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Chairman Kristin Mayes
Commissioner Gary Pierce
Commissioner Sandra Kennedy
Commissioner Paul Newman
Commissioner Bob Stump
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Arizona Corporation Commission
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Re: Post Workshop Comments Regarding Feed-In Tariff NOI
Docket No. E-00000J-09-0505

Dear Madam Chair and Commissioners:

I want to thank you for holding the Commissioner-led workshop regarding the potential adoption of a Feed-In Tariff ("FIT") for wholesale renewable energy production. The workshop proved to be informative and provocative, prompting a lively discussion of the many merits of FITs. As I indicated at the workshop, Green Choice Solar ("GCS") believes that a properly crafted FIT will lead to the rapid deployment of solar PV systems across Arizona. GCS recommends that APS and TEP propose FIT programs in their 2011 REST Implementation Plans. With this letter, GCS formally submits its recommendations for the design and implementation of a wholesale FIT program.

Benefits of a FIT

- GCS would like to underscore the many benefits that a FIT policy brings to Arizona.
- ✓ Minimizes the risk premium required by investors by providing price security. The greatest barrier for renewable energy deployment is attracting investors with defined and reasonable return on investment.
- ✓ Lowers administrative and parasitic transaction costs. Standardized contracts and guaranteed feed-in rates provide price predictability for solar PV firms.
- ✓ Lowers the cost of renewable energy over time. The application of stepped-down tariffs reduces costs on ratepayers, encourages cost-containment efforts by the solar PV industry and fosters technological innovation in solar modules.
- ✓ Helps reach deployment in specific areas or of particular system size. The FIT will promote the deployment of renewable energy in specific locations and encourage the development of assorted system sizes.

- ✓ Stimulates economic activity and job creation. With a FIT, utilities will have an additional funding source to develop more renewable energy projects, which will generate high-paying jobs; bolster income, property and sales tax collections; and, create spin-off renewable industries.
- ✓ Enables the utilities to meet their renewable energy requirements. The FIT is an additional funding mechanism to provide for the expeditious development of renewable energy projects.
- ✓ Provides a hedge against increasing fuel prices in the future. With a FIT, the cost of electricity is set over a specified term, unlike the commodity price of natural gas that is subject to market volatility and changes in supply.

Supplement Existing DE Programs

GCS recommends the FIT policy should be additive to the current Distributed Energy ("DE") programs and should not apply to the DE requirement of the Renewable Energy Standard ("RES") Rules. Instead, any energy derived from the FIT program should count toward the utility's non-DE renewable energy requirement under the RES.

The FIT is a cost effective and efficient means by which the utility can achieve its annual renewable energy requirement. For the purpose of rapid deployment, the FIT policy should apply to non-residential installations only, focusing on medium-sized DG systems (30 kW to 1 MW) that can be quickly installed and begin generating electricity immediately.

FIT Benchmarking

For benchmarking purposes, the Commission should look to the successful German FIT program. Since its introduction in 1999, the German FIT has resulted in the rapid and cost-effective deployment of distributed generation systems, with 9.7 gigawatts of solar PV installed to date. Farmers in Bavaria, with large barn roofs and open fields, have spurred on much of the demand for PV.

As a result, German solar firms are now world leaders, and the German economy has been strengthened, not weakened, by a rush into renewable energy. However, Germany, which has fewer sunny days and less quality solar exposure than Arizona, has taken a more modest approach in deploying PV systems. Rather than concentrate on the deployment of larger-scale renewable systems, German policy-makers focused the design of the FIT to accommodate the installation of solar PV systems under 1 MW.

By ensuring a guaranteed rate of return, typically between 8% and 10%, over a specific term, the German FIT has proven to be a key factor for accelerating private financing for renewable energy. To encourage cost savings, the feed-in rate is decreased 5% to 10% annually for newly installed PV systems. Once a PV system is connected to the power grid, the guaranteed feed-in rate remains constant over a 20-year period. This approach allows solar developers to earn a return on their investment, while exerting price pressure on the industry to reduce costs.

Scope and Size

GCS recommends the Commission institute a separate FIT program cap for APS and TEP. The FIT should encourage the development of as many projects as possible under the established MW cap for each utility. Therefore, GCS recommends the Commission should impose a program cap of at least 75 MW for APS and at least 25 MW for TEP. The projects should be awarded on a first-come, first-served basis. The FIT program should also account for payment differentiation, based on project-size.

GCS recommends that the Commission implement an aggressive FIT program aimed at the installation of DG systems smaller than 1 MW. (In its filed comments, APS also recommends the project size be limited to systems under 1 MW.) The FIT structure should include three tiers based on the system size, assigning higher rates for the smaller system tiers and lower rates for the larger ones.

Tiered Structure

Tier	System Size
1	Up to 30 kW
2	30 kW to 150 kW
3	150 kW to 1 MW

GCS believes that the implementation of FIT program can assist utilities in meeting not only the non-DE requirement of RES Rules but also their overall resource planning objectives. APS and TEP intend to meet their future generation needs with a combination natural gas-fired generation and renewable resources, including the deployment of solar PV systems.

For example, APS has sought to “leapfrog” compliance with its non-DE portion of the RES Rules by entering into purchase power agreements with large CSP developers (i.e., 280 MW Solana Project and 290 MW Starwood Solar Project). However, given the current difficulty in securing financing, neither project, which would have been among the largest solar power plants in the world, has yet to come to fruition: the Starwood Project has been cancelled and the Solana Project is still pending.

Relying on medium-sized DG systems would obviate the need for utilities to build costly transmission lines, distribution lines and substations. In addition, medium-sized DG projects have inherent advantages over utility-scale CSP plants, including little water use, few siting or environmental concerns and no need for large swaths of land. As a consequence, GCS believes that FIT adoption will lead to the gradual and stable development of renewable systems across Arizona. APS and TEP would use the energy produced from these “fleets” of mini-generators to comply with the non-DE portion of the RES Rules.

Potential Targets for FIT Program

Location	Load Considerations	Market Group
<ul style="list-style-type: none"> • Urban • Suburban • Rural <hr style="border-top: 1px dashed black;"/> <ul style="list-style-type: none"> • Rooftops • Parking Structures • Infill Areas 	<ul style="list-style-type: none"> • High Growth • Congested • Peaking 	<ul style="list-style-type: none"> • Apartments • Commercial Buildings • Community Colleges • Distribution Centers • Farms • Homeowner Associations • Light Industrial • Manufacturing • Non-Profit Organizations • Office Campuses • Private & Public Schools • Private & Public Universities • Ranches • State & Local Government • Warehouses

The service territories of APS and TEP offer ample opportunities for solar PV systems in the non-residential market. GCS does not believe that the Commission should specifically limit the FIT program to any one market. DG is a cost-effective way to provide peaking power in the load pockets. In areas of high growth or congestion, the deployment of DG can lessen the need for the incumbent utility to construct costly electric facilities. A well-designed FIT should be non-discriminatory, allowing the same opportunity to any developer who can secure the customer sites, obtain financing, as well as pay for nonrefundable security deposits and reasonable interconnection costs.

Duration of FIT Program

At a minimum, the Commission should make a two-year commitment toward the program to gauge the progress of PV system deployment and monitor the amount of funding being disbursed. During this period, if the program is sputtering because of underpayments or is running out of money too quickly, the Commission can adjust the FIT payments based on current market conditions. After the two-year juncture, the Commission should review and assess the success of the FIT and decide to continue the program in its current form, expand the program caps and funding, or end the program entirely.

Funding Source

The utilities should be afforded full cost recovery for the FIT program, including reasonable expenses for imputed debt and system integration. APS and TEP already flow

the costs of replacement power and purchased power through their approved fuel adjuster mechanisms. Since the FIT program entails a wholesale energy transaction between the producer and the utility, it is reasonable for the Commission to allow full cost recovery for the utilities through **either** their authorized purchase power fuel adjusters **or** a combination of the purchase power fuel adjusters for below market costs and the RES surcharges for above market costs.

Federal Jurisdictional Issues

By their very nature, FIT policies impose very few limits on who can participate in selling renewable energy generation. However, a major legal problem exists today concerning the adoption of any European style FIT. While retail electric sales in Arizona, except for SRP and the electrical districts, are regulated by the Commission, the Federal Regulatory Commission ("FERC") regulates the sale of wholesale power.

Based on the current federal jurisdictional issues implicated by any contemplated FIT program, the Commission should consider a hybrid approach in fashioning its FIT program. This path would allow rates to fluctuate with market prices subject to a narrow band, improving revenue certainty for project owners to secure capital. This approach would be held in a RFP setting, where strict eligibility criteria would be considered in awarding contracts (see next section).

FIT pricing should recover reasonable costs, guarantee an appropriate profit margin and track the value of the renewable energy credit (REC). The Commission has broad latitude in assigning monetary attributes to a REC, including added values for project location, time of delivery, avoidance of various air emissions (i.e., carbon dioxide, sulfur dioxide, nitrogen dioxide, carbon monoxide, volatile organic compounds and mercury), and economic development. I would estimate that the FIT pricing would range from \$0.24 to \$0.30 per kWh, depending on the system size, with established price floors and ceilings for each system tier.

FIT Eligibility Criteria

By setting the right FIT rates, along with healthy program MW caps for utilities, the Commission will attract plenty of participation from renewable producers. If at all possible, the FIT program should remain simple and easy to implement; the more prescribed the program becomes, the less likely its success. With that said, the federal jurisdictional issues complicate this approach, which will necessitate the Commission to impose additional program features to avoid federal preemption from FERC.

The Commission should require the utilities to adopt nonnegotiable standardized contracts and streamlined interconnection agreements in reducing any program complexity and administration. With a FIT, because the transaction is wholesale, not retail, the question of net metering goes away. Moreover, in an effort to produce measurable results, the utilities should require project completion within 12 months of the renewable developer being awarded FIT contracts.

Specified Eligibility Criteria

- Establish reasonable bidder qualifications
- Require project completion deadlines
- Require security deposits for renewable producers
- Require renewable producers to pay reasonable interconnection costs

Concluding Comments

In closing, GCS extends its appreciation to the Commission for opening the docket and holding the workshop on this important public policy matter. I cannot stress enough that the adoption of a FIT program will help aid in the rapid development of renewable energy projects in Arizona. As discussed, the economic development benefits are many, and the possibility of technological innovation is great. The Commission should seize this opportunity for more Arizonans to "Go Solar" and make Arizona the solar capital of the world.

Yours truly,



Herbert Abel
Chief Executive Officer