
	0%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%	0%
	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%
Mean	1.36	1.40	1.37	1.50	1.42	1.42	1.26	1.32	1.56	1.46	1.41	1.35	1.41	1.00	2.00
Chi Square	15.14				32.07				14.35				596.00		
	.515				.001				.279				.001		

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Table 13c: Do you have a central air conditioning and heating system?

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Not Build/Lean	Und/DK	Build/Lean	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	51 9%	201 34%	234 39%	84 14%	60 10%
Yes	365 61%	149 63%	176 60%	40 56%	321 62%	43 54%	241 63%	33 55%	91 25%	303 83%	31 49%	31 61%	138 69%	148 63%	46 55%	21 35%
No	231 39%	87 37%	115 40%	29 13%	193 84%	35 15%	141 61%	27 12%	63 27%	180 78%	31 13%	20 9%	63 27%	85 37%	37 44%	39 65%
Unsure	1 0%	0 0%	0 0%	1 100%	1 100%	0 0%	0 0%	0 0%	1 100%	1 100%	0 0%	0 0%	0 0%	1 100%	0 0%	0 0%
REF	2 0%	1 50%	0 0%	1 50%	1 50%	1 50%	1 100%	0 0%	1 50%	1 50%	1 100%	0 0%	0 0%	0 0%	0 0%	0 0%
DK	1 0%	1 100%	0 0%	0 0%	1 100%	0 0%	1 100%	0 0%	0 0%	1 100%	0 0%	0 0%	0 0%	0 0%	1 100%	0 0%
Mean	1.41	1.39	1.40	1.48	1.39	1.48	1.39	1.45	1.44	1.39	1.54	1.39	1.31	1.37	1.49	1.65
Chi Square		13.24 .104			4.18 .382			5.96 .651		7.58 .475				31.18 .002		

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Table 18: Is your home in this area a seasonal residence or your primary residence?

	Gender		Age			Race/ Ethnicity			Patagonia Sonoma Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	599	300	299	121	221	248	453	95	51	127	472	106	141	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
Primary	559	276	283	119	210	226	420	94	45	118	441	103	129	105	120	102
	93%	92%	95%	98%	95%	91%	93%	99%	88%	93%	93%	97%	91%	93%	94%	92%
		49%	51%	21%	38%	40%	75%	17%	8%	21%	79%	18%	23%	19%	21%	18%
Seasonal	33	20	13	1	11	19	29	1	3	8	25	1	12	7	8	5
	6%	7%	4%	1%	5%	8%	6%	1%	6%	6%	5%	1%	9%	6%	6%	5%
		61%	39%	3%	33%	58%	88%	3%	9%	24%	76%	3%	36%	21%	24%	15%
Both	4	2	2	1	0	3	4	0	0	1	3	2	0	1	0	1
	1%	1%	1%	1%	0%	1%	1%	0%	0%	1%	1%	2%	0%	1%	0%	1%
		50%	50%	25%	0%	75%	100%	0%	0%	25%	75%	50%	0%	25%	0%	25%
REF	3	2	1	0	0	0	0	0	3	0	3	0	0	0	0	3
	1%	1%	0%	0%	0%	0%	0%	0%	6%	0%	1%	0%	0%	0%	0%	3%
		67%	33%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%
DK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mean	1.08	1.10	1.07	1.02	1.05	1.10	1.08	1.01	1.24	1.08	1.08	1.05	1.09	1.08	1.06	1.14
Chi Square		1.90			10.34			38.10		1.03				24.51		
		.593			.111			.001		.795				.017		

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Table 18b: Is your home in this area a seasonal residence or your primary residence?

	DISTRICT				CON DATE			BILL			Central Air and Heating?				
	Sierra Vista	Benson	Wilcox	Elgin Sonolita Patagon	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Total	599														
Base	264 44%	114 19%	30 5%	125 21%	66 11%	124 21%	115 19%	118 20%	142 24%	136 23%	135 23%	150 25%	178 30%	365 61%	230 38%
Primary	559 93%	104 91%	29 97%	116 93%	62 94%	110 89%	105 91%	114 97%	137 96%	114 84%	125 93%	143 95%	177 99%	342 94%	214 93%
Seasonal	33 6%	13 5%	7 3%	8 6%	4 6%	12 10%	9 8%	3 3%	3 2%	17 13%	8 6%	7 5%	1 1%	20 5%	13 6%
Both	4 1%	2 2%	0 0%	1 1%	0 0%	1 1%	1 1%	0 0%	1 1%	3 2%	1 1%	0 0%	0 0%	2 1%	2 1%
REF	3 1%	2 1%	0 0%	0 0%	0 0%	1 1%	0 0%	1 1%	1 1%	2 1%	1 1%	0 0%	0 0%	1 0%	1 0%
DK	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
Mean	1.08	1.12	1.03	1.08	1.06	1.14	1.10	1.05	1.06	1.21	1.10	1.05	1.01	1.07	1.09
Chi Square			5.62 .934				12.56 .183			33.68 .001				0.34 .952	

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Table 18c: Is your home in this area a seasonal residence or your primary residence?

	Employment Status			Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood
Base	599	237 40%	291 49%	71 12%	517 86%	79 13%	383 64%	156 26%	486 81%	62 10%	51 9%	201 34%	234 39%	84 14%	59 10%
Primary	559 93%	228 96%	266 91%	65 92%	484 87%	72 13%	355 64%	146 26%	455 81%	57 10%	47 8%	187 33%	218 39%	78 14%	57 10%
Seasonal	33 6%	7 21%	23 8%	3 4%	27 82%	6 18%	23 70%	8 24%	26 79%	4 12%	3 9%	12 36%	14 42%	5 15%	2 6%
Both	4 1%	2 50%	2 50%	0 0%	4 100%	0 0%	4 100%	0 0%	4 100%	0 0%	0 0%	1 25%	1 25%	1 25%	0 0%
REF	3 1%	0 0%	0 0%	3 100%	2 67%	1 33%	1 33%	2 67%	1 33%	1 33%	1 33%	1 33%	1 33%	0 0%	0 0%
DK	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
Mean	1.08	1.05	1.09	1.17	1.08	1.11	1.09	1.09	1.08	1.11	1.12	1.08	1.08	1.08	1.03
Chi Square		29.30 .001			2.40 .493		5.71 .456		5.64 .465			2.44 .982			

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Table 19: Age

	Gender		Age			Race/Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	599	300	299	121	221	248	453	95	51	127	472	106	141	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
18-34	71	34	37	71	0	0	47	20	4	6	65	16	19	16	13	7
	12%	11%	12%	59%	0%	0%	10%	21%	8%	5%	14%	15%	13%	14%	10%	6%
	48%	48%	52%	100%	0%	0%	66%	28%	6%	8%	92%	23%	27%	23%	18%	10%
35-44	50	29	21	50	0	0	32	13	5	9	41	3	13	16	15	3
	8%	10%	7%	41%	0%	0%	7%	14%	10%	7%	9%	3%	9%	14%	12%	3%
	58%	58%	42%	100%	0%	0%	64%	26%	10%	18%	82%	6%	26%	32%	30%	6%
45-54	93	48	45	0	93	0	68	18	7	24	69	10	20	16	33	14
	16%	16%	15%	0%	42%	0%	15%	19%	14%	19%	15%	9%	14%	14%	26%	13%
	52%	52%	48%	0%	100%	0%	73%	19%	8%	26%	74%	11%	22%	17%	35%	15%
55-64	128	58	70	0	128	0	103	14	11	36	92	21	30	22	38	17
	21%	19%	23%	0%	58%	0%	23%	15%	22%	28%	19%	20%	21%	19%	30%	15%
	45%	45%	55%	0%	100%	0%	80%	11%	9%	28%	72%	16%	23%	17%	30%	13%
65+	248	127	121	0	0	248	201	29	18	49	199	56	59	42	29	62
	41%	42%	40%	0%	0%	100%	44%	31%	35%	39%	42%	53%	42%	37%	23%	56%
	51%	51%	49%	0%	0%	100%	81%	12%	7%	20%	80%	23%	24%	17%	12%	25%
REF	6	2	4	0	0	0	2	1	3	1	5	0	0	1	0	5
	1%	1%	1%	0%	0%	0%	0%	1%	6%	1%	1%	0%	0%	1%	0%	5%
	33%	33%	67%	0%	0%	0%	33%	17%	50%	17%	83%	0%	0%	17%	0%	83%
DK	3	2	1	0	0	0	0	0	3	2	1	0	0	0	0	3
	1%	1%	0%	0%	0%	0%	0%	0%	6%	2%	0%	0%	0%	0%	0%	3%
	67%	67%	33%	0%	0%	0%	0%	0%	100%	67%	33%	0%	0%	0%	0%	100%
Mean	3.77	3.76	3.78	1.41	3.58	5.00	3.85	3.23	4.08	3.98	3.72	3.92	3.69	3.54	3.43	4.36
Chi Square		3.77	.707		1000+		65.75			16.16				88.83		
					.001		.001			.013				.001		

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Table 19b: Age

	DISTRICT					CON DATE				BILL				Central Air and Heating?	
	Sierra Vista	Benson	Wilcox	Elgin Sonitoa Patagon	Snsites/ Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Base	264 44%	114 19%	30 5%	125 21%	66 11%	124 21%	115 19%	118 20%	142 24%	136 23%	135 23%	150 25%	178 30%	365 61%	230 38%
18-34	45 12%	14 17%	4 13%	6 8%	2 3%	42 34%	17 15%	7 6%	0 0%	13 10%	22 16%	16 11%	20 11%	44 12%	24 10%
35-44	27 8%	8 10%	3 10%	9 7%	3 5%	21 17%	13 11%	8 7%	2 1%	6 4%	7 5%	16 11%	21 12%	28 8%	22 10%
45-54	47 16%	10 18%	5 17%	23 18%	8 12%	20 16%	20 17%	19 16%	13 9%	17 13%	15 11%	25 17%	36 20%	62 17%	31 13%
55-64	40 21%	32 28%	3 10%	36 29%	17 26%	21 17%	24 21%	22 19%	33 26%	28 21%	32 24%	28 19%	40 22%	76 21%	52 23%
65+	102 41%	49 43%	15 20%	48 38%	34 52%	19 15%	40 35%	59 50%	93 65%	68 50%	57 42%	63 42%	60 34%	150 41%	98 43%
REF	2 1%	1 1%	0 0%	1 1%	2 3%	1 1%	0 0%	3 3%	1 1%	3 2%	1 1%	1 1%	1 1%	3 1%	2 1%
DK	3 1%	0 0%	0 0%	2 2%	0 0%	0 0%	1 1%	0 0%	0 0%	1 1%	1 1%	1 1%	0 0%	2 1%	1 0%
Mean	3.77	3.52	3.85	3.73	4.27	2.65	3.53	4.08	4.55	4.07	3.76	3.75	3.57	3.76	3.82
Chi Square	47.06 .003					138.61 .001				25.74 .106				2.36 .883	

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Table 19c: Age

	Employment Status			Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Not Build/Lean	Und/DK	Build/Lean	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood
Base	599	237 40%	291 49%	71 12%	517 86%	79 13%	383 64%	60 10%	156 26%	486 81%	62 10%	51 9%	201 34%	234 39%	84 14%	59 10%
18-34	71 12%	51 22%	0	20 28%	59 11%	12 15%	37 10%	4 7%	30 19%	60 12%	8 13%	3 6%	27 13%	29 12%	5 6%	4 7%
35-44	50 8%	39 78%	2	9 18%	41 82%	9 18%	34 68%	4 8%	12 24%	43 86%	2 4%	5 10%	19 38%	19 38%	4 8%	7 14%
45-54	93 16%	67 28%	16 17%	10 11%	80 86%	13 14%	55 59%	8 9%	30 32%	76 82%	7 8%	10 11%	34 37%	16 40%	8 9%	10 11%
55-64	128 21%	54 23%	59 46%	15 12%	114 89%	13 10%	79 62%	19 15%	30 23%	100 78%	20 16%	8 6%	41 20%	39 17%	26 31%	21 36%
65+	248 41%	26 11%	212 73%	10 14%	215 42%	31 39%	174 45%	25 42%	49 31%	202 42%	22 35%	24 47%	77 38%	107 46%	40 48%	16 27%
REF	6 1%	0 0%	1 17%	5 83%	5 83%	1 17%	1 17%	0 0%	5 83%	2 33%	3 50%	1 17%	2 33%	2 33%	1 17%	0 0%
DK	3 1%	0 0%	1 33%	2 67%	3 100%	0 0%	3 100%	0 0%	0 0%	3 100%	0 0%	0 0%	1 33%	1 33%	0 0%	1 33%
Mean	3.77	2.85	4.68	3.13	3.80	3.46	3.87	3.95	3.46	3.74	3.89	3.94	3.66	3.79	4.13	3.71
Chi Square			327.72 .001		3.46 .749			33.02 .001			22.43 .033			28.18 .059		

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Table 22: What was your approximate household income for 2008 before taxes?

	Gender		Age			Race/Ethnicity			Patagonia Soncita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300	299	121	221	248	453	96	51	127	472	106	142	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
Under 25k	106	34	72	19	31	56	75	20	11	19	87	106	0	0	0	0
	18%	11%	24%	16%	14%	23%	17%	21%	22%	15%	18%	100%	0%	0%	0%	0%
		32%	68%	18%	29%	53%	71%	19%	10%	18%	82%	100%	0%	0%	0%	0%
25k-50k	142	71	70	32	50	59	109	26	7	27	114	0	142	0	0	0
	24%	24%	23%	26%	23%	24%	24%	27%	14%	21%	24%	0%	100%	0%	0%	0%
		50%	49%	23%	35%	42%	77%	18%	5%	19%	80%	0%	100%	0%	0%	0%
50k-75k	113	62	51	32	38	42	88	17	8	21	92	0	0	113	0	0
	19%	21%	17%	26%	17%	17%	19%	18%	16%	17%	19%	0%	0%	100%	0%	0%
		55%	45%	28%	34%	37%	78%	15%	7%	19%	81%	0%	0%	100%	0%	0%
75k-100k	61	34	27	10	40	11	47	10	4	15	46	0	0	0	61	0
	10%	11%	9%	8%	18%	4%	10%	10%	8%	12%	10%	0%	0%	0%	48%	0%
		56%	44%	16%	66%	18%	77%	16%	7%	25%	75%	0%	0%	0%	100%	0%
100k-150k	44	27	17	14	22	8	35	5	4	12	32	0	0	0	44	0
	7%	9%	6%	12%	10%	3%	8%	5%	8%	9%	7%	0%	0%	0%	34%	0%
		61%	39%	32%	50%	18%	80%	11%	9%	27%	73%	0%	0%	0%	100%	0%
150k+	23	17	6	4	9	10	18	4	1	7	16	0	0	0	23	0
	4%	6%	2%	3%	4%	4%	4%	4%	2%	6%	3%	0%	0%	0%	18%	0%
		74%	26%	17%	39%	43%	78%	17%	4%	30%	70%	0%	0%	0%	100%	0%
DK	111	55	56	10	31	62	81	14	16	26	85	0	0	0	0	111
	19%	18%	19%	8%	14%	25%	18%	15%	31%	20%	18%	0%	0%	0%	0%	100%
		50%	50%	9%	28%	56%	73%	13%	14%	23%	77%	0%	0%	0%	0%	100%
Mean	3.51	3.73	3.30	3.17	3.56	3.54	3.52	3.23	3.98	3.78	3.44	1.00	2.00	3.00	4.70	7.00
Chi Square		23.04			57.99			11.33		4.39				1000+		
		.001			.001			.501		.624				.001		

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A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 22b: What was your approximate household income for 2008 before taxes?

	DISTRICT				CON DATE			BILL				Central Air and Heating?			
	Sierra Vista	Benson	Wilcox	Elgin Sonoma Patagon	Snsites/ Efrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0 - \$55	\$56 - \$85	\$86 - \$130	\$130+	Yes	No
Base	600	115	30	125	66	125	115	118	142	136	135	150	179	365	231
	44%	19%	5%	21%	11%	21%	19%	20%	24%	23%	23%	25%	30%	61%	39%
Under 25k	106	36	7	19	18	23	21	19	32	26	31	27	22	51	55
	18%	14%	34%	15%	27%	18%	18%	16%	23%	19%	23%	18%	12%	14%	24%
	34%	25%	7%	18%	17%	22%	20%	18%	30%	25%	29%	25%	21%	48%	52%
25k-50k	142	60	6	25	16	34	32	24	31	34	28	36	44	80	61
	24%	23%	20%	20%	24%	27%	28%	20%	22%	25%	21%	24%	25%	22%	26%
	42%	42%	4%	18%	11%	24%	23%	17%	22%	24%	20%	25%	31%	56%	43%
50k-75k	113	51	7	21	15	29	18	24	23	28	23	26	36	67	45
	19%	17%	23%	17%	23%	23%	16%	20%	16%	21%	17%	17%	20%	18%	19%
	45%	17%	6%	19%	13%	26%	16%	21%	20%	25%	20%	23%	32%	59%	40%
75k-100k	61	33	2	15	3	13	14	11	12	8	14	16	23	43	18
	10%	13%	7%	12%	5%	10%	12%	9%	8%	6%	10%	11%	13%	12%	8%
	54%	54%	3%	25%	5%	21%	23%	18%	20%	13%	23%	26%	38%	70%	30%
100k-150k	44	23	3	12	1	6	10	11	7	6	7	18	13	34	10
	7%	9%	10%	10%	2%	5%	9%	9%	5%	4%	5%	12%	7%	9%	4%
	52%	52%	7%	27%	2%	14%	23%	25%	16%	14%	16%	41%	30%	77%	23%
150k+	23	12	0	7	2	7	4	3	4	8	7	4	4	21	2
	4%	5%	0%	6%	3%	6%	3%	3%	3%	6%	5%	3%	2%	6%	1%
	52%	52%	0%	30%	9%	30%	17%	13%	17%	35%	30%	17%	17%	91%	9%
DK	111	49	5	26	11	13	16	26	33	26	25	23	37	69	40
	19%	17%	17%	21%	17%	10%	14%	22%	23%	19%	19%	15%	21%	19%	17%
	44%	44%	5%	23%	10%	12%	14%	23%	30%	23%	23%	21%	33%	62%	36%
Mean	3.51	3.68	3.15	3.27	3.05	3.14	3.31	3.71	3.53	3.46	3.44	3.44	3.68	3.73	3.14
Chi Square															
		29.40					20.80				22.50			24.91	
		.206					.289				.210			.001	

Prepared by RBI Strategies and Research

A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 22c: What was your approximate household income for 2008 before taxes?

	Employment Status			Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Total	Full/part time	Retired	V + SW Satsfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood	
Base	600	238 40%	291 49%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	51 9%	234 39%	84 14%	60 10%	
Under 25k	106 18%	22 9%	65 22%	96 27%	10 13%	56 15%	16 27%	34 32%	79 75%	16 15%	11 10%	36 34%	13 15%	17 28%	
25k-50k	142 24%	57 40%	74 52%	122 86%	18 13%	99 70%	13 9%	30 21%	118 83%	16 11%	8 6%	56 39%	20 14%	15 11%	
50k-75k	113 19%	54 48%	49 43%	99 88%	14 12%	77 68%	10 9%	26 23%	99 88%	6 5%	8 7%	44 39%	12 11%	12 11%	
75k-100k	61 10%	39 64%	18 30%	51 84%	10 16%	45 74%	4 7%	12 20%	53 87%	4 7%	4 7%	27 44%	9 15%	4 7%	
100k-150k	44 7%	26 59%	12 27%	40 91%	4 9%	29 66%	5 11%	10 23%	37 84%	4 9%	6 7%	16 36%	9 20%	4 9%	
150k+	23 4%	13 57%	8 35%	19 83%	4 17%	16 70%	1 4%	6 26%	22 96%	0 0%	1 4%	12 52%	2 9%	2 3%	
DK	111 19%	27 24%	65 59%	90 81%	19 17%	62 56%	11 10%	38 34%	78 70%	17 15%	16 14%	43 39%	19 17%	6 5%	
Mean	3.51	3.58	3.42	3.45	3.86	3.49	3.27	3.67	3.47	3.51	3.58	3.59	3.75	2.88	
Chi Square			59.89 .001	4.62 .593		17.04 .148	22.23 .035		14.19 .717						

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A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 23: What is the highest level of education you have completed?

	Gender		Age			Race/ Ethnicity			Patagonia Sonoita Elgin Area			What was your approximate household income for 2008 before taxes?				
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300	299	121	221	248	453	96	51	127	472	106	142	113	128	111
		50%	50%	20%	37%	41%	76%	16%	9%	21%	79%	18%	24%	19%	21%	19%
Less than high school	30	16	13	5	7	16	19	8	3	4	25	16	4	2	2	6
	5%	5%	4%	4%	3%	6%	4%	8%	6%	3%	5%	15%	3%	2%	2%	5%
		53%	43%	17%	23%	53%	63%	27%	10%	13%	83%	53%	13%	7%	7%	20%
High school graduate	102	52	50	22	36	44	81	14	7	14	88	25	32	23	11	11
	17%	17%	17%	18%	16%	18%	18%	15%	14%	11%	19%	24%	23%	20%	9%	10%
		51%	49%	22%	35%	43%	79%	14%	7%	14%	86%	25%	31%	23%	11%	11%
Some college	163	67	96	37	57	67	113	38	12	27	136	34	38	34	29	28
	27%	22%	32%	31%	26%	27%	25%	40%	24%	21%	29%	32%	27%	21%	23%	25%
		41%	59%	23%	35%	41%	69%	23%	7%	17%	83%	21%	23%	21%	18%	17%
College grad	142	67	75	29	57	55	119	16	7	35	107	15	29	29	38	31
	24%	22%	25%	24%	26%	22%	26%	17%	14%	28%	23%	14%	20%	26%	30%	28%
		47%	53%	20%	40%	39%	84%	11%	5%	23%	75%	11%	20%	20%	27%	22%
Graduate school or advanced degree	139	84	55	25	56	57	109	17	13	42	97	15	33	21	47	23
	23%	28%	18%	21%	25%	23%	24%	18%	25%	33%	21%	14%	23%	19%	37%	21%
		60%	40%	18%	40%	41%	78%	12%	9%	30%	70%	11%	24%	15%	34%	17%
Technical/junior college	14	8	6	2	6	6	8	2	4	2	12	1	6	4	1	2
	2%	3%	2%	2%	3%	2%	2%	2%	8%	2%	3%	1%	4%	4%	1%	2%
		57%	43%	14%	43%	43%	57%	14%	29%	14%	86%	7%	43%	29%	7%	14%
DK	10	6	4	1	2	3	4	1	5	3	7	0	0	0	0	10
	2%	2%	1%	1%	1%	1%	1%	1%	10%	2%	1%	0%	0%	0%	0%	9%
		60%	40%	10%	20%	30%	40%	10%	50%	30%	70%	0%	0%	0%	0%	100%
Mean	3.57	3.66	3.48	3.47	3.66	3.50	3.57	3.31	4.02	3.91	3.48	2.92	3.51	3.50	3.94	3.90
Chi Square		12.69			5.60		46.54			15.10			117.54			
		.048			.935		.001			.020			.001			

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Table 23c: What is the highest level of education you have completed?

	Employment Status		Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood	
Base	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	156 26%	60 10%	63 11%	51 9%	201 34%	234 39%	84 14%	60 10%
Less than high school	6 3%	17 6%	7 10%	26 5%	3 4%	16 4%	2 3%	2 3%	3 5%	5 10%	10 5%	9 4%	6 7%	4 7%
High school graduate	38 16%	51 18%	13 18%	92 18%	10 13%	60 16%	32 21%	10 17%	5 8%	10 20%	30 15%	39 17%	17 20%	12 20%
Some college	57 24%	85 29%	21 30%	141 27%	20 25%	109 24%	39 25%	15 22%	14 22%	11 27%	57 28%	70 30%	16 19%	13 22%
College grad	60 25%	68 23%	14 20%	126 24%	15 19%	94 24%	39 27%	9 15%	12 19%	14 27%	50 25%	60 26%	16 19%	13 22%
Graduate school or advanced degree	65 27%	64 22%	10 14%	110 21%	29 37%	91 24%	26 17%	22 37%	25 40%	10 20%	45 22%	45 19%	28 33%	17 28%
Technical/ junior college	8 3%	5 2%	1 1%	13 3%	1 1%	9 2%	4 3%	1 2%	1 2%	0 0%	6 3%	5 2%	1 1%	1 2%
DK	4 2%	1 0%	5 7%	9 2%	1 1%	5 1%	4 3%	1 2%	3 5%	1 2%	3 1%	6 3%	0 0%	0 0%
Mean	3.76	3.45	3.42	3.54	3.81	3.60	3.40	3.77	4.05	3.35	3.60	3.56	3.55	3.50
Chi Square		30.83 .002		9.75 .136		16.23 .181		22.50 .032		18.69 .411				

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A Survey of Sulphur Springs Valley Electric Cooperative Members

Table 24: Are you currently a student, unemployed, employed, retired or a homemaker?

	Gender		Age			Race/Ethnicity			Patagonia Sonoma Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
Full time	200 33%	122 41%	77 39%	76 38%	109 55%	14 7%	139 70%	46 23%	15 8%	47 24%	152 76%	10 5%	49 25%	48 24%	69 35%	24 12%
Part time	38 6%	9 24%	29 76%	14 37%	12 32%	12 32%	29 76%	7 18%	7 5%	9 24%	29 76%	12 32%	8 21%	6 16%	9 24%	3 8%
Unemployed	23 4%	12 4%	11 48%	10 43%	12 52%	0 0%	20 87%	1 4%	2 9%	5 22%	18 78%	7 30%	4 17%	4 17%	4 17%	4 17%
Student	7 1%	1 0%	6 28%	4 57%	1 14%	1 14%	6 86%	0 0%	1 14%	1 14%	6 86%	3 43%	1 14%	0 0%	2 29%	1 14%
Retired	291 49%	146 49%	145 83%	2 1%	75 26%	212 73%	235 81%	33 11%	23 8%	57 20%	234 80%	65 22%	74 25%	49 17%	38 13%	65 22%
Homemaker	36 6%	6 17%	30 83%	15 42%	11 31%	9 25%	24 67%	9 25%	3 8%	6 17%	30 83%	9 25%	6 17%	6 17%	6 17%	9 25%
REF	3 1%	2 0%	1 33%	0 0%	0 0%	0 0%	0 0%	0 0%	3 100%	0 0%	3 100%	0 0%	0 0%	0 0%	0 0%	3 100%
DK	2 0%	1 100%	0 0%	0 0%	1 50%	0 0%	0 0%	0 0%	2 100%	2 100%	0 0%	0 0%	0 0%	0 0%	0 0%	2 100%
Mean	3.47	3.25	3.69	2.07	2.81	4.66	3.53	2.94	3.90	3.31	3.51	4.21	3.43	3.12	2.60	4.16
Chi Square		42.65 .001		281.78 .001			72.92 .001			10.18 .179			97.18 .001			

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Table 24c: Are you currently a student, unemployed, employed, retired or a homemaker?

	Employment Status			Satisfaction with SSVEC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood		
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	486 81%	63 11%	51 9%	201 34%	234 39%	84 14%	60 10%
Full time	200 33%	200 84% 100%	0 0%	0 0%	167 32% 84%	31 39% 16%	125 33% 63%	18 30% 9%	57 37% 29%	167 34% 84%	19 30% 10%	14 27% 7%	66 33% 33%	81 35% 41%	22 26% 11%	23 38% 12%
Part time	38 6%	38 16% 100%	0 0%	0 0%	34 7% 89%	4 5% 11%	25 7% 66%	3 5% 8%	10 6% 26%	30 6% 79%	4 6% 11%	4 8% 11%	13 6% 34%	16 7% 42%	3 4% 8%	5 8% 13%
Unemployed	23 4%	0 0%	0 0%	23 32% 100%	18 3% 78%	5 6% 22%	13 3% 57%	2 3% 9%	8 5% 35%	19 4% 83%	3 5% 13%	1 2% 4%	12 6% 52%	8 3% 35%	0 0% 0%	1 2% 4%
Student	7 1%	0 0%	0 0%	7 10% 100%	7 1% 100%	0 0% 0%	1 0% 14%	2 3% 29%	4 3% 57%	4 1% 57%	3 5% 43%	0 0% 0%	3 1% 43%	1 0% 14%	2 2% 29%	0 0% 0%
Retired	291 49%	0 0%	291 100%	0 0%	258 50% 89%	31 39% 11%	200 52% 69%	32 53% 11%	59 38% 20%	233 48% 80%	30 48% 10%	28 55% 10%	92 46% 32%	115 49% 40%	52 62% 18%	25 42% 9%
Homemaker	36 6%	0 0%	0 0%	36 51% 100%	29 6% 81%	7 9% 19%	17 4% 47%	3 4% 8%	16 10% 44%	30 6% 83%	3 5% 8%	3 6% 8%	12 6% 33%	12 5% 33%	5 6% 14%	6 10% 17%
REF	3 1%	0 0%	0 0%	3 4% 100%	2 0% 67%	1 1% 33%	1 0% 33%	0 0% 0%	2 1% 67%	1 0% 33%	1 2% 33%	1 2% 33%	1 0% 33%	1 0% 33%	0 0% 0%	0 0% 0%
DK	2 0%	0 0%	0 0%	2 3% 100%	2 0% 100%	0 0% 0%	2 1% 100%	0 0% 0%	0 0% 0%	2 0% 100%	0 0% 0%	0 0% 0%	2 1% 100%	0 0% 0%	0 0% 0%	0 0% 0%
Mean	3.47	1.16	5.00	4.93	3.50	3.27	3.50	3.60	3.35	3.43	3.54	3.73	3.46	3.40	3.88	3.28
Chi Square			1000+		7.91		24.73			15.40		23.68				
			.001		.340		.037			.352		.309				

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Table 25: Race/ Ethnicity

	Gender		Age				Race/ Ethnicity			Patagonia Sonota Elgin Area		What was your approximate household income for 2008 before taxes?				
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25K	25K-50K	50K-75K	75k+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
White non-Hispanic	453 76%	219 73%	234 78%	79 65%	171 77%	201 81%	453 100%	0 0%	0 0%	95 75%	358 76%	75 71%	109 77%	88 78%	100 78%	81 73%
Hispanic/ Latino	96 16%	48 16%	47 16%	33 27%	32 14%	29 12%	0 0%	96 100%	0 0%	23 18%	72 15%	20 19%	26 18%	17 15%	19 15%	14 13%
Black non-Hispanic	7 1%	4 1%	3 1%	3 2%	1 0%	3 1%	0 0%	0 0%	7 14%	0 0%	7 100%	1 1%	2 1%	2 2%	2 2%	0 0%
Asian	7 1%	3 43%	4 57%	2 29%	2 29%	2 29%	0 0%	0 0%	7 100%	0 0%	7 100%	1 14%	2 29%	1 14%	1 14%	2 29%
Other	19 3%	14 58%	5 26%	2 11%	9 47%	8 42%	0 0%	0 0%	19 37%	3 2%	16 3%	8 3%	1 1%	5 4%	5 4%	0 0%
REF	11 2%	7 64%	4 36%	1 9%	3 27%	4 36%	0 0%	0 0%	11 100%	2 18%	9 82%	0 0%	2 18%	0 0%	1 9%	8 73%
DK	7 1%	5 71%	2 29%	1 14%	3 43%	1 14%	0 0%	0 0%	7 100%	4 57%	3 43%	1 14%	0 0%	0 0%	0 0%	6 86%
Mean	1.51	1.62	1.39	1.53	1.49	1.40	1.00	2.00	5.08	1.54	1.50	1.59	1.35	1.39	1.40	1.86
Chi Square		7.16 .306		21.91 .038			1000+			10.10 .120				62.77 .001		

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Table 25b: Race/ Ethnicity

	Total	DISTRICT				CON DATE			BILL			Central Air and Heating?			
		Sierra Vista	Benson	Wilcox	Elgin Sonorita Patagon Elfrida	2005-2007	2008 or after	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Base	600	264 44%	115 19%	30 5%	125 21%	115 19%	125 21%	118 20%	142 24%	136 23%	135 23%	150 25%	179 30%	365 61%	231 39%
White non-Hispanic	453 76%	194 73%	82 21%	22 5%	93 21%	74 21%	74 21%	78 20%	73 23%	75 23%	78 23%	105 24%	138 30%	286 63%	166 37%
Hispanic/ Latino	96 16%	41 16%	13 14%	7 7%	23 24%	18 24%	19 25%	15 16%	21 22%	20 21%	20 21%	24 25%	32 33%	48 50%	47 49%
Black non-Hispanic	7 1%	7 3%	0 0%	0 0%	0 0%	0 0%	4 5%	1 0%	2 2%	2 2%	2 2%	2 2%	1 1%	5 1%	2 1%
Asian	7 1%	6 2%	1 1%	0 0%	0 0%	0 0%	1 1%	2 2%	3 3%	2 2%	1 1%	4 3%	0 0%	4 1%	3 1%
Other	19 3%	7 3%	3 2%	1 5%	3 16%	6 21%	5 14%	5 14%	6 16%	4 10%	4 10%	6 16%	4 10%	15 38%	4 10%
REF	11 2%	7 3%	2 1%	0 0%	2 18%	0 0%	2 18%	1 2%	4 3%	4 3%	1 1%	4 3%	2 1%	4 1%	6 3%
DK	7 1%	2 1%	1 1%	0 0%	4 5%	0 0%	1 1%	0 0%	2 2%	1 1%	2 2%	2 2%	2 2%	3 3%	3 3%
Mean	1.51	1.56	1.42	1.37	1.55	1.42	1.44	1.43	1.63	1.56	1.44	1.64	1.40	1.46	1.54
Chi Square		29.41				16.20				11.36				10.47	
						.579						.879			.106

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Table 25c: Race/ Ethnicity

	Employment Status		Satisfaction with SSV/EC		Should Line be Built?		Build Line Revote		What is the primary way you heat your home?						
	Full/part time	Retired	Other	V + SW Satisfied	Neutral or dissatis	Build/Lean	Und/DK	Not Built/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood		
Base	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	156 26%	60 10%	63 11%	486 81%	51 9%	201 34%	234 39%	84 14%	60 10%
White non-Hispanic	168 71%	235 81%	50 70%	392 76%	59 75%	291 76%	119 76%	43 72%	44 70%	368 76%	41 80%	149 74%	180 77%	65 77%	44 73%
Hispanic/ Latino	53 22%	11 34%	10 14%	84 16%	11 14%	62 16%	23 15%	11 18%	9 14%	80 16%	7 14%	33 16%	35 15%	14 17%	11 18%
Black non-Hispanic	4 2%	1 3%	0 0%	7 1%	0 0%	4 1%	3 2%	0 0%	1 2%	6 1%	0 0%	5 2%	2 1%	0 0%	0 0%
Asian	3 1%	1 3%	1 1%	6 1%	1 1%	4 1%	2 1%	1 2%	0 0%	6 1%	1 2%	1 0%	6 3%	0 0%	0 0%
Other	4 2%	4 21%	3 11%	17 3%	2 11%	13 3%	3 2%	3 5%	3 5%	15 3%	1 2%	7 3%	6 3%	3 4%	2 3%
REF	4 2%	1 27%	4 36%	6 1%	5 36%	5 1%	6 4%	0 0%	4 6%	6 1%	1 2%	3 1%	4 2%	2 2%	1 2%
DK	2 1%	0 14%	6 57%	5 71%	2 29%	5 71%	0 0%	2 29%	2 29%	5 71%	0 0%	3 43%	1 14%	0 0%	2 29%
Mean	1.50	1.42	1.92	1.47	1.68	1.49	1.63	1.49	1.87	1.47	1.37	1.53	1.46	1.43	1.60
Chi Square	37.48 .001		9.09 .168		13.10 .362		14.08 .296		17.25 .506						

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Table 26: Gender

	Gender		Age			Race/ Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-His p	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	599	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	95 16%	51 9%	127 21%	472 79%	106 18%	141 24%	113 19%	128 21%	111 19%
Male	300 50%	300 100%	0	63 21%	106 35%	127 42%	219 73%	48 16%	33 11%	62 21%	238 79%	34 11%	71 24%	62 21%	78 26%	55 18%
Female	299 50%	0	299 100%	58 19%	115 38%	121 40%	234 78%	47 16%	18 6%	65 22%	234 78%	72 24%	70 23%	51 17%	50 17%	56 19%
Mean	1.50	1.00	2.00	1.48	1.52	1.49	1.52	1.49	1.35	1.51	1.50	1.68	1.50	1.45	1.39	1.50
Chi Square		599.00 .001		0.71 .701		4.92 .086		0.10 .748						20.83 .001		

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Table 26b: Gender

	DISTRICT				CON DATE				BILL			Central Air and Heating?		
	Sierra Vista	Benson	Wilcox	Elgin Sonoita Patagon Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Total	264 59%	114 19%	30 5%	66 21%	124 21%	115 19%	118 20%	142 24%	136 23%	135 23%	150 25%	178 30%	365 61%	230 38%
Male	134 51%	56 49%	18 60%	61 47%	63 51%	64 56%	62 53%	61 43%	65 48%	70 52%	77 51%	88 49%	197 54%	101 44%
Female	130 50%	58 51%	12 40%	35 53%	61 49%	51 44%	56 47%	81 57%	71 52%	65 48%	73 49%	90 51%	168 46%	129 56%
Mean	1.49	1.51	1.40	1.51	1.49	1.44	1.47	1.57	1.52	1.48	1.49	1.51	1.46	1.56
Chi Square			1.61			4.62				0.58			5.71	
			.807			.202				.902				.017

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Table 26c: Gender

	Employment Status		Satisfaction with SSVEC		Should Line be Built?		Build Line Revote		What is the primary way you heat your home?						
	Full/part time	Retired	Other	V + SW Satisfied	Neutral or dissatis	Build/Lean	Not Build/Lean	Und/DK	Build/Lean	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood
Total	599	237 40%	291 49%	71 12%	517 86%	79 13%	383 64%	60 10%	156 26%	62 10%	51 9%	201 34%	234 39%	84 14%	59 10%
Base															
Male	300	131 55%	146 50%	23 32%	255 49%	45 57%	204 53%	22 37%	74 47%	26 42%	18 35%	106 53%	111 47%	43 51%	30 51%
Female	299	106 45%	145 50%	48 68%	262 51%	34 43%	179 47%	38 63%	82 53%	36 58%	33 65%	95 47%	123 53%	41 49%	29 49%
Mean	1.50	1.45	1.50	1.68	1.51	1.43	1.47	1.63	1.53	1.47	1.58	1.47	1.53	1.49	1.49
Chi Square		11.44 .003			1.60 .206		6.31 .043			7.41 .025			1.28 .735		

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Table 27: Patagonia Sonoita Elgin Area

	Gender		Age			Race/Ethnicity			Patagonia Sonoita Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	599	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	95 16%	51 9%	127 21%	472 79%	106 18%	141 24%	113 19%	128 21%	111 19%
Y	127 21%	62 21%	65 22%	15 12%	60 27%	49 39%	95 75%	23 24%	9 7%	127 100%	0 0%	19 18%	27 21%	21 17%	34 27%	26 23%
N	472 79%	238 50%	234 50%	106 22%	161 34%	199 42%	358 76%	72 15%	42 9%	0 0%	472 100%	87 18%	114 81%	92 81%	94 73%	85 77%
Mean	1.79	1.79	1.78	1.88	1.73	1.80	1.79	1.76	1.82	1.00	2.00	1.82	1.81	1.81	1.73	1.77
Chi Square		0.10 .748			10.66 .005			0.91 .633		599.00 .001				4.03 .402		

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Table 27b: Patagonia Sonoita Elgin Area

	DISTRICT				CON DATE				BILL			Central Air and Heating?			
	Sierra Vista	Benson	Wilcox	Elgin Sonoita Patagon	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$55-\$85	\$85-\$130	\$130+	Yes	No
Base	264 44%	114 19%	30 5%	125 21%	66 11%	124 21%	115 19%	118 20%	142 24%	136 23%	135 23%	150 25%	178 30%	365 61%	230 38%
Y	0 0%	3 0%	0 0%	124 98%	0 0%	3 2%	5 4%	10 8%	9 7%	25 18%	24 19%	27 21%	51 40%	69 54%	57 45%
N	264 79%	111 97%	30 100%	1 100%	66 14%	121 98%	110 23%	108 23%	133 28%	111 82%	111 82%	123 82%	127 71%	296 81%	173 75%
Mean	2.00	1.97	2.00	1.01	2.00	1.98	1.96	1.92	1.94	1.82	1.82	1.82	1.71	1.81	1.75
Chi Square	575.58 .001				4.82 .185				8.43 .038			2.92 .087			

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Table 27c: Patagonia Sonoita Elgin Area

	Employment Status		Satisfaction with SSVCEC		Should Line be Built?		Build Line Revote		What is the primary way you heat your home?					
	Full/part time	Retired	Other	V + SW Satisfied	Neutral or dissatisfied	Build/Lean	Not Build/Und/DK	Build/Lean	Not Build/Und/DK	Electric heat	Natural gas	Propane	Wood	
Base	237 40%	291 49%	71 12%	517 86%	79 13%	383 64%	60 10%	486 81%	62 10%	51 9%	201 34%	234 39%	84 14%	59 10%
Y	56 24%	57 20%	14 20%	95 18%	30 38%	89 23%	23 38%	92 19%	29 47%	6 12%	49 24%	21 9%	24 29%	29 49%
N	44 18%	45 15%	11 12%	75 24%	24 10%	70 24%	18 8%	72 23%	23 33%	5 10%	39 17%	17 6%	19 13%	23 6%
	181 76%	234 80%	57 80%	422 82%	49 62%	294 77%	37 62%	394 81%	33 53%	45 88%	152 76%	213 91%	60 71%	30 51%
	38 16%	50 17%	12 15%	89 26%	10 13%	62 21%	8 11%	83 23%	7 11%	10 14%	32 10%	45 17%	13 10%	6 5%
Mean	1.76	1.80	1.80	1.82	1.62	1.77	1.62	1.81	1.53	1.88	1.76	1.91	1.71	1.51
Chi Square		1.38 .501		15.88 .001		24.03 .001		28.49 .001		52.33 .001				

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Table 28: BILL

	Gender		Age			Race/ Ethnicity			Patagonia Sonotia Eigin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-His p	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	600	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
0 - 55	136 23%	65 28%	71 52%	19 14%	45 33%	68 50%	102 75%	20 15%	14 10%	25 18%	111 82%	26 19%	34 25%	28 21%	22 16%	26 19%
56 - 85	135 23%	70 23%	65 48%	29 21%	47 35%	57 42%	105 78%	20 15%	10 7%	24 18%	111 82%	31 23%	28 21%	23 17%	28 21%	25 19%
86 - 130	150 25%	77 26%	73 49%	32 21%	53 35%	63 42%	108 72%	24 16%	18 12%	27 18%	123 82%	27 18%	36 24%	26 17%	38 25%	23 15%
130+	179 30%	88 29%	90 50%	41 23%	76 42%	60 34%	138 77%	32 18%	9 5%	51 28%	127 71%	22 12%	44 25%	36 20%	40 22%	37 21%
Mean	2.62	2.63	2.61	2.79	2.72	2.46	2.62	2.71	2.43	2.82	2.56	2.42	2.63	2.62	2.75	2.64
Chi Square		0.58 .902			10.94 .090		6.46 .374			8.43 .038				10.92 .536		

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Table 28b: BILL

	DISTRICT				CON DATE			BILL				Central Air and Heating?			
	Sierra Vista	Benson	Wilcox	Elgin	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Base	264 44%	115 19%	30 5%	125 21%	66 11%	125 21%	115 19%	118 20%	142 24%	136 23%	135 23%	150 25%	179 30%	365 61%	231 39%
0 - 55	54 20%	35 30%	7 23%	26 21%	14 21%	38 30%	28 21%	24 18%	27 20%	136 100%	0 0%	0 0%	0 0%	78 21%	56 24%
56 - 85	74 28%	16 13%	4 3%	24 18%	15 23%	30 24%	28 21%	25 19%	32 24%	0 0%	135 100%	0 0%	0 0%	80 22%	54 23%
86 - 130	74 28%	30 26%	4 13%	26 21%	16 24%	28 22%	25 22%	28 24%	46 32%	0 0%	150 100%	0 0%	0 0%	98 27%	52 23%
130+	62 23%	32 28%	15 50%	49 39%	21 32%	29 23%	34 30%	41 35%	37 26%	0 0%	0 0%	0 0%	179 100%	109 30%	69 39%
Mean	2.55	2.51	2.90	2.78	2.67	2.38	2.57	2.73	2.65	1.00	2.00	3.00	4.00	2.65	2.58
Chi Square	26.73				11.75			1000+				1.71			
	.008				.228			.001				.634			

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Table 28c: BILL

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Total	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Und/DK	Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood
Base	600	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	156 26%	51 9%	486 81%	63 11%	201 34%	234 39%	84 14%	60 10%
0 - 55	136 23%	42 18%	81 28%	13 18%	116 22%	17 22%	90 23%	16 27%	30 19%	17 27%	105 22%	14 27%	38 19%	64 27%	21 25%	8 13%
56 - 85	135 23%	54 23%	60 44%	21 16%	122 90%	13 10%	82 61%	11 8%	42 31%	8 6%	114 84%	13 10%	28 21%	72 31%	15 11%	17 13%
86 - 130	150 25%	61 26%	76 51%	13 9%	131 87%	19 13%	97 65%	17 11%	36 24%	19 13%	117 78%	14 9%	44 29%	60 40%	25 30%	14 23%
130+	179 30%	81 34%	74 41%	24 13%	148 83%	30 17%	115 64%	16 27%	48 31%	10 6%	150 84%	19 11%	91 45%	38 16%	23 27%	21 35%
Mean	2.62	2.76	2.49	2.68	2.60	2.78	2.62	2.55	2.65	2.63	2.64	2.39	2.94	2.31	2.60	2.80
Chi Square	13.84			3.62			4.14			7.29			54.06			
	.031			.306			.658			.295			.001			

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Table 29: DISTRICT

	Gender		Age			Race/ Ethnicity			Patagonia Sonora Elgin Area		What was your approximate household income for 2008 before taxes?				
	Male	Female	18-44	45-64	65+	White non-His P	Hisp	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	300 50%	299 50%	121 20%	221 37%	248 41%	453 76%	96 16%	51 9%	127 21%	472 79%	106 18%	142 24%	113 19%	128 21%	111 19%
Sierra Vista	134 44%	130 43%	72 60%	87 33%	102 39%	194 43%	41 16%	29 11%	0 0%	264 100%	36 34%	60 42%	51 45%	68 53%	49 44%
Benson	115 19%	58 19%	22 18%	42 37%	49 43%	94 82%	13 11%	8 7%	3 3%	111 97%	26 25%	35 25%	19 17%	15 12%	20 18%
Wilcox	30 5%	12 4%	7 6%	8 27%	15 50%	22 73%	7 23%	1 3%	0 0%	30 100%	7 7%	6 4%	7 23%	5 4%	5 17%
Elgin Sonora Patagonia	125 21%	64 21%	15 12%	59 47%	48 38%	93 74%	23 18%	9 7%	124 99%	1 0%	19 18%	25 18%	21 19%	34 27%	26 23%
Sunsites/Elfrida	66 11%	35 12%	5 4%	25 38%	34 52%	50 76%	12 18%	4 6%	0 0%	66 100%	18 17%	16 11%	15 13%	6 5%	11 10%
Mean	2.36	2.38	1.83	2.52	2.45	2.36	2.50	2.04	3.95	1.93	2.59	2.31	2.38	2.18	2.37
Chi Square	1.61 .807		24.76 .002			7.94 .439			575.58 .001		26.84 .043				

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Table 29b: DISTRICT

	Total	DISTRICT				CON DATE				BILL				Central Air and Heating?		
		Sierra Vista	Benson	Wilcox	Elgin Sonoita Patagonia	Snsites/Elfrida	2008 or after	2005-2007	1998-2004	1997 or before	\$0 - \$55	\$56 - \$85	\$86 - \$130	\$130+	Yes	No
Base	600	264 44%	115 19%	30 5%	125 21%	66 11%	125 21%	115 19%	118 20%	142 24%	136 23%	135 23%	150 25%	179 30%	365 61%	231 39%
Sierra Vista	264 44%	264 100%	0 0%	0 0%	0 0%	0 0%	0 0%	66 25%	54 20%	46 17%	40 15%	55 21%	49 18%	35 13%	47 18%	40 15%
Benson	115 19%	0 0%	115 100%	0 0%	0 0%	0 0%	27 23%	26 23%	27 23%	33 29%	35 30%	18 16%	30 26%	32 28%	72 63%	41 36%
Wilcox	30 5%	0 0%	0 0%	30 100%	0 0%	8 27%	3 10%	8 27%	7 27%	11 37%	7 23%	4 13%	4 13%	15 50%	19 63%	11 37%
Elgin Sonoita Patagonia	125 21%	0 0%	0 0%	125 100%	0 0%	3 2%	4 3%	10 8%	10 8%	10 7%	26 19%	24 18%	26 17%	49 27%	66 18%	58 25%
Sunsites/Elfrida	66 11%	0 0%	0 0%	0 0%	66 100%	10 15%	10 13%	15 23%	19 29%	22 33%	14 10%	15 11%	16 11%	21 12%	38 10%	28 12%
Mean	2.36	1.00	2.00	3.00	4.00	5.00	1.74	1.90	2.26	2.22	2.35	2.17	2.20	2.64	2.26	2.51
Chi Square				1000+				17.35				26.73			5.36	
				.001				.137				.008			.253	

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Table 29c: DISTRICT

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?			
	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Und/DK	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood		
Base	238 40%	291 49%	71 12%	517 86%	79 13%	384 64%	60 10%	63 11%	51 9%	201 34%	234 39%	84 14%	60 10%		
Sierra Vista	118 50%	117 40%	29 41%	229 44%	34 43%	166 43%	21 35%	21 8%	16 47%	77 38%	148 63%	23 27%	8 13%		
Benson	34 14%	64 22%	17 24%	105 20%	9 11%	76 20%	9 15%	9 8%	9 26%	30 19%	38 16%	21 25%	8 13%		
Wilcox	13 5%	14 47%	3 10%	27 90%	3 10%	19 63%	1 3%	1 3%	2 7%	12 40%	10 33%	4 13%	3 10%		
Elgin Sonoita Patagonia	55 23%	56 19%	14 20%	92 18%	31 39%	87 23%	23 38%	23 18%	15 12%	47 23%	22 9%	23 27%	29 48%		
Sunsites/Elfrida	18 8%	40 14%	8 11%	64 97%	2 3%	36 55%	6 10%	6 9%	8 12%	23 11%	16 7%	13 15%	12 20%		
Mean	2.25	2.44	2.37	2.34	2.47	2.35	2.73	2.29	2.31	2.49	1.80	2.79	3.48		
Chi Square	13.56 .094			24.42 .001		27.31 .001			27.97 .001			91.98 .001			

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Table 30: CON DATE

	Gender		Age			Race/Ethnicity			Patagonia Sonora Elgin Area		What was your approximate household income for 2008 before taxes?					
	Total	Male	Female	18-44	45-64	65+	White non-Hispanic	Hispanic	All other	Y	N	Under 25k	25k-50k	50k-75k	75k+	DK
Base	500	250 50%	249 50%	110 22%	172 34%	211 42%	378 76%	78 16%	44 9%	27 5%	472 94%	95 19%	121 24%	94 19%	102 20%	88 18%
2008 or after	125 25%	63 25%	61 24%	63 57%	41 24%	19 9%	92 74%	24 31%	20 7%	3 2%	121 97%	23 18%	34 27%	29 23%	26 21%	13 15%
2005-2007	115 23%	64 26%	51 20%	30 27%	44 26%	40 19%	90 78%	15 13%	10 9%	5 4%	110 96%	21 18%	32 28%	18 16%	28 24%	16 14%
1998-2004	118 24%	62 25%	56 22%	15 14%	41 24%	59 28%	92 78%	18 23%	8 7%	10 8%	108 92%	19 20%	24 20%	24 20%	25 21%	26 30%
1997 or before	142 28%	61 24%	81 33%	2 18%	46 27%	93 44%	104 73%	21 15%	17 12%	9 6%	133 94%	32 23%	31 22%	23 16%	23 16%	33 38%
Mean	2.55	2.48	2.63	1.60	2.53	3.07	2.55	2.46	2.75	2.93	2.54	2.63	2.43	2.44	2.44	2.90
Chi Square		4.62 .202		122.36 .001			4.49 .611			4.82 .185				16.82 .157		

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Table 30b: CON DATE

	DISTRICT					CON DATE				BILL				Central Air and Heating?	
	Sierra Vista	Benson	Wilcox	Elgin	Snsites/Elfrida	2008 or after	2005-07	1998-2004	1997 or before	\$0-\$55	\$56-\$85	\$86-\$130	\$130+	Yes	No
Base	264 53%	113 23%	30 6%	27 5%	66 13%	125 25%	115 23%	118 24%	142 28%	117 23%	115 23%	127 25%	141 28%	309 62%	187 37%
2008 or after	77 29%	24 6%	8 2%	3 1%	10 2%	125 100%	0 0%	0 0%	0 0%	38 30%	30 22%	28 22%	29 23%	79 63%	43 34%
2005-2007	67 25%	26 23%	3 1%	4 1%	15 23%	0 0%	115 100%	0 0%	0 0%	28 24%	28 24%	25 22%	34 30%	85 74%	30 26%
1998-2004	54 20%	27 24%	8 7%	10 8%	19 16%	0 0%	0 0%	118 100%	0 0%	24 20%	25 21%	28 24%	41 35%	80 68%	38 20%
1997 or before	66 25%	33 29%	11 37%	10 7%	22 33%	0 0%	0 0%	0 0%	142 100%	27 23%	32 28%	46 36%	37 26%	65 21%	76 41%
Mean	2.41	2.58	2.73	3.00	2.80	1.00	2.00	3.00	4.00	2.34	2.51	2.72	2.61	2.42	2.79
Chi Square	17.35					1000+				11.75				24.19	
	.137					.001				.228				.001	

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Table 30c: CON DATE

	Employment Status			Satisfaction with SSV/EC		Should Line be Built?			Build Line Revote			What is the primary way you heat your home?				
	Full/part time	Retired	Other	V + SW Satisfd	Neutral or dissatis	Build/Lean	Not Build/Lean	Und/DK	Build/Lean	Not Build/Lean	Und/DK	Electric heat	Natural gas	Propane	Wood	
Base	500	194 39%	247 49%	59 12%	442 88%	56 11%	311 62%	44 9%	145 29%	411 82%	43 9%	46 9%	157 31%	220 44%	69 14%	35 7%
2008 or after	125 25%	73 38%	28 11%	41 16%	25 20%	13 10%	70 56%	10 8%	45 36%	108 86%	8 6%	9 7%	48 38%	52 42%	9 7%	8 6%
2005-2007	115 23%	50 26%	21 45%	13 11%	103 90%	12 10%	73 63%	10 9%	32 28%	91 79%	10 23%	14 30%	40 25%	53 24%	15 22%	3 9%
1998-2004	118 24%	40 21%	64 26%	14 12%	102 86%	15 13%	69 58%	11 9%	38 32%	97 82%	12 10%	9 8%	31 26%	54 46%	21 18%	10 8%
1997 or before	142 28%	31 16%	103 42%	8 14%	126 89%	16 11%	99 70%	13 9%	30 21%	115 81%	13 30%	14 30%	38 24%	61 28%	24 35%	14 40%
Mean	2.55	2.15	2.98	2.10	2.55	2.61	2.63	2.61	2.37	2.53	2.70	2.61	2.38	2.56	2.87	2.86
Chi Square	69.49 .001			0.44 .932		8.13 .229			3.55 .737			16.27 .061				

Prepared by RBI Strategies and Research

270 HOURS OF OUTAGES PROVES IT IS NEEDED.
270 VS 3 HOURS OF OUTAGES SEEMS LIKE A GOOD REASON AND THEY NEED THE POWER.
ABLE TO BUILD TO FIT THE POWER IN THAT AREA
ADDITIONAL GROWTH.
ALL ABOUT PROGRESS.
ALLEVIATE THE PROBLEM BY THE EXTRA POWER CREATED BY ALTERNATIVE POWER SOURCES FROM WIND & SOLAR.
ALOT OF POWER OUTAGES AND RUINING APPLIANCES.
ANOTHER LINE SHOULD BE BUILT TO SUPPORT ALL THE PEOPLE IN THE AREA.
AREA IS GROWING FASTER THAN WHAT COOP CAN ACCOMIDATE.
AS LONG AS THEY KEEP RATES LOW AND DON'T DESTROY FARM LAND.
AS LONG AS UNDERGROUND POWER IS CONSIDERED.
AS THE AREA GROWS-MORE NEED FOR ELECTRICITY.
AS THE POPULATION GROWS MORE ELECTRICITY IS NEEDED.
AS THE POPULATION GROWS MORE ELECTRICITY IS NEEDED.
BASED ON GROWTH, THEY NEED AND EXTRA LINE.
BE ABLE TO HAVE ENOUGH POWER INTO THE AREA.
BECAUSE THEY HAVE THE RIGHT TO BULD IT THERE AND IT IS NEEDED.
BECAUSE THEY SHOULD HAVE DONE IT LAST YEAR. THEY'RE WASTING THE TAXPAYERS MONEY.
BECAUSE WE NEED A BACK-UP ON THE POWER. IT IS MORE IMPORTANT THAN THE VIEW.
BECAUSE DOWN THE ROAD THEY'RE GOING TO HAVE POWER.
BECAUSE I LIKE POWER - ELECTRICITY IS MY FRIEND.
BECAUSE IF YOU DELAY IT WILL BE EXPENSIVE AND JUST PUT THE LINE UP.
BECAUSE IT HAS TO BE DONE NOW. THEY NEED RELIABLE ELECTRICITY.
BECAUSE IT NEEDS MORE LINES BECAUSE ONE LINE WON'T BE ABLE TO HANDLE THE ELECTRICITY.
BECAUSE IT WILL HELP MAKE THE OUTAGES LESS AND IT WILL HELP WITH THE COST OF THE UTILITIES.
BECAUSE IT'S CRAVING AND IT NEEDS MORE LINES TO HANDLE THE GROWTH.
BECAUSE IT'S NECESSARY FOR THE GROWTH. ONE LINE CAN'T HOLD ALL THAT ELECTRICITY.
BECAUSE IT'S NEEDED.
BECAUSE MORE PEOPLE ARE GONNA KEEP COMING.
BECAUSE OF ALL THE PROBLEMS THEY ARE HAVING. WE NEED A NEW POWER LINE.
BECAUSE OF POWER OUTAGES AND SOMETHING NEEDS TO BE DONE.
BECAUSE OF POWER OUTAGES!
BECAUSE OF POWER OUTAGES, WE NEED MORE POWER.
BECAUSE OF THE POOR QUALITY OF POWER.
BECAUSE ONE LINE IS NOT ENOUGH AND IT WILL HELP WITH THE OUTAGES.
BECAUSE POPULATION HAS INCREASED THERE AND THEY NEED IT.
BECAUSE THAT'S WHAT THE STUDY CONCLUDED.
BECAUSE THE AREA IS GROWING AND THEY NEED MORE POWER LINES TO HANDLE ALL THAT ELECTRICITY.
BECAUSE THE AREA OUT THERE IS GROWING TOO FAST, AND THEY NEED IT.
BECAUSE THE DEMAND IS THERE & THEY NEED IT.
BECAUSE THE GROWTH IN THAT AREA NEEDS MORE POWER LINES FOR THE GROWTH.
BECAUSE THE LINE IS OUT DATED AND THEY SHOULD BUILD IT.
BECAUSE THEY DON'T HAVE TOO MANY OUTAGES. 2ND SO IT'S NOT A BURDEN ON THE OTHER TAXPAYERS.
BECAUSE THEY NEED EXTRA LINES TO NOT HAVE THOSE OUTAGES.
BECAUSE THEY NEED IT DESPERATELY BECAUSE OF THE ONE LINE IS NOT ENOUGH.
BECAUSE THEY NEED IT.
BECAUSE THEY NEED IT. A LOT OF BUILDING GOING ON IN THAT AREA.
BECAUSE THEY NEED IT. BECAUSE THEY'RE ALWAYS OUT OF POWER.
BECAUSE THEY NEED MORE LINES TO SUPPORT THE UTILITIES, AND THAT WOULD ELEMIMATE THE SHORTAGES THEY ARE GETTING.
BECAUSE THEY NEED MORE POWER IN THAT AREA.
BECAUSE THEY NEED MORE THAN ONE LINE.
BECAUSE THEY NEED NEW LINES NOW, SO IT CAN HAVE THE COST LESS.
BECAUSE THEY NEED THE ELECTRICITY.
BECAUSE THEY SAY IT IS REQUIRED.
BECAUSE THEY WON'T GO NUCLAR. SO WE NEED MORE POWER LINES.
BECAUSE TOO MUCH GROWTH. THEY NEED MORE LINES TO HANDLE THAT ELECTRICITY.
BECAUSE WE NEED ANOTHER LINE.
BECAUSE WE NEED POWER.
BECAUSE WE NEED MORE LINES BECAUSE OF THE GROWTH.
BEFORE I SUPPORT THE NEW TIME I WOULD LIKE THEM TO USE ALTERNATIVE & RENEWABLE SOURCES.
BETTER POWER TO PEOPLE IN THAT REGION. MOST COST EFFECTIVE POWER.
BETTER SERVICE AND THE AREA IS GOING TO GROW.
BETTER SERVICE THEN WE HAVE NOW.
BETTER SERVICE.
BETTER SERVICE.
BUILD A NEW LINE OR FIND ANOTHER SOURCE FOR ELECTRICITY.
CAN'T STOP PROGRESS & COOP HAS THE RIGHT TO DO WHAT THEY WANT.
CHEAPER FOR EVERYONE.
CHEAPEST FAIREST WAY TO GO.
CHEAPEST WAY TO DO THIS.
COMMON SENSE. IT'S NOT THAT NEGATIVE A THING.
COMPLY WITH THE LAWS TO BUILD IF ITS THE RIGHT WAY.
COST AND FUTURE RESOURCES
COST AND GROWTH.

COST AND NEED.
CUSTOMER NEEDS AND RELIABILITY.
DANGER FACTOR ON OVERLOADING ELECTRICAL LINES.
DECREASE POWER OUTAGES, KEEPING UP WITH TECHNOLOGY.
DEMAND FOR DEVELOPMENT.
DEMAND OF NEED & CONTINUED NEED OF ALTERNATIVE SOURCES COULD BE BUILT & BROUGHT ONLINE QUICKLY ENOUGH TO BE EFFECTIVE.
DEMAND.
DEPENDABLE SERVICE TO THE AREA.
DEVELOPMENT OF MORE PEOPLE WE NEED MORE POWER - THE MOST ECONOMICAL THING THEY CAN DO.
DONE ALL THE STUDIES THEY NEED AND SULPHUR SPRINGS IS A GOOD COOPERATIVE. ALL STUDIES ARE AGREEABLE WITH SULPHUR SPRINGS.
DON'T CONTINUE TO DO STUDY'S AND COST ME MONEY. I WISH WE COULD DO IT UNDERGROUND. IF THEY DON'T LIKE IT THEY SHOULD PAY THE DIFFERENCE.
ECONOMICALLY FIT. IT WILL NOT HURT THE ENVIRONMENT THAT MUCH.
ECONOMICS.
ELECTRICITY IS ESSENTIAL AND IS NEEDED.
ELECTRICITY IS OUR LIFE STYLE. ELDERS NEED POWER.
ELECTRICITY IS VIABLE SINCE 1930'S IN RURAL ELECTRIC KITCHEN PROGRAM. THEREFORE SHOULD BE DONE.
ENERGY NEEDED FOR THAT AREA.
EVERYONE DESERVES ELECTRICITY OT MEET DEMAND.
EVERYONE NEEDS POWER.
EVERYONE'S COMPLAINING ABOUT POWER BUT THEY DON'T WANT A POWER LINE. THEY DON'T REALIZE HOW MUCH WIND, ETC POWER IS.
FI THEY WANT IT. THEY NEED A LINE.
FOR GROWTH.
FOR HEALTH, SAFETY & ECONOMIC VIABILITY.
FOR IT, BUT WANT IT UNDERGROUND
FOR LESS OUTAGES-WOULD NOT WANT TO BE INCONVIENCED.
FOR PEOPLE DOWN THERE TO HAVE POWER.
FOR PEOPLE WHO NEED IT.
FOR THE COMOFRT OF AMERICAN CITIZENS.
FOR THE PEOPLE LIVING THERE.
FROM WHAT THEY SAY IT'S GOING TO HAVE TO BE DONE SOONER THAN LATER.
GET IT DONE NOW BEFORE IT GETS MORE EXPENSIVE.
GETTING ELECTRICITY TO THE PEOPLE WHO NEED IT.
GROWING AREA. WE HAVE GOT TO KEEP UP DEMAND & SUPPLY.
GROWING POPULATION.
GROWTH IN AREA NEEDS IT.
GROWTH OF THE AREA
GROWTH.
HAVE TO USE A LINE ANYWAY. MORE COST EFFECTIVE.
HAVING EXPERIENCE FROM LINE OVERLOADS.
HELP CUT DOWN ON POWER OUTAGES IN THE AREA. THEY'RE GUILDING MORE DOWN THERE & THEY NEED POWER.
HELP PROMOTE GROWTH OUT THAT WAY.
HELP WITH THE ELECTRICAL OUTAGES.
HELP WITH THE OUTAGES.
I AGREE WITH THE PEOPLE. ELECTRICITY COULD BE MORE.
I AM TIRED OF ALL POWER OUTAGES. WE NEED A RELIABLE SYSTEM.
I DIDN'T MOVE HERE TO LIVE IN A 3RD WORLD COUNTRY. WE NEED ELECTRICITY TO HANDLE THE GROWTH.
I DON'T KNOW.
I HAD PROBLEMS WITH OVER-POPULATION & FREQUENT OUTAGES TILL A NEW LINE WAS BROUGHT IN.
I JSUT GENERALLY AGREE WITH THEM.
I OWN LAND AND WE HAVE COMMERCIAL PROPERTIES. I AM FOR JUCING UP THE AREA.
I THINK IT WILL TAKE FOREVER FOR SOLAR & WIND POWER AND AT A DECENT PRICE.
I THINK IT'S DOABLE IN THE TIME FRAME. WE NEED IT. THE OTHERS I DON'T THINK ARE DOABLE.
I THINK MAYBE IT IS NEEDED.
I THINK THE POWER COMPANY HAS LOOKED INTO ALL ALTERNATIVES AND IS DOING THE BEST THEY CAN BY BUILDING THE NEW POWER LINE.
I THINK THEY CAN USE IT.
I USED TO LIVE IN DOUBLE ADOBE HOUSES AND HAD ALOT OF OUTAGES, SO THEY NEED A NEW LINE. I KNOW WHAT IT IS LIKE.
I WILL SUPPORT IT AS LONG AS IT DOES NOT COST MORE MONEY.
I WORKED FOR AN ELECTRIC COMPANY BACK EAST AND 2 FEEDER LINES IS THE BEST WAY TO GO.
IF IT'S NEEDED THEN THEY SHOULD BUILD IT.
IF IT'S NOT DONE, PEOPLE WILL COMPLAIN ESPECIALLY NEW PEOPLE.
IF IT'S THE MOST LOW IMPACT WAY FOR THE ENVIRONMENT & PEOPLE, I'M ALL FOR IT.
IF PEOPLE WANT ELECTRICITY, THEY HAVE TO BUILD THE POWER LINES.
IF POWER IS NEEDED THEN THEY NEED TO BUILD THE LINES.
IF THE OPPONENTS WANT MORE STUDIES, THEY SHOULD PAY FOR THEIRSELVES & ADDITIONAL MATERIAL COSTS FROM WAITING TO INSTALL THE POWER LINE.
IF THE STUDY SAYS IT'S THE BEST THEN THEY SHOULD.
IF THERE ARE PEOPLE THERE AND MORE TO COME YOU NEED TO BE ABLE TO SERVE THEM.
IF THERE IS A POWER SHORTAGE THEY NEED IT. THEY HAVE HANDLED THIS WRONG. THEY CHOSE THE WRONG ROUTE.
IF THEY ARE GROWING, THEN THEY NEED TO HAVE MORE ELECTRICITY, NO MATTER WHAT.
IF THEY ARE HAVING TOO MANY OUTAGES THEN THEY NEED THE LINE NO MATTER WHAT THE PROBLEM IS.
IF THEY NEED THE POWER, THEN THEY SHOULD UP THE LINES.
IF THEY WANT SOLAR, IT WOULD TAKE UP ALOT MORE LAND AREA. ONCE THE LINE IS IN, PEOPLE WON'T EVEN NOTICE IT.
IF THEY WERE WORRIED ABOUT MOUNTAINS AND VIEW THEY WOULDN'T HAVE BUILT THEIR HOMES THERE.
IF TO PROVIDE MORE JOBS. THERE IS ALREADY EXISTING LINES. THEY DON'T NEED TO DISTURB ANYTHING ELSE USE WHAT'S THERE. JUST UPGRADE.
IF WE NEED IT, WE NEED IT.

I'M NOT REALLY FAMILIAR W/THE ISSUES. I JUST MOVED HERE, BUT IF WE NEED NEW POWER LINES & IT'S A BIG ISSUE, THEN WE NEED A NEW POWER LINE!
IMMEDIATE NEEDS OUT WEIGH ANY DELAYS SO MOVE FORWARD EXPEDIOUSLY TOWARDS RENEWABLE ENERGY.
IN THE LONG RUN MORE POWER WILL BE NEEDED.
INCREASE IN POPULATION.
IT HAS TO BE DONE THE ALTERNATIVE ENERGY SOURCE AREA READY YET.
IT IS A NECESSITY.
IT IS CHEAPER AND IT SOUNDS LIKE THEY NEED IT.
IT IS COST EFFECTIVE. RESIDENTS KNEW IT COULD HAPPEN.
IT IS GOOD FOR THE COMMUNITY.
IT IS NEEDED AND OUR RATES WOULD STAY LOW.
IT IS NEEDED AND PEOPLE IN THE AREA HAVE WAITED A LONG TIME FOR ANOTHER LINE.
IT IS NEEDED FOR DEPENDABLE ELECTRIC SERVICE.
IT IS NEEDED TO TAKE CARE OF POWER OUTAGES AND HANDLE THE GROWTH.
IT IS NEEDED.
IT IS NEEDED. STUDY HAS EXPLAINED THAT IT IS THE MOST REALISTIC WAY TO GO.
IT IS WHAT NEEDS TO BE DONE FOR THE COMMUNITY.
IT JUST MAKES SENSE OVER THE OTHER ALTERNATIVES.
IT JUST MAKES SENSE. BUILD IT IF THEY NEED IT.
IT MAKES MORE SENSE ELECTRIC IS MORE DEPENDABLE THE OTHERS SHOULD ONLY BE USED FOR BACK UP.
IT MAKES SENSE. MOST COST EFFECTIVE & EFFECTS LESS PEOPLE.
IT MAKES THE MOST SENSE AND MOST COST EFFECTIVE FOR WHAT THEY ARE GETTING.
IT NEEDS POWER AND THEY CAN'T HAVE EXPANSION WITHOUT IT.
IT ONLY GOOD BUSINESS IF YOU WANT A GOOD COMPANY TO SERVE YOU, YOU SHOULD SUPPORT THEM.
IT SEEMS LIKE A GOOD IDEA TO ME.
IT SEEMS THEY ARE EXPERIENCING A NUMBER OF OUTAGES AND THAT SHOULD BE ENOUGH REASON.
IT SHOULD BE BUILT 3-TIMES AS LARGE SO THIS WON'T HAPPEN IN THE FUTURE.
IT SOUNDS LIKE IT WOULD BENEFIT THE PEOPLE OUT THERE.
IT SOUNDS LIKE THE MOST COST PRODUCTIVE WAY TO REDUCE OUTAGES IN THE AREA.
IT WILL BE MOST EFFICIENT.
IT WILL BE THERE WHEN MORE PEOPLE MOVE TO THE AREA AND IT WILL HAVE LESS OUTAGES.
IT WILL CUT DOWN ON OUTAGE PROBLEMS AND THE AREA NEEDS IT.
IT WILL GIVE PEOPLE POWER. THE OUTAGES WE HAVE ARE SOMETIMES LIKE 3 HOURS LONG TO RESTORE THE AREA.
IT WILL HELP ALOT OF PEOPLE OUT ALOT.
IT WILL HELP KEEP OUR RATES DOWN.
IT WILL HELP MORE PEOPLE THAN HURT
IT WILL HELP THE OUTAGES FROM HAPPENING OUT THERE.
IT WILL HELP THE RATES.
IT WILL REDUCE EVERYONE'S RATES IN DUE TIME.
IT WON'T HURT PROPERTY VALUES. IT WILL INCREASE IT. IF THEY DON'T HAVE POWER, HOW WILL THEY SELL THEIR HOMES ANYWAY?
IT WOULD AID DEVELOPMENT OF THAT AREA.
IT WOULD HELP GET POWER TO THE REST THAT DON'T HAVE IT
IT'S A GROWING AREA AND THEY NEED PROGRESS.
IT'S AN NECESSITY.
IT'S BEEN A GROWING COMMUNITY AND THEY NEED MORE POWER.
IT'S BEEN NEEDED FOR A LONG TIME, THE ALTERNATIVES AREN'T FEASIBLE AT THIS TIME.
IT'S COST EFFECTIVE. TOO MANY DELAYS COULD IMPACT THE COST.
IT'S GOOD FOR THE WHOLE COUNTY. DOWN THERE IT WON'T MATTER IF IT WAS WATER. THEY STILL DISAPROVE. SOMEONE WILL ALWAYS COMPLAIN.
IT'S MUCH MORE EXPENSIVE TO WAIT, THEY WILL KEEP WANTING STUDIES TO DRAG IT OUT LONGER AND LONGER.
IT'S NECESSARY.
IT'S NEEDED
IT'S NEEDED BECAUSE THEY NEED THE POWER.
IT'S NEEDED OUT THERE.
IT'S NEEDED.
IT'S PROGRESS. PEOPLE NEED POWER.
IT'S THE ONLY LOGICAL WAY TO SOLVE THE PROBLEM.
IT'S THEIR LAND THEY SHOULD BE ABLE TO BUILD ON IT IN ORDER TO BEST ALLOW BEST SERVICE FOR CUSTOMERS, WAITED AS LONG AS THEY COULD HAVING TO PUT OUT
IT'S WHAT IS BEST FOR THE COMMUNITY.
IT'S WHAT IS NEEDED
I'VE LIVED IN SONAITA AND THE POWER OUTAGES ARE UNTOLERABLE. IT HAS TO BE DONE.
KEEP IT ECONOMICAL & IT'S NEEDED FOR RELIABILITY SO I SAY BUILD IT.
KEEP THE COST DOWN AND PREVENT OVERLOADING.
KEEP THE COST DOWN FOR EVERYONE.
KEEP THE POWER ON.
LATER IT WILL COST MORE AND THEY'RE GOING TO HAVE TO HAVE IT SO MIGHT AS WELL DO IT NOW.
LESS OUTAGES.
LESS OUTAGES.
LESS POWER OUTAGES AND MORE PEOPLE COMING OUT TO ELGIN TO PICK FRUIT FROM FARMERS.
LESS POWER OUTAGES!
LESS POWER OUTAGES, LESS COMPLAINTS.
LESS POWER OUTAGES.
LESS POWER OUTAGES.
LESS POWER OUTAGES.
LESS POWER OUTAGES. COST EFFECTIVE.
LIMIT HURTING RATES. KEEP RATES LOWER.
LIVED IN RURAL AREAS & EVERYBODY HAS A RIGHT TO ELECTRICITY.

LONG TERM SOLUTION AND COST EFFECTIVE.
LOWER OUR RATES. LIMIT OUTAGES.
LOWER RATES.
MONEY.
MORE COST EFFECTIVE IF THEY ARE HAVING THAT MANY OUTAGES THEY MUST NEED IT.
MORE ELECTRICITY IS NEEDED.
MORE EXPENSIVE THE LONGER THEY WAIT.
MORE PEOPLE MOVED IN OUT THERE.
MORE PEOPLE YOU GET, THE MORE POWER YOU'RE GOING TO NEED. IT'S BETTER TO FIX IT EARLY.
MORE POWER ACCESS, LESS OUTAGES.
MORE POWER IS NEEDED IN THE AREA. TOO MANY OUTAGES.
MOST REALISTIC WAY OF DEALING WITH THE PROBLEM.
NA
NEED IT DESPERATELY.
NEED MORE ELECTRICITY A YEAR.
NEED MORE GROWTH.
NEED POWER & OUT OF POWER. THEY NEED TO ACCOMODATE PEOPLE AND BE PRACTICLE.
NEED THE LINE.
NEED THE POWER AND ARE COMPLAINING ABOUT POWER OUTAGES BUT WON'T ALLOW THE LINE.
NEEDED TO AVOID THAT FUTURE PROBLEM. NEED TO TAKE CARE OF OLD FEEDS.
NO ENOUGH LINES.
NO NEW HOOK UPS ALLOWED RIGHT NOW.
NO OTHER ALTERNATIVE BUT A NEW LINE.
NO OTHER ALTERNATIVES WOULD BE AS EFFECTIVE & MAKE LAND VALUES GO UP.
NOT TO HAVE POWER OUTAGES.
ONCE ESTABLISHED & PEOPLE LEARN TO ADAPT TO WHAT WAS ONCE A PROBLEM AND SOLVE BLACK OUT PROBLEMS.
ONE LINE IS OVER-LOADED.
ONLY IF IT DOESN'T RAISE CURRENT ELECTRIC RATE.
ONLY IF THE POWER LINE'S ARE UNDERGROUND
OUTAGES
OUTAGES ARE VERY STRESSFUL
OVERALL GROWTH. CUT OFF GROWTH WITHOUT POWER.
PEOPLE ARE GOING TO MOVE DOWN THERE AND THERE WILL NOT BE ENOUGH POWER.
PEOPLE ARE GOING TO NEED THE ELECTRIC. IF THEY DON'T GET IT THEY'LL BLAME THE COOP & IT'S THEIR FAULT FOR NOT LETTING THEM DO THEIR JOB.
PEOPLE ARE GOING TO NEED THE POWER.
PEOPLE DESERVE MORE POWER.
PEOPLE DO NEED POWER.
PEOPLE NEED ELECTRICITY, AND THAT EXTRA POWER LINE.
PEOPLE NEED ELECTRICITY.
PEOPLE NEED ELECTRICITY.
PEOPLE NEED POWER.
PEOPLE NEED POWER.
PEOPLE NEED THE CHEAPEST WAY.
PEOPLE NEED THE ELECTRICITY NOW.
PEOPLE NEED THE ELECTRICITY.
PEOPLE NEED THE ELECTRICITY.
PEOPLE SHOULD NOT HAVE TO EXPERIENCE THAT MUCH OUTAGE.
PEOPLE WHO LIVE IN THE AREA WITH THEIR VIEWS & ALTERNATIVE ENERGY IS NOT WORKING. THEY NEED IT. THE COST WILL CONTINUE TO GO UP.
PEOPLE WHO LIVE THERE NEED THE SERVICE.
PEOPLE WHO MOVE THERE WANT POWER, SO THEY NEED A POWER LINE.
PLAN FOR THE FUTURE.
POPULATION & GROWING & IT'S REALLY NEEDED WITH A GROWING POPULATION
POPULATION EXPLOSION.
POPULATION IS INCREASING.
POWER IS NEEDED IN THE LONG RUN.
POWER IS NEEDED.
POWER OUTAGES ARE DANGEROUS.
POWER REQUIREMENTS - OLD PEOPLE NEED THAT POWER MORE THAN ANYONE ELSE.
PROGRESS FOR THE WHOLE SOUTHERN PART OF THE STATE.
PROVIDE POWER FOR MORE PEOPLE WITH LESS OUTAGES.
PUBLIC SERVICE PROBLEM TO LESSEN.
QUIT WINING! THEY NEED THE POWER.
RELIABILITY - AND THE PLACE IS GROWING & THEY WILL NEED IT ANYWAY.
RELIABILITY ISSUES AS FAR AS IT GOING ON AND OFF.
RELIABILITY OF POWER.
RELIABILITY OF SERVICE IT CAN PROVIDE.
RELIABLE POWER AND PREVENT RATE INCREASES FROM THE DELAY.
SAFETY.
SERVICE.
SO I DON'T HAVE TO START MY GENERATOR EVERY TIME I NEED TO WATER MY HORSES.
SO MY ELECTRIC BILLS WON'T SKY ROCKET.
SO PEOPLE DON'T END UP WITH POWER OUTAGES CONSTANTLY.
SO THEY CAN HAVE BETTER SERVICES.
SO THEY CAN HAVE MORE POWER.

SO THEY CAN HAVE NEW BUILDING.
SO THEY CAN PROVIDE SERVICE FOR THE PEOPLE.
SO THEY DON'T HAVE OUTAGES & THE LONGER YOU WAIT THE MORE IT WILL COST.
SO THEY DON'T HAVE POWER OUTAGES.
SO THEY WON'T BE WITHOUT POWER WITH THAT MANY OUTAGES.
SO THEY WON'T HAVE SO MANY OUTAGES. THE WINDMILLS (GENERATORS) ARE BIG & UGLY WHICH BLOCK VIEW ALSO.
SO WE DON'T HAVE AS MANY POWER OUTAGES.
SO WE DON'T HAVE SO MANY POWER OUTAGES.
SO WE HAVE LESS INTERRUPTIONS & POWER OUTAGES.
SOONER OR LATER IT'S GOING TO HAVE TO BE DONE.
SOUTHEAST ARIZONA IS ALWAYS LOOKING FOR MORE GROWTH & THEY WILL HAMPER THAT GROWTH IF THEY DON'T BUILD THE POWER LINE.
STOP BLACKOUTS AND HELP PEOPLE. IT WON'T INTERFERE WITH THE VIEW OF THE MOUNTAINS.
STOP POWER OUTAGES. ITS GROWING AND IT NEEDS TO BE DONE.
SULPHUR SPRINGS VALLEY ELECTRIC CO-OP HAD THE RIGHTS TO BUILD THERE FIRST.
SUPPLY & DEMAND.
THAT PEOPLE ARE GOING THROUGH POWER OUTAGES.
THE ALTERNATIVE NEEDS INFRASTRUCTURE AND STILL BLOOCKS VIEWS
THE AREA & POPULATION IS GROWING & IT'S A NECESSITY.
THE AREA HAS GROWN AND IT NEEDS IT.
THE AREA IS EXPANDING.
THE AREA IS GROWING AND DEMAND IS THERE.
THE AREA IS GROWING TOO FAST. THEY NEED MORE SERVICE.
THE AREA IS GROWING.
THE CONTINUED DEVELOPMENT OF THE AREA.
THE CO-OP HAS THE RIGHT OF WAY.
THE COOP SAYS IT'S NECESSARY THEY WOULDN'T WASTE OUR MONEY.
THE COST ISSUE AND THE INDEPENDENT STUDY.
THE COST RIGHT NOW WILL NOT AFFECT MY PROFITS DOWN THE ROAD.
THE COST WOULD DECREASE.
THE EASTENERS ARE MOVING IN. THEY HAVE TO BUILD IT TO PROVIDE POWER.
THE ELECTRICITY IS NEEDED AS MORE PEOPLE MOVE THERE.
THE ELECTRICITY IS NEEDED.
THE ELECTRICITY IS REALLY NEEDED.
THE ELECTRICITY IS RELIABLE.
THE ELECTRICITY SHOULD BE GIVEN TO EVERYONE AS A FAIR ADVANTAGE. EVERYONE SHOULD HAVE ELECTRICITY.
THE EXPANDING POPULATION.
THE GROWTH AND IT WOULD SOLVE THE PROBLEM TO PUT UP A NEW LINE.
THE GROWTH IN THE AREA.
THE HIGH GROWTH THAT HAS BEEN ALLOWED.
THE INDEPENDENT STUDY IS ON THE INTERNET. READ IT.
THE MORE PEOPLE THEY HAVE THE MORE ELECTRICITY THEY ARE GOING TO USE.
THE NEED FOR ELECTRICTY FOR THE PEOPLE LIVING IN THE AREA.
THE NEED FOR IT.
THE NEED FOR IT.
THE NEED OF THE PEOPLE.
THE NEEDS THERE.
THE OUTAGES ARE THE BEST REASONS TO BUILD THE LINE.
THE OUTAGES.
THE PEOPLE ARE HAVING PROBLEMS WITH THE SYSTEM AND OVER LOADING THE SYSTEM AND LOOSING POWER.
THE POPULATION GROWTH - THERE USED TO BE A LOT OF LIVE STOCK BUT NOT ANYMORE.
THE POPULATION GROWTH.
THE POWER IS NEEDED.
THE POWER IS NEEDED.
THE POWER OUTAGES, WHEN NOT ENOUGH POWER IN FEED LINES TO COVER IT.
THE RELIABILITY OF ELECTRICY IN THIS AREA IS REQUIRED.
THE REST OF US SHOULD NOT SUFFER THE COST IF THE LINE IS NOT PUT IN.
THE STUDY & IF THEY WAIT IT WILL COST MORE.
THERE ARE ALOT OF PEOPLE WHO HAVE SUFFERED ALOT OF OUTAGES.
THERE HAS BEEN ALOT OF GROWTH TO THAT AREA. THEY NEED IT.
THERE WILL BE MORE RELIABILITY.
THERE'S A NEED FOR IT & LONG RANGE THEY NEED IT, BECAUSE THERE IS NOT MUCH OUT THERE.
THESE OPPONENTS DO NOT WANT THEIR VIEW OBSTRUCTED - IF YOU PUT IN AN ALTERNATE SOURCE THEY WILL ALSO COMPLAIN.
THESE PEOPLE DESERVE BETTER SERVICE THAN THEY ARE GETTING.
THEVE ALLOWED PEOPLE TO BUILD IN THE AREA SO THEREFORE, THEY HAVE TO HAVE IT.
THEY ARE GOING TO BUILD IT SOMEWHERE IT MIGHT AS WELL BE THERE.
THEY ARE HAVING OUTAGE PROBLEMS. THEY NEED A NEW LINE.
THEY ARE TRYING TO FIX A PROBLEM. THEY HAVE OWNED THE RIGHTS FOR YEARS.
THEY CAN HAVE ELECTRICITY THAT IS NEEDED.
THEY CAN'T ADD ANY NEW CUSTOMERS TO THE AREA.
THEY COMPLAIN ABOUT THE POWER OUTAGES THEY'RE TRYING TO MOSTLY KEEP IT OUT SITE.
THEY DON'T HAVE ENOUGH POWER. YOU CAN'T STOP PROGRESS.
THEY HAD ALREADY PLANNED FOR THIS YEARS AGO & THEY HAVE THE RIGHT TO BUILD IT.
THEY HAVE HAD RIGHTS TO IT FOR A LONG TIME. IT IS LESS EXPENSIVE THEN SOLAR.
THEY HAVE SO MANY OUTAGES AND NOT ENOUGH POWER.

THEY HAVE TO BUILD IT. WE NEED MORE POWER.
THEY HAVE TOO MANY BLACKOUTS. IT IS NEEDED.
THEY HAVE TOO MANY OUTAGES.
THEY NEED A NEW LINE. WHY WAIT TILL IT COSTS MORE AND THERE WILL BE NEW GROWTH.
THEY NEED ELECTRICITY.
THEY NEED ELECTRICITY.
THEY NEED ELECTRICITY.
THEY NEED IT AND ANY DELAY ON BUILDING. IT WILL END UP COSTING US MORE MONEY.
THEY NEED IT AND IT WOULD BE COST EFFECTIVE.
THEY NEED IT SO THERE AREN'T AS MANY OUTAGES.
THEY NEED IT.
THEY NEED IT.
THEY NEED IT. IF IT WAS PUBLIC RECORD WHEN HOME OWNERS BOUGHT THEIR PROPERTY, THEN THAT IS THEIR FAULT FOR NOT PAYING ATTENTION.
THEY NEED IT. THERE HAS BEEN ALOT OF BUILDING OUT THERE.
THEY NEED IT. TOO MANY OUTAGES.
THEY NEED MORE ELECTRICITY IN THE AREA.
THEY NEED MORE ELECTRICITY.
THEY NEED MORE LINES OF POWER. BECAUSE ITS GROWING.
THEY NEED MORE LINES TO HANDLE THE ELECTRICITY AND IT WILL CREATE TO HAVE JOBS AS WELL
THEY NEED MORE POWER AND IT'S THE MOST COST EFFECTIVE. I DON'T WANT TO PAY FOR THE OTHER ALTERNATIVES.
THEY NEED POWER AND IT IS THE MOST REALISTIC.
THEY NEED POWER.
THEY NEED POWER.
THEY NEED POWER. TOO MANY OUTAGES.
THEY NEED THE EXTRA ELECTRICITY IT WOULD PROVIDE.
THEY NEED THE EXTRA ENERGY.
THEY NEED THE POWER IT WOULD PROVIDE.
THEY NEED THE POWER NOW.
THEY NEED THE POWER TO ACCOMODATE CURRENT & NEW RESIDENTS.
THEY NEED THE POWER, AND IT'S THE CHEAPEST WAY.
THEY NEED THE POWER.
THEY NEED THE POWER.
THEY NEED THE POWER.
THEY NEED THE POWER.
THEY NEED THE POWER. THEY CAN'T COMPLAIN BOTH WAYS. THEY KNEW IT WAS COMING.
THEY NEED THE SERVICE BECAUSE OF OUTAGES.
THEY NEED THEIR ELECTRICITY.
THEY NEED THIS BECAUSE OF THE GROWTH.
THEY NEED TO BUILD NOW INSTEAD OF LATER.
THEY NEED TO BURY IT.
THEY NEED TO DO IT TO AVOID MORE OUTAGES.
THEY NEED TO SUPPORT THE GROWTH.
THEY NEED TO UPGRADE THEIR SYSTEM.
THEY OWN THE LAND. THEY SHOULD BE ALLOWED TO DO WHAT THEY WANT. I DO WHAT I WANT ON MY LAND.
THEY SHOULD NOT BURN THE EXISTING CUSTOMERS. THEY SHOULD PAY FOR THAT EXTRA LINE.
THEY WANT THE ELECTRICITY.
THEY WON'T HAVE AS MANY OUTAGES AND BETTER SERVICES.
THEY WON'T HAVE ENOUGH POWER WITHOUT IT.
THEY WOULDN'T PUT IT IN IF WE DIDN'T NEED IT.
THEY'RE HAVING BURN OUTS.
THEY'RE TRYING TO ACCOMODATE EVERYONE COMING IN. A FEW DON'T WANT IT, BUT MROE NEED IT.
THINK GROWTH IS GOOD.
THOSE PEOPLE DESERVE TO HAVE GOOD POWER.
THOSE POEPL E NEED THOSE BUILT WINDED & SOLAR WILL TAKE TOO LONG. THE AREA IS GROWING TOO FAST.
TIRED OF THE OUTAGES.
TO ACCOMIDATE GROWTH.
TO ACCOMODATE GROWTH.
TO AVOID OUTAGES.
TO CONTINUE POWER FOR NEW HOMES.
TO CUT THE OUTAGES DOWN.
TO ELIMINATE THE AMOUNT OF POWER CURCUITS.
TO END OUTAGES IN THAT AREA.
TO GIVE THE PEOPLE WHAT THEY NEED.
TO GIVE THE RESIDENTS THE POWER THAT THEY NEED.
TO GIVE THEM ELECTRICITY.
TO HAVE BETTER SERVICE. HAVE MORE CONSTANT SERVICE.
TO HAVE CONSISTENT SERVICE.
TO HAVE LESS OUTAGES.
TO HELP LOWER EVERYONES RATES
TO IMPROVE THE SERVICE.
TO KEEP POWER OUTAGES TO A MINIMUM.
TO KEEP RATES LOWER. IT IS THE BEST SOLUTION.
TO MAKE SURE THAT EVERYONE THAT LIVES OUT THERE HAS ELECTRICITY WITHOUT OVER LOADING THE ONE LINE.
TO PREVENT MORE OUTAGES AND GIVE PEOPLE ELECTRICITY.

TO PREVENT THE OUTAGES
TO PROVIDE ADEQUATE SERVICE TO THAT AREA.
TO PROVIDE POWER TO THE PEOPLE IN SONOITA, PATAGONIA & ELGIN AREA.
TO PROVIDE SERVICE TO PEOPLE THAT ARE REQUESTING IT.
TO REDUCE NUMBER OF POWER OUTAGES. TO ALLOW MORE PEOPLE TO BUILD HOMES IN THAT AREA BECAUSE OF REFUSALS FOR HOOKUPS.
TO REDUCE POWER OUTAGES.
TO REDUCE THE NUMBER OF OUTAGES.
TO REDUCE THE NUMBER OF POWER OUTAGES.
TO RELIEVE THE POWER OUTAGES IN THAT AREA.
TO SERVE PEOPLE WHO SUBSCRIBE IN THAT AREA.
TO STOP THE POWER OUTAGES.
TO SUPPORT GROWTH IN THE AREA.
TOO MANY OUTAGES.
TOO MANY OUTAGES.
TOO MANY OUTAGES.
TOO MANY OUTAGES.
TOO MANY PEOPLE ARE MOVING INTO THE AREA.
TOO MANY POWER OUTAGES. IT NEEDS TO BE DONE ASAP.
TOO MANY PROBLEMS IN PAST.
TOO SHORTEN OUTAGE TIME.
WE ALL NEED LIGHT.
WE ALL NEED POWER.
WE ARE EXPANDING THE AREA AND IF THEY WANT TO CUT DON ON POWER OUTAGES THEY NEED TO DO IT.
WE DON'T HAVE A LOOP & NEED A LOOP.
WE HAVE TO IF WE NEED TO PROVIDE ELECTRICITY TO A GROWING COMMUNITY.
WE HAVE TOO MANY OUTAGES AND TOO MUCH GROWTH.
WE KEEP LOSING POWER IN PATAGONIA.
WE NEED ELECTRICITY & IT WILL STOP OUTAGES.
WE NEED EXTRA LINE FOR POWER.
WE NEED GOOD SERVICE & THE POPULATION IS GROWING.
WE NEED IT AND DO IT NOW WHILE THE COST IS LOW.
WE NEED MORE POWER FOR MORE HOUSES.
WE NEED MORE POWER.
WE NEED THE ELECTRICITY FOR THE AMOUNT OF NEW PEOPLE.
WE NEED THE EXTRA POWER LINES AND THEY NEED TO BUILD THEM.
WE NEED THE EXTRA POWER THAT IT WOULD PROVIDE.
WE NEED THE POWER.
WE NEED TO THINK OF LONG TERM RESOURCES WE WOULD USE.
WE OWN A VERY LARGE BUSINESS & IT COSTS US THOUSANDS OF DOLLARS. EVERY TIME THERE IS AN OUTAGE. BEEN HERE SINCE 1947. PEOPLE SHOULD DO THEIR RESEARCH.
WE RECEIVE TOO MANY OUTAGES.
WE'VE ALREADY SPENT ENOUGH MONEY ON THIS, JUST GET IT DONE.
WHEN WE HAVE STORMS & WINTER TIME, THE POWER GOES OUT ALOT, SO WE NEED IT.
WILL BE LESS OUTAGES.

(CONT'D) MORE STUDIES IT WILL COST MORE.

2010 WE HAVE INTELLIGENCE, THEY NEED TO LOOK AT ALTERNATIVE POWER OR ALTERNATIVE WAY INSTEAD OF RUINING THE VIEWS.

ALTERNATIVE ENERGY MAKES SENSE IN THE LONG RUN.

ALTERNATIVE ENERGY SHOULD BE USED.

ALTERNATIVE IS THE WAY TO GO FOR THE FUTURE.

BECAUSE 100% OF THIS PURPOSE IS FOR THE EXPANSION FOR FUTURE USE.

BECAUSE I DON'T KNOW WHERE THE LINE GOES.

BECAUSE THE COST WOULD BE PROHIBITED.

BECAUSE IT'S GOING TO COST ME MORE MONEY.

DESTRUCTION OF LANDS AND VIEWS. ALTERNATIVE FUELS ARE THE BETTER WAY TO GO RIGHT NOW.

DON'T KNOW.

GROWTH & THE STRAIN ON OUR AQAFAER. IT WILL CAUSE TOO MUCH GROWTH.

HALT THE GROWTH.

I DON'T BELIVE WE NEED IT.

I DON'T THINK EITHER SIDE HAS DISCLOSED ALL THE INFORMATION SULPHUR SPRINGS HAS BEEN VERY VINDICTIVE ON A PERSONAL LEVEL AND IT'S VERY UNPROFESSIONAL

I DON'T WANT THE TAXPAYERS TO PAY FOR IT.

I QUESTION IF THIS IS THE ONLY WAY TO PROVIDE ADAQUATE POWER TO THE VALLEY.

I THINK ALTERNATIVE IS THE WAY TO GO.

I THINK I DON'T LIKE THE POWER LINES, I LIKE THE VIEW OF THE MOUNTAINS AND I THINK THEY COULD FIND A BETTER WAY.

I THINK IT'S CRITICAL TO DEVELOP ALTERNATIVE MEANS TO POWER, NO MATTER TIME OR COST.

IF PEOPLE DON'T WANT IT, THEN DON'T PUT IT OUT THERE.

IF THEY BUILD IT, THEY WON'T EVEN LOOK INTO RENEWABLE ENERYG SOURCES.

IF THEY WANT MORE ELECTRICITY THEY CAN MAKE IT THEMSELVES.

I'M NOT AGAINST IT BEING BUILT BUT IT NEEDS TO BE PUT SOMEWHERE ELSE.

I'M NOT OPPOSED TO ANOTHER LINE. I AM OPPOSED TO WHERE THEY WANT TO PUT IT. THEY CAN PUT IT WHERE THE OTHER ONE THAT DOESN'T WORK IS.

IN 1985 I SUGGESTED THAT THEY GO INTO ALTERNATIVE ENERGY-WE SHOULD ALL HAVE ALTERNATIVE ENERGY FOR OUR HOMES-THEY BELIEVED I HAD A DUMB IDEA.

INCORRECT ON OUTAGES AND NEEDS

IT COULD BE DONE EASIER. THERE ARE NATURAL LINES.

IT DISTRACTS FROM THE SCENERY & BEAUTY OF THE PLACE & THE POWER ALWAYS WENT OUT ANYWAYS. MORE POWER LINES AREN'T GOING TO HELP.

IT NEEDS TO BE 50/50. THAT WOULD BE FAIR, THEN IT WON'T MATTER.

IT WILL DAMAGE ALL OF THE COMMUNITY SHOUL WE GO WITH ALTERNATIVE ENERGY.

IT'S A BEAUTIFUL PLACE HERE AND WE NEED TO KEEP THE BEAUTY.

IT'S DESTROYING A BEAUTIFUL AREA.

IT'S NOT FAIR TO THE PEOPLE THAT LIVE HERE. IF WE KEEP BUILDING WE WILL LOOK LIKE NEW YORK. WHY NOT START W/RENEWABLE ENERGY NOW?

MAJOR CONSIIRACY. BIO'S STUDY.

NEED TO DO MORE WITH SOLAR ENERGY.

NO CONCERNS. I LIVE IN THAT AREA.

NOT NECESSARY.

OFFER MORE ALTERNATIVE ENERGY OPTIONS. THEY NEED TO FIGURE OUT A NEW WAY TO DO THINGS.

PROVIDES THE OPPORTUNITY TO PUSH FOR ALTERNATIVES.

SULPHUR SPRINGS IS TRYING TO BUILD A PATHWAY TO ROENMONT MINES AND I DON'T WANT THEM USING ANYONE.

THE ALIGNMENT & ROUTE - USE THE SAME ALIGNMENT THAT THE CURRENT POWER LINE OR THE ALIGNMENT THAT TEP ALREADY HAS.

THE ALTERNATIVE ENERGY NEEDS TO IMPLEMENT THE USE OF ALL SOLAR ENERGY.

THE COST AND INFRINGEMENT ON OTHER PEOPLE.

THE COST AND VIEW OF THE MOUNTAINS.

THE DISAGREEMENT OF THE PEOPLE. IF THEY SEE NO NEED FOR IT, WHY PUT IT IN?

THE ENVIRONMENTAL IMPACT. LOOK INTO ALTERNATIVES MORE DEEPLY.

THE HOME OWNERS BOUGHT THERE TO GET AWAY FROM POWER LINES AND NOT OBSTRUCT THEIR VIEW.

THE PEOPLE SHOULD BE RESPECTED AND IF THEY CHOOSE NOT TO HAVE THE LINE THERE, THEN IT SHOULD NOT.

THE VIEWS OF THE MOUNTAINS AND THE COST.

THE WILD-LIFE WILL BE AFFECTED. THEY SHOULD HAVE IT BUILT UNDERGROUND WOULD SOLVE ALOT BETTER.

THEY COULD PUT IN SOLAR ENERGY.

THEY DO NOT HAVE ENOUGH MONEY TO SUPPORT WHAT THEY HAVE, WHY WOULD THEY SPEND MORE.

THEY HAVEN'T LOOKED AT ALTERNATIVES.

THEY NEED TO DISCUSS WHAT OTHER OPTIONS CAN BE DONE, LIKE PUT THE LINES UNDERNEATH THE GROUND. SO THE OPPONENTS CAN STILL HAVE THEIR VIEW.

THEY NEED TO LOOK AT OTHER ALTERNATIVES.

THEY NEED TO TAKE CARE OF THE PROBLEMS THEY ALREADY HAVE.

THEY SHOULD SHARE POWER WITH TETON BASE.

THIS IS TO INCREASE THE BILLS ON THE UTILITIES.

TOO MUCH EXPENSE.

WE USE SHORT TERM GAINS & NEGLECT THE LONG TERM.

WE WANT THE ALTERNATIVE SOURCES DEVELOPED.

WE WON'T EVEN GET ANY OF THE POWER FROM THE NEW LINE.

ALTERNATIVE ENERGY SOURCE WOULD BE BETTER.
COOP NOT TRYING TOO HARD TO GO SOLAR OR WIND - DO PROPERTY OWNERS WANT TO SEE WIND MILLS?
COST & RELIABILITY.
COST AND OUTAGES.
COST AND WHAT'S BEST FOR PEOPLE AND ENVIRONMENT.
COST EFFECTIVENESS & COST OF WHATEVER RATE PAYER'S HAVE TO PAY.
COST EFFECTIVENESS & DESTROYING THE VIEW.
COST TO THE SULPHUR SPRINGS VALLEY SHAREHOLDERS.
FIRST, WHO THE OPPONENTS ARE AND SECOND, EXACTLY WHAT THE COST OF THE ALTERNATIVE ENERGY SOURCES ARE.
GETTING RELIABLE POWER TO THE PEOPLE IS IMPORTANT AND SO IS KEEPING THE COST DOWN.
HOW THE NEEDS CAN BEST BE MET. HOW CAN WE BUILD IT?
I CAN'T SAY BECAUSE I DON'T LIVE THERE AND I DON'T HAVE ANY INFORMATION.
I DON'T KNOW ENOUGH YET TO SAY ONE WAY OR ANOTHER.
I DON'T KNOW MUCH ABOUT ANY OF THIS.
I DON'T KNOW WHERE THE POWER LINE IS GOING.
I DON'T KNOW.
I DON'T KNOW.
I DON'T KNOW. I HAVE HEARD VERY LITTLE.
I DON'T LIVE THERE DO I DON'T HAVE ANY OPINION AT THIS TIME.
I FEEL THE PUBLIC NEEDS TO BE EDUCATED MORE ABOUT THIS. I THINK THERE COULD BE OTHER ALTERNATIVES BESIDE RENEWABLE ENERGY. NOT ENOUGH INFORMATION.
I NEED INFORMATION BEFORE I CAN MAKE A DECISION.
I NEED MORE INFORMATION. I DON'T KNOW WHAT THEY NEED.
I THINK I WOULD LIKE SOMETHING IN THE SOLAN AREA TO BE CHECKED OUT.
I WANT TO SEE THEM PUT IT UNDERGROUND.
IF IT'S SOMETHING THAT WILL BRING IN MORE JOBS, WHY WOULD THEY WANT TO EXTEND IT? IS IT ONLY FOR RESIDENTS?
IF SOLAR IS ALTERNATIVE LOOK INTO IT.
IF THE PEOPLE WANT IT THEY SHOULD GET IT AND IF THEY DON'T THEN THEY SHOULDN'T - KEEPING MY ELECTRICITY LOWER.
I'M UP IN THE AIR. WE NEED MORE POWER BUT THEY NEED TO FIND ANOTHER WAY.
IS IT REALLY NEEDED?
KEEP IT WHERE IT DOESN'T DISTURB THE ENVIRONMENT TOO BAD.
LEARNING TO OPPOSE, TOO MUCH MONOLOGY.
LOOK AT ALL ALTERNATIVES & TRY TO WORK WITH THE PEOPLE.
MAKE THEM PAY FOR IT! WIND MILLS ARE WAY WORSE FOR THE VIEW THAN POWER LINES!
NO OPINION
POWER LINES SHOULD BE PUT IN BUT UNDERGROUND ONLY.
RAISES IN RATES.
RELIABILITY OF SERVICE. RE-USE OF RENEWABLE ENERGY.
THE COST IS ONE AND HOW MUCH THE CUSTOMERS NEED THE POWER.
THE HIKE IN COST. THE ECONOMY DOESN'T CALL FOR SPENDING MORE MONEY.
THE PEOPLE WHO LIVE THERE.
THE PEOPLES VIEWS AND THE LAND
THE SOONER THE BETTER.
THEY DO NEED SOMETHING DONE.
THEY NEED POWER LINES. IT SHOULD BE BUILT UNDERNEATH.
THEY NEED TO GIVE ME A LOT MORE INFORMATION. THIS SURVEY IS THE FIRST I'VE HEARD ABOUT IT.
THEY SHOULD NOT PUSH THAT SO FAST AND DO PHONE STUDIES FIRST.
WE DO NOT NEED A NEW FEEDER LINE. NOT OUTAGES WHERE I LIVE.
WHETHER IT IS REALLY NECESSARY.
WHETHER PEOPLE CARE ABOUT THE OUTAGES.
WHY CAN'T THEY BURY THEM.
WISH SOMETHING COULD BE DONE W/O ELECTRIC BILL GOING UP.
WOULDN'T WANT TO BLOCK VIEW/WOULDN'T COST MORE.

BECAUSE ITS A GREAT VALUE AND RELIABLE SERVICE.

I DON'T WANT IT.

I HAVE A DIFFERENT SERVICE THAT I LIKE.

IT IS RELIABLE.

IT WORKS BETTER THAN WHEN I LIVED ON THE OTHER SIDE OF THE STATE.

NOT GREAT SERVICE.

PHONE SUCKS BUT INTERNET IS GOOD.

SHE GETS WHAT SHE WANTS OUT OF IT.

THE INTERNET SERVICE IS SLOW & EXPENSIVE.

TOO SLOW.

WE ARE RETIRED AND WE DON'T NEED THESE SERVICES.

ALREADY HAVE SERVICE.
ALREADY WITH ANOTHER PROVIDER.
BECAUSE AN ANTENNA IS NEEDED & THATS TO MUCH WORK
BECAUSE I LIKE THE SERVICE I ALREADY HAVE. THE PEOPLE I KNOW WHO HAVE THEIR SERVICE SAY IT'S NOT RELIABLE.
BECAUSE I LIKE THE SERVICE WE HAVE.
BECAUSE I SPEND ONLY SEVEN MONTHS OF THE YEAR HERE SO FAR.
BECAUSE I WANT THEM TO STICK TO ELECTRICITY.
BECAUSE I'M WITH QWEST.
BECAUSE IT DOES NOT REACH OUT HERE AT HOME.
BECAUSE ITS NOT AVAILABLE TO US IN THIS AREA.
BECAUSE IT'S TOO EXPENSIVE.
BECAUSE MY HUSBAND RUNS COMPETITION.
BECAUSE OF COST.
BECAUSE THE INSTALATION IS TOO EXPENSIVE.
BECAUSE THEY DON'T OFFER T.V. AND MY HUSBAND WOULD HAVE A HISSY FIT!
BECAUSE WE WERE LEAVING.
BETTER PROVISION BY ANOTHER SOURCE (QWEST).
BROADBAND IS CHEAPER.
BUNDLE WITH QWEST.
CABLE IS FASTER.
CHEAPER PACKAGE.
CONTENT WITH WHAT I HAVE.
COST & AVAILABILITY.
COST AND ANTENA ON THE HOUSE.
COST.
COST.
COST.
COST.
COST. QWEST IS BETTER.
DIDN'T HAVE THAT GOOD OF COVERAGE.
DIDN'T KNOW UNTIL TOO LATE.
DIRECT TV WILL KICK THEIR BUTT.
DO NOT HAVE COMPUTER.
DO NOT HAVE THE EXPENSES.
DON'T LEAVE IN THE HOME.
DON'T USE INTERNET.
DON'T USE THE COMPUTER MUCH.
FAMILIARITY WITH COMPETING COMPANIES.
FIND OTHER CHEAPER SERVICES.
GO WITH A DIFFERENT COMPANY BECAUSE IT'S CHEAPER.
HATE TO SWITCH IT'S A HASSEL, WHEN THE TIME IS RIGHT I WILL.
HAVE A BETTER OFFER FROM A DIFFERENT COMPANY.
HAVE SATELLITE INTERNET
HERE IN TOWN (COX) DOES A BETTER JOB.
I ALREADY HAD SERVICE IN PLACE WHEN THEY STARTED OFFERING IT. IT'S TOO MUCH OF A HASSLE TO CHANGE IT.
I ALREADY HAVE ANOTHER SERVICE.
I ALREADY HAVE COX CABLE AND SEPERATE PHONE SERVICE AND SEPARATE PHONE SERVICE. I DON'T WANT TO CHANGE OR DEAL WITH ANY MORE CARRIERS.
I ALREADY HAVE INTERNET THROUGH THE CABLE COMPANY.
I AM ALREADY SET UP.
I CAN GET OTHERS CHEAPER.
I CAN'T REMEMBER WHY.
I DID NOT KNOW HOW LONG I WOULD BE LIVING THERE.
I DON NOT NEED IT.
I DON'T BECAUSE THEY REQUIRE A CONTRACT.
I DON'T DO COMPUTERS.
I DON'T HAVE & I DON'T WANT A COMPUTER.
I DON'T HAVE A COMPUTER AND DON'T TRUST THEM.
I DON'T HAVE A COMPUTER AND DON'T WANT ONE.
I DON'T HAVE A COMPUTER.
I DON'T HAVE A COMPUTER. I ONLY OWN A CELL PHONE. I TOOK OUT THE LAND LINE.

I DON'T HAVE INTERNET.
I DON'T HAVE THE CONNECTIONS FOR IT.
I DON'T KNOW HOW TO USE A COMPUTER
I DON'T KNOW.
I DON'T LIKE MODEM INTERNET.
I DON'T NEED IT.
I DON'T NEED IT.
I DON'T NEED IT.
I DON'T NEED IT.
I DON'T THINK IT WOULD BE AS EFFECTIVE AS QWEST, WHICH I HAVE.
I DON'T WANT IT.
I DON'T WANT IT.
I DON'T WANT TO CHANGE.
I DON'T WANT TO GET INTO THE INTERNET OR DIGITAL PHONE SERVICE STUFF. I'M TOO OLD.
I FIND IT NOT AS RELIABLE AS CABLE.
I FOUND BETTER SERVICE.
I GET BETTER RATES WITH OTHER PEOPLE.
I GET HIGH SPEED INTERNET FROM ANOTHER PROVIDER.
I GET MINE FROM THE TELEPHONE COMPANY.
I HAVE A BETTER DEAL NOW COSTWISE.
I HAVE ANOTHER SERVICE I'M HAPPY WITH.
I HAVE BEEN WITH VALLEY TELECOM FOR LONG TIME.
I HAVE COX CABLE.
I HAVE FASTER SERVICE WITH CABLE.
I HAVE HIGH SPEED THROUGH COX.
I HAVE NO COMPUTER.
I HAVE OTHER INTERNET SERVICE.
I HAVE QWEST.
I HAVE SERVICE ELSEWHERE.
I HAVE SOMETHING ELSE.
I HAVEN'T CHECKED INTO IT ENOUGH TO KNOW.
I HAVEN'T HAD A NEED FOR IT YET.
I HAVEN'T HEARD ABOUT IT. I HAVE EVERYTHING THROUGH COX.
I HAVEN'T INQUIRED ABOUT IT, I USE ANOTHER SERVICE AND JUST STUCK WITH IT.
I JUST DON'T NEED IT AT THIS POINT IN MY LIFE.
I JUST FOUND OUT ABOUT THE SERVICE.
I JUST HAVEN'T LOOKED INTO IT.
I LIKE COX INTERNET.
I LIKE MINE BETTER.
I LIKE WHAT I ALREADY HAVE.
I LIKE WHAT I HAVE.
I NEVER HAVE, I'M HAPPY WITH QWEST.
I PREFER CABLE MODEMS & CELL PHONES.
I SERVICE THROUGH QWEST.
I WAS WITH QWEST BEFORE I FOUND OUT ABOUT IT.
I'M HAPPY WITH COX.
I'M HAPPY WITH COX.
I'M HAPPY WITH VTC.
I'M HAPPY WITH WHAT I HAVE - ANOTHER SERVICE.
I'M HAPPY WITH WHAT I'VE GOT.
I'M KIND OF CHALLENGED BY TECHNOLOGY. I DON'T HAVE A COMPUTER.
I'M LAZY.
I'M NOT INTERESTED IN THIS.
I'M ON A FIXED INCOME AND CAN'T AFFORD THAT LUXURY.
I'M ONLY HERE FOR A SHORT TIME IN THE WINTER, SO I DON'T NEED IT. I DO LEAVE THE ELECTRICITY ON ALL YEAR.
I'M PRETTY HAPPY WITH QWEST.
I'M RETIRED FROM QWEST AND I GET MY PHONE FREE.
I'M SATISFIED WITH MY CURRENT SERVICE.
I'M SATISFIED WITH WHAT I HAVE.
I'M WITH ANOTHER PROVIDER.
INCOME.
IS NOT COST EFFECTIVE.
IT DOESN'T REACH TO MY RESIDENCE.
IT DOESN'T WORK VERY WELL.
IT IS TOO EXPENSIVE.
IT WOULD BE MORE COSTLY TO ME.
IT'S CHEAPER WITH ANOTHER COMPANY.
IT'S EXPENSIVE.

IT'S MORE EXPENSIVE THAN MY SERVICE.
IT'S NOT AVAILABLE IN MY AREA ANYMORE.
IT'S NOT WORTH THE MONEY TO ME.
IT'S TOO EXPENSIVE AND THE ECONOMY IS BAD.
IT'S TOO EXPENSIVE.
I'VE GOT QWEST & TOO MUCH WORK TO CHANGE OVER.
I'VE HAD THE SAME SERVICE FOR OVER 10 YEARS AND AM HAPPY WITH IT!
JUST USE CELL PHONE RURAL AREA.
MONEY!
MORE EXPENSIVE.
MUCH BETTER DEAL WITH DIFFERENT PROVIDERS.
MY COMPANY PROVIDES FOR FREE.
MY COMPUTER IS NOT THAT GOOD, SO IT WOULDN'T BE WORTH IT FOR ME
MY FATHER IS 91. HE HAS NO INTEREST IN COMPUTERS.
MY HUSBAND HAS RETIRED FROM QWEST AND GETS IT FREE.
NEVER NEEDED IT. I'M HAPPY WITH THE SERVICE SHE HAS.
NEVER REALLY THOUGHT ABOUT IT.
NEW TO RECENT SERVICE.
NO BECAUSE CAN'T EXCEPT IT WHERE I LIVE AT THIS APARTMENT.
NO COMPETITIVE PRICES.
NO COMPUTER.
NO NEED.
NO REASON
NO REASONS.
NONE
NOT ENOUGH EFFICIENCY IN SERVICE.
NOT ENOUGH MONEY.
NOT HOME ENOUGH.
NOT INTERESTED. NO NEED.
OUT OF THE AREA.
PHONE DON'T EXCEPT HIGH SPEED.
PRICES TOO HIGH.
PROBLEMS WITH RELIABILITY.
QWEST HAS BETTER PRICES
QWEST IS CHEAPER & BETTER & THAT'S WHAT WE HAVE.
QWEST IS CHEAPER.
SERVICE ELSEWHERE.
SERVICE ELSEWHERE.
SET WITH SOMEONE ELSE.
SIGNING A CONTRACT.
SOMEONE ELSE IS MORE COST EFFICIENT.
SOMEONE ELSE PROVIDES IT.
THE COST
THE COST IS TOO HIGH.
THE COST MORE EXPENSIVE.
THE SPEED AND RELIABILITY.
THE TIMING WAS WRONG.
THERE IS HIGHER SPEED INTERNET WHERE I AM.
THEY ARE A POWER COMPANY, NOT A COMPUTER/INTERNET COMPANY.
THEY DON'T RESPOND TO MY PHONE CALLS!
THEY WEREN'T COMPETITIVE TO OTHER COMPANY BUNDLES.
TOO COSTLY.
TOO EXPENSIVE.
TOO EXPENSIVE.
TOO EXPENSIVE.
TOO EXPENSIVE.
TOO MUCH TROUBLE AND COST.
WE ALREADY HAVE ANOTHER SERVICE WE'RE HAPPY WITH.
WE ALREADY HAVE COX.
WE ALREADY HAVE IT THRU DIRECT.
WE ARE AN OLDER COUPLE AND NOT UP ON TECHNOLOGY TODAY.
WE ARE HAPPY WITH THE SERVICE WE HAVE.
WE ARE HAPPY WITH WHAT WE HAVE AND THEY MAKE TOO MANY CHANGES.
WE ARE SET WITH WHAT WE HAVE.
WE ARE WITH VALLEY TELEPHONE - LOCAL COOP & SULPHUR SPRING'S INTERNET IS NEWER.

WE BUNDLE WITH COX BECAUSE IT'S CHEAPER.
WE DON'T HAVE LAND LINES. WE ONLY HAVE CELL PHONES.
WE HAD IT AND IT WAS SLOWER WE HAVE BROADBAND NOW.
WE HAD QWEST FIRST AND NEVER DECIDED TO SWITCH.
WE HAD QWEST FIRST AND NEVER SWITCHED.
WE HAVE A BUNDLED PACKAGE FROM ANOTHER PROVIDER.
WE HAVE ALWAYS HAD OTHER SERVICE.
WE HAVE DIFFERENT SOURCES
WE HAVE IT WITH VALLEY.
WE HAVEN'T LOOKED INTO MUCH!
WE SUBSCRIBE TO VERIZON AND WE GET A MAJOR DISCOUNT BECAUSE MY HUSBAND IS RETIRED FROM VERIZON.
WE USE A COMPUTER AT OUR IN-LAWS HOME.
WE WENT WITH SOMETHING BETTER.
WE WERE NOT ABLE TO GET IT.
WE'RE REMODELING.
WE'VE HAD QWEST FOR YEARS & I'M HAPPY WITH THEIR SERVICE.
WHEN I FIRST MOVED HERE VALLEY TELECOM GOT HERE 1ST.
WHEN I MOVED HERE THE ONLY ONE I COULD GET WAS VALLEY TEL AND THAT'S WHAT I HAVE NOW.
WHEN I FIRST GOT MY CURRENT SERVICE, I DIDN'T KNOW SULPHUR SPRINGS ELECTRIC OFFERED IT.
WHERE I AM, IT IS NOT AVAILABLE YET.
WHERE I'M AT SERVICES ARE NOT THAT GREAT. I USE WIRELESS AND IT WORKS GREAT.

ORIGINAL

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BEFORE THE ARIZONA CORPORATION COMMISSION
RECEIVED

COMMISSIONERS
KRISTIN K. MAYES
GARY PIERCE
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP

2010 MAR 16 P 4:11
AZ CORP COMMISSION
DOCKET CONTROL

3/2

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-08-0328

IN THE MATTER OF THE APPLICATION OF
SULPHUR SPRINGS VALLEY ELECTRIC
COOPERATIVE, INC. FOR AN ORDER
INSTITUTING A MORATORIUM ON THE
NEW CONNECTIONS TO THE V-7 FEEDER
LINE SERVING THE AREAS OF
WHETSTONE, RAIN VALLEY, ELGIN,
CANELO, SONOITA, AND PATAGONIA,
ARIZONA.

DOCKET NO. E-01575A-09-0453
**STAFF'S NOTICE OF FILING
DIRECT TESTIMONY**

Staff of the Arizona Corporation Commission ("Staff") hereby files the Direct Testimony of
Staff Witness Elijah Abinah in the above-referenced matter.

RESPECTFULLY SUBMITTED this 16th day of March, 2010.

Arizona Corporation Commission
DOCKETED
MAR 16 2010
DOCKETED BY [Signature]

Wesley Van Cleve
Wesley C. Van Cleve, Attorney
Kevin O. Torrey, Attorney
Charles H. Hains, Attorney
Legal Division
Arizona Corporation Commission
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Phoenix, Arizona 85007
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1 Original and thirteen (13) copies
of the foregoing were filed this
2 16th day of March, 2010 with:

3 Docket Control
Arizona Corporation Commission
4 1200 West Washington Street
Phoenix, Arizona 85007
5

6 Copies of the foregoing mailed this
7 16th day of March, 2010 to:

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BEFORE THE ARIZONA CORPORATION COMMISSION

KRISTIN K. MAYES

Chairman

GARY PIERCE

Commissioner

PAUL NEWMAN

Commissioner

SANDRA D. KENNEDY

Commissioner

BOB STUMP

Commissioner

IN THE MATTER OF THE APPLICATION OF)
SULPHUR SPRINGS VALLEY ELECTRIC)
COOPERATIVE, INC. FOR APPROVAL OF A)
RATE INCREASE)

DOCKET NO. E-01575A-08-0328

IN THE MATTER OF THE APPLICATION OF)
SULPHUR SPRINGS VALLEY ELECTRIC)
COOPERATIVE, INC. FOR AN ORDER)
INSTITUTING A MORATORIUM ON NEW)
CONNECTIONS TO THE V-7 FEEDER LINE)
SERVING THE WHETSTONE, RAIN VALLEY)
ELGIN, CANELO, SONOITA, AND)
PATAGONIA, ARIZONA AREAS)

DOCKET NO. E-01575A-09-0453

DIRECT

TESTIMONY

OF

ELIJAH O. ABINAH

ASSISTANT DIRECTOR

UTILITES DIVISION

ARIZONA CORPORATION COMMISSION

MARCH 16, 2010

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1 **INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Elijah O. Abinah. My business address is 1200 West Washington Street,
4 Phoenix, Arizona, 85007.

5
6 **Q. Where are you employed and in what capacity?**

7 A. I am employed by the Utilities Division ("Staff") of the Arizona Corporation Commission
8 ("ACC" or "Commission") as the Assistant Director.

9
10 **Q. How long have you been employed with the Utilities Division?**

11 A. I have been employed with the Utilities Division since January 2003.

12
13 **Q. Please describe your educational background and professional experience.**

14 A. I received a Bachelor of Science degree in Accounting from the University of Central
15 Oklahoma in Edmond, Oklahoma. I also received a Master of Management degree from
16 Southern Nazarene University in Bethany, Oklahoma. Prior to my employment with the
17 ACC, I was employed by the Oklahoma Corporation Commission for approximately eight
18 and a half years in various capacities in the Telecommunications Division.

19
20 **Q. What are your current responsibilities?**

21 A. As the Assistant Director, I review submissions that are filed with the Commission and
22 make policy recommendations to the Director regarding those filings.

23

1 **Q. What is the purpose of your testimony?**

2 A. The purpose of my testimony is to provide policy recommendations in response to Sulphur
3 Springs Valley Electric Cooperative, Inc.'s ("SSVEC" or "Company") Motion to Amend
4 Commission Decision No. 71274. The petition to amend Decision No. 71274 is pursuant
5 to A.R.S. §40-252 and related authorization.

6
7 **Q. Are you providing any technical recommendations?**

8 A. No.
9

10 **BACKGROUND**

11 **Q. Can you please provide a brief background?**

12 A. Yes. On June 30, 2008, SSVEC filed an application for a rate increase with the
13 Commission. SSVEC is a member-owned, non-profit cooperative that provides electric
14 distribution services to approximately 51,000 customers in Cochise, Santa Cruz, Pima and
15 Graham Counties, Arizona.

16
17 In addition to the rate increase in its application, SSVEC presented evidence and argued
18 that the construction of a 69 kV transmission line serving the Sonoita area, known as the
19 Sonoita Reliability Project, is needed to ensure reliable service.

20
21 On September 8, 2009, the Commission issued Decision No. 71274. Among other things,
22 the Decision states that:

23
24 *"Sulphur Springs Valley Electric Cooperative, Inc, as a matter*
25 *compliance, shall docket by December 31, 2009, a feasibility study*
26 *prepared by an independent third party that includes alternatives*
27 *(including use of distributed renewable energy) that could mitigate the*
28 *need for construction of SSVEC in a proposed 69kV project."*
29

1 *"Sulphur Springs Valley Electric Cooperative, Inc. shall not commence*
2 *construction of the referenced 69kV line until the public has had an*
3 *opportunity to review and comment on the report and until further Order*
4 *of the Commission."*
5

6 On December 31, 2009, in compliance with Decision No. 71274, SSVEC filed the
7 independent study with the Commission.

8
9 On January 14, 2010, SSVEC filed in this docket, a petition to amend Decision No. 71274
10 pursuant to ARS §40-252 and for related authorization.

11
12 **Q. Can you please briefly describe SSVEC's request?**

13 A. Yes. The Company petitioned the Commission to issue an order amending its previous
14 Decision dated September 8, 2009, regarding the authorization for SSVEC to construct the
15 69 kV sub-transmission power line ("69 kV line"). SSVEC requests that it be allowed to
16 immediately begin construction of the 69 kV line.

17
18 In addition, SSVEC requests that its petition be expeditiously heard. The petition also
19 seeks to have the Commission vacate its order requiring the Company to conduct forums
20 allowing public input into the Feasibility Study and requests immediate construction of the
21 69 kV line.

22
23 **Q. What was the reason cited by SSVEC for its request?**

24 A. SSVEC asserts that the independent study confirms the evidence presented by SSVEC in
25 the rate case docket that the expeditious construction of the 69 kV line is the only proven
26 and viable solution from a technical and economic standpoint to alleviate the performance,
27 reliability and capacity constraint of the existing V-7 feeder line.

28

1 **Q. Did Staff review the independent third party feasibility study?**

2 A. Yes. Staff will discuss its findings and recommendations later in this testimony.

3

4 **Q. What are Staff's recommendations?**

5 A. Staff recommends the following:

6

7 • Consistent with the prior Administrative Law Judge's recommendation, Staff believes
8 that the Company has demonstrated the need for the line. Therefore, Staff
9 recommends that the Commission grant the Company's request to amend Decision
10 No. 71274, which will allow the Company to commence with the construction of the
11 line;

12 • Staff recommends that SSVEC, as stated in its request, file a Motion to Withdraw its
13 Motion for Reconsideration, and the Application for Moratorium;

14 • Staff recommends that the Company implement the recommendation of the
15 independent consultant, to modify employee schedules as appropriate to help mitigate
16 the length of outages (page 14-15 of the independent report);

17 • Staff recommends that the Company file, as a compliance item in this docket, a
18 detailed plan of how the Company will encourage and educate its customers on the use
19 of renewable energy;

20 • Staff further recommends that the Company educate and encourage its customers on
21 measures such as energy efficiency; and,

22 • Staff further recommends that the Commission deny the Company's request to vacate
23 the requirement that the Company first conduct public forums before the Commission
24 will authorize SSVEC to construct the line.

25

1 **Q. Does Staff have additional issues that need to be addressed?**

2 A. Yes. In addition to the Company's request, Staff intends to address the following:

3

4 1. The issue of easement as it relates to the current V-7 25 kV feeder line
5 transmission line.

6 2. The issue raised on lines 16-20 on page 48 of Commission Decision No. 71274
7 (which includes alternative resources in order to mitigate the need for the 69 kV
8 line).

9 3. The third party independent feasibility study.

10 4. Action that the Company needs to implement to mitigate the length of the outage.

11

12

Easement

13 **Q. Can you please briefly explain the type of easement at issue?**

14 A. Yes. Based on the response to STF1.1, SSVEC claims that SSVEC's rights to the existing
15 V-7 25 kV feeder are held under an easement by prescription, which is established by
16 operation of law resulting from general legal principles.

17

18 **Q. Are you providing a legal opinion or recommendation?**

19 A. No. Staff believes the issue of what constitutes an easement, and what type of easement is
20 applicable should be addressed in detail through legal briefs and/or argument as is
21 necessary.

22

1 **Q. Does Staff believe that the Company has the ability to upgrade the existing V-7 25 kV**
2 **feeder?**

3 A. Yes. Staff believes that modification and upgrade to the existing V-7 25 kV line is
4 technically feasible. However, Staff does not believe it will be cost effective, nor viable to
5 do so for the following reasons:

- 6
- 7 1. Number of property owners, including governmental agencies such as Arizona
8 State Land involved in the easement;
 - 9 2. Cost to obtain right of way;
 - 10 3. Risk involved in modifying the easement (such as litigation risk); and,
 - 11 4. The amount of time and money that will be expended.
- 12

13 **Q. Please describe what changes can be made to the easement.**

14 A. According to the Company, the existing V-7 25 kV feeder line could be upgraded by
15 changing the conductors where possible, but by doing so, the Company would have to
16 replace poles and widen the easement. Changes which would be required include the
17 widening of the easement to 50 feet to accommodate the taller replacement poles and the
18 safety requirements for clearances. Additionally, there would be material changes with
19 the addition of four more wires for the 69 kV line and the fiber optic cable for the Smart
20 Grid Project.

21

22 The Company believes that replacing the poles and widening the easement would be an
23 impermissible burden on the existing easement.

24

1 **Q. Does Staff believe that changing the conductors where possible would constitute a**
2 **modification to the easement?**

3 A. Yes. As stated above, changing the conductors where possible would result in pole
4 replacement and widening of the easement. This would require the Company to initiate a
5 discussion with property owners and other agencies in an attempt to modify the easement.
6

7 **Q. How many property owners, governmental agencies and other agencies will be**
8 **involved in the discussion?**

9 A. Based on the response to Staff's data request, there are 98 private property owners,
10 Arizona State Land and Las Cienegas National Conservation Area.
11

12 **Q. What is the probability that SSVEC will successfully negotiate and receive easements**
13 **from all the property owners including Arizona State Land and Las Cienegas**
14 **National Conservation Area?**

15 A. Staff cannot predict the outcome of such negotiations. However, based on the response
16 from Staff's data request, the Company states that the probability that SSVEC would
17 receive easements for all 98 parcels is slim at best. Therefore, an Eminent Domain or
18 condemnation action would likely be required for SSVEC to finalize the remainder of the
19 parcels.
20

21 **Q. Has the Company made any attempt to meet with the property owners?**

22 A. Yes. SSVEC claims that at a community information session, the Company met with
23 several of the landowners along the existing V-7 line, at their request, when they heard of
24 the suggestions by the Sonoita opposition to upgrade the existing line to 69 kV. These
25 landowners were adamant they would not grant any new easements for the new line, and
26 would challenge SSVEC if such a modification was attempted.

1 Further, at the meeting, according to SSVEC, it was stated that some landowners had
2 purchased their property upon the expectation that the 69 kV line would be constructed in
3 SSVEC's existing easement on the Babocomari Land Grant, and modifying that plan
4 would potentially expose SSVEC to litigation from those landowners.

5
6 **Q. Are there other issues relating to the easements?**

7 A. Yes. Staff inquired of the Company as to the due diligence performed in determining the
8 limitation of the prescriptive easement. In addition, Staff inquired whether SSVEC has
9 contacted the property owners regarding the possibility of modifying or attempting to
10 obtain appropriate grants of easement.

11
12 **Q. What was the Company's response?**

13 A. According to the Company, the requirements for the Arizona State Land Department
14 would be to file applications for Rights of Way, which would require the inclusion of full
15 boundary and cultural surveys. The Las Cienegas National Conversation Area would
16 require a full boundary survey, an Environmental Impact Statement, and other related
17 applications to satisfy the Federal permitting requirements. The Company estimated time
18 frames for application processing would be a minimum of 2-3 years.

19
20 In addition, the Company explained that the private property rights are more complicated
21 because of the limitations of the prescriptive rights. According to SSVEC, the prescriptive
22 easement is based upon hostile occupation. Therefore, if SSVEC were to begin
23 discussions with landowners regarding permission to perfect or change the easement, there
24 would be a possibility of losing the prescriptive right due to the effects under permissive
25 use.

26

1 According to SSVEC, in order to fully perfect the prescriptive rights, SSVEC would be
2 required to file a Quiet Title Action against all private landowners on the V-7. This would
3 only solidify the record of the prescriptive use right. If SSVEC then wished to upgrade to
4 an express, or written, easement it would be able to go to each landowner and negotiate
5 for the upgraded rights.
6

7 **Q. Has Staff quantified the cost of negotiating the right of way?**

8 A. The Company states that the costs of the applications, surveys, environmental studies, and
9 easement payments are estimated at \$1.8 – 2.2 million, which does not include the cost of
10 any legal actions.
11

12 **Q. Does Staff have additional comment relating to the easement?**

13 A. Yes. Based on the conversation with the Company and response to data request, although
14 Staff believes that upgrading the existing V-7 25 kV transmission line is technically
15 feasible, Staff believes it is not viable. Because of the present need for the improvements
16 to service in the area, and the prospect of lengthy condemnation proceedings and
17 Regulatory approval processes, this alternative does not adequately mitigate the current
18 need for an additional 69 kV line.
19

20 *Alternatives*

21 **Q. Does Staff believe that there are alternative resources, which could mitigate the need
22 for the line?**

23 A. Yes. Staff believes that there are alternatives. However, those alternatives are not viable
24 either due to timing issues, cost effectiveness, other environment concerns and reliability.
25

1 **Q. Can you please describe those alternatives?**

2 A. Yes. From Staff's point of view, Staff believes the following alternatives are available to
3 the Company.

- 4
- 5 1. The Company can construct its own generating plant such as nuclear, gas, bio-
6 diesel within the load pocket;
 - 7 2. The Company can purchase a generating plant from a third party such as a
8 merchant generator;
 - 9 3. The Company can enter into a Power Purchase Agreement ("PPA") with another
10 energy provider;
 - 11 4. The Company can contract with other electric generating companies such as UNS
12 Electric;
 - 13 5. The Company can institute energy saving programs such as energy efficiency; and,
14 6. The Company can utilize renewable resources such as solar, wind etc.

15

16 **Q. What are Staff's recommendations on Alternative 1 (construction of a power plant
17 such as nuclear, gas or bio-diesel)?**

18 A. Staff is not recommending that the Company construct its own generating plant station.
19

20 **Q. Why is Staff recommending against the construction of a power plant?**

21 A. Although Staff believes this is a viable option, Staff is recommending against construction
22 for the following reasons:

- 23
- 24 • The Company is not in the business of generating electricity; the Company is in
25 the business of distribution;
 - 26 • The cost of building a power plant today outweighs the benefit; and,

- 1 • The process of obtaining approval for construction is lengthy.

2
3 **Q. Did the Company at one time contemplate building its own generating plant?**

4 A. Yes. According to the Company's responses to Staff's data request, at one time SSVEC
5 considered installing its own generation, but has since determined that this generation is
6 not appropriate for SSVEC at this time.

7
8 **Q. What was SSVEC's rationale for such a decision not to procure its own generating
9 plant?**

10 A. SSVEC believes that the best choices for increasing its power supply, at present, is by
11 participating with other cooperatives, municipalities, and Indian tribes in a combined
12 purchase which gives the group lower prices and economies of scale that they would not
13 normally be able to obtain. The Company believes this could be achieved through the
14 group known as the Southwest Purchase Power Resources group or SPPR.

15
16 **Q. Has Staff quantified the cost of constructing a power plant?**

17 A. According to the Company, at the time it was considering its own generation, a 40 MW
18 gas-fired peaking unit would have cost approximately \$50 million dollars. Such a facility,
19 according to the Company, would have to be located near the Company's primary load
20 center in the Sierra Vista area, which would have given it access to high pressure gas
21 lines, existing transmission and sub-transmission facility (including a bio-diesel facility) in
22 the Affected Areas for many reasons including, but not limited to, the lack of transmission
23 for the excess power that would need to be exported in to other areas of the SSVEC
24 system. SSVEC would still need to build the 69 kV line (or a bigger transmission line) to
25 transport the power generated from such a facility to the affected areas. SSVEC can solve
26 the capacity and reliability problems in the Affected Areas through the construction of the

1 69 kV line and substation for approximately \$13 million without the necessity of spending
2 millions of additional dollars on a generating facility that would require construction of
3 the same 69 kV line (or an even larger transmission line) anyway. Additionally, the added
4 permitting and construction time for this alternative do not adequately resolve the current
5 service issues facing SSVEC.

6
7 **Q. What is Staff's recommendation as it relates to a purchase of a power plant from a**
8 **merchant?**

9 A. Staff does not believe there is a plant for sale in SSVEC's service area. Staff notes that in
10 the event that an appropriate generating plant were for sale that the underlying issue of
11 moving the power into the affected areas would still necessitate improved transmission
12 capabilities.

13
14 **Q. Can SSVEC enter into a PPA?**

15 A. Yes. Staff recommends that the Company consider entering into a PPA where it is
16 technically and financially feasible. In addition, if and when it is technically and
17 financially feasible, the Company should engage companies such as UNSE with the
18 possibility of negotiation of a PPA.

19
20 **Q. Can the Company utilize renewable energy?**

21 A. Yes. Staff believes that the Company can and should utilize renewable energy. The
22 Company can install a large utility scale solar project and also encourage distributed
23 energy in the Affected Area. Again, Staff would note that the adequacy of service issues
24 present in the Affected Areas will still require moving generated electricity to the load.
25 As such, necessary improvements to transmission within the Affected Area will not be
26 avoided by installing new generation alone.

1 **Q. Does Staff believe there is enough distributed renewable energy today to mitigate the**
2 **need for the line?**

3 A. No. Staff believes that distributed energy can help over time as participation increases.
4 However, the present service issues in the Affected Areas will not be resolved in a timely
5 manner by distributed generation.
6

7 **Q. What is Staff's recommendation?**

8 A. Staff recommends that the Company provide the Commission a detailed plan on how to
9 encourage its customers to take advantage of distributed energy. In addition, Staff
10 recommends that the Company propose a detailed method on how the Company will
11 promote distributed energy.
12

13 *Comment on the Third Party Independent Report*

14 **Q. Did Staff inquire as to whether SSVEC found any recommendations in the Study**
15 **that would facilitate a review of its procedures regarding reducing outage time in the**
16 **Affected Areas?**

17 A. Yes.
18

19 **Q. What was the recommendation of the Independent Consultant?**

20 A. The Independent Study recommends on pages 14-15, that supplementing crews or
21 extending coverage during the periods of high outage frequency. If SSVEC has not
22 already implemented such measures, they may prove to be cost effective for reducing
23 outages on the V-7 feeder.
24

1 **Q. What was the Company's response?**

2 A. Based on the response to Staff's data request, SSVEC stated that currently the Company
3 has doubled its service and on-call crews during these periods from regular staffing levels,
4 and extended its operating coverage through split hour shifts.

5

6 In addition, SSVEC claims that although Navigant did not analyze SSVEC's current
7 procedures, its recommendation is common in the industry, and SSVEC has implemented
8 this recommendation. Also, SSVEC stated that the Company has investigated the
9 possibility of 'staffing' the Affected Area with Service personnel. The Company believes
10 that if those changes were to be implemented (staffing the Affected Area with service
11 personnel) those staff members would have to be relocated, and the Company would have
12 to acquire a number of properties large enough to accommodate equipment, supplies, and
13 vehicles. Based on these factors, SSVEC does not believe the costs justify the additional
14 facilities.

15

16 **Q. What is Staff's recommendation?**

17 A. Staff recommends that the Company revisit this issue and file the result of its investigation
18 as a compliance item in this docket, no later than June 30, 2010.

19

20 **Q. What are Staff's overall recommendations?**

21 A. From a technical perspective Staff has review the actions taken by the Company and
22 found those actions to be reasonable. Based on the above, Staff recommends the
23 following:

24

- 25 • Consistent with the prior Administrative Law Judge's recommendation, Staff believes
26 that the Company has demonstrated the need for the line. Therefore, Staff

1 recommends that the Commission grant the Company's request to amend Decision
2 No. 71274, which will allow the Company to commence with the construction of the
3 line;

- 4 • Staff recommends that SSVEC, as stated in its request, file a Motion to Withdraw its
5 Motion for Reconsideration, and the Application for Moratorium;
- 6 • Staff recommends that the Company implement the recommendation of the
7 independent consultant, to modify employee schedules as appropriate to help mitigate
8 the length of outages (page 14-15 of the independent report);
- 9 • Staff recommends that the Company file, as a compliance item in this docket, a
10 detailed plan of how the Company will encourage and educate its customers on the use
11 of renewable energy;
- 12 • Staff further recommends that the Company educate and encourage its customers on
13 measures such as energy efficiency; and,
- 14 • Staff further recommends that the Commission deny the Company's request to vacate
15 the requirement that the Company first conduct public forums before the Commission
16 will authorize SSVEC to construct the line.

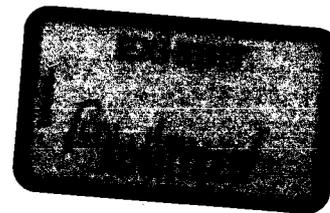
17
18 **Q. Does this conclude your Direct Testimony?**

19 **A.** Yes it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

Kristin K. Mayes
Gary Pierce
Sandra D. Kennedy
Paul Newman
Bob Stump



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-08-0328

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR AN ORDER INSTITUTING A MORATORIUM ON THE NEW CONNECTIONS TO THE V-7 FEEDER LINE SERVING THE AREAS OF WHETSTONE, RAIN VALLEY, ELGIN, CANELO, SONOITA, AND PATAGONIA, ARIZONA.

Docket No. E-01575A-09-0453

LINDA KENNEDY DIRECT TESTIMONY
IN SUPPORT OF INTERVENOR JAMES F. ROWLEY III

16 MARCH 2010

This filing contains my Direct Testimony in support of Intervenor James F. Rowley III who requested that I be a witness in these hearings.

I was asked by Mr. Rowley to prepare a graphical depiction of numeric data provided by Sulphur Springs Valley Electric Cooperative.

I certify this filing has been mailed or delivered to parties on the Service List this date.

Respectfully submitted on this 16th day of March 2010.

LINDA KENNEDY

By 
Linda Kennedy

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DIRECT TESTIMONY

OF

Linda Kennedy

AS A

WITNESS

FOR

James F. Rowley III,

INTERVENOR

16 MARCH 2010

IN THE MATTERS

OF

THE APPLICATION[S] 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.**

AND

**FOR AN ORDER INSTITUTING A MORATORIUM ON THE NEW CONNECTIONS TO THE V-7
FEEDER LINE SERVING THE AREAS OF WHETSTONE, RAIN VALLEY, ELGIN, CANELO, SONOITA,
AND PATAGONIA, ARIZONA.**

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6. This Witness Testimony.

Q. Why are you a witness in these proceedings?

A. As I had generated the graphics, I should be prepared to explain my methodology. Notes made during the preparation of the graphs were used to prepare Exhibit 1, Protocol: Display of Data.

Q. Would you care to interpret the graphs included in Exhibit 1?

A. No, I am not qualified to interpret the meaning of these graphs. An average, which I used in these graphs, is one means to describe distribution of data and is not difficult to calculate. Electrical flow, which is what these data seem to describe, is not my area of expertise. I can describe the graphs but it would be inappropriate for me to interpret them.

Exhibit 1

Protocol: Display of Data
Prepared by: Linda Kennedy, Ph.D.
Date: February 23, 2010

Project: Prepare a graphic display of data from C.D. received from James F. Rowley III (JR) and labeled:

Downing – Set One
Data Request
E-01575A-09-0453
DRI – 1
January 29, 2010

Methods:

C.D. contained one file, "DR1-1_01292010.xls"

I transferred the complete file from C.D. to hard drive (size as transferred 34,602 kb)

The file contained an Excel spreadsheet with 5 worksheets labeled: 2005, 2006, 2007, 2008, 2009.

Each worksheet contained data w/headings of:

Date	Time	kW			kVAR			kVA		
		A- Phase	B- Phase	C- Phase	A- Phase	B- Phase	C- Phase	A- Phase	B- Phase	C- Phase

There was no additional explanatory text on the C.D. or on any worksheet.

The data in the Date and Time columns were in this format:

09-Jan-05	13:00
09-Jan-05	13:15
09-Jan-05	13:30
09-Jan-05	13:45

JR asked me to prepare graphics limited to the data under the heading "kW" in the form of average kW readings per month for each year.

- 1) I copied the entire file to a new spreadsheet, and labeled that file, "kw only 2005 through 2009.xls." which became my working file. The original file (DR1-1_01292010.xls) was archived. The remainder of this memo refers only to "kw only 2005 through 2009.xls."

2) I worked on each worksheet in the following order: 2009, 2008, 2007, 2006, and 2005 in the following manner:

- a) I deleted all data in columns labeled kVAR and kVA
- b) Some data were inappropriate for averaging and were isolated. If a single cell in a row contained suspect data all cells in that row were excluded from further calculations.

These rows included:

- Cells with text
- Cells with "0"
- Cells with negative numbers
- Cells with values very different from surrounding data. For example:

14-May-06	0:30	5768	2757	6830
14-May-06	0:45	20994	9218	25090
14-May-06	1:00	17181	7597	20525

Compared to:

14-May-06	0:15	617	561	648
14-May-06	1:15	564	517	624

- Cells with the data repeated for many rows. For example:

29-Dec-06	8:30	1566	1270	1760
29-Dec-06	8:45	1566	1270	1760
29-Dec-06	9:00	1566	1270	1760
29-Dec-06	9:15	1566	1270	1760

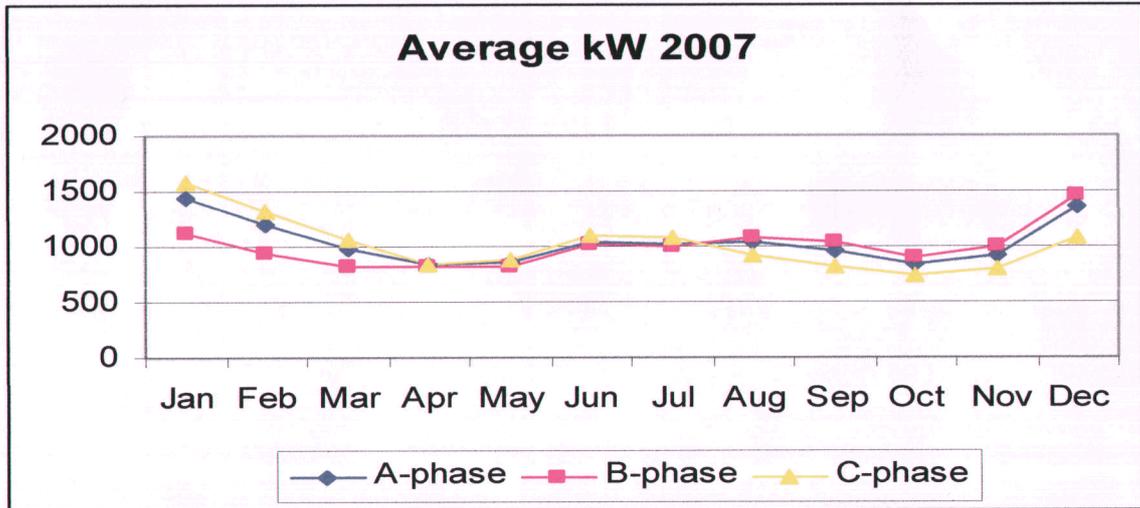
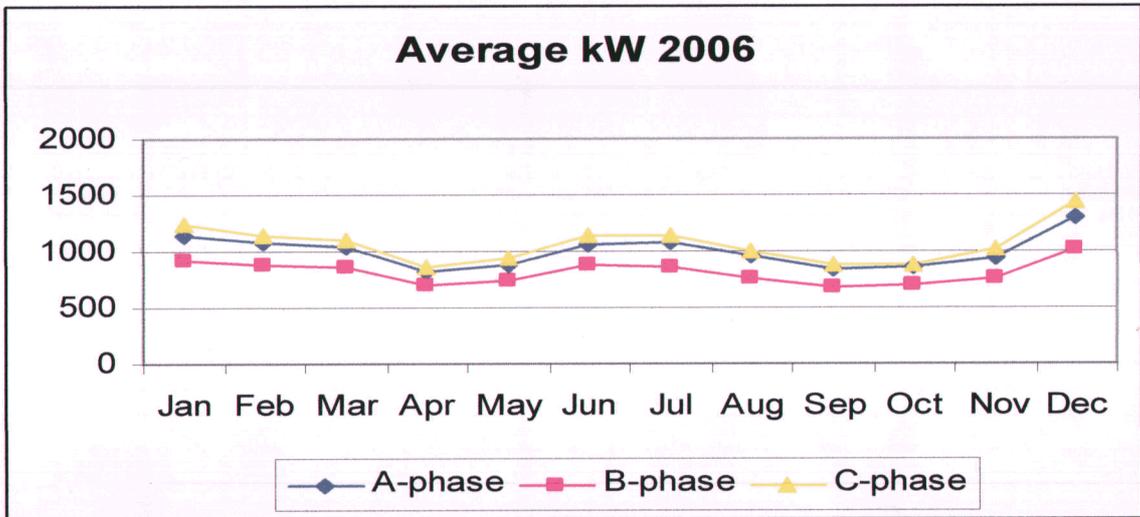
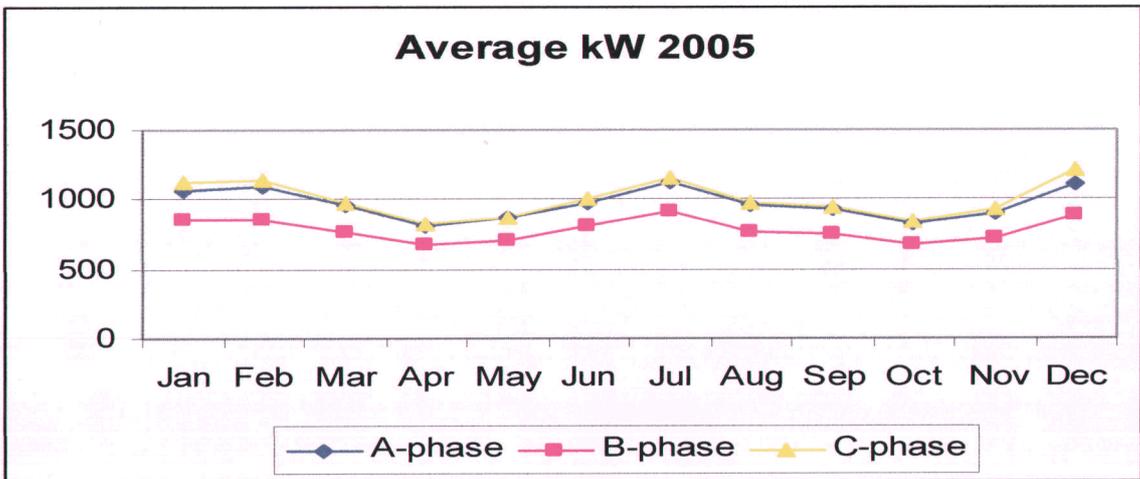
d) Using the above criteria 1830 rows were not included to calculate average kW by month/year:

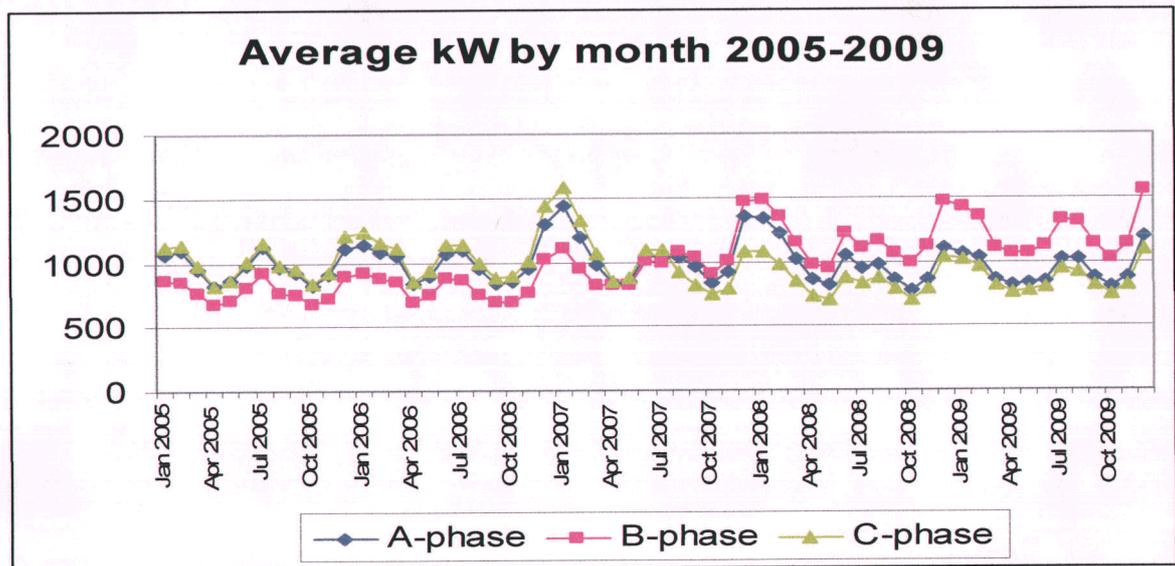
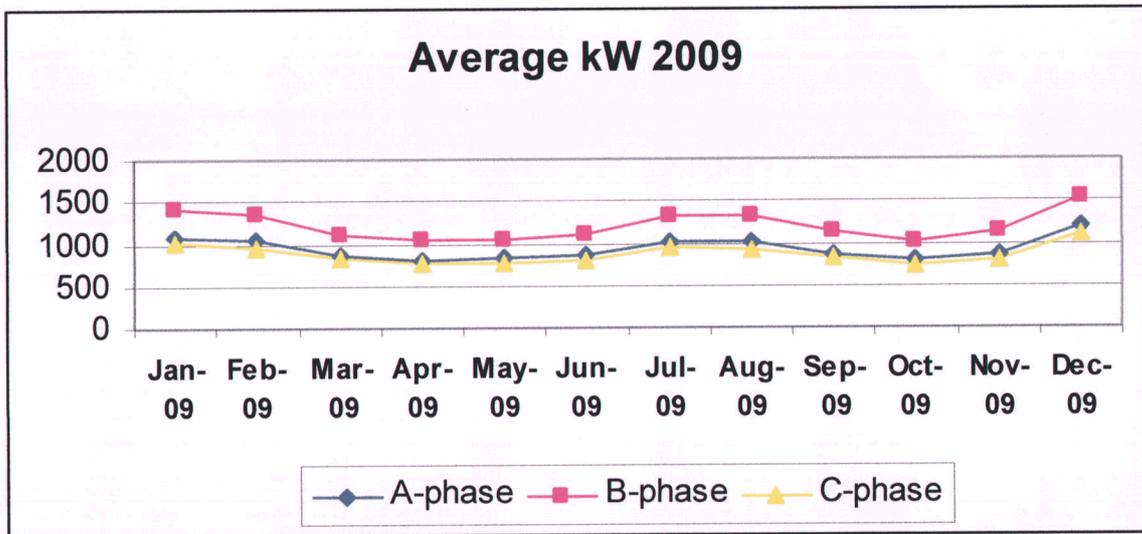
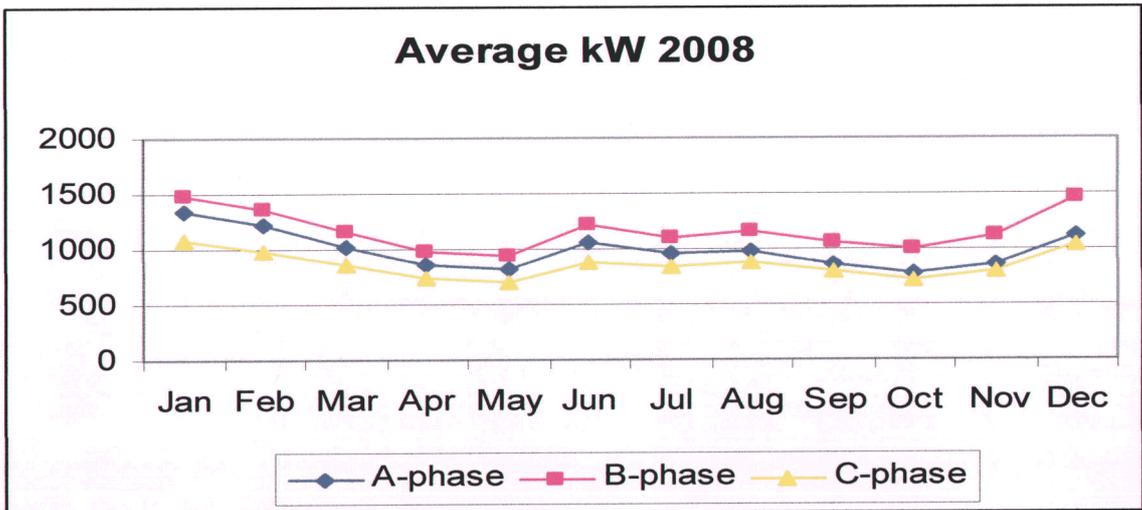
2009	133
2008	59
2007	96
2006	512
2005	1030
Total:	1830

e) To calculate the average per month for each phase the data in each column were summed by month and divided by a count of the rows within that data range. The averages were arranged in tabular format. For example:

	A-phase	B-phase	C-phase
Jan 2005	1067	860	1120
Feb 2005	1098	849	1143
Mar 2005	953	759	979
Apr 2005	816	672	822
May 2005	865	709	868
Jun 2005	973	809	1008
Jul 2005	1120	914	1158
Aug 2005	963	767	975
Sep 2005	927	752	945
Oct 2005	827	677	841
Nov 2005	903	725	926
Dec 2005	1114	886	1212

Output: Graphs were generated for each year and for the five year period. Symbols were used to indicate points (average kW/month) and lines to show trend (note: lines do not indicate continuous data).

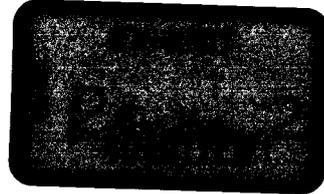




1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2
3 COMMISSIONERS

4
5 KRISTIN K. MAYES, Chairman
6 GARY PIERCE
7 PAUL NEWMAN
8 SANDRA D. KENNEDY
9 BOB STUMP



10
11 IN THE MATTER OF THE APPLICATION
12 OF SULPHUR SPRINGS VALLEY ELECTRIC
13 COOPERATIVE, INC. FOR A FAIR HEARING
14 TO DETERMINE THE FAIR VALUE OF ITS
15 PROPERTY FOR RATEMAKING PURPOSES,
16 TO FIX A JUST AND REASONABLE RETURN
17 THEREON, TO APPROVE RATES DESIGNED
18 TO DEVELOP SUCH RETURN AND FOR
19 RELATED APPROVALS.

DOCKET NO. E-01575A-08-0328

20
21 IN THE MATTER OF THE APPLICATION OF
22 SULPHUR SPRINGS VALLEY ELECTRIC
23 COOPERATIVE, INC. FOR AN ORDER
24 INSTITUTING A MORATORIUM ON NEW
25 CONNECTIONS TO THE V-7 FEEDER LINE
26 SERVING THE WHETSTONE, RAIN VALLEY,
27 ELGIN, CANELO, SONOITA AND
28 PATAGONIA, ARIZONA AREAS.

DOCKET NO. E-01575A-09-0453

29
30
31 **PRE-FILED DIRECT TESTIMONY OF JAMES F. ROWLEY III**
32 **(A.R.S. §40-252 Proceeding)**

33
34 **March 16, 2010**
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Introduction

Q. Please state your name and address

A. James F. Rowley III

My physical address is 52 Omega Lane, Elgin, Arizona with the mailing address of
HC 1 Box 259, Elgin, Arizona 85611

**Q. Please state the purpose of your testimony before the Arizona Corporation
Commission.**

A. I am an intervenor in the two cases before the Arizona Corporation Commission,
Docket numbers E-01575A-08-0328 and E-01575A-09-0453. I am very concerned
about SSVEC's proposed plan to build a new 69kV line to service the Elgin, Sonoita,
and Patagonia areas. The proposed location of this line will damage fragile
grassland ecosystem of the largest Mexican Land Grant Ranch in the United States
as well as damage economic and tourism values of this community, when there are
other alternatives that will met the area's needs for the future.

Q. Have you previously testified before the Arizona Corporation Commission?

A. Yes. As an intervenor I have appeared at various hearings for SSVEC's 2010
REST Plan.

	wells.
A-07	<p>PIERS AND FOUNDATIONS Installation of piers and foundations using concrete, rebar, and other materials common to the industry. Includes pile driving, excavation, forming and other techniques and equipment common to the industry.</p>
A-09	<p>SWIMMING POOLS Construction, service, and repair of swimming pools and spas, including water and gas service lines from point of service to pool equipment, wiring from pool equipment to 1st readily accessible disconnect, pool piping, fittings, backflow prevention devices, waste lines, and other integral parts of a swimming pool or spa. Also included is the installation of swimming pool accessories, covers, safety devices, and fencing for protective purposes, if in the original contract.</p>
A-11	<p>STEEL AND ALUMINUM ERECTION Field fabrication, erection, repair, and alteration of architectural and structural steel and aluminum materials common to the industry, including field layout, cutting, assembly, and erection by welding, bolting, wire tying or riveting.</p>
A-12	<p>SEWERS, DRAINS AND PIPE LAYING Installation and repair of any project involving sewer access holes, the laying of pipe for storm drains, water and gas lines, irrigation, and sewers. Includes connecting sewer collector lines to building drains and the installation of septic tanks, leaching lines, dry wells, and all necessary connections, and related excavation and backfilling</p>
A-14	<p>ASPHALT PAVING Installation of asphalt paving, and all related fine grading on streets, highways, driveways, parking lots, tennis courts, running tracks, play areas, and gas station driveways and areas, using materials and accessories common to the industry. Includes the necessary excavation and grading only for height adjustment of existing sewer access holes, storm drains, water valves, sewer cleanouts, and drain gates.</p>
A-15	<p>SEAL COATING Application of seal coating to asphalt paving surfaces. Includes repair of surface cracks and application of painted marking symbols.</p>
A-16	<p>WATERWORKS All work necessary for the production and distribution of water including drilling well, setting casing and pump, related electrical work, related concrete work, excavation, piping for storage and distribution, storage tanks, related fencing, purification and chlorination equipment.</p>
A-17	<p>ELECTRICAL AND TRANSMISSION LINES Installation, alteration, and repair of transmission lines on public right-of-ways, including erection of poles, guying systems, tower line erection, street lighting of all voltages, and all underground systems including ducts for signal, communication, and similar installations. Installing transformers, circuit breakers, capacitors, primary metering devices and other related</p>

	<p>equipment of all electrical construction is included. All electrical systems of less than 600 volts on or inside a building are excluded.</p>
A-19	<p>SWIMMING POOLS, INCLUDING SOLAR Construction, service, and repair of swimming pools and spas, with or without solar water heating devices, including water and gas service lines from point of service to pool equipment, wiring from pool equipment to first readily accessible disconnect, pool piping, fittings, backflow prevention devices, waste lines and other integral parts of a swimming pool, spa and attached solar water heating device. Also included are swimming pool accessories, covers, safety devices, and fencing for protective purposes, if in the original contract.</p>
A-21	<p>LANDSCAPING AND IRRIGATION SYSTEMS Treat, condition, prepare, and install topsoil. Plant all decorative vegetation. Excavate, trench, bore, backfill and grade as necessary for installation of landscaping and irrigation systems. Landscaping includes installation of non-load bearing slabs, walkways and areas using concrete, brick, stone, or gravel; wooden decks; decorative garden walls, fences and screens up to 6 feet in height; retaining walls up to 3 feet in height; and all other materials and equipment common to the industry. Excluded are cast-in-place or tilt concrete; load bearing walls for structures; and perimeter fencing along property lines or boundaries. Install, repair, and maintain irrigation systems to distribute water for the purpose of irrigation, dust and soil erosion control using equipment, materials, and fittings common to the industry. This includes electrical control panels and apparatus which are an integral part of the irrigation system. Connections to potable water lines, installation of backflow prevention devices, installation of hose bibs and installation of service lines from source of supply are permitted only when they are an integral part of the irrigation system. Installation of electric wiring and related fixtures of 110 volts or less for landscaping projects is included. All electrical work is limited to exterior use and only that work necessary to complete a landscaping project. If necessary, a new circuit may be added to the existing service panel or sub-panel. Excluded is the installation of a new service panel or sub-panel.</p>

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Q. Are your contractors licenses still active?

A. My General Engineering License is suspended because I did not renew the bonding. The type of work in the area did not lend itself to the General Engineering license. I have a current Electrical Contractor's License # 254282, licensed in residential and commercial electrical.

1
2 **Q. If your General Engineering License was still active could you build a 69kV**
3 **line as a Contractor I could build this type of electrical line with plans from an**
4 **engineering firm?**

5
6 A. Yes, I am familiar with substation and line construction.

7
8 **Q. During your employment at SRP were you exposed to power transmission**
9 **and distribution systems?**

10
11 A. Yes, I was on the SRP Joint Accident Prevention Rules Committee for five years
12 and Co-Chairman for three years. While I was Co-Chair of the committee I was
13 responsible for oversight of two editions of the Joint Accident Prevention Rule book.

14
15 **Q. Do you have a good understanding of Transmission and Distribution**
16 **electrical systems?**

17
18 A. Yes. I am not an engineer. However, I have a very good understanding of
19 electrical systems and communication systems.

20
21 **Q. Do you agree with the assumptions and conclusions of the Navigant**
22 **Feasibility Study prepared for SSVEC?**

23

1 A. No, The study doesn't fully address the storage of energy from either distributed
2 generation or large scale generation to meet peak load.

3
4 **Q. Have you reviewed the load data for the V-7 feeder supplied to Sue
5 Downing by SSVEC?**

6
7 A. Yes, the data supplied was for 15 minute intervals for years 2005 through 2009.

8
9 **Q. What conclusions did you arrive at during your review?**

10
11 It appears the average of the B phase was lower than the A and C phases until
12 2007. During the fall of 2007 it appears the load was changed on the V-7 feeder to
13 cause the B phase load to continually grow larger until the end of 2009.

14
15 **Q. What other anomalies did you find?**

16
17 A. The B phase seems to be the only phase of the three phases that experienced
18 any overload other than events when two of the phases overloaded for a brief period
19 likely caused from two of the phases shorting during lightning or wind events.

20
21 **Q. Do you believe SSVEC could better balance the three phases of the V-7
22 feeder?**

23

1 A. Yes, some variation in load is to be expected. However, in this case the B phase
2 is obviously not balanced with the A and C phases.

3
4 **Q. Do you agree with Mr. Shlatz's Direct Testimony on page 9, paragraph (2)**
5 **when he mentions the ten (10) percent overload on the substation**
6 **transformer:**

7
8 A. No. While Mr. Shlatz is very qualified to make this type of statement he does not
9 mention that the substation transformer is able to handle much higher load capacity
10 when the air temperature is cold as it was in December 2009. The transformer rated
11 capacity is at a much higher temperature. Also, the high loads seen in December
12 2009 were caused from the lines shorting either from phase to phase or phase to
13 ground, not from customer load.

14
15 **Q. Do you agree with conclusion Navigant Consulting made in their statement**
16 **regarding the exposure to residential and roadway views on Page 72 of the**
17 **study as it relates to the T 1 option vs. the T 2 Option?**

18
19 A. No, Raising the pole height and adding wires on the existing V-7 feeder does not
20 make a larger visual impact than placing a new 69 kV line in areas where no power
21 lines exist today.

22

1 **Q. Do you agree with Ms. White's answer to Direct Testimony on Page 5 as it**
2 **relates to the number of customers out?**

3
4 A. No. While some customers were out almost 5 hours other customers on the V-7
5 feeder in the Rain Valley area were not affected by the outage. Also, other
6 customers power was restored much sooner than the 5 hours Ms. White mentions.
7 Apparently SSVEC was notified of at least one location of wires in contact with a tree
8 directly after problem occurred. It appears SSVEC was in no hurry to restore power
9 to the "Problem Customers" in the Sonoita-Elgin area.

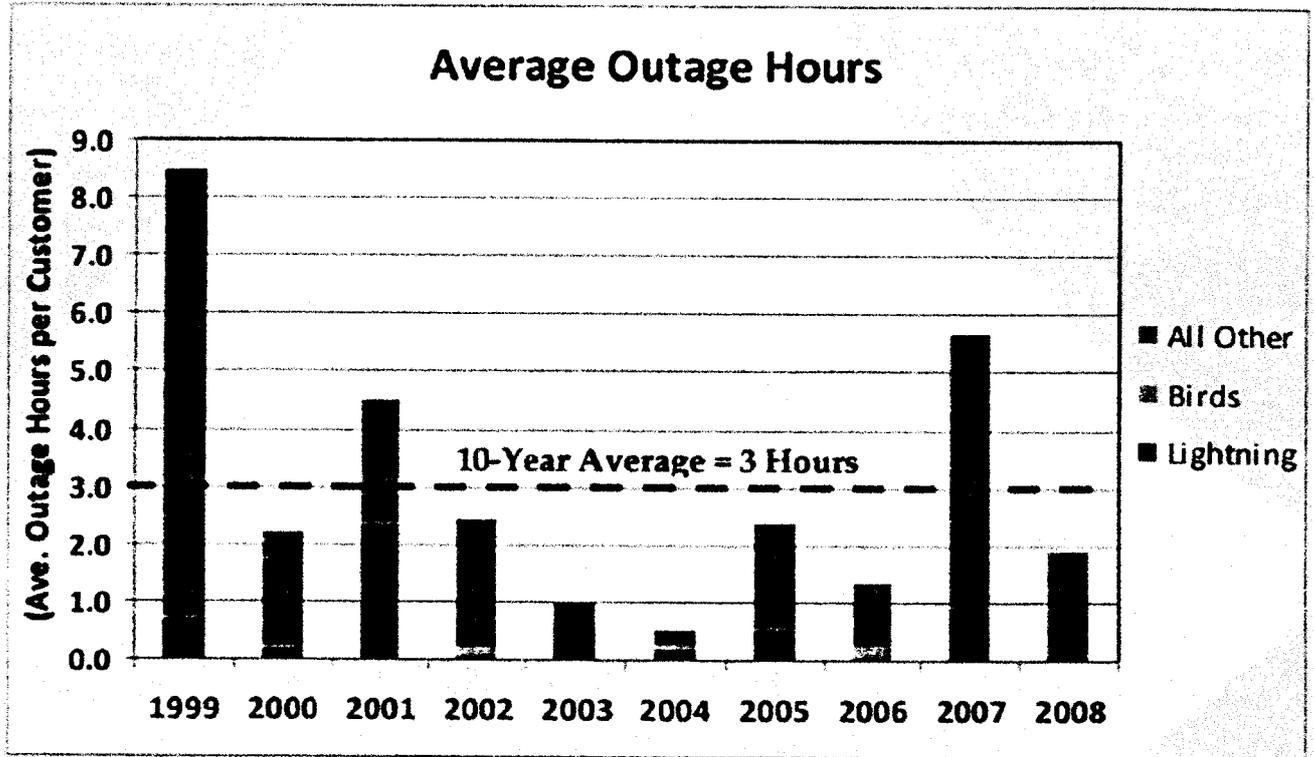
10
11 **Q. Do you agree with Ms. White's answer to Direct Testimony on page 6 in her**
12 **answer to the "Average Total Hours Out".**

13
14 A. No. This is just another case of SSVEC trying to over state the problem. While
15 the number is correct when you extrapolate the data in this method, it does not
16 correctly state the reality quoted in the Navigant study which says customers have
17 only been out of power an average of 3 hours and if the 1999 data was removed it
18 would be less than 2.4.

19
20 *"For over 10 years SSVEC has collected outage statistics, including the number of sustained*
21 *outages by cause, duration, and number of customers affected, among other data. (NCI used*
22 *the SSVEC data without modification to derive each of the reliability charts that follow.) One of*
23 *the more common statistics utilities collect is the total time that customers are out of service,*
24 *measured in minutes or hours. Figure 2 presents annual customer outage hours, which over 10*

1 years has averaged three hours per customer. While high, the duration is not unusual for very
2 long feeders; the value drops to 2.4 hours if 1999 is excluded (in 1999 several wind-related
3 events interrupted all customers served by the feeder).” [F.S. page 10 & 11]

4 Figure 2: Annual Average Outage Hours per Customer [F. S. page 11]



5
6
7 Q. Do you find it curious that in Mr. Orozoco's Direct Testimony on page 6 he
8 mentions that in 2007 SSVEC conducted an in-depth analysis of the existing V-
9 7 feeder and this coincides with the same time the B phase started the trend of
10 being way over balanced?

11
12 A. Yes. In the Spring of 2007 the average load for the B phase was slightly below
13 the A and C phases, then in the Summer it was perfectly balanced. Later in 2007

1 the B phase started the trend of being way out of balance. This lead to the B phase
2 load going over the rated capacity.

3
4 **Q. Do you take exception to Mr. Orozco's Direct Testimony on page 12**
5 **relating to use of the CREB bonds?**

6
7 A. Yes, Mr. Orozco makes it appear the 750 kW grid-connected solar electric
8 system could not be installed if the 69 kV line was not built. This is not true, the PV
9 can still be built with the power feeding directly onto the existing 25 kV line.

10
11 **Q. Do you take exception to Mr. Orozco's Direct Testimony on page 14 as it**
12 **relates to the grant money for the Smart Grid system.**

13
14 A. Yes. The improvements can still be made to the Huachuca West substation and
15 the two-way directional meters for the DSM could still be installed. Again, SSVEC is
16 trying to make it sound like the affected communities will receive no benefit from
17 these programs if the 69 kV line is not built. This is a blatant distortion of facts to
18 distort the true reason the 69 kV line is being built. This is a purposeful distortion of
19 facts to unduly sway SSVEC Cooperator Members and the Arizona Corporation
20 Commission to assume if the 69kV line does not go in, the ARRA Funds cannot be
21 applied to this area.

22
23 **Q. What would you recommend to solve the load issues on the V-7 feeder?**

1 A. The solution is multifaceted.

2 1. The load on the V-7 feeder should be better balanced. This can be done by
3 removing load from the B phase adding it to the A and C phases.

4 2. Temporarily install a skid or trailer mounted 500 kW to 1 mW generator in
5 Patagonia on the property currently owned by SSVEC. This property has access to
6 Natural gas and the 25 kV line. Noise attenuation can reduce the sound from the
7 plant to less than 60 db.

8 3. Continue plans to build the PV installation in Sonoita and deliver the power
9 directly to the 25 kV line.

10 4. Continue plans with the Demand Side Management and make the upgrades to
11 the Huachuca West substation.

12 5. Develop an RFP for a storage facility in Sonoita with use of NaS battery
13 technology. The storage facility would be recharged by either the PV or generation
14 provided by the existing V-7 feeder. The storage plant would be available to meet
15 peak on the V-7 feeder until well after 2029. After the storage plant is operational
16 the Peaker Plant could be removed. If monitoring/operation of either the Peaker
17 Plant or the PV system cannot be accomplished with current SSVEC systems, a T1
18 line from Qwest Communications should be used. Qwest has fiber optics within a
19 1/4 mile from either of these locations and would provide reliable communications.

20 6. Continue developing strategies to help customers reduce their load.

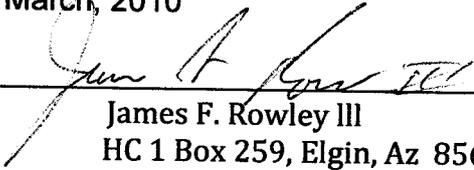
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23

1 Respectfully Submitted this 16th Day of March, 2010

2
3 By _____


James F. Rowley III
HC 1 Box 259, Elgin, Az 85611
520.455.0404
jfrowleylll@msn.com

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7
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9 **Service List**

10 Original and 13 copies of the foregoing are filed this date:

11 **Arizona Corporation Commission**

12 1200 West Washington Street

13 Phoenix, Arizona 85007-2927 (Attn: **Docket Control**, 13 copies)

14
15 **Jane L. Rodda**, Administrative Law Judge (1 copy)

16 Arizona Corporation Commission, Room 218

17 400 West Congress

18 Tucson, Arizona 85701-1347

19
20 **Susan J. Downing**

21 HC 1 Box 197

22 Elgin, Arizona 85611

23
24 **Susan Scott**

25 PO Box 178

26 Sonoita, Arizona 85637

27
28 **Bradley S. Carroll**, Attorney for SSVEC

29 One Arizona Center

30 400 East Van Buren

31 Phoenix, Arizona 85004-2201

32
33 CC.

34
35 **Santa Cruz County Board of Supervisors**

36 County Complex

37 2150 N. Congress Drive

38 Nogales, Arizona 85621

39
40 **Mayor and Town Council**

41 Town of Patagonia

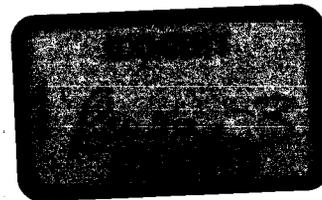
42 310 McKeown Avenue

43 Patagonia, Arizona 85624

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

Kristin K. Mayes
Gary Pierce
Sandra D. Kennedy
Paul Newman
Bob Stump



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-08-0328

IN THE MATTER OF THE APPLICATION OF SULPHUR SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR AN ORDER INSTITUTING A MORATORIUM ON THE NEW CONNECTIONS TO THE V-7 FEEDER LINE SERVING THE AREAS OF WHETSTONE, RAIN VALLEY, ELGIN, CANELO, SONOITA, AND PATAGONIA, ARIZONA.

Docket No. E-01575A-09-0453

**WAYNE PORTER DIRECT TESTIMONY
IN SUPPORT OF INTERVENOR JAMES F. ROWLEY III**

16 MARCH 2010

This filing contains my Direct Testimony in support of Intervenor James F. Rowley III who requested that I be a witness in these hearings.

I was asked by Mr. Rowley to prepare an analysis of the impacts to the monthly electricity bills of Sulphur Springs Valley Electric Cooperative members based on the net present values of five technically feasible options for the Sonoita Reliability Project as described in the Independent Feasibility Study of Electric Supply Alternatives submitted on December 31, 2009.

I certify this filing has been mailed or delivered to parties on the Service List this date.

Respectfully submitted on this 16th day of March 2010.

WAYNE PORTER

By W P

Wayne Porter
1255 W Solano Drive
Phoenix, AZ 85013

wepor@asu.edu

Service List

Original and 13 copies of the foregoing are filed this date:

Docket Control (13 copies)

Arizona Corporation Commission

1200 West Washington Street
Phoenix, Arizona 85007-2927

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DIRECT TESTIMONY

OF

Wayne Porter

AS A

WITNESS

FOR

James F. Rowley III,

INTERVENOR

16 MARCH 2010

IN THE MATTERS

OF

**THE APPLICATION[S] 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.**

AND

**FOR AN ORDER INSTITUTING A MORATORIUM ON THE NEW CONNECTIONS TO THE V-7
FEEDER LINE SERVING THE AREAS OF WHETSTONE, RAIN VALLEY, ELGIN, CANELO, SONOITA,
AND PATAGONIA, ARIZONA.**

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Direct Testimony by Wayne Porter

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**DIRECT TESTIMONY
OF Wayne Porter**

1. Introduction.

Q. Please state your name, business address, and occupation.

A. My name is Wayne Eliot Porter. I am the TogetherGreen Apacheria Fellow at the Audubon Society's Appleton-Whittell Research Ranch, HC 1 Box 44, Elgin, AZ 85611. I hold a Bachelor's Degree in Mathematics from Arizona State University, Tempe, AZ and I expect to complete my Master's Degree in Sustainability from ASU this summer. In an earlier career, I earned the Certified Financial Planner designation, which is presently inactive. I started studying energy systems, both formally and informally in the early 1990s and the focus within my studies at the School of Sustainability has been to understand the economic, social and environmental impacts of various energy technologies.

2. Involvement in these Proceedings.

Q. Why are you involved in these proceedings?

A. I was awarded an Apacheria Fellowship from the National Audubon Society for my project, "A Proposal for the Design and Development of a Plan to Reduce Carbon Emissions in Rural Southeastern Arizona." As part of my research, which includes an analysis of the efforts made by members of this community to reduce their carbon emissions and includes an educational outreach program, I became aware of the Independent Feasibility Study (IFS) of Electric Supply Alternatives prepared by Navigant Consulting, Inc. for SSVEC. Specifically, I thought it was important to show the impact to the average SSVEC member's monthly electricity bill that would be caused by each of the five technically feasible options that were described in the IFS if those costs were to be passed on directly to co-op members. For comparative purposes and in support of the Arizona Environmental Portfolio Standard, I also included financial analyses of a 3 MW photovoltaic (PV) system and a 2 MW sodium sulfur (NaS) battery-based energy storage system, each of which was described but deemed to be either technically or logistically infeasible by the authors of the IFS and thus not included in their economic analysis.

3. Prior Experience before the Corporation Commission.

Q. Have you previously testified before this Commission?

A. No.

4. Preparation of this Testimony.

Q. Have you received advice or help from others in preparing your Testimony?

A. No.

5. The Primary Reference for this Testimony

Q. What is the primary reference used for this Testimony?

A. The Independent Feasibility Study of Electric Supply Alternatives prepared for SSVEC by Navigant Consulting, Inc. and submitted to the Commission by SSVEC on December 31, 2009.

6. This Witness Testimony.

Q. Why are you a witness in these proceedings?

A. I prepared the financial analysis that includes the table shown below as Exhibit 1, Ratepayer financial analysis for five technically feasible options as stated in the IFS plus PV and energy storage options.

Q. What assumptions did you use to perform the financial analysis?

A. I calculated the monthly payment amounts needed to amortize the net present values of the five options shown in Table 12 (page 63) of the IFS over a 20-year period at an annual interest rate of 6%. Then I calculated simple averages using 51,849 electric services as specified in the 2008 SSVEC Annual Report to estimate the impact to the average monthly SSVEC electric bill. The cost of the 3 MW PV system owned by SSVEC was estimated based on a price of \$5.40/W for a single-axis tracking system reduced by 30% for a federal renewable energy grant. An alternative to SSVEC owning a PV system is for a customer to build a system under a power purchase agreement with SSVEC to sell electricity to the co-op at a price 2 cents/kWh above the prevailing wholesale price of electricity and this customer-owned PV option was also included in the analysis. The monthly cost of the 2 MW NaS energy storage system was based on a price of \$3,000/kW as stated in the IFS.

Q. What did you discover when you calculated the impacts to SSVEC ratepayers' bills of the various alternatives?

A. The five technically feasible options described by the IFS would cause increases to the average SSVEC bill ranging from lows of \$0.23 and \$0.33 for the demand-side management options and \$0.79 for the distributed generation option to \$1.77 and \$2.27 for the two transmission options that include building a new substation in Sonoita and constructing 69kV lines through either the Babocomari Ranch or along SR82. A 3 MW SSVEC-owned PV system

would add \$0.82 (\$1.56 minus the \$0.74 savings from avoiding the purchase of conventionally-generated electricity) to the average bill, and a 2 MW NaS storage system would add \$0.83.

Q. Why did you think it was important to include the NaS battery system in your analysis?

A. I understand that the long lead times required to order, obtain and then install large NaS battery systems represent a challenge. But they would provide a number of benefits, and they are a proven technology that has been commercially manufactured in Japan since 2000, and portable diesel-powered generators could provide capacity for peak demand in the interim. Though NaS batteries contain a central core of liquid sodium, which is potentially explosive if exposed to water, the technology has been used safely in Japan since the mid-1990s and in a pilot project that started in the U.S. in 2001 and led to the installation of six MW of NaS units at American Electric Power facilities in Ohio and West Virginia. The high charge/discharge efficiency and long product lifecycle provide another set of benefits of the technology. A major advantage of implementing a NaS storage system in conjunction with the Sonoita Reliability Project is that the batteries could be charged by any of several different power sources. In the near future, they could be charged during low-demand periods using low-cost, conventionally produced SSVEC power. Then as more PV units are installed in the Elgin-Sonoita area, the solar arrays could provide the energy for the NaS units, which would provide both power for demand peaks and more stable voltage levels across the entire V-7 feeder circuit. While NaS systems do not present an immediate solution to the V-7 feeder's power quality issues, they could be a valuable and environmentally benign asset within a few years.

Q. Are there any potential economic benefits for SSVEC members if a 3 MW PV system were installed instead of the recently announced 750 kW system?

A. Yes, absolutely. A 3 MW array would generate about 6 GWh per year in Sonoita. The amount saved by SSVEC for avoiding the purchase of 6 GWh of conventionally-generated power is \$462,000/year based on a current wholesale power price of 7.7 cents/kWh. Although 6 GWh represents less than 1% of the 819 GWh distributed by SSVEC in 2008, if the co-op owned a 3 MW PV array it would own the output for the 30+ year life of the array, and the annual savings would increase in direct proportion to the increases in the price of power sold to SSVEC by the Arizona Electric Power Cooperative and other suppliers.

Exhibit 1

Ratepayer financial analysis for five technically feasible options as stated in the IFS plus PV and NaS energy storage options.

IFS Option	Description	NPV (cost, in millions) ¹	Annual Cost(-) or Savings ²	Additional Cost/Month on Average SSVEC bill ³
T1	New 69kV line on Babocomari Ranch ROW and Sonoita Substation	\$12.78		\$1.77
T2	New 69kV line on SR 82 ROW and Sonoita Substation	\$16.41		\$2.27
DS2	Electric space heating with thermal storage	\$2.06		\$0.28
DS4	Space heating with fuel switching	\$2.36		\$0.33
R1-S	Solar photovoltaic (3 MW tracking array; SSVEC owns) ⁴	\$11.34	\$462,000	\$0.82
R1-C	Solar photovoltaic (3 MW tracking array; Customer owns) ⁵	0	-\$120,000	\$0.19
R4	Energy storage (2 MW sodium sulfur battery system) ⁶	\$6.00		\$0.83
R5	Distributed generation (2 MW diesel generator set)	\$5.75		\$0.79

¹Net Present Values (costs to SSVEC) for T1, T2, DS2, DS4 and R5 are from the Independent Feasibility Study of Electric Supply Alternatives, p. 63.

²Annual cost or savings to SSVEC based on PV production of 6 GWh/yr and a 7.7 cents/kWh conventional wholesale power price.

³SSVEC cost amortized over 20 years at 6% annual interest and averaged across 51,849 electric services (SSVEC customers) in place.

⁴Price for 3 MW tracking array is \$16.2 million (\$5.40/W) based on a 3.3 MW single-axis tracking array recently constructed in Prescott, AZ. NPV is net cost after 30% federal renewable energy grant. The resulting \$1.56 monthly cost per SSVEC member is then reduced by \$0.74 per member monthly savings due to avoiding purchases of conventionally-generated power.

⁵Solar-generated tariff rate of 2 cents/kWh above the conventional wholesale power price. The tariff is then passed along to SSVEC customers.

⁶Cost for the storage system based on \$3,000/kWh as stated in the Independent Feasibility Study of Electric Supply Alternatives, p. 50.

Change to Summary

Findings and Conclusions

The V-7 feeder is a very long feeder that is nearing or at capacity limits. It requires a significant number of regulators operating in tandem to maintain voltages within acceptable limits. Reliability is below that of other SSVEC feeders, but not unusually low, as the Company has implemented effective reliability improvement measures; however, the number of momentary interruptions appears to be high, in large part because of the very long lines. There is evidence the feeder may be experiencing other voltage anomalies that require resolution. In summary, the V-7 feeder cannot accommodate material increases in load without overloads or unacceptable voltage impacts, or both. Immediate action is necessary to address V-7 capacity and performance issues.

Several alternatives are feasible to resolve capacity and performance issues from a technical perspective. Most transmission options are technically viable, except for use of Tuscon Electric Power's 46kV line to serve V-7 load, which appears to have insufficient capacity to serve SSVEC load. The transmission supply options provide the highest level of firm capability compared to other feasible options, as the availability of new transmission lines tend to be higher than distributed generation options. Distributed generation option also must be carefully maintained, and special control strategies and systems would be needed to ensure the units operate when needed.

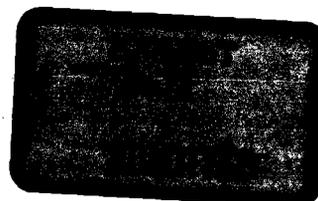
Added
Congrac
(pg 98, 200
para 4) →

Most renewable energy options, including wind and solar photovoltaic, did not provide sufficient coincident peak load reduction to be feasible – the feeder peak occurs during cold winter mornings when the sun is low on the horizon. Concentrated solar power (CSP) could provide a solution, but would be very expensive and have potentially undesirable visual impacts; it also requires significant land, which may be difficult to obtain in quantities sufficient to construct devices large enough to reduce peak demand. Energy storage systems show much promise and efforts are underway on a national scale to advance the technology and reduce cost, but are still in the early stages of development. Storage also would require complex monitoring and control schemes to ensure sufficient storage was available and dispatched in a manner that will reduce loads over the full duration of the daily peak. It should nonetheless be considered by SSVEC as a solution. del.

Added

"The lowest cost"
Alternative

The most cost effective alternative is a targeted conversion of customer space heating systems, followed by the installation of oil or gas-fired diesel generators in Sonoita. However, there are clear trade-offs and concerns with the lower cost options. For targeted fuel conversions, the number of eligible customers and level of incentive needed to ensure sufficient participation levels has not been established. Such a program would need to be expedited, as the V-7 feeder has reached capacity limits. Further, the conversion program would only reduce



1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2
3 COMMISSIONERS

4
5 KRISTIN K. MAYES, Chairman
6 GARY PIERCE
7 PAUL NEWMAN
8 SANDRA D. KENNEDY
9 BOB STUMP

RECEIVED

MAR 16 2010

ARIZONA CORP. COMM
400 W CONGRESS STE 218 TUCSON AZ 85707

10
11 IN THE MATTER OF THE APPLICATION
12 OF SULPHUR SPRINGS VALLEY ELECTRIC
13 COOPERATIVE, INC. FOR A FAIR HEARING
14 TO DETERMINE THE FAIR VALUE OF ITS
15 PROPERTY FOR RATEMAKING PURPOSES,
16 TO FIX A JUST AND REASONABLE RETURN
17 THEREON, TO APPROVE RATES DESIGNED
18 TO DEVELOP SUCH RETURN AND FOR
19 RELATED APPROVALS.

DOCKET NO. E-01575A-08-0328

20
21 IN THE MATTER OF THE APPLICATION OF
22 SULPHUR SPRINGS VALLEY ELECTRIC
23 COOPERATIVE, INC. FOR AN ORDER
24 INSTITUTING A MORATORIUM ON NEW
25 CONNECTIONS TO THE V-7 FEEDER LINE
26 SERVING THE WHETSTONE, RAIN VALLEY,
27 ELGIN, CANELO, SONOITA AND
28 PATAGONIA, ARIZONA AREAS.

DOCKET NO. E-01575A-09-0453



29
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32
33 **PRE-FILED DIRECT TESTIMONY OF SUSAN SCOTT**
34 **(A.R.S. §40-252 Proceeding)**

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38 **March 16, 2010**
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Q. Please state your name and address

A. Susan Scott

My physical address is 15 Marvin Lane in Sonoita, Arizona, my mailing address is P.O. Box 178, Sonoita, Arizona 85637

Q. Please state the purpose of your testimony before the Arizona Corporation Commission.

A. I am an intervenor in the Rehearing and Reconsideration Case, Docket, No. E-01575A-08-0328. It is my belief that Sulphur Springs Valley Electric Cooperative, Inc. (SSVEC) has not fully considered all options other than the proposed 69kV line on the Babacomari Ranch easement.

Q. Have you previously testified before the Arizona Corporation Commission?

A. No. As an intervenor I have appeared at various procedural conferences regarding this Docket. This is the first time that I have testified before the Commission at a hearing.

Q. Ms. Scott, when did you first approach SSVEC regarding its plans for the Sonoita, Elgin and Patagonia areas for improved electrical service?

1 A. In December 2006. I was a board member of the Sonoita Crossroads
2 Community Forum and we had heard that SSVEC had plans but knew nothing about
3 them. On behalf of the Forum I attended the SSVEC Board of Directors meeting in
4 December 2006 in Willcox. Through a letter I read to the Board of Directors, I asked
5 that SSVEC please inform the community of its plans.

6

7 **Q. And what happened as a result of that presentation to the SSVEC Board of**
8 **Directors?**

9

10 A. Nothing. Subsequent to that presentation, our Forum Board President at the
11 time, Stephen Strom made numerous phone calls and sent many emails requesting
12 SSVEC management meet with us with no response. The only communication we
13 received that I recall was that SSVEC was in litigation over the proposed easement
14 through the Babacomari Ranch and couldn't discuss any information related to the
15 69kV line until that was completed.

16

17 **Q. When was the next time you heard from SSVEC?**

18

19 A. It was at a public meeting held at the Elgin School on July 22, 2008.

20

21 **Q. This was after the litigation was resolved?**

22

23 A. I believe so.

1 **Q. What was the purpose of this meeting?**

2

3 A. It was to present the four alternative routes SSVEC was considering for bringing
4 in the 69kV line. In fact, at that meeting we were asked to vote on our preference of
5 the four. At the time, I felt the vote was premature because we didn't have all the
6 answers about each of the alternatives. I wonder what the results of that vote were
7 as it was never shared with the community.

8

9 **Q. Was there any information shared about alternatives to the 69kV line such**
10 **as solar or wind?**

11

12 A. Not that I recall. Only the four alternative routes were discussed and how
13 SSVEC planned to mitigate the visual impact by using colored poles that blended
14 with the landscape. I do not recall SSVEC management discussing renewable
15 energy or any other options to the 69kV line at this meeting.

16

17 **Q. And what happened after this meeting?**

18

19 A. There were a couple of meetings with SSVEC management but they basically
20 listened to our concerns, never giving us much information. And there were a
21 number of other presentations by individuals and groups to the SSVEC Board of
22 Directors. I was not involved in those presentations but I do know they included
23 other options, including renewable energy that SSVEC had not considered or at

1 least not shared with the community. Additionally, I made another presentation to
2 SSVEC Board of Directors at their March 2008 meeting in Patagonia. At that
3 meeting I asked that other options be considered. Finally, we had a meeting with
4 Forum representatives and SSVEC management which helped understand the 69kV
5 line but did little to explain why they were not pursuing other options more
6 vigorously.

7
8 **Q. Did you ever receive any response from the Board of Directors?**

9
10 A. I never received any reply.

11
12 **Q. So, here we are today. Why did you become an intervenor in the Rehearing
13 and Reconsideration Case?**

14
15 A. I just never felt that SSVEC listened to the communities' concerns. And until very
16 recently, they never shared in detail all the options they considered in improving
17 electrical reliability in our communities. I believe that they secured the easement on
18 the Babacomari Ranch and were going to use it regardless of other possibly better
19 options. The perceived attitude of "I'm right and you're wrong" seemed to permeate
20 everything they did. I've said all along, if SSVEC had been more forthcoming and
21 transparent in their dealings with the community, shared all the details of their work,
22 we possibly would not be here today. Instead they gave us bits and pieces and told
23 us "we're the experts".

1 **Q. In a response filed with the Arizona Corporation Commission on January**
2 **21, 2010 you stated “there are many statements in the Feasibility Study that**
3 **require further explanation and analysis”. What did you mean by that**
4 **statement?**

5
6 A. First let me say that I am not an electrical engineer and have no experience with
7 electrical utility lines. But the Feasibility Study includes many statements about the
8 current performance of V7 feeder line and alternative solutions that seem contrary to
9 the need for the 69kV line. Just like SSVEC has picked out phrases from the
10 Feasibility Study to support their position, I believe that there are phrases that show
11 better, more cost effective alternatives. This is not only about alternatives to the
12 69kV line; it's about saving the company and all cooperative members' money.

13
14 **Q. So, give some examples of those statements that support alternatives to**
15 **the 69kV line.**

16
17 A. Ok, here are some quotes from the Feasibility Study
18 Pg. 1: “The large majority of these outages affected less than 3-4 customers for the
19 last ten years. While outage rates are high, NCI does not view current feeder
20 outage performance to be unusual for a line with the distance and exposure of the V-
21 7 feeder.”

22 Pg. 2: “Reliability performance as measured by the number of outages and duration
23 has modestly improved. Notably, full feeder outages that interrupt all customers

1 Pg. 1: "The large majority of these outages affected less than 3-4 customers for the
2 last ten years. While outage rates are high, NCI does not view current feeder
3 outage performance to be unusual for a line with the distance and exposure of the V-
4 7 feeder."

5 Pg. 2: "Reliability performance as measured by the number of outages and duration
6 has modestly improved. Notably, full feeder outages that interrupt all customers
7 served by the V-7 feeder have been very low – less than one per year over the last
8 five years."

9 Pg. 2: "There is evidence that very high voltages may be caused by electrical
10 anomalies that occur under light loading conditions or on longer line sections
11 equipped with several voltage regulating devices operating in series. Resolution of
12 voltage anomalies were beyond the scope of this effort but should be addressed."

13 Why was this the case and could resolving the electrical anomalies be part of
14 SSVEC's standard maintenance of the V-7 line?

15 Pg. 3: "Relatively small amounts of demand management and judiciously placed
16 generation results in net effective generation of up to 150% of the nameplate rating
17 of the alternative." 150% of nameplate rating would take us beyond 2029 according
18 to figure 16, page 30. (Exhibit A)

19 Pg. 13: "Most outages are due to transformer or pole riser fuses, many of which
20 serve one or fewer homes."

21 Pg. 16: "the continued high incidence of lightening related outages suggests
22 targeted improvements such as installation of additional arresters, improving ground

1 Pg. 30-31: "Utilities often adjust the rating of substation transformers based on
2 ambient conditions and load patterns. Because the V-7 and Huachuca substation
3 are winter peaking, the capacity of the transformer is typically higher than nameplate
4 due to ambient cooling."

5 Pg. 49: "Of the technologies considered, sodium sulfur appears best suited for
6 meeting V-7 capacity needs, as the storage capacity and discharge hours conform
7 to feeder peak load intervals. Notably, NaS battery availability currently is limited
8 due to a high order backlog (up to one year or longer)." SSVEC has estimated that
9 construction of the 69kV line will take approximately 12-18 months, so a one year
10 backlog for NaS batteries does not seem limited to me.

11 Pg 51: "Distributed generation connected to the V-7 feeder would reduce effective
12 loads during those hours in which it operates."

13 Pg. 58: "The injection of DG output on the V-7 feeder essentially reduces the
14 effective loading on the circuit. The decrease in feeder loads also reduces
15 substation transformer loading, improves feeder voltages and reduces losses."

16 Pg. 60: "None of the supply options cited above are likely to significantly improve V-
17 7 feeder reliability – the 69kV supply option provide the greatest benefit, as the
18 separation of one feeder into four would reduce customer interruptions and average
19 outage hours by up to 30 percent." This statement references the addition of the
20 substation separating the feeder into four, not the 69kV line.

21 And finally, in figure 16, page 30 the V-7 Feeder Annual Peak Load Forecast show
22 that under a medium case scenario, peak loads won't be achieved until about 2023.
23 That's a long time for alternative energy solutions to become mature.

1 **Q. What are you suggesting?**

2

3 A. I am suggesting that it makes sense to take a lower cost solution to the 69kV line
4 such as a natural gas peaker plant on SSVEC's property in Patagonia that has
5 distributed natural gas at the lot line or energy storage. Either option would provide
6 an immediate solution to our peak load problems and allow the incredibly rapidly
7 developing renewable energy technology to become mainstream. Some of these
8 technologies may eliminate the need for transmission lines altogether. One of the
9 most exciting projects is the Bloom Box being used in California. It's no longer far
10 fetched to think that we may be generating our own electricity in the future. Is
11 SSVEC going to take down all their power poles when that happens? I don't think
12 so. Most importantly, either one of these solutions would be a significant cost
13 savings for all cooperative members.

14

15 **Q. In Ms. Deborah White's direct testimony she indicates that the outages**
16 **that occurred in December 2009 would have affected fewer customers if the**
17 **project was in place. Do you agree?**

18

19 A. The proposed project's Sonoita Substation that will split the existing 360-mile V-7
20 feeder into four separate feeders would have reduced the number of affected
21 customers in the December 2009 outages, not the 69kV line. In fact, it is my
22 understanding that if an outage occurs on the proposed 69kV line the number of
23 customers affected would not change. I also understand that the Arizona

1 the primary fuel supplier to SSVEC, I would think AEPCO would have a vested
2 interest in the construction of the 69kV line.

3
4 **Q. In Mr. Shlitz's testimony he is asked "Did SSVEC management, its staff,**
5 **customers, or representatives influence any of the conclusions or**
6 **recommendations presented above or in your report?" He states that**
7 **clarifications offered by TRC and SSVEC "did not in any way alter results,**
8 **conclusions, or recommendation in our draft report". When you compared the**
9 **Draft Report with the final bound copy of the Feasibility Study, what did you**
10 **find?**

11 A. Pages 97-98 of the Draft Report is the Findings and Conclusions. These pages
12 compare to the Summary pages 92-93 of the final bound copy of the Feasibility
13 Study. In the third paragraph on page 97 and fourth paragraph page 92 it discusses
14 energy storage. The last sentence of that paragraph in the Draft Report has been
15 deleted from the final bound Feasibility Study. It states in reference to energy
16 storage "It should nonetheless be considered by SSVEC as a solution". (Exhibit C).

17 In my opinion, that is a recommendation and significantly changes the
18 findings and conclusions made by Navigant to SSVEC.

19

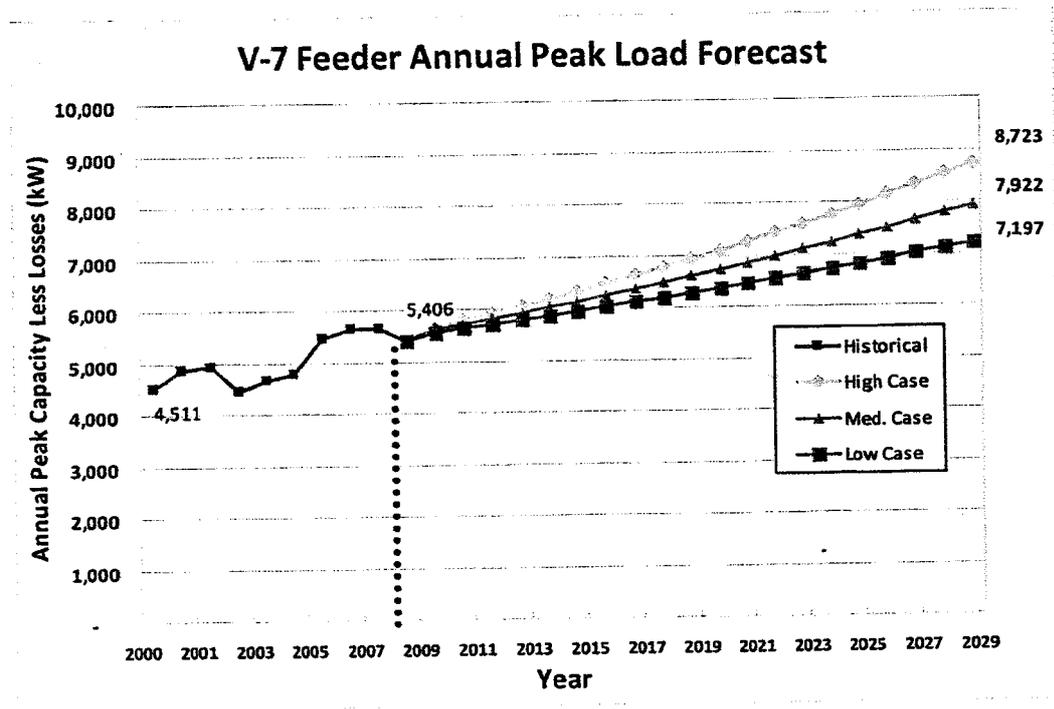
20 **Q. Does this conclude your testimony?**

21 A. Yes.

22

Exhibit A

Figure 16: 20 -Year Peak Load Forecast



The high case scenario assumes the high population growth rate over the last eight years, roughly 2.5 percent per year from 2000-2008, will continue at the same rate through the next 20 years.¹⁶ The low case forecast assumes that the growth rate will be proportionally lower (roughly 1.5 percent annual growth rate) from the base case. Using the linear relationship between customer and load growth based on historical trends and customer population projections, V-7 feeder peak load was forecast over the next 20 years as previously depicted in Figure 16.

Station Capacity

The existing 69/24.9kV Huachuca substation transformer has a nameplate rating of 7 MVA. The previous peak of over 6.9 MVA indicates virtually all available substation capacity has been used. Any significant additional load will exceed the nameplate rating of the device. Similarly, if power factors are below 1.0 per unit, the transformer will become overloaded for lower real power demand. However, utilities often adjust the rating of substation transformers based on

¹⁶ Annual Customer Growth Rate from 2000 to 2008 for V7 Feeder= -2.6% (see Figure 15)

Exhibit B

David T. Larsen

David T. Larsen
Director

Navigant Consulting, Inc.
3100 Zinfandel Drive, Suite 600
[REDACTED]
[REDACTED]

Professional History

Navigant Consulting, Inc. (1986 - Present)
Director
Arizona Electric Power Cooperative, Inc.
(1975 - 1986) Supervisor of System
Planning

Education

B.S., Electrical Engineering, South Dakota
State University, Brookings, 1970

Professional Associations

Institute of Electrical and Electronics
Engineers
National Honorary Electrical Engineering
Society

Mr. Larsen is a Director with Navigant Consulting, Inc. (NCI) and has over 35 years of experience in transmission and resource planning and the development and negotiation of power contracts. At NCI, he oversees the evaluation and planning of transmission projects and provides technical support in the evaluation and negotiation of power contracts and the performance of power marketing analyses. Mr. Larsen has performed or supervised interconnection and system impact assessments for proposed renewable (wind and solar) and thermal generating projects in the Desert Southwest and other portions of the western United States. He has also participated in the planning of several major electric transmission projects. He has also represented one of NCI's major transmission owner clients on the Western Electricity Coordinating Council's Planning Coordination Committee.

Prior to joining NCI, Mr. Larsen was employed by the Arizona Electric Power Cooperative and was actively involved in resource and transmission planning in the Desert Southwest. Mr. Larsen was one of the original members of the Southwest Area Transmission Planning Committee, which was responsible for the performance of coordinated power flow and transient stability evaluations of the interconnected system (500-kV, 345-kV, and 230-kV) in the Desert Southwest and served as chairman of the Committee.

Exhibit C

Summary

The V-7 feeder is a very long circuit that is nearing or at capacity limits. It requires a significant number of regulators operating in tandem to maintain voltages within acceptable limits. Reliability is below that of other SSVEC feeders, but not unusually low, as SSVEC has implemented effective reliability improvement measures; however, the number of momentary interruptions appears to be high, in large part because of the very long lines. There is evidence the feeder may be experiencing other voltage anomalies that require resolution. In summary, the V-7 feeder cannot accommodate material increases in load without overloads or unacceptable voltage impacts, or both. Immediate action is necessary to address V-7 capacity and performance issues.

Several alternatives are feasible to resolve capacity and performance issues from a technical perspective. Most transmission options are technically viable, except for use of TEP's 46kV line to serve V-7 load, which appears to have insufficient capacity to serve incremental SSVEC load. The transmission supply options provide the highest level of firm capability compared to other feasible options, as the availability of new transmission lines tend to be higher than distributed generation options. Distributed generation options must be carefully maintained and complex control strategies, communication systems would be needed to ensure the units operate when needed.

The investigation of environmental issues indicates the new 69kV line along new and existing ROWs along the Ranch has the greatest impact of the options considered. If the 69kV line and new substation at Sonoita are built as previously proposed by SSVEC, modest mitigation efforts are needed to address biological, cultural, and archeological issues. The visual impact of a new line is the most significant, and efforts should be made by SSVEC to minimize visual impact if the line is constructed. These would include low-profile line design, selection of construction materials that blend with the landscape.

Most renewable energy options, including wind and solar photovoltaic, did not provide sufficient coincident peak load reduction to be feasible – the V-7 feeder peak occurs during cold winter mornings when the sun is low on the horizon. Concentrated solar power could provide a solution, but would be very expensive and have potentially undesirable visual impacts; it also requires significant land, which may be difficult to obtain in quantities sufficient to construct devices large enough to reduce peak demand. The other renewable energy options provide minimal voltage support, and do not improve power quality and reliability. Energy storage systems show much promise and efforts are underway on a national scale to advance the technology and reduce cost, but are still in the early stages of development. Storage also would require complex monitoring and control schemes to ensure

sufficient storage was available and dispatched in a manner that will reduce loads over the full duration of the daily peak.

The lowest cost alternative is the targeted conversion of customer space heating systems, followed by the installation of oil or gas-fired diesel generators in Sonoita. However, there are clear trade-offs and concerns with the lower cost options. For targeted fuel conversions, the number of eligible customers and level of incentive needed to ensure sufficient participation levels has not been established. Such a program would need to be expedited, as the V-7 feeder has reached capacity limits. Further, the conversion program would only reduce feeder loading – voltage regulation and power quality issues would need to be addressed to ensure customers receive a level of service comparable to other feeders on SSVEC's system.

Other options that would have environmental impacts is the installation of generators at Sonoita and the conversion of existing electric space heating units to alternate fuels. If the amount of generation installed were to exceed state thresholds, an air quality permit likely would be needed. The EMF levels associated with existing lines versus options considered indicate each of the proposed upgrades or load management options will likely produce lower EMF levels than existing facilities. The absence of EMF standards does not enable a determination as to which alternatives are preferred from an EMF standpoint.

The preferred alternative based on feeder performance and firm capacity requirements is the construction of new 69kV line along the Ranch where SSVEC has easement rights.

Changed to Summary

Findings and Conclusions

The V-7 feeder is a very long feeder that is nearing or at capacity limits. It requires a significant number of regulators operating in tandem to maintain voltages within acceptable limits. Reliability is below that of other SSVEC feeders, but not unusually low, as the Company has implemented effective reliability improvement measures; however, the number of momentary interruptions appears to be high, in large part because of the very long lines. There is evidence the feeder may be experiencing other voltage anomalies that require resolution. In summary, the V-7 feeder cannot accommodate material increases in load without overloads or unacceptable voltage impacts, or both. Immediate action is necessary to address V-7 capacity and performance issues.

Several alternatives are feasible to resolve capacity and performance issues from a technical perspective. Most transmission options are technically viable, except for use of Tuscon Electric Power's 46kV line to serve V-7 load, which appears to have insufficient capacity to serve SSVEC load. The transmission supply options provide the highest level of firm capability compared to other feasible options, as the availability of new transmission lines tend to be higher than distributed generation options. Distributed generation option also must be carefully maintained, and special control strategies and systems would be needed to ensure the units operate when needed.

Added Longview (pg 98, 200)

Most renewable energy options, including wind and solar photovoltaic, did not provide sufficient coincident peak load reduction to be feasible – the feeder peak occurs during cold winter mornings when the sun is low on the horizon. Concentrated solar power (CSP) could provide a solution, but would be very expensive and have potentially undesirable visual impacts; it also requires significant land, which may be difficult to obtain in quantities sufficient to construct devices large enough to reduce peak demand. Energy storage systems show much promise and efforts are underway on a national scale to advance the technology and reduce cost, but are still in the early stages of development. Storage also would require complex monitoring and control schemes to ensure sufficient storage was available and dispatched in a manner that will reduce loads over the full duration of the daily peak. It should nonetheless be considered by SSVEC as a solution.

Added

del.

"The lowest cost" Alternative

The most cost effective alternative is a targeted conversion of customer space heating systems, followed by the installation of oil or gas-fired diesel generators in Sonoita. However, there are clear trade-offs and concerns with the lower cost options. For targeted fuel conversions, the number of eligible customers and level of incentive needed to ensure sufficient participation levels has not been established. Such a program would need to be expedited, as the V-7 feeder has reached capacity limits. Further, the conversion program would only reduce

feeder loading – voltage regulation and power quality issues would need to be addressed to ensure customers receive a level of service comparable to other feeders on SSVEC's system.

The investigation of environmental issues indicates the new 69kV line along new and existing rights-of-way along the Babocomari Ranch has the greatest impact of the options considered. If the 69kV line and new substation at Sonoita are built as previously proposed by SSVEC, modest mitigation efforts are needed to address biological, cultural, archeological issues. The visual impact of a new line would be more significant, and efforts should be made by SSVEC to minimize visual impact if the line is constructed. These would include low-profile line design, selection of construction materials that blend with the landscape.

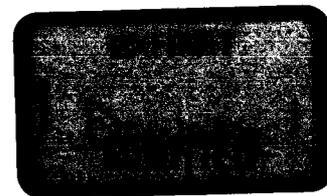
Other options that would have environmental impacts is the installation of generators at Sonoita and the conversion of existing electric space heating units to alternate fuels. If the amount of generation installed were to exceed state thresholds, an air quality permit likely would be needed. The EMF levels associated with existing lines versus options considered indicate each of the proposed upgrades or load management options will likely produce lower EMF levels than existing facilities. The absence of EMF standards does not enable a determination as to which alternatives are preferred from an EMF standpoint.

Added Preferred alternative - - -

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

**Kristin K. Mayes
Gary Pierce
Sandra D. Kennedy
Paul Newman
Bob Stump**



IN THE MATTER OF THE APPLICATION OF
SULFUR 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

No. E-01575A-08-0328

IN THE MATTER OF THE APPLICATION OF
SULFUR SPRINGS VALLEY ELECTRIC
COOPERATIVE, INC. FOR AN ORDER
INSTITUTING A MORATORIUM ON THE NEW
CONNECTIONS TO THE V-7 FEEDER LINE
SERVING THE AREAS OF WHETSTONE, RAIN
VALLEY, ELGIN, CANELO, SONOITA, AND
PATAGONIA, ARIZONA

No. E-01575A-09-0453

SUSAN J. DOWNING DIRECT TESTIMONY

March 15, 2010

This filing contains the direct testimony of Susan J. Downing, Intervenor, for Docket Numbers E-01575A-08-0328 and E-01575A-09-0453. Sulphur Springs Valley Electric Cooperative petitioned the Commission to amend Decision No. 71274 on January 14, 2010. Thereafter, SSVEC requested an expedited procedural order regarding the petition to amend Decision No. 71274.

Testimony will prove that "exigent reliability circumstances" do not exist and SSVEC and Navigant Feasibility Consulting have failed to provide a reasonable basis to support the immediate construction of the 69kV line.

Respectfully,


Susan J. Downing

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Please state your name and address

Susan Downing
360 Elgin Canelo Road, Elgin AZ

Why are you involved in these Proceedings?

I have been a cooperative member of Sulfur Springs Valley Electric Cooperative (SSVEC) for 25 years. I am an intervenor in Dockets E-01575A-08-0328 and E-01575A-09-0453. There are three reasons I chose to be an intervenor in this matter. These are:

1. Concerns with how my cooperative spends my money.
2. I do not believe that the SSVEC proposed Sonoita Reliability Project is the best solution for the current or future needs of my community.
3. The proposed route through the Babacomari Ranch will create environmental, archeological, and visual damage to area that deserves protection.

Have you previously testified before the Arizona Corporation Commission?

No. I have spoken during public comment segments prior to becoming an intervenor and I have attended Procedural Hearings in these two dockets.

Background

When did you first become aware of SSVEC plans to improve service to Sonoita, Elgin, Canelo, Rain Valley and Patagonia?

After receiving a notice in the mail from SSVEC, I attended a public meeting at Patagonia High School on November 14, 1991. After hearing the presentation, SSVEC asked if anyone would be interested in joining an advisory committee. I joined the Community Advisory Committee and attended every meeting thereafter.

What were some of the topics discussed at these meetings?

Different routes were suggested by members and SSVEC investigated each route. They presented construction costs and developed a matrix to evaluate the different options. Jim Sober, Line Extension Supervisor, along with other SSVEC employees listened to member concerns and explored different options. Other topics discussed were pole height, pole design, EMF, easements, and environmental studies.

How did these meetings differ from the SSVEC meetings held more recently?

During the 1991-93 meetings I felt the SSVEC employees were sincerely concerned with how members felt, they were respectful and very truthful. For example, any time a member asked a question about a route, SSVEC would investigate and at the next meeting bring copies of all correspondence or research results. Everything was very transparent. They presented copies of letters from Bill Brophy of the Babacomari Ranch, Tucson Electric and others. I had great

respect for the SSVEC staff. I felt they cared, were very truthful, honest and open minded. They made me feel like the cooperative operated as a cooperative, for the members benefit.

My dealing with the current SSVEC staff is quite the opposite. They have not answered questions and have refused to be forthright or to back up any of their statements with data or proof. Their attitude has been that we should not question anything they say, but to believe it hook, line and sinker. Credan Huber, Jack Blair, Deborah White have made public statements that I do not believe are true.

What statements have they made that you feel may not be true?

For example, to convince my community that the proposed line is necessary, they have stated in their letters to the community that we suffer from 270 hours a year in outages. They have lost so much creditability with these statements because everyone knows we don't lose power that often. The Navigant Study (Page 2, Table ES-1) states that our outage time is 3 hours and would be less if not for the high wind related outages in 1999. I believe this is the correct outage time.

How often are the outages and how do they affect you?

I have lived in both Sonoita and Elgin for 25 years. We rarely have outages compared to how it used to be. When we do have outages, it is usually during wind storms and lightening, the same conditions that cause outages in the other SSVEC service areas and for that matter in other electric utility service areas. We do get blinks sometimes but that is just a minor inconvenience. I'm surprised that we don't get more poles down during wind storms since they appear to be in very bad shape along the existing 25kV line. The poles are very old and the wood has deteriorated badly. I feel that SSVEC is not adequately maintaining the poles and equipment.

On August 18, 2009, we had an outage of several hours with brownout conditions prior to the entire V-7 line going down. At the Board of Directors meeting on August 19, 2009, I asked Ron Orozco what had happened. He told the Board and the cooperative members attending that the causation was a very old fuse at the substation and it did not open like it should have. This is what caused the brownout and blackout. After hearing Mr. Orozco say this at the meeting, a cooperative member who is also a Journeyman Electrician asked SSVEC to ensure that their crews do not allow this (brownout) to happen again since it causes equipment damage in peoples' homes.

Recently there were two outages that lasted several hours and affected the entire V-7 feeder. Tell me about these.

One was on December 8, 2010 during a terrible wind storm. Winds of 70 mph were clocked in Sierra Vista. From reading The Sierra Vista Herald newspaper reports I understood that SSVEC had extended outages in many communities including Willcox and Sierra Vista. Their article *Winds Remind Us How Good We Have It* states "The howling winds reportedly gusted to more than 70 miles per hour at times throughout the evening. There were power outages in the southwest part of town with residents going chilly for nearly eight hours." So I guess our outage was a small one compared to what other cooperative members suffered.

The outage on December 23, 2010 was from a snowstorm with high winds that we had overnight. The power went off that morning at 5:50am. At 6:30am I drove about 23 miles to the

substation and back along the V-7 line. I could not find any SSVEC crews responding. At 7:32am I found a crew checking poles. I stopped and asked them what the problem was and they said they did not know yet, they were still checking reclosers. Later in the day I heard that a pole had gone down. One of the reasons that the outages are so long is because SSVEC has to mobilize crews that are based about 45 minutes away. This adds a lot to the outage times they are tracking. Even if it is a fuse on a pole outside your house, it is recorded as an one hour occurrence because that's how long it takes to get them out. I believe this is why the Navigant Study recommended keeping a crew closer in bad weather.

Would the proposed 69kV line improve your reliability?

Not according to the Navigant study. The study states on page 2. *"Resolution of voltage anomalies were beyond the scope of this effort, but should be addressed if the V-7 feeder remains in its current configuration. (voltage perturbation may continue to be a problem even if certain upgrades outlined herein are implemented.) The long lines create power quality events- mostly voltage sags- characteristic of long lines where fault current is low, especially for faults occurring on outlying line sections."* The proposed 69kV line is about the same length as the existing one, so the same issues exist. Also, both the existing substation (Huachuca) and the proposed 69kV line tap into the same transmission line- resulting in a power source with no redundancy. If that transmission line, which is on a busy highway (State Highway 90), is hit by a car, both lines to Sonoita would go down.

You stated that you have concerns about how your cooperative spends your money. What do you mean by this?

Enormous amounts have been spent on the campaign and legal proceedings to cram the Sonoita Reliability Project down the throats of its members to the tune of almost one million dollars. I see wasteful spending in the form of multiple mailings, robocalls, SSVEC management efforts to encourage employee's families and friends to write letters of support and ongoing legal fees. As a member I see all of this reflected in increased electricity costs and decreased patronage. This wasted money would have better served the rate payers if it had been spent to improve our current service by investigating the problems identified in the Navigant report or better yet by investing in renewable energy. Given these tough economic times my Cooperative has been frivolous and foolish with their spending. The blame lies with their CEO and Board.

Why do you believe that the SSVEC proposed Sonoita Reliability Project is not the best solution for the current or future needs of your community?

The 69kV line plan was developed in 1991, almost twenty years ago. This is an outdated plan that depends on coal, a cheap, dirty fuel that is a finite natural resource. With Cap and Trade and renewable energy mandates it will become an expensive solution that will not provide the reliability that it claims. Many in my community embrace renewable energy and expect our cooperative to use Best Available Technology, not outdated and expensive solutions.

The Sonoita, Elgin, Patagonia areas depend on tourism and the proposed 69kV line will forever scar the landscape. Visitors to our area come to see the wide open vistas with an unblemished

view of our mountains in the background. They come to see the scenic beauty of one of the few remaining grasslands in the Southwest, an area known to birders, hikers and outdoorsmen.

The Navigant Feasibility Study reaffirmed my position that there are more cost effective solutions available. SSVEC can do much to improve their Demand Side Management (DSM) and Time of Use (TOU) programs. Both of these programs are ineffective because SSVEC does little to make them attractive to cooperative members. The DSM program is little more than an advertising program. They do nothing to promote the purchase of Energy Star washers, dryers, refrigerators or dishwashers. There are no rebates for Energy Star fluorescent lighting. SSVEC continues to promote all electric homes with heat pumps which are very inefficient in colder climates like we have. Most cooperative members do not even realize that SSVEC has a TOU program since it is not promoted very often. They have no measurement tools in place to track or evaluate the performance of their programs. They really don't know what works and what doesn't or where our money is put to good use.

Do you think the Navigant study was independent?

I do not. While the report claims there was no contact between Navigant and SSVEC staff it then goes on to state in a footnote on Page 8 that an SSVEC employee accompanied Navigant and TRC. Photo 9 even shows a SSVEC vehicle with the emblem on the door at the substation site.

Navigant depended on SSVEC for much of its data with no time allowed to research data on their own due to the rushed timeframe caused by SSVEC's late response to the ACC order. Navigant used much of the data SSVEC provided. For example Table ES-2: Economic Comparisons of Alternatives. How can O&M costs be more for a line along an easy to access public highway (State Highway 82) as opposed to a rugged, mountainous, poorly accessible ranch such as the Babocomari? I understand that Navigant also used equipment cost estimates provided by SSVEC. So it goes to say, garbage in, garbage out.

Are you comfortable with David Larson of Navigant Consulting being previously employed by Arizona Electric Power Cooperative?

Absolutely not, this is a conflict of interest. Given how large a company Navigant is, Mr. Larson should not have been used on this project.

How do you feel about Navigant's statement that "We incorporated several comments and suggestions offered by TRC and SSVEC related to the RFP to clarify our findings and conclusions?"

By allowing SSVEC to comment on the findings and influence the resulting outcome negated "independence" to this feasibility study.

Do you agree with Mr. Eugene Shlatz's statement that the T-1 option across the Babocomari Ranch did not present any material environmental impacts that could not be

addressed through modest migration methods, such as low profile design and selection of materials that blend with the natural landscape?

No, the view will be greatly impacted by any poles. The maintenance roads will also scar the view. In the past, movies have been filmed here because of the great beauty of the landscape. Many of the movies were westerns, which required a landscape without electric lines and poles. Oklahoma was filmed here long ago, but more recently Tombstone was filmed on the Babocomari Ranch.

Do you think the proposed route through the Babacomari Ranch will create environmental, archeological, and visual damage?

The information provided in the Study was inadequate. The report stated that further environmental studies would be necessary if they proposed route was chosen.

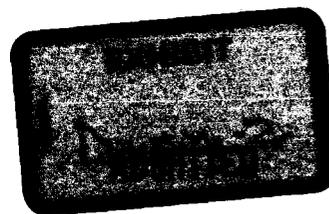
The issue at hand is the impact the installation and maintenance of an electrical line will make on an area that is fragile and will never recover from this construction. SSVEC has already bulldozed areas of the ranch for the purpose of construction. On the ranch there are wetlands, and this area is a link between the Sky Islands. Jaguars have been sited nearby. Species that depend on the grassland ecosystem are rapidly losing habitat.

The archeological did not mention the Babocomari Village, an Indian settlement that was found on the Babocomari Creek, nor the Fort Wallen, an army fort on the Babocomari. There are also reports of burial grounds.

BEFORE THE ARIZONA CORPORATION COMMISSION

1 COMMISSIONERS

2 Kristin K. Mayes
3 Gary Pierce
4 Sandra D. Kennedy
5 Paul Newman
6 Bob Stump



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

Docket No. E-01575A-08-0328

14 IN THE MATTER OF THE APPLICATION OF SULPHUR
15 SPRINGS VALLEY ELECTRIC COOPERATIVE, INC., FOR
16 AN ORDER INSTITUTING A MORATORIUM ON THE NEW
17 CONNECTIONS TO THE V-7 FEEDER LINE SERVING THE
18 AREAS OF WHETSTONE, RAIN VALLEY, ELGIN, CANELO,
19 SONOITA, AND PATAGONIA, ARIZONA.

Docket No. E-01575A-09-0453

20 **NOTICE OF FILING**

21 **MARSHALL MAGRUDER DIRECT TESTIMONY**
22 **IN SUPPORT OF INTERVENOR SUE DOWNING**

23 **16 MARCH 2010**

24 This filing contains the Direct Testimony of Marshall Magruder in support of Intervenor Sue
25 Downing who requested that I be a witness in these hearings, in particular, a §40-252 review
26 that was petitioned by Sulphur Springs Valley Electric Cooperative (SSVEC). The Cooperative
27 then petitioned the Commission on 14 January 2010 to amend Decision No. 71274. SSVEC then
28 requested an "expedited procedural order regarding petition to amend Decision No. 71274".

29 This testimony provides evidence and proves that the "exigent reliability circumstances" do
30 not exist based on the Feasibility Study order by Decision No. 71274. Further, the Cooperative
may avoid loss of American Relief and Recovery money if its management delayed longer.

As will be shown, the misleading conclusions reached by the Cooperative have been
repeated so many times in the numerous and extremely voluminous filings by SSVEC, that their
counsel seems to believe he is not "stretching" the truth beyond the facts that have been shown

1 to be true (and different) in the Feasibility Study. It's a sad day when this Cooperative has been
2 so misleading that it now believes its own bathwater.

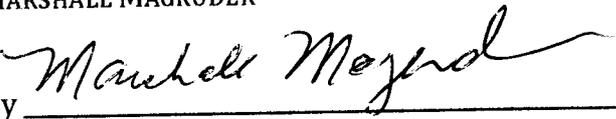
3 I was asked by Ms Downing to assist her in this area, and based on my background at the
4 Santa Cruz County/City of Nogales Joint Energy Commissioner, to which I was appointed in
5 January 2000 through September 2008 as its Vice-Chairman.

6 My attached testimony will speak for itself with a firm recommendation that the petition by
7 the Cooperative be denied based on the fact there is no basis for its claims to not follow the
8 existing procedure as, outlined by the Administrative Law Judge, as no emergency exists.

9 I certify this filing has been mailed or delivered to parties on the Service List this date.

10 Respectfully submitted on this 16th day of March 2010.

11 MARSHALL MAGRUDER

12 By 

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19 Original and 13 copies of the foregoing are filed this date:

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DIRECT TESTIMONY

OF

MARSHALL MAGRUDER

AS A

WITNESS

FOR

SUE DOWNING ,

INTERVENOR

16 MARCH 2010

IN THE MATTERS

OF

THE APPLICATION[S] 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.**

AND

**FOR AN ORDER INSTITUTING A MORATORIUM ON THE NEW CONNECTIONS TO THE V-7
FEEDER LINE SERVING THE AREAS OF WHETSTONE, RAIN VALLEY, ELGIN, CANELO, SONOITA,
AND PATAGONIA, ARIZONA.**

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**DIRECT TESTIMONY
OF MARSHALL MAGRUDER**

SECTION 1 - BACKGROUND AND INTRODUCTION

1.1 Introduction.

Q. Please state your name, business address, and occupation.

A. My name is Peyton Marshall Magruder, Jr. I am a customer of UNS Gas and UNS Electricity, two public service companies that serve Santa Cruz County. I was Vice-Chairman of the Santa Cruz County/City of Nogales Energy Commission, and active in community projects including the AARP tax aide program. In this position, the entire county was in my area of concern, including the Northeast Santa Cruz County communities of Patagonia, Sonoita, Elgin, and Canelo. I participated in the creation, development, and drafting of the *2004 Santa Cruz County Comprehensive Plan* that established Character Areas in our county. The Northeast Character area corresponds to these communities, which is very similar to the Northwest Character area in which I live. This plan sets the County's goals, objectives and polices.¹

I recently was employed as a Senior Scientist and Information Systems Architect for Integrated Systems Improvement Services (ISIS), Inc. in Sierra Vista, Arizona, working with information warfare, systems architectures, electronic and communications intelligence systems, test plans, information assurance, future cryptologic systems management, and information technology services. I am Systems Engineer and Training Systems Consultant for Imagine CBT, Inc., at Raytheon Naval and Maritime Systems in San Diego, doing systems engineering work with US and Royal Navy involving aircraft carriers and amphibious warfare ship's command, control, communications, computers, intelligence, surveillance and reconnaissance systems, (C4ISR) and all levels of training systems.

Annually, between January and April 15, I am seasonally employed as a Senior Tax Advisor Level III, the 10th of 13 pay levels for tax preparers, at H&R Block, Inc, in Tucson, Arizona. I retired from Raytheon, previously, Hughes Aircraft Company, as a Senior Systems Engineer after nearly 18 years and as a Naval Officer for 25 years. Please see Exhibit A for additional work experience.

¹ *Santa Cruz County Comprehensive Plan*, adopted by the Board of Supervisors Resolution No. 2004-11, 29 June 2004.

1 As an instructor, I taught for the University of Phoenix MBA courses "Operations
2 Management for Total Quality" and "Managing R&D and Innovation Processes" in Nogales,
3 Arizona, where all the students were from Mexican maquilas, and also in Tucson, Arizona.

4 I am the Vice President of the Martin B-26 Marauder Historical Society of some 1,700
5 World War II veterans and serve as Fund Raising Chairman for a five-million dollar "Lasting
6 Legacy" fund drive to endow the MHS International Archives and restore a B-26 Marauder
7 aircraft at the Pima Air & Space Museum/Arizona Aerospace Foundation in Tucson.

8 I hold two Masters of Science (MS) degrees, one from the University of Southern California
9 in Systems Management (MSSM) with specialties in Managing R&D and Human Factors and from
10 U.S. Naval Postgraduate School, a MS in Physical Oceanography with emphasis on underwater
11 acoustics. My BS is from the U.S. Naval Academy.

12 My address is P.O. Box 1267, Tubac, Arizona, 85646.

13 **1.2 Involvement in these Proceedings.**

14 **Q. Why are you involved in these proceedings?**

15 **A.** Both my professional background and involvement in local energy issues have led me to
16 participate during these proceedings. Due to time limitations and cost, I decided not to
17 intervene, as I have other ongoing cases with two testimonies due in the next few weeks.

18 **Q. What is a Systems Engineer?**

19 **A.** I have over 40 years of engineering experience with that last few decades as a
20 Systems Engineer, with most titles a Senior Systems Engineer or Principle Systems Engineer. A
21 systems engineer is one who conceptualizes a system based on understanding its needs, its
22 functions, and its expected results through delivery, operations and maintenance and disposal.

23 As I learned in my first class in a Systems Management course, a "system" usually is
24 somewhere between an atom and the universe, each made up of subsystems and each being a
25 subsystem of a larger system.

26 A Systems Engineer looks at the big picture, including economic, environmental,
27 functional, human factors, reliability, and cost issues when designing options or alternatives²
28 and a methodology to assess and select the best alternative to accomplish the task. As Exhibit A
29
30

² The terms "option" and "alternative" are used interchangeably herein, without any significance between them.

1 shows, many diverse kinds and types of systems have shaped my background with a continuous
2 array of unique experiences, everyone involving electricity in one form or another.

3 **1.3 Prior Experience before the Corporation Commission.**

4 **Q. Have you previously testified before this Commission?**

5 **A.** Yes, I have made appearances at Arizona Corporation Commission (ACC) Open and
6 Special Meetings and as an intervening party in the following ACC Dockets:

7 a. Arizona Power Plant and Transmission Line Siting Case No. 111, a Joint TEP and
8 Citizens Communications Company CEC Application for 345 kV Transmission Line from
9 Sahuarita, Arizona, to Santa Anna, Sonora, Mexico;

10 b. Docket No. E-01032C-00-0951, a Purchase Power and Fuel Adjustment Clause
11 (PPFAC) case for Citizens Communications Company;

12 c. Docket Nos. E-1033A-02-0914, E-01032C-02-0914 and G-01032C-02-0914, the
13 UniSource-Citizens Acquisition of Citizens Communications Company Arizona electricity and
14 natural gas utilities cases;

15 d. Docket No. E-04230-03-0933, the UniSource-Sahuaro Acquisition case;

16 e. Reopened and ongoing Docket No. E-01032A-99-0401, the Santa Cruz County service
17 quality, analysis of transmission and proposed Plan of Action case;

18 f. Reopened Arizona Power Plant and Transmission Line Siting Case No. 111;

19 g. Docket Nos. G-04204A-06-0463, G-04204A-06-0013, and G-04204A-05-0831, the UNS
20 Gas, Inc., UNS Gas Rate, UNS Gas PGA and Prudency cases;

21 h. Docket No. E-04204A-06-0783, for UNS Electric rate case;

22 i. Arizona Power Plant and Transmission Line Siting Case No. 144, TEP and UNS Electric
23 CEC Application for a 115 kV to 138 kV Transmission Line Upgrade from Vail to Nogales;

24 j. Open Docket No. E-04204A-09-09-0589, a Formal Complaint filed against UNS
25 Electric for failing to fund student loans, failing to complete 32 defective underground cable
26 and utility pole replacement projects, and failing to provide notification during an outage for
27 all customers on life support during an outage; and

28 k. Open Docket Nos. S/SW-01303A-08-0227, Arizona-American Water Company (AAWC)
29 water and sewage water rate cases. These initial rate cases are continued in Docket No. S/SW-
30 01303A-09-0343 where consolidation of rates for all of this company's divisions. Hearings will

1 begin on 19 April 2010 in Phoenix. I am a strong supporter of Rate Consolidation with its
2 resultant benefits for the company and ratepayers.

3 In view of the variety and diversity of these cases, I feel that being a witness to a first-time
4 intervenor who has never appeared before the Commission would help her case, provide Ms
5 Downing advise based on my knowledge and experiences from prior participations. This should
6 aid her in making her arguments with additional technical emphasis.

7 I also have intervened or participated in Federal Energy Regulatory Commission (FERC),
8 U.S. Department of Energy (DOE), U.S. Bureau of Land Management (BLM), and U.S. Forest
9 Service proceedings.

10 **Q. Have you filed documents in these matters?**

11 **A.** I have made two prior filings in these matters, which are included in the Attachment as
12 Exhibits MM-2 and MM-3.

13
14 **1.4 Preparation of this Testimony.**

15 **Q. Have you received advise or help from others in preparing you Testimony?**

16 **A.** All filings and testimonies are totally mine and were produced at my own expense. I have
17 received no compensation from anyone involving this case.

18
19 **1.5 The Primary Reference for this Testimony.**

20 **Q. What is the primary reference used for this Testimony?**

21 **A.** The primary reference used herein is the "*Feasibility Study*" (FS) prepared by an
22 independent third-party, Navigant Consulting, Inc., (NCI) that includes Alternatives that could
23 mitigate the need for a proposed 69 kV line to a planned Sonoita substation.³ The FS was
24 ordered by the Corporation Commission in ACC Order No. 71274 of 8 September 2009 due to
25 the veracity of prior SSVEC statements being questioned by the public. Section 4 herein will
26 provide some of the misleading statements being made by SSVEC's Counsel, SSVEC's CEO, and
27 other SSVEC management personnel. The FS stated:

28
29
30 ³ *Independent Feasibility Study of Electric Supply Alternatives*, prepared for Sulphur Springs Valley Electric
Cooperative, Willcox, Arizona, by Navigant Consultant, Inc., www.navigantconsulting.com dated December 2009,
filled in ACC Docket No. E-01056A-08-0328 on 31 December 2009 in compliance with ACC Order No. 71274 of 8
September 2009, hereafter "*Feasibility Study*" or "FS".

1 "All findings presented herein were prepared independently, without bias or
2 prior knowledge of feeder performance issues or concerns raised by customers
3 and other interested parties." [FS p. 1]

4 Also, an "independent engineering and consulting firm, TRC Solutions, was engaged by
5 SSVEC to respond to information and data requests submitted by NCI." [FS p. 1, fn 2] Due to this
6 position to collaborate with SSVEC, testimony by TRC is of a lower quality than any testimony
7 from NCI. Therefore, only truly "independent" testimony should be considered in this case, that
8 is, testimony by the "independent study contractor" and not as an "in-between" liaison
9 organization.

10 A serious question remains, as to why SSVEC chose to have TRC testify in these hearings
11 instead of those who performed the feasibility study and wrote the actual report. If TRC did
12 either of these actions, then, in my opinion, the FS would not be truly "independent". It is noted
13 that there are no negative implications here for the work involving the FS accomplished by NCI.

14 **1.6 This Witness Testimony.**

15 **Q. Why did you feel a need to be a witness in these proceedings?**

16 **A.** When I read the Cooperative's Application for a Re-hearing, and additional Cooperative-
17 produced letters and filings, many issues of concern became apparent. These included the
18 following issues of concern:

- 19 a. Misleading statements concerning the reliability of the V-7 feeder line for the
20 affected communities;
- 21 b. Ability to meet peak and emergency demands;
- 22 c. Ability of renewable energy Alternatives to provide additional capacity; and
- 23 d. Correction of the Cooperative's exaggerated claims with facts from the Feasibility
24 Study.

25 **Q. Why do you feel that the Cooperative is spending so much effort on pushing for the**
26 **69 kV line?**

27 **A.** It appears to me that the Cooperative is not interested in ANY Alternative other than a 69
28 kV line, and refuses to really try to solve the issues in the matter without constructing a 69 kV
29 line.
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This is unfortunate. The Cooperative's senior management has not been open-minded, transparent or even making an attempt to be truly honest in these proceedings when it comes to working through the challenges in resolving this question by any other solution than a 69 kV line.

It appears to me that this line is a precursor for the three on-going mining exploration sites in the Patagonia Mountains, in Santa Cruz County. By double-circuiting this 69-kV line and continuing it to Patagonia, the Cooperative would use the same arguments, "we have a request for power", to take this action for a mine. This is one unintended consequence that is in direct opposition to Resolutions passed unanimously by the Santa Cruz County's Board of Supervisors and the will of the people in these communities, which are very far from Willcox, Benson and Sierra Vista.

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SECTION 2

**SUMMARY OF RECOMMENDATIONS AND CONCLUSIONS FOR
THE ISSUES IN THIS TESTIMONY**

2.1 Summary of Issues 1 to 4 from in Sections 3 to 6.

Q. Can you summarize the issues from your Direct Testimonies?

A. Yes. Several issues of concern are in my testimonies as follows:

- **Issue 1** – In reliability terms, the Health of the Present V-7 Feeder Service Area does NOT require emergency construction of a 69 kV subtransmission line in Section 3.
- **Issue 2** – Methods to meet short-term peak and emergency demands are more reasonable, cost effective, and available in Section 4.
- **Issue 3** – Benefits of Renewable Energy (RE), Distributed Energy (DE), and Demand Side Management (DSM) to improve performance in the service area in Section 5.
- **Issue 4** – Correction of exaggerated Cooperative claims in Section 6.

2.2 Summary of Conclusions.

2.2.1 The Feasibility Study did NOT recommend that the 69 kV line be Constructed under EMERGENCY Conditions.

The Cooperative quoted the FS [p. 3] in its petition for these §40-252 hearings, that
“The results of NCI’s investigations indicates SSVEC should take immediate action to address current performance issues and capacity limits, including carefully assessing the impact of customer requests for new or expanded service on V-7 feeder performance and capacity.” [FS p. 3, italics in original]

This often repeated quote does NOT use the words “69 kV line” but it does specify that action should be taken by SSVEC. As shown in the FS and below, the most costly action would be a 69 kV line, while others are more economical. There has been no acknowledgement by the Cooperative that it could resolve its V-7 feeder area problems by combinations of these less expensive Alternatives contained in the Feasibility Study and other sources.

Further, as to be shown, NCI was not required to investigate key involved in making decisions for the V-7 feeder area, in particular

“Resolution of voltage anomalies were beyond the scope of this effort, but should be addressed if the V-7 feeder remains in its current configuration. (Voltage perturbations may continue to be a problem even if certain upgrades outlined herein are implemented.)” [FS p. 2, emphasis added]

1 Further, the Commission Staff's Closing Brief of 22 May 2009 in the Rate Case had no
2 mention the Sonoita Reliability Project (SRP) or this 69 kV subtransmission line; thus, the SRP
3 must not have been considered as a serious an issue at that time.

4 Further, the Administrative Law Judge (ALJ) in the rate case Recommended Opinion and
5 Order (ROO) of 14 June 2009 included the following statement:

6 "To the extent residents in the area and the Cooperative believe it would be
7 helpful, the Commission can make Staff available to moderate discussions
8 on how renewable generation can successfully be integrated into its system.
9 It is not in the public interest, however, to order SSVEC to delay the planned
10 upgrade."⁴

11 The above ROO did NOT mention the SRP in the Finding of Fact other than facts about a
12 Public Haring held in Sierra Vista on 11 February 2009. There are NO Orders in this ALJ ROO
13 that pertains to the SRP or the proposed 69 kV line. The word "immediate" and "emergency"
14 pertaining to the SRP were NOT found in this ROO. Similarly, the Commission Staff did NOT use
15 these words. These will be discussed in greater detail in Section 6 below. And even the
16 Commission does NOT use the words "urgent", "immediate", "expedite", or "emergency"
17 anywhere in the Order Decision and Order No. 71274. Only the Cooperative repeatedly uses
18 these words in these matters.

19 The study constraints established by SSVEC were NOR completely realistic as will be
20 discussed in Section 6. These "constraints" led NCI to prematurely exclude what appear to be
21 viable Alternatives. For example, NCI was not required to provide dig deeper into the voltage
22 anomalies it knew were present? [FS p. 2]

23 2.2.2. Summary of Conclusions for Issue 1 to Issue 4.

24 **Q. Can you summarize your conclusions for Issues 1 to 4?**

25 **A. Yes.**

26 Issue 1 Conclusion - There is no "reliability" or outage emergency and the Commission's
27 original schedule for rehearing the SSVEC Rate Case should not be changed due to the
28 Emergency Petition under A.R.S §40-252.

29
30
⁴ ACC Docket No. E-10575A-08-0328, Letter from ACC Acting Executive Director of 14 July 2009 distributing ALJ Rodda recommendation in the form of an Opinion and Order, page 39 at 1-4.

1 Issue 2 Conclusion – The Feasibility Study provides adequate ways for the Cooperative to
2 use to in order meet short-term peak and emergency demands more economically than
3 with its proposed and more expensive 69 kV subtransmission line.

4 Issue 3 Conclusion – The Cooperative should vigorously pursue – Renewable Energy
5 (RE), Distributed Energy (DE) and Demand Side Management (DSM) Alternatives based
6 on this Feasibility Study.

7 Issue 4 Conclusion – The Cooperative should not exaggerate its claims with misleading
8 statements, when so vastly different from the facts in the Feasibility Study.

9 **2.3 Recommendation.**

10 **Q. What is your recommendation with respect to the A.R.S. §40-252?**

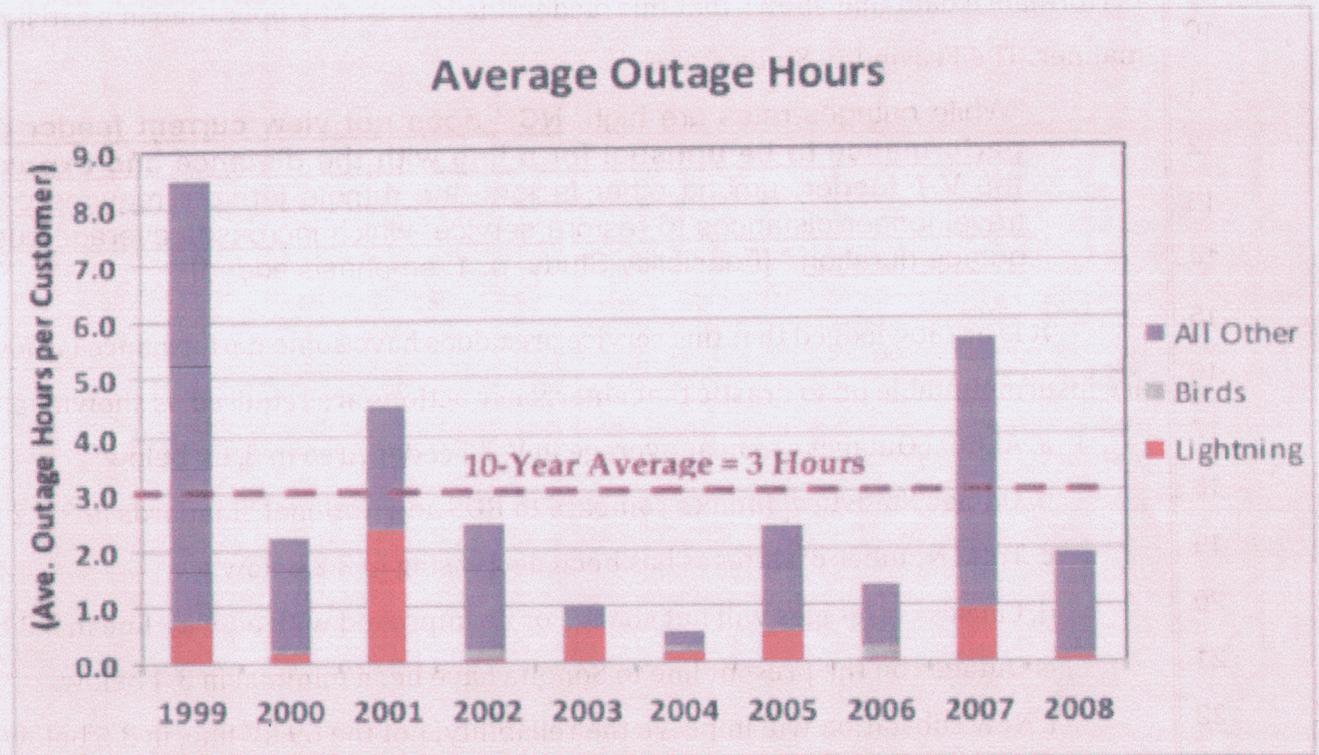
11 **A.** The Commission has no basis to approve an emergency request to construction at 69 kV
12 line based on facts contained in the Feasibility Study or prior Commission Staff
13 Recommendations. The ongoing procedural process should not be interrupted or
14 changed based on the facts in the Feasibility Study until the total set of issues can be
15 resolved with full testimonial hearings as the Procedural Orders now schedule.

16
17 **Therefore, the Recommended Opinion and Order (ROO) from these hearings**
18 **to the Commission should NOT recommend approval of the A.R.S. §40-252 Petition**
19 **because evidence presented shows that the “situation” has not changed since the**
20 **issuance of ACC Order No. 71274 on 9 December 2009 and therefore, this Order**
21 **should NOT be changed.**
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1 As shown in Figure 12 below, the annual average outage per customer in the V-7
 2 service area exceeded 5.0 hours twice in the ten years, the RUS Bulletin 161 standard for
 3 rural cooperatives. Further, the above quote also indicated that if several 1994 windstorms
 4 were omitted, then the average would have been 2.4 hours per customer per year. At 3.0
 5 hours of outage per year, this means the average customer had electricity 99.966% of the
 6 time [= 1.0 - 3.0/356.25*24]. At 2.4 hours of outage per year the availability of electricity is
 7 99.971%. It is noted that SSVEC, like most utilities, and the FS defines an outage of five
 8 minutes or more, as used in IEEE Std 1633-203, *IEEE Guide for Electric Power Distribution*
 9 *Reliability Indices*. Momentary outages also have IEEE indices that are not used by SSVEC.



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Figure 1. Average Outage Hours per Year Per Customer in the V-7 Service Area.
 [FS p. 11. Fig. 2]

3.1.2 Outage Statistical Indices Compare Favorably to RUS and National Standards

Q. Is 3.0 hours per customer a year of outage of a concern to the Rural Utility Service⁶?

A. Somewhat; however, SSVEC has several other feeders with higher outages than 3 hours per customer per year. What is important is that RUS Bulletin 161 considers **System Average**

⁶ The Rural Utility Service or RUS is the present title of the Rural Electrification Administration (REA) in the U.S. Department of Agriculture (USDA).

1 **Interruption Duration Index (SAIDI)** of five hours (300 minutes) or more per customer as
 2 unacceptable, except under very unusual circumstances. These are "outages of concern". If the
 3 outages exceeded 5 hours per year per customer, then RUS requires an in-depth explanation by
 4 the Cooperative when it applies for RUS-discounted loans. These RUS loans fund electricity
 5 programs for rural and low-density communities. They make rural electric cooperatives cost-
 6 effective. It is very understandable that SSVEC does not want to exceed 5 hours of outage per
 7 customer per year. The ten-year average is well within this RUS requirement.

8 **Q. How do the V-7 Reliability Indices Compare to National Utility Averages?**

9 **A.** Table 1, from the FS, provided these standard distribution line reliability index values for
 10 the past ten years for this distribution feeder area.
 11

12 **Table 1: V-7 Reliability Indices**

Year	SAIFI	SAIDI	CAIDI
1999	1.5	8.9	5.9
2000	0.9	2.2	2.6
2001	2.8	4.5	1.6
2002	1.5	2.3	1.5
2003	0.5	0.9	2.0
2004	0.3	0.5	1.8
2005	1.8	3.0	1.6
2006	0.3	1.1	3.9
2007	1.5	4.8	3.2
2008	1.3	1.6	1.3

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 23 **Table 1 - Distribution Reliability Performance Indices for the V-7 Service Area.**
 24 **[FS Table 1, p. 11]⁷**

25 The three different distribution reliability indices shown in Table 1 are from IEEE Std 1633-
 26 2003. This standard also includes a caveat that a minimum of five-years of data should be used
 27 as weather and other factors can cause significant annual changes in the indices:. These indices
 28 are defined below:
 29

30 ⁷ . The IEEE standard uses minutes instead of hours for SAIDI and CAIDI, as shown in the FS and Table 1. They
 have been converted from hours to minutes in the following Tables 2 and 3. This standard also uses the term
 "interruptions" instead of the more familiar term, "outage".

- 1 ▪ **SAIFI**, System Average Interruption Duration Index or the average number of
- 2 interruptions experienced by customers per year.
- 3 ▪ **SAIDI**, System Average Interruption Duration Index is the average number of
- 4 interruption minutes experienced by customers per year.
- 5 ▪ **CAIDI**, Customer Average Interruption Duration Index is the average duration of
- 6 interruptions during the year.

7 The IEEE Standard 1366 provides the values of SAIFI, SAIDI, CAIDI, and MAIFI, based on
 8 measured utility data in the United States, by quartiles, as shown in Table 2 below:

9 **Table 2 – Typical Reliability Index Values for US Utilities**

Average	SAIFI (Outages)	SAIDI (Minutes)	CAIDI (Minutes)
Top or First Quartile (>75%)	0.90	54	55
Second Quartile (50-75%)	1.10	90	74
Average (50% - national average)	1.26	117	108
Third Quartile (25-50%)	1.45	138	108
Bottom or Fourth Quartile (<25%)	<1.45	<138	<108

11 Using the same process that the Corporation Commission has used for other utilities, it
 12 compares various distribution feeders during rate cases, the following Table 3 shows the
 13 Quartile from Table 2 that each of these three indices was measured in the past ten years.

14 **Table 3 –Reliability Index Values for the V-7 Feeder Area**

Average	SAIFI (Outages)	SAIDI (Minutes)	CAIDI (Minutes)	
Top or First Quartile (>75%)	2006 (0.3)	2004 (30)		
	2004 (0.3)	2003 (54)		
	2003 (0.5)			
	2000 (0.9)			
Second Quartile (50-75%)	2008 (1.3)	2008 (96) 2006 (66)	2008 (72)	
Average (50% - national average)	1.45 outages	117 minutes	108 minutes	
Third Quartile (25-50%)		2002 (198) 2000 (132)	2005 (96) 2004 108 2002 (90) 2001 (96)	
	Bottom or Fourth Quartile (<25%)	2007 (1.5)	2007 (288)	2007 (192)
		2005 (1.8)	2005 (180)	2006 (234)
		2002 (1.5)	2001 (270)	2003 (120)
2001 (2.8)		1999 (534)	2000 (156)	
	1999 (1.5)		1999 (354)	

1 Some conclusions from this distribution reliability analysis in Tables 1, 2 and 3 for the V-7
2 service area:

- 3 ▪ In the last year measured, 2008, all three indices were in the Second Quartile, that is,
4 better than the average utility company, with 1.3 outages per customer (SAIFI), for
5 average total outage duration of 96 minutes (SAIDI), and the average outage duration
6 was 72 minutes (CAIDI).
- 7 ▪ There were 0.3 outages per customer for the entire years of 2006 and 2004.
- 8 ▪ The number of outages per customer in these ten years has, in general, been in the Top or
9 Bottom quartile for 9 of the 10 years that shows a significant variability in outage
10 durations.
- 11 ▪ The RUS requirement for less than 5 hours of outage per customer (SAIDI) was exceeded
12 in only one year, that was in 1999.
- 13 ▪ The total annual durations of outages for a customer in the ten-year period varied from
14 30 minutes (in 2004) to nearly 9 hours (534 minutes) in 1999 when serious windstorms
15 caused widespread outages that reduced repair crew availability throughout all of the
16 SSVEC service areas. Many parts of the country have infrequent but long outages due to
17 hurricanes, winter storms, earthquakes, flooding or windstorms. The IEEE Standard puts
18 major events in a special category; however, most utilities do not use that process.
- 19 ▪ The duration of outages (CAIDI), in all years but 2008, was worst than national average.
20 The FS explains this because of the highly rural area, with less than 7 customers per
21 distribution line mile, distance from nearest Cooperative repair facilities in Sierra Vista,
22 terrain challenges, and long maintenance travel times and suggest having line crews pre-
23 positioned in rural areas during predictable outages.

24 **3.1.3 Other Measurements of Outages Available for the V-7 Service Area.**

25 **Q. Can you compare the V-7 feeder area with other SSVEC distribution areas?**

26 **A.** Yes. Upon request, the Commission Staff provided 12-months of data for different months
27 in 2008 and 2009. This data was presented to the Cooperative on 13 July 2009 in Figure 2 below.

28 Figure 2 shows at least three other feeder lines with higher hours of outage, and two
29 other feeder lines with higher number of customer-hours of outage. This data show 0.06 hours
30 or 36 minutes of outage per customer during this data set for 12 months.

2008 V-7 AND OTHER FEEDERS (CONNECTIVITY) OUTAGE DATA

Feeder Line	Hours Off	Number of Customers	Customer Hours OFF	Hours OFF/customer
V-7 Sonoita/Patagonia	179.98	3057	3839.91	0.06
R-3 Ramsey	64.16	1006	2988.66	0.06
K-2 Chri	259.75	1828	4299.75	0.13
O-5 Mescal	392.22	2639	4657.97	0.15
J-3 Kansas Settlement	197.05	1202	3409.05	0.16

1. Three feeder lines have higher outages than V-7, with twice the outage hours per customer.

2. Only 1 V-7 outage was due to "overload" impacting 1 customer.

*Analysis prepared by Jeanne Horsmann and Gail Getzwiller, Sonoita.
Ref: SSVEC 2008 Feeder Outage Data (without November)*

Figure 2 – 2008 V-7 and Other SSVEC Feeders Outage Data.⁸

Q. Did the Commission Staff in the Rate Case review reliability?

A. Yes, the Commission Staff does this in all rate cases and found that the average Co-op customer had 2.09 hours of outage per year between 2004 and 2007. The Co-op's average hours of outage per year varied between a low 1.10 hours in 2005 and 3.52 hours in 2007.⁹ Based on these data, the best SAIDI was in 2005 for the entire Co-op's service area was in the Second Quartile. In terms of SAIDI (average outages per year per customer during 2004 to 2007), the Cooperative was in the Third Quartile, and its worst year (2007) it was in the Bottom Quartile according to Table 2 above.

The Commission Staff also agreed with the FS reliability, that the

"SSVEC outage ratio is well below the Rural Utilities Service ("RUS") guidelines of 5 outage hours per consumer per year."¹⁰ [emphasis added]

Again, it is noted that the V-7 Feeder area averaged 3.0 hours of outage per year per customer (SAIDI) which is slightly above that of the overall average for the entire Cooperative.

⁸ From a Briefing that I provided to SSVEC staff on 13 July 2009, slide 10. [Slide notes are omitted]

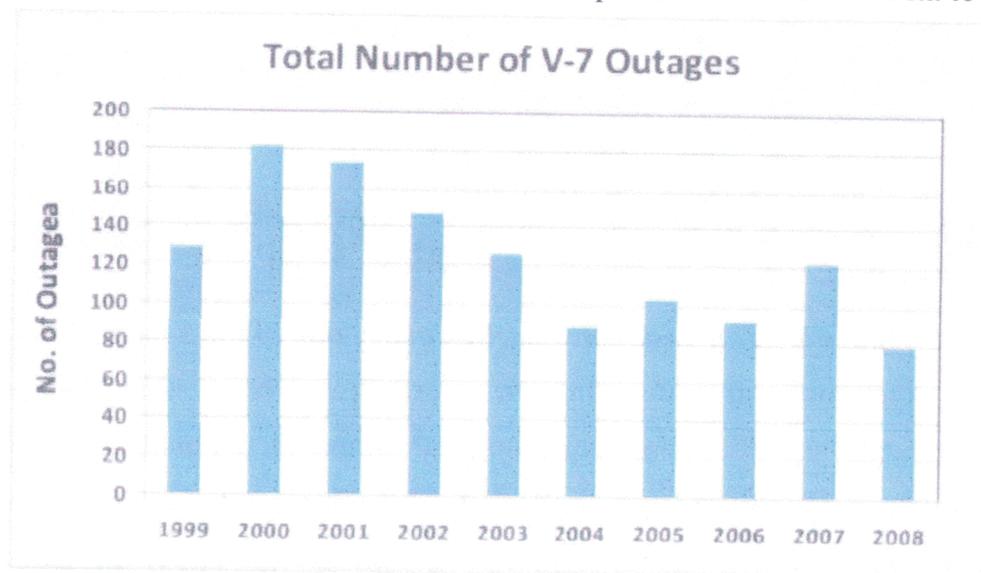
⁹ ACC Docket No. E-0157A-08-0328, "Direct Testimony of Prem K. Bahl" on 17 February 2009, p. 15 at 9 to 12.

¹⁰ *Ibid.*

1 **3.2 Total Number of Outages in the V-7 Service Area.**

2 **Q. What has been the trend been in total number of outages in the V-7 Area?**

3 **A.** As shown in Figure 3 below, in the past ten-years, the number of outages has shown a
4 moderat decline. This trend, according to the FS, is due to the continually increasing the number
5 of utility poles with lightning arrestors and an aggressive utility pole replacement program that
6 has produced these improvements. Replacement poles between Sonoita and Mustang Corner
7 scheduled for last July did not happen; however, new poles are in from Sonoita to Patagonia.



18 **Figure 3 – Total Number of V-7 Service Area Outages.** [FS p. 12, Fig. 3]

19 The FS states:

20 “Figure 3 presents the annual outages on the V-7 feeder over the last 10
21 years. Although the number of outages is higher than most compact feeders
22 with fewer feeder miles, the number does not appear inordinately high
23 given the very rural area served and significant outage exposure.” [FS,
24 Fig. 3, p. 12, emphasis added]

24 **3.3 Causes of Outages in the V-7 Service Area.**

25 **Q. What are the causes of outages in this area?**

26 **A.** Using industry standards, the Cooperative uses a “cause code” whenever there is an
27 outage. Figure 4 shows these with the highest outages causes first. The FS states:

28 “Figure 4 presents composite 10-year outages by cause code for the V-7
29 feeder. The primary causes of outages have been weather (lightning, wind)
30 and animals (birds, other animals). Other dominant outage causes include
unknown and other, many of which could be weather or animal-related, but
otherwise not observed by field personnel or the person reporting the
outage.” [FS p. 12, emphasis added]

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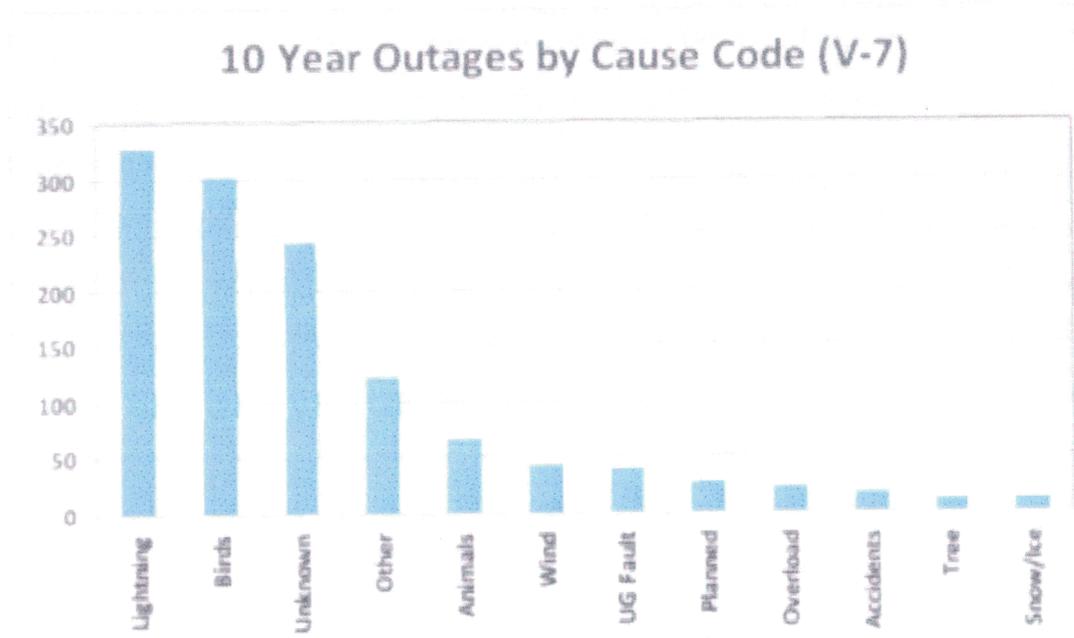


Figure 4 – Ten-Year Outages by Cause Code in the Service Area. [FS Fig 4, p. 13]

Lightning is the most common reported cause of an outage, followed by birds, “unknown”, “other”, animals, wind, underground fault, planned, overhead, accidents, tree, and snow/ice. As the utility adds more and more lightning arrestors, as recently done on the Patagonia line, this impacted the declining trend in Figure 3 for the past decade. The “other” and “unknown” codes are a fairly significant cause for about 365 outages in the ten-years.

The 350 miles of existing utility poles represented by Figure 4 will remain in the V-7 area. The additional 23 miles of the proposed 69 kV line will not make any changes to the results in Figures 3 and 4 above. In fact, any additional outages on the 69 kV line will need to be included whenever that line fails, to increase the potential total number of outages per customer per year or SAIDI. The substation, which is independent of the 69 kV line, improves outage reliability.

Figure 2, also includes causes of outages with “all Other” dominating for every year but 2001 when lightning-caused and number of outages averaged about 2.5 hours per customer that year. The proposed 69 kV line would also not have reduced those outages.

3.3.1 Equipment Caused Outages are Dominated by Pole Transformer Fuse Failures.

Q. What was the dominant equipment causes of these outages in the V-7 area?

A. Figure 5 shows Transformer fuses caused over 750 outages in the past ten years.

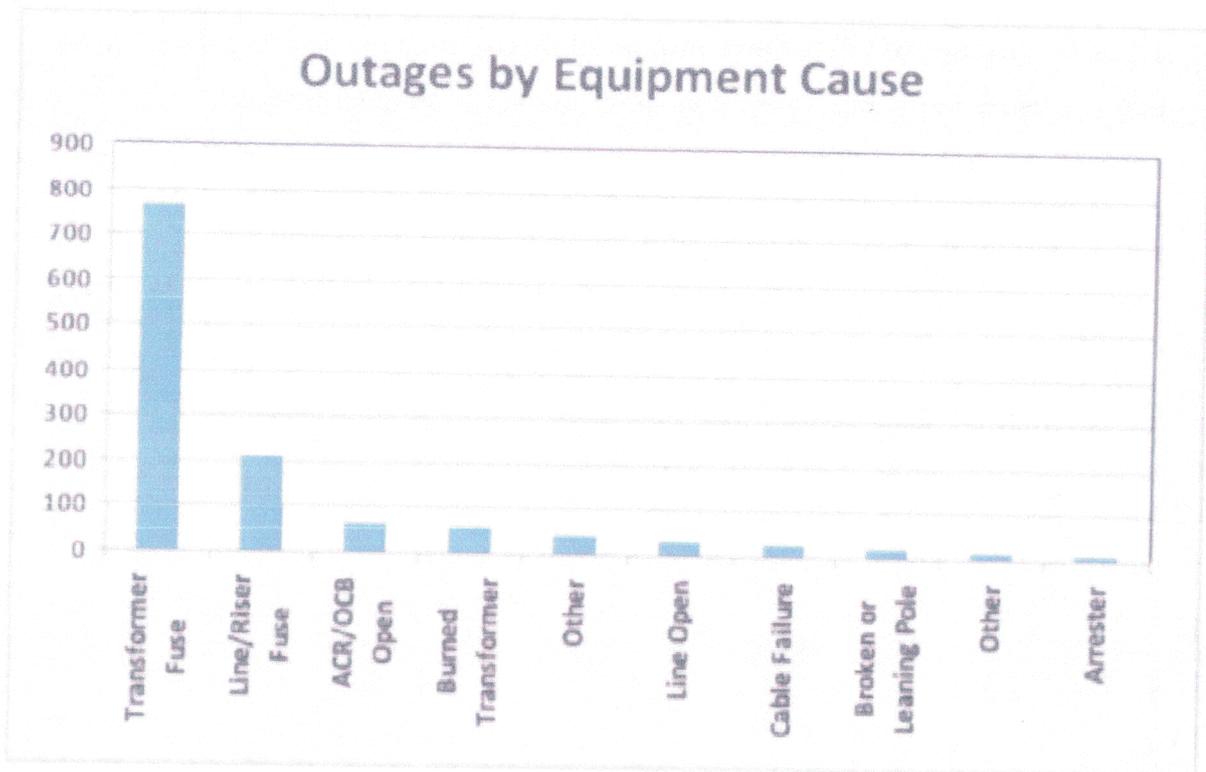


Figure 5 – Transformer Fuse Failures Dominate Equipment Caused Outages. [FS p. 14, Figure 6]

The failures of pole transformers was considered unique by NCI which that

“...indicate most outages are due to transformer or pole riser fuses, many of which serve one or a few homes. (The very large lot sizes limit the number of secondary services that can be served by a single transformer: if the distance between line transformer and service entrance is over 300 feet, it may create unacceptable voltage drop.)” [FS p. 13, emphasis added]

This anomaly was assessed by NCI’s statement and explained in the footnote as follows:

“The large majority of outages were caused when line or transformer fuses opened [about 775 of about 1100 in 10 years]. Interestingly, the large number of transformer fuse operations is an unexpected finding, as most animal and lightning-related outages occur on the primary line; whereas transformer fuses typically open when a fault occurs on the secondary side of the transformer.” [FS p. 14, emphasis added]

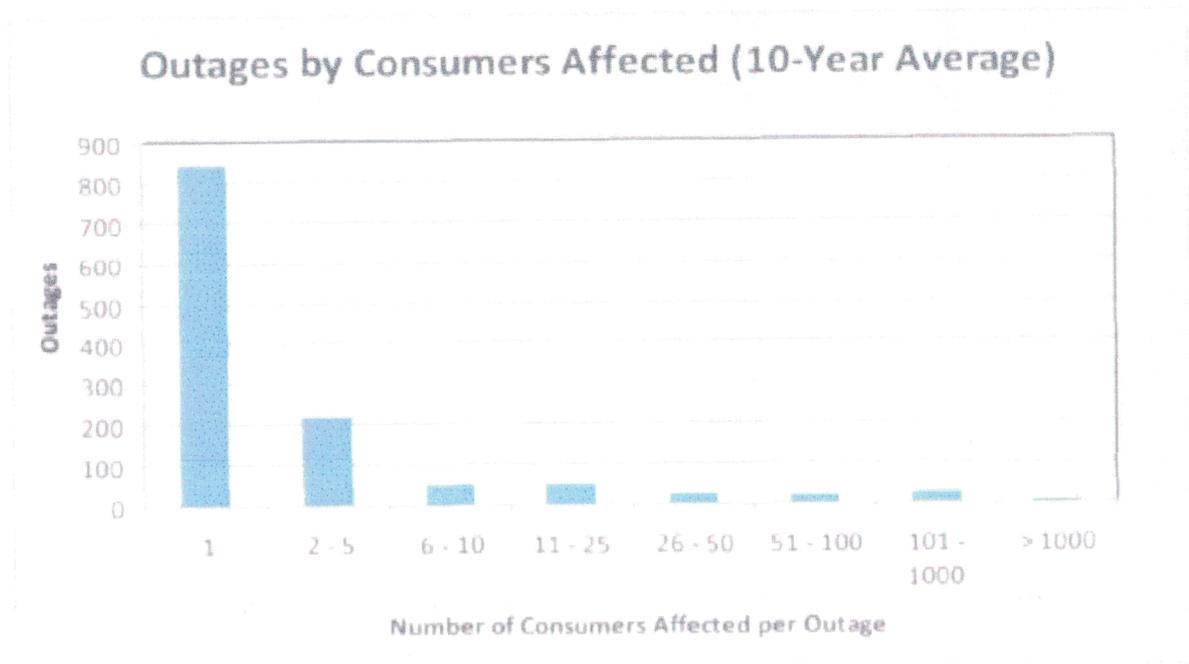
And in Footnote 8, explained as follows:

“SSVEC’s standard for line transformer arrester placement is adjacent to the fuse cutout. Industry research suggest the preferred placement for arresters is directly on the transformer to reduce voltage potential rise on the transformer loads.” [FS p. 14.emphasis added]

1 **3.3.2 Number of Customers Impacted by Outages in the V-7 Service Area.**

2 **Q. How many customers were impacted by these outages?**

3 **A.** As shown in Figure 6, most of these outages involved a small number of customers.



16 **Figure 6 – Number of Customers Affected by Outages. [FS p. 13, Fig. 5]**

17 About 850 of the approximately 1100 outages in the past ten years impacted only ONE
18 customer, almost 78%. According to NCI, **over 90% of the outages impacted less than 3**
19 **customers**. This shows that transformers to service lines, with 1 to 3 customers per service line,
20 appear to be where the vast number of outages occurs. The 69 kV line will not resolve the
21 transformer fuse reliability issues that average of 75 outages per year.
22

23 **3.3.3 Weather Impacts on Outages.**

24 **Q. What impacts do lightning, wind, rain and storms have on the reliability?**

25 **A.** Lightning dominates weather-caused outages, which peak during the summer monsoon
26 months, as shown in Figure 7. Also, diurnal outages occur more frequently in early morning
27 hours between 9AM and 1 PM and again between 6-7 PM in Figure 8. The early morning outages
28 can be explained as occurring from an unnoted outage that occurred during the hours between
29 midnight and 7 AM when most people are asleep and are unaware that an outage has occurred.
30 The early evening peak appears due to afternoon thunder and wind storms.

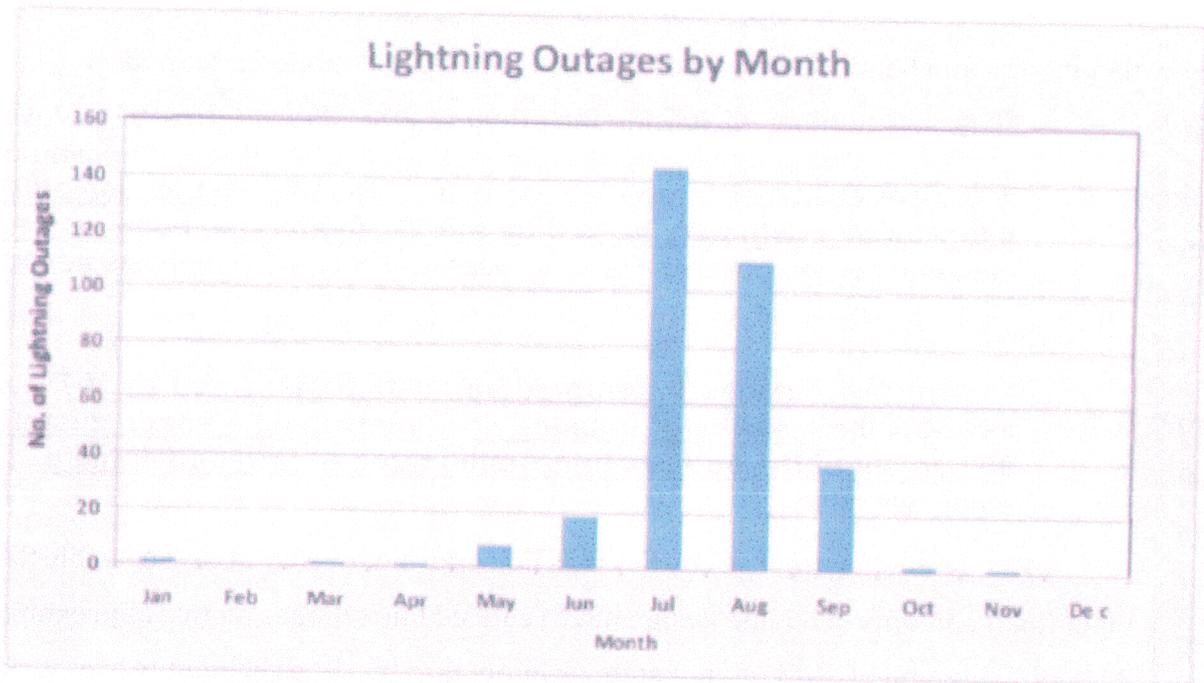


Figure 7 - Lightning Outages by Month. [FS p. 15, Fig. 7]

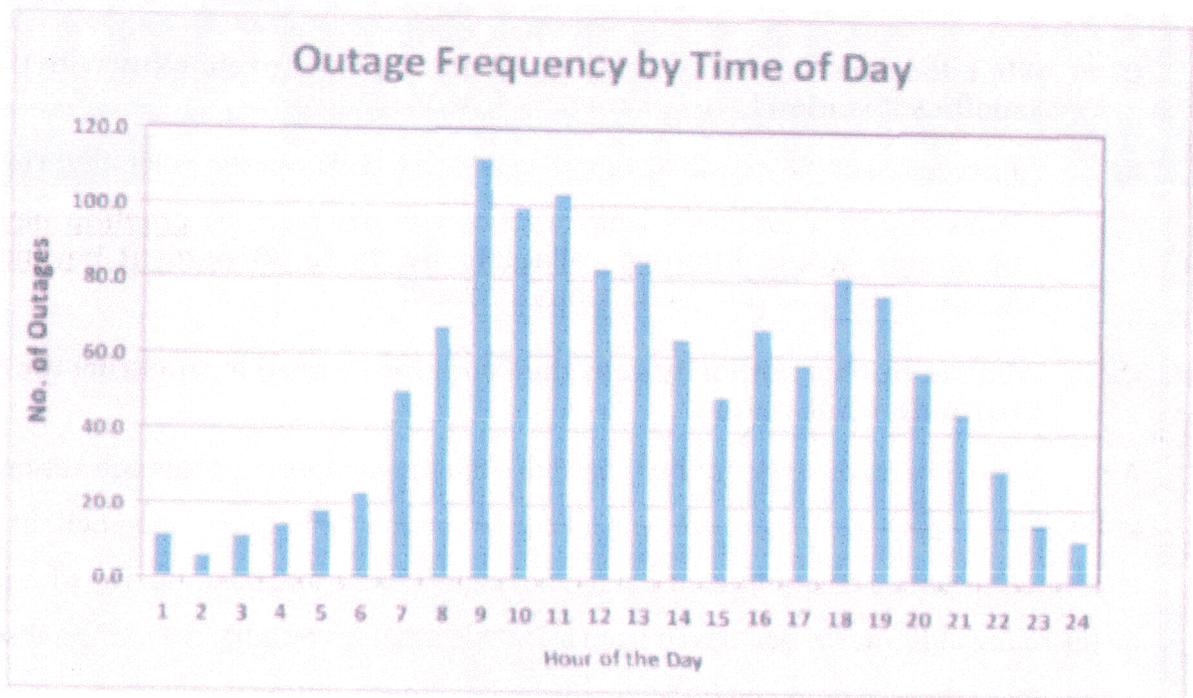


Figure 8 - Outage Frequency by Time of Day. [FS p. 15, Fig. 8]

3.4 Outages on the line Between Mustang Corner transformer to Sonoita.

Q. Are there outages on the existing 24.9 kV line from Mustang Corner to Sonoita?

1 A. The FS states that only limited outages have occurred on this line between the SR-90/SR-
2 83 junction and Sonoita (vicinity of SR-83 south of the “Sonoita Crossroads”):

3 “The low number of full feeder outages and effective use of reclosing circuit
4 breakers along many sections of the V-7 feeder has limited the average outage
5 hours per customer to about three hours. “Notably, full feeder outages that
6 interrupt all customers served by the V-7 feeder has been very low – less
7 than one per year over the last five years.” [FS p. 1-2, emphasis added]

8 and

9 “...very few outages interrupted all customers served by V-7 ... Figure 5
10 indicates the majority of outages only interrupted a single customer; over
11 90 percent of the outages interrupted three or fewer customers.” [FS p. 13,
12 emphasis added]

13 The excellent responses by SSVEC’s line crews with easy access from SR-82, SR-83 and
14 Elgin Road and improved line design have reduced line outages on this approximately 24 mile
15 24.9 kV line segment. NCI did not state or imply that this line segment was of serious concern.

16 3.5 Reliability Improvements with a new Sonoita Distribution Substation.

17 Q. What does the Feasibility Study say about improving reliability with the new
18 Sonoita Substation?

19 A. Construction of the new distribution substation will improve reliability. The FS states:

20 “New supply alternatives which reduce line exposure by creating new feeder
21 segments would improve reliability by 15 to 30 percent beyond current
22 levels.” [FS Pp. 2 and 14, emphasis added]

23 Q. What additional authority does the Cooperative need to construct the Sonoita
24 Distribution Substation?

25 A. None. The Santa Cruz County Board of Adjustment approved this substation in May of
26 2009. The Cooperative to not commenced construction of this distribution hub for the
27 communities with a feeder line for Patagonia, Elgin, Canelo and Sonoita. The fifth feeder line will
28 be for renewable energy generated from a 750 kW solar array adjacent to the substation.

29 All of these actions can be accomplished without additional regulatory actions, other than
30 submission of routine building permits. The ongoing 69 kV line disputes are independent of the
substation, thus it should be under construction at this time. There are no reasons for delay in
construction of the Sonoita substation, as Santa Cruz County grants these building permits.¹¹

¹¹ Discussions with the Santa Cruz County Planning Director indicated the building permits had not been received.

1 **3.6 Conclusions for Issue 1.**

2
3 **Q. What are the conclusions from the Feasibility Study concerning reliability?**

4 **A.** NCI states that

5 “NCI concludes that feeder and substation facilities are generally in good
6 condition and appropriately maintained. Our findings regarding the need
7 for capacity support generally is independent of feeder and substation
8 equipment needs.” [FS p. 17, emphasis added]

8 **Q. What are your conclusions concerning reliability?**

9 **A.** Based on the evidence by NCI in the FS, the Commission Staff, and other independent
10 analysis, there does NOT presently exist a significant reliability problem in the V-7 service area.
11 Resolution of these known problems are not so urgent to require emergency action, but do
12 suggest that serious action to be taken by the Cooperative improve the Distribution Line
13 Reliability Indices to reach the Top and Second Quartiles in the V-7 Feeder and all other lower
14 performing feeder areas in the Cooperative’s service area.

15 The performance of Cooperative by continuous incremental upgrades and planning and
16 its effective maintaining and operating personnel for this distribution system is why the
17 reliability, in this challenging rural environment, is steadily improving. Other than construction
18 of the distribution substation to make a 15% to 30% improvement in reliability, in my opinion,
19 the Cooperative is on the right track with respect to reliability, in particular, in reducing the
20 number, frequency and durations of outages. This has no direct relationship with a 69 kV line.

21 **3.7 Recommendations for Issue 1.**

22 It is recommended that curing the known reliability problems in the V-7 Feeder Area are
23 not dependent of the construction of a 69 kV subtransmission line; however, the construction of
24 the approved Sonoita distribution substation should not be delayed.¹²

25 Therefore, no conditions exist that involve reliability in terms of the standard indices that
26 are urgent or require emergency authorization to construct a 69 kV subtransmission line.
27

28
29 ¹² In view of the importance of the Sonoita Substation for reliability improvements, the distribution portion could
30 be constructed without an interconnection (but space reserved) while the 69 kV line issue is being resolved. A
Phase I for the distribution station and its five feeders could to be followed by a possible Phase II for the 69 kV
connection and transformer equipment, if that is the final action of the Commission. This two Phase approach
has been suggested to the Cooperative several times since May of 2009.

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1 SECTION 4 - ISSUE 2

2 MEETING THE ELECTRICITY DEMANDS WITHOUT A 69 KV LINE
3 BASED ON INFORMATION IN THE FEASIBILITY STUDY

4 Issue 2 - The electricity short-term peak and emergency demands in the V-7 Feeder Area
5 can be met by methods in the Feasibility Study other than the 69 kV line.
6

7 4.1 Distribution Line Capacity Capabilities in the V-7 Service Area.

8 Q. What are the capacity limitations for the V-7 service area?

9 A. The FS indicates that the V-7 maximum capacity is limited by the Mustang Corner
10 substation transformer capacity with a rating of 7.0 MW [FS p. 37] and with a nameplate rating
11 of 7.0 MVA when the power factor is 1.0 [FS p. 30]. The FS goes on and states:

12 "... utilities often adjust the rating of substation transformers based on
13 ambient conditions and load patterns, and reasonable reduction of equipment
14 life.¹³ Because the V-7 feeder and the Huachuca substation are winter
15 peaking, the capacity of the transformer typically is higher than
16 nameplate due to ambient cooling. This is in contrast to substation peak in
17 the summer, in which case maximum transformer loading is closer to
18 nameplate.

19 "NCI did not independently calculate the weather-adjusted transformer rating,
20 but notes that other utilities will apply rating above nameplate for devices
21 experiencing short-duration cold weather loading.¹⁴ Notably, the 2008 V-7
22 summer peak was about 5800 kW [5.8 MW], about 16 percent lower than the
23 most recent winter peak of 6903 kW. Hence, an additional 1000 kW [1 MW]
24 of substation transformer capacity would be available at Huachuca [at
25 Mustang Corners] substation if the winter rating is increased by at least
26 16 percent above the nameplate rating." [FS p. 31, emphasis added]

27 During a recent discussions with the Cooperative, an additional capacity limitation of
28 2.333 MW per phase was also indicated, or equal to one-third of the 7.0 MW equally allocated to
29 each of the three distribution line phases: A, B, and C.
30

31 ¹³ IEEE, an industry group that develops guidelines and standards for electrical equipment, has published
32 guidelines that enable electric utilities to determine the increase in transformer rating as a function of a device
33 pre-loading, ambient temperature and expected increase in loss of equipment life. Our experience indicates
34 winter-peaking utilities often increase transformer rating by 25 percent (or higher) for devices in good
35 condition. In contrast, transformers known to have operational or design constraints often are limited to the
36 nameplate capacity ratings. [FS Footnote 17, p. 31, emphasis added]

37 ¹⁴ The determination of acceptable transformer loading is utility and location-specific. The value typically is based
38 on a combination of several factors including average ambient temperature, transformer pre-loading,
39 transformer design, condition, performance history (including number of high current through-faults), and
40 acceptable loss of life. [FS Footnote 18, p. 31]

1 **Q. What would be the impact of using weather-adjusted transformer ratings?**

2 **A.** The maximum capacity for the existing 24.9 kV line would be increased from 7.0 MW to at
3 least 8.0 MW, based on the information provided by NCI. If the rating was increased by 25%, as
4 indicated in FS footnote 17, then the transformer would have a winter peak capacity of 8.75 MW.
5 This is significant, because it increases the A, B, and C Phase ratings between 333 kW to 583 kW
6 to a weather-adjusted winter rating to between 2.666 MW and 2.916 MW per phase.

7 **Q. Has the V-7 Transformer been known to exceed its weather-related capacity?**

8 **A.** No. No data presented in the FS show any winter peaking that exceeds 7.0 MW other than
9 in one instance as a result of a substation breaker locking out and causing an interruption of
10 service in December 2009, but this was below the trip setting of the phase conductors [FS p. 20,
11 fn 10]. Even under these conditions that may have happened over a very short time period, the
12 transformer was not damaged. The trip settings for the phase conductors are not in the FS.

13 The impact of using or considering weather-related capacities for the 69:24.9 kV
14 transformer at the Mustang Corner substation significantly changes the "urgency" of upgrading
15 the transmission capabilities to the new Sonoita distribution substation.

16 **Q. How can additional capacity be provided for the V-7 service area?**

17 **A.** Yes. This is discussed in some detail in Section 5 below.

19 **4.2 The Impact of Line Loss or Energy Loss on the Capacity of the V-7 system.**

20 **Q. What are the line or energy losses on the existing system?**

21 **A.** All electricity systems require energy to transmit electricity through conducting wires. In
22 utility-scale systems, due to the I^2R law, as voltage increases on the wire, less energy per Watt
23 transmitted is required. Using the existing V-7 system, NCI calculated the energy required to
24 transmit electricity to customers in the V-7 area. The FS states:

25 "...any increase in load can significantly increase line losses, particularly on
26 longer lines. Such as in the case with the V-7 feeder, where losses at peak
27 are approximately 30 percent of total feeder demand. Significantly,
28 incremental losses approach 50 percent - that is, for each additional one
29 kilowatt (kW) of load added to the feeder, on average, approximately 1.5 kW
30 must be delivered from the [Mustang Corner] Huachuca substation at peak."
[FS p. 23, emphasis added]

The FS provided model data that show a substantial portion of the total electricity
demand is consumed in losses. [FS p. 23] These losses are nothing more than **wasted energy**

1 used to transmit electricity to the V-7 customers. These losses are not unexpected or unusual
 2 because as the length of the line causes losses to be much higher than with shorter feeders, that
 3 result when the Sonoita substation is built. Table 4 shows the Peak Losses in kilowatts (kW).

4 **Table 4 – Peak Losses (kW) and Percent for Actual Peak Loads. [FS p. 24, Table 3]**

Year	Peak Load (kW)	Peak Losses (kW)	Total Load (kW)	Percent Losses
2000	4511	715	5226	16%
2001	4856	854	5710	18%
2002	4919	881	5800	18%
2003	4440	689	5129	16%
2004	4668	777	5445	17%
2005	4787	824	5611	17%
2006	5464	1124	6588	21%
2007	5652	1248	6900	22%
2008	5655	1248	6903	22%
2009	5406	1124	6530	21%

14 The percent of total load being lost has increased from around 16-18% to 21-22%
 15 between 2000 and 2009, as the total loads have increased from 5,236 kW (5.236 MW) to 6,530
 16 kW (6.530 MW). These corresponding actual line losses, when at peak demands, which
 17 increased from 715 kW (0.715 MW) in 2000 to 1,124 kW (1.124 MW) in 2009 on the existing
 18 24.9 kV line. Customers all pay for these line losses.

19 This Table also shows that the total peak loads for 2007 and 2008 were nearly identical
 20 at 6.9 MW (6900 kW) and in 2009 the peak load decreased to 6,530 kW (6.53 MW) or 5.4%.
 21 This is another indication that total load growth has been decreasing, along with the DOE
 22 Energy Information Administration (EIA) national electric load decreases for the past three
 23 years, averaging about 2 to 3% per year nationally.

24 These line losses were estimated to cost the Cooperative and its ratepayers over
 25 3,000,000 kilowatt-hours, kWh (3,000 MWh) in the V-7 Feeder Area. This is equivalent to about
 26 \$230,000 in 2009. [FS p. 24, Table 4]

27 This extra power required to transmit exists on all feeder lines and increases the
 28 infrastructure requirements for Cooperative, by compounding all of the line losses millions of
 29 dollars all at ratepayer expense. It must be noted that infrastructure is developed to meet peak
 30 load conditions, thus just in this one feeder area, over 20% additional infrastructure is
 necessary, up the line to the generation source, is required.

1 One way to reduce line losses is to reduce the length of the line. Local generation in the
 2 form of renewable energy or distributed generation can be designed to reduce line losses. This
 3 will be discussed in the next section.

4 **4.3 Service Load Demands in the V-7 Area.**

5 **Q. What is the peak demand or load on the V-7 distribution system?**

6 **A.** Various customer classes use the V-7 feeder shown in Table 5. There are a total of 2,355
 7 customers in this service area, of which 1,675 or 71.6% have residential rate codes. There are
 8 some 642 or 26.8% general service (small business customers), 13 or 0.6% residential
 9 (SunWatts) customers, 8 large power customers, 4 irrigation customers (agriculture), 1
 10 residential Time of Use (TOU) and 6 TOU (Total kWh) customers plus some others on
 11 miscellaneous rates. There is 1 customer with a pre-meter construction rate, thus only ONE
 12 customer in this entire feeder area was under construction when this data were obtained.

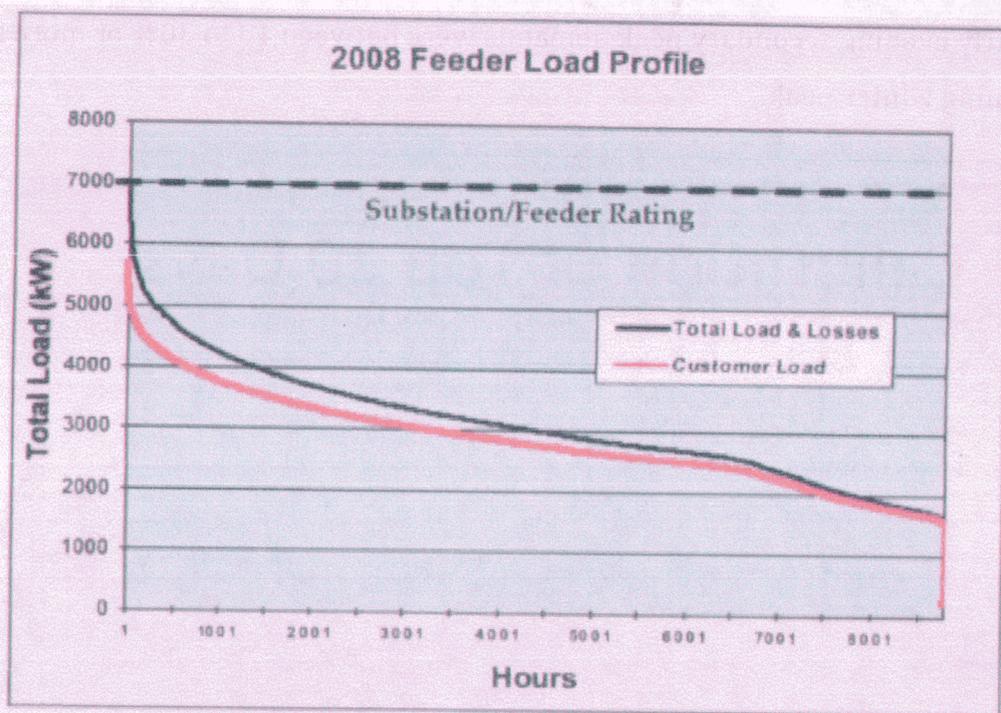
13 **Table 5 – Number of Customers by Rate Codes. [FS p. 26, Table 5]**

Rate Code	Rate Description
GEN DEMAND C/PEASE	67
GEN DEMAND C/PEASE	31
GEN NON TIME DEMAND C/PEASE	506
GEN NON TIME DEMAND C/PEASE	2
IRR CONTRACTOR	2
IRR CONTRACTOR	1
IRR CONTRACTOR	1
IRR CONTRACTOR	2
IRR CONTRACTOR	1
PRE METER CONSTRUCTION	1
RESIDENTIAL	1675
RESIDENTIAL SUNWATTS	13
RESIDENTIAL TOU CONTRACTOR	1
SETUP RATE	2
TOU TOTAL KWH	6
TOTAL	2355

28
 29 **4.3.1 Peak Loads and Demands can be reduced with Shorter Lines.**

30 **Q. What is the impact of the feeder and load total demands compared to capacity?**

1 A. The FS provided the substation load profile in Figure 9 shows the substation transformer
2 nameplate 7.0 MW rating with load demands the number of hours in the year 2008. Customer
3 actual Loads for 2008 are in Red, below the Total Load curve, with the Total Load in Black above.
4 The difference between these two curves is the Line Loss. It is noted that when the total
5 customer demand or load is below approximately 3.0 MW (3000 kW), that the line losses
6 decrease, about 50% of the time. Conversely, when the customer demands are higher, such as
7 above 4.0 MW (4000 kW), the line losses cause the Red (customer load) curve to separate from
8 the black (total load) curve. In other words, Line Losses increases as Customer Loads increase.



22 **Figure 9 – The V-7 Feeder Load Profile for 2008. [FS p. 27, Fig. 13]¹⁵**

23 This figure shows that less than about 1,000 hours does the Total Load in the V-7 feeder
24 area exceed 4.0 MW (4000 kW) and less than 500 hours exceeding 4.5 MW or less than 100
25 hours exceeding 5.0 MW. It is important to note that Line Losses become more significant at
26 higher customer loads. If weather-adjusted transformer capacity data were used, then at 8.0 MW
27 (8000 kW) there would be no capacity issues in the V-7 service area.

28 **4.3.2 Peak Loads and Demands vary as according to the Time of Day.**

29 **Q. What are the impacts of Time of Day on Peak Loads?**

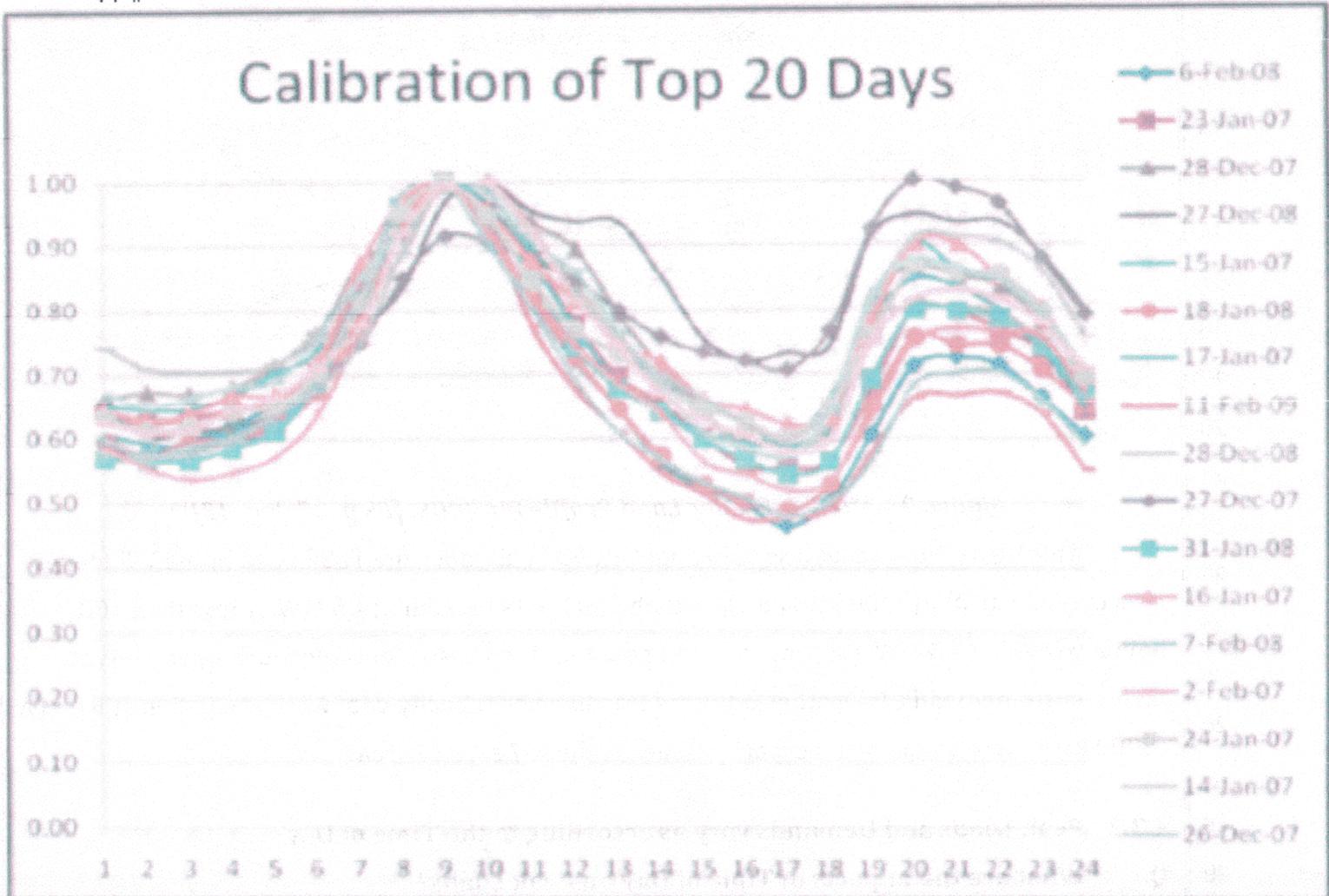
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¹⁵ In Figure 9, the top curve is labeled "Total Load & Losses". This is an error. It should be labeled as "Total Load" and the differenced between these two curves labeled as "Line Losses".

1 A. Based on the 20 highest peak load days in the past three years, Figure 10 shows the
2 diurnal peak loads. Of the 16 dates shown on the right of the figure (the remaining 4 dates are
3 not known, thus are not considered).

4 All of these peak load days occurred between 26 December and 11 February, in a short
5 period of some 6 weeks. With one exception, every (or 95%) of the peak periods occurred
6 during the winter morning hours.

7 There also is a secondary but a lower peak in the early afternoon that occurred about 5%
8 of the time. On 27 December 2007, the peak that day was an early evening peak. In general, 95%
9 of early evening secondary peak demands were between 10 to 30% or more lower than the
10 morning winter peak.
11



30 **Figure 10 – The Hourly Peak Load Profile for the 20 Highest Peak Days
in the Last 3 Years. [FS p. 27, Fig. 14]**

1 The FS noted that

2 "...there is high degree of comparability among the peak day load curves. This
3 consistency likely is due to recurring heating load during colder winter days - all 20
4 days of highest peak load occurred during winter months. Predictable load
5 patterns enable system planners to design programs to reduce daily peaks; e.g.,
6 targeted load reduction programs. Further, the duration of the peak hours on
7 days with the highest demand is relatively short, as load quickly tapers off
8 after sharp early morning peaks." [FS p. 27, emphasis added]

9 These comments are very important as Demand Side Management (DSM) programs can
10 be developed to reduce these consistent short-term peak loads, as discussed below in Issue 3.

11 4.4. Forecasts for Peak Demands Need Realistic Information.

12 Q. Does the Feasibility Study provide realistic peak demand forecasts?

13 A. Not exactly. In particular, there has been almost no building in Santa Cruz County or in
14 the V-7 area in the past two years. Shown in Table 5 above, there was only one pre-construction
15 "temporary" electrical connection. Older forecasts, such as the 2006 Arizona DES data used in
16 the FS are suspect, due to a major decline in building permits. This is an area where NCI may
17 have used old data.

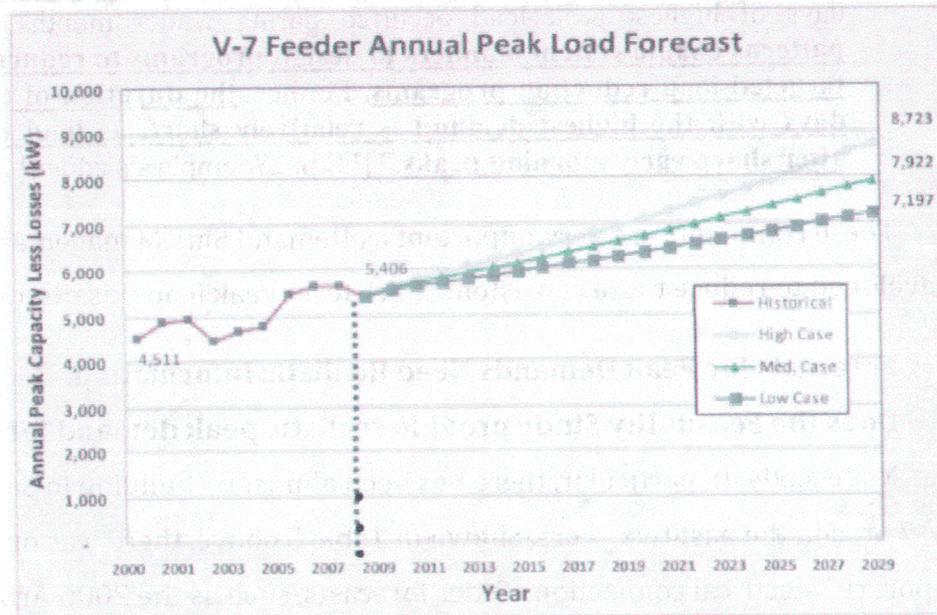
18 The Cooperative believes that hundreds of homes are being planned for three housing
19 developments in the Patagonia area. Conversations with the Santa Cruz County Planning
20 Director indicate NONE of these three developments are active, at least two are bankrupt, and
21 NONE have any active building at this time. In general, only about a dozen or so homes are being
22 constructed this year in the V-7 service area.

23 Further, all new developments in Santa Cruz County are having a requirement that at
24 least ten percent of the homes be EnergyStar™ certified that will reduce future residential
25 electrical loads.

26 The FS found the estimated annual feeder peak loads to be as shown in Figure 11 below.

27 The data in Figure 11 has three forecasts; however, based on present growth, the "low"
28 case appears even higher for the next few years. Further, historical growth rates can NOT
29 continue unabated in the V-7 feeder area because of the lack of water resources. The *2004 Santa*
30 *Cruz County Comprehensive Plan* limits the population growth in the part of the county in the
Santa Cruz Active Management Area (SCAMA) to 31,000 more people due to requirements
SCAMA must remain sustaining. This plan also implements a special *Sonoita Cross-Roads*
Compressive Plan that is more restrictive than the county's Plan. In 2009 Town of Patagonia

1 General Plan requires that community to be sustaining in its resources and emphasizes renewable
2 energy development.



14 **Figure 11 – V-7 Feeder Annual Peak Load Forecasts based on 2006 Population Forecasts.**
15 **[FS p. 29, Fig. 16]**

16 In summery, all large future building projects will have to prove they meet the goals,
17 objectives and policies in these management plans. Thus, long-term future growth in the
18 Northeast Character Area of Santa Cruz County will be limited.

19
20 **Q. What are the future load requirements for the V-7 Feeder area?**

21 **A.** The FS states that

22 The load forecast indicates about 2500 kW of new load will added to V-7
23 over the next 20 years *prior* to losses, an increase of about 40 percent. As
24 noted, incremental line losses at peak are approximately 50 percent.
25 Accordingly, supply alternatives that reduce total feeder load also reduce
26 the percent losses on the V-7 feeder. Supply options that create a new
27 source in Sonoita or other central locations of the feeder will cause losses
28 to decline significantly due to the reduced loading on the primary section of
29 line between the Huachuca substation and V-7 load centers. If total losses
30 are brought down to more reasonable levels of 10 to 15 percent at peak,
total capacity deficits will be about 1500kW in 10 years and 3500kW in 20
years. [FS Pp. 31-32, underline and bold emphasis added, italics in
original]

1 Therefore, the FS supports adding new supply sources in Sonoita or other central
2 locations in the feeder area, to reduce line losses. Further, NCI has stated that losses could be
3 reduced to 10 to 15 % of peak instead of the 40 or higher levels of line loss, and then there will
4 be a capacity deficiency, without any new supply sources as follows:

5 a. In 2019, an additional 1.5 MW (1500 kW) of capacity will be needed.

6 b. In 2029, an additional 3.5 MW (3500 kW) of capacity will be needed.

7
8 **4.5 Voltage Changes on the V-7 Feeder under various Load Conditions.**

9 **Q. What did the FS say about Feeder Voltage issues?**

10 A. NCI modeled the voltage profiles for two long extension of the V-7 feeder, to Canelo and
11 to Patagonia, at peak loads. Both required significant regulation to maintain voltages, and the
12 model results “predicted that they are within acceptable limits” [FS Pp. 17-19]

13 **Q. Are there voltage variations between the Phases?**

14 A. Yes. A long single-phase (B-Phase) line serves Canelo and areas south of the Babacomari
15 Land Grant. The B-Phase is the only phase that has exceeded 2.333 MW in the past three years,
16 other than one hour when the A-Phase was greater than 2.333 MW.

17 Some possible solutions, not included in the FS, could include adding a second-phase line
18 partway along this long one-phase feeder to off-load the B-Phase, or to use other methods to
19 reduce the B-Phase loads. Action is necessary to reduce voltage imbalances.

20 **Q. Can Feeder Protection Issues be Resolved?**

21 A. Yes. On long feeder lines, line-end voltage outages produce fault currents at the Mustang
22 Corner substation that approach levels to trip the phase lines. This is common for long circuits
23 with attendant problems for reclosers, fuse protection, power quality degradation, and
24 additional impedance problems. The FS then states:

25
26 “One of the advantages of new supply options (substation) located centrally
27 along the existing V-7 feeder is the corresponding increase in available fault
28 current. The higher fault current allows protective devices to operate faster,
29 thereby improving power quality and protection coordination. Protection
30 coordination also is facilitated by the fewer number of protection zones,
achieved by creating several independent feeders, each with independent
substation feeder breakers - four were proposed for the new 69/24.9kV
Sonoita Substation, with one spare for future use or to connect DG.” [FS p.
19, emphasis added]

1 This statement supports the Sonoita substation and its four distribution feeder lines and
2 one distributed generation feeder line; however, a new 69 kV line has no benefits.

3 **Q. What Power Quality issues are discussed in the Feasibility Study?**

4 **A.** The voltage dips caused by recloser or fuse operations impact sections of line farthest
5 from Mustang Corner. The FS states:

6 “Absent a new supply source that will strengthen voltages in outlying areas,
7 voltage dips and perturbations are likely to continue, and worsen as loads
8 increase. As noted in other sections, high line losses under high load
9 conditions exacerbate voltage drop.” [FS p. 21, emphasis added]

10 Therefore, the addition of new supply sources, such as renewable energy or distributed
11 generation, will improve Power Quality.

12 **Q. Are there harmonic and resonance performance issues?**

13 **A.** Yes there is a potential for these issues but have “not been confirmed or independently
14 verified” [FS p. 21] If these are present, mechanical and thermal stresses may impact magnetic
15 devices such as motors, transformers or relay coils. Further, telephone interference, causing
16 harmonic Electromagnetic fields (EMF) or even faulty meter readings. Mitigation is usually done
17 by additional feeder sectionalizing or removing system capacitance or adding filters. [FS p. 22]

18 The FS suggest for mitigation of harmonic distortion to

19 “...there may be several options available for mitigation. Two of these
20 methods could include either feeder separation, such as the 69kV Sonoita
21 Substation - four feeder option or by implementing filters along the V-7
22 feeder. Most likely if the filters were needed, they would be shunt filters
23 designed to mitigate harmonic frequencies observed on secondary voltages
24 for the V-7 feeder.” [FS p. 22]

25 **Q. Have actions taken by SSVEC been effective to reduce these problems?**

26 **A.** Yes. The Cooperative has installed additional reclosers and protective equipment that
27 have successfully limited full feeder lockouts, which improves reliability; however, momentary
28 interruptions are caused to all customers on the V-7 feeder. [FS p.20] Again, the new substation
29 will limit this on only those customers on one of the four feeder lines from that substation.

30 **4.6 Conclusions for Issue 2**

Q. What are the conclusions from the FS concerning capacity?

A. The FS contains the following:

1 "SSVEC should take immediate steps to ensure sufficient capacity is
2 available to serve existing and new customers in the short and long-term.
3 SSVEC should carefully review the impact any new load will have on
4 feeder loading and performance to ensure voltage and loading standards
5 are not exceeded or violated. An exception would be load that is proven to
6 peak at times other than the current peak – these typically occur on cold
7 winter mornings with a secondary peak during early evening hours." [FS p.
8 31, emphasis added]

9 It is noted that "how" SSVEC should proceed is not included in this statement. Further, it
10 states that sufficient capacity is available to serve existing and "new" customers.

11 **Q. What are your conclusions concerning capacity?**

12 **A.** Based on information in the Feasibility Study:

- 13 1. SSVEC should calculate the weather-adjusted capacity capabilities of the transformer
14 presently serving the V-7 feeder area for winter and summer peak conditions.
- 15 2. New capacity limits need to be used to determine line loading peaks, in particular for
16 Phases A, B and C.
- 17 3. Phase B loads should be redistributed as soon as possible to Phases A and C, which are
18 significantly less loaded.
- 19 4. Reduction of line losses should be determined by the use of local distributed generation
20 and renewable energy generation systems.
- 21 5. The Sonoita distribution substation with its feeders and 750 kW solar generation source
22 should be constructed as soon as possible.
- 23 6. Additional capacity enhancements are also included in the next section.

24 **4.7 Recommendation for Issue 2.**

25 It is recommended that new weather-adjusted capacity limits for the transformer and
26 lines be calculated and implemented as recommended in the Feasibility Study, Phase loading
27 should be adjusted to reduce overloading of Phase B and to equalize loading on all three phase
28 lines, local generation should be used to reduce line losses, and that the Sonoita substation with
29 its four feeders and the 750 kW solar plant constructed as soon as possible.

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SECTION 5 - ISSUE 3

**MEETING THE PERFORMANCE REQUIREMENTS WITH ACTIONS
BASED ON INFORMATION FROM THE FEASIBILITY STUDY**

**Issue 3 - The Renewable Energy, Distributed Generation, Demand Side Management,
and Distribution System Actions from the Feasibility Study can Achieve the
Performance Requirements for the V-7 Service Area**

5.1 Renewable Energy Supply Alternatives.

Q. What Renewable Energy Supply Alternatives were considered in the FS?

A. In summary, five different renewable energy (RE) Alternatives were considered:

R1 - Solar Photovoltaic (PV),

R2 - Concentrated Solar Power (CSP),

R3 - Wind Generation,

R4 - Energy Storage, and

R5 - Distributed Generation (discussed in 5.2 below)

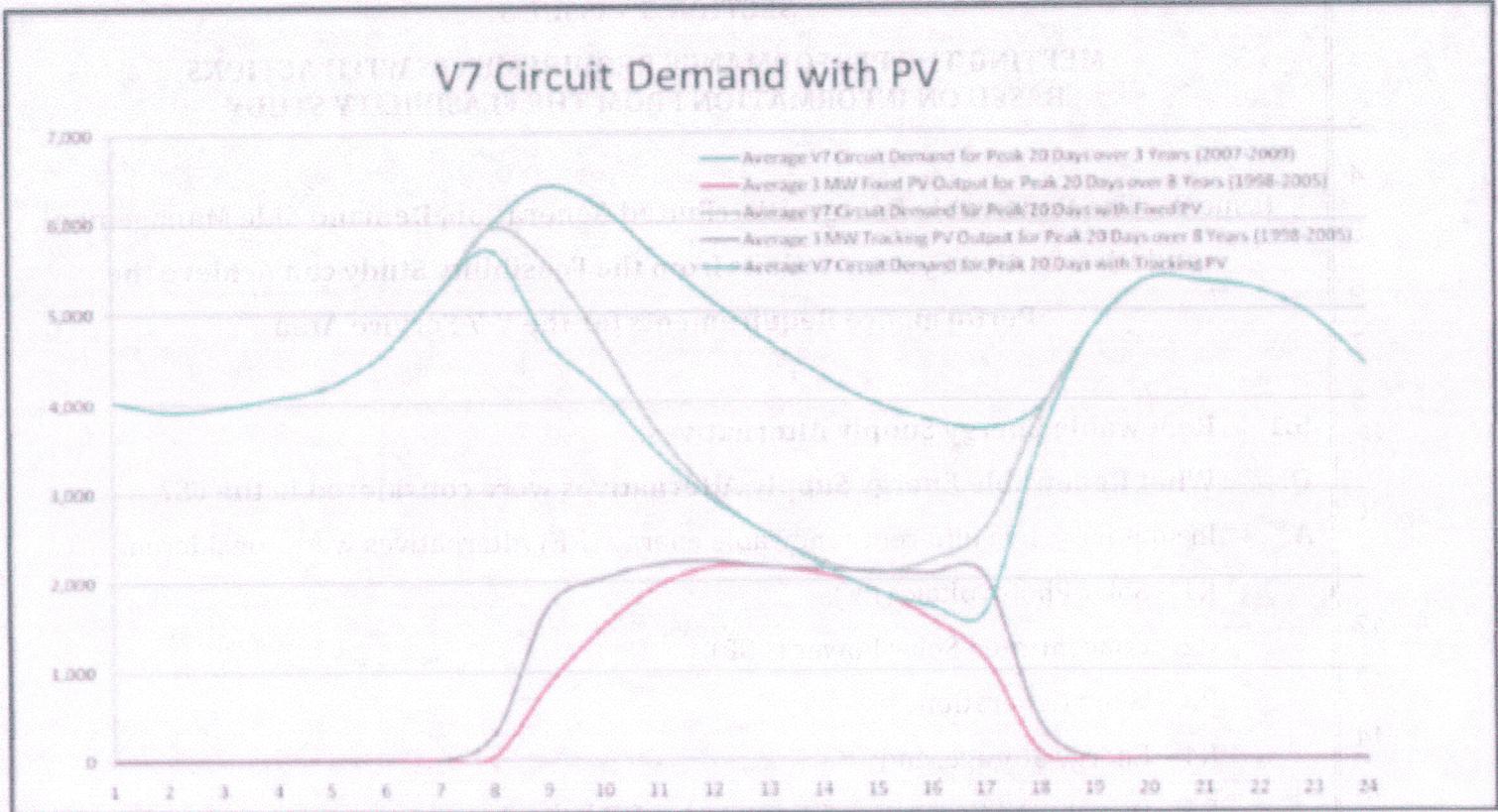
5.1.1 Solar Photovoltaic Energy Supply (R1)

Q. What did the FS say about use of Photovoltaic Energy Supply Alternatives?

A. Southern Arizona has very high solar insolation levels that make PV a suitable option. The winter morning and early evening peaks, as shown in Figure 10 above. A PV system in this area has an output profile as shown in Figure 12. There are several demand curves, with the top curve in Green the average of the Top 20-day peak demand curves shown in Figure 10. This curve shows the morning peak about 8 AM and secondary evening peak at 8 PM.

The second curve from the top in Olive is the result when a 3 MW Fixed PV system's output is combined with the Top 20-day peak demand curve. This Fixed PV supply source lowers the morning Peak Demand from 6.5 MW to about 6.0 MW based on an average 3 MW Fixed PV output curve (the lowest curve) in Red based on data for 8 years from 1998 to 2005.

The third curve from the top in Aqua represents a 3 MW rotating axis-tracking PV system's output when combined with the Top-20 peak demand curve. This further reduces the morning peak to about 5.75 MW, for a total reduction of 750 kW, based on its output curve.



16 **Figure 12 - V-7 Feeder Demand Changes with Fixed and Tracking 3 MW PV Systems.**
 17 **[RS p. 43, Fig. 23]**

18 These changes due to the benefits of Fixed versus Tracking PV systems was not further
 19 developed in the FS. The other benefits of a 3 MW PV generation system in the V-7 area were
 20 also not discussed. In fact, the FS stated:

21 “Eligible PV systems include rooftop and central system arrays. Because
 22 most residential rooftop systems can only accommodate fixed axis systems,
 23 central systems are likely the only feasible alternative (such systems
 24 could be customer or utility-owned). [FS p. 43]

25 This simple discussion on PV systems missed the “fixed” benefits in Figure 12. In addition,
 26 well over \$1,500,000 in building permits has been issues in Santa Cruz County in the V-7 area for
 27 solar PV and solar heating systems in the past nine months. The residents in the V-7 area are
 28 very aware of the benefits of reducing total demand and are paying their money for these
 29 systems. Unfortunately, the Cooperative has failed to provide the promised rebates. This may
 30 result in bankruptcy proceedings for several local solar installers. These new PV systems are not
 reflected in the number of customers with residential or commercial solar rates in Table 5.

1 Q. Why did the FS reject Photovoltaic Systems as a Supply Source?

2 A. The FS states

3 “Both rooftop-mounted and ground-based PV is insufficient to defer
4 capacity due to the limited amount of firm capacity coincident with the
5 early morning peaks. At minimum, five to six MWs would be needed to
6 provide sufficient offsets under favorable conditions. However, the
7 intermittent nature of PV does not match other supply options from a firm
8 capacity standpoint. Further, the amount of PV operating at full output may
9 exceed actual feeder loads, thereby violating screening criterion.” [FS p. 57,
10 emphasis added]

11 These are very weak reasons to totally reject solar PV systems. As the trainable PV
12 system was not further developed in the FS, this conclusion missed that opportunity. PV systems
13 can be combined with several storage methods by generating electricity during the day for use
14 during evening hours.

15 Q. What is the screening criteria being used to reject alternatives?

16 A. The ‘screening criteria’ found on pages 54 and 55 is too restrictive to be practical. For
17 example, the ‘screening criteria’ used above to reject PV systems states

18 “All DG and renewable energy solutions should be able to meet capacity and
19 performance requirements without exceeding feeder loads as measured at
20 the Huachuca substation. Generally, this means the total rated output of
21 these options should not exceed load at any hour of the days. It excludes
22 options where output production can be adjusted via local or remote controls.”
23 [FS p. 55, italics in original, other emphasis added]

24 The bold part of this criterion seems to not permit any power output to the Mustang
25 Corner (Huachuca) substation.

26 Let me explain. The 24.9 kV line has a capacity of at least 7 MW. If there is 5 or 6 MW of
27 PV generated power, then several of these MW would be used in the V-7 feeder area to satisfy
28 local load demands. Just as with netmetering, any excess, up to 7 MW greater than local
29 demands, should be able to go back through the Huachuca substation and on to its transmission
30 lines for use by other members of the Cooperative, as electricity can flow both ways on these
lines. Obviously, this criterion has not been satisfactorily developed to handle these distributed
generation benefits to the Cooperative. Other “screening” criterion are also defective, as will be
discussed later in 5.8 below.

I disagree with this “screening” criterion, as written.

1 **5.1.2 Concentrated Solar Power (CSP) Energy Supply (R2)**

2 **Q. What did the FS say about use of Concentrated Solar Power (CSP) Supply**
3 **Alternatives?**

4 **A.** Four basic CSP technologies were discussed (parabolic trough, power tower, solar dish
5 and linear/Fresnel lens). The FS states:

6 "The Parabolic Trough is the most advanced CSP technology and the only
7 one with commercial deployment. It is technically viable, and field
8 performance has been proven. However, trough systems require extremely
9 flat land (less than one percent slope). It is difficult to maintain this over a
large area. Typical land requirements are five to ten acres per MW." [FS p.
44, emphasis added]

10 The other three technologies, based on the "screening criteria", were discussed as not
11 been commercially available.

12
13 **Q. Why did the FS reject CSP (2) as a Supply Source?**

14 **A.** The FS states

15 "The absence of suitable flat sites for parabolic trough CSP and the high cost
16 of these devices (coupled with high cost of remote and multiple
17 interconnections) exclude CSP from further consideration. Further, most CSP
18 is large - greater than 10MW - and would not be suitable for a distribution
19 feeder. Other promising CSP technology that less slope dependent may be
viable once they have achieved commercial status; however, all other
technologies are still at the pilot or demonstration phase." [FS p. 57]

20 **5.1.3 Wind Generation Energy Supply (R3).**

21 **Q. What did the FS say about use of Wind Generation Supply Alternatives?**

22 **A.** Wind generation has expanded rapidly in the past few years. The FS states:

23 "...the average wind profile for southern Arizona generally is on the lower end
24 of the wind power classification scale, with ratings of mostly 1 and 2. Most of
25 the V-7 feeder is located in a Class 1 area, which is defined as having poor
26 wind resource potential. There may be pockets where local wind profiles may
27 be higher grade, but likely insufficient to provide significant wind potential.
28 Further, most wind projects are assigned minimal or no firm capacity credits
29 due to the highly intermittent nature of wind - a brief drop-off in wind speed
30 can cause unit shutdown or reduced output, with resultant loss of feeder
capacity. Accordingly, NCI did not further analyze the capability of wind to
reduce V-7 feeder loadings to meet current and future capacity requirements."
[FS Pp. 48-49, emphasis added]

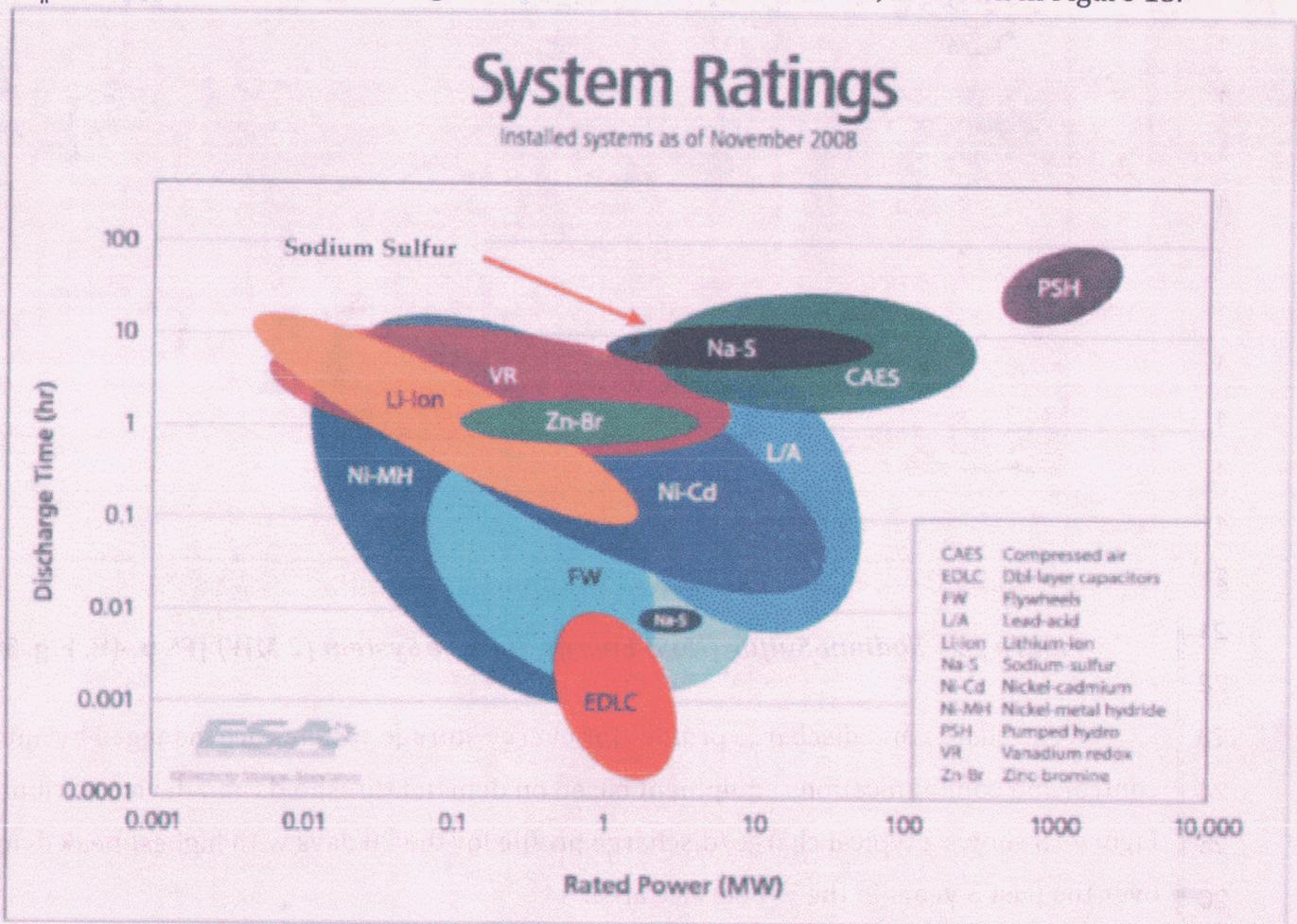
5.1.4 Energy Storage as Energy Supply (R4).

1 Q. What did the FS say about use of Energy Storage Alternatives?

2 A. The FS states:

3 **“Electric energy storage systems have the potential to reduce feeder peak**
4 **load by charging and storing electric energy during off-peak hours when**
5 **load are low; and then discharging the device during high load, on-peak**
6 **hours.** Although various forms of battery storage systems have been
7 commercially available for many years, energy storage systems of sufficient
8 size, capability and cost for electric utility applications have only recently started
9 to appear on utility grids; and *many of these have been pilot or demonstration*
projects.” [FS p. 48, italics emphasis in original, other emphasis added]

Many different energy storage devices were assessed in the FS, as shown in Figure 13.



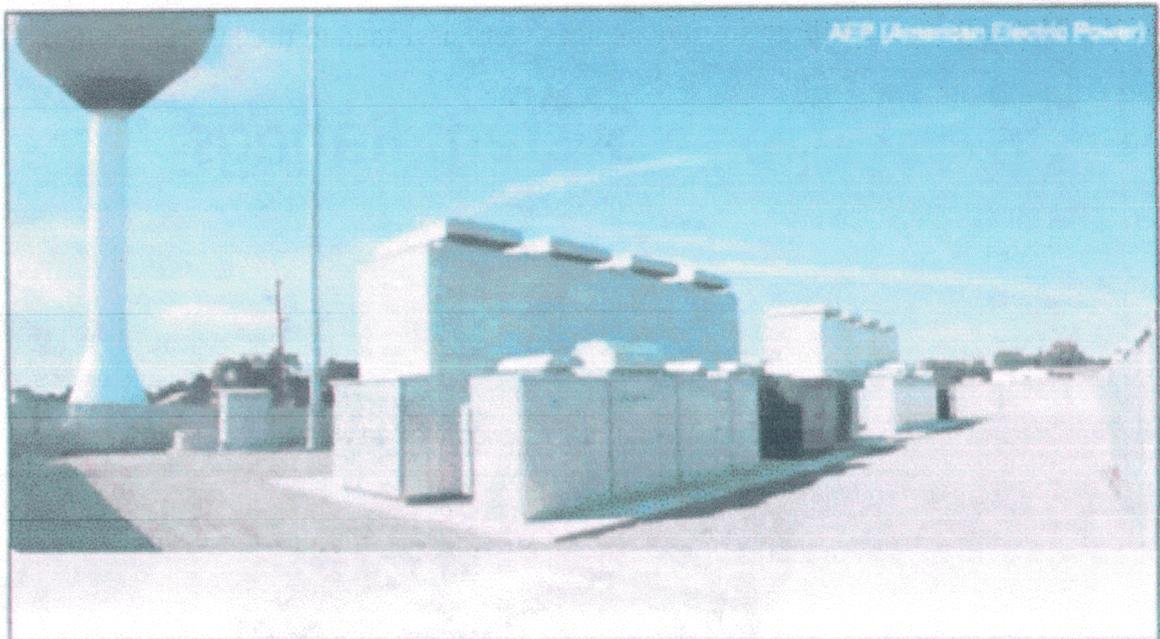
Source: Energy Storage Association Web Site

28 **Figure 13 – Energy Storage Device Attributes in terms of Rated Power and Discharge**
29 **Time. [FS p. 49, Fig. 29]**
30

1 The FS evaluated the systems in Figure 13 and states:

2 Of the technologies considered, sodium sulfur appears best suited for
3 meeting V-7 capacity needs, as the storage capacity and discharge hours
4 used domestically to support or defer distribution upgrades at a cost of about
5 \$3000/kW. American Electric Power (AEP) is among the leaders in the US. in
6 applying NaS to T&D systems. Utilities in Japan have successfully applied
7 NaS systems for several years, with over 50 installations. [FS p. 49, italics in
8 original, other emphasis added]

A typical substation application is shown in Figure 14 below.



2 Source: NGK Insulators, Ltd, Reference Substation Installation (AEP)

21 **Figure 14 – Sodium-Sulfur (NaS) Energy Storage System (2 MW) [FS p. 48, Fig. 30]**

22
23 The charge and discharge profiles for energy storage systems are managed by automated
24 control and communications equipment based on demand thresholds and device attributes.
25 Figure 15 shows a typical charge/discharge profile for the 20 days with highest peak demands
26 over the past 3 years in the V-7 service area.

27 The Aqua curve is the average Top 20-day peak demands curve shown previously. The
28 Lower or Red curve at the bottom of Figure 15 is a NaS energy storage system with 40% losses.
29 The middle or Olive curve, shows that the morning peak has been smoothed out and the
30 maximum load is about 5.5 MW compared to 6.5 MW in the Top 20-day peak curve. This energy
storage system has reduced the peak about 1.0 MW by efficiently smoothing out demand.

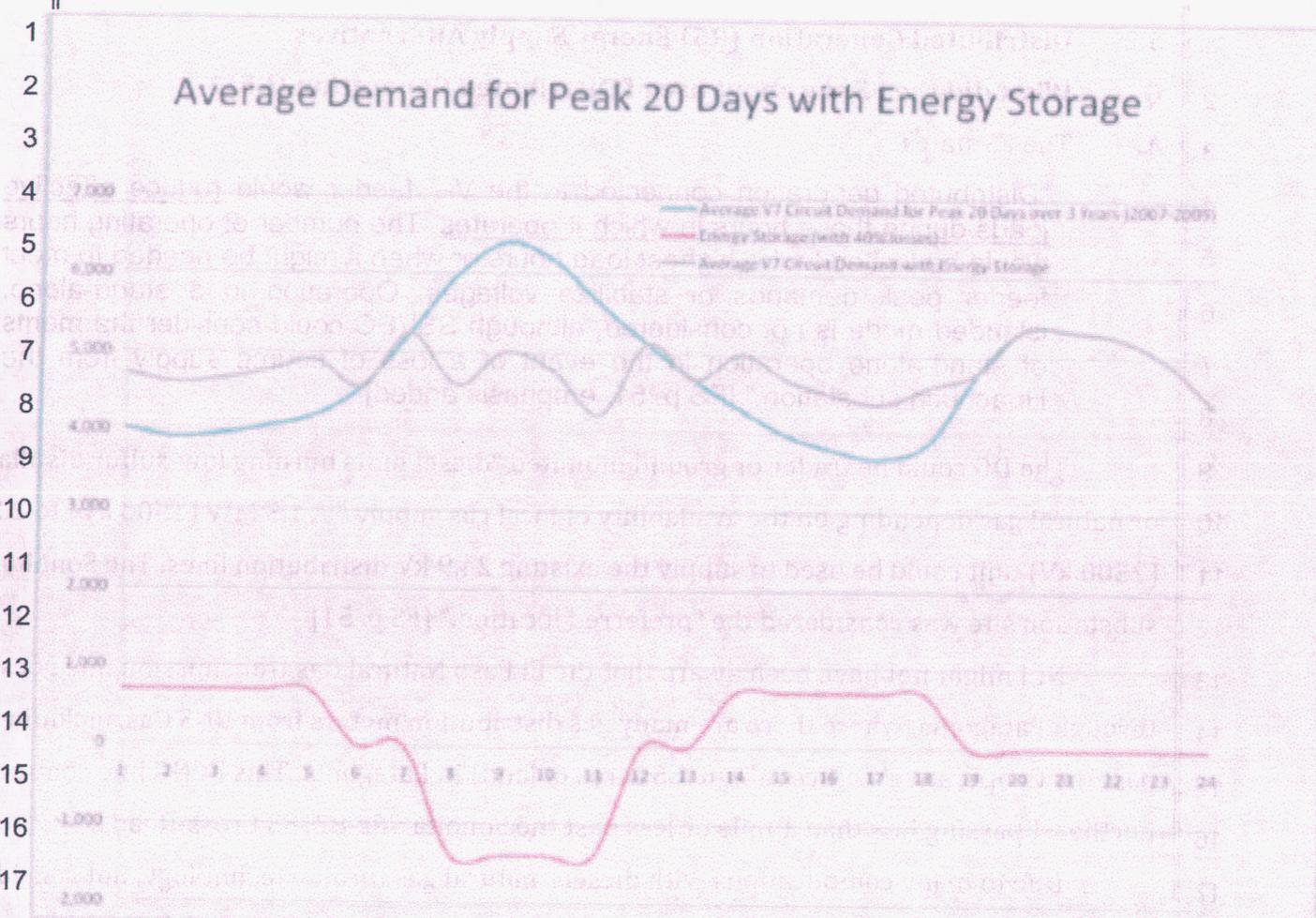


Figure 15 – Average Demands for the Top 20-days Peaks with Energy Storage.
[FS p. 50, Fig. 31]

Q. Why did the FS reject Energy Storage (R4)?

A. The FS states:

“The limited number of installations beyond the demonstration or pilot phase, and the few suppliers of sodium sulfur energy storage systems preclude this option as a commercially available, mature technology.” [FS p. 57, emphasis added]

This rejection is seriously question, in particular, because the FS also states:

“Notably, NaS battery availability currently is limited due to a high order backlog (up to one year or longer).” [FS p. 49, emphasis added]

With over 50 utilities using this system and a sizable backlog are strong indicators this system is well beyond the “demonstration or pilot phase”. This rejection should be reconsidered.

1 **5.2 Distributed Generation (R5) Energy Supply Alternatives.**

2 **Q. What did the FS say about use of Distributed Generation (R5)?**

3 **A.** The FS states

4 “Distributed generation connected to the V-7 feeder would reduce effective
5 loads during those hours in which it operates. The number of operating hours
6 would be limited to the highest load hours or when it might be needed to meet
7 feeder peak demands or stabilize voltages. Operation in a stand-alone,
8 islanded mode is not considered, although SSVEC could consider the merits
of stand-alone operation in the event of a loss of source supply from the
Huachuca substation.” [FS p. 51, emphasis added]

9 The DG could be trailer or ground mounted “diesel units burning low-sulfur distillate oil
10 or natural gas depending on the availability of local gas supply.” A 1.5 MW (1500 kV) to 2.5 MW
11 (2500 kV) unit could be used to supply the existing 24.9 kV distribution lines. The Sonoita
12 substation site was considered the “preferred location.” [FS p. 51]

13 NCI might not have been aware that the El Paso Natural Gas transmission line goes
14 through Patagonia, where there are many gas distribution meters from UNS Gas, including going
15 past the Cooperative’s office (about 1.5 acres of land) in Patagonia. This EPNG line continues
16 northeast passing less than 1 mile or less past the Sonoita SRs-82/83 Cross-Roads.

17 Due to many complications with diesels, natural gas turbine technology, not considered
18 by NCI, could be more advantageous in this area, either in Patagonia or at the Sonoita substation.
19 There are many large natural gas generator sets in Santa Cruz County, many operated by water
20 utility companies. In Tubac, there is a 500 kW gas turbine in the Tubac Barrio’s water company.

21 **Q. What will be the impact of DG outputs on the V-7 Feeder system?**

22 **A.** The FS states that DG output reduces the effective loading which then reduces the
23 substation transformer loading, improves feeder voltages and reduces line losses. If the
24 distributed generator is located in Sonoita, as shown in Table 6 below, the DG impacts on the
25 feeder from zero, in 500 kW increments to 2,000 kW (2 MW) are show the following when at a
26 5656 MW peak load plus DG:

- 27 • System Losses decrease so that at 2,000 kW, the DG actually is 2,746 kW, regaining 746
28 kW more than actually generated due to less line losses.
29 • Line losses decrease from 29.8% to 16.6%.
30 • All three Phase Voltage Drops are decreased.

Thus, the 746 MW are reduced from Mustang Corner by a net unit 2.0 MW rating or about 35%.

Table 6 – Distributed Generation Feeder Impacts for 500 to 2000 kW Generation.
[FS p. 59, Table 9]

Sonoita: DG							
Voltage drop and Losses at Peak (5656 MW) + DG							
DG (KW)	System Losses Regained	Highest Voltage Drop			Net Losses (kW)	Losses (% of Total Load)	Load + Losses – DG (kW)
		Phase A (V)	Phase B (V)	Phase C (V)			
0	---	113	115	119	1683	29.8	7339
500	227	114	115	119	1456	25.7	6612
1000	437	116	115	119	1246	22	5902
1500	602	116	115	120	1081	19.1	5237
2000	746	117	115	119	937	16.6	4593

Q. What is the long-term performance with Distributed Generation (R5) and the 69 kV transmission line?

A. Up to 2 MW of DG will be sufficient to maintain voltages with acceptable levels; however, in the long-term another 2 MW will be needed. Table 7 shows the results of both 2MW and 4MW of DG and the 69 kV line.

Table 7 – DG and 69 kV Line Alternatives Performance in 2029. [FS p. 60, Fig. 33]

2029 Peak Forecasted Loads							
Voltage Drop and Loss Comparison							
2MW & 4MW DG and 69-kV Option							
2029 Forecasted Load (Low, Base, High) kW	DG (KW)	Highest Voltage Drop			Net Losses (kW)	Losses (% of Total Load)	Load + Losses – DG (kW)
		Phase A (V)	Phase B (V)	Phase C (V)			
DG & Energy Storage							
7197	2000	112	113	118	1543	21	6740
	4000	115	113	118	927	13	4124
7922	2000	107	112	117	1907	24	7829
	4000	115	112	118	1142	14	5064
8723	2000	103	110	117	2165	25	8888
	4000	113	111	118	1456	17	6179
69-kV Option							
7197	---	116	113	118	691	10	7888
7922	---	115	112	117	732	9	8654
8723	---	114	111	117	780	9	9503

1 It should be noted that both DG and the 69 kV line would have problems that need
2 correction in the future. The FS states:

3 “Results presented above [in Table 7] also indicate Phase A and B voltages
4 are below acceptable levels in year 2029, and these would need to be
5 resolved for whichever solution is selected.” [FS p. 60, emphasis added]

6 **Q. What is an estimated cost for Distributed Generation?**

7 **A.** The FS has cost estimates for two DG options: diesel or natural gas fueled in Table 8.

8 **Table 8 – Cost Estimates for 2 x 500 kW Diesel and Natural Gas Distributed Generators.**
9 **[FS page 52, Table 7]**

Unit Type	Cost (2009 \$Million)				
	2-500 kW Units (\$000)	Site Costs (\$000)	Interconnection (\$000)	Total Cost (\$000)	Total Cost (\$/kW)
Diesel	\$400	\$100	\$100	\$600	\$600
Natural Gas	\$500	\$100*	\$100	\$700	\$700

13 * Includes cost of fencing, screening, enclosures, and oil retention facilities

14 **5.3 Demand Side Management (DSM) Energy Supply Alternatives.**

15 **Q. What demand Side Management Alternatives were considered in the FS?**

16 **A.** In summary, the FS considered five demand side management (DSM) Alternatives:

17 DS1 – Targeted DSM,

18 DS2 – Electric Storage Handling,

19 DS3 – Incentive Rate Alternative,

20 DR4 – Space Heating/Fuel Switching, and

21 DR5 – Combination of the above DS1 through DS5.

22
23 DSM includes energy efficiency (EE), demand reduction (DR) and direct load control
24 (DLC) and other measures to reduce the load in order to avoid construction of new facilities
25 required to meet capacity requirements.

26 There is an instance where Florida Power and Light used DLC to control air conditioners,
27 pool pumps, and other high energy consumption equipments where is saved 3,000 MW of new
28 generation and associated transmission and distribution (T&D) infrastructure costs of \$3 billion
29 for a cost of about \$800 million. The one challenge with DSM programs is that they need “hands-
30 on management” to be effective.

1 **5.3.1 Targeted DSM Energy Supply (DS1).**

2 **Q. What did the FS say about use of Targeted DSM Supply Alternatives?**

3 **A.** The FS total discussion concerning Targeted DSM as follows:

4 "An energy efficiency and distributed resource program targeted to
5 customers located on the V-7 feeder has the potential to defer capacity
6 upgrades if the level of firm demand reduction is coincident with the feeder
7 peak load intervals, is sustainable over time and customers are willing to
8 participate in the program. Customer participation typically is a function of
9 the level of incentives provided versus the inconvenience of Participation or
10 disinterest. Our experience with similar programs indicates customer
11 willingness to participate is perhaps the greatest challenge. The level of
12 participation declines as the perceived cost or value of the program is
13 diminished, or where customers are inconvenienced by program measures."
14 [FS p. 40, emphasis added]

12 **Q. Why did the FS reject Targeted DSM Supply Alternatives?**

13 **A.** The FS states:

14 "While aggressive DSM may be cost-effective and provide benefits independent
15 of area capacity needs, even large increases above current programs levels is
16 insufficient to materially defer the date for additional feeder and station
17 capacity. Because the additional amount of DSM that could be achieved is
18 uncertain, at best, it is not advisable to defer new capacity for the one of few
19 years the need date could be extended." [FS p. 56, emphasis added]

18 This rejection of Targeted DSM is unfortunate because there are so many ways to
19 motivate customers to make behavioral changes to reduce demands, or to use new equipment
20 necessary to ensure energy efficiencies, or to establish effective DLC or DR programs, with
21 appropriate incentives. The lack of even wanting to "try DSM" is more than discouraging;
22 especially since no specific DSM programs were even discussed in Alternative DS1.

23 **5.3.2 Storage Electric Heating Energy Supply (DS2).**

24 **Q. What did the FS say about use of Storage Electric Heating Supply Alternatives?**

25 **A.** The FS provided a good description of this program that is targeted at reducing the
26 demand from electric heating. The FS states:

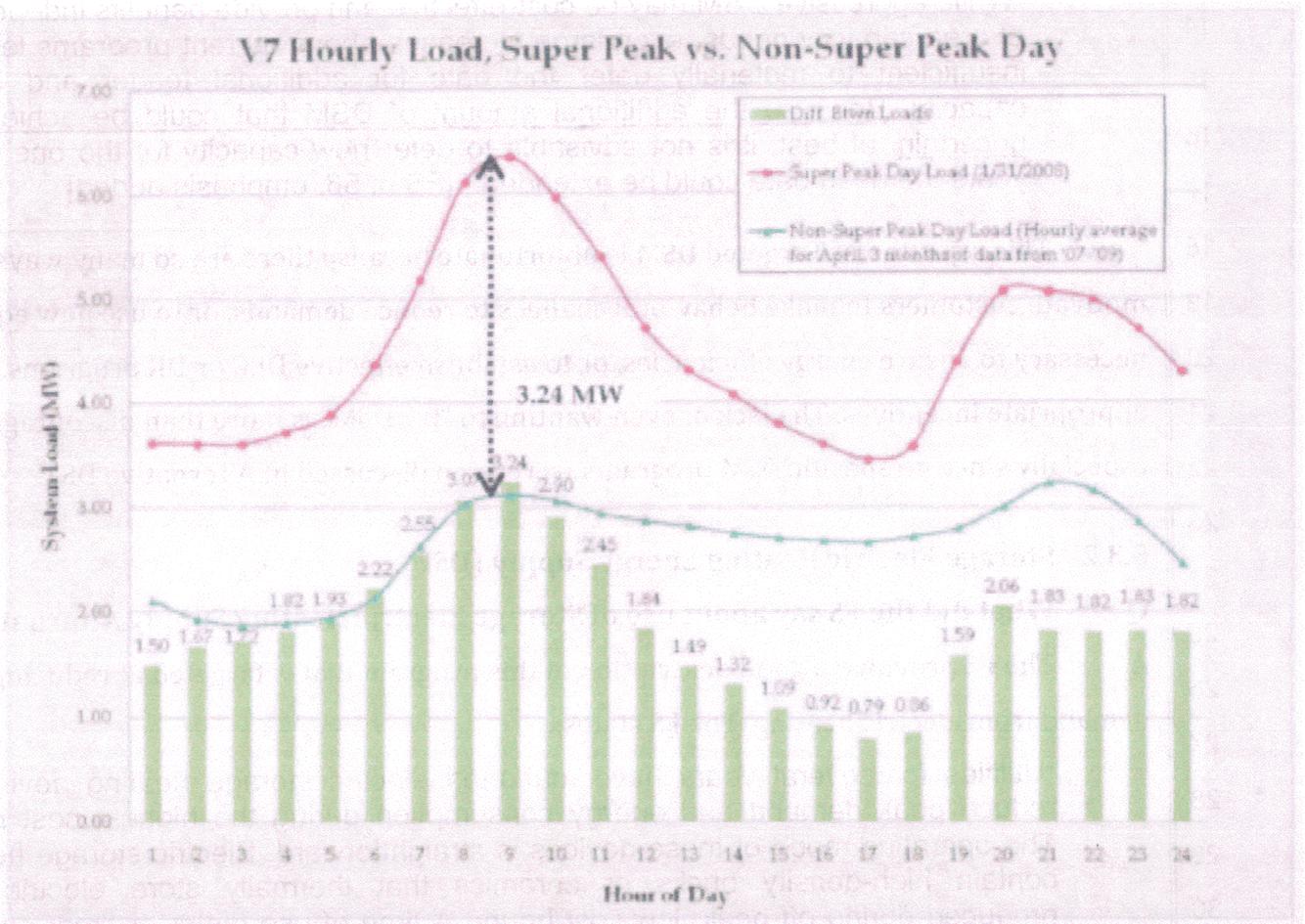
27 "Utilities for several years have marketed electric storage heating devices to
28 reduce peak demand and energy consumption during the highest cost hours.
29 The operating mode of these devices is straightforward. Electric storage heaters
30 contain high-density bricks or ceramics that thermally store electric heat
produced during off-peak, low-cost hours. A time of use meter or timer sends a
signal to the storage heating devices to ensure devices do not charge during the

1 peak cost hours. The thermal stored energy is discharged during high cost [peak]
 2 hours via use of small internal fans that circulate and heat ambient air through
 3 small opening in the bricks to vents located on the front of the heating enclosure.
 4 Customers achieve savings by charging the heaters only during low cost [off-
 5 peak] hours.” [FS p. 40]

6 This Alternative would be very useful for Cooperative customers who are not in the UNS
 7 Gas service area. The FS continues with

8 “The amount of existing electric heating load can be estimated by
 9 comparing daily load profiles for peak winter days to non-heating days - the
 10 difference is likely due to electric heating load, with some additional peak
 11 loading created by lighting small motor and pumping load. Figure [16]
 12 illustrates this differential, which indicates incremental loads of about 3 MW
 13 on peak load days. A portion of this load likely is eligible for conversion to
 14 storage systems.” [FS p. 41, emphasis added]

15 Figure 16, shows the hourly load profile differences between a Super-Peak and Non-
 16 super Peak day.



17 **Figure 16 – Peak and Off-Peak Daily Load Profiles. [FS p. 41, Fig. 21]**

1 **Q. Did the FS reject this Alternative?**

2 **A.** No, it stated this program was the most cost-effective of all the Alternatives.

3 **Q. How could Heat Storage be implemented?**

4 **A.** An aggressive DSM plan, an accomplished DSM Manager, and Cooperative senior
5 management support would be needed. This DS2 Approach can be combined with DS4 (Space
6 Heating and Fuel Conversions) to meet capacity. The FS states:

7 "To meet capacity requirements, a feeder peak target of 5000 kW, net of
8 losses, was chosen to determine the minimum number of units for conversion.
9 Significantly, the number of units in 2010 exceeds 100; hence, an aggressive
10 program would be needed to achieve this target. Table [9] identifies the number
of units that would need to be replaced by year." [FS p. 62, emphasis added]

11 Table 9 shows that a total of 135 electric heat storage (Alt DS2) or space heating
12 conversions (Alt DS4) are needed in 2010, a cumulative total of 357 in 2019, and 655 in 2019.

13 **Table 9 - Cumulative Totals of Space Heating and Electric Storage (Alt DS2) and Space**
14 **Heating Conversions to Meet V-7 Capacity Requirements.**
15 [FS p. 62, Table 10]

Year	Capacity Reduction (kW)	Units Replaced (Cumulative)
2010	602	135
2019	1593	357
2029	2922	655

16
17
18
19
20
21 At present there are 1,675 residential customers (from Table 5) so in 2010, only 8.1%
22 would be needed to either add electric heat storage or convert from electric heat to another
23 source to meet heating needs. Adding additional conversions for the 600 or so business
24 customers, even fewer residential conversions would be required. New customer from growth in
25 the V-7 Feeder area could be incentivized to not use electric heating. Building contractors who
26 construct "energy efficient" homes can receive a \$5,000 per home tax credit from the state.
27 Unfortunately, I understood this Cooperative provides building contractors \$1,500 for
28 construction an "all-electric" home. That has a negative effect on reducing demand.

29 **Q. What are the costs associated with a Heat Storage (DS2) program?**
30

1 A. The FS stated that a Heat Storage unit that uses propane, as an initial capital cost of
2 \$1,800 per unit. Thus, for 135 such units, the total cost in 2010 is \$243,000. [FS Pp. 62, Table 11]
3 When viewed over a 20-year period, the total capital investment would be \$1,788,000,
4 with fuel, operations and maintenance costs of \$350,000, and its NPV is \$2,061,000.

5 This is the most economical means to meet all the present and future V-7 load
6 demands that also saves another \$77,000 in less line losses. [FS p. 63, Table 12]

7
8 **5.3.3 Incentive Rates (DS3).**

9 **Q. What did the FS say about the use of Incentive Rates as a Supply Alternative?**

10 A. The electric industry, including this Cooperative, uses incentive rates to encourage its
11 customers to use less energy during Peak cost hours or to change usage patterns by shifting
12 electric usage from high cost to lower cost hours. The Cooperative for almost all rate classes has
13 established a Time-Of-Use (TOU) rate. The FS states:

14 "... the price differential between the on and off peak hours must be sufficiently
15 high to motivate customers to *significantly* reduce usage during peak hours to
16 defer V-7 system upgrades. Currently, SSVEC offers a TOU rate with an on
peak rate of about 14 cents and on off-peak rate of about 7 cents per kilowatt-
hour." [FS p. 41, emphasis added]

17 **Q. Did the FS reject Incentive Rates as a way to resolve the Supply issue?**

18 A. The FS rejected the use of Incentive Rates as stated below:

19 "Incentive rates, regardless of the rate differential, is very unlikely to have a
20 measurable impact on peak usage. Industry studies indicate on versus off-
21 peak ratio of two and three to one have a very minor impact on customer
22 electric usage. SSVEC's current TOU rates, which have a two to one price
23 differential has limited interest and participation for customers served by the
24 V-7 feeder." [FS p. 56, emphasis added]

25 This assessment is most unfortunate because there has been almost no emphasis on TOU
26 by the Cooperative. Only ONE residential customer has TOU rates in the V-7 service area, as
27 shown in Table 5. Without effective DSM marketing, presentations to local organizations
28 including business groups such as Chambers of Commerce, the present unsatisfactory state will
29 continue with very low TOU participation. If 10% of the 2,355 customers in this area switched to
30 TOU rates, a noticeable change in Peak customer demand should be noted. At present, only
0.06% of the residential customers in the V-7 participate in TOU rates. This is clearly subpar
performance and is NOT SATISFACTORY for an area where known capacity issue exist.

1 **5.3.4 Space Heating and Fuel Switching (DS4).**

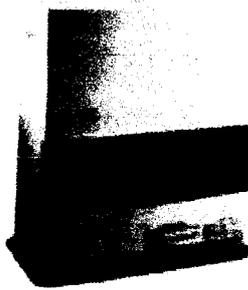
2 **Q. What did the FS say about use of Space Heating/Fuel Switching as a Supply**
3 **Alternative?**

4 **A.** The highest demands on the V-7 Feeder are the winter morning and early evening as
5 shown in Figures 10 and 16. The shapes of these curves “strongly suggest the peaks are driven
6 by electric space heating.” [FS p. 42] The FS further states:

7 “The large percentage of residential and small commercial customers (over 80
8 percent) served by V-7) yields average coincident heating load of 2 to 3 kW
9 per customer. An aggressive conversion of electric heating system to propane
10 or kerosene could reduce load during the hours of highest demand.” [FS p. 42,
11 emphasis added]

12 Even though a natural gas pipeline passes through Sonoita, NCI did not investigate use of
13 natural gas as an alternative fuel due to the long distances between customers. [FS p. 42, Fn 25]
14 Unfortunately, NCI did not recognize that UNS Gas distributes natural gas in the only town in the
15 V-7 area, which is Patagonia, where homes are much closer than Sonoita. Many have natural gas.

16 Use of direct venting modular heating units, such as shown in Figure 17 was suggested.



21 Model of FS 90 Modular Propane Heating System (1997) by (a) (b) (c)

22 **Figure 17 – Typical Direct Venting Modular Heating Unit. [FS p. 42, Fig. 22]**

23 For this kind of program to be successful, short-term DSM incentives with aggressive
24 marketing (something this Cooperative seems to avoid) will be necessary to reduce demand to
25 avoid upgrading the V-7 Feeder system. The FS also states:

26 “Assuming an average of 2 kW of coincident demand and a reduction in 200kW
27 is needed to avoid feeder overloads, about 100 customers would need to
28 participate in the first year for this option to be viable. Each successive
29 year would require 50 to 75 participants to offset load growth. Program costs
30 include incentives designed to offset the cost of modular heating systems and
dismantling of electric heating controls. The program could be structured similar
to the targeted DSM programs described above, which includes incentives
based on the value of T&D deferrals.” [FS p. 42, emphasis added]

1 Q. Did the FS reject Incentive Rates as a way to resolve the Supply issue?

2 A. No, it stated this program was the second most cost-effective of the Alternatives.

3 Q. How could Space Heating/Fuel Conversion (DS4) be implemented?

4 A. An aggressive DSM plan is required. This DS4 Approach can combine with DS2 (Heat
5 Storage) as discussed in 5.3.2. Table 9 has the number of units to be converted from electric.
6

7 Q. What are the costs associated with a Space Heating/Fuel Switching (DS4) program?

8 A. The FS states that a Heat Storage unit that uses propane, has an initial capital cost of
9 \$1,800 per unit. Thus, for 100 such units, the total cost in 2010 is \$180,000. [FS Pp. 62, Table 11]
10 This table also indicated that setting up an Electric Heating program might cost \$250,000, even
11 more than the cost of all of the proposed heaters.

12 When viewed over a 20-year period, the total capital investment would be \$1,386,000,
13 with fuel, operations and maintenance costs of \$1,428,000, with a NPV of \$2,355,000.

14 This is the second most economical means to meet all the present and future V-7 load
15 demands that also saves another \$460,000 in less line losses. [FS p. 63, Table 12]

16 5.3.5 Combinations of the DS1 to DS4 (DS5).

17 Q. What did the FS say about Combinations of the DS1 to DS4 as a Supply Alternative?

18 A. The FS states that

19 "This option includes combinations of the above four alternatives, as the
20 contribution of any single option would likely be insufficient to meet capacity
21 deficits. For example, the amount of lighting demand may be too small to
22 have a major impact on demand, but nonetheless may be cost-effective.
23 When energy efficiency is combined with incentive rates and fuel
24 conversions, there may be greater amounts of capacity reduction, and in
sufficient quantities to defer capacity need dates." [FS p. 42]

25 Q. Did the FS reject Incentive Rates as a way to resolve the Supply issue?

26 A. This Alternative was not discussed other than the above paragraph. This Alternative was
27 dropped without any real consideration, even though DSM programs DS2 and DS4 were jointly
28 discussed elsewhere. Even the above statement about reduction in demand due to decreased
29 "lighting demand" should not be overlooked, as EVERY action done by customers to reduce
30 demand, i.e., DSM, should be included. Other DSM programs include those in later supplemental
testimonial filings.

1 **5.4 Distribution Supply Alternatives.**

2 This paragraph and its subparagraphs below will be filed in a later supplemental
3 testimony. The selection of Alternatives is not the purpose of the A.R.S. §40-252 hearings.

4 **5.4.1 Reinforce the Existing System (D1).**

5 **5.4.2 Reconnector the 25 kV Line (D2).**

6 **5.4.3 Install New 25 kV Feeder from Huachuca (D3).**

7 **5.4.4 Create Tie to UNS Electric in Patagonia (D4).**

8 **5.4.5 Install Distribution Static VAR Compensator (D5).**

9 **5.5 Transmission Supply Alternatives.**

10 This paragraph and its subparagraphs below will be filed in a later supplemental
11 testimony. The selection of Alternatives is not the purpose of the A.R.S. §40-252 hearings.

12 **5.5.1 New 69 kV Line and Sonoita Substation on Ranch Right of Way (T1).**

13 **5.5.2 New 69 kV Line and Sonoita Substation on SR-82 Right of Way (T2).**

14 **5.5.3 Tap 138 kV or 115 kV Transmission Lines (T3).**

15 **5.5.4 Create Tie to TEP 46 kV Lines (T4).**

16 **5.5.5 Underground Transmission Line Cable (T5).**

17 **5.6 Other Alternatives Not Considered.**

18 This paragraph will be filed in a later supplemental testimony.

19 **5.7 Cost Assessments,**

20 This paragraph will be filed in a later supplemental testimony.

21 **5.8 Criteria Used For Assessments.**

22 This paragraph will be filed in a later supplemental testimony.

23 **5.9 Trade-Offs Between Alternatives,**

24 This paragraph will be filed in a later supplemental testimony.

25 **5.10 Conclusions for Issue 3.**

26 As shown in paragraphs 5.1, 5.2, and 5.3, there is ample evidence to support
27 implementation of these Alternatives to improve reliability in Section 3 and meet the demand
28 performance demands in Section 4. Some Alternatives in paragraphs 5.4 and 5.5 will also be
29 shown to be viable in a later supplemental filing.
30

1 **5.11 Recommendations for Issue 3.**

2 This paragraph will be filed in a later supplemental testimony, as recommending an
3 alternative is not the primary purpose of the A.R.S. §40-252 hearings.

4 For the purpose of the A.R.S. §40-252 hearings it recommended that some
5 misunderstandings by NCI in the FS be considered for correction.

6 Also, it is abundantly clear implementation of combinations of the various DSM, RE, and
7 DG Alternatives can solve the reliability, capacity and power quality issues for the V-7 Feeder
8 Area without the more costly 69 kV line in Alternative T1 or T2.

9 Further, these Alternatives (other than T1 or T2) need actions to be taken by the
10 Cooperative in order to be more cost effective than the Cooperative's preferred T1 and to be
11 successful.

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1 "Finally, SSVEC is intending upon working with the ACC, and the community,
2 in a cooperative manner towards resolution of the power quality, reliability,
3 and capacity problems in the area."

4 One of my goals with this testimony is to ensure that the Cooperative's management
5 actually do read the Feasibility Study so they can learn new facts about their system and then
6 follow through on the above quote. I hope that happens.

6.2 "270 hours of Outage"

R. What does "270 hours of annual outage in the V-7 Feeder Area mean?"

8 A. Many times, too many to count, the Cooperative has stated that there have been 270
9 hours of annual outage in the V-7 feeder area.

10 Before quoting a few of these instances, it should be noted that the number "270" does
11 NOT appear once in the Feasibility Study other than in the phone number for Navigant
12 Consulting on the cover page. Whatever this is, it is NOT a measure of reliability, NOT used as an
13 industry standard and is VERY misleading. In fact, it has NO technical meaning whatsoever other
14 than to make it seem the V-7 Feeder area has 90 times the actual annual outage per customer of
15 3 hours per year per customer. In 3.1.1 and 3.1.2, Figures 1 and 2, Tables 1 to 3, have all shown
16 that

- 17 • Annual outages in the V-7 Feeder area over the past ten years was 3.0 hours per
18 customer per year,
- 19 • V-7 Distribution Line standard Reliability Indices for number of outages, length of total
20 outages, and duration of each outage were above the national average in 2008,
- 21 • V-7 Feeder outages were less than the 5 hours per customer per year that would be of
22 concern to the Rural Utilities Service (RUS) standard.
- 23 • V-7 Feeder outages in 2008 were 1.3 outages per customer, for average total outage
24 duration was 96 minutes, and the average outage duration was 72 minutes.
- 25 • Commission Staff reported in 2007, the Cooperative average customer had 3.52 hours of
26 outage per customer per year compared to the ten-year V-7 outages of 3.0 hours.
- 27 • V-7 Feeder outages have been less than 0.03% of the time, or 99.97% of the time; all its
28 customers have had electricity.

29 This performance is not perfect, but nothing meets that standard.

30 Furthermore, "NCI does not view current feeder outage performance to be unusual for a
line with the distance and exposure of the V-7 feeder." [FS p. 1, paragraph 3]

1
2 Q. Can you provide some instances of when "270 hours of annual outage" or similar
3 wording was used by the Cooperative?

4 A. First, in a letter from the Mr. Huber, SSVEC CEO, to Corporation Commissioner Newman
5 on 2 October 2009, in the second paragraph, he states

6 "The existing infrastructure has exceeded capacity, experienced a 10 year
7 outage average of 270 hours per year." [emphasis added]

8 Second, in a letter from Mr. Jack Blair, the SSVEC Chief Member Services Officer, wrote to
9 all the members of the Cooperative, dated 14 December 2009, in the second paragraph:

10 "Sulphur Springs Valley Electric Cooperative (SSVEC) has proposed a 23
11 mile 69kV transmission line to serve that area [Elgin, Sonoita, Patagonia]
12 because it experiences 270 hours of outages a year, far more than the
13 approximately 20 hours a year that our other members experience on
14 average." [p. 1, emphasis added]

15 Third, in the Cooperative's Application for a Re-hearing of 28 September 2009, by
16 the Cooperative's attorney, states:

17 "...an average reliability occurrence of 270 outage hours per year over the
18 last 10 years." [p. 25 at 17-18, emphasis added]

19 and

20 "He [Mr. Creden Huber, CEO] presented uncontroverted evidence demon-
21 strating that the Sonoita area has a 10-year average of 270 hours of outages
22 per year adding to the total unreliability of the existing service line." [p. 26 at
23 1-2, emphasis added]

24 and

25 "He [Creden] presented uncontroverted evidence demonstrating that the Sonoita
26 area has had a 10-year average of 270 hours of outages per year adding to the total
27 unreliability of the existing service line." [p. 42 at 8-10]

28 and

29 "...and an average reliability occurrence of 270 outage hours per year over
30 the last 10 years" [Attachment H, SSVEC "Moratorium" Application filing of
31 18 Sept 2009, p. 4 at 3-4]

32 Fourth, in a letter of 27 January 2010 to the Commission by SSVEC's CEO that
33 provided a "Member Survey Report" of a poll of members filed this docket. In the Executive
34 Summary dated 26 January 2010 from Jody Severson of Severson Associates, she states:

1 "Then we introduced the Sonoita line. We gave them some background
2 information, explaining that only one feeder line serves the area, that it has 270
3 hours or outages per year compared to under 3 for the rest of the system,
4 and that SSVEC requested a ban on new hookups because the line was
overloaded. We told them that the co-op wants to build a second line to relieve
the overloading and provide a backup route for power." [p. 3, emphasis added]

5 and the following questions 12 (which was rotated with a similar 13) was worded
6 as follows:

7
8 "12. Opponents say that the new line will hurt their property values because it
9 will interfere with their view of the mountains. The cooperative says that it has
10 owned the right-of-way to build that line for 28 years and that was public
11 record when property owners bought their property. As regards concerns
12 about the view of the mountains, which of these two sides do you most agree
13 with -- the co-op or the opponents -- even if neither is exactly your opinion? (IF
14 UNDECIDED:) Well, which way do you lean?" [PDF p. 14, emphasis added]

15 and questions 15 continued to mislead as worded as follows:

16 "15. I'd like to ask your opinion on another issue. Opponents of the Sonoita
17 Elgin/ Patagonia line asked the Arizona Corporate Commission, which
18 regulates electric utilities, to order Sulphur Springs Valley Electric
19 Cooperative to conduct an independent, third party study of the alternatives to
20 building a new feeder line, including wind and solar power. That study has
21 just been completed and found that the proposed new feeder line is the most
22 realistic, affordable and long-term way to solve the reliability and power
23 quality problems. Opponents are expected to criticize the study or ask for
24 more studies of the various alternatives. Sonoita/ Elgin/ Patagonia area and
25 that such cost increases are unfair to all other ratepayers who have to pay for
26 the new line. -- The cooperative-says that further delays will significantly
27 increase costs to put in the new line to the ~ Sonoita/ Elgin/ Patagonia area
28 and that such cost increases are unfair to all other ratepayers who have to
29 pay for the new line.

30 "As regards conducting more studies of the issue, which of these two views
do you most agree with -- the cooperative or the opponents -- even if neither
is exactly your opinion? (IF UNDECIDED:) Well, which way do you lean?"
[PDF p. 15, emphasis added]

and the verbal comments recorded during the polling included:

"270 hours out outages proves it is needed.

"270 vs 3 hours of outages seems like a good reason and they need power.

"Because we need a back-up power. It is more important than their view.

"Because of all the problems they are having, we need a new power line.

"Because of power outages!

"Because that's what the study concluded.

"Because they say it is required.

- 1 "Can't stop progress & coop has the right to do what they want.
"For less outages – would not want to be inconvenienced.
- 2 "Help with the outages.
- 3 "If there is a power shortage, they need it. They have handled this wrong. They chose
the wrong route.
- 4 "If they are having too many outages then they need the line no matter what the
problem is.
- 5 "It is needed to take care of power outages and handle the growth.
- 6 "It is needed. Study has explained that it is the most realistic way to go.
"It seems they are experiencing a number of outages and that should be enough
7 reason.
- 8 "It sounds like the most cost productive way to reduce outages in the area.
"It will help the outages from happening out there.
- 9 "Less outages. [twice]
- 10 "Less power outages and more people coming out to Elgin to pick fruit from farmers.
"Less power outages!!
- 11 "Less power outages. (twice)
- 12 "Less power outages. Cost effective.
- 13 "Lower our rates. Limit outages.
- 14 "More cost effective if they are having that many outages they must need it.
"More power access, less outages.
- 15 "More power is needed in the area. Too many outages.
- 16 "No new hook ups allowed right now.
"Not to have power outages.
- 17 "Outages.
- 18 "Outages are very stressful.
- 19 "People should not have to experience that much outage.
- 20 "Power outages are dangerous.
- 21 "Power requirements – Old people need that power more than anyone else.
"Provide power for more people with less outages.
- 22 "Reliability issues as far as it going on and off.
- 23 "Reliability of power.
- 24 "So people don't end up with power outages constantly.
"So they don't have power outages.
- 25 "So they won't be without power with that many outages.
"So they won't have so many power outages.
- 26 "So we don't have as many power outages. (twice)
- 27 "So we have less interruptions & power outages.
"Stop blackouts and help people. It won't interfere with the view of the mountains.
- 28 "Stop power outages. It's growing and it need to be done.
"That people are going through power outages.
- 29 "The coop says it's necessary. They wouldn't waste our money.
"The outages are the best reasons to build the line.
- 30 "The outages.
"The power outages, when not enough power in feed lines to cover it.
"The reliability of electricity in this area is required.
"There are a lot of people who have suffered a lot of outages.
"There will be more reliability.
"These people deserve better service than they are getting.
"They are having a power outage problems. They need a new line.
"They can't add any new customers to the area.
"They complain about the power outages. They're trying to mostly keep it out of sight.

- 1 "They have so many outages and not enough power.
- 2 "They have too many blackouts. It is needed.
- 3 "They have too many outages.
- 4 "They need electricity. (three times)
- 5 "They need it so there aren't as many outages.
- 6 "They need it. Too many outages.
- 7 "They need power. Too many outages.
- 8 "They need the service because of the outages.
- 9 "They need to do it to avoid more outages.
- 10 "They wouldn't have as many outages and better services.
- 11 "They are having burn outs.
- 12 "Tired of the outages.
- 13 "To avoid outages.
- 14 "To cut the outages down.
- 15 "To end outages in that area.
- 16 "To have less outages.
- 17 "To keep power outages to a minimum.
- 18 "To prevent more outages and give people electricity.
- 19 "To prevent the outages.
- 20 "To reduce the number of outages.
- 21 "To relieve the power outages in that area.
- 22 "To stop the power outages.
- 23 "Too many outages (four times)
- 24 "Too many power outages. It need to be done ASAP.
- 25 "To shorten outage time.
- 26 "We are expanding the area and if they want to cut down on power outages, they need to do it.
- 27 "We don't have a loop & need a loop.
- 28 "We have too many outages and too much growth.
- 29 "We keep losing power in Patagonia.
- 30 "We need electricity & it will stop outages.
- 31 "We have a very large business & it costs us thousands every time there is an outage. Been here since 1947. People should do their research.
- 32 "We receive too many outages.
- 33 "Will be less outages." [from Pp. 116 to 123 of Huber ltr of 27 January 2010]

22 Lastly, both Mr. Jack Blair and Ms. Deborah White, the two presenters, repeated the
23 "**270 hours of annual outage**" including an exhibit titled "1999-2009 Average Annual
24 Hours Out: SSVEC System" where there was a "270 hour" spike for the V-7 Feeder Area.

25 There are many additional instances of this very misleading statement in the record
26 of these proceedings. The "poll" questions above and the verbal responses are a clear
27 examples how using misleading information can extract the desired answer.

28 The local newspapers, including the *Arizona Daily Star* (on page 1), *Sierra Vista*
29 *Herald*, *The Bulletin*, and others, have also reported the "**270 hours**".

30 The tragic part of this is that "**270 hours**" has been repeated by SSVEC upper
management and its attorney so many times, some are beginning to believe it is true.

1
2 **6.3 "The Capacity has been exceeded" or similar expressions.**

3 **Q. Can you provide instances of when this or similar expressions have been used?**

4 **A.** A careful review of the entire Feasibility Study has resulted in NO instances where any
5 claims or facts presented indicate that the capacities of the system (transformer or lines) have
6 been exceeded.

7 In addition, as presented above in 4.1, the FS states: "the capacity of the transformer
8 typically is higher than nameplate due to ambient cooling." [FS p. 31]

9 Further, NCI has not and apparently the Cooperative also has not computed the weather-
10 adjusted transformer ratings. The FS also states: an additional 1000 kW [1 MW] of substation
11 transformer capacity would be available at Huachuca [at Mustang Corners] substation if the
12 winter rating is increased by at least 16 percent above the nameplate rating.

13 **Q. What are some examples about misleading statement concerning exceeding**
14 **capacity?**

15 **A.** First, in the same letter from the CEO on 2 October 2009, Mr. Heber states

16 "The existing infrastructure has exceeded its capacity" [as quoted above]

17 and later states:

18 "The facts are the substation transformer has exceeded its capacity multiple
19 times." [p. 1, second paragraph]

20 Second, in another letter to the Cooperative's membership, dated April 2009, Mr Heber
21 states:

22 "The V-7 feeder has reached its maximum capacity, and, in fact, has exceeded
23 it several times recently, which resulted in reduced voltage (brownouts), blinks,
24 and some outages. The new substation and 69kV line must be built now.
25 Without this critical new infrastructure, SSVEC will have no choice but to
26 invoke a moratorium on new services in this area –and keep in mind that this
27 action would still not resolve the current reliability problems. [Page 10]

28 This letter was written to the Members after a concerted effort was made to bring
29 possible alternatives to the attention of SSVEC at a meeting with approximately a dozen staff
30 members and as many members from the V-7 Feeder communities, TEP, and Santa Cruz County
in attendance. Rather than working and collaborating with this group to work out alternative
and/or responding to this group; the Cooperative chose to ignore this group and instead sent out
a letter to the members with their own conclusions.

1 Additional examples will be included in a supplemental filing.

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2 **EXHIBIT MM-1**

3 **RESUME OF MARSHALL MAGRUDER**

4
5 **Education**

6 MS in Systems Management, University of Southern California, Los Angeles, California (1981)
7 Majors in Managing Research and Development and in Human Factors (grade A in every course)
8 MS in Physical Oceanography, Naval Postgraduate School, Monterey, California (1970)
9 Honor roll 4 times (two years, 5 terms a year)
10 BS, US Naval Academy, Annapolis, Maryland (1962)
11 Special courses in Operational Analysis and History of Russian Military Tactics

12 **Experience**

13 Over 25 years as Senior Systems Engineer with and an associated contractor, consultant to Raytheon-
14 Hughes in systems engineering, training and naval systems, simulation and modeling in C4I; with over
15 20 years of service with the US Navy, a total over 40 years experience in this field

- 16 • **Large-system development** at all levels
17 **From** pursuit, analysis, winning strategy, Request for Proposal evaluation, proposal management,
18 system requirements analysis, architectures, specifications, design synthesis, trade-off studies,
19 requirements allocation tracking,
20 **To** system, level test planning, deployment, implementation, through sign-off, and
21 **For** technical systems of all complexities.
- 22 • **Developed** Antisubmarine Warfare (ASW), Electronic Warfare (EW), Command, Control,
23 Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) operational
24 concepts, procedures, and tactical employment.
- 25 • **Used, operated, and planned** Navy, Army, Air Force, Coast Guard, Joint systems, world-wide.
- 26 • **Coordinated multi-platform employment** from sensor to unit to Battle Force to Theater levels.
- 27 • **Qualified systems engineer/manager** for trainers, artillery, Command and Control (C2),
28 countermeasures, for any platform.
- 29 • **Specialties:** environmental analysis, documentation, sensor/weapon predictions, C4ISR,
30 Electromagnetic and Emission Control decision criteria.
- **Battle Force/Group Tactical Action Officer (TAO)** on 8 aircraft carriers, TAO Instructor for 4 years, 20
months combat experience.

31 **Recent Positions**

32 **at ImagineCBT Inc., ISIS Inc., Raytheon, and Hughes Aircraft Company**

- 33 **C4I Architect and C4I Support Plan Lead** for the Carrier for the 21st Century (CVNX) Task Order.
- 34 • Completed *CVX C4I Support Plan, v1.0*, Joint Operational Architecture development for Joint and Naval
35 staff space allocations for CVX (1999) and Joint Command and Control ship (2002).
 - Drafted *CVN 77 Electronics System Integrator Statement of Work (SOW)* for WBS Group 400 tasks and
36 IPTs (1999), *Integrated Management Plan*; Royal Navy CVF WBS proposal (2002)

1 **Lead Systems Engineer, Operations Analyst and Site Survey Leader** for Saudi Arabian Minister of
2 Defense National Operational Command Centers and C4I System (completed August 1997).

- 3 • Completed *System Specification, System Description Document, Site Survey, Interface Requirements*
4 *Documents*

4 **Proposal Technical Volume Manager** for the following **winning proposals**:

- 5 • Vessel Traffic Service 2000 system, US Coast Guard command center for surface surveillance using
6 radar, visual, communications links. (proposal evaluated A++, won Phase I, Phase II delayed then
7 restructured)
- 6 • Anti-submarine Warfare Team Trainer (Device 20A66), an integrated, multi-ship, submarine and
7 aircraft training system for Naval Task Groups. (\$56M contract, best technical, lowest cost)
- 8 • Electronic Warfare Coordination Module, an Intelligence/EW spectrum planning and management
9 system for Task Force Command Centers. (won Phase I, best technical)

9 **Assistant Program Manager for the Training Effectiveness Subsystem, Device 20A66**

- 10 • Performance Measurement Subsystem, observed real-time performance of operators, teams, multi-
11 ship and aircraft units during exercises and compared to the standard

11 **Senior Systems Engineer** responsible for writing **specifications** in following **proposals**:

- 12 • Fire Support Combined Arms Team Trainer (FSCATT) *System Specification*, a US Army artillery
13 multiple cannon and battery training system. (awarded \$118M contract, still under contract)
- 14 • Warfighter's Simulation 2000 (WARSIM 2000) *System Specification*, a US Army Force XXI Century
15 battalion to theater levels, and training system with actual C4I systems. (won Phase I)
- 16 • Tactical Combat Training System, *Exercise Execution Software Requirements Specification* (SRS) for
17 simulation and computer models to run real-time, driving sensors, weapons and links on 35 ships,
18 100 aircraft and submarines (won Phase I contract, wrote SRS in Phase 2 proposal)

17 **Detailed Descriptions of Experience**

18 The following are more information, arranged chronologically, with dates, duration, position title,
19 program name, followed by accomplishments, and then an overview of the project.

20 **April 2000 to present - ISIS, Inc., primarily as Senior Scientist, Information System Architect,**
21 **Systems Engineer, Training Systems Analyst and Requirements Analyst.**

22 **General Accounting Office (GAO) (May 2005 - June 2006)**, reviewed and prepared training system
23 development and professional engineering services (PES processes and job descriptions for
24 category 69 (training) proposal.

25 **Strategic Services and Support (April 2005-Sept. 2006)**, attended pre-solicitation conference for
26 the Army Communications-Electronics Command (CECOM), Ft. Monmouth, New Jersey, waiting for
27 formal request for a part of this \$19.25 billion program proposal.

28 **Department of Interior Management, Organization and Business Improvement Services**
29 **(MOBIS) and Professional Engineering Services (PES) proposal analysis (June 2005)**,
30 prepared a detailed requirements and tasks analysis of the RFP) and proposal plan.

27 **Total Engineering Information Services (TEIS) (Feb. - March, 2005)**, participated as proposal
28 writer, pink and red team member with another company which is prime for an approximately \$12
29 million, multi-year, contract for the Army Information Systems Engineering Command, Ft.
30 Huachuca, Arizona. Prepared TEIS Risk Management Plan for prime contractor. Presently ISIS is
waiting for announcement of selected winners.

30 **Networthiness Certification (Jan. 2005 - Sept. 2006)**, prepared proposal for the Army Network
Command (NETCOM), awaiting RFP to respond for this several million dollar program involving

1 over 3,200 Army computer programs at all Army installations, worldwide. Prepared Quality Control
(QC) and Risk Management Plan.

2 **Cryptologic Support and Logistic Analysis (Oct. 2004 – Sept. 2006)**, prepared proposal for the
3 Army Communications-Electronics Command (CECOM), Ft. Huachuca, Arizona, waiting for formal
request for proposal.

4 **Information Warfare Training (2001 - 2005)**, USAF Small Innovative Business R&D (SBIR) Phase I
5 contract, to determine IW training requirements and measure performance in an intelligence,
6 wargaming system, awaiting possible award for development of an Information Warfare training
system for the USAF Information Warfare Aggressor Squadron.

7 **US Army Virtual Proving Ground (2001-2002)** - Performed *C4ISR Architecture Framework*
8 development, implementation and documentation using the DoD *C4ISR Architecture Framework*,
9 v2.0 and for Operational, Technical and Systems architecture products.

10 **Prepared C4ISR architecture framework proposals** for US South Command (USSOUTHCOM)
11 Command Center (2003), DoD Threat Reduction Agency (DTRA) Operational Command Center at
12 an Army Command, Virginia (2002), and Government Enterprise Architecture development for
13 Department of Health and Human Services Command Center (2002) programs.

14 **Raytheon Naval and Maritime Systems, San Diego, California**, for various programs, a consultant for
15 ImagineCBT, systems engineer.

16 **April 2001 to June 2005 – C4I Architect, Operations Analyst/Systems Engineer** for Minister of
17 Defence (UK) Future Aircraft Carrier (CVF) program, Raytheon Naval and Maritime Ship Systems,
18 San Diego.

19 Prepared for Raytheon Naval Ship & Integrated Systems (San Diego) proposals in April and
20 June 2003 with Statement of Work (SOW), Data Item Descriptions (DIDs) and CDRLs for
21 Architecture Assessments (Requirements, Testing) for ten functional mission areas, Global
22 Information Grid Evaluations in order for CVF to be interoperable with US forces, and Levels of
23 Information System Interoperability (LISI) using DoD LISI PAID (procedures, applications,
24 infrastructure, data) attributes to determine internal and external interoperability assessments

25 Prepared proposal and performed contract for Raytheon C3I Systems (Fullerton, CA) for the Joint
26 Command and Control Ship (JCC) *JCC Interoperability Study*, including report drafting and
27 preparation, conference presentations and making recommendations to JCC Program Office for
28 ensuring over 400 tactical, logistic, administrative, C4ISR applications work. (2001-02)

29 Prepared proposal and performed contract for Raytheon NAMS (San Diego) for *JCC Reconfiguration*
30 *Study* to determine requirements to most effectively manage command (C4ISR) onboard JCC.
(2001-02)

31 Provided architecture framework proposal inputs and evaluation for US Army Landwarrior III (Future
32 Combat System) for Raytheon C3I Systems (Plano Texas)

33 Provided C4ISR and engineering analysis and proposal preparation for LHA(R), JCC, CVF and other
34 Raytheon, San Diego ship programs (2000-03)

35 **October 2000 to 2003 (now inactive) – MBA Instructor, University of Phoenix**, “Operations
36 Management for Total Quality” and “Managing R&D and Innovation Processes” courses.

37 Taught these courses in Nogales to Mexican maquiladores managers and in Tucson to Americans
38 managers.

39 Qualified to teach “Program Management” course.

40 Plan to qualify as FlexNet (online) Instructor, presently inactive instructor status.

41 **April 1998 to September 2000 – CVNX C4I Architect, C4I Support Plan Leader also Lead Systems**
42 **Engineer and Requirements Analyst** for CVN 77 and CVNX Programs, at Raytheon, San Diego, CA
43 Performed C4I Support analysis to prepare requirements for the DoD C4I Support Plan. Led several
44 teams to understand the *DoD C4ISR Architecture Framework*, v2.0 and Operational, Technical and
45 Systems architecture products.

1 Managed team for CVN 77 combat requirements analysis 3 months to draft and submit plan to
NAVSEA (PMS-378) for two customer reviews.
2 Provided interface to combine CVNX and Joint Command and Control (JCCX) Ship architecture
development for NAVSEA (PMS-377), drafted task schedule but funding then not provided.
3 Proposed an approved Technical Instruction for "Reconfigurable Joint and Naval Staff Space
4 Allocations" in order to start the CVX/JCC *Operational Architecture and Mission Essential Tasks*
processes - completed early 1999. (3 of 14 proposed were approved for study)
5 Coordinated the AFCEA "Architecture Implementation Course" at the Raytheon San Diego site.
6 Created and drafted CVN 77 *Electronic Systems Integrator (ESI) Statement of Work (SOW)* for the CVN
77 ESI role and RFP in Spring 1999.
7 Provided trade studies and options for performing this task for Newport News Shipbuilding.
Established a draft CVN 77/CVX "Total Ship Systems Engineering (TSSE) Plan for our team.
8 Implemented the Raytheon and Newport News Shipbuilding *Integrated Product and Process*
Development processes to structure IPTs, tasks, and work descriptions.
9 Provided interoperability inputs to UK Future Aircraft Carrier (CVF) Raytheon Qualification letter.
10 Participated in establishing teaming arrangements with SPAWAR Systems Center, San Diego.
11 The CVN 77 is the transition aircraft carrier from the *Nimitz* class, to be commissioned in FY 2008. Two
12 other evolutionary aircraft carriers, CVNX-1 and CVNX-2 are to be commissioned in FY 2013 and FY
2018, respectively. The tenth CVNX is planned for disposal in April 2111. Overall manning will be
13 reduced up to 1,740 personnel. Up to 12 Joint, Naval, Combined and Coalition staffs may embark up to
14 1,000 augmentation personnel beyond the present capabilities. CVNX can embark a Joint (Task) Force
Commander with command and control systems for Operational-Theater and Tactical (service)
15 levels. The ESI role involves integration of all C4ISR equipment, internal and external
communications, navigation, sensors, fire control, weapons, and associated display and processing
16 systems.

17 **January 1998 to present - H&R Block, Tax Advisor Level 3**, seasonal tax preparer (annually, January
to April 15), AARP Tax Consulting for the Elderly (pro bono) tax preparer, IRS qualified, over 450
18 hours of H&R Block classroom and CBT training courses.

19 **August 1997 to April 1998 - DD 21 Requirements IPT Lead, Systems Verification and Test IPT**
Lead, and Initial Lead Systems Engineer for the Hughes, then Raytheon, DD 21 Program for
20 NAVSEA, PMS-500 - assigned the CVX Reduced Manning (Automation) Study that led to CVX C4I
Support Plan after Raytheon sent "no bid" letter in April 1998.

21 Provided IPPD plans for all systems engineering functions, including workshop participation, for
22 subsystem to total Ship System levels.

23 Managed two Integrated Product Teams (IPTs), as additional DD 21 personnel were assigned.
Conducted a weekly VTC with IPTs, issued Agenda, Minutes, and led team meetings.

24 Attended Risk Management course and recommended Raytheon's Prophet™ risk management
software tool for DD 21 and other integration programs.

25 Provided the initial *DD 21 Total Ship Systems Engineering (TSSE) Plan*.

26 Coordinated systems engineering modeling and simulation planning.

27 The Future Surface Combatant of the 21st Century (SC-21) Program consisted of both destroyers and
28 cruisers, with the Land Attack Destroyer (DD 21) to be commissioned in FY2009 and an Air
Dominance Cruiser in FY2018. I participated in the program implementation and maintenance of
collaborative and synergy with both CVNX and SC-21 programs and the emergent JCC and USCG Deep
Water Programs. [SC 21 is DDGX Program]

29 **June 1995 to August 1997 (26 months) - Operations Analyst and Site Survey Team Leader also**
Naval Operations Analyst and Joint Training Analyst, C4I System for National Defense Operations
Center and Area Command Centers Definition Study - completed August 1997.

30 Performed pre-contract planning analysis for site survey from battalion to national level.

1 Managed budget for 3 months deployment for the 12 engineers in Saudi Arabia.
2 Conducted interviews and briefs with members of all joint Minister of Defense and Aviation (MODA)
3 staff and all armed forces, including schools and topographic commands.
4 Provided reports, program reviews and TGMIRs for survey and design efforts for the 2 years, including
5 the coordination of all Action Items and Program Management Review Minutes.
6 Created significant inputs to the *System Description Document*, *System Specification* as Lead Systems
7 Engineer, emphasized operational concepts including staffing and workstation operator tasks;
8 operations center and support facility layouts; specifications for a transportable operations center
9 (TOC); system-level communications interfaces including ATM, SATCOM, PTT and RF
10 communications; system hardware and software interfaces including JMCIS, TADIL-S and IDL;
11 operator training; selected over 100 formatted messages (using USMTF) for integration, and overall
12 system performance characteristics.

13 Drafted System Specification for Land Forces Operations Center, deemed excellent by customer.
14 Prepared *Site Survey Report* and participated in drafting the *Communications Interface Requirements*
15 *Document*, presented multiple customer briefs.

16 Only engineer to start and complete this contract (over \$10M), most of the others were replaced.
17 The MODA C4I System will provide 13 operations centers, nation-wide, to form a joint service, C4I
18 system, integrating the four services through 3 command echelons and, for the Land Force will
19 provide their digital command and control system through 4 echelons.

20 **1995 - Systems Engineer, for an AirHawk Concept of Operations.**

21 Drafted a preliminary "*Operations Concept Document (OCD) for the Air HAWK*" system for HMSC, provided
22 a systems approach to integrate the subsystems with the missile, for the Command and Control
23 Division, using the MIL-STD-498(B) DID as a guide.

24 AirHawk provides an air-launch system capability for the U.K. Tomahawk cruise missile.

25 **1995 (5 months) - Lead Systems Requirements Engineer, Warfighters' Simulation 2000 (WARSIM**
26 **2000), US Army training system.**

27 Performed system functional requirements analysis for command and control levels from battalion
28 through echelons above corps and Theater-levels

29 Responsible Engineer for the analysis and writing of the system specification for the entire system in
30 accordance with MIL-STD-498(B) (System Engineering). (Hughes won Phase I)

31 WARSIM 2000 C4I training system to stimulate all present and emerging Force XXI digital C4I systems
32 with operational data for entire staffs in their Tactical Operations Centers in the field, in classrooms
33 and at the War Colleges. WARSIM 2000 integrates with other joint systems through protocol
34 standardization and object-oriented design features.

35 **1994 - System Requirements Compliance Engineer, Theater Battle Management Core System**
36 **(TBMCS), US Air Force C4I system.**

37 Ensured compliance with the contract and requirements documents integrating different systems into
38 the TBMCS proposal, including the Global Command and Control System.

39 Drafted a compliance matrix with 200 pages in the Executive Volume to meet demanding RFP compliance
40 requirements (Proposal vs. IFPP vs. SOW vs. CDRL vs. WBS vs. CLIN vs. TRD).

41 TBMCS is the US Air Force Theater to squadron level C4I system. (Hughes lost)

42 **1994 (7 months) - Proposal Technical Volume Manager for the Vessel Tracking Services 2000**
43 **(VTS 2000), US Coast Guard C3 system.**

44 Led the technical and engineering proposal efforts to comply with the RFP and proposal requirements,
45 based on Hughes themes and proposal strategy decisions.

46 Managed systems, hardware, communications, software, and logistics engineers writing the responsive
47 proposal. (Ten corporate teams bid; Hughes won Phase I with two others including Raytheon,
48 Hughes performed Phase I, Congress delayed Phase II, program later restructured)

1 VTS interfaces radar, visual surveillance, environmental, and voice communications data with differential
2 Global Positioning System (dGPS) information from automated and human input to enhance safety
and commerce on waterways and for major port regions.

3 **1993-1994 (10 months) – Lead Systems Engineer, Fire Support Combined Arms Tactical Trainer**
4 **(FSCATT), US Army training system.**

5 Team Leader for the requirements analysis, design, and system engineering and proposal efforts.

6 Drafted and led several pre-RFP System Requirements Reviews for the System Specification.

7 Developed a technique with Distributed Interactive Simulation (DIS) protocols whereby a thousand or
8 more cannons can perform exercises from multiple sites in same exercise.

9 FSCATT integrates artillery and fire control with a Forward Observer visual training system, provides

10 Fire Direction Center simulation and stimulation interfaces with Close Combat Team Trainer

11 (CCTT) M1 tank and M2 systems. (Hughes won \$118M program, still ongoing)

12 **1990-1991 (20 months) – Systems Requirements Engineer, Tactical Combat Training System**
13 **(TCTS), US Navy C4I training system.**

14 Led the simulation and modeling, system requirements analysis for all real-time operations for the
15 proposal and Phase I development efforts. (Hughes won Phase I)

16 Wrote most of the *Exercise Execution CSCISRS* for real-time system execution software for all
17 simulations and sensor, weapons and platform models (over 100).

18 TCTS provides a task group training data link for 100 aircraft, 24 ships and submarines, 6 ashore
19 installations and ranges, with real-time targets (to 780). TCTS uses participant “pods” with a data
20 link between platforms; stimulates platform sensors with the real-time targets; maintains data link
21 communications; collects data for feedback and rapid after action reviews. (Hughes team won
22 Phase I, Raytheon Phase II)

23 **1991 - Human Factors SE for Land Warrior 2000 proposal, US Army infantryman C4I system.**

24 Human Factor Engineer for proposal effort for the helmet display overload analysis with computer text
25 and graphic display resolution. Left to lead FSCATT Systems Engineering and Proposal teams.

26 Land Warrior 2000 system provides infantrymen with an integrated C4I System for an infantry brigade,
27 with computer-driven displays, messages, GPS, and other C2 features. (Hughes won)

28 **1988-1991 (4 years) – Assistant Program Manager for the Training Effectiveness Subsystem,**
29 **Device 20A66.**

30 Created Performance Measurement Subsystem, used subcontractor to provide analysis, documentation,
and design details.

Managed subcontract (\$1.2M), conducted subcontractor reviews, and wrote SOWs, evaluated products
and a subcontractor.

The Performance Measurement Subsystem determines operational performance (real time) for trainees
from Admiral to sensor operators and for ship teams, multi-ship and tactical units.

1988-1991 (4 years) – Senior Systems Engineer, Device 20A66.

Lead Systems Engineer, provided significant inputs for models, simulations, communication data link
interfaces, user displays, and I/O; consultant to software team as ASW expert.

Designed to real-time Links 4A/11/16 with ships in port and ships/aircraft at sea.

The Device 20A66 trains a Battle Group Commander in a Task Force Command Center (TFCC), staff and
subordinate staffs (in 20 ships and submarines and 15 aircraft in 35 mockups using 186 different
workstations with 61 large screen displays) to use data links, communications, and good decision
making practices.

1986-1988 (1.5 years) – Proposal Technical Volume Manager, Device 20A66.

1 Evaluated Draft-RFP and System Specification, provided 229 change pages, and was acknowledged to be
most significant pre-proposal action by any bidding contractor.

2 Led pre-proposal, technical design and development effort as the only engineer for 1 year.

3 Led, as Technical Volume Manager, team of systems, simulation, hardware, courseware, facility,
4 logistics and software engineers in the synthesis and drafting of the 500-page technical volume,
with final technical volume cost less than B&P estimate.

5 After proposal submittal, replied to questions, gave briefs. (Hughes won, beat 2 incumbents)

6 **1987-1988 (6 months) - Proposal Manager, California Law Enforcement Driver Trainer System**

7 Led pre-proposal and proposal team to develop a design for high-technology driver trainer systems for
the Peace Officers and Safety Training (POST) Commission. (Hughes won)

8 Participated during contract, as systems engineer in-charge of design, to verify the POST training
objective(s), standard(s) and criteria would be met for the drivers of the system.

9 **1987 (4 months) - Lead Engineer, Advanced Fuels Auxiliaries Test System for USAF**

10 Provided initial engineering requirements analysis leading to joint venture with Allison Gas Turbines to
bid this major USAF test system.

11 Drafted initial System/Subsystem Design Document, the basis for design.

12 Hughes bid, after I left project; however, USAF declined to award contract.

13 **1986-1987 (3 months) - Proposal Coordinator, USAF LANTIRN training system.**

14 Led proposal compliance review for real-time video and infrared technical requirements using the
Hughes RealScene™ 3-dimensional (voxel-based), interactive system instead of the Hughes
(formerly Honeywell)-developed, GBU-15 training system.

15 LANTIRN trainer provides real-time displays of video and IR images to cockpit and weapons systems for
16 F-15, F-16 flight simulators and the AGM-130 missile. (Hughes no-bid)

17 **1985-1986 (9 months) - Senior System Engineer for the Electronic Warfare Coordination Module
(EWCM) program with responsibility for the environmental effects design.**

18 Led technical proposal effort, coordinated proposal outline, reviewed storyboards and topics, determined
compliance, edited technical volume, and synchronized with other volumes.

19 Responsible engineer for atmospheric and acoustic effects on propagation and degradation from
countermeasures, provided customer briefs and proposal topics.

20 EWCM provides full spectrum management capabilities for the Electronic Warfare Commander to
21 coordinate operational and intelligence EW information and databases. (Hughes won Phase I, lost
Phase II)

22
23 **1982-1985 (2.5 years) - Systems Engineer for the training subsystem, Device 14A12 ASW Tactical
Ship Training System.**

24 Led technical proposal effort for the Performance Measurement and Monitoring training subsystem,
sonar modeling and simulation, operator displays, fire control, data links, and sensor, weapon and
25 platform modeling.

26 Designed PMM subsystem, pushing the state of the art, later implemented in Device 20A66.

27 All ASW ships and ASW aircraft were simulated in a single-ship, multi-dimensional (anti-air, anti-surface,
anti-submarine) environment, as a C2 and sensor operator training system.

28 **Papers**

29 Presented papers to the Industry/Inter-Service Training Systems Conferences (I/ITSC):

30 "Design Concepts for a Performance Measurement System" [nominated for best paper top 5 of 105]

"A Performance Measurement System Design", based on Device 20A66 results.

1 Prepared and presented three reports to the National Security Industrial Association (NSIA), ASW
2 Committee, as Vice-Chairman of Training and Interoperability Subcommittee; Study Leader for
3 following Reports:

4 "Training Commonality for Oceanography and Acoustic Environment Study Results"

5 "Training Commonality for Detection and Classification Study Results"

6 "Proposed Standard Sonar Equation for Technical, Tactical, and Training Communities"

7 Received NSIA Meritorious Award for leading these ASW industry and government studies)

8 Presented paper to the Hughes Advanced Technology and Studies Group describing the use of

9 "Distributed Interactive Simulation (DIS) Protocols in C4I Systems".

10 **Raytheon and Hughes Aircraft Company Courses**

11 **Taught** "Introduction to ASW Tactics" course, at Hughes (four times) and for the *Advanced Training*
12 *Institute* at Naval Underwater Systems Center (New London and Newport RI) 10 times at the Naval
13 Surface Weapons Center (White Oak), Naval Civil Engineering R&D Center (Oxnard), and others.

14 **Attended** "C4I Architecture Implementation" (4 days, AFCEA Course), "Risk Management" (3 days),
15 "Front-End of the Business" (1 week), "Systems Engineering" (HITS/HMSC processes), "Global
16 Command and Control Seminars" (APL)

17 **Attended ATEP Courses:**

18 Software Risk Analysis, Software Estimating and Prediction, Database Modeling, Object-Oriented
19 Software Methodologies, Proposal Development, How to Interview Candidates, Microsoft Word,
20 Creating a Web Browser, Netscape User's Courses

21 **Participated** in the NSIA Industry War Games at Naval War College (Newport RI) and Marine Corps
22 Command and Development Center (Quantico).

23 **Military Schools**

24 Attended US Naval schools including Destroyer School Department Head Course, Gunnery Officer, Anti-
25 submarine Warfare (ASW) Officer, Communications Security (COMSEC), Naval War College
26 Wargaming Course, and Naval Tactical Data Systems User Courses.

27 **Military Qualifications**

28 Qualified for Command of Destroyer, Tactical Action Officer (Battle Group and Warship), Officer of the
29 Deck (cruiser and destroyer), Ship Command Duty Officer, and Surface Warfare Officer.

30 Proven Subspecialist (post Master Degree) in Geophysics, Oceanography, and ASW Systems Technology,
Board selected (about 10 in each of these subspecialties per year in US Navy).

31 **Significant Military And Operational C4i Experience**

32 Active duty commissioned officer in the US Navy serving in the following assignments (homeported twice
33 with each of the four fleets):

34 Area ASW Force, Sixth Fleet (CTF 66) as Staff Plans Officer coordinated all surface ships, aircraft carriers,
35 submarines and ASW/EW aircraft in the Sixth Fleet area on a daily basis; conducted operational ASW
36 with real targets; coordinated (simulated) daily submarine, surface ship and air-launched anti-ship
37 Harpoon attacks on targets. (Awarded Meritorious Service Medal for highest Fleet-level ASW
38 performance ever)

39 Fleet ASW Training Center, Pacific Fleet, the lead Coordinated ASW Tactics Instructor and Staff
40 Oceanographer, and at sea as an Anti-Submarine Warfare Commander Instructor and ASWC Watch
41 Officer during Fleet Exercises, augmenting Destroyer Squadron staffs. Also taught coordinated ASW
42 tactics at Fleet Combat Training Center (Point Loma) as a guest instructor to TAO classes for three
43 years.

44 Commander Carrier Group Three, as staff ASW Surface Operations and Geophysics/ Environment Officer,
45 deployed twice to Western Pacific and Indian Ocean; planned and conducted RIMPAC 77 with Japan,

1 Australia, New Zealand, and Canadian ships, 3 aircraft carriers, 7 submarines and over 150 aircraft;
2 planned Persian Gulf CENTO MIDLINK-77 with UK, Iran and Pakistan; qualified as Battle Force TAO
3 on 5 different aircraft carriers.

4 Naval Surface Warfare Officers Schools Command/Naval Destroyer School as the ASW Tactics and TAO
5 Instructor for Prospective COs, XO's, Department Heads and Free World Navies Courses for mid-grade
6 officers from over 30 countries; co-developed Naval Tactical Analysis Wargame and used it to
7 evaluate tactical concepts including Harpoon anti-ship tactical development; used ASW team and
8 sonar trainers for exercises; trainers for anti-PT boat interactive team exercises; taught anti-
9 submarine/anti-surface warfare tactics, EW, communications, and EMCON decision making classes.
10 Taught surface ship ASW at Submarine School was a guest instructor at the Naval War College and
11 used the War College wargaming facilities to evaluate new systems and ship classes being designed
12 by NAVSEA. (Awarded Navy Commendation Medal with Gold Star for second award)

13 Commander Cruiser-Destroyer Flotilla Ten, as ASW Plans Officer, deployed to Sixth Fleet, embarked on 3
14 aircraft carriers and 2 cruisers including USS *Albany*. Planned and executed many Sixth Fleet and
15 NATO exercises and a CENTO air defense exercise. Engaged in more than 50 Soviet bomber over-
16 flights of the Battle Group, 100% successfully intercepted by fighters and missile lock -on prior to
17 100 miles from the aircraft carrier. (Awarded Meritorious Unit Commendation for validating anti-
18 SSBN tactics and developing SSN direct support procedures)

19 USS *Hollister* (DD788), Operations Officer, deployed for 2 years, 19 months of consecutive combat
20 operations off Vietnam in the Seventh Fleet, provided naval gunfire support (over 28,000 5/38
21 rounds), maritime surveillance, SAR, *Gemini VIII* NASA space craft rescue ship, and EW intelligence
22 gathering and Korean operations. (Awarded Secretary of Navy Unit Commendation, Navy
23 Commendation Medal with Combat "V")

24 USS *Robert L. Wilson* (DD748), ASW Officer, deployed to Sixth Fleet for ASW operations, UN rescue ship
25 off Cyprus, NATO exercises, *Gemini IV* NASA space craft rescue ship, participated in the Dominican
26 Republic operations. (Armed Forces Expedition Service Medal, National Defense Service Medal)

27 USS *Springfield* (CLG7), Main Battery Fire Control Officer and Missile Fire Control Officer, deployed in the
28 Sixth Fleet Flagship, home ported in Villefranche-sur-Mer, France.

19 **State of Arizona, Industry Association, Company, and Military Awards**

20 Friends of the Santa Cruz River, "Volunteer of the Year" award and certification from Sherry Sass,
21 President of the Friends of the Santa Cruz River for service involving transmission line sitings to
22 protect the Santa Cruz River and support for the Arizona Department of Water Resources, Santa
23 Cruz Active Management Area (SCAMA) Ground Water User's Group in Nogales, Arizona. (2010)

24 Arizona Secretary of State "Arizona Golden Rule Citizen Certificate" and plaque from Janice K. Brewer,
25 Secretary of State, for "exemplifying the spirit of the Golden Rule daily: "Treat others as you would
26 like to be treated", nominated by former Santa Cruz County Supervisor Ron Morriss, for his work as
27 a voluntary Energy Commissioner and his work for the county before the Arizona Corporation
28 Commission. (2004)

29 National Security Industrial Association. (NSIA) Anti-Submarine Warfare Committee, Meritorious Award
30 from the NSIA President, Admiral Hogg USN (Ret.), for leading several ASW training industry and
government studies. (1992)

Merit Awards. Raytheon and Hughes, four times, for achievement and excellence in performance.

Military Awards include Meritorious Service Medal, Naval Commendation Medal with Combat "V" and
Gold Star for second award, Navy Unit Commendation, Navy Meritorious Unit Commendation,
National Defense Medal, Armed Forces Expeditionary Medal (Dominican Republic), Vietnam
Service Medal with three Bronze Stars, Vietnam Campaign Medal with "1960-", Overseas Service
Ribbon (Italy).

Community Service

Joint Santa Cruz County and City of Nogales Energy Commission from February 2001 to present - Member and Vice-Chairman and periodically report to both the Santa Cruz County Board of Supervisors, P&Z Commission and City of Nogales Council on various energy matters.

Marauder Historical Society from 2002 to present - Board Member and Vice-President, Chairman of the Living Legacy Fund Raising and Archive Donation Campaigns, semi-annual Board meetings, annual "Gathering of the Eagles" Martin B-26 medium bomber reunions since 2006, leading proponent of the "Heritage Flight" so the first World War II generation legacy is passed to later generations

Tubac Community Center Foundation from 1998 to 2000 - Member of the Board of Directors, wrote Bylaws for this IRS Code 501(c)3 organization that operates and maintains the Community Center for Santa Cruz County, softball field and play ground.

High School "All American" Swimmer in Breaststroke on 200 Yard Medley Relay Team, Coral Gables High School, Florida, State Champions (3 years), Undefeated in Dual Meets (3 years),

Scoutmaster, Troop 502. From 1992 to 1997 - reinvigorated a Scout Troop with 5 Scouts to 32 Scouts so that it would make it's 50th Anniversary in La Cañada-Flintridge, CA. Troop graded as "best" in District Camporee, Qualified "Honor Troop" for three years, with 7 or first 8 new Scouts in troop awarded Eagle Scout, graduate of Scoutmasters Training Course, member of "Hi-Tech" Patrol.

Boys State (Florida) in 1958.

Eagle Scout, with Bronze and Silver Palms, Troops 32 (Miami) and Troop 7 (Coral Gables) in Florida.

Security Clearance

Active DoD Secret Clearance

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1 Exhibit MM-2

2 Marshall Magruder
3 PO Box 1267
4 Tubac, Arizona 85646

5 17 August 2009

6 Public Comments

7 Re: SSVEC Rate Case, ACC Docket No. E-01575A-08-0328

- 8 1. Since last fall, I have been working with a group of concerned citizens in the Mountain Empire of
9 communities of Sonoita, Elgin and Patagonia who want to improve electric reliability though use of
10 today's technologies instead of those decided by SSVEC over a quarter century ago. And as an Energy
11 Commissioner for Santa Cruz County, considered this my obligation.
- 12 2. The company proposed a radial 69-kV subtransmission line because these communities are near
13 the 7 MW capacity of its present 25 kV distribution line and to provide a distribution substation with
14 four reliability loops for at least \$13.5 million. The 25 kV line will be a loop.
- 15 3. Initially, several powerline alternatives were considered, including backup support from TEP on
16 its 46 kV line and an option to tie UNS Electric and SSVEC distribution lines south of Patagonia. Both
17 remain as valid options but more importantly provide two second sources instead of only one at
18 present or as proposed.
- 19 4. The most inexpensive and obvious solution is to double-circuit the existing 25 kV line to provide
20 14 MW for these communities.
- 21 5. In the January-February timeframe, it became obvious that renewable energy options would
22 greatly enhance local reliability on the V-7 feeder line when reasonably inexpensive generators could
23 handle "sunless" or "windless" excursions. Interconnections to a nearly adjacent EPNG natural gas
24 line in UNS Gas service area could service if demand exceeds 7 MW.
- 25 6. The community has fully supported becoming independent with clean distributed generation to
26 reduce its dependence on coal-power electricity generated from Wilcox.
- 27 7. There are many residential and business owners who have or plan to apply for solar PV and
28 heating systems, at least 1 MW, that will reduce demand. Further, several small solar arrays or biogas
29 1 to 3 MW generation units are under active discussions. This will significantly reduce load on the
30 existing 25 kV line.
8. The ACC REST, netmetering and DSM programs being implemented by this utility improve
reliability and distributed generation. Stimulus funding options was not discussed until about six
months ago and can provide funding not available last year.
9. What does this mean? MANY new options are now on the table, with more expected in the near
term, and from our view, all appear less expensive than the utility's 1982 proposal.
10. In May-June we suggested that a FEASIBILITY STUDY be conducted to collaboratively work with
these communities to determine their best solution. In July we discussed this with the utility to see if
they agreed to conduct such a study. If they had, I wouldn't be here today.

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11. Thus, we are here today requesting that an INDEPENDENT organization, acceptable to the ACC Staff, be funded by the utility to conduct a FEASIBILITY STUDY we outlined.

12. This FEASIBILITY STUDY must look at all aspects of the issue, from technical and environmental views, including public relations and financial, and summarized so management can make a decision. Our outline has all these elements and includes biweekly reviews with the public to baseline results as the study progresses with written monthly status reports to SSVEC Board of Directors and to the ACC Staff.

13. I have read Commissioner Newman's Proposed Amendment No. 1. It establishes a requirement for SSVEC to conduct such a FEASIBILITY STUDY by an independent third party. This amendment requires the study filed with the ACC in a (new) docket, and monthly progress status reviews and reports are also filed for additional public review and comment.

14. The community's proposal for frequent public reviews should be in a forum atmosphere, as proposed in Commissioner Mayes Amendment No. 1. These public progress status review forums should be coordinated by the third party during the FEASIBILITY STUDY as community participation will lead to better understandings between the utility and the public and create the basis necessary to implement a renewable distributed energy "model" for these and other rural communities "at the end of the line."

15. From my role as consultant to the Mountain Empire communities, the Commission should approve both Commissioners Mayes No. 1 and Newman No. 1 AMENDMENTS as they are based on what these communities believe are the best approach towards resolution of these issues and are in the public interest.

16. Commissioner Newman's Amendment orders that the 69 kV line construction not be commenced until the FEASIBILITY STUDY has been reviewed. SSVEC is concerned it will not have adequate power for these communities this winter. Because electricity consumption has decreased for past two years for most Arizona utilities, less than a dozen homes were built in the past 12 months, local renewable energy systems are being installed today, public participation in energy efficiency programs is reducing demand, and since 7 MW was not exceeded last winter, there should be a very low risk of exceeding the 7 MW capacity on the existing 25 kV line. Further, and if such a risk is deemed, then renting a 500 kW generation set for backup would be a simple, cost-effective way to resolve any such risk while more prudent and cost-effective options are being fully evaluated in an ongoing FEASIBILITY STUDY.

17. RECOMMEND APPROVAL of both the NEWMAN and MAYES AMENDMENTS No. 1.

Sincerely,

Marshall Magruder

1 **Exhibit MM-3**

2 **Marshall Magruder**
3 **PO Box 1267**
4 **Tubac, Arizona 85646**

5 27 January 2009

6 Arizona Corporation Commission
7 Chairman Kristan K. Mayes
8 Commissioner Gary Pierce
9 Commissioner Paul Newman
10 Commissioner Sandra D. Kennedy
11 Commissioner Bob Stump
12 1200 West Washington Street
13 Phoenix, Arizona 85007

14 Subject: Impact of the Feasibility Study on SSVEC's V-7 Feeder Area (preliminary)

15 Re: ACC Dockets Nos. E-01-0575A-08-0328

16 Dear Commissioners:

17 As an Energy Commissioner in Santa Cruz County between 2001 and 2008, I have worked to help resolve various energy issues in this county.

18 The long standing issues concerning the feeder line to the Santa Cruz County communities of Patagonia, Sonoita, Elgin, and Canelo Hills has been discussed in several proceedings before this Commission in the past two years. I am not a party to these proceedings but have followed them closely due to my interest in ensuring reliability and satisfactory service in my county.

19 This letter provides a few preliminary facts uncovered while reading the Feasibility Study for this area.

20 The local utility company for this area is Sulphur Springs Valley Electric Cooperative (SSVEC) was ordered to delay starting construction of a 23-mile 69 kV subtransmission line to Sonoita. This is one of the two elements of the SSVEC proposed Sonoita Reliability Project (SRP). The second element is for a distribution substation to be installed in Sonoita with four feeders from each cardinal direction to improve reliability. This distribution substation was approved for construction by the Santa Cruz County Board of Adjustment last spring as its interconnection to the 69 kV line could be added later. There is no reason why that construction has not started which will also include a local 750 kW solar array. The Feasibility Study found that "new supply alternatives which reduce line exposure by creating new feeder segments would improve reliability by 15 to 30 percent beyond current levels" [p. 2]

21 In the decision by the Commission to delay the first element, due to over 200 letters and comments received during public comments in Sierra Vista last spring, at the SSVEC Rate Case hearings, and via various dockets requesting a review of the first element of the SRP, the 69 kV line, a Feasibility Study was requested by the Commission to be conducted by an independent third-party to be completed by the end of 2009, then to reviewed during public forums in these local communities during six months, followed by a meeting of the Commission to then decide which of the options would be fair and reasonable for the SSVEC customers in these communities. This decision is expected to occur in the summer of 2010. The overall result, if the proposed 69 kV line were determined to be the best for SSVEC's ratepayers, would be a one-year delay from its original schedule.

1 Confidence in SSVEC's "facts". There are many statements in the resultant Feasibility Study that do not
2 support the company's rationale for the proposed 69 kV line element of the SRP. When reading the below,
3 suggest considering is the "69 kV line" going to impact this statement, in most cases the answer is no. Some
4 more glaring include:

- 5 1. The Average Customer Lost Electricity 3.0 hours per year based on the past 10 years of data. [see
6 Feasibility Study at Fig 2, p. 11] The standard for rural areas used by the USDA for RUS loans in
7 5.0 hours of outage per year per customer. The Company seems to believe that some 240 (or 270)
8 hours of customer outage per year and keeps promoting that number which the Feasibility Study
9 does NOT support. In fact, if one windstorm in 1999 were deleted, then the average outage would
10 have been 2.4 hours per customer. This is very good for rural areas, where the distances are much
11 longer than urban area for repair crews to travel. As also noted in other data, the V-7 feeder area
12 is also not SSVEC's worst.
- 13 2. Voltage Anomalies may continue Even if Upgrades are implemented. [Pp. 2-3] Resolution of
14 voltage anomalies were beyond the scope of this study but should be addressed if the V-7 feeder
15 remains in its current configuration.
- 16 3. Long Lines can create Power Quality Events [p. 2] Mostly voltage sags can occur in long lines and
17 even protective devices may have difficulties as "end of line" currents approach normal trip
18 settings. Local or Distributed Generation (DG) within the V-7 feeder area thus should reduce
19 voltage sags and improve reliability since these lines are much shorter.
- 20 4. SSVEC should address Current Performance and Capacity Issues. [p. 3] No one disagrees with this
21 comment; however, the erroneous "customer requests for new or expanded service" has been
22 erroneous in the data proved by SSVEC to the study team and to the Commission. The "Urgency"
23 of the frantic calls by this company has NO basis.
- 24 5. Cost of Mitigating Reliability and Performance Issues was NOT included in the Feasibility Study.
25 [p. 5, footnote 3] This study did not consider the cost to mitigate reliability and performance
26 issues. Unfortunately, "cost" is a key determinate when decisions are involved. This condition
27 was established by SSVEC when it provided study constraints to the Feasibility Study Contractor.
- 28 6. Present "reliability" in the V-7 feeder area is better than average. [Table 1, p. 11] Based on the
29 data in this study, during 2008, the three most common distribution line reliability indices (SAIFI,
30 SAIDI, CAIDI) were in the second quartile, compared to national averages for reliability in the
IEEE Standard for these indices.
7. The Number of Outages in the V-7 Area is Decreasing. [Fig. 3, p. 12] In general, the number of
outages in this area shows a decreasing trend during the past ten years. This is one of the three
largest distribution areas for SSVEC, thus it's "total" number of outages will be high compared to
most other 25 or so much smaller SSVEC feeder areas.
8. The Cause of Outages in the V-7 area is mostly Natural Causes. [Fig. 4, p. 13] The six most common
causes for outages in the past ten years has been lightning, birds, animals, and wind other than
"unknown" or "other". The company's increasing use of lightning arrestors is reducing the highest
cause. The 69 kV line may have minor, if any, impacts on reducing outages.
9. The Number of Customers impacted by Outages is Low. [Fig. 5, p. 13]. Over 90% of the outages in
the V-7 area involved three or fewer customers. As stated on page 20, full feeder outages have
been very low. Less than 1 such outage a year has been experienced.

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10. The Equipment Failures were Mostly Non-Distribution Line Failures. [Fig. 6, p. 14] Fuse failures for Transformer and Line/Riser dominated equipment failures, which was unexpected. Footnote 8 indicated that SSVEC standard for line transformer arrester placement does not agree with industry research for industry placement. This anomaly might be a major cause of failures, as distribution line overloading was insignificant.
11. Techniques could reduce Lightning Failures. [Figs 7 and 8, p. 15] Since lightning failures peak during the summer and early morning/late afternoon, pre-positioning crews was suggested as a way that might reduce travel time to correct outages. Some additional equipment were recommended [p. 16]. Further, replacement utility poles by SSVEC on several V-7 sections have installed lightning protection and "have been effective in the decline in number of outages over the past 10 years." [p. 16]
12. Cost of Mitigating Reliability and Performance Issues was NOT included in the Feasibility Study. [p. 5, footnote 3] This study did not consider the cost to mitigate reliability and performance issues. Unfortunately, "cost" is a key determinate when decisions are involved. This condition was established by SSVEC when it provided study constraints to the Feasibility Study Contractor.
13. New Construction is Minimal in the V-7 Area. [Table 5, p. 26] As shown, only ONE pre-meter construction customer was in this area. SSVEC has used unrealistic numbers to account for new customers, including 222 in three bankrupt developments in foreclosure, without buyers.
14. SSVEC does NOT have Realistic Time of Use (TOU) Programs. [Table 5, p. 26] Only ONE residential customer has TOU rates out of over 1,675 residential customers. This is one area where peak demand can be significantly decreased. Obviously, an effective Demand Side Management (DSM) program would have been stressing TOU for this area.
15. About 30% of the Feeder Load was due to Line and Equipment Losses. [Pp. 3, 27] Some \$230,000 annually cost is required for excess electricity power to compensate for line losses to this area. Local distributed generation would greatly reduce this wasted electricity and its resultant generation impacts on the environment.
16. Line and Equipment Losses Increase at Higher Customer Demands. [Fig. 13, p. 27] As the customer load increases, then there are more losses.
17. Most of this Feeder load is Less than 5 MW. [Fig. 13, p. 27] If the desired maximum loading limit is 4.5 MW, then use of Distributed Resources or Demand Response would need to be operated or enabled for a minimum of about 500 hours.
18. Peak Loads are Predictable in the V-7 Area. [Fig. 14, p. 27-28] There is a high degree of consistency among peak load days that allows system planners to design programs to reduce daily peaks by targeting load reduction programs, e.g., DSM programs.
19. Peak Demand Forecasts in the Study appear Highly Optimistic. [Pp. 28-30] Unfortunately, the 2006 data were old and did not reflect the present very slow growth and failed to account for limitations on growth that water resources require for these areas.
20. Weather Adjusted Transformer Rating are Higher than Nameplate Data. [p. 31] The Study did not calculate higher winter ratings used by many companies; however, the existing 7.0 MW upper limit for the transformer maybe actually higher that its stated nameplate data.

- 1
- 2 21. By Removing Losses, then total Capacity Deficits will be 1.5 MW in 10 years and 3.5 MW in 20
- 3 years. [p. 32] IF SSVEC actively removed demand 10 to 15 percent to reasonable levels, then an
- 4 additional 1.5 MW of local distribution in 2019 and 3.5 MW in 2029 would meet the capacity
- 5 demands for this area.
- 6
- 7 22. Demand Side Management for Space Heating/Fuel Switching with Resolve Capacity Issues. [p. 42]
- 8 MANY ways to remove demand were in this study, such as having 100 customers switch from
- 9 electric heat to gas (propane or natural gas) would alleviate today's problems, and 50 to 75 per
- 10 year to offset load growth.
- 11
- 12 23. Solar Photovoltaic was Not Really Considered in the Study. [Pp. 43-44] Apparently due to winter
- 13 peak issues, the study did not go into PV options; however, several excellent storage devices were
- 14 discussed that would resolve this issue. [Pp. 48-50] A Sodium-Sulfur (NaS) was recommended for
- 15 this area that is compact, and as shown in Fig. 21 (p. 50) would "fill in" the valley between the
- 16 winter peaks. Due to "lead time" to order such a device, this option was not considered; and its
- 17 popularity should also drive down its future costs.
- 18
- 19 24. Distributed Generation with Generator Sets is a Viable Option. [Pp. 51-52] This is a relatively
- 20 inexpensive option, and can easily meet the 1.5 MW demand for 2019 at minimal capital costs
- 21 (1MW = \$700,000). Unfortunately, the study team did not contact UNS Gas, the natural gas
- 22 distributor for Santa Cruz County that could develop a substation on the El Paso Natural Gas line
- 23 that runs through Patagonia and very close to the Sonoita substation location.
- 24
- 25 25. Analysis for Renewable Energy or Solar Technical or Economic Analysis were NOT in this Study.
- 26 [p. 33, footnote 19] As noted, this analysis was not conducted as a part of this study nor provide
- 27 by SSVEC to the study contractor. Without such details, then additional work is necessary to
- 28 properly evaluate renewable energy options and solar installations.
- 29
- 30 26. Support to Patagonia from UNS Electric. [p. 36] The study stated that UES does not have
- "sufficient capacity on the Valencia feeder to provide firm capacity to serve Patagonia load. This is
- confusing as two UNSE feeders from Valencia and Cañez stations are "tied" so there are two
- sources, the UNSE-SSVEC tie is to provide "backup" or additional power, and not to be a full-time
- provider meeting a firm delivery requirement. Somehow the study team was misled.
- 27
- 28 27. Only 3 MW is required to Unload the V-7 Feeder to Acceptable Levels. [p. 38] There are several
- 29 plans for 1 to 3 MW solar arrays that could support the V-7 feeder area, including one that could
- 30 be near the UNSE-SSVEC tie. Obviously, a peaker generator set would met this requirement,
- maybe at the Sonoita or Patagonia areas, at much less cost than for the 69 kV line.

These are only very preliminary comments on the Feasibility Study that is still being digested; however, in general, it is an excellent point of departure for some stimulating Forums expected in the next six months.

Recommendations.

1. That evidentiary hearings with a Recommended Opinion and Order (ROO) be held to review this study before reviewing the prior decisions concerning the 69 kV line.
2. That the recent Staff proposed schedule be seriously considered.

1 3. That the forums be held in an 'informative' atmosphere, without the high-pressures and misleading
2 influences of SSVEC, as discussed in the following paragraph.

3 These forums need to be led by an impartial person/team, and would suggest that SSVEC NOT be the one who
4 controls inputs to these forums. I would like to suggest that the Feasibility Study team be the ones who lead the
5 "town hall" type of forum. Further, would suggest that two such forum be held in each community (Patagonia,
6 Elgin, Sonoita) with the first primarily being a presentation of the study to these customers with some questions
7 and answers, and that the second being Questions and Answers with the Public and SSVEC using the Study
8 Team as moderators.

9 I hope this letter has provided some additional information in this very important matter. If additional
10 information is requested, please feel free to contact me.

11 Sincerely,

12 Marshall Magruder
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14 [Note: corrected in the mailed version several insignificant typos in an emailed version]

15 CC.

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