

July 30, 2019

Via Electronic Filing

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120

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

Answer of Sunrun Inc. to Petition of PPL Electric Utilities Corporation

Secretary Chiavetta:

Enclosed please find the *Answer of Sunrun Inc. to Petition of PPL Electric Utilities Corporation* for filing in the above-referenced proceeding. Please contact me if you have any questions concerning this matter

Sincerely,

/s/ James M. Van Nostrand

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Counsel to Sunrun Inc.

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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

**ANSWER OF SUNRUN INC.
TO PETITION OF PPL ELECTRIC UTILITIES CORPORATION**

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DATE: July 30, 2019

Counsel to Sunrun Inc.

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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**ANSWER OF SUNRUN INC.
TO PETITION OF PPL ELECTRIC UTILITIES CORPORATION**

Pursuant to 52 Pa. Code §5.61(e), and the Secretarial Letter dated July 10, 2019 in the above-captioned proceeding, Sunrun Inc. (“Sunrun”) hereby submits this answer (“Answer”)¹ to the *Petition of PPL Electric Utilities Corporation for Approval of Tariff Modifications and Waivers of Regulations Necessary to Implement its Distributed Energy Resources Management Plan* (“Petition”) submitted May 24, 2019 in the above-captioned proceeding.

Sunrun requests that the Commission deny the Petition. In the alternative, Sunrun requests the Commission suspend the proposed tariff revisions and open a new proceeding applicable statewide to investigate the technical and policy issues raised by the Petition and allow all interested parties to participate and engage through a robust stakeholder process.

I. Introduction and Background

Sunrun is the largest residential solar, storage, and energy service company in the country with more than 240,000 customers in 23 states (including Pennsylvania) and the District of

¹ Sunrun notes that the Secretarial Letter invites interested parties to submit protests to PPL’s Petition but understands that 52 Pa. Code §§ 5.51 – 5.53, providing the rules for submitting protests, applies to “applications.” Sunrun submits this Answer pursuant to 52 Pa. Code §5.61 in response to PPL’s petition; however, Sunrun respectfully requests that the Commission construe this filing in accordance with the Commission’s preferred procedural mechanism and accept Sunrun’s answer and/or protest as timely and appropriately filed.

Columbia and Puerto Rico. Sunrun pioneered the “solar-as-a-service” model over 12 years ago to make solar energy more accessible. With Sunrun’s residential rooftop solar, storage, and energy services, homeowners are saving money, reducing their greenhouse gas footprint, delivering grid benefits, and lowering system costs for other ratepayers. Sunrun has an ownership and/or other interests in distributed energy resources (“DERs”) in Pennsylvania and the PPL Electric Utilities Corporation’s (“PPL” or “Company”) service territory. The Commission’s disposition on PPL’s Petition has a direct and substantial impact on Sunrun’s interests in DER deployment and management of its customers’ DERs in PPL’s service territory, and in Pennsylvania.²

PPL’s Petition requests the Commission’s waiver of certain regulations and approval of certain modifications to the Company’s net metering and interconnection requirements to implement PPL’s proposed “DER Management Plan” (“Plan”).³ PPL’s Plan would, among other things, require customers applying to interconnect new DERs to PPL’s distribution system to (1) use Company-approved smart inverters that are compliant with IEEE Standard 1547-2018 and forthcoming UL Standard 1741; and (2) install devices that enable PPL to monitor and proactively manage the customers’ DER.⁴ At the heart of PPL’s Plan is direct utility control over customer and third-party owned DERs.

PPL asserts that direct utility control is necessary to enable the Company to, among other things:

- (i) Improve system efficiency, power quality, and reliability;
- (ii) Operate more safely;

² See Docket No. P-2019-3010128, *Petition to Intervene of Sunrun Inc.* (July 30, 2019) (filed contemporaneously with this Answer).

³ Docket No. P-2019-3010128, *Petition of PPL Electric Utilities Corporation for Approval of Tariff Modifications and Waivers of Regulations Necessary to Implement its Distributed Energy Resources Management Plan* at p. 1 (May 24, 2019) (“PPL Petition”).

⁴ *Id.* at p. 2.

- (iii) Increase the number of DERs that can be interconnected with the constrained portions of the Company’s distribution system; and
- (iv) Reduce capital investments by the Company where DER installations have traditionally required capital-intensive system enhancements or upgrades.⁵

Sunrun supports the improved grid operations, safety, DER expansion, and ratepayer saving goals that PPL identifies. Critically, however, PPL incorrectly implies that achieving these goals requires utility control over DERs and the associated revisions the Company seeks to its interconnection and net metering tariffs. These goals are being achieved in other states and utility service territories by leveraging competitive DER market providers’ core competencies in customer engagement, DER deployment, and DER management through utility programs that offer compensation for the grid services provided by customer-sited DERs.⁶ These programs encourage customers to enroll and participate through third-party DER aggregators to minimize program costs, mitigate risk to ratepayers, reduce, systems costs and deliver ratepayer savings.

Indeed, the ability to leverage DERs to deliver customer and grid value is not a vague concept to be realized at some point in the future. The numerous benefits that DERs provide customers, utilities and other ratepayers are a reality now. PPL’s Petition implicitly acknowledges the grid value that customer-sited DERs offer; however, PPL’s Plan is the wrong

⁵ *Id.* at pp. 2-3.

⁶ *See, e.g.*, Cal. Pub. Utils Comm’n, Rulemaking (“R.”) 14-10-003, *Order Instituting Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning and Evaluation of Integrated Distributed Energy Resources* (“R. 14-10-003”); Mass. Dept. of Pub. Utils, Docket Nos. 18-110—18-119, *Order Approving Massachusetts Joint Statewide Electric and Gas Three-Year Energy Efficiency Plan 2019-2021* (Jan. 29, 2019) (“DPU Order”); Long Island Power Authority, *Approval of Modifications to LIPA’s Tariff For Electric Service to Enable Energy Storage Systems to Participate in Dynamic Load Management* (May 22, 2019) (“LIPA Order”); Vermont Pub. Util. Comm’n, Docket No. 18-1633-PET, *Memorandum of Understanding Between Green Mountain Power and Renewable Energy Vermont* (Mar. 26, 2019) (“GMP REV MOU”).

approach “to support and enable Pennsylvania’s vision of renewable growth to address climate and sustainability objectives.”⁷

PPL’s proposal to *require* customers to relinquish control of their DER to the Company and allow PPL to manage the device to support grid needs without compensation represents a dramatic departure from national trends, is antithetical to sound clean energy policy, and would chill the still nascent DER market in Pennsylvania. PPL’s Plan has no technical basis to justify these onerous and backward-looking requirements and offers little to no detail regarding how the Plan will be implemented. More fundamentally, PPL’s proposal is a misguided and dissonant approach to addressing the issues that PPL identifies.

The relief requested in PPL’s Petition should be denied for reasons including the following:

- (A) The Petition is unjustified and premature given the low penetration of DERs in PPL’s service territory and Pennsylvania.
- (B) The Petition raises significant technical questions about the implementation of IEEE 1547-2018 and UL 1741 certification standards and is out of sync with other states’ timing for adopting the updated standards.
- (C) The Petition inappropriately conflates advanced inverter functionalities pursuant to the IEEE 1547-2018 and UL 1741 certification standards with the need for utility control of customer-sited DERs.
- (D) The Petition is void of critical details and analysis of its impact on customers and implications for advancing DER markets in Pennsylvania.
- (E) The Petition raises significant policy issues that should be considered on a statewide basis, not a utility-by-utility basis, through a full and complete investigation by the Commission that includes opportunity for broad stakeholder participation and engagement.

⁷ PPL Petition at p. 3

II. Discussion

A. The Petition is unjustified given the low penetration of DERs in PPL's service territory and Pennsylvania.

PPL's proposal to significantly accelerate the rollout of the updated advanced inverter standards well ahead of utilities with much higher DER penetration and DER adoption rates, and to require new interconnecting customers to install DER communication devices to enable utility control over the DER, is unjustified. The Company instead relies on conclusory statements with no supporting evidence. For instance, the Petition states "given PPL Electric's current inability to directly communicate and manage customer DERs to leverage grid support functionality, the amount of intermittent generation that can be interconnected must be limited to maintain system stability and reliability."⁸ PPL offers no analysis or supporting evidence that DER penetration is adversely affecting the distribution system currently, or that the current rate of DER penetration will trigger adverse impacts in the foreseeable future.

PPL's Petition is an ill-conceived solution in search of a problem. A comparison of current DER penetration and anticipated DER adoption rates between PPL and Pacific Gas & Electric ("PG&E") in California, and their respective DER communication and control protocols, illustrates this point. PG&E is a leading utility in the country with respect to DER penetration with "over 5,000 solar installations added *per month* totalling more than 390,000 sites."⁹ In contrast, PPL estimates receiving 1,000 to 1,500 solar interconnection applications per year and as of 2018, fewer than 6,500 PPL customers have installed solar.¹⁰ Despite DER penetration

⁸ *Id.* at p. 16.

⁹ Pacific Gas & Electric, *EPIC Final Report* at p. 13 (Jan. 18, 2019) (emphasis added) available at https://www.pge.com/pge_global/common/pdfs/about-pge/environment/what-we-are-doing/electric-program-investment-charge/PGE-EPIC-2.02.pdf.

¹⁰ See PPL Petition at p. 6; Pennsylvania Public Utility Commission, *Net-Metering & Interconnection Report 2016-18* at p. 4 available at http://www.puc.pa.gov/Electric/pdf/AEPS/Net_Metering-Interconnection_Report_2016-18.pdf.

levels dramatically higher than PPL and adoption rates between 40 to 60 times higher than PPL, PG&E does not require accelerated rollout of the new UL and IEEE standard or the communication and control functions that PPL asserts are necessary to interconnect additional DERs and maintain reliable and safe system operations.

PPL's Petition fails to justify its proposals to (a) accelerate the timeline for adoption of the UL 1741 and IEEE 1547-2018 standards well ahead of other states' anticipated adoption timelines; and (b) require interconnecting customers to install DER communication devices to enable utility control over customers' DERs. Sunrun urges the Commission to consider the experience of other utilities, such as PG&E, with much higher DER penetration levels and adoption rates that do not require direct utility control of customers' DERs and reject the Petition as premature and unsupported given the low penetration and rate of DER deployment in PPL's service territory.

B. The Petition raises significant technical questions about the implementation of IEEE 1547-2018 and UL 1741 certification standards and is out of sync with other states' timing for adopting the updated standards.

The Petition states that "all DER inverter and communication devices are expected to be certified in 2020 under IEEE 1547-2018, using the new UL Standard 1741" because "California provided manufacturers [until 2020] to update their products to the new standards imposed through California Senate Bill 1."¹¹ PPL is mistaken as to the California requirements and the timeline for when DER inverters certified to the new standards will be available on the market. California's 'Guidelines for California's Solar Electric Incentive Programs' require certification to UL 1741 SA, not UL 1741 under the IEEE 1547-2018 standard.¹² According to reports from

¹¹ PPL Petition at p. 12.

¹² See California Energy Comm'n, *Guidelines for California Solar Electric Incentive Program, (Senate Bill 1), Seventh Ed.* at p. 13 (Dec. 2018) available at <https://ww2.energy.ca.gov/2018publications/CEC-300-2018-009/CEC-300-2018-009-CMF.pdf>

the Interstate Renewable Energy Council (“IREC”), equipment that is UL 1741-certified to IEEE standard 1547-2018 will not be available until 2021.¹³

Moreover, the Petition states that “in the absence of the revisions to UL Standard 1741 being finalized, PPL Electric may adopt screening requirements that are different and stricter than what is ultimately adopted by UL.”¹⁴ It is apparent from this statement that PPL either misunderstands UL 1741 and IEEE 1547-2018 or takes an over-simplified view of the implications of its proposal.

The IEEE and UL standards represent equipment specifications that define advanced inverter capability requirements and standardized inverter function settings. While some deviation from standard settings may be technically feasible in some instances, a requirement to use non-standard functions would require manual field settings, increase installation time, and raise programming concerns. In the absence of unique and compelling circumstances, standardized settings should be used to ensure customers are not harmed, financially or otherwise, from more aggressive inverter response settings and to ensure uniformity and simplification in field programming and DER installation protocols. PPL’s suggestion that it might unilaterally adopt “screening requirements that are different and stricter than what is ultimately adopted by UL” suggests a deep misunderstanding of the purpose of the updated

(stating: “[t]he following certifications will be required and reflected on the Inverter List as provided below: Optional until December 31, 2019 – If provided, will be reflected on listing. Required starting January 1, 2020, for list eligibility: (1) Safety certification to UL 1741, inclusive of Supplement SA (“UL 1741 SA”), with optional sections, from a NRTL, 37 or alternatively, safety certification to UL 1741, inclusive of IEEE 1547:2018, from a NRTL; 33 and (2) NRTL test report or summary of test results for Supplement SA or IEEE 1547 testing.”)

¹³ See Interstate Renewable Energy Council, *Making the Grid Smarter: Primer on Adopting the New IEEE 1547-2018 Standard for Distributed Energy Resources* at p. 8 (Jan. 2019) (“IREC Primer”) available at https://irecusa.org/wp-content/uploads/2019/01/IEEE-FINAL_012919.pdf; see also Maryland Pub. Serv. Comm’n, Docket No. PC 44, Interconnection Workgroup, *Phase II Final Report* at p. 5 (July 22, 2019) (“Maryland Phase II Final Report”) (recommending January 1, 2022 for the implementation of UL 1741 and IEEE 1547-2018 standards for smart inverters).

¹⁴ PPL Petition at p. 2, FN 4.

standards and the implications of such unilateral utility decision-making on DER installation, programming and operation.

Most states are thoughtfully considering the new IEEE 1547-2018 standards and are developing interconnection requirements in a collaborative way with their RTO/ISO, utilities, industry, and other stakeholders. For instance, the Maryland Public Service Commission instituted an interconnection working group to explore, among other matters, the appropriate timeline for instituting the updated standards and, after extensive stakeholder input, the working group recommended an implementation date of January 1, 2022.¹⁵ Indeed, as IREC observes, robust stakeholder engagement is critical to state adoption and implementation of the new standard:

State adoption and implementation of this Standard will require the attention of state regulators – who will be tasked with formally adopting the new Standard at the state level – as well as utilities who will integrate them into internal interconnection protocols. In addition, DER industry representatives, technology manufacturers, state and federal agencies, national laboratories and advocates will play key roles in the consideration and adoption of the new Standard. In contrast with the 2003 Standard, which provided one set of requirements for all DERs, IEEE Std 1547-2018 features a menu of options that need to be considered and selected.¹⁶

PPL’s apparent misunderstandings of UL Standard 1741 and IEEE Standard 1547-2018 and oversimplification of the issues presented in the Petition underscore the importance of any Commission decision regarding the forthcoming advanced inverter certification standards apply to all utilities a statewide basis and result from a robust stakeholder process. As such, Sunrun urges the Commission to deny PPL’s Petition.

¹⁵ Maryland Phase II Final Report at p. 5 (following extensive stakeholder engagement the interconnection working group final report recommended “a January 1, 2022 requirement to use smart inverters in Maryland and several other companion regulations including requiring utilities to develop inverter setting policies and also post a list of smart inverters they have approved on their websites”).

¹⁶ IREC Primer at p. 4.

C. The Petition inappropriately conflates advanced inverter functionalities pursuant to the IEEE 1547-2018 and UL 1741 certification standards with utility control of customer-sited DERs.

PPL's Petition appears to be based on a misunderstanding of what the updated certification standards require and how advanced inverter functionalities operate. It is important to emphasize that the adoption of UL Standard 1741 certification for IEEE Standard 1547-2018 does not require direct utility control for these functions to deliver grid benefits. The Petition incorrectly asserts that PPL's proposed "DER management device" – the communication medium between the DER inverters and PPL – "must be installed so that the Company can monitor and manage the DERs and take advantage of the DERs' grid support functions."¹⁷ In other words, the Petition incorrectly claims that adopting the UL Standard 1741 certifications for IEEE 1547-2018 for advanced inverter functionality and direct utility control through PPL's proposed DER management device are both necessary for advanced inverters to provide grid support benefits. Instead, many grid support functions of smart inverters, such as voltage and frequency support, can be provided autonomously without the need for direct control.

Moreover, as discussed further in the sections below, other states and utilities do not allow direct utility control of DERs; but instead are investigating different mechanisms for utilities to procure and compensate customers for grid support functions provided by DERs and implementing programs to create new market participation pathways for customers to enroll their DERs through DER aggregators and receive compensation for participating in utility programs that deliver grid benefits.¹⁸

¹⁷ PPL Petition at p. 15 (emphasis added).

¹⁸ See, e.g., R.14-10-003, *Admin. Law Judge's Ruling Directing Response to Post Workshop Questions* at p. 3 (Apr. 15, 2019) (requesting parties' input on a potential tariff-based procurement mechanism for grid services provided by DERs, including distribution investment deferral, energy, capacity, and voltage/Volt Ampere Reactive (volt/VAR) and other services).

PPL’s Petition also presents a troubling and oversimplified discussion of the issues implicated by the development of PPL’s DER Management System (“DERMS”) and its interaction with, and timing of, PPL’s proposed DER Management Plan. The Petition states that PPL “is developing a [DERMS] to gather DER data, provide DER system forecast capabilities, and *potentially provide DER management capabilities.*”¹⁹ There is no justification for utility control of customer and third-party owned DERs as these functions can be provided either autonomously or through third-party DER aggregators.

The Petition’s conclusory and speculative assertions about how advanced inverter functionalities and utility control over customer DERs “will maintain or increase the stability, reliability, and efficiency of the distribution system over time as DER penetration levels increase” and “improve distribution system management capabilities, streamline the interconnection process for new DERs by reducing the protocols the Company will need to manage and maintain, provide increased DER interconnection potential, and could reduce utility investments supporting DER interconnection”²⁰ are unfounded and should be rejected.

While Sunrun is supportive of advanced inverter deployment, PPL’s Petition goes far beyond a proposal to accelerate the adoption of not-yet approved advanced inverter standard updates. The issues of direct utility control over customer-sited DERs and the adoption of advanced inverter requirements are distinctly separate issues. While the adoption of UL Standard 1741 and IEEE Standard 1547-2018 merits a full and complete investigation by the Commission with opportunities for robust stakeholder engagement (as discussed above), PPL’s request for approval to assert direct control over customers’ DERs should be flatly rejected.

¹⁹ PPL Petition at p. 9 (emphasis added).

²⁰ *Id.* at p. 13.

D. The Petition is void of critical detail and analysis of its impact on customers and implications for advancing DER markets in Pennsylvania.

The Petition lacks analysis of the impact of PPL’s proposed Plan on customers, including, but not limited to, the potential for increased costs to interconnecting customers, the loss of value from the reduced operation of customers’ DERs, the lack of compensation to customers for providing grid services, and numerous DER operation and management implications.

The Petition states that for new interconnecting customers, a “DER management device must be installed and connected to the local communication interface of the DER system, so that the Company can monitor and manage the DERs and take advantage of the DERs’ grid support functions.”²¹ The cost of the DER management device and whether the customer would be required to pay for the device is unclear. More fundamentally, regardless of who would ultimately bear the cost of the device, PPL’s proposed communications device is redundant and represents an unnecessary cost to customers and ratepayers. DERs installed by third parties have communication systems in place that can enable the situational awareness PPL desires via aggregators pursuant to tariffs or other contracts for the provision of dispatchable grid services from customers’ DERs. Imposing redundant equipment requirements for DERs to enable direct utility control would not only inappropriately insert rate-regulated utilities into competitive markets, but would also saddle customers and ratepayers with unnecessary costs that reduce the value proposition of DERs and the cost effectiveness of DER programs.

The Petition also indicates that PPL’s DER Management Plan would allow the Company to remotely curtail customers’ DERs and otherwise operate the DER as it determines necessary

²¹ *Id.* at p. 15.

to provide certain grid services.²² However, the Petition makes no mention of necessary agreements for control of the DER, including how much curtailment is acceptable, or the extent of the risk of lost production from curtailed or altered operation of customers' DERs. PPL's proposal to control customers' DERs raises significant operational concerns that would expose customers to uncertainty and risk with respect to how their DERs will operate under PPL management and whether such operation will meet the customers' needs and deliver the expected return on investment.²³ Inserting such customer uncertainty and risk also creates financing and other concerns for DER developers, which in turn raises significant questions about the future of DER deployment in the Commonwealth.

Finally, the Petition makes no mention of whether or how customers would be compensated for the grid services that PPL would obtain through the management of customers' DERs. DER developers such as Sunrun work with their customers to program inverters and help customers understand how to best manage their devices to maximize value under various programs, such as Pennsylvania's net metering program, and provide customers with back-up power in the event of a grid outage. Moreover, while customers have traditionally adopted DERs to generate clean electricity and provide back-up power, states and utilities around the country

²² See *id.* at pp. 14; 18.

²³ See, e.g., IREC Primer at p. 28 (finding that “[u]tilizing IEEE Std 1547-2018 enabled functions can (dependent on the settings) reduce a DER system’s generation at certain locations, which can impact a consumer’s investment and project economics. Care must be taken to ensure customers are not unduly affected by the required settings. Since the performance of voltage regulation functions depend on a customer’s location on the grid as well as factors outside of the customer’s control, such as utility voltage regulation practices, introducing these functions may complicate system performance modeling and potentially reduce a consumer’s expected return on investment. Adopting explicit consumer protection provisions may be necessary to ensure that customers are aware of any potential loss of generation over time and/or that recourse exists to the extent a single customer experiences a disproportionate amount of generation loss. Similarly, DER system designers need to understand and model the effects of the new functions on DER output power to convey accurate information to customers regarding anticipated lifetime generation.”).

are increasingly investigating new market participation pathways for customers to provide grid services and are adopting programs that encourage customers to enroll their DERs in these programs (such as demand response, peak reduction, and other “pay for performance” programs) either directly or through third-party DER aggregators.²⁴

These programs acknowledge the broader grid and ratepayer value of customer-sited DERs and seek to leverage that value by (1) providing customers options to enroll their DERs and receive compensation for the services provided; and (2) integrate the customer engagement and DER management expertise of third-party aggregators to deploy and manage their customers DERs in response to grid needs. PPL’s Plan makes no mention of customer compensation for the grid services it would obtain from customers’ DERs or the ability of third-party DER aggregators to provide these grid services through their DER management systems. Moreover, PPL’s proposal to control customers’ DERs could preclude opportunities for customers to participate in other programs and undermine Pennsylvania’s ability to obtain the customer and ratepayer value that other states and utilities are unlocking by allowing these customers to provide grid services for compensation through DER aggregators.

²⁴ See, e.g., Cal. Pub. Utils Comm’n, R.14-10-003; DPU Order (adopting demand reduction measures under utility efficiency programs and creating new market participation pathways for residential customers with DERs to participate through third-party aggregators to reduce system peaks and receive compensation for the service); LIPA Order (approving LIPA’s proposal to modify its Tariff for Electric Service to enable incentives in support of PSE&G Long Island’s BTM energy storage program and allowing residential and other net metering and VDER customers to participate in PSE&G Long Island’s dynamic load management programs with customer or third-party owned storage devices through third-party DER aggregators and receive compensation for the service); Green Mountain Power, GMP Bring Your Own Device “BYOD” Access & Service Agreement *available at* <https://greenmountainpower.com/wp-content/uploads/2019/03/BYOD-Termsand-Conditions-3-11-19.pdf> (“GMP BYOD Service Agreement”) (pursuant to which customers may enroll customer-owned energy storage devices for dispatch during forecasted peak times to provide transmission and capacity cost savings and receive compensation for the service); GMP REV MOU (pursuant to which Green Mountain Power will develop a third iteration of its “bring-your-own-device” (“BYOD”) program under which customers may enroll and participate in the program through third-party DER aggregators and receive compensation for the service).

Recent decisions by the Illinois Commerce Commission (“ICC”) rejecting tariff proposals from Commonwealth Edison and Ameren to operate and control customers DERs through advanced inverter settings offers helpful insight into the shortcomings of PPL’s Petition, including the lack of compensation for services provided. The ICC rejected arguments that to preserve “reliability during distribution system reliability events,” smart inverters must be able to perform certain “communications and control” functions permitting the utility to “operate and control” the DER.²⁵ Like PPL’s proposal, the Illinois utilities’ did not include provisions to compensate customers for the grid services provided by the customers’ DERs.

The ICC rejected the proposals and concluded in its order rejecting one of those proposals that it posed “an unreasonable amount of risk and uncertainty to DER customers and owners” and that it is unclear how or why the utility would need to take active control of a customer’s smart inverter, or to what extent such actions would constitute a service that required additional compensation from the utility.²⁶

PPL’s proposal to control customer and third-party owned DERs raises significant consumer protection, DER financing and other issues that have far reaching implications for the future of DER deployment in Pennsylvania. Sunrun urges the Commission to deny the Petition.

E. The Petition raises significant policy issues that should be considered on a statewide basis and provide for a robust stakeholder process.

PPL’s proposal to accelerate the adoption of yet to be finalized UL Standard 1741 and Standard 1547-2018 raises significant policy questions that should be considered on a statewide basis. Moreover, PPL’s proposal to require customers to install a DER management device to

²⁵ Illinois Commerce Comm’n, Case No. 18-0753, Commonwealth Edison, *Petition for Approval of Rider DG REBATE Renewable Energy Distributed Generation Rebate and Rider DG REBATE ADJUSTMENT, Renewable Energy Distributed Generation Rebate Adjustment*, Order at p. 41 (Nov. 26, 2018).

²⁶ *Id.*

enable PPL to directly control the customers' DERs is antithetical to sound clean energy policy and will chill the nascent DER market in Pennsylvania. As discussed above, utility control of DERs is not, and should never be, a prerequisite to DERs providing grid benefits. Indeed, many advanced inverter functionalities can be performed autonomously and third-party DER providers and DER aggregators have substantial advanced capabilities to manage customers' DERs in response to grid needs by working in conjunction with DER customers, utilities and RTOs/ISOs.

It is important to emphasize that DER developers and aggregators play critical roles interfacing with customers, managing DER operations and performance, and ensuring consistent achievement of customer expectations. DER developers and aggregators have direct and ongoing relationships with their customers, starting with the DER sale and installation and continuing through delivering and managing the customer experience for the life of the DER, including the provision of grid services, such as those contemplated in PPL's Petition. The importance of this relationship only increases when customers' DERs are utilized to provide grid services, whether in accordance with a grid services tariff or other utility program rules.

Customer-sited DERs have a significant role to play in achieving Pennsylvania's clean energy vision and address pressing climate challenges. However, to unlock the full potential of these resources, viable market participation pathways are necessary for customers and third-party providers to enroll DERs and participate in utility programs, and receive compensation for the services provided. Advanced inverters certified to UL Standard 1741 under IEEE Standard 1547-2018 will have an important role in helping customers, DER providers, utilities, and ISOs/RTOs deliver the grid benefits of customer-sited DERs. Developing the appropriate policy, market structures, and utility programs, however, requires collaboration between utilities, industry, and other stakeholders. Careful and deliberate consideration of the rollout of the UL 1741 and IEEE

1547-2018 standards in Pennsylvania on a statewide basis is essential to thoroughly and appropriately address customer protection issues, provide DER developers consistent and clear guidance, and maximize the ability for customer-sited DER solutions to provide value to all ratepayers in the Commonwealth.²⁷

PPL's Petition implicitly acknowledges the grid value that customer-sited DERs offer; however, PPL's Plan is the wrong approach "to support and enable Pennsylvania's vision of renewable growth to address climate and sustainability objectives."²⁸ There are far better, less costly, and sustainable alternatives to PPL's vision. Indeed, as discussed above, other states have engaged utilities and stakeholders to develop grid service procurement mechanisms, including tariff-based mechanisms, and/or are in the process of, or have already implemented, programs that allow customers to deliver a variety of grid services.²⁹ Well-crafted programs stimulate investment and innovation in grid management strategies and services, promote competitive markets and reduce ratepayer costs, and preserve customer choice and investment in clean energy technologies.

Sunrun urges the Commission to consider the deliberate and collaborative approach undertaken in other states considering the adoption of UL 1741 and IEEE 1547-2018 advanced inverter standards as well as the experience of other states and utilities developing and implementing programs and mechanisms enabling DERs to provide grid services and compensating customers for those services. Given these considerations, PPL's Petition should be denied.

²⁷ See, e.g., IREC Primer at 10 (observing that "for states with multiple regulated utilities, statewide adoption of IEEE Std 1547-2018 will provide greater consistency across utilities and enable a more streamlined rollout of the Standard, which will benefit consumers, utilities and DER developers alike").

²⁸ PPL Petition at p. 3.

²⁹ See, e.g., Cal. Pub. Utils Comm'n R.14-10-003; DPU Order; LIPA Order; GMP REV MOU.

III. Conclusion

For the foregoing reasons, Sunrun requests that the Commission deny PPL's Petition. In the alternative, Sunrun requests the Commission suspend the proposed tariff revisions and open a new proceeding applicable statewide to investigate the technical, policy and other issues raised by the Petition and allow all interested parties to participate and engage through a full and robust stakeholder process.

Respectfully submitted this 30th day of July 2019.

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Management Plan :

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the following document, the *Answer of Sunrun Inc. to Petition of PPL Electric Utilities Corporation*, upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant), in the manner and upon the persons listed below:

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Dated this 30th date of July 2019.

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