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AZ CORP COMMISSION
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TO: The Arizona Corporation Commission
FROM: The Solar Alliance
DATE: April 9, 2010
DOCKET No.: E-01345A-09-0338

The Solar Alliance appreciates this opportunity to address the Arizona Corporation Commission on the matter of "ARIZONA PUBLIC SRVICE COMPANY'S APPLICATON FOR MODIFICATION TO THE RESIDENTIAL DISTRIBUTED ENERGY INCENTIVE" (DOCKET NO. E-01345A-09-0338)

The Solar Alliance (Alliance) commends the Arizona Corporation Commission (Commission) and Arizona Public Service Company (APS) for what has become an extremely successful residential distributed renewable energy program. The exponential growth in demand for residential renewable energy systems, which comprise primarily of solar thermal and solar electric systems, offers strong evidence that Arizona utility customers are ready to adopt renewable energy technologies on a scale capable of meeting the future residential Distributed Generation (DG) goals as set forth in the Commission's Renewable Energy Standard (RES).

The Alliance supports policies that build a foundation for long term, sustainable solar markets. As these more permanent structures come into place and market matures, modifying incentives, which are often more "short term", can make sense. The Solar Alliance supports adjustments to incentives in a manner that is predictable and in a manner that allows APS the flexibility required to attain its RES requirements for residential DG, based on market conditions.

The current situation with APS's residential program is unfortunate in that the solar industry did not have insight into the accelerated rate of 2010 funding depletion that began in the fourth quarter of 2009. The Alliance is concerned that such a quick and steep drop in rebates could negatively impact the market (demand and supply). The Solar Alliance supports the concept of reduced incentive levels outlined in APS's request. We recommend, however, the Commission consider modifying the schedule and implement more transparent process to determining funding levels and resulting incentives. To that end, the Alliance has specific recommendations for the Commission to consider that will strengthen market continuity and improve visibility into APS's residential programs going forward.

Concerns and Analysis

By far the most serious concern with the Staff proposal is that it is almost certain the program will run out of money in about a month if it is adopted. Predictions based on numbers from the APS filing suggest that between March 31st and Aug 31st APS will be able to utilize approx $4.1 million for residential incentives, which will lead to funding for approximately 427 systems. At a reported reservation rate of 110 systems a week, it is easy to predict that funding will be exhausted by mid May. This would lead to a period of about 3.5 months (mid-May to Sep. 1st) when there would be no available funding. This is to be followed by a second funding cycle, later in the year, which would also likely be exhausted in around a month creating a second funding drought from mid-October through November and December. This would lead to 5.5 to 6 months over the next year when there would be no residential incentives available, assuming that the residential market maintains its current uptake of 110 systems per week.

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Staff does recommend that only the first 3MW of incentives be funded at the $2.15 per watt incentive and that incentives after that be at $1.95 per watt. Based on the below analysis (See section labeled "staff proposal") the $1.95 per watt incentive would not be reached in the first funding cycle, and about 2/3 of the systems in the second funding cycle (Sep. 1 to Dec. 31st) would be at the $1.95 per watt incentive. Calculations indicate that the lower incentive would lead to an additional 60 (about half a weeks worth) of systems and funding would still be exhausted in early to mid-October, leaving no incentives available for the remainder of the year.

Note: Multiply all # of system data by .6 to get # of PV systems.

	Funding Cycle 1 - Mar 31st to Aug 31	Funding Cycle 2 - Sep 1 to Dec. 31
Total estimated demand for solar systems per funding cycle	2200	1760
APS ask at current funding levels. ($2.15 PV) ($.75 per kWh SHW equivalent)		
Current residential RES adjuster	$3.46	$3.46
Total # of systems (PV+SHW) per funding cycle executable with current funding and **current incentives (the do nothing scenario).**	311	311
Total # of systems (PV+SHW) per funding cycle executable with current funding and **lowered incentives.**	427	427
Approval of an Additional 25.9 Million		
Proposed residential RES adjuster	$4.94	$4.94
Total # of Systems (PV+SHW) per funding cycle executable with additional funding and **current incentives (based on current incentives)**	1,292	1,292
Total # of Systems (PV+SHW) per funding cycle executable with additional funding and **lowered incentives**	1879	1987
Staff Proposal		
Total # of Systems (PV+SHW) per funding cycle executable with current funding and **lowered $2.25 incentives transferring to $1.95 per watt at 3MW.**	427	459

Assumptions	
Monies Remaining in APS program (April 15)	$8,200,000.00
Monies Remaining in APS program (April 15) with additional 25.9 Million	$34,100,000.00
Monies Remaining in APS program (April 15) with additional 20 Million	$28,200,000.00
Average incentive per system (current)	$13,200.00
Average incentive per system ($2.15)	$9,600.00
Average incentive per system ($1.95)	$8,580.00
Average system size in kW	4,400
Current Average Number of solar system requests per week	110
Current Average Number of solar SHW requests per month (Estimate)	44
Current Average Number of PV requests per month (Estimate)	66
Current Average Monthly Expenditure	$1,500,000.00
Percentage of systems that are SHW	0.4
Percentage of systems that are PV	0.6
# of systems that equals 4MW assuming 4.4 kW average system size (2.25 lower incentives)	909
# of systems that equals 3MW assuming 4.4 kW average system size (2.25 lower incentives)	606
Cost of 4 MW worth of incentives at current incentive levels	$11,998,800.00
Cost of 4 MW worth of incentives at lowered incentive levels	$8,726,400.00
Cost of 3 MW worth of incentive at lowered incentive levels	$5,817,600.00
$ Spent on PV incentives in 2010	$31,000,000.00
$ Spent on SHW incentives in 2010	$2,000,000.00
Percentage of any given incentive dollar spent that is PV	94%
Cost of 2200 systems at 13,200 per system	$29,040,000.00

Response to Comments Filed to the Docket

On April 7th, 2010 an e-mail from Mr. Jim Combs was docketed that misstated the potential quantity of Renewable Energy Credits that could be generated from a grid-connected 3 kW-STC photovoltaic (PV) power system. Mr. Combs' assumes that a 3 kW PV system offsets about 3,000 kWh/year. According to one of our member companies, American Solar Electric, the production of a 3 kW system is approximately 5,250 kWh / year.

In most cases, PV modules come with power production warranties that last 25 years. If we assume the PV system is operational over the life of the module warranty then the 3 kW PV system will generate 130,949 Renewable Energy Credits (REC) for APS. With an incentive amount of $6,450 ($2.15/W), the cost to APS is $0.049/REC during the power warranty period of the PV modules.

According to the web site of one Arizona-based solar thermal system integrator, the warranty for their solar thermal collector is 10 years. Assuming Mr. Combs solar thermal system is operational during the life of a 10 year warranty then the system would generate 30,000 RECs for APS. With an incentive amount of $1,500, the cost to APS is $0.05/REC during the warranty period of the solar thermal collector.

"Cost Reduction & Continuity Program"

If the Commission approves APS's request to modify their current residential solar incentives, the Alliance recommends that the Commission also require APS to submit a "Cost Reduction & Continuity Plan" within their 2011 REST implementation filing that makes future incentive reductions predictable, both in degree as well as timing, and that would propose mechanisms for meeting unmet demand if APS were not in compliance with their residential DG requirements. The plan should include:

1. A mechanism to allow automatic incentive reductions or increases, depending on whether or not APS is attaining RES compliance.
2. A mechanism to adjust program funding forward between REST implementation plan approvals to ensure market continuity.

Reporting

As stated above, there was little warning of the impending incentive decline. Advance warning of such occurrences would have been of great assistance. Renewable energy companies could have made appropriate adjustments to procurement, sales, advertising and even hiring and would have been able to mitigate the need to cancel or modify contracts and associated product orders. Advanced warning may have also stabilized the market and could have prevented program "over-heating". For example, marketing of the program could have been a lower priority if compliance with the program was imminent and program funds were about to be exhausted. The Alliance recommends the immediate implementation of a reporting tool that consumers and industry can use to gauge the status of APS's residential programs. This tool should be located on APS's web site and provide the following information:

1. The amount of Residential UFI funding available for current 2010 reservation period and the number of new reservations confirmed in the past week along with project cancellations that occurred in the same period.
2. The percentage of 2010 residential compliance attained.

Customer Requests Less Incentive (one of Staff's Recommendation #2)

Section #2 of Staff' Recommendations states:

"APS would be allowed to provide PV incentives at less than the maximum, if requested by a customer."

It is unclear what is meant here. Is staff proposing that customers who request a lower incentive receive funding sooner? If so, this would seem to indicate that staff believes that a reverse auction mechanism similar, to that in place for the non-residential DG program, is appropriate. The alliance feels that any sort of auction mechanism would be administratively unworkable.

The Alliance also believes that to establish "triggers" that allow APS to automatically lower the residential PV incentive without tying the drop to its 2010 compliance targets establishes the concept that MW demand be the barometer for whether or not APS has met its obligations to the ACC. We strongly disagree with this approach and suggest the following change to Staff's Recommended Order & Opinion:

1. Strike Staff's recommendation # 2 and insert: "APS shall maintain its residential PV incentive at $2.15 / watt if it has not reached compliance with its 2010 residential requirement upon reserving an additional 3 MW of capacity."

<u>Reservations & Funding Periods (assumes ACC wants to increase funding)</u>

If the Commission decides that additional funding is appropriate the Alliance suggests that it should not be approved in one lump sum but should be allotted according to the following:

1) The remaining funding should be divided up across two funding tranches.
2) The first tranche would be from April 1st, 2010 to June 30th, 2010, and if the commission feels that some amount of additional funding is appropriate for this funding period it should authorize funding as part of this rulemaking. An additional $8 million for this tranche, coupled with lower incentives, would likely mitigate the worst effects of any funding shortages, eliminating multi-month work droughts that could potentially lead to companies scaling back.
3) The second tranche, which will be from July 1st, 2010 to September 30th, 2010, should not be funded in advance. However, if by the start of the third week in June, 2010 APS feels that half of the currently remaining funds that were set aside will not be sufficient to meet demand across the second tranche then it can appeal to the commission for a funding increase of a pre-approved additional $8 million, that will be granted by Commission Staff without the necessity of an open meeting. Of course, transparent up-to-date monitoring of the program will be vital.
4) Demand during the 4th tranche, which will consist of October 1st, 2010 through the remainder of the year, will be met by granting APS authority to initiate reservations for 2011 residential compliance on October 1st, 2010 with notice that PV systems reserved after October 1st, 2010 and before January 1st, 2011 will not be commissioned until January 1st 2011.
5) Any 2010 funds remaining in the residential program at the end of the second tranche would be allocated on a "first-come, first-served" basis to customers indicating a project completion date prior to 1/1/2011.

Such a mechanism will allow the Commission to right-size any additional funding while at the same time exploiting the benefits of lowered incentive levels.

<u>Reservations & Funding Periods (assumes ACC does not want to increase funding)</u>

In the event that the Commission decides to limit residential funds to the balance APS noted in their filing, the Alliance strongly suggests the following changes to Staff's Recommended Order and Opinion in an attempt to mitigate some of the more severe effects "stop/start" funding could have on the industry serving APS's customers:

1) The first tranche of funding should be changed to "April 1st, 2010 to June 30th, 2010".
2) The second tranche should be changed to "July 1st, 2010 to September 30th, 2010".

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3) Grant APS authority to initiate reservations for 2011 residential compliance on October 1st, 2010 with notice that PV systems reserved after this date and before January 1st, 2011 will not be commissioned until 2011 or as APS staff is available to inspect.
4) In the instance where 2010 funds remain available after October 1st, 2010, the 2010 program shall continue and APS may postpone implementation of the 2011 reservation period until all 2010 funds are reserved.

The Alliance does not believe moving the start of the 2011 reservation period into the fourth quarter of 2010 will create a funding issue in 2011. The cycle of construction associated with residential PV systems is such that a three month schedule – from contract signing to utility final inspection - is common in Arizona. It appears that APS took this approach for 2010 based on Figure 2 of their consultants approach. Not allowing customers to submit 2011 reservations until the first of the year creates a significant delay in APS engaging their customers and could contribute to non-compliance in the residential program next year.

The Alliance looks forward to working with the Commission and Arizona Public Service on workable and sustainable changes to the Residential REST program.

Respectfully, submitted on behalf of the Solar Alliance.
Tom Alston

Thomas J. Alston

State Lead for the Solar Alliance