3/30/2016

To: The Tennessee Regulatory Authority

C/O: Sharla Dillon, Dockets and Records Manager

RE: Docket # 16-00001,

I am submitting the following comments to the Tennessee Regulatory Authority opposing Kingsport Power Company's (KgPCo) request to reduce their net metered tariff, apply discriminatory fixed charges to solar net metered customers, impose discriminatory demand charges to solar net metered customers, and deny billing terms to solar net metered customers extended to other customer classes for the reasons explained below. I am submitting these comments on behalf of the Tennessee Solar Energy Association, a non-profit solar organization with members in the Kingsport area.

Kingsport Power Company assumes "cross-subsidization" of solar net metered customers by other rate payers as justifying all the various tariff, fee, and policy revisions it seeks to apply to solar net metered customers. This assumption can only be validated if KgPCo undertakes a value of solar study to determine if the value of solar is, as they claim, less than the retail rate. If the value of solar exceeds the retail rate, then current net metered customers are subsidizing other rate payers.

KgPCo should conduct a value of solar study using established utility industry best practices such as those developed by the National Renewable Energy Laboratory (2014) or (TVA (2015) to determine which customers, if any, are actually benefitting from cross-subsidization." Sans such a study, all claims by KgPCo are speculative and without merit. Only an accurately determined value of solar tariff can provide the objective cost-benefit analysis needed to establish a fair tariff that eliminates cross-subsidization among rate payer classes.

Even if the value of solar for KgPCo residential and commercial rate payers is below retail, the proposed avoided cost compensation to net metered residential rate payers is well below the value of solar estimated by all but one of a dozen other value of solar studies recently conducted around the USA (Hallock and Sargent, 2015). Further, a "weight of evidence" observation based these value of solar studies suggests KgPCo net metered customers are already subsidizing other rate payers by not being paid a fair net-metered rate. Only one other study has obtained a value of solar estimate lower than KgPCo'S current net-metered rate, and none have ever obtained a value lower than KgPCo's proposed new rate.

The value of solar studies cited above ranged from approximately 4.5 c/kWh to 33.5 c/kWh. These estimates vary in part because of which parameters are included in the value of solar methodology as well as utility specific factors. Because TVA did not include environmental externalities or other benefits that accrue to the citizens of the Valley rather than the utility itself, its analysis is essentially a baseline solar-specific avoided cost study (Revesz and Unel, 2016). This seems to be the how KgPCo seeks to value the solar energy they receive from their solar net metered customers. However, TVA's recent estimate of the value of solar of 7.2 c/kWh which is among the lowest of the dozen studies cited is still

almost double the value of solar KgPCo is proposing to compensate net metered customers. Given that KgPCo does not operate as diverse a generation portfolio as TVA, it is likely solar would have a higher valuation in their service area. Further, If TVA's value of solar estimate is applicable, or even conservative, when applied to KgPCo, solar net metered customers are subsidizing other ratepayers by almost 2 c/kWh at the current tariff level of 5.36 c/kWh for residential, and commercial net metered customers are at parity. The proposed tariff decrease for residential solar net metered customers KgPCo is requesting would increase the subsidy solar net metered customers are providing other ratepayers to almost 4 c/kWh if the value of solar is the same as TVA's estimate.

KgPCo is justifying its request to impose discriminatory tarfiffs, fixed charges, and service plans on solar net metered customers because these customers are allegedly being "cross-subsidized." At the same time KgPCo is requesting to implement a Low Income Program that is a form of "cross-subsidization." KgPCo is to be commended for designing a Residential Low Income Program that emphasizes implementation of energy conservation and efficiency measures targeted at low income ratepayers. However, KgPCo'S Low Income Program is designed to reduce the quantity of energy consumed by its low-income customers through energy conserving retrofits and efficient appliances such as LED bulbs. This is also exactly what net metered solar customers are doing by investing in solar generation technology—reducing their energy consumption. However, solar net metered customers are investing their own money, not the money of other KgPCo customers, and, depending upon what the actual value of solar is in the KgPCo service area, they may be additionally subsidizing other customers by feeding solar into the distribution system that is more valuable than what they are being compensated (see above discussion about value of solar).

KgPCo is arguing that solar net metered customers are not paying for the infrastructure to provide quality reliable service because they are not using as much energy as other customers, while at the same time, asking to be granted permission to use $300,000.00 of ratepayers money to subsidize low income customers to install energy conservation and efficiency upgrades that will reduce their energy consumption. We support KgPCo in its efforts to craft a policy that benefits its low income customers, however, we feel it is important to recognize that KgPCo itself employs cross subsidization to achieve a policy goal and an objectively determined cost of solar analysis might choose to accept a certain level of "cross-subsidization" to achieve other policy goals, such as climate change mitigation, pollution reduction, meeting requirements of the Clean Power Plan, etc…

Discriminatory Fixed Charges

The fixed charges proposed for solar customers are based on the unsubstantiated assumption that solar net metered customers are enjoying "cross-subsidization" by other customers as described above. However, even if this were the case, a fixed demand charge for one class of customer is discriminatory and not based on sound billing principles. If the lower rate of net metered compensation is based on the assumption that solar net metered customers are not paying their fair share that should be reconciled by the value of solar calculation.

High fixed charges are also a bad billing option because they reduce ratepayer's incentive to reduce energy use while encouraging the utility to invest in unneeded and costly infrastructure. Because customers will see high fixed charges regardless of how much energy they use they will use more energy. Because utilities will receive high payments regardless of how much they spend on infrastructure they will not make the most efficient infrastructure investments.

The Commission should also be aware that fixed charge requests such as those proposed here by KgPCo have proliferated since an article, *Disruptive Challenges*, was published by Kind (2013). This article described the challenges faced by the utility sector as customer implementation of distributed generation increases in the power grid. A subsequent publication by Kind (2015), "*Pathways to a 21st Century Utility*," repudiates the widespread utility sector response to his 2013 publication of requesting more fixed charges for many of the same reasons cited here. In reflecting on the 2013 publication, Kind states in the 2015 publication "*What is needed is 'a value of solar approach," … "Let's figure out the cheapest way to provide renewables and use that as the basis for setting net energy metering rates*.'"

Discriminatory Demand Charges

KgPCo should be denied the request to impose discriminatory demand charges against a class of customer without undertaking an objective analysis of the value of solar on their system. If this is done, then any "cross-subsidization" issues will be addressed by an appropriate net meter tariff.

KgPCo is affording other customers the option to enroll in time of use pricing, which is laudatory because it provides a strong market signal to customers to use least cost power, while denying the same option to solar net metered customers who have greater ability to respond to such price signals than other customers.

Applying KgPCo's reasoning, if a customer installed a solar hot water collector on their house to offset the electricity they use to heat the house and their domestic hot water, KgPCo would be entitled to charge them a higher fixed fee and deny them the time of use pricing they afford their other customers.

KgPCo is to be commended for considering tariff reform that incorporates demand side management strategies. However, solar generation is in and of itself a widely accepted strategy for demand side management by helping to reduce peak load during summer daytime peak demand periods (TVA, 2015). Charging solar net metered customers a discriminatory higher demand fee compounds the injustice of the discriminatory fixed charges levied against solar net metered customers and both tariffs are redundant mechanisms for addressing any cross-subsidization (either to, or by, the solar net metered customers) by establishing an accurate value of solar tariff. However, KgPCo is not offering solar net metered customers the option of time of use billing, an option it does afford other customer classes. Not only is this arbitrary and discriminatory to solar net metered customers, it is a disincentive to these customers to better harmonize their solar production with their use to the benefit of all customers in

the distribution system. Because solar net metered customers often produce excess power at peak summer use periods, they are providing a net benefit to all KgPCo customers. Time of use billing would further incentivize solar net metered customers to adjust their energy consumption to maximize their contribution to peak load reduction.

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