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Green Choice Solar

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ARIZONA CORPORATION COMMISSION
DOCKET CONTROL

Arizona Corporation Commission
DOCKETED
SEP 28 2017

DOCKETED BY
JSM

Chairman Gary Pierce
Commissioner Bob Stump
Commissioner Sandra D. Kennedy
Commissioner Paul Newman
Commissioner Brenda Burns
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Re: APS 2013 REST Implementation Plan (Docket No. E-01345A-12-0290)

E-01345A-10-0394

Dear Chairman Pierce and Commissioners:

As the CEO of Green Choice Solar (GCS), I am submitting comments on the APS 2013 REST Implementation Plan (Plan). This letter specifically concerns the continuation of cash incentives for APS's successful non-residential PBI program. Although APS has achieved compliance with its Distributed Energy (DE) requirements through 2015, I contend that discontinuing cash incentives would be disastrous to the solar industry and customers wanting to install solar. Maintaining stable and predictable levels of sufficient capacity will enable the solar industry not only to bring down installation costs for our non-residential customers but also yield savings to APS ratepayers. Further, under the **right circumstances**, I envision no utility incentives will be needed in the near future to substantiate the value proposition of distributed solar energy.

I would like to thank APS for convening a robust stakeholder process earlier this year in preparation of its 2013 Plan. The process was constructive, as APS listened to the solar industry's concerns and suggestions. I look forward to continuing to participate in APS's formalized stakeholder process in the coming years.

I started GCS in Scottsdale in 2009 as a solar PV integrator, providing turnkey custom services to the non-residential market. *The Business Journal* ranked GCS as the top solar installer in 2011. Our largest installations in the APS service territory include Crescent Crown Distributing, Paradise Valley Unified School District and the Jewish Community Center.

GCS uses the local supply chain for deploying systems, including K2 Electric, Urban Energy, Progressive Roofing and Skyline Steel. For project financing, GCS has established partnerships with several local lending institutions, including Biltmore Bank and National Bank of Arizona.

These relationships, which drive a substantial amount of economic activity in the Valley, would be jeopardized if the Commission fails to approve APS's highest capacity block alternative.

Distributed Energy Options

In its 2013 Plan, APS proposes two primary DE options, the first of which ends new PBIs for the non-residential market and the second of which provides four different capacity block alternatives. Option 1 suspends the non-residential DE market indefinitely, while many of the capacity block alternatives of Option 2 upend market progress.

However, the 20 MW Block 4 alternative equals roughly the approved 2012 non-residential program. Moreover, it has four 5 MW nomination periods, providing for greater market stability and continuity throughout the year. Therefore, I urge the Commission to adopt APS's highest capacity option of 20 MW to ensure that the PBI program continues at the same level as it did in 2012.

Schools and Government Program

The Schools and Government (S&G) market has considerable potential and is still worth pursuing by solar developers. I support APS's request of \$31.5 million in additional lifetime authorization to fund its expansion. In addition, GCS agrees with APS's proposed administrative rollout of the 18.75 MW allocated to third-party ownership, which entails splitting the MW capacity equally over six bi-monthly nomination cycles. Since the third party ownership part of the S&G Program will operate on the same competitive model as the Standard PBI Program, I would urge the Commission to resist imposing other unnecessarily limiting criteria.

PBIs Still Needed

In an effort to recover more of its fixed costs from its larger customers, APS's rate schedules for its commercial customers have higher demand charges (measured in kW) and lower energy charges (measured in kWh). When PBIs were higher, rate design had not been an issue in the calculation of cost savings for customers considering switching to solar. However, with lower cash incentives times have changed, and rate design is now front and center.

In most cases, our customers decide to install solar based on the attendant cost savings in their monthly electric bills. PBIs still remain a key economic consideration in this evaluation as they provide the needed revenue complement to make up for diminished cost savings resulting from higher demand charges.

Under APS's reverse competitive auction, cash incentives have dropped steeply and quickly over last few years from \$0.25 per kWh in 2008 to \$0.075 per kWh in 2012. This greatly benefitted APS ratepayers. However, as cash incentives decrease and eventually disappear, the solar industry will need to compete with APS and the other electric utilities on the basis of rates alone.

As you well know, solar reduces customer reliance on APS for electricity; however it does not significantly reduce demand charges. Demand measures the highest single 15-minute usage point

during a billing period. Typically, the customer's high demand peak takes place during a hot summer month when the solar system cannot cover all of the consumption needs.

Here is an example of how the demand charge affects a customer's monthly bill. The demand charge will be a larger part of the bill if the customer uses more power from APS over the course of the month versus if the same customer uses solar power. The following simplified example involves a commercial customer (under the E-32 M rate schedule) operating the business 10 hours per day for 23 days during the month of August with 100 kW of demand. (It excludes the basic service charge, demand charge for transmission, and unbundled components.) The three scenarios include 1) the old E-32 M tariff without the solar system installation, 2) the old E-32 M tariff with the solar system installation, and 3) the new E-32 M tariff with the solar installation.

2011 – Before Solar Installation (Previous E-32 M tariff)

Charge	Calculation	Total
Demand	100 kW x \$4.814 kW	\$481.40
Energy	100 kW x 230 hours x \$0.1031/kWh	\$2,371.30
Total	Demand + Energy	\$2,852.70

2011 – After Solar Installation (Previous E-32 M tariff); 150 hours of solar production

Charge	Calculation	Total
Demand	100 kW x \$4.814 kW	\$481.40
Energy	100 kW x 80 hours x \$0.10310/kWh	\$824.80
Total	Demand + Energy	\$1,306.20

2012 – After Solar Installation (New E-32 M tariff); 150 hours of solar production

Charge	Calculation	Total
Demand	100 kW x \$9.488 kW	\$948.80
Energy	100 kW x 80 hours x \$0.09884/kWh	\$790.72
Total	Demand + Energy	\$1,739.52

As you can see, the demand charge portion of the customer's electric bill remains the same in first two scenarios and nearly doubles in the third one after the Commission approved new rates. Further, the energy charge component depends on the amount of power produced by the solar system. With the solar system supplying 150 hours of electricity, the customer's power consumption from APS drops from 230 hours to 80 hours, saving \$1,546.50 in August under the previous E-32 M tariff. However, the customer's cost savings under the new E-32 M tariff erodes \$433.32 to \$1,113.18 for August, which is a direct result of the doubling of the demand ratchet.

Having solar customers compete on an equal rate basis with APS would make cash incentives unnecessary. For this to happen, APS would have to develop a special rate schedule for solar customers, consisting of a lower demand charge and a higher energy charge. However, until a special solar tariff is available to customers, PBIs will still be needed to augment the cost savings

needed to justify the installation of solar. Customers with solar systems should be afforded the opportunity to select a designated solar rate schedule. I urge the Commission to direct APS to work with the solar industry to propose a special solar tariff for inclusion in the 2014 Plan.

PBI Program Impact on APS Ratepayers

APS has reported that the cumulative lifetime commitments for existing PBIs are approximately \$765 million. However, I believe it is important for the Commission to distinguish among various PBI programs. The one program that has worked the best at driving down cash incentives – and therefore ratepayer costs – has been the Standard PBI. The other PBI programs (2008 DE RFP, Innovative Renewable Energy Projects, and current Schools and Government Program) were generally contracted at fixed rates and have not been expanded.

By virtue of their program design, the contracted rates by APS did not produce comparable ratepayer savings as the Standard PBI Program has done in the succeeding auction periods since 2008. Accordingly, these other incentive programs should be considered separately from the Standard PBI Program.

Existing Non-Residential DE Commitments

PBI Program	Total Lifetime Authorization
Standard PBI	\$423 million
2008 DE RFP	\$225 million
Innovative Technologies	\$ 25 million
Schools and Government	\$ 94 million

APS’s 20 MW Capacity Block 4 alternative would add \$27.6 million to the total lifetime authorization of the Standard PBI Program. At same time, the APS RES budget shows that millions of dollars are allocated to pay down the existing PBI contracts in each of the next five years. Moreover, even if the Commission selects Option 2 with 20 MW Block 4, PBI contract payments will represent a small portion of the annual projected RES budget over the next years, ranging from 14% to 22%.

Standard PBI Budget

Category	2013	2014	2015	2016	2017
Existing Contracts	\$17.8M	\$26.3M	\$25.9M	\$25.9M	\$25.9M
RES Budget	\$106.8M	\$159.9M	\$186.2M	\$158M	\$119.2M
% of Budget	16.7%	16.5%	13.9%	16.4%	21.7%

If the Commission approves APS Option 2 with 20 MW Block 4, cumulative standard PBI legacy costs are still controlled. As you can see from the table on the following page, with the scheduled PBI contract payments, the outstanding balance for total PBI authorizations will decline \$104 million over next five years, from \$432.8 million in 2013 to \$328.8 million in 2017.

Lifetime Standard PBI Authorization Balance with Option 2 with 20 MW Block 4

Category	2013	2014	2015	2016	2017
Beginning Balance	*\$450.6M	\$432.8M	\$406.5M	\$380.6M	\$354.7M
Contract Payment	\$27.6M	\$26.3M	\$25.9M	\$25.9M	\$25.9M
Ending Balance	\$432.8M	\$406.5M	\$380.6M	\$354.7M	\$328.8M

Note: 2013 beginning consists of \$423M (beginning balance) plus \$27.6M (20 MW Block 4)

Conclusion

As the Commission considers my comments and APS's proposed two DE options, I want to underscore that the PBI model is very cost effective for ratepayers and affords non-residential customers the opportunity to install solar. Over the last few years, APS's PBI program has fostered a stable business environment for solar developers. It would be a major setback for continued solar development in Arizona if the 20 MW Block 4 alternative is not approved. In addition, the creation of a solar tariff would obviate the need for new cash incentives in the future as distributed solar would be able to compete on a level playing field regarding rates.

Please contact me should you have any questions or need more information. Should the need arise, I will submit another letter commenting on the Commission's Staff Report. Thank you for your consideration in this matter.

Sincerely Yours,



Herbert Abel
CEO