

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of PPL Electric Utilities :  
Corporation for Approval of Tariff :  
Modifications and Waiver of : Docket No. P-2019-3010128  
Regulations Necessary to Implement :  
its Distributed Energy Resources :  
Management Plan :

**COMMENTS IN SUPPORT OF ANSWER FILED BY  
NATURAL RESOURCES DEFENSE COUNCIL**

Pennsylvania Solar Energy Industries Association (“PASEIA”) submits these comments in support of the July 30, 2019 answer filed by Natural Resources Defense Council (“NRDC”) to the Petition of PPL Electric Utilities Corporation (“PPL”) for Approval of Tariff Modifications and Waivers of Regulations Necessary to Implement its Distributed Energy Resources Management Plan.

PASEIA is a Division of the Mid-Atlantic Solar & Storage Industries Association (“MSSIA”), formerly the Mid-Atlantic Solar Energy Industries Association (MSEIA). MSSIA is a not-for-profit trade association made up of businesses and professionals working in Pennsylvania, New Jersey and Delaware involved in the development, manufacturing, design, construction and installation of solar photovoltaic (PV) and energy storage systems.

PASEIA strongly agrees with NRDC’s answer in its entirety regarding PPL’s Petition, though we would like to reiterate some of the important points made in NRDC’s response, as well as add a few more comments:

1. In general, PASEIA supports many of the goals described in PPL’s Petition for modernizing the electric grid – such as moving to a more dynamic grid; improving overall grid system efficiency, power quality, reliability and resiliency; and reducing the need for capital investments by the utility. However, we question the urgency for why PPL seeks to be proactive with implementing a DER management plan, particularly when the UL1741 SA standard has yet to be finalized and won’t be released until later in 2019, and may not synchronize with revised IEEE 1547-2018 until 2021. There is a small fraction of the solar PV capacity installed in PPL service territory, as well as across the state of Pennsylvania, with only 0.5% required by 2021, as compared to many states in the country with far higher solar capacity goals. The DER management technology has a long way to go before it is a proven and mature technology for the intended purposes that PPL proposes.
2. PPL petition refers to the DER development through its Keystone Solar Future Project (“KSFP”), funded by DOE’s SunShot Grant program over two years ago. PASEIA sent

in a supporting letter for PPL proposal, which at that time included the installation of 500 small solar PV systems, about 5 kW each, for the purpose of utilizing DER management devices to monitor and manage those systems. However, after PPL won the grant and sent out an RFP for solar contractors to install the 500 solar PV systems, the winning solar contractor was ultimately informed that they would not be installing any of the solar PV systems after all. So, we question how much experimentation and study has PPL actually done with DER management if these systems were not installed per their original proposal.

3. PASEIA has major concerns with PPL having the authority to manage the smart inverters at their undisclosed discretion. By adjusting the inverters' settings to generate some "reactive power" as compared to "real power" for example, the solar PV system will generate less recordable electricity and attributes than expected, which will in turn reduce the net metering billing credit and reduce the revenue stream from a lower amount of SRECs reported, thus reduce the cost effectiveness of the solar project.
4. The PPL petition does not mention anything about compensating the customer-generator or solar project owner for implementing a DER management system; electric grid and market operations provide compensation for generated ancillary services, such as from solar PV systems and battery storage. PPL seems to recognize solar PV technology has a value to their distribution system, so there should be compensation for that service.
5. The DER management device will need to be thoroughly tested to assure that it is working as expected. Further, it will need its own UL listing. Are these devices available today, which could work on all smart inverters accepted throughout the country? It can't be expected that the customer-generator or solar project owner would bear the cost of this added device, only to lose net metering credit/revenue when it's used. And ratepayers couldn't be expected to pay for installing this device, as that would require further regulatory review outside of this petition.
6. With regard to PPL wanting control to shut down a solar PV system during a grid outage, as they have concerns of the PV system islanding, or generating power endangering linemen/women working on distribution lines - during the grid outage - the earliest versions of IEEE 1547, including its predecessor IEEE Standard 929-2000, already include automatic shutdown of the inverter when a grid outage occurs. Grid tied inverters cannot operate without "seeing" a tight band of grid voltage/frequency levels. There is no reason that PPL should require the need to turn off these systems when they are already disconnected from the grid. Furthermore, the solar PV systems with storage should still be operable as a backup system during grid outages, as they were designed to do and were installed for that purpose - PPL should not be authorized to shut down these backup systems.
7. Adding another barrier like this new proposed requirement, years before the DER management technology is mature, and many years before it might even be necessary, will only slow down the already crawling market penetration of new solar projects in Pennsylvania.

8. At the very minimum, there could be a pilot for “opt-in” only solar customer-generators who would receive compensation for participating in a strawman DER management plan, but even this seems years away. If DER management is to be taken seriously, it should be vetted or conceptually framed out through a stakeholder process across the state, not just limited to PPL’s territory – how does solar PV technology effect their distribution system different than anywhere else in the state? Still, much more technical information is needed to properly study DER management, including deep reviews of what some of the other states have been doing thus far.

For the reasons set forth in NRDC’s answer, as well as in the additional comments above, PASEIA strongly agrees that the Pennsylvania Public Utility Commission (“PUC”) should deny the Petition or, in the alternative, suspend the proposed tariff revisions and establish necessary proceedings to allow interested parties an opportunity to thoroughly examine the major policy and technical issues raised by the Petition.

Although PASEIA is not seeking to intervene in this proceeding at this juncture, it respectfully requests that the PUC notify it of any hearings or other actions taken by the PUC with respect to the Petition.

Respectfully submitted,

Ron Celentano, President  
Pennsylvania Solar Energy Industries Association  
7821 Flourtown Avenue  
Wyndmoor, PA 19038

Date: July 30, 2019