

ORIGINAL  
OPEN MEETING



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MEMORANDUM

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AZ CORP COMMISSION  
DOCUMENT CONTROL

TO: THE COMMISSION

FROM: Utilities Division

DATE: February 28, 2005

RE: IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR APPROVAL OF THE ENVIRONMENTAL PORTFOLIO STANDARD CREDIT PURCHASE PROGRAM AND FOR THE AUTHORIZATION TO ENTER INTO EPS CREDIT CONTRACTS (DOCKET NO. E-01345A-05-0373)

In 2002, Arizona Public Service Company ("APS") initiated the Environmental Portfolio Standard Credit Purchase Program ("EPS Credit Purchase Program") as part of its effort to meet the requirements of the Environmental Portfolio Standard ("EPS") Rule. From 2002 through 2005, a total of 538 APS customers installed solar energy systems in the EPS Credit Purchase Program, which helped APS to meet a portion of its annual EPS requirement. In general, these customers installed various qualifying renewable energy systems on their properties. APS reimbursed them a portion of the costs of these systems, and in return APS acquired the renewable energy credits associated with these systems. APS could then apply these credits to its environmental portfolio requirements.

On April 7, 2005, the Arizona Corporation Commission ("Commission") entered Decision No. 67744, which adopted a settlement agreement concerning APS' rate case. The decision provided that subsequent to the approval of the settlement, renewable programs that directly involve APS' retail customers must be submitted to the Commission for approval.

On May 25, 2005, APS filed an Application for Approval of the Environmental Portfolio Standard Credit Purchase Program and for Authorization to Enter into EPS Credit Purchase Contracts (the subject application).

On November 21, 2005, APS filed a request to amend the application by replacing Exhibit A with a revised version of Exhibit A.

Proposed APS EPS Credit Purchase Program

The APS EPS Credit Purchase Program is one method by which APS can meet a portion of its annual renewable kWh requirement established in the Environmental Portfolio Standard. Instead of APS building renewable energy systems to meet the annual EPS requirement, APS offers incentives to customers who wish to install eligible renewable energy systems.

In return for the APS incentive, APS gets credit for the renewable kWh generated or conventional energy that is replaced with the customer-sited renewables. This credit helps APS meet its annual EPS requirement at a much lower cost than if APS had installed the renewable system itself.

The APS EPS Credit Purchase Program, as currently proposed, allows for four options for APS customers: 1) grid-tied photovoltaic systems; 2) off-grid photovoltaic systems; 3) solar water heating systems, and 4) solar heating, ventilation, and air conditioning ("HVAC") systems. An APS customer who wishes to install any of these types of systems may apply to APS for an incentive.

APS has established a reservation system by which qualifying APS customers may reserve program funding. Funds are made available for reservation on the first working day after January 1 of each year. Reservations for future years cannot be made. Multi-year reservations cannot be made.

For customers with photovoltaic systems and small water heating systems, the customer has 180 days from the date of the reservation confirmation to complete the installation. Customers may request extensions beyond the 180 days. If no extension is granted by APS, the funds will be made available to other customers.

For large solar water heating systems and solar air conditioning systems, the customer has 365 days from the date of the reservation confirmation to finish the installation. APS may allow extensions of this limit, if requested by the customer.

All systems must be installed by an Arizona-licensed contractor and inspected and approved by APS.

All systems eligible for credit purchase must be located on an APS customer's property, except for off-grid systems. Commercial systems may be owned by third parties and APS may, with customer consent, make payment to such third parties.

#### Grid-tied Photovoltaic Systems

In the grid-tied option, the customer's photovoltaic system is interconnected to the APS electric grid. The customer receives a one-time EPS credit purchase payment of \$3.00 per watt-DC. For system expansions, the payment is capped at 50 percent of the total expansion cost.

#### Off-grid Photovoltaic Systems

This option is available to both residential and commercial customers in remote areas that are not connected to the electric grid, but want to use solar energy to provide their electric power. APS makes this option available to non-APS customers who are remote residents in fringe areas that adjoin the APS service territory, as long as permission from the adjoining utility is obtained.

The participant receives a one-time EPS credit purchase payment of \$2.00 per watt-DC for the installation of an off-grid photovoltaic system, up to a maximum size of 5 kW.

#### Small Solar Water Heating Systems

The customer receives a one-time EPS credit purchase payment for the installation of a solar water heating system of \$0.50 per first-year kilowatt-hour savings based on the OG-300 rating from the Solar Rating and Certification Corporation<sup>1</sup>. The option is limited to systems rated at 10,000 kWh per year energy savings or less.

#### Large Solar Water Heating Systems

The commercial customer will receive a production-based incentive ("PBI") for the thermal energy delivered by a solar water heating system of \$0.07 per kilowatt-hour equivalent based on metered production in British Thermal Units ("BTUs"). The calculation for payment is the produced BTUs divided by 3,412 BTUs per kWh times \$0.07. The PBI is for a term of 10 years or until 50 percent of the total system cost is collected, whichever comes first. Payments are made at the end of each calendar quarter within 30 days of receipt of thermal meter readings provided by the customer. The minimum system size for this option is 5,000 kWh per year energy savings.

#### Solar HVAC Systems

This option is available to commercial customers to install a solar HVAC system. The customer will receive a PBI for thermal energy delivered for cooling by a solar HVAC system of \$0.16 per kilowatt-hour equivalent based on metered production. Systems that incorporate solar thermal heating and/or solar thermal water heating are eligible for the solar water heating PBI of \$0.07 per kilowatt-hour equivalent of thermal energy delivered for heating. The PBI is for the term of 10 years or until 50 percent of the total system cost is collected, whichever comes first. All heating and cooling payments are credited for calculation of the 50 percent cap. Payments are made at the end of each calendar quarter within 30 days of receipt of thermal meter readings, which are provided by the customer. The minimum system size is 10 tons of cooling. Cooling and heating must be metered and reported separately.

#### Dealers and Manufacturers of Photovoltaic Solar Energy Systems Requesting Incentives

Dealers and manufacturers of photovoltaic solar energy systems may apply for an EPS credit purchase agreement to install systems on their own facilities. APS has established various restrictions on the cost basis of the equipment. A dealer cannot profit from installing its own system on its facilities or include a mark-up for systems sold to itself or its employees. Dealers

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<sup>1</sup> The national Solar Rating and Certification Corporation ("SRCC") is a non-profit organization that develops and implements certification programs and national rating standards for solar energy equipment.

receive a one-time EPS credit purchase payment of \$3 per watt-DC or 50 percent of the system cost, whichever is less.

#### EPS Credit Purchase Contracts

In addition to the APS EPS Credit Purchase Program, APS has requested authorization to continue to enter into bi-lateral agreements to purchase EPS credits for energy generated from qualified renewable energy projects, other than through the EPS Credit Purchase Program. APS suggests that such authorization provides negotiating flexibility to both APS and its customers. Such flexibility will support and encourage the development of large renewable projects in the State of Arizona, according to APS.

#### Major Changes from the Existing APS EPS Credit Purchase Program

Since the original filing was made in May, APS has worked closely with a variety of stakeholders to establish a framework for an Arizona Uniform Credit Purchase Program ("UCPP"). The intent of the UCPP is to establish fundamental procedures for EPS credit purchases that can be implemented in a uniform manner throughout Arizona. The UCPP development is still ongoing, but APS has come to agreement with renewable industry members on some issues related to solar technologies.

APS has worked closely with the solar industry to modify the current APS Credit Purchase Program to reflect the new consensus with the solar industry that will likely become the foundation of the new UCPP effort. APS' November 21, 2005 proposed amendment incorporates a number of significant changes from the existing EPS Credit Purchase Program.

The APS-proposed incentive level for grid-tied photovoltaics is reduced from \$4.00 per watt-DC (which is in the current APS EPS Credit Purchase Program) to \$3.00 per watt-DC.

The APS-proposed incentive for small solar water heating systems is changed from a \$700 per system flat incentive (in the existing program) to an incentive that is set at \$0.50 per first year kilowatt-hour savings based upon certified ratings.

The APS proposal sets a \$500,000 cap on incentive payouts to any single customer in a calendar year.

The proposal introduces a new production based incentive ("PBI") for solar heating, ventilation, and air conditioning ("HVAC") systems as well as large commercial water heating systems. Under the PBI approach, customers will receive quarterly payments for the amount of thermal energy produced over a period of up to 10 years.

APS plans to allocate \$4.25 million to this program in 2006. Half of the funds will be allocated to residential customers and half to commercial customers. A sum of \$250,000 from

the commercial funds will be reserved for customers with photovoltaic systems that are willing to negotiate a PBI in lieu of an up-front incentive.

Staff's Review of the APS Application and Program

Staff has reviewed the APS application and is in general support of the program, with a few recommendations.

Staff recognizes that the revised APS Environmental Portfolio Standard Credit Purchase Program is a significant improvement over the existing APS program. APS has worked cooperatively with the solar industry to establish a common foundation for EPS credit purchases.

Staff supports the APS effort to establish production-based incentives. This is a new concept in Arizona. Until now, the primary incentives have been up-front incentives which help the customer "buy-down" the cost of installing a renewable system. This is advantageous to the customer who might not have the initial capital to buy and install a renewable energy system. However, the up-front incentive requires APS to buy, in effect, 20-30 years of future renewable kWh in a one-time payment.

The PBI approach allows APS to purchase only the renewable kWh that are needed in the current year, allowing APS to purchase many more renewable kWh for a given amount of portfolio funding. For instance, for the same amount of money used to offer an up-front incentive for six projects, APS could offer a PBI incentive for a dozen or possibly two dozen projects producing significantly more kWh in a given year.

Staff supports the APS effort to allocate \$250,000 from the commercial funds for PBI incentives. Staff believes that the allocation for PBIs should not be limited to photovoltaics, but should also be available for solar water heating and solar HVAC systems to qualify for PBI incentives in the 2006 program.

Staff recommends that APS subdivide the \$250,000 for PBIs into three allocations. That would be \$150,000 for photovoltaics and \$50,000 each for solar HVAC and solar water heating. If, by September 30, 2006, all of the funds in any of the three allocations are not yet reserved, the remaining money shall be made available to other customers.

In the original APS application, APS requested authorization to continue to enter into bi-lateral agreements to purchase EPS renewable energy credits for energy generated from eligible renewable energy resources which are not included in the 2006 APS EPS Credit Purchase Program. This request is really separate and distinctly different than the major request in the application which was to approve the 2006 EPS Credit Purchase Program.

Staff recommends denial of the request for authorization to enter into bi-lateral agreements at this time. Based upon inclusion of a Uniform Credit Purchase Program Section in the proposed EPS Rule amendments, Staff believes that by the end of 2006 there should be

established a uniform credit purchase requirement. At that time, APS may choose to request approval for authorization to enter into bi-lateral agreements consistent with the approved Uniform Credit Purchase Program. APS may, of course, request approval of individual agreements on a case-by-case basis. APS also may file subsequent applications to expand the programs and/or technologies that comprise its credit purchase program.

APS has indicated that there was a typographical error on the bottom line of Page 6 of the November 21, 2005 revised Exhibit A. The small solar water heating system option is limited to systems rated at 10,000 kWh per year energy savings or less, rather than the mistaken amount of 100,000 kWh per year.

#### Comments Filed in the Docket

On June 20, 2005, the Arizona Solar Energy Industries Association ("AriSEIA") filed comments on the initial May 25, 2005 APS filing. AriSEIA recommended, at that time, that the incentive for solar water heaters be set at an upfront incentive of \$1 per first-year kWh saved or one-half of the cost of the system. After AriSEIA met with APS, AriSEIA filed comments on December 8, 2005, responding to the November 21, 2005 APS-revised Exhibit A. In this letter, AriSEIA requested that the Commission approve the revised EPS Credit Purchase Program as filed by APS with an incentive of \$0.50 per first-year kWh saved.

In addition to AriSEIA, three other solar industry individuals and organizations filed comments. They were: Robert Annan, Industrial Solar Technology Corporation, and Kyocera Solar, Inc. All three letters were in support of the proposed APS EPS Credit Purchase Program.

The Greater Tucson Coalition for Solar Energy ("GTCSE") also filed comments, which encouraged the Commission to approve the program. However, GTCSE offered three recommendations. First, GTCSE did not like the \$500,000 annual cap on incentives to any single customer in a single year. It suggested that the limit be lifted for public institutions such as governments and schools. Second, GTCSE suggested that implementation of production based incentives "be tied to the capacity of financing entities to monetize the payments and assume the necessary up-front capital." Third, GTCSE recommended a timeline longer than 365 days for large projects or a mechanism for easy extension.

The City of Tucson filed a letter that was "in general support of the program," but offered some comments. Tucson believes that negotiating for production-based incentives is inconsistent with a Uniform Credit Purchase program. Tucson does not agree with an annual cap on incentives. Tucson suggested that projects needing an incentive above the cap should submit a proposal to the ACC for consideration. Tucson recommended against incentives for off-grid applications. Tucson also recommended that solar water heating systems should be allowed to replace natural gas.

S.O.L.I.D. USA, Inc. ("S.O.L.I.D.") filed comments in support of the proposed APS EPS Credit Purchase Program. However, S.O.L.I.D. also requested clarification of a number of issues related to the program.

S.O.L.I.D. comments that APS proposes that the "credit purchase agreement assigns the rights to all associated EPS credits." S.O.L.I.D. suggests that the program wording be changed to show that the credit purchase agreement assigns the rights to all associated EPS credits for which APS pays during the contract period and not for the entire life of the project.

S.O.L.I.D. further commented that on Page 3 of Exhibit A, APS specifies that systems "must be located on APS customer's property." S.O.L.I.D. requested that the wording be changed to "must be located on an APS customer's property or supply a central plant that generates energy for an APS customer."

S.O.L.I.D. mentions that the Large Solar Water Heating section of the proposed program mentions the "two customers per calendar year and a maximum of 60,000 therms per calendar year" restriction for projects that displace natural gas. This restriction was included in the waiver approved by the Commission in Decision No. 66565, dated November 13, 2003. S.O.L.I.D. asked for clarification that the restriction applies to hot water projects only and not to HVAC projects.

S.O.L.I.D. also asked for clarification of wording on Page 8 of Exhibit A that says that program incentives are "available to commercial customers to replace" certain systems. S.O.L.I.D. requests clarification that the term "replace" does not restrict the program to retrofits, but also allows new installations.

Finally, S.O.L.I.D. asks for clarification of wording on Page 8 of Exhibit A that says "replace an electric HVAC system." S.O.L.I.D. asks for clarification that a solar HVAC system must replace electricity for cooling, but can displace natural gas for both associated heating and hot water.

#### Comments Provided to Staff

Although he did not file written comments in the docket, Mr. Tom Bohner of Sun Systems, Inc. called Staff to express concern about the fact that APS would be using a performance-based incentive for small solar water heaters rather than a flat fee incentive. Mr. Bohner's concern was that such a performance-based incentive may cause dealers and customers to oversize systems and include the most efficient black chrome collectors which could cause system problems due to overheating. He contends that such overheating may cause future system damage, requiring future repair or replacement of equipment.

Staff Review of Comments Received

Staff has reviewed the comments filed in this docket. Staff supports the \$500,000 annual cap. This is a reasonable cap when the current budget is \$4.25 million. Without such a cap, four or fewer large customers could lock up most of the non-residential money in the reservation system, leaving many smaller customers without a chance to participate. Staff recommends that the Commission allow APS, if increased funds become available, to increase the cap if there is demand for such an increase and if sufficient funding is available after all other reservation commitments have been satisfied.

Staff supports the modest level of PBI reservation funding. This effort by APS will provide a test of whether customers really want such an incentive, rather than an upfront buy-down incentive.

Staff supports the APS 365-day timeline for larger projects, at this time. If more funding becomes available, the proposed Uniform Credit Purchase Program may be able to address this issue for future years.

Staff disagrees with the City of Tucson on incentives for off-grid applications. Off-grid applications, particularly in remote locations, will avoid the need for utilities or customers to build long distribution lines.

Staff agrees with the City of Tucson that solar water heating that replaces natural gas should be allowed in the Portfolio Standard. However, this is better addressed in the amended EPS Rules process. APS has already been granted a waiver that allows solar water heaters to replace natural gas in Decision No. 66565, dated November 18, 2003.

Staff agrees with S.O.L.I.D. that the program wording should be changed to indicate that the purchase agreement assigns all associated EPS credits for which APS pays during the contract period.

Staff has reviewed S.O.L.I.D.'s request to change the wording on Page 3 of Exhibit A that currently reads "must be located at customer's property." In response to S.O.L.I.D.'s proposed revised wording, APS has countered with a different approach. APS suggested the revision should say "must be located on an APS customer's property or supply a central plant that generates energy exclusively for APS customers." Staff believes that the S.O.L.I.D. wording is the better approach. Staff believes that using the new APS-proposed wording would preclude potential future large-scale district heating and cooling projects, where customers other than APS customers could participate. Staff recommends the inclusion of the S.O.L.I.D. wording, which would be followed by wording that would require additional metering for non-APS customers that may participate in the project.

Staff agrees with S.O.L.I.D. that clarification to the restrictions in Decision No. 66565 may be beneficial, but Staff believes that this issue should not be addressed in this docket.

Staff agrees with S.O.L.I.D. that the APS EPS Credit Purchase Program should clarify that new construction should be allowed.

Staff disagrees with S.O.L.I.D. that the program should say that a solar HVAC system must replace electricity for cooling, but can displace natural gas for both associated heating and hot water heating. This clarification goes beyond the scope of this docket and should be addressed in the current rule amendment docket.

Staff has considered the concerns expressed by Sun Systems, Inc. Although there may be some problems that result from the APS-proposed solar water heating incentive, it is too soon to know the scope of any potential problems. Staff recommends that APS be allowed to offer the proposed performance-based solar water heater incentive for the entire 2006 calendar year. This issue should be examined by the Uniform Credit Purchase Program Working Group, and APS should be required to refile its credit purchase plan in order to incorporate any results from that process.

#### Staff Recommendations

Staff recommends that the APS EPS Credit Purchase Program be approved, with some recommended changes.

Staff recommends that the funding reserved for production based incentives be allocated as \$150,000 for photovoltaics and \$50,000 each for solar HVAC systems and solar water heating systems. If, by September 30, 2006, all of the funds in any allocation are not yet reserved, the remaining money made available to other customers.

Staff recommends approval of the \$500,000 cap on annual incentive payments to any single customer, but recommends that the Commission allow APS, if increased funding becomes available, to increase the annual cap if there is demand for such an increase and if sufficient funding is available after all other reservation commitments have been satisfied.

Based upon suggestions made by S.O.L.I.D. USA, Inc., Staff recommends that APS modify the wording in Exhibit A of its November 21, 2005 filing as follows.

In the "General Requirements" section, Page 3 of Exhibit A, first paragraph, APS shall add a final sentence that says:

"The assignment of the associated EPS credits and environmental attributes to APS shall only apply to the contract period for which APS pays the customer."

On Page 3, last paragraph, APS shall modify the first sentence and add an additional sentence following the first sentence that says:

“All systems eligible for credit purchase must be located on an APS customer’s property or supply a central plant that generates energy for an APS customer, except for off-grid systems. Any project developer that builds an eligible system that also provides energy to a non-APS customer must provide metering to document the energy received by each customer.”

On Page 8, under Section 8, Solar HVAC Systems, the first bullet under “Qualifications for Solar Air Conditioning Systems,” shall be changed to read:

- “• This option is available to commercial customers and must replace an electric HVAC system, another HVAC system approved by the ACC, and may be used for new construction if not prohibited by another Commission Decision or waiver restriction.”

Staff further recommends denial of APS’ request for authorization to enter into bilateral agreements with customers to purchase EPS Credits for energy generated from qualified renewable energy projects that are not included in the APS EPS Credit Purchase Program. APS may, however, request approval of individual agreements on a case-by-case basis. APS also may file subsequent applications to expand the programs and technologies that comprise its credit purchase program.



Ernest G. Johnson  
Director  
Utilities Division

EGJ:RTW:lhm/JFW

ORIGINATOR: Ray Williamson

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**BEFORE THE ARIZONA CORPORATION COMMISSION**

- JEFF HATCH-MILLER  
Chairman
- WILLIAM A. MUNDELL  
Commissioner
- MARC SPITZER  
Commissioner
- MIKE GLEASON  
Commissioner
- KRISTIN K. MAYES  
Commissioner

IN THE MATTER OF THE APPLICATION )  
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DOCKET NO. E-01345A-05-0373  
 DECISION NO. \_\_\_\_\_  
ORDER

Open Meeting  
 March 15 and 16, 2006  
 Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Arizona Public Service Company ("APS") is certificated to provide electric service as a public service corporation in the State of Arizona.
2. In 2002, APS initiated the Environmental Portfolio Standard Credit Purchase Program ("EPS Credit Purchase Program") as part of its effort to meet the requirements of the Environmental Portfolio Standard ("EPS") Rule. From 2002 through 2005, a total of 538 APS customers installed solar energy systems in the EPS Credit Purchase Program, which helped APS to meet a portion of its annual EPS requirement. In general, these customers installed various qualifying renewable energy systems on their properties. APS reimbursed them a portion of the costs of these systems, and in return APS acquired the renewable energy credits associated with these systems. APS could then apply these credits to its environmental portfolio requirements.

1           3.       On April 7, 2005, the Arizona Corporation Commission (“Commission”) entered  
2 Decision No. 67744, which adopted a settlement agreement concerning APS’ rate case. The  
3 decision provided that subsequent to the approval of the settlement, renewable programs that  
4 directly involve APS’ retail customers must be submitted to the Commission for approval.

5           4.       On May 25, 2005, APS filed an Application for Approval of the Environmental  
6 Portfolio Standard Credit Purchase Program and for Authorization to Enter into EPS Credit  
7 Purchase Contracts (the subject application).

8           5.       On November 21, 2005, APS filed a request to amend the application by replacing  
9 Exhibit A with a revised version of Exhibit A.

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11 Proposed APS EPS Credit Purchase Program

12           6.       The APS EPS Credit Purchase Program is one method by which APS can meet a  
13 portion of its annual renewable kWh requirement established in the Environmental Portfolio  
14 Standard. Instead of APS building renewable energy systems to meet the annual EPS requirement,  
15 APS offers incentives to customers who wish to install eligible renewable energy systems.

16           7.       In return for the APS incentive, APS gets credit for the renewable kWh generated  
17 or conventional energy that is replaced with the customer-sited renewables. This credit helps APS  
18 meet its annual EPS requirement at a much lower cost than if APS had installed the renewable  
19 system itself.

20           8.       The APS EPS Credit Purchase Program, as currently proposed, allows for four  
21 options for APS customers: 1) grid-tied photovoltaic systems; 2) off-grid photovoltaic systems; 3)  
22 solar water heating systems, and 4) solar heating, ventilation, and air conditioning (“HVAC”)  
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25           9.       APS has established a reservation system by which qualifying APS customers may  
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5           23.     The APS-proposed incentive level for grid-tied photovoltaics is reduced from \$4.00  
6 per watt-DC (which is in the current APS EPS Credit Purchase Program) to \$3.00 per watt-DC.

7           24.     The APS-proposed incentive for small solar water heating systems is changed from  
8 a \$700 per system flat incentive (in the existing program) to an incentive that is set at \$0.50 per  
9 first year kilowatt-hour savings based upon certified ratings.

10          25.     The APS proposal sets a \$500,000 cap on incentive payouts to any single customer  
11 in a calendar year.

12          26.     The proposal introduces a new production based incentive ("PBI") for solar heating,  
13 ventilation, and air conditioning ("HVAC") systems as well as large commercial water heating  
14 systems. Under the PBI approach, customers will receive quarterly payments for the amount of  
15 thermal energy produced over a period of up to 10 years.

16          27.     APS plans to allocate \$4.25 million to this program in 2006. Half of the funds will  
17 be allocated to residential customers and half to commercial customers. A sum of \$250,000 from  
18 the commercial funds will be reserved for customers with photovoltaic systems that are willing to  
19 negotiate a PBI in lieu of an up-front incentive.

20  
21 Staff's Review of the APS Application and Program

22          28.     Staff has reviewed the APS application and is in general support of the program,  
23 with a few recommendations.

24          29.     Staff recognizes that the revised APS Environmental Portfolio Standard Credit  
25 Purchase Program is a significant improvement over the existing APS program. APS has worked  
26 cooperatively with the solar industry to establish a common foundation for EPS credit purchases.

27          30.     Staff supports the APS effort to establish production-based incentives. This is a  
28 new concept in Arizona. Until now, the primary incentives have been up-front incentives which

1 help the customer "buy-down" the cost of installing a renewable system. This is advantageous to  
2 the customer who might not have the initial capital to buy and install a renewable energy system.  
3 However, the up-front incentive requires APS to buy, in effect, 20-30 years of future renewable  
4 kWh in a one-time payment.

5 31. The PBI approach allows APS to purchase only the renewable kWh that are needed  
6 in the current year, allowing APS to purchase many more renewable kWh for a given amount of  
7 portfolio funding. For instance, for the same amount of money used to offer an up-front incentive  
8 for six projects, APS could offer a PBI incentive for a dozen or possibly two dozen projects  
9 producing significantly more kWh in a given year.

10 32. Staff supports the APS effort to allocate \$250,000 from the commercial funds for  
11 PBI incentives. Staff believes that the allocation for PBIs should not be limited to photovoltaics,  
12 but should also be available for solar water heating and solar HVAC systems to qualify for PBI  
13 incentives in the 2006 program.

14 33. Staff recommends that APS subdivide the \$250,000 for PBIS into three allocations.  
15 That would be \$150,000 for photovoltaics and \$50,000 each for solar HVAC and solar water  
16 heating. If, by September 30, 2006, all of the funds in any of the three allocations are not yet  
17 reserved, the remaining money shall be made available to other customers.

18 34. In the original APS application, APS requested authorization to continue to enter  
19 into bi-lateral agreements to purchase EPS renewable energy credits for energy generated from  
20 eligible renewable energy resources which are not included in the 2006 APS EPS Credit Purchase  
21 Program. This request is really separate and distinctly different than the major request in the  
22 application which was to approve the 2006 EPS Credit Purchase Program.

23 35. Staff recommends denial of the request for authorization to enter into bi-lateral  
24 agreements at this time. Based upon inclusion of a Uniform Credit Purchase Program Section in  
25 the proposed EPS Rule amendments, Staff believes that by the end of 2006 there should be  
26 established a uniform credit purchase requirement. At that time, APS may choose to request  
27 approval for authorization to enter into bi-lateral agreements consistent with the approved Uniform  
28 Credit Purchase Program. APS may, of course, request approval of individual agreements on a

1 case-by-case basis. APS also may file subsequent applications to expand the programs and/or  
2 technologies that comprise its credit purchase program.

3 36. APS has indicated that there was a typographical error on the bottom line of Page 6  
4 of the November 21, 2005 revised Exhibit A. The small solar water heating system option is  
5 limited to systems rated at 10,000 kWh per year energy savings or less, rather than the mistaken  
6 amount of 100,000 kWh per year.

7  
8 Comments Filed in the Docket

9 37. On June 20, 2005, the Arizona Solar Energy Industries Association ("AriSEIA")  
10 filed comments on the initial May 25, 2005 APS filing. AriSEIA recommended, at that time, that  
11 the incentive for solar water heaters be set at an upfront incentive of \$1 per first-year kWh saved or  
12 one-half of the cost of the system. After AriSEIA met with APS, AriSEIA filed comments on  
13 December 8, 2005, responding to the November 21, 2005 APS-revised Exhibit A. In this letter,  
14 AriSEIA requested that the Commission approve the revised EPS Credit Purchase Program as filed  
15 by APS with an incentive of \$0.50 per first-year kWh saved.

16 38. In addition to AriSEIA, three other solar industry individuals and organizations  
17 filed comments. They were: Robert Annan, Industrial Solar Technology Corporation, and  
18 Kyocera Solar, Inc. All three letters were in support of the proposed APS EPS Credit Purchase  
19 Program.

20 39. The Greater Tucson Coalition for Solar Energy ("GTCSE") also filed comments,  
21 which encouraged the Commission to approve the program. However, GTCSE offered three  
22 recommendations. First, GTCSE did not like the \$500,000 annual cap on incentives to any single  
23 customer in a single year. It suggested that the limit be lifted for public institutions such as  
24 governments and schools. Second, GTCSE suggested that implementation of production based  
25 incentives "be tied to the capacity of financing entities to monetize the payments and assume the  
26 necessary up-front capital." Third, GTCSE recommended a timeline longer than 365 days for  
27 large projects or a mechanism for easy extension.

28 ...

1           40.     The City of Tucson filed a letter that was “in general support of the program,” but  
2 offered some comments. Tucson believes that negotiating for production-based incentives is  
3 inconsistent with a Uniform Credit Purchase program. Tucson does not agree with an annual cap  
4 on incentives. Tucson suggested that projects needing an incentive above the cap should submit a  
5 proposal to the ACC for consideration. Tucson recommended against incentives for off-grid  
6 applications. Tucson also recommended that solar water heating systems should be allowed to  
7 replace natural gas.

8           41.     S.O.L.I.D. USA, Inc. (“S.O.L.I.D.”) filed comments in support of the proposed APS  
9 EPS Credit Purchase Program. However, S.O.L.I.D. also requested clarification of a number of  
10 issues related to the program.

11           42.     S.O.L.I.D. comments that APS proposes that the “credit purchase agreement  
12 assigns the rights to all associated EPS credits.” S.O.L.I.D. suggests that the program wording be  
13 changed to show that the credit purchase agreement assigns all associated EPS credits for which  
14 APS pays during the contract period and not for the entire life of the project.

15           43.     S.O.L.I.D. further commented that on Page 3 of Exhibit A, APS specifies that  
16 systems “must be located on APS customer’s property.” S.O.L.I.D. requested that the wording be  
17 changed to “must be located on an APS customer’s property or supply a central plant that  
18 generates energy for an APS customer.”

19           44.     S.O.L.I.D. mentions that the Large Solar Water Heating section of the proposed  
20 program mentions the “two customers per calendar year and a maximum of 60,000 therms per  
21 calendar year” restriction for projects that displace natural gas. This restriction was included in the  
22 waiver approved by the Commission in Decision No. 66565, dated November 13, 2003.  
23 S.O.L.I.D. asked for clarification that the restriction applies to hot water projects only and not to  
24 HVAC projects.

25           45.     S.O.L.I.D. also asked for clarification of wording on Page 8 of Exhibit A that says  
26 that program incentives are “available to commercial customers to replace” certain systems.  
27 S.O.L.I.D. requests clarification that the term “replace” does not restrict the program to retrofits,  
28 but also allows new installations.

1           46.     Finally, S.O.L.I.D. asks for clarification of wording on Page 8 of Exhibit A that  
2 says "replace an electric HVAC system." S.O.L.I.D. asks for clarification that a solar HVAC  
3 system must replace electricity for cooling, but can displace natural gas for both associated heating  
4 and hot water.

5  
6 Comments Provided to Staff

7           47.     Although he did not file written comments in the docket, Mr. Tom Bohner of Sun  
8 Systems, Inc. called Staff to express concern about the fact that APS would be using a  
9 performance-based incentive for small solar water heaters rather than a flat fee incentive.  
10 Mr. Bohner's concern was that such a performance-based incentive may cause dealers and  
11 customers to oversize systems and include the most efficient black chrome collectors which could  
12 cause system problems due to overheating. He contends that such overheating may cause future  
13 system damage, requiring future repair or replacement of equipment.

14  
15 Staff Review of Comments Received

16           48.     Staff has reviewed the comments filed in this docket. Staff supports the \$500,000  
17 annual cap. This is a reasonable cap when the current budget is \$4.25 million. Without such a  
18 cap, four or fewer large customers could lock up most of the non-residential money in the  
19 reservation system, leaving many smaller customers without a chance to participate. Staff  
20 recommends that the Commission allow APS, if increased funds become available, to increase the  
21 cap if there is demand for such an increase and if sufficient funding is available after all other  
22 reservation commitments have been satisfied.

23           49.     Staff supports the modest level of PBI reservation funding. This effort by APS will  
24 provide a test of whether customers really want such an incentive, rather than an upfront buy-down  
25 incentive.

26           50.     Staff supports the APS 365-day timeline for larger projects, at this time. If more  
27 funding becomes available, the proposed Uniform Credit Purchase Program may be able to address  
28 this issue for future years.

1           51.     Staff disagrees with the City of Tucson on incentives for off-grid applications. Off-  
2 grid applications, particularly in remote locations, will avoid the need for utilities or customers to  
3 build long distribution lines.

4           52.     Staff agrees with the City of Tucson that solar water heating that replaces natural  
5 gas should be allowed in the Portfolio Standard. However, this is better addressed in the amended  
6 EPS Rules process. APS has already been granted a waiver that allows solar water heaters to  
7 replace natural gas in Decision No. 66565, dated November 18, 2003.

8           53.     Staff agrees with S.O.L.I.D. that the program wording should be changed to  
9 indicate that the purchase agreement assign all associated EPS credits for which APS pays during  
10 the contract period.

11           54.     Staff has reviewed S.O.L.I.D.'s request to change the wording on Page 3 of Exhibit  
12 A that currently reads "must be located at customer's property." In response to S.O.L.I.D.'s  
13 proposed revised wording, APS has countered with a different approach. APS suggested the  
14 revision should say "must be located on an APS customer's property or supply a central plant that  
15 generates energy exclusively for APS customers." Staff believes that the S.O.L.I.D. wording is the  
16 better approach. Staff believes that using the new APS-proposed wording would preclude  
17 potential future large-scale district heating and cooling projects, where customers other than APS  
18 customers could participate. Staff recommends the inclusion of the S.O.L.I.D. wording, which  
19 would be followed by wording that would require additional metering for non-APS customers that  
20 may participate in the project.

21           55.     Staff agrees with S.O.L.I.D. that clarification to the restrictions in Decision No.  
22 66565, but Staff believes that this issue should not be addressed in this docket.

23           56.     Staff agrees with S.O.L.I.D. that the APS EPS Credit Purchase Program should  
24 clarify that new construction should be allowed.

25           57.     Staff disagrees with S.O.L.I.D. that the program should say that a solar HVAC  
26 system must replace electricity for cooling, but can displace natural gas for both associated heating  
27 and hot water heating. This clarification goes beyond the scope of this docket and should be  
28 addressed in the current rule amendment docket.

1           58.     Staff has considered the concerns expressed by Sun Systems, Inc. Although there  
2 may be some problems that result from the APS-proposed solar water heating incentive, it is too  
3 soon to know the scope of any potential problems. Staff recommends that APS be allowed to offer  
4 the proposed performance-based solar water heater incentive for the entire 2006 calendar year.  
5 This issue should be examined by the Uniform Credit Purchase Program Working Group, and APS  
6 should be required to refile its credit purchase plan in order to incorporate any results from that  
7 process.

8  
9     Staff Recommendations

10           59.     Staff recommends that the APS EPS Credit Purchase Program be approved, with  
11 some recommended changes.

12           60.     Staff recommends that the funding reserved for production based incentives be  
13 allocated as \$150,000 for photovoltaics and \$50,000 each for solar HVAC systems and solar water  
14 heating systems. If, by September 30, 2006, all of the funds in any allocation are not yet reserved,  
15 the remaining money shall be made available to other customers.

16           61.     Staff recommends approval of the \$500,000 cap on annual incentive payments to  
17 any single customer, but recommends that the Commission allow APS, if increased funding  
18 becomes available, to increase the annual cap if there is demand for such an increase and if  
19 sufficient funding is available after all other reservation commitments have been satisfied.

20           62.     Based upon suggestions made by S.O.L.I.D. USA, Inc., Staff recommends that APS  
21 modify the wording in Exhibit A of its November 21, 2005, filing as follows.

22           In the "General Requirements" section, Page 3 of Exhibit A, first paragraph, APS shall add  
23 a final sentence that says:

24           "The assignment of the associated EPS credits and environmental attributes to APS  
25 shall only apply to the contract period for which APS pays the customer."

26           On Page 3, last paragraph, APS shall modify the first sentence and add an additional  
27 sentence following the first sentence that says:

28           "All systems eligible for credit purchase must be located on an APS customer's  
property or supply a central plant that generates energy for an APS customer,  
except for off-grid systems. Any project developer that builds an eligible system

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that also provides energy to a non-APS customer must provide metering to document the energy received by each customer.”

On Page 8, under Section 8, Solar HVAC Systems, the first bullet under “Qualifications for Solar Air Conditioning Systems,” shall be changed to read:

“• This option is available to commercial customers and must replace an electric HVAC system, another HVAC system approved by the ACC, and may be used for new construction if not prohibited by another Commission Decision or waiver restriction.”

63. Staff further recommends denial of APS’ request for authorization to enter into bilateral agreements with customers to purchase EPS Credits for energy generated from qualified renewable energy projects that are not included in the APS EPS Credit Purchase Program. APS may, however, request approval of individual agreements on a case-by-case basis. APS also may file subsequent applications to expand the programs and technologies that comprise its credit purchase program.

CONCLUSIONS OF LAW

1. APS is an Arizona public service corporation within the meaning of Article XV, Section 2, of the Arizona Constitution.
2. The Commission has jurisdiction over APS and over the subject matter of the application.
3. The Commission, having reviewed the application and Staff’s Memorandum dated February 28, 2006, concludes that the filing is in the public interest.

ORDER

IT IS THEREFORE ORDERED that the APS Credit Purchase Program is hereby approved, with the modifications recommended in Findings of Fact Nos. 60, 61 and 63.

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IT IS FURTHER ORDERED that APS' request for authorization to enter into bilateral contracts to purchase EPS Credits for energy generated from qualified renewable energy projects that are not included in the APS EPS Credit Purchase Program is denied.

IT IS FURTHER ORDERED that this Order shall become effective immediately.

**BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

CHAIRMAN		COMMISSIONER
COMMISSIONER	COMMISSIONER	COMMISSIONER

IN WITNESS WHEREOF, I BRIAN C. McNEIL, Executive Director of the Arizona Corporation Commission, have hereunto, set my hand and caused the official seal of this Commission to be affixed at the Capitol, in the City of Phoenix, this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

\_\_\_\_\_  
BRIAN C. McNEIL  
Executive Director

DISSENT: \_\_\_\_\_

DISSENT: \_\_\_\_\_

EGJ:RTW:lhm/JFW

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