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E-01345A-09-0227

IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR APPROVAL OF A DISTRIBUTIVE ENERGY INITIATIVE: THE COMMUNITY POWER PROJECT – FLAGSTAFF PILOT

DOCKET NO. E-01345A-09-____

APPLICATION

Arizona Corporation Commission
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With this Application, Arizona Public Service Company ("APS" or "Company") is seeking approval of a renewable distributed energy pilot program that will supplement APS's 2009 Renewable Energy Standard ("RES") Implementation Plan. The Community Power Project – Flagstaff Pilot ("Community Power Project") will provide renewable energy from APS-owned distributed energy systems to customers in a limited geographical area. This pilot program will help APS gain valuable experience with the impact of distributed energy systems on the distribution grid, and has the potential to increase distributed energy deployment in APS's service territory. As such, the Community Power Project will help facilitate the Company's compliance with the distributed renewable energy requirements of the Renewable Energy Standard ("RES") Rules.[1] The Community Power Project Report includes program details and is attached as Exhibit A.

Background

APS recognizes the importance of distributed energy resources as part of the Arizona Corporation Commission's ("Commission") comprehensive renewable energy objectives, and the Company actively promotes distributed energy programs. While the installation of both

[1] A.A.C R14-2-1805(B).

photovoltaic ("PV") and solar water heating systems in APS service territory has increased significantly, meeting the RES distributed energy requirement[2] continues to present a challenge, particularly the residential requirement. Customer participation in the Company's distributed energy programs is essential to their success. On average, a residential customer must make a personal investment of about $1,000 for a solar water heater, and more than $8,000 for a rooftop PV system. Commercial units require a greater investment and often, financial arrangements for these facilities are complex. The national economic downturn poses further challenges to distributed energy deployment. It has negatively impacted the financial markets, which are essential to finance capital cost, and it has impacted some customers' ability and interest in installation of distributed energy systems. The Community Power Project is a result of APS's on-going efforts to develop new strategies to promote distributed energy installations.

The primary objectives of the Community Power Project are to maximize the value of distributed energy resources and to achieve a high penetration of these systems in a localized area in order to study the effects of distributed energy on the electrical distribution system. The proposed Community Power Project is distinctive in two ways. The field study, which is a key component of this pilot, will provide specific and detailed information on the interaction of two emerging technologies: a high concentration of distributed renewable resources on a substantial scale, and the intelligent energy distribution network (a key component of a "smart grid"). Secondly, the pilot provides eligible customers with benefits of a renewable system on their premises, including a fixed price for "green" energy, and eliminates any financing, operations or maintenance concerns because the renewable system is owned by APS. The Community Power Project pilot will provide valuable information from both a technical and program perspective; accordingly, it is APS's objective to evaluate

[2] The RES Rules require that APS meet a percentage of the annual renewable energy requirement with distributed energy resources. In 2009, 15% of the total renewable requirement must be distributed energy applications; by 2012 the requirement is 30%. A.A.C. R14-2-1805(B).

the impacts and effectiveness of this pilot program to determine how to further facilitate the deployment of distributed renewable systems in the future.

The Program

With the Community Power Project, APS proposes to place distributed renewable energy resources, including PV arrays (approximately 200 systems or up to 1,500 kilowatts ("kW")), solar water heaters (approximately 50 systems), and small-scale wind turbines (approximately six systems) in a limited distribution area in Flagstaff. These renewable facilities will displace conventional energy otherwise used to provide electricity to APS customers. The Community Power Project will provide customers with a convenient solar opportunity: the benefits of a distributed energy system, without the economic obligations of capital investments, or cost and inconvenience of operating and maintaining the system.

APS selected a portion of the Flagstaff service territory for the Community Power Project because the Company will deploy smart distribution technologies in this area in the near future. The smart distribution grid includes intelligent diagnostics, automation technologies, and central distribution information management systems. It will provide APS with the ability to measure and track the effects of weather, equipment failure, household usage, and other types of operational impacts on the distribution system. These technologies will enable the Company to observe and measure the distributed energy system impacts of a significant penetration of distributed resources. Based on field and engineering surveys, the Sandvig 4 feeder in northeast Flagstaff was determined to be the most suitable for the deployment of the Community Power Project.[3]

There is significant community support for renewable resources in the Flagstaff area, so APS expects customers will be interested in participating in this pilot program. Reflecting a key benefit of customer-owned distributed energy systems, this program will give customers direct cost control over a portion of their electric consumption. APS would

[3] APS serves approximately 2,700 residential and 300 small and commercial customers in the Sandvig 4 feeder area. Field surveys indicated that the majority of the rooftop sizes in the area are sufficient to support industry standard PV panels and that overall, rooftop orientation is appropriate for the PV applications.

guarantee participating customers a pre-determined amount of energy[4] under a rate schedule that will provide fixed costs to these customers for a twenty-year period.

There will be a number of eligibility requirements that must be satisfied for customers to participate in the program. To participate in the Community Power Project, the property owner must provide a utility easement for the rooftop PV system.[5] Structural parameters related to the rooftop itself, including the size, age, structural integrity, and the orientation of available rooftop space, will be taken into consideration. Additionally, to assure that adequate data for the field study will be collected from these systems, customers must occupy the property for a minimum of six months each year. Customers who are not eligible or choose not to participate in the Community Power Project may participate in the Company's other incentive programs.[6]

In addition to the rooftop PV units, APS will provide a limited number of solar water heaters as part of the Community Power Project. Understanding the impact of energy consumption on the local distribution grid and the potential for solar water heaters to reduce load are important components of the field study. However, rather than taking ownership of these systems, APS will provide the solar water heating systems without cost to approximately fifty low-income households located on the Sandvig 4 feeder. APS intends to utilize the partnerships developed through the Distributed Public Assistance Program to place the systems.[7]

The Community Power Project also includes plans for a limited number of PV and wind installations to be installed in a "stand-alone" configuration. These systems would be

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[4] The amount of energy guaranteed will be directly related and proportional to the size of the hosted PV system.

[5] Utility easements are standard business practice. For example, Commission Rule R14-2-206(C) requires customers to grant adequate easements and rights of way to allow the utility to insure that the customer has a proper service connection. With the Community Power Project, owners of eligible properties would be required to provide an additional easement to APS for the placement of renewable facilities. This easement would be filed with the Coconino County Recorder's Office.

[6] These programs include: APS's Renewable Energy Incentive Program, APS's Solutions for Business Program, APS's Residential Air Conditioning Rebate Program; APS's Energy Star Program; and APS's Duct Test and Repair Rebate Program.

[7] The Distributed Public Assistance Program was approved in Decision No. 70654 (Dec. 18, 2008).

located on property not directly associated with an individual customer, and would provide capacity and energy for use by multiple customers in the distribution substation service area. These facilities would afford APS the opportunity to deploy systems promptly after Commission approval in order to validate the data collection and monitoring systems, as well as to assure that the pilot field study includes large-scale installations.

As part of this Application, the Company is requesting that the Commission find that the renewable energy produced by all of the Community Power Project facilities will count toward compliance of the distributed renewable energy requirements of the RES Rules.[8]

The Field Study

APS will be studying significant information regarding distributed renewable energy systems as part of the Community Power Project pilot. By utilizing smart grid technologies, the Company will be able to study the impact of renewable energy systems on the distribution feeder, the energy and capacity impact of distributed PV deployments, the impacts of system availability, and the impact of environmental factors (such as weather) on the aggregated PV systems and the connected energy delivery system. Additionally, APS believes the Community Power Project will provide information that will allow for a better understanding of the reliability of renewable energy systems, as well as the life cycle costs for both residential and commercial applications. The information obtained from the Community Power Project should allow APS to deploy distributed renewable energy more effectively in the future.

Funding the Community Power Project Pilot

APS estimates that the Community Power Project pilot program will require a capital investment of $10.8 million to implement the program. The capital investment includes PV systems, solar water heaters, and wind turbines. In addition, $3.8 million is budgeted for deployment including technology/system interface, customer support and a contingency. The average annual cost to operate the Community Power Project pilot after deployment is

[8] A.A.C. R14-2-1805(B).

projected to be approximately $410,000. APS is proposing that in addition to standard incentives, pilot deployment, system operation, maintenance, and the carrying cost for base rate capital would be paid with RES funds until a subsequent rate case.

Customers participating in the pilot may receive service under the new Rate Schedule CMPW-01, which would be available to residential and business customers.[9] This rate provides the customer a renewable rate for a fixed amount of energy for a term of twenty years, thus creating a hedge against future changes in energy costs. This rate was developed to ensure customer cost neutrality at the time of enrollment: a Community Power Project participant's bill would be approximately the same as the customer's bill would be absent installation of the PV system. The CMPW-01 rate varies depending on the parent rate employed by the customer. Rate Schedule CMPW-01 is attached as Attachment C to Exhibit A.

The funding for this program leverages existing RES program parameters and does not require an increase in the RES adjustor. APS proposes to use the current standard RES incentive to pay for a portion of Community Power Project capital costs. APS would fund the remainder of the capital costs, which it would recover in the same manner as conventional generation assets under traditional rate base treatment.[10] Pending incorporation of such costs in the APS rate base or the approval of another recovery mechanism, APS proposes collection of the revenue requirement associated with APS's investment through the RES. The Company proposes two sources of RES funding: $4.3 million from the currently approved $55 million RES incentive budget, and $3.8 million from the $8.5 million remaining from the Company's 2008 distributed energy program.

[9] Customers served under APS's Rate Schedules E-12, ET-2, E-32 and E-32TOU may participate in the Community Power Project.

[10] Under traditional rate base treatment, in a rate case subsequent to the placement of the rooftop assets, the Company would request and the Commission would authorize rate base recovery of that portion of the capital costs that had not been recovered through RES funding.

APS believes that this approach to funding the Community Power Project will facilitate the successful implementation of the pilot, and will have minimal impact on customers.

Program Rollout

APS plans to implement the Community Power Project in phases, giving the Company the ability to periodically review the process and adjust the program if necessary. The Company will provide written reports on the progress of the pilot in the Company's annual compliance and implementation reports submitted pursuant to the RES Rules.[11] Reporting will include program participation, energy production or savings, program cost summaries, and observations on system impacts.

Upon Commission approval, APS will seek out customers serviced on the Sandvig 4 feeder to participate in the Community Power Project pilot. Eligibility will be limited; the customer's property will be inspected to determine whether the location and condition of the rooftop provides adequate structural integrity and meets engineering requirements to ensure a sufficient and properly oriented rooftop area. The Company may partner with solar installation experts who perform the inspections and determine rooftop technical potential. These third party solar experts would likely engineer, permit, and install systems. Additionally, APS will likely contract with third party professionals for the ongoing maintenance of the systems. The Company anticipates that the deployment of the distributed renewable resources will begin within three months of program approval with completion within twenty-four months of program approval.

The Community Power Project pilot is an innovative proposal that involves many complex components. As such, there is the possibility that because of unforeseen circumstances, including customer response, safety, reliability, administrative or economic considerations, the Company may need to modify, freeze or discontinue some or all aspects of the pilot program. Discontinuance of the pilot program could include halting the program

[11] A.A.C. R14-2-1812 and 1813.

prior to completing the entire installation target or unwinding the project and removal of the assets. The Company is seeking authorization to modify or discontinue the pilot, if necessary, with thirty days written notice to the Commission.

Conclusion

APS believes the Community Power Project provides another opportunity to increase deployment of distributed renewable energy systems within APS's service territory. The Community Power Project will provide participants with the benefits of installed PV rooftop units, without the need for significant financial investment by the individual customer or the responsibility of operation and maintenance of the systems. Additionally, with a rate that provides a portion of the customer's energy at a fixed rate for a twenty-year term, participating customers will have a hedge against future fluctuations in consumer energy costs. Furthermore, by integrating distributed renewable resources with the smart grid distribution network, APS will better understand the effects of a significant amount of distributed renewable resources on the local distribution system, which should support increasingly effective deployment of distributed energy in the future.

For these reasons, APS requests that the Commission approve the Community Power Project pilot in Flagstaff. Specifically, APS requests that the Commission determine that:

1. The Community Power Project is a reasonable means of achieving RES targets.
2. All renewable energy produced by the Community Power Project will count toward compliance with the distributed renewable energy requirements of the RES Rules.
3. The allocation of RES funding for the operation, maintenance, deployment and carrying costs of the Community Power Project is appropriate and reasonable.
4. The Community Power Project pilot, as described herein, is approved.
5. The Rate Schedule CMPW-01 is approved.

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RESPECTFULLY SUBMITTED this 11th day of May, 2009.

PINNACLE WEST CAPITAL CORPORATION
LAW DEPARTMENT

By _____
Deborah R. Scott
Attorney for Arizona Public Service Company

ORIGINAL and thirteen (13) copies
of the foregoing filed this 11th day of
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Docket Control
ARIZONA CORPORATION COMMISSION
1200 West Washington Street
Phoenix, Arizona 85007

EXHIBIT A

THE COMMUNITY POWER PROJECT

FLAGSTAFF PILOT

TABLE OF CONTENTS

I. INTRODUCTION

In this report, Arizona Public Service Company ("APS" or "Company") presents a new renewable distributed energy resource pilot program designed to increase the penetration of these resources in the Company's service territory by providing a vehicle through which customers may obtain the benefits of distributed energy resources ("DE") without the need for considerable up-front financial investment, thereby removing a significant barrier to customer acceptance of renewable DE resources.

The Community Power Project ("Project") combines tools the Company has at its disposal today to create a program that removes the economic burden from the customer of owning, operating, and maintaining DE, an obstacle to deployment that has only increased in recent months due to the nation's current economic climate. The Company anticipates that this program will encourage increased customer participation in and acceptance of DE, and will help facilitate the Company's compliance with the distributed energy requirements of the Arizona Corporation Commission's ("ACC" or "Commission") Renewable Energy Standard ("RES"). The goal of the pilot program is to establish a partnership between the customer and the Company that will make customer adoption of DE simple and eliminate customer concerns, whether technical or economic. The Project is a supplemental program to those renewable programs already approved by the Commission; it is not intended nor designed to replace any program or programs currently in effect.

The Project will also provide the opportunity for APS to integrate DE into the emerging group of technologies that comprise the intelligent energy distribution network known as the "smart" grid. The information gathered as a result of the Project will support an efficient and effective evolution of smart grid technologies throughout the Company's service territory in the future and will support an increasingly effective deployment of DE.

This report discusses the smart grid development in the City of Flagstaff as a background to the program and how the Project leverages the Company's

investment in the smart grid to provide a starting point for the expansion of DE systems. It presents the framework of the Project and its various components including the Company's current budget for deployment of the pilot, and shows how the structure of the program provides benefits to all renewable and distributed energy stakeholders. Additional financial and technical details, along with the Company's proposed rate schedule for customers participating in this program, are provided in the attachments to this report.

II. THE FLAGSTAFF SMART GRID

One of the primary objectives of the Project is to place a substantial number of DE systems in a localized area to assess the impact of a high penetration of these resources on the Company's distribution system. The technological advances that are being developed as a part of the smart grid are central to the ability to observe and measure DE system impacts in greater detail. Therefore, the most effective location for the successful deployment of a program such as the one described herein is in an area where a smart grid is also being deployed.

In June of 2008, APS began to develop the blueprint of a smart grid in the City of Flagstaff. By July of this year, it is expected that more than 30,000 of approximately 35,000 conventional APS meters in Flagstaff will have been replaced by advanced metering capable of remote and automated two-way communication. This communication capability is the backbone of the smart grid.

Distribution system "smart" technologies are planned to be installed at four of the six Flagstaff substations and their feeder systems which, along with the Company's central Distribution Operations Management System (known as DOMS), will provide APS with the ability to remotely monitor and manage its distribution system. The Company will measure and track the effects of weather, equipment failure, household usage, and other types of operational impacts on the wider Flagstaff distribution system. Through the communication abilities of these smart grid technologies, the Company will also be alerted when maintenance on the distribution system is required, in many cases prior to any failure of equipment or loss of load.

Smart grid technologies will also support the expansion of distributed renewable generation more readily than the current distribution grid, which cannot respond as quickly to the often intermittent nature of distributed renewable resources. With the equipment, sensors, metering, and communications abilities of the smart grid, the distribution system is expected to support a more robust deployment of DE. However, a complete and integrated field study of these technologies and solutions will provide detailed insight to

questions regarding how these two elements of the future electric grid will interact.

A. The Smart Grid and the Community Power Project.

On January 29, 2009, the Company filed the RW Beck report entitled "Distributed Energy Operating Impacts and Valuation Study" (the "Beck Study") as a compliance item in the Company's most recently decided rate case.[1] This report addresses the value and impact of distributed generation on the APS system and was developed with the collaborative input of a large number of interested renewable energy stakeholders. The results of this study demonstrate that large amounts of distributed generation would be needed to provide measureable value for the utility. This objective could be accomplished through a number of avenues including utility installations and partnerships with solar communities, homebuilders, and developers. The Beck Study indicates that such deployment of DE continues to face many challenges. One further unanswered question is the resulting impact to the distribution system from concentrated amounts of distributed generation.

It is clear that a more complete understanding of the interaction between a delivery grid and large scale penetration of distributed technologies such as solar photovoltaic panels and small scale wind turbines is needed. Much research and study has been conducted; however, complete deployment of these technologies in tandem will facilitate advanced learnings and refinement of technical insights.

Currently, although the integration of the smart grid with distributed generation is being studied and researched, field studies that provide specific and detailed information on the interaction of these two emerging technologies have not been completed. The APS Community Power Project will provide invaluable information to APS and the industry. As part of this program, the Company will explore available technology (or determine if the development of new technology is needed) that will maximize benefits and minimize impacts to the distribution grid, as well as gather data and determine necessary

[1] ACC Docket Nos. E-01345A-05-0816, E-01345A-05-0826, and E-01345A-05-0827.

communications and controls that will allow APS to optimize the operation of the distribution grid under these conditions.

The Company's proposed program was designed with these challenges in mind, and is intended to leverage the ability of a smart grid to support DE. APS chose the Flagstaff area to implement its initial smart grid because the current distribution system in the area is stable and not expected to change in the near future. Impacts of new technologies can be measured readily in a stable environment. Additionally, local interest in and support of sustainable infrastructure and renewable energy has been strong. For these same reasons, and because the Company's smart grid will be available in the area, the Project will be implemented in Flagstaff.

B. Data Collection.

Field deployment of distributed energy as envisioned in the Project will give APS the opportunity to collect data related to delivery system performance as a result of the interaction between advanced technologies and other system concerns such as voltage, current, and local environmental conditions. Many of the key obstacles identified in the Beck Study will be tested in the field through the implementation of this program. Valuable information APS expects to obtain from the pilot includes information on concentrated deployments of distributed energy, expanded use of advanced metering infrastructure ("AMI") to analyze usage and reliability impacts, and development of improved software for statistical modeling. Data regarding system deployment issues will be useful in assisting the Company to strategically locate distributed energy projects within the APS system. The data collected will allow APS to better understand how to maximize the benefits of these technologies in the future and will provide operational experience which the Company can draw upon to prepare for increased deployment of DE.

Attachment A is a pictorial representation that is helpful in understanding the technologies that represent the smart grid and shows data collection opportunities and how that data can influence management of customer energy usage as well as the utility distribution system.

III. THE COMMUNITY POWER PROJECT

The Community Power Project has been designed to encourage adoption of currently available distributed energy technologies - and maximize the value of these technologies - by providing a vehicle through which many of the traditional obstacles to DE acceptance are diminished or eliminated. The Project will provide practical experience along with actual field data observations which will allow APS to better understand how distributed energy affects the electrical distribution system concurrently with the widespread installation of smart grid technologies.

The Project will be a pilot program in which APS will place approximately 1.5 megawatts ("MW") of DE systems on properties served by a single distribution feeder. Placing equipment on a single feeder allows the Company to aggregate the systems and monitor their performance in concert, thereby satisfying one of the primary objectives of the Project (to achieve a substantial local penetration of DE systems), and is expected to produce installation cost benefits as well. An aggregate of approximately 1 MW of solar photovoltaic panel arrays will be placed on customer rooftops through a partnership plan in which the customer, while not providing the substantial personal investment required to purchase a photovoltaic system, will receive the traditional benefits of utilizing a renewable distributed energy system.

The remaining 500 kilowatts ("kW") will be installed as stand-alone photovoltaic DE systems at select locations on the same feeder.[2] The Project will be implemented as a 20 year program, reflecting the economic life of a photovoltaic DE system, and all Renewable Energy Credits ("RECs") produced by this program will accrue to the Company.

APS will update the Commission on the progress of this pilot program as part of the annual reporting requirement under the Commission's RES rules.[3]

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[2] The kW of solar energy systems deployed and the split between residential, commercial and stand-alone systems will be determined, in part, by customer response to the pilot program. APS intends to deploy this program according to the parameters identified herein, but the Company may be required to modify the proposed kW due to technical and economic issues as well as customer participation.

[3] A.A.C. R14-2-1812 (Compliance Reports) and R14-2-1813 (Implementation Plans).

Reporting will include program participation, energy production or savings, program cost summaries, and observations on system impacts.

A. Feeder Selection.

In order to adequately gauge the impact of DE on the distribution system, the saturation level of those resources must be at a certain threshold level at which measurable and verifiable data regarding the effect of DE is apparent in enough detail to be gathered and reviewed. The Company has undertaken field and engineering surveys and has concluded that the Sandvig SV04 ("SV04") feeder in northeast Flagstaff will support the goal of placing a sufficient amount of DE to adequately demonstrate the effects of those resources on the greater distribution grid. Feeder SV04 historically carries an annual peak load of between 10 and 11 MW. Current operating practice limits the aggregated distributed generation on a feeder to 15% of the total circuit annual peak load. Although recent studies have indicated that higher percentages may be achievable, the current 15% limitation is the basis for the Project installation target of 1.5 MW. APS has determined that this target constitutes a sufficient penetration to achieve the Company's measurement goals.

Feeder SV04 is located in the northeastern portion of Flagstaff, north of Interstate 40 and the Flagstaff Mall, and extends north along Arizona Highway 89 through the Doney Park subdivisions. More than 2,700 residential customers and approximately 300 small commercial and industrial customers are served by the feeder. Attachment B provides an overview map of the feeder.

Overall, residential rooftop orientation on the SV04 feeder is favorable for placement of solar panels, and the majority of rooftop sizes are sufficient to support industry standard photovoltaic panels. Portions of the feeder cut through flat open areas with limited obstructions where small wind turbine potential is strong. Although the potential for commercial placement of solar panels is somewhat limited as compared to other feeders, the SV04 feeder presents the most effective overall attributes for support of the program and will be fully upgraded with smart grid technology by the time the Project is established. Additionally, the SV04 feeder is currently near its capacity, and will be an optimal

location to study the potential of DE systems to affect the need for future distribution system upgrades.

B. Rooftop Solar Photovoltaic Installations.

To achieve the necessary penetration of DE systems on a single feeder as described above, APS will partner with eligible customers on the SV04 feeder to place Company owned and operated rooftop photovoltaic panels that are connected directly to the distribution grid on the customer's property. The Company's goal is to attract approximately 600 kW of residential DE installations and approximately 400 kW of small commercial DE installations. Systems will be installed in phases, giving the Company the ability to periodically review the process and make adjustments to the program if necessary.

The concept of a customer "host" for Company owned and operated solar photovoltaic arrays is a central component of the Project. Allowing a customer to host a DE system without requiring the customer to purchase the system makes it much easier for the customer to participate in a distributed energy program, and removes the burden of operating and maintaining a DE system.

Participating customers will have the opportunity to be billed for a portion of their electricity usage on a program-specific rate schedule which is designed to mirror the customer benefits of a self-installed DE system. The rate structure provides the benefits of a solar DE rooftop system to the customer without the responsibilities inherent in the ownership of such a system. This rate schedule is described in detail in Section IV of this report.

1. Grant of Easement.

Because APS will be placing utility equipment on customer property and will require access for periodic maintenance and emergencies, the Company will need to build upon its current authority and responsibility to serve customers through the easement described in A.A.C. R14-2-206(c). To participate in the Project, the property owner must provide an additional utility easement that will allow APS to place its solar assets on the customer's rooftop. The easement will include aerial rights to ensure that the photovoltaic array will have continuous

and unobstructed exposure to available sunlight. The document will cover the placement of the DE system and any necessary additional equipment (such as meters and interconnection equipment), and will be recorded as required. This easement is the threshold requirement for participation in the Project.

2. *Screening Criteria.*

The Company has developed a set of criteria that each customer must meet in order to participate in the Project. The criteria are essential to the successful deployment of the program because they reflect technically necessary conditions for installing photovoltaic rooftop systems and economic provisions that will ensure the customer receives the benefits the program is designed to offer.

To be eligible for participation in the Project, the customer's energy consumption must be in excess of 4,800 kilowatt-hours ("kWh") annually; that is, in excess of an average of 400 kWh per month. The customer should also occupy the property on which the panels are installed for a minimum of six (6) continuous months each year in order to ensure that the Company will collect adequate data for both system production and customer load through the program.

Additionally, the customer's property must be appropriately sized and situated so that solar panels may be placed for optimum operation. Each customer property must be individually inspected; the following structural criteria will be among those reviewed when determining property eligibility for the Project:

- Rooftop space. Residential rooftops must have sufficient contiguous space to effectively locate one of three pre-designed and standardized photovoltaic array systems (2 kW, 3 kW, or 4 kW). Business customer rooftop systems are expected to be sized between 50 and 250 kW. Eligible customers will be matched with the most appropriate system for their individual circumstances based on customer usage history and the size of the property.

- Age of rooftop. The rooftop itself must be less than 10 years old or the customer must allow or provide an inspection which verifies that the roof is sound with sufficient remaining integrity and capable of supporting the long-term installation of the photovoltaic array.
- Rooftop orientation. The available rooftop space must have a south, southwest, or southeast orientation with little to no shading.
- Accessibility. The rooftop must be accessible to APS on an unrestricted basis for maintenance purposes.
- Engineering integrity. The roof and building structure will be evaluated and generally deemed to be sound and structurally adequate to support system installation.

Based on the field survey of the SV04 feeder, APS estimates that the majority of the residences served through the feeder have the potential to meet these property requirements. As the preparation for deployment of the Project continues, the Company will remain open to explore additional accommodations for other possible options for panel placement.

Applications for participation in the Project will be accepted on a first-come, first-served basis. If a customer chooses not to participate, or if the customer's property is determined to be ineligible for the program, any and all of the other approved APS distributed energy programs remain available to the customer, as the Project is not designed nor intended to replace the previously approved RES incentive programs. As mentioned, APS must screen and inspect all property prior to accepting a customer into the program, and the Company reserves the right to deny program participation to any customer due to safety, technical, or economic issues.

3. Communication Plan.

APS is currently developing a targeted communication plan to reach customers whose homes are served by the Sandvig SV04 feeder which will explain the smart grid development, present the Project, offer the opportunity to participate, and clearly communicate eligibility requirements. The Company is exploring a variety of methods to communicate this information. Town Hall

meetings, web-based interfaces, a specific team of call center employees to assist these customers, and a field demonstration space where customers may see the DE system panels which will be placed on rooftops are all being considered. Upon approval of the program by the Commission, APS will begin these targeted communications with the goal of recruiting customer hosts for the Company owned solar photovoltaic panels. If a customer is interested in participating in the program, the Company will screen that customer and the customer's property for eligibility using the screening criteria.

4. System Installation Partnerships.

As part of the Project, APS is currently exploring partnerships with solar installation experts. These partners have the potential to assist APS in several fundamental areas of the Project, including the field screening of properties identified by APS as potentially eligible for the program, determining the technical potential of the customer rooftop, engineering and permitting the DE systems, and installing and interconnecting the systems. APS believes that working with experts in the renewable installation field is appropriate for this portion of the Project, as these experts have existing experience in identifying the most appropriate system for each rooftop, and have the expertise needed to accurately place and install the solar panels. The Company also expects these experts will help identify the best equipment manufacturers for the parameters of the Project through familiarity with the renewable resource supply chain.

The Company may pre-select a limited number of partners for installation of the solar photovoltaic rooftop panel arrays. These partners would be ensured a portion of the total planned installed capacity and in return will support the Company in the development of key installation parameters, evaluation of equipment and supply-chain alternatives, and effective design of engineering and permitting strategies. Partners for the remainder of the planned capacity will be competitively solicited.

Once a property has been screened and selected for participation in the Project, the design, permitting, and installation process will begin. The Company and its installation partners will involve and inform the customer during each step

of the process. After the DE system is installed on the customer's property, APS may engage these same installation partners to provide troubleshooting expertise, warranty support, and ongoing maintenance for the system.

5. Property Management.

APS recognizes that, during the lifetime of the photovoltaic installation, the customer may desire or need to maintain or renovate the rooftop. With adequate notice and under certain limitations, the Company will accommodate these needs by removing the system while repairs or renovations are made, and reinstalling the system when any changes are complete at no cost to the customer.

Additionally, should the customer choose to sell the property on which the DE system resides, the Company will maintain and support the system through any property transfer. All aspects of the program will be available to any subsequent property owner, and the easement provided by the prior property owner will remain with the property.

C. Utility Distributed Solar Installations.

Another integral part of the Company's program is the installation of larger stand-alone photovoltaic systems that will be located on either Company owned land or leased property. This portion of the Project is designed to ensure rapid and early deployment of DE resources within the program in order to begin development of data collection methodologies as soon as possible, to provide early and measurable distributed energy benefits to the distribution feeder, and to provide visual evidence of the Company's commitment to the program to eligible customers. APS expects stand-alone systems to comprise approximately 500 kW of the 1.5 MW program target.

D. Solar Water Heaters.

In addition to the solar photovoltaic panels placed through the Project, the Company will also install solar water heaters in a number of homes served by the same distribution feeder utilized for the solar panels. Placement of a high concentration of solar water heaters on a feeder where the smart grid is fully

developed will enable APS to gain an understanding of the energy reduction impact these systems may have on the local distribution grid. The data collection capabilities of the smart grid will provide information on the ability of solar water heaters to reduce overall peak load as well.

APS is committed to finding renewable solutions for the low-income customer, who may have limited financial means and relatively low or non-existent taxable income to which renewable tax credits or other incentives may be applied. To further this goal, the Company will provide approximately 50 solar hot water systems to low-income customers as part of the Project. Solar water heaters are an excellent vehicle to allow the low-income customer to reduce energy consumption and lower monthly electric bills. These water heaters will be installed at no expense to the customer, will be wholly owned by the customer or, if appropriate, the property owner, and will remain on the property regardless of the success or retirement of the Project.

The Company will use currently established E-3 and/or E-4 rate eligibility criteria to qualify low-income customers. Systems will be placed in low-income customer homes in collaboration with the agency partnerships developed through the Distributed Public Assistance Program as described in the Company's 2009 RES Implementation Plan.

E. Small-Scale Wind Turbines.

As part of the Project, APS will place several small-scale wind turbines at appropriate locations on the SV04 feeder, interconnected directly to the Company's distribution system to study the effects of wind DE on the distribution grid. Goals for this portion of the Project include testing of residential wind turbine acceptance, gathering data on the production potential of these systems and measuring the impacts of turbine production under different weather conditions.

APS plans to establish a partnership with Northern Arizona University to develop study parameters to determine how small-scale wind turbine generation is valued by the customer and the utility. Specifically, the study will include the gathering and validation of data on the output of the systems, impacts of the site

chosen for the turbine, variability in wind speed and other characteristics between sites, and the cumulative impact of these systems on the APS distribution grid.

F. Data Collection.

An integral part of the Project entails the gathering and analysis of distribution system technical data, along with DE system data, which will provide valuable insight into the interaction between these two systems and will be essential to the development of the future smart grid. Much of the data will be collected and monitored using systems that the Company has already developed; however, collection and monitoring methodologies for some of the data will need to be developed as part of this program. Additionally, specific data for these resources must be gathered at the beginning of the Project to provide a baseline for data comparison.

APS will collect and analyze data in several study areas such as: the impact of DE systems on the local distribution feeder and associated equipment, energy and capacity impacts of photovoltaic system deployments, weather impacts, system reliability and O&M expenses for the installed DE systems, differences in system production and characteristics, the financial and production impacts of system availability, and life cycle costs and load impacts of the installed DE systems.

The Company will be gathering data on installed DE systems in two main categories – operation and performance. Data will be gathered through an AMI meter installed on the individual rooftop photovoltaic array, then delivered through the AMI communication network and collected in the Company's meter data management system. This data will confirm system operation and will enable system performance monitoring. High resolution performance monitoring will be conducted on a sampling of systems installed through the Project, and will be collected through a separate data collection system. This data will provide information about specific components of the energy generation system such as voltages, currents, and local environmental conditions.

This monitoring will support detailed analysis of system operation and performance as well as provide data regarding the impacts of these systems in aggregate on the distribution feeder and substation.

G. Phased Installation.

The Company will be closely monitoring the deployment of this Project in order to track and effectively manage the many facets of this pilot program. To this end, it is reasonable for APS to implement the pilot in phases in order to allow APS to evaluate the progress of the Project. After installation of 200 kW of residential rooftop systems, or 500 kW of all rooftop systems, the Company will pause to review system field performance, program budget, customer satisfaction and comments, and overall Project management. If the Company's ongoing review reveals that changes to any part of the program are warranted to achieve the goals and objectives of the Project, then such changes may be made in successive phases of the pilot.

H. Program Retirement.

Finally, although APS has every expectation of completing the pilot program successfully, as is true with any new program, unforeseen circumstances may require the Company to discontinue the program before completion. If for any reason APS must end the program, the Company would consider several retirement options, including transfer of ownership of the DE system to the host customer. APS may also consider removing and/or redeploying the solar equipment, in which case the Company would abandon the additional utility easement and return the customer's property to its original state prior to the start of the program.

IV. RATE SCHEDULE CMPW-01

Once the system has been installed on the customer's property and has been tested and connected to the APS distribution system, the customer will have the opportunity to receive service under Rate Schedule CMPW-01 (Community Power). This rate schedule, available only to those eligible customers who participate in the Project, has been designed to provide the customer with the benefits of owning a solar rooftop DE system without the economic obligation of operating and maintaining the system. It provides the customer with cost certainty for a set monthly kWh that is based on the specific system installed on that customer's rooftop, creating a "hedge" against any fluctuations in price for that kWh, in the same manner as a customer owned and operated DE system would.

Rate Schedule CMPW-01 is a rate rider, which means that the rate is used in conjunction with the customer's otherwise applicable rate schedule, in this instance referred to as a "parent" rate. For this pilot, customer participants must be served under rate schedules E-12, ET-2, E-32 or E-32TOU as the parent rate.[4] The vast majority of customers served from the SV04 feeder are billed on one of these four eligible rate schedules; however, if an eligible customer is billed under a different rate schedule but wishes to participate in the program, that customer may participate if a switch to one of these parent rate schedules is made upon placement and activation of the DE system.

All charges and calculations in Rate Schedule CMPW-01 are based on the amount of kWh the DE system placed on the customer's rooftop generates in an average month. Rate Schedule CMPW-01 provides the participating customer with a guaranteed amount of monthly kWh usage that is a proxy for the kWh the customer would receive if the system was owned and operated by the customer. This calculation methodology places any operating risk of the DE system directly on the Company, relieving the customer from the inevitable variations in kWh generated by the system that would otherwise occur as a result of annual and

[4] For residential customers, Rate Schedule CMPW-01 may be used in conjunction with the low-income rate riders E-3 and E-4. For these customers, any calculated low-income discount will be applied to total metered usage prior to any CMPW-01 Solar Energy computations.

seasonal variances, due to weather conditions or maintenance needs. This guarantee provides a clear benefit to the customer, and APS believes that the Company's assumption of this risk will create another strong argument for customer participation in the pilot program.

Although Rate Schedule CMPW-01 represents a long-term benefit, a customer that participates in the pilot is not required to take service under the rider. Adoption of this rate schedule is optional and entirely at the discretion of the customer.

Rate Schedule CMPW-01 is attached to this report as Attachment C. Also included in Attachment C are comparative bill calculations that show the impact of this rate rider on the customer's annual bills for each of the eligible parent rates.

A. Derivation of Solar Energy.

As mentioned above, Rate Schedule CMPW-01 provides the customer with a fixed price for the energy generated from the DE system that has been placed on the customer's rooftop. Not only is the price of this energy fixed, the monthly output of the system is also normalized or "fixed" for purposes of this rate rider, providing the customer with a guaranteed monthly overall price for a portion of their energy bill in exchange for hosting a photovoltaic array for the Company.

Output of the standardized systems to be utilized in the Project was determined through the use of a solar energy modeling program developed by the National Renewable Energy Lab ("NREL") called the "Solar Advisor Model". This model calculates expected annual output using a measure known as the "typical meteorological year", which consists of 30 years of averaged weather data and is a recognized standard calculation methodology in the renewable industry. The model incorporates variations such as rooftop orientation and placement, location of system, and degradation of system panels over time. The average annual output calculated using the model has been adjusted by 10% to accommodate for pilot variability and unexpected program results.

The calculated fixed monthly output for these systems is different for residential and business customers due to the disparity in system size and expected rooftop orientation. The kWh guarantee for Rate Schedule CMPW-01 for the standardized 2, 3 and 4 kW residential systems is 105 kWh per kW per month, while the guarantee for business systems is 90 kWh per month. These kWh comprise the "Solar Energy" referred to in the rate schedule.

B. Derivation of Solar Charge.

The goal of Rate Schedule CMPW-01 is to provide the customer with rate certainty for the portion of the customer usage that is attributable to the output of the system that has been placed on the customer rooftop. For this reason, those kWh have been assigned a dollar charge specific to the customer's rate schedule, and computed using the Solar Energy assignments discussed above, that will not change over the life of the program. In the rate schedule, this charge is referred to as the "Solar Charge". Over time, this certainty becomes a "hedge" against increasing fuel prices and overall rate increases.

The Solar Charge was designed specifically to achieve revenue neutrality at the time the program begins; that is, the charge replicates the amount the customer would otherwise have paid for that same amount of usage under today's rates. Due to the different rate designs employed for the "parent" rates (E-12, ET-2, E-32 and E-32TOU), each parent rate schedule Solar Charge must be unique to realize revenue neutrality.

The Solar Charge for each of the rate schedules available to program participants is as follows:

	Solar Charge per kWh[5]
E-12	$0.11242
ET-2	$0.13480
E-32	$0.09293
E-32TOU	$0.05855

[5] The Solar Charge will be shown on the customer's monthly bill as a separate line item dollar charge. An established dollar amount is easy to understand, is more transparent, and provides clarity. As other electric prices change over time, it will be clear that the Solar Charge does not change, providing a very real signal to the customer that a solar DE system can truly impact the price of electricity in the long term.

A complete set of workpapers has been provided to Commission Staff that includes proof of revenues demonstrating the derivation of these charges.

V. COMMUNITY POWER PROJECT BUDGET

The Project is estimated to require approximately $10.8 million in capital investment costs which will be incurred as the equipment is purchased and installed. In addition, $3.8 million has been budgeted for deployment including technology/system interface, customer support, and contingencies. These costs will be expensed between 2009 and 2011. More detail is provided in Attachment D.

Budgeted carrying costs relate solely to expected capital expenditures are estimated to average $750,000 per year for the first three years. Carrying costs are based on the Company's currently assumed future cost of debt of 8.0% and the 11.0% cost of equity proposed in the Company's currently pending rate case.

After completion of the deployment of DE systems, annual costs for ongoing operation and maintenance of the program, including data collection and customer support, are expected to average approximately $410,000 per year for the remaining life of the program.

A. Initial Project Deployment Budget Assumptions.

The capital investment reflects the installed costs of each of the three types of equipment APS will deploy in the program – solar photovoltaic panel arrays, solar water heaters, and small scale wind turbines. For budget purposes, APS has assumed a photovoltaic system average installed cost of $7,750/kW for residential systems and an average cost of $6,500/kW for small commercial systems. Residential average system cost is representative of the installed cost of similar sized systems (2 to 4 kW) that are currently operating in Flagstaff and the surrounding areas. The average small business system cost, however, represents the average cost of currently operating small commercial systems throughout the APS service territory as no business photovoltaic systems above 50 kW have been installed in the Flagstaff area to date. Stand-alone photovoltaic system installed costs are also estimated at $6,500/kW.

As described earlier in this report, APS will be partnering with photovoltaic installation experts to acquire and install these systems. The Company believes

that opportunities may arise through these partnerships to reduce the expected manufacture and installation costs of solar equipment due to cost efficiencies of ordering and installing a large number of systems in a local area within a relatively short period of time. If such efficiencies do emerge, APS will revise its budget as appropriate in the Company's annual RES Implementation Plan filings.

Additionally, solar water heaters are budgeted at an installed cost of $5,400 each, and small scale wind turbine systems are expected to be installed at a cost of $6,000/kW.

Other costs included in the initial deployment budget include program marketing and other customer communications, customer screening, data acquisition hardware and software, and customer information system upgrades that will allow the Company to provide customers with a single bill reflecting both the program monthly solar rate and the remaining routine monthly rate calculations as described earlier in this report.

B. Project Funding.

The Company's requested program funding is three-fold: recovery of a portion of the capital resource cost through traditional rate base treatment; recovery of the remainder of the capital resource costs as well as other program costs such as operation, maintenance, and carrying costs through the RES adjustment mechanism; and recovery of a portion of the cost from program participants through the rate schedule rider.

Of the $7,750/kW budgeted capital cost for residential solar photovoltaic panels, APS proposes to include $4,750/kW of that cost in rate base in the Company's next rate case filing. Likewise, of the $6,500/kW budgeted capital cost for business and stand-alone systems, APS proposes to include $4,000/kW of that cost in rate base in the Company's next rate case filing. This rate base treatment of capital expenditures for generating resources is consistent with traditional cost recovery practice. Additionally, the full capital cost of installed wind turbines will be included in rate base in the next rate case.

The remaining program cost – solar water heater capital cost, operation and maintenance expense, customer communication cost, data collection

equipment cost, the remaining $3,000/kW of residential and $2,500/kW of business solar panel capital cost[6], and all other program expenses – are proposed to be recovered through the RES adjustment mechanism. Carrying costs on capital expenditures will also be recovered through the RES mechanism, but only until the Company's next rate case, when the Company will include those expenditures in rate base and will recover carrying costs in the same manner as other APS generating resources.

The Company also requests that the $8.5 million that was recovered from customers in 2008 through the RES adjustment factor, but not allocated to a specific renewable program in the approved 2009 RES Implementation Plan, be allocated to the Project. Because 2009 program costs are not expected to reach the $8.5 million mark, the remainder of these funds will be allocated in the Company's 2010 RES Implementation Plan.

[6] The $3,000/kW of residential and $2,500/kW of business and stand-alone capital cost contribution for solar photovoltaic rooftop panel arrays reflects the incentives available for distributed energy installations available through the APS Renewable Energy Incentive Program for installed photovoltaic systems, as determined by installing customer type.

VI. CONCLUSION

The RES requires that APS satisfy a percentage of the Company's annual renewable requirement through the addition of distributed energy resources. The required percentage for 2009 is 15% of the total renewable requirement, and that percentage increases to 30% by the year 2012. Additionally, the RES requires that the installed resources result from residential systems and non-residential systems in equal proportions. As noted in the Company's 2009 RES Implementation Plan, even with the availability of incentives from RES funds, customers must still provide significant personal funding in order to have DE systems installed on their homes or businesses. A residential customer wishing to install a 3 kW photovoltaic system on a rooftop still needs to invest more than $8,000 over and above available governmental and utility incentives, enough to present a challenging barrier in today's difficult economic markets.

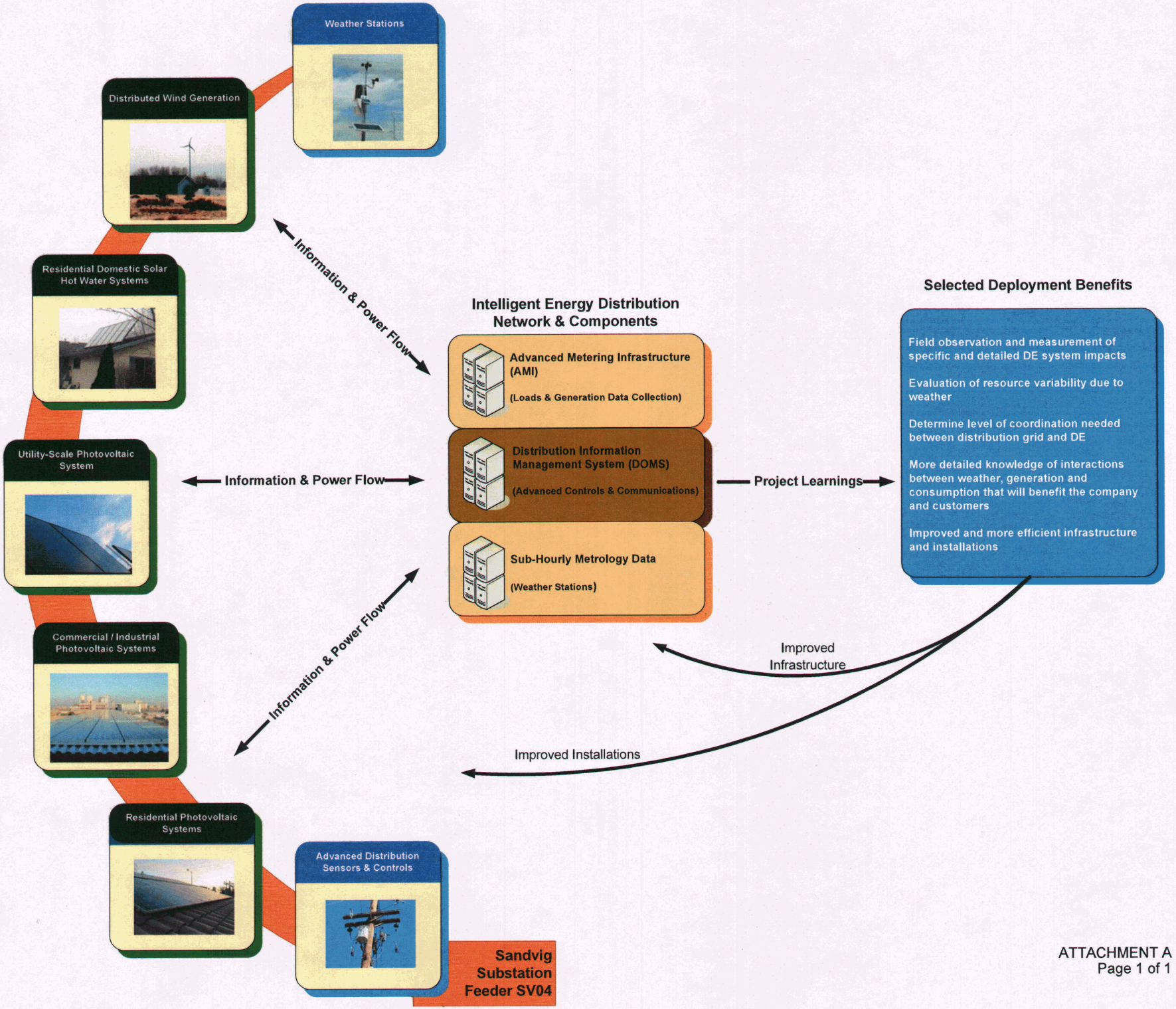
APS recognizes that DE is an important component of the renewable goals outlined in the RES. Similarly, the Commission has recognized that new approaches to DE deployment will be necessary to achieve RES objectives. Throughout the development of the RES rules and as implementation plans have been discussed and approved, Commissioners have encouraged the Company to develop alternate programs and incentives to increase the adoption of DE systems by APS customers. Increased participation is important to meet the Company's renewable objectives, not only in meeting RES requirements, but also because the Company's 2009 Resource Plan (filed with the Commission in Docket No. E-01345A-09-0037) relies upon an increasing amount of DE to meet anticipated future load.

The Community Power Project provides benefits for customers, industry stakeholders, and the utility itself. Implementation of this pilot program will be a large step forward in the Commission's goal of bringing reasonably priced renewable resources to the state of Arizona and will increase recognition of the value of distributed energy, as well as our understanding of system impacts from large scale deployment of DE.

ATTACHMENT A

THE SMART GRID

APS Community Power Project - Flagstaff



ATTACHMENT A
Page 1 of 1

ATTACHMENT B

THE SANDVIG SV04 FEEDER

Flagstaff Community Power Project Area

ATTACHMENT B
Page 1 of 1

ATTACHMENT C

RATE SCHEDULE CMPW-01

RATE SCHEDULE CMPW-01
COMMUNITY POWER – FLAGSTAFF SANDVIG 04
PILOT RIDER RATE

AVAILIBILITY

This pilot rate schedule is available to customers that are located within the Community Power boundaries of the limited geographical area in Flagstaff, Arizona served by the Sandvig 04 circuit feeder as defined by the Company and approved by the Arizona Corporation Commission ("ACC") in Decision No. xxxxx.

APPLICATION

This pilot rate schedule shall apply to retail Standard Offer customers served under rate schedules E-12, ET-2, E-32, E-32TOU or their successor rate schedules as approved by the ACC. All provisions of the customer's current applicable rate schedule will apply in addition to the charges and credits defined within this rate schedule. Rate Schedule CMPW-01 may not be used in conjunction with any of the Company's partial requirements rate schedules.

In addition, to be eligible for this rate schedule, the customer must meet the program requirements to participate in the Community Power Program in Flagstaff, Arizona including but not limited to (1) granting the Company an easement to install, own, operate and maintain a solar photovoltaic system on customer's premises and (2) meeting the technical requirements for the customer's premises. The rate and terms and conditions of this rate schedule are applicable only to this pilot rate.

TERM

This rate schedule shall remain in effect for a period of twenty years from its effective date unless cancelled or modified by the ACC prior to such date. Customers can discontinue participation in this rate schedule at any time without penalty.

SOLAR OPTIONS

Residential Options: For residential customers there are three photovoltaic equipment size options for service under this rate schedule, with nominal kW-DC ratings approximately equal to 2kW, 3kW, and 4kW.

General Service Options: Photovoltaic equipment size options available to general service customers under this rate schedule range from 50 to 250 kW.

DETERMINATION OF SOLAR ENERGY

The Solar Energy, which is the nominal expected monthly kWh output from the photovoltaic solar installation over time, shall be derived by multiplying the kW-DC rating of the photovoltaic installation by an average monthly production factor (kWh-AC per kW-DC), as determined by the Company. The monthly production factor for Residential Options is 105 kWh-AC per kW-DC and for General Service Options it is 90 kWh-AC per kW-DC.

RATES

The customer's monthly bill shall be calculated in accordance with their current applicable rate schedule except that:

(1) The monthly bill will include a Solar Charge, which is the Solar Energy multiplied by the per kWh charges listed below. The Solar Charge is a fixed monthly amount for the term of this rate schedule.

Solar Option	Applicable Retail Rate Schedule	Solar Charge per kWh
Residential	E-12	$0.11242
Residential	ET-2	$0.13480
General Service	E-32	$0.09293
General Service	E-32TOU	$0.05855

RATES (cont)

(2) The monthly bill will be based on the Customer's total metered usage net of the Solar Energy applied to all unbundled kWh charges in the customer's current applicable rate schedule, where the netted kWh shall not be less than zero. The netting shall be applied as follows:

- ET-2, E32TOU - 50% of Solar Energy shall be netted from on-peak kWh, 50% from off-peak kWh. If the net kWh is less than zero for either the on-peak or off-peak period, the remaining kWh shall be netted from the other time period, where the netted amount shall not be less than zero.

- E-12 - Solar Energy shall be netted from the second tier kWh charges. If the netted kWh is less than zero the remaining kWh shall be netted against the first tier of kWh charges, where the netted amount shall not be less than zero.

- E-32 - Solar Energy shall be netted from first tier kWh charges. If the netted kWh is less than zero the remaining kWh shall be netted against the second tier of kWh charges, where the netted amount shall not be less than zero.

- All kWh adjustment charges will be calculated on total metered kWh and then the bill will be credited for the Solar Energy multiplied by those charges.

- Discount levels for the Energy Support Program and Medical Care Equipment under rate schedules E-3 and E-4 will be based on the Customer's total metered usage.

TERMS AND CONDITIONS

Service under this rate schedule is subject to the Company's Terms and Conditions of the customer's parent rate schedule. This schedule has provisions that may affect the customer's bill.

ARIZONA PUBLIC SERVICE CO.
Average Annual - Monthly Bill Impacts
April 2009
Rider Rate CMPW-01
Excludes RA, franchise fee, taxes

Residential E-12

	Current Rates Bill ($)	Current Rate with proposed CMPW-01 Rider Bill ($)
Base Rates		
Basic Service Charge	$ 7.59	$ 7.59
kWh	$ 116.78	$ 84.49
Adjustors		
Total PSA	$ 6.24	$ 4.56
TCA	$ 1.41	$ 1.03
CRCC	$ 0.40	$ 0.29
EIS	$ 0.19	$ 0.14
RES	$ 3.17	$ 3.17
DSMAC	$ 0.71	$ 0.52
Subtotal	$ 136.49	$ 101.79
Solar Charge	$ -	$ 35.00
Total before taxes and fess	**$ 136.49**	**$ 136.79**

Residential ET-2

	Current Rates Bill ($)	Current Rate with proposed CMPW-01 Rider Bill ($)
Base Rates		
Basic Service Charge	$ 14.79	$ 14.79
On-Peak	$ 54.88	$ 24.07
Off-Peak	$ 48.09	$ 39.57
Adjustors		
Total PSA	$ 6.24	$ 4.56
TCA	$ 1.41	$ 1.03
CRCC	$ 0.40	$ 0.29
EIS	$ 0.19	$ 0.14
RES	$ 3.17	$ 3.17
DSMAC	$ 0.71	$ 0.52
Subtotal	$ 132.51	$ 90.07
Solar Charge		$ 42.00
Total before taxes and fess	**$ 132.51**	**$ 132.07**

ARIZONA PUBLIC SERVICE CO.
Average Annual - Monthly Bill Impacts
April 2009
Rider Rate CMPW-01
Excludes RA, franchise fee, taxes

General Service E-32

	Current Rate Bill ($)	Current Rate with proposed CMPW-01 Rider Bill ($)
Base Rates		
Basic Service Charge	$ 17.25	$ 17.25
1st 100kW (Secondary)	$ 524.06	$ 524.06
Over 100kW (Secondary)	$ -	$ -
1st 200 kWh/kW	$ 1,033.89	$ 281.13
over 200 kWh/kW	$ 464.38	$ 464.38
Adjustors		
Total PSA	$ 120.11	$ 72.06
TCA	$ 39.45	$ 39.33
CRCC	$ 7.61	$ 4.56
EIS	$ 3.60	$ 2.16
RES	$ 117.93	$ 107.15
DSMAC	$ 16.90	$ 16.85
Subtotal	$ 2,396.03	$ 1,559.44
Solar Charge	$ -	$ 836.37
Total before taxes and fess	**$ 2,396.03**	**$ 2,395.81**

General Service E-32TOU

	Current Rate Bill ($)	Current Rate with proposed CMPW-01 Rider Bill ($)
Base Rates		
Basic Service Charge	$ 18.24	$ 18.24
1st 100kW On-Peak (Secondary)	$ 687.03	$ 687.03
Over 100kW On-Peak (Secondary)	$ -	$ -
1st 100kW Off-Peak (Secondary)	$ 293.12	$ 293.12
Over 100kW Off-Peak (Secondary)	$ -	$ -
On-Peak kWh	$ 388.79	$ 137.96
Off-Peak kWh	$ 664.16	$ 471.65
Adjustors		
Total PSA	$ 120.11	$ 72.06
TCA	$ 35.35	$ 35.35
CRCC	$ 7.61	$ 4.56
EIS	$ 3.60	$ 2.16
RES	$ 117.93	$ 107.15
DSMAC	$ 15.14	$ 15.14
Subtotal	$ 2,401.93	$ 1,874.93
Solar Charge	$ -	$ 526.95
Total before taxes and fess	**$ 2,401.93**	**$ 2,401.88**

ATTACHMENT D

COMMUNITY POWER PROJECT
BUDGET DETAILS

Renewable Energy Equipment - Capital Budget

	APS	RES[1]	Total
Capital and Capital Offset (Incentives)			
Program Budget (2009-2011)	$6,514,000	$4,320,000	**$10,834,000**

Notes:
1 RES incentives are reserved from 2009 RES funds.

Program Deployment and Ongoing Costs

	Total Launch and Installation (2009-2011)[1]	Average Ongoing
Program Deployment		
Deployment and Customer Support	$1,218,000	$220,000
Smart Grid Interface and Data Acquisition	$1,052,000	$21,000
System O&M	$222,000	$135,000
Contingency Costs[2]	$1,332,000	$38,000
Program Budget Total	**$3,824,000**	**$414,000**

Notes:
1 Deployment and Ongoing costs will be charged against the $8.5 million that was recovered from customers in 2008 through the RES adjustment factor, but not allocated to a specific renewable program in the approved 2009 RES Implementation Plan.
2 Contigency funds are broadly allocated to the program and applied only if necessary for full execution of the pilot program. Funds may either be applied towards incentives or towards deployment related expenses.

Additional Funding Supported by RES

	2009	2010	2011	2012	2013
Revenue Requirement[1]	$0	$632,000	$861,000	$758,000	$0[2]

Notes:
1 Based on complete accounting treatment of APS capital, including 11% ROE, 8% Incremental Cost of Debt, depretiation, taxes (and deferals), and ITC.
2 Assumes completion of an APS rate case and allocation to rate base beginning this year.