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Pinnacle West
Capital Corporation
LAW DEPARTMENT

DEBORAH R. SCOTT
Senior Regulatory Attorney
Telephone: (602) 250-5508
Facsimile: (602) 250-3393
E-mail: deb.scott@pinnaclewest.com

Arizona Corporation Commission
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March 19, 2010

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Sandra D. Kennedy, Commissioner
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

RE: Community Power Project – Flagstaff Pilot
Docket No. E-01345A-09-0227

Dear Commissioner Kennedy:

Arizona Public Service Company (“APS” or “Company”) appreciates this opportunity to provide additional information in clarification of the Community Power Project – Flagstaff Pilot (the “Pilot”). The Pilot is an exciting opportunity for Arizona and APS to demonstrate continued leadership in renewable energy.

On January 29, 2009, the Company filed the RW Beck report entitled “Distributed Energy Operating Impacts and Valuation Study” (“Beck Study”). The Beck Study, in part, highlights that maximizing the value of distributed energy for all customers will require significant technical learning and specific strategic planning. APS also jointly participated in a 2008 Navigant Consulting Study entitled, “The Convergence of the Smart Grid with Photovoltaics: Identifying Value and Opportunities” (“Navigant Study”).¹ Among the insights gained, the Navigant Study found that photovoltaic smart grid implementation will require testing and experimentation and that pilot programs will be critical to ensure that benefits can be realized on a large scale. The Company’s Pilot proposes an interface between smart delivery grid technologies and a high penetration of renewable distributed energy technologies. The complete deployment of these technologies in tandem will facilitate advanced learning and refinement of technical insights in a first-of-its kind field study.

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¹ Study participants include: Applied Materials, APS, Austin Energy, BP, Consolidated Edison Company of New York, Dow Chemical, Duke Energy, First Solar, Global Environment Fund, Good Energies, Orlando Utilities Commission, PNM, PSE&G, Salt River Project, San Diego Gas and Electric, Solar Integrated, Southern Company, We Energies, and Xcel Energy.

APS designed the Pilot specifically with the host customers in mind. In doing so, APS focused on a program design that was non-discriminatory with respect to the solar opportunity,² ensuring availability to customers of all income levels, and specifically included a solar water heating component aimed at supporting low-income customers.³ The Company's Pilot design was also intended to increase predictability and timeliness of system installations. APS believes that meeting the initial expectations of potential Pilot participants and continuing to support those participants throughout the entire life of the Pilot is very important, not only for the Company, but for the entire solar industry in Arizona. APS and its predecessor companies have reliably served Arizona customers for over 100 years, and the Company is in an excellent position to provide this commitment to our customers.

APS also designed the Pilot to leverage the skills and diversity of solar installers in Arizona. The Pilot proposes to use third party solar installers to inspect prospective participants property, install solar energy systems, and maintain those systems should any repair be required over the operational life. All system installation costs will be paid directly to the installer/equipment provider as part of this project, including Renewable Energy Standard ("RES") distributed energy incentives for the residential installations. Importantly, APS customers in the Pilot area, the Sandvig-4 feeder in northeastern Flagstaff, retain all options for adoption of renewable energy technologies. This includes procuring a renewable energy system or energy efficiency option under any incentive program offered by APS. Through this Pilot, the Company believes it will raise its customers' awareness of their renewable energy options. APS is committed to developing new and innovative solar options, and driving increased adoption throughout Arizona.

While much of the focus on the Pilot has revolved around the deployment of photovoltaic technologies at residential and non-residential locations, this is only one facet. Deployment of the photovoltaic technologies alone does not facilitate key field study objectives for which the Pilot was designed. Data must be synchronously collected from the photovoltaic system, the distribution system and related equipment, and the end user. Only in concert will this data allow for a comprehensive evaluation of the implications of high penetrations of photovoltaic equipment on the electric distribution system and opportunities for optimized operation. The Pilot includes the technology and analytical elements necessary to collect, capture, monitor and analyze the data required to meet the Pilot's objectives.

As you are aware, APS applied for and received federal grant funding for a high penetration photovoltaic study through the U.S. Department of Energy ("DOE") in partnership with GE Energy, GE Energy Research, Viasol, Arizona State University, and the National Renewable Energy Laboratory ("APS Partners"). This partnership collectively will bring \$4.2 million to fund the study, with the DOE contributing \$3.3 million, APS Partners contributing \$700,000, and APS contributing \$180,000. This approach will bring tremendous value to APS and its

² Many financing options offered by third party installers to customers participating in APS's standard distributed energy incentive program require certain, and often very high, credit scores.

³ Solar water heaters are an excellent way of reducing electric consumption, thereby reducing a customer's electric bill.

customers by leveraging the resources of the DOE and APS Partners. The partnership expands APS technical capabilities far beyond those originally envisioned in the Pilot application. APS believes that the DOE study funding is ultimately dependent on APS's ability to deploy both the renewable energy and study-related monitoring equipment within a carefully managed timeline.

APS ownership of both the photovoltaic systems and the smart delivery grid technologies is a critical component of the Pilot's technical study objectives. As the owners of both the rooftop systems and the smart grid equipment, APS will be able to manage the installation process needed to achieve the desired penetration, as well as the subsequent integration of the overall system. This integration is needed to achieve the technical and operational learning necessary to successfully deploy distributed systems throughout our service territory. As stated earlier, APS will partner with third-party solar installers to inspect prospective participants property, install solar energy systems, and maintain those systems should any repair be required over the operational life.

Although APS does not currently have any feeders with this level of penetration, it is conceivable that over an extended timeframe, certain areas within the APS service territory could result in high penetrations (over 15 percent) of distributed energy system deployments. In preparation for this potential outcome and in designing the Pilot, APS considered alternatives that might also result in the required photovoltaic system density within the necessary study timeframe on a single APS feeder. Those options included: 1) paying incentives higher than those currently paid to customers installing systems elsewhere to create further enticements for installation; 2) short-term (several years) deployment of systems at or near host customer property that might later be deployed elsewhere; and 3) APS deployment of utility-owned and monitored assets at the customer's site with the designed intent to operate those systems as a virtual photovoltaic "power plant" for the benefit of all APS customers. APS believes the only viable option to drive the required density within the necessary timeframe is option 3, which is the proposal for the Pilot.

For ease and clarity of response, questions from your letter dated March 8, 2010 are restated below with the Company's response following each question or group of questions.

- 1. Please describe the rebate process that APS will utilize. Will APS benefit from this rebate process? If yes, please describe how. Will the ratepayers benefit from this rebate process? If yes, please describe how. If no, please explain why.**

As proposed, there is no change to the solar installer or the customer in how they benefit from distributed incentives. The installer will still receive the full payment for the installed system. The participating customers will benefit from a portion of their bill being fixed for a 20-year period in exchange for granting an easement to their property. The remaining question is how APS will fund the Pilot.

In its original filing, APS proposed using funds collected through the RES to pay customers and installers the appropriate incentive for the system being installed. This

had the benefit of deploying unallocated funds collected through the RES in 2008 to reduce the amount of capital necessary for the Pilot. Since its original filing on the Pilot, the Company used a portion of the 2008 carryover RES funds to fund requested incentive payments to customers in 2009 that were over and above what had been originally budgeted.

At the time of its Application, APS envisioned that energy resulting from photovoltaic systems installed as part of the Pilot on both residential and non-residential customer roof-tops would count towards the Company's RES distributed energy requirement. Following the Commission's recent direction in Decision No. 71459,⁴ the Company now understands that energy resulting from non-residential installations will not count toward the RES distributed energy requirement. Therefore, the Company no longer believes it is appropriate to use non-residential incentives to off-set the capital cost of installing non-residential photovoltaic systems as part of this Pilot.

With this in mind, at the March 3, 2010 Open Meeting, the Company proposed that the entire cost of the non-residential photovoltaic portion of the Pilot be financed through the use of APS capital with recovery consistent with Section 15.7 of the Settlement Agreement approved in Decision No. 71448.⁵ This approach would have two primary benefits that are worth considering. First, it would allow incentive dollars that APS has proposed to use through this Pilot to be deployed by other customers for the development of additional systems outside of this Pilot. Second, up-front incentives are entirely recovered from ratepayers in the same year in which those commitments are made. Therefore, if APS were to fund the majority of the Pilot from its own balance sheet and without the use of incentives, it would help reduce the up-front impact to all ratepayers. An analogy is that instead of collecting a down payment (incentives via our original proposal), APS would borrow the money from its investors and collect a loan payment from customers helping to address the issue of the up-front cost to ratepayers.

Attachment A reflects this approach. It details the revised balance of APS capital contribution towards this Pilot and the resulting revenue requirement to support the investment in a manner similar to our original filing, adjusted for the fact that APS will not use incentives to fund non-residential systems. APS believes this alternate approach is constructive and supportive of distributed energy development. The incentive funds described as part of this Pilot would remain available for APS customers to install renewable energy systems through the currently available non-residential incentive programs.

In addition to that described above, APS also recognizes concerns of the solar industry over the use of residential RES incentive funds as part of this Pilot. While those funds are indeed supporting residential distributed energy installations, APS recognizes it may

⁴ Issued January 29, 2010.

⁵ Transcript pp. 77-79.

be constructive to execute the Pilot without the use of any RES incentives funds. Should the Commission choose to give APS such direction, the APS capital contribution towards the project would increase. Attachment B details the revised balance of APS capital contribution towards this Pilot and the resulting revenue requirement to support the investment under this optional approach.

2. Please provide additional clarification regarding the funding source(s) for the Project.

The Company anticipates two sources of funding for the Flagstaff Pilot Program: first, funds collected in 2008 through the RES, but which were not allocated to a specific program in the approved 2009 RES Implementation Plan; and second, through the application of RES distributed energy incentive funds collected as part of the current year's Implementation Plan budget.

APS proposed that the unallocated funds collected through the 2008 RES adjustor should be applied towards non-capital Pilot execution and study costs, as well as the revenue requirement associated with APS's capital investment in the Pilot in the early years. This allows for implementation of the Pilot without impact to APS's 2010 RES adjustor, and depending on the Pilot's ultimate execution timeline, should allow for very little increase to the Company's 2011 RES adjustor. The maximum increase to the RES adjustor as a result of this project will occur in 2011 and is projected to be \$0.01 for a residential customer. Details are provided in Attachment A.

The revenue requirement of APS's capital investment in subsequent years will be recovered through the RES mechanism, but only until the Company's next rate case, when the Company would include those expenditures in rate base and base rates in the same manner as other APS generating resources.

3. Please provide information regarding the updated balances of the RES funding from 2008 and 2009 budgets.

As noted in Decision No. 70654 (approval of APS's 2009 RES Implementation Plan), the Company had anticipated a surplus of funds from the 2008 RES Adjustor mechanism of approximately \$8 million. The actual amount of those uncommitted funds at the end of 2008 was \$8.3 million, which was not allocated to any specific RES program.

In the Company's application for approval of the Pilot, APS proposed allocating that surplus to fund the Pilot. Since that time, however, the Company experienced a historically unprecedented demand for distributed energy incentives from customers, and a portion of these funds were used to supplement customer-sited distributed incentive applications in 2009. As of today, the amount of uncommitted funds remaining from the 2008 RES adjustor is as follows:

\$ Millions	Uncommitted RES Funds From 2008
\$8.3	Original Uncommitted Funds ¹
\$2.9	Funds Applied Toward Customer Non-Residential Up-front Incentives in 2009
\$5.4	Remaining Uncommitted Funds

¹ In Attachment D to APS's Application in this docket, the Company estimated \$8.5 million. Following year-end reconciliation of customer reservations, the final amount was \$8.3 million.

APS anticipates that approximately \$4 million in funds collected through the RES adjustor in 2009 will not be used for the purpose originally detailed in the Company's 2009 Implementation Plan. Of this amount, approximately \$3.2 million dollars was not spent due to delays in new utility-scale facilities becoming available as scheduled in the original budget. Budget variances in administration, implementation, and research and development costs contributed to the remaining amount.

- 4. The recommended order states that the Company be allowed to modify or discontinue the project with 120 days written notice to the Commission and that notice should also be provided to the project participants.**
- a. Should the Company decide to discontinue the project, what will happen to equipment and who will be responsible for the equipment?**
 - b. Do you believe APS should be required to obtain Commission approval before discontinuing this project? If no, why not?**

Should the Pilot be discontinued, APS would consider all options regarding the deployed photovoltaic system and related equipment. Ultimately, the selected course of action would likely depend on the reasons for discontinuing the Pilot. In any case, all efforts will be made to minimize impacts to the participating customers. These options may include:

- i. APS removal of the systems from participating customer rooftops and redeploying the equipment elsewhere in the Company's service territory. In this instance, APS would abandon the rooftop easement and return the customer's property to its original function and appearance.
- ii. APS may allow the participating customer to purchase the equipment from the Company at an appropriate price.

The costs of discontinuing the Pilot (including removal or redeployment of equipment, restoration of rooftops, and other similar costs) will not be charged to the participating customer.

APS agrees with the Staff's recommendation to require that the Company provide 120 days written notice prior to modification or discontinuation of the Pilot. If a safety or

reliability consideration required the Company to discontinue the Pilot immediately, the Commission would be notified in writing as soon as possible. However, if the Commission determines that Commission approval is necessary, the Company has no objection.

5. What is the Company's response to the RUCO written comments that APS's solar charge is parallel or close to the rate that third party installers are charging?

The Company believes that the proposed charges for solar energy are fair and reasonable, because they offer customers an opportunity to benefit from the characteristics of a solar installation on their home or business without any up-front payment.⁶ Importantly, this rate is no more expensive than the customer's current cost of electricity, and the portion of energy provided by the system will remain fixed for a period of 20 years, thus allowing the customer to recognize the benefit of the solar installation for many years. Many solar service agreements and leases offered by third party installers are designed to escalate over time, making the customer's long-term benefit of installing solar much more difficult to predict.

RUCO states within its comments "... that the Solar Charge should be parallel or be close to the rate that third party installers are charging their customers for energy under current lease agreements." APS believes it is important to elaborate on this issue, since the charges of a third party installer to a customer are not the only contributions necessary for the deployment of distributed renewable energy today.

Distributed renewable energy technologies are costly, and in most instances, more costly than customers are willing to pay without financial incentives. Said another way, the potential long-term savings associated with an individual customer's installation of a solar technology are simply not high enough to motivate the customer to purchase a system. The combination of utility rebates and tax incentives are paid to customers choosing to install renewable energy systems at their property to help reduce the cost of the system and make the decision from the customers' perspective an economic one. Irrespective of the incentive type (up-front or production based), incentives are ultimately transferred from the customer to the third party system installer (or financier) as a cash contribution that is used to reduce the effective system cost. This incentive, together with a lease or energy payment, is required to cover the full renewable energy system cost.

The balance between utility rebates, tax incentives and customer contributions must be carefully managed to ensure that all customers: 1) receive the maximum distributed renewable energy installations for the least amount of incentive cost; 2) send appropriate price signals to help drive down the cost of system installations; and 3) sufficiently drive

⁶ The proposed charges are set forth in Rate Schedule CMPW-01, which was attached to APS's Application (Attachment C) in this docket.

Sandra D. Kennedy, Commissioner

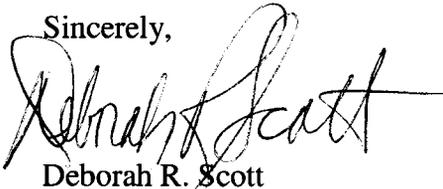
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enough system installations to meet the requirements of the RES. APS believes that if third party installers are able to offer solar power for a price that is below the price for conventional power, then the utility rebates may be too generous.

I hope that the information provided is responsive to your inquiry. Company representatives will be prepared to answer further questions you might have on this topic at the next open meeting.

Sincerely,



Deborah R. Scott

DRS/jlj

cc: Kristen K. Mayes, Chairman
Gary Pierce, Commissioner
Paul Newman, Commissioner
Bob Stump, Commissioner

Steven M. Olea
Director, Utilities Division
Arizona Corporation Commission

Janice M. Alward
Chief Counsel, Legal Division
Arizona Corporation Commission

C. Webb Crockett
Fennemore Craig, PC

Scott Wakefield
Ridenour, Hinton & Lewis, P.L.L.C.

Adam Browning
Executive Director
The Vote Solar Initiative

David L. Townley
Vice President, US Sales & Marketing
Infinia Corporation

Sandra D. Kennedy, Commissioner

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Herbert Abel
Chief Executive Officer
Green Choice Solar

Daniel Pozefsky
RUCO

Jay I. Moyes
Steve Wene
Moyes Sellers & Sims Ltd.

ATTACHMENT A

**Arizona Public Service
Attachment A
Community Power Project Budget Summary: Using Residential RES DE Incentives and APS Capital**

<u>Renewable Energy Equipment - Capital Budget</u>			
Capital and Capital Offset (Incentives)	<u>APS</u>	<u>RES¹</u>	<u>Total</u>
	\$10,564,000	\$270,000	\$10,834,000

¹ RES incentive are reserved from 2010 RES funds.

<u>Program Deployment and Ongoing Costs</u>	
	<u>Average</u>
	<u>Ongoing</u>
Deployment and Customer Support	\$220,000
Smart Grid Interface and Data Acquisition	\$21,000
System O&M	\$135,000
Contingency Costs ²	\$38,000
Program Budget Total	\$414,000

¹ Deployment and Ongoing costs will be charged against the remaining \$5.4 million that was recovered from customers in 2008 through the RES adjustor, but not allocated to a specific renewable programs in the approved 2009 RES implementation Plan.

² Contingency 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 toward deployment related expenses.

<u>Additional Funding Supported by APS</u>					
	<u>2010</u>	<u>2011</u>	<u>2012¹</u>	<u>2013</u>	<u>2014</u>
Revenue Requirement	\$517,525	\$1,457,515	\$667,542	\$0	\$0

¹ Assumes completion of an APS rate case and allocation to rate case on 07/01/2012.

<u>RES Adjustor</u>		
	<u>2011</u>	<u>2012¹</u>
Effect on Residential RES Cap	\$ 0.011	0.004

¹ Assumes completion of an APS rate case and allocation to rate case on 07/01/2012.

NOTE: These numbers are being provided solely for purposes of the Community Power Project and are not to be used or relied upon for purposes of trading any security.

**Arizona Public Service
Attachment A
Community Power Project Budget Summary: Using Residential RES DE Incentives and APS Capital**

Community Power Project Expenses with remaining rollover budget		2010	2011	2012
2010 RES Net Funds Available	\$	5.4	\$ 1.0	\$ -
Updated Program Cost Estimation	\$	(3.9)	\$ (2.2)	\$ -
Revenue Requirement	\$	(0.5)	\$ (1.5)	\$ (0.7)
Ongoing Program Costs	\$	-	\$ -	\$ (0.4)
2008 RES Net Funds Remaining	\$	1.0	\$ (2.7)	\$ (1.1)
Amount Funded through RES Adjustor	\$	-	\$ 2.7	\$ 1.1

NOTE:
These numbers are being provided solely for purposes of the Community Power Project and are not to be used or relied upon for purposes of trading any security.

ATTACHMENT B

**Arizona Public Service
Attachment B
Community Power Project**

Renewable Energy Equipment - Capital Budget

Capital and Capital Offset (Incentives)

¹ RES incentive are reserved from 2010 RES funds.

Program Deployment and Ongoing Costs

Deployment and Customer Support
Smart Grid Interface and Data Acquisition
System O&M
Contingency Costs²
Program Budget Total

¹ Deployment and Ongoing costs will be charged against the remaining \$5.4 million that was recovered from customers in 2008 through the RES program. Funds may either be applied not allocated to a specific renewable programs in the approved 2009 RES Implementation Plan.
² Contingency funds are broadly allocated to the program and applied only if necessary for full execution of the pilot program.

Additional Funding Supported by APS

Revenue Requirement

¹ Assumes completion of an APS rate case and allocation to rate case on 07/01/2012.

RES Adjustor

Effect on Residential RES Cap

¹ Assumes completion of an APS rate case and allocation to rate case on 07/01/2012.

NOTE:

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APS	RES¹	Total
\$8,764,000	\$2,070,000	\$10,834,000

Total Launch and Installation (2009-2011)¹	Average Ongoing
\$1,218,000	\$220,000
\$1,052,000	\$21,000
\$222,000	\$135,000
\$1,332,000	\$38,000
\$3,824,000	\$414,000

2010	2011	2012¹	2013	2014
\$400,414	\$1,226,900	\$554,788	\$0	\$0

**Arizona Public Service
Attachment B
Community Power Project Budget Summary: No Incentives Applied to the Reduction of System Capital Cost**

Community Power Project Expenses with remaining rollover budget		2010	2011	2012
2010 RES Net Funds Available	\$	5.4	1.1	\$ -
Program Cost	\$	(3.9)	(2.2)	\$ -
Revenue Requirement	\$	(0.4)	(1.2)	\$ (0.6)
Ongoing Program Costs	\$	-	-	\$ (0.4)
2008 RES Net Funds Remaining	\$	1.1	(2.3)	\$ (1.0)
Amount Funded through RES Adjustor	\$	-	2.3	\$ 1.0

NOTE:
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