STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

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COMMISSIONER

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November 8, 2019

Via Electronic Mail to mshigdon@tva.com
Attn: Matthew Higdon, NEPA Compliance
400 West Summit Hill Drive, WT 11B
Knoxville, TN 37902

Dear Mr. Higdon:

The Tennessee Department of Environment and Conservation (TDEC) appreciates the opportunity to provide comments on the Tennessee Valley Authority (TVA) *Draft Environmental Assessment* (EA) evaluating the discontinuation of the Green Power Providers (GPP)[1] Program to new customers on December 31, 2019 and establishment of an alternative solution to assist residential customers interested in solar installations.[2] In February 2019, the TVA Board of Directors approved closure of the existing GPP Program to new applications at the end of 2019. The Board also delegated authority to the CEO to provide for the design and implementation of new renewable offerings consistent with the Board-approved revised metering standard, making these decisions contingent upon the satisfactory completion of any environmental reviews necessary under federal law. Under the Proposed Action, TVA would close its GPP Program to new applications on December 31, 2019. All current participation agreements (PAs), which outline the terms and rates that will apply to energy generated by GPP systems, will remain in effect for the remainder of their terms. A new private-scale service offering would be implemented in 2020 and would be exclusively for residential end-use consumers (EUC) interested in private-scale solar photovoltaic (PV) installations. TVA would establish a network of qualified solar installers for applicants to choose from for installing solar PV systems, installation standards that include best practices and requirements for installers, inspection requirements, and a more standardized interconnection process. The new program would be implemented in partnership with LPCs. Actions considered in detail within the Draft EA include:

- **Alternative A – No Action Alternative (GPP Program Continues) –** Under Alternative A, TVA would continue to implement the GPP Program, and there would be no changes to the services or offerings currently available to customers with private-scale renewable generation. The 2019 electricity purchase rates ($0.075 or $0.09 per kWh, depending on system capacity) would remain the same and the annual total GPP capacity

[1] TVA's GPP Program is a EUC generation dual metering program that began in 2003 as the Generation Partners (GP) Pilot Program. According to TVA, GPP was developed in an effort to provide distributors the opportunity to support environmental stewardship while responding to the growing consumer interest in generating renewable power. Participation in the program is optional for LPCs. Through the GPP Program, participating LPCs' residential and commercial EUCs with renewable solar, wind, low-impact hydro, or biomass systems sell all of the generation to TVA for the term of their 20-year PA for a fixed kilowatt-hour (kWh) rate.

[2] These proposals would not affect customers that have already entered into participation agreements with TVA or those that apply by the closure date.

limit for new enrollments would revert to the 10 MW capacity limit set each year between 2013 and 2018, up from the 2019 limit of 7.5 MW. TVA would continue offering Dispersed Power Production (DPP) and Renewable Energy Certificates (REC) purchasing programs to residential and commercial EUC interested in renewable energy. EUCs would also have the option of installing behind-the-meter (BTM) generation.

- **Alternative B – Discontinue GPP Program without Replacement Program** – Under Alternative B, TVA would close GPP to new applications effective 5:00 PM CST on December 31, 2019, and offer no replacement solution for private-scale renewable generators. Existing GP/GPP PAs and applications submitted prior to the closure date would continue for the duration of the agreement terms. TVA would continue offering DPP and REC purchasing programs to residential and commercial EUCs interested in renewable energy. EUCs would also have the option of installing BTM generation.

- **Alternative C – Discontinue GPP Program and Present New Offering** – Alternative C is the Proposed Action, TVA would (1) close GPP to new applications effective 5:00 PM CST on December 31, 2019, and (2) implement a new private-scale service offering shortly after GPP closure. Existing GP/GPP PAs and applications submitted prior to the closure date would continue for the duration of the agreement terms. The new private-scale solar offering would not include contracts for sale of renewable energy or payments for energy generated by the EUC systems. Rather, the offering would be structured to include features and benefits identified as important by Valley residents and installers during market research conducted for TVA by a third party vendor. The surveyed EUCs identified "confidence in the quality of the installation" as the most important benefit a TVA program could offer and installers pointed to marketing and support as important features. The service offering would be exclusively for residential rate-class EUCs interested in installing private-scale solar PV systems. LPCs would have to elect to participate in the offering for it to be available in their service territory, just as they elect to participate in GPP today.[3]

TDEC has reviewed the Draft EA and provides the following comments:

General Comments

The Draft EA mentions the gradual decline of GPP participation over recent years, with that trend continuing (e.g., the Draft EA states that only 2.5MW of the potential 10MW was reserved in 2018). However, during this same time period TVA made modifications to its incentive structure, such as the addition of a cap and increasing

[3] TVA proposes to establish (1) a Quality Contractor Network (QCN) of vetted solar installers for applicants to choose from when installing their solar systems, (2) installation standards that include best practices and requirements for PV systems and batteries, (3) inspection requirements, and (4) a more standardized interconnection process. The solar installers participating in the QCN would be licensed and insured, have completed special training on TVA installation standards and best practices, and maintain high customer satisfaction. In return TVA would publicly showcase the solar QCN installers on the private-scale offering website. QCN members could also potentially benefit from more productive leads originating from this website since interested EUCs would have access to educational materials, which could be used to decide whether a solar system is the right investment for their property. The educational materials would include modules on the ideal placement and size of a solar system, insight into the technical set-up and functions of a solar system, and a link to the TVA solar calculator; the EUCs would have access to these resources prior to, during, and post installation. Further, the program website would offer a scheduling feature for the installation and inspection process. With the new structure, TVA and LPCs would have visibility into private-scale installations, which is crucial for safety of LPC and/or TVA personnel and equipment. Another aspect of the proposed service offering would address the disposal of solar arrays and related equipment after their useful life, which usually occurs around 20 to 25 years after installation. Incorporating training and increasing LPC and TVA visibility into private-scale installations may create opportunities to educate the public on proper disposal of solar arrays after they are no longer viable. TVA would continue offering DPP and REC purchasing programs to residential and commercial customers interested in renewable energy. Customers who participate in the private-scale offering could also participate in DPP and REC purchase programs pursuant to the terms of those programs.

GPP purchase rates. Has TVA considered how changes in incentive structure, specifically cap and purchase rate, can affect EUC participation and how past program performance has informed the proposed action? TDEC encourages TVA to include discussion relating to how past lessons learned will be applied to development of future programs in the Final EA.

For residential customers interested in installing solar, Alternative C (the Proposed Action) has the potential to result in the addition of batteries as a backup or consumption of all of the energy produced on-site, adding additional cost as well as potentially deterring private-scale solar for EUCs. Has TVA explored options to assist EUCs with this added cost? If not, has TVA considered that this could negatively impact the potential for any new installations of private scale solar? TDEC encourages TVA to include these considerations in the Final EA.

In the Draft EA, TVA assumes all current LPCs participating in GPP will elect to make the new offering proposed by Alternative C available to their EUC. Has TVA been in communication with LPCs to ensure their continued interest in offering this to their EUCs? Additionally, has TVA contemplated engaging with LPCs that are not currently participating in GPP to gauge interest in participation? TDEC recommends TVA include these considerations in the Final EA.

Energy Resources

While TVA's market research shows that "confidence in the quality of the installation" was the most important benefit a TVA program could offer, it is widely accepted that the economic cost and available incentives drive participation in solar programs.[4] Under Alternatives B and C, no economic incentive is provided to potential participants. Instead these alternatives rely on a QCN that depends on the rigor of installation standards and TVA's inspection requirements. Purchasers of residential solar PV may choose contractors outside the solar QCN, which could lead to reduced visibility for TVA and LPCs and may potentially push the market further into private, BTM installations. Outside installations could increase the use of poor quality contractors and increase the risk of safety hazards for both homeowners and linemen. If TVA considered a nominal rate, such as a "Value of Solar" rate determined by a third party for excess generation, then TVA may incentivize applicants to participate, increasing TVA's and LPCs' visibility into private-scale, and thus reducing safety risks associated with poor quality contractors. TDEC encourages TVA to include additional discussion relating to the comparative benefits and impacts to program uptake of both rate incentives as well as the QCN in the Final EA.

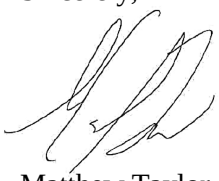
The process of interconnection, including fees and timelines for inspection and approval, varies widely among LPCs. Long approval timelines and high interconnection fees may discourage participation, thereby reducing visibility into private-scale BTM installations. TDEC encourages TVA to create a simple, streamlined, low-cost process for interconnection of solar from residential homes to the LPCs. This standardization will help maximize participation and ease reporting of distributed solar efforts throughout the Valley. For example, TVA could simplify the BTM if the requirement for a second meter was replaced with using a single, bi-directional meter.

TDEC is supportive of a decentralized, diversified power supply in the state. In the event of an energy emergency, solar PV systems may provide an emergency source of electricity that could serve critical infrastructure and facilities (e.g., hospitals, shelters, food banks) in the region. Additionally, TDEC is supportive of resiliency efforts, including island-able power sources and microgrids throughout the state. In order to supply power in the event of a prolonged grid outage or energy emergency, TDEC encourages projects establishing microgrids in continuity zones to maintain critical infrastructure. Distributed power generation as contemplated in the program may provide an emergency source of electricity for critical infrastructure.

[4] Distributed Solar Incentive Programs: recent Experience and Best Practices for Design and Implementation, p.3.

TDEC appreciates the opportunity to comment on this Draft EA. TDEC is supportive of the continuation of an EUC focused renewable energy program and would be happy to engage with TVA on discussions around future structure of what the program might look like. Please note that these comments are not indicative of approval or disapproval of the proposed action or its alternatives, nor should they be interpreted as an indication regarding future permitting decisions by TDEC. Please contact me should you have any questions regarding these comments.

Sincerely,



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