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File #: 175564

January 29, 2024

VIA ELECTRONIC FILING

Rosemary Chiavetta
Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
P.O. Box 3265
Harrisburg, PA 17105-3265

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

Dear Secretary Chiavetta:

Enclosed for filing is the Answer of PPL Electric Utilities Corporation ("PPL Electric") to the Petition of Tesla, Inc. ("Tesla"), Sun Directed, American Home Contractors ("AHC"), Sunrun, Inc. ("Sunrun"), and the Solar Energy Industries Association ("SEIA") (collectively, "Joint Solar Parties") for Recission or Amendment of PPL Electric's Distributed Energy Resources Management Pilot and Request for Expedited Proceeding. Copies are being provided as indicated on the Certificate of Service.

Respectfully submitted,

Devin Ryan

DTR/dmc
Enclosures

cc: The Honorable Mary D. Long (via email; w/attachments)
The Honorable Emily I. DeVoe (via email; w/attachments)
Certificate of Service

CERTIFICATE OF SERVICE

(Docket No. P-2019-3010128)

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

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Date: January 29, 2024

Devin TRyan

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

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

ANSWER OF PPL ELECTRIC UTILITIES CORPORATION TO THE PETITION OF JOINT SOLAR PARTIES FOR RESCISSION OR AMENDMENT OF PPL ELECTRIC'S DISTRIBUTED ENERGY RESOURCES MANAGEMENT PILOT AND REQUEST FOR EXPEDITED PROCEEDING

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Date: January 29, 2024

Counsel for PPL Electric Utilities Corporation

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PPL Electric Utilities Corporation ("PPL Electric" or the "Company"), pursuant to 52 Pa. Code §§ 5.61 and 5.572, hereby respectfully submits this Answer to the Petition filed by Tesla, Inc. ("Tesla"), Sun Directed, American Home Contractors ("AHC"), Sunrun, Inc. ("Sunrun"), and the Solar Energy Industries Association ("SEIA") (collectively, "Joint Solar Parties" or "JSPs") requesting that the Pennsylvania Public Utility Commission ("Commission") take the radical step of rescinding its unanimous December 17, 2020 Order ("Order"), which approved the Joint Petition for Settlement of All Issues ("Settlement") that was achieved and filed by all the active parties in the above-captioned proceeding,[1] or, alternatively, amending the Order to create an opt-out for customers participating in the Distributed Energy Resources ("DER") Management pilot program. The JSPs also request that the Commission grant expedited review of their Petition.

The rescission or amendment of a Commission Order, particularly a unanimous Order that approved a Settlement reached by all active parties in a proceeding, is an **extreme remedy**. The Commission can only rescind or amend a prior order: (1) when there is "newly discovered evidence, a substantial change in circumstances, or an error of fact or law"[2]; and (2) after "conduct[ing] an evidentiary hearing" when the request to rescind or amend the order is opposed.[3] As explained herein, the Commission should deny the JSPs' Petition outright or, if it does not, set the matter for hearing.

PPL Electric filed its DER Management Plan to encourage more DER deployments in the Company's service territory, facilitate more DER installations on its circuits without the need for additional capital investments by the Company or interconnection applicants, and leverage smart

[1] Although Sunrun was a party in the proceeding, Sunrun did not submit any testimony or exhibits. More importantly, Sunrun stated that it would not file an objection to the Settlement. Now, however, Sunrun asks the Commission to rescind its Order approving the Settlement despite having a clear and obvious opportunity to do so previously. This Petition is clearly an objection to the Settlement, and therefore, should be rejected as improper.

[2] *Feleccia v. PPL Elec. Utils. Corp.*, Docket No. C-20016210 (Order entered Mar. 7, 2003) (citation omitted).

[3] *Armstrong Telecoms., Inc. v. Pa. PUC*, 835 A.2d 409, 420 (Pa. Cmwlth. 2003) ("*Armstrong*") (citing *Popowsky v. Pa. PUC*, 805 A.2d 637 (Pa. Cmwlth. 2002)).

inverters' functionalities to improve the safety, reliability, and adequacy of PPL Electric's electric distribution system. All of these goals align with PPL Corporation's broader strategy to achieve net-zero carbon emissions by 2050, support economy-wide electrification, and advance a renewable energy future.[4] In fact, when the Commission unanimously approved the Settlement, former Chairman Brown Dutrieuille "**commend[ed] PPL for being in the vanguard of distributed energy advancement**," noting that "[t]aking this next step in managing distributed energy has the potential to permit PPL to better control power quality, reliability, and safety throughout the grid while further fostering investment in resources such as rooftop solar and combined heat and power."[5]

Contrary to the JSPs' allegations, the DER Management pilot program has out-performed expectations. The pilot program, which is still ongoing, has produced or is projected to produce significant benefits and cost savings, including millions of dollars in deferred capital investments, increased hosting capacity for additional DERs, and improvements to the safety, reliability, and adequacy of the Company's electric distribution service. In fact, if the Commission decides to terminate the pilot program now, PPL Electric estimates that **approximately $6.52 million in capital investment savings over the term of the pilot program will be lost**.

Terminating the pilot program early also would limit the number of DERs that could interconnect with the Company's distribution system without expensive distribution system upgrades. Under the pilot program, PPL Electric has increased its hosting capacity and facilitated more cost-effective interconnections. Indeed, PPL Electric has seen significant increases in both

[4] PPL Corporation's Sustainability Report, *available at* https://www.pplweb.com/wp-content/uploads/2023/04/PPL-Corporation_2022-Sustainability-Report_FINAL.pdf.

[5] *PPL Elec. Utils. Corp. Petition for Approval of Tariff Modifications and Waivers of Regulations Necessary to Implement its Distributed Energy Resource Management Plan*, Docket No. P-2019-3010128 (Statement of Chairman Gladys Brown Dutrieuille dated Dec. 17, 2020) (emphasis added).

the number of DERs and nameplate capacity added to its system. For example, in 2019, before the pilot program, PPL Electric saw a total of 1,229 new DER interconnections, totaling 29.2 MW of capacity. In 2023, while the pilot program has been in place, PPL Electric interconnected 4,225 new DERs, adding up to 44.5 MW of capacity. These stark increases: (1) demonstrate how the pilot program is encouraging and facilitating more DER interconnections; and (2) completely undercuts the JSPs' unsubstantiated claims that the pilot program is negatively affecting the deployment of solar in PPL Electric's service territory.

Further, most, if not all, of the alleged issues raised in the Petition are Tesla-specific and caused by Tesla's actions or inactions. To date, Tesla has refused to provide any of the necessary information and equipment for the Company to add Tesla's inverters to its approved inverter list. Tesla is the **only** inverter manufacturer refusing to provide that information and equipment. Apparently, Tesla wants to be treated differently and more favorably than every other inverter manufacturer. However, the Commission-approved inverter requirements must apply to all entities equally.[6] Pennsylvania law prohibits granting Tesla an undue preference or advantage by exempting it from those requirements. Such an exemption would be anti-competitive conduct, would violate PPL Electric's Commission-approved tariff[7] and the Commission's Order,[8] and constitute unreasonably discriminatory service.[9]

In addition, the purported "communications and functionality" issues identified in the JSPs' Petition are due to Tesla's after-market modification of Delta and SolarEdge inverters. Specifically, Tesla inserts a ZigBee chip in the Delta and SolarEdge inverters that prevents PPL

[6] *See* 66 Pa. C.S. §§ 1303, 1502.

[7] *See id.* § 1303 (requiring public utilities to adhere to their tariffs); *PPL Elec. Utils. Corp. v. Pa. PUC*, 912 A.2d 386, 402 (Pa. Cmwlth. 2006) (citing 66 Pa. C.S. § 1303 and *Pa. Elec. Co. v. Pa. PUC*, 663 A.2d 281, 284 (Pa. Cmwlth. 1995)).

[8] *See, e.g.*, *id.* §§ 316, 502.

[9] *See id.* § 1502.

Electric's DER Management device from properly communicating with the inverters. By denying the Company the required ability to communicate with the inverters, Tesla's modification contravenes: (1) PPL Electric's Commission-approved tariff; and (2) the Commission's unanimous Order approving the DER Management Plan in its current form.

PPL Electric worked directly with Tesla on these "communications and functionality" issues. The Company even supplied Tesla with the exact software code for a firmware update to Tesla's gateways that would resolve the issues. Tesla also emailed PPL Electric informing the Company that it was working on a firmware update that would resolve the issues as well. However, Tesla refused to implement PPL Electric's hand-crafted firmware update or the one that Tesla was developing on its own.

Instead, **Tesla personnel intentionally vandalized or tampered with PPL Electric's DER Management devices on at least eight occasions**. Some devices were removed from their installations, apparently taken back to Tesla's warehouses, and only returned by Tesla to PPL Electric's offices or the service addresses after the Company demanded that Tesla do so. Another device was destroyed by water damage after Tesla personnel removed the device from its mounting and left it on the ground. In other situations, Tesla personnel removed the fuses from PPL Electric's DER Management devices, rendering the devices inoperable.

Now, building upon Tesla's prior efforts to undermine the Company's DER Management pilot program through vandalism or tampering, Tesla and the other JSPs want the Commission to rescind the pilot program entirely. The Commission should take these disreputable and unlawful actions by Tesla into account when weighing the JSPs' allegations and their requested relief, as such actions severely impeach their credibility.

In fact, the JSPs set forth and rely on inaccurate statements and gross mischaracterizations in their Petition. For instance, the JSPs claim that the Company's DER Management device prevents inverter manufacturers from viewing the inverters' error codes. However, PPL Electric confirmed with Delta that it is actually Tesla's ZigBee chip that prevents Delta from viewing the error codes. The DER Management device's presence has no effect whatsoever on inverter manufacturers' viewing of those codes. The JSPs also erroneously declare that fixed power factor is not used in any other jurisdiction, when, in reality, New York, California, and Hawaii (*i.e.*, the three states referenced in the JSPs' Petition) require grid profiles that have fixed power factor to be programmed into the inverters that are used in their jurisdictions.[10] The JSPs also allege that the pilot program has forced installers to end operations in the Company's service territory, such as Tesla in July 2023. Yet, Tesla continued to submit interconnection applications beyond that date, including as recently as October 2023.[11] One of the other JSPs, Sun Directed, even submitted an interconnection application 21 days ago, on January 8, 2024.

Additionally, the JSPs inaccurately describe the Company's inverter approval process as limiting customer choice of inverters, driving up costs of installations, and limiting the design of distributed solar systems, apparently believing that the Company's approved inverter list does not include inverters that are integrated in solar-plus-storage systems. In actuality, PPL Electric's approved inverter list includes: (1) 237 inverters as of January 24, 2024, from 11 different manufacturers,[12] with more inverters from 8 additional inverters manufacturers in the pipeline that

[10] *See* "Meeting Hawaii Utility Interconnect Requirements," SolarEdge (dated June 2021), *available at* https://knowledge-center.solaredge.com/sites/kc/files/meeting_hawaii_utility_interconnect_requirements_na.pdf*;* "SolarEdge Instruction – California Electric Rule 21," SolarEdge (dated Mar. 2019) (used by both New York and California), *available at* https://knowledge-center.solaredge.com/sites/kc/files/se_instruction_california_electric_rule_21_upgrade_instructions.pdf.

[11] Even if Tesla or other installers decided to end operations in the Company's service territory, such decision could be because of several reasons that are unrelated to PPL Electric's pilot programs. A company's decision to operate or not operate in a given state or even service territory is its own business decision.

[12] A copy of the current approved inverter list is attached hereto as **Appendix A**.

cover the vast majority of inverter manufacturers and inverters that are certified to Institute of Electrical and Electronics Engineers ("IEEE") 1547-2018 and Underwriters Laboratories ("UL") 1741-SB; and (2) Sol-Ark and Solectria inverters that are integrated in solar-plus-storage systems, with more to be added as inverter manufacturers and installers may need. The Company also reviews and approves inverters expeditiously; within approximately two weeks. Moreover, the average cost of single-phase and three-phase inverters on the Company's approved list is $2,600 and $11,100, respectively, while the Company estimates that the average cost of single-phase and three-phase inverters not on the approved list is $2,400 and $15,000, respectively. Also, contrary to Sun Directed's claim that the Company's requirements do not provide "viable options" to "commercial leads with single phase service," the approved inverter list includes 93 inverters that would work for single-phase service for non-residential DER installations for system sizes ranging from 0.19 kW to 15 kW. As such, it is unclear how the Company's inverter requirements are limiting customer choice of inverters, driving up any installation costs, and limiting system design, as alleged by the JSPs.

Further, it is wholly inappropriate for the JSPs to request rescission or amendment of the Commission's Order. First, the JSPs' Petition is paradoxically late and premature. The Petition is late because despite requesting expedited treatment (presumably because of some alleged exigent harm), the JSPs' alleged grounds for rescinding or amending the Order have existed since at least July 2023 and, in some cases, well before that. The JSPs waited several months to file the instant Petition and only now ask the Commission to rescind or amend the Order on an expedited basis. The JSPs' decision to wait so long to file their Petition negates any claim that expedited relief is warranted or that any exigent harm is ongoing or imminent.

At the same time, the JSPs' Petition is premature. The Settlement contained a carefully-crafted process to review the merits of the pilot program and evaluate whether it should continue—PPL Electric must file a Petition within 60 days after the end of Program Year 2 to continue or expand the pilot program. Such a filing is due in the next few months, at which time interested parties, including JSPs, can petition to intervene and raise their issues with the pilot program. The JSPs also want to terminate the pilot program before Program Year 2 of the three-year pilot program is completed. As alleged support, the JSPs heavily rely on statements in the Company's 2023 DER Management Report, which was submitted over nine months ago on April 20, 2023. However, PPL Electric's 2024 DER Management Report will be filed in a couple months and will present new data demonstrating the current and projected performance and benefits of the pilot program. Indeed, it is a gross misstep to gauge a three-year pilot program's performance and success based on only one year's worth of data.

Second, the JSPs had notice and opportunity to participate in the DER Management Plan proceeding and oppose the Company's proposals or the Settlement. Notice of the DER Management Plan was published in the *Pennsylvania Bulletin*,[13] and PPL Electric served the notice of the filing on three of the JSPs—Tesla, Sun Directed, and Sunrun.[14] **Sunrun even intervened in the proceeding and never submitted any testimony or exhibits**. Then, once the active parties achieved the Settlement, **Sunrun represented that it would not be objecting to the Settlement**.[15] Despite having notice and opportunity to oppose the DER Management Plan and, in the case of Sunrun, oppose the Settlement, the JSPs did not. It is completely inappropriate for the JSPs to turn

[13] 49 Pa.B. 3454 (June 29, 2019).

[14] *See* PPL Electric Letter and Certificate of Service Regarding Service of Notice on Solar Entities, Docket No. P-2019-3010128 (dated July 12, 2019).

[15] *See* Settlement, p. 1 n.1.

around now and argue that the pilot program should be terminated or amended based on their unsubstantiated and inaccurate allegations.

Third, the JSPs present undeveloped and irrelevant legal arguments in their Petition, asserting that the Commission's Order violated the Commonwealth Documents Law[16] and the Alternative Energy Portfolio Standards Act ("AEPS Act")[17] and contravened competitive policies, such as the Electricity Generation Customer Choice and Competition Act ("Choice Act").[18] In actuality, the Commonwealth Documents Law does not apply here because the Commission did not amend its existing regulations or promulgate new regulations through its Order. The Commission simply acted in its quasi-judicial authority and adjudicated a litigation, which Pennsylvania appellate courts have held is an accepted method for an administrative agency to formulate policy that has the force of law.[19] Also, nothing in the Commission's Order affected the competitive market for retail electric supply service, so the Choice Act does not apply here either. Moreover, PPL Electric wants to foster the competitive market for solar development, which is why the Company refuses to treat Tesla differently from every other inverter manufacturer. Also, nothing in the AEPS Act was violated or modified by the Commission's Order. To the contrary, the Commission's authorization for PPL Electric to require additional equipment for DER interconnections is explicitly contemplated in the Commission's AEPS Act regulations.[20]

For all these reasons, and as further explained herein, the JSPs' factual and legal arguments are severely flawed and should be rejected. Notwithstanding, to the extent that the Commission gives any credence to these unfounded arguments, the Commission cannot and should not rescind

[16] *See* 45 P.S. §§ 1102-1602; 45 Pa. C.S. §§ 501-907 (collectively referred to as the "Commonwealth Documents Law").

[17] 73 P.S. §§ 1648.1-1648.8.

[18] 66 Pa. C.S. §§ 2801-2815.

[19] *See Corman v. Acting Sec'y of the Pa. Dep't of Health*, 267 A.3d 561, 574 (Pa. Cmwlth. 2021) (quoting *Pa. Human Rels. Comm'n v. Norristown Area Sch. Dist.*, 374 A.2d 671, 679 (Pa. 1977)).

[20] 52 Pa. Code § 75.13(k).

or amend the in-progress pilot program unless and until the JSPs' claims can be vetted through a full on-the-record proceeding, where the parties can engage in discovery, submit testimony and exhibits, and cross-examine witnesses. Otherwise, the Commission will violate appellate precedent and deny due process to PPL Electric and the other signatories to the Settlement.

I. INTRODUCTION AND BACKGROUND

1. PPL Electric is a public utility that provides electric distribution and provider of last resort services in Pennsylvania subject to the regulatory jurisdiction of the Commission. PPL Electric furnishes electric distribution, transmission, and provider of last resort electric supply services to approximately 1.5 million customers throughout its certificated service territory, which includes all or portions of 29 counties and encompasses approximately 10,000 square miles in eastern and central Pennsylvania.

2. On May 24, 2019, PPL Electric filed its DER Management Petition, which initiated the above-captioned proceeding.

3. On July 29, 2019, Trinity Solar filed Comments on the Company's Petition.

4. On July 30, 2019, the Office of Consumer Advocate ("OCA"), Natural Resources Defense Council ("NRDC"), and Sunrun filed Answers to the Petition. NRDC and Sunrun also filed Petitions to Intervene. Further, Comments were filed by the Sustainable Energy Fund ("SEF"), GridLab, the Solar Unified Network of Western Pennsylvania ("SUNWPA"), Energy Independent Solutions, LLC ("EIS"), the Interstate Renewable Energy Council, Inc. ("IREC"), the Pennsylvania Solar Energy Industries Association ("PASEIA"), and Exact Solar.

5. On August 22, 2019, PPL Electric filed a letter inquiring about the procedural status of the proceeding and requesting that the matter being assigned to an administrative law judge for hearings. An Interim Order also was issued granting NRDC and Sunrun's Petitions to Intervene.

6. On August 28, 2019, ALJ DeVoe issued the Prehearing Conference Order, which established procedural rules and required prehearing memoranda to be filed by Noon on September 9, 2019. A Notice also was issued scheduling the prehearing conference for September 11, 2019.

7. On August 30, 2019, NRDC and Sunrun filed: (1) a Preliminary Objection to PPL Electric's August 22, 2019 letter; and (2) a Motion for Leave to Reply & Reply to PPL Electric's August 22, 2019 letter.

8. On September 3, 2019, SEF filed a Petition to Intervene.

9. On September 9, 2019, PPL Electric filed an Answer to NRDC and Sunrun's Preliminary Objection as well as an Answer to NRDC and Sunrun's Motion for Leave to Reply & Reply. Also, prehearing memoranda were filed by PPL Electric, OCA, NRDC, and Sunrun.

10. On September 11, 2019, the prehearing conference was held as scheduled. At the prehearing conference, ALJ DeVoe established a deadline of September 20, 2019, for parties to file petitions for interlocutory review and answers to material questions. Further, the parties were directed to confer about a procedural schedule and propose a schedule by September 27, 2019.

11. On September 20, 2019, NRDC and Sunrun separately filed Petitions for Interlocutory Review and Answer to Material Questions. Also, NRDC filed a Notice of Appearance.

12. On September 25, 2019, ALJ DeVoe issued an Interim Order: (1) holding NRDC and Sunrun's Preliminary Objection to the August 22, 2019 letter and their Motion for Leave to Reply & Reply in abeyance; and (2) extending the due date for parties to submit a proposed procedural schedule from September 27, 2019, to November 6, 2019.

13. On September 30, 2019, PPL Electric filed a Brief in Opposition to, and OCA, NRDC, and Sunrun filed Briefs in Support of, the Petitions for Interlocutory Review and Answer to Material Questions.

14. On October 1, 2019, NRDC filed a corrected version of its Brief in Support of the Petitions for Interlocutory Review and Answer to Material Questions.

15. On October 17, 2019, the Commission entered an Opinion and Order denying NRDC's and Sunrun's Petitions for Interlocutory Review and Answer to Material Questions and returning the matter to ALJ DeVoe.

16. On November 6, 2019, PPL Electric submitted its proposed litigation schedule to ALJ DeVoe, noting that OCA and SEF did not oppose the Company's schedule. Further, Sunrun and NRDC filed their proposed litigation schedule with the Commission.

17. On November 7, 2019, PPL Electric filed a letter responding to NRDC and Sunrun's proposed litigation schedule.

18. On November 12, 2019, Sunrun filed a letter in reply to PPL Electric's November 7, 2019 letter.

19. On November 14, 2019, a Notice was issued scheduling a telephonic prehearing conference for November 15, 2019, before ALJ Long.

20. On November 15, 2019, the prehearing conference was held as scheduled, during which ALJ Long determined that PPL Electric's proposed litigation schedule would be used for this proceeding. Subsequently, a Notice was issued scheduling in-person evidentiary hearings for April 8-9, 2020, consistent with the adopted litigation schedule.

21. On November 18, 2019, the ALJs issued a Prehearing Order setting forth the litigation schedule and other procedural rules and requirements for the proceeding. Also, a Judge Change Notice was issued, officially assigning both ALJ Long and ALJ DeVoe to the case.

22. On December 11, 2019, PPL Electric served its written direct testimony and exhibits.

23. On January 13, 2020, PPL Electric filed an unopposed Motion for Protective Order.

24. On January 16, 2020, the ALJs issued an Order granting the Motion for Protective Order.

25. On February 5, 2020, OCA, NRDC, and SEF served their written direct testimony and exhibits.

26. On March 4, 2020, PPL Electric served its written rebuttal testimony and exhibits.

27. On March 16, 2020, the ALJs notified the parties that the April 8-9, 2020 in-person hearings would be canceled because the Commission's offices were being closed pursuant to the State of Emergency declared by Governor Wolf regarding COVID-19. The ALJs also instructed the parties to inform them by March 30, 2020, on how the parties would like to proceed.

28. On March 17, 2020, a Notice was issued canceling the in-person evidentiary hearings scheduled for April 8-9, 2020.

29. On March 19, 2020, OCA, NRDC, and SEF served their written surrebuttal testimony and exhibits.

30. On March 25, 2020, after consulting with the other parties on a scheduling proposal, PPL Electric sent an email to the ALJs proposing that the Company file a status report 30 days after March 30, 2020 (*i.e.*, by April 29, 2020), to advise the ALJs on the status of: (1) settlement;

and (2) developing new dates for the evidentiary hearings. The ALJs subsequently agreed with this proposal.

31. On March 30, 2020, PPL Electric served its oral rejoinder testimony outlines.

32. On April 29, 2020, PPL Electric sent an email to the ALJs advising them that settlement negotiations were still ongoing, stating that evidentiary hearings did not need to be scheduled at this time, and proposing that the Company submit another status report within 30 days.

33. On April 30, 2020, the ALJs agreed with the Company's proposal and directed PPL Electric to submit its next status report by May 29, 2020.

34. On May 29, 2020, PPL Electric sent an email to the ALJs again advising them that settlement negotiations were still ongoing, stating that evidentiary hearings did not need to be scheduled at this time, and proposing that the Company submit another status report within 30 days.

35. Later on May 29, 2020, the ALJs agreed with the Company's proposal and directed PPL Electric to submit is next status report by June 26, 2020.

36. On June 26, 2020, PPL Electric sent the ALJs an email informing them that the parties were still engaging in settlement negotiations. However, since hearings were again being held in Commission proceedings, the Company requested dates that the ALJs would be available for rescheduled hearings. The ALJs responded by indicating that they were available for telephonic evidentiary hearings during the weeks of August 24 and 31, 2020.

37. After the parties provided their availability during those two weeks, the ALJs sent an email on July 13, 2020, informing the parties that the telephonic evidentiary hearings would be scheduled for September 2-3, 2020.

38. On July 14, 2020, a Notice was issued scheduling the telephonic evidentiary hearings for September 2-3, 2020.

39. On July 23, 2020, the ALJs issued an Interim Order directing the service of oral rejoinder outlines by 12:00 PM on August 26, 2020, directing the submittal of a witness matrix by 12:00 PM on September 1, 2020, and rescheduling the evidentiary hearings for September 2-3, 2020.

40. On August 26, 2020, PPL Electric served its written rejoinder testimony and exhibits.

41. On August 27, 2020, PPL Electric sent an email to the ALJs informing them that the Company, OCA, NRDC, and SEF had reached a settlement in principle of all issues and that Sunrun had represented to the parties that it would not file an objection to the Joint Petition for Settlement. The Company also requested that the September 2-3, 2020 hearings be canceled and that the testimony and exhibits be admitted into the record through stipulation.

42. On August 28, 2020, the ALJs issued an Interim Order canceling the September 2-3, 2020 hearings and directing the parties to file a Joint Stipulation for Admission of Evidence by September 3, 2020, and a Joint Petition for Settlement, including statements in support, by October 5, 2020. In addition, a Notice was issued canceling the September 2-3, 2020 hearings.

43. On September 3, 2020, PPL Electric, OCA, NRDC, and SEF filed a Joint Stipulation for Admission of Evidence.

44. On September 8, 2020, the ALJs issued an Interim Order granting the Joint Stipulation for Admission of Evidence.

45. The parties engaged in multiple rounds of discovery during the course of the proceeding.

46. On October 5, 2020, PPL Electric, OCA, NRDC, and SEF filed a Joint Petition for Settlement of All Issues. As stated in footnote 1 of that Joint Petition, Sunrun was not a party to the Settlement but would not be filing an objection to the Settlement.

47. On November 17, 2020, the Commission served the ALJs' Recommended Decision, which recommended approval of the Settlement without modification.

48. On December 17, 2020, the Commission rendered its unanimous Order adopting the Recommended Decision and approving the Settlement without modification. As such, the Commission: (a) granted the Company's DER Management Petition as modified by the terms and conditions of the Settlement; (b) granted PPL Electric's waivers of all or portions of Sections 75.13(c), 75.13(k), 75.22, 75.34, 75.35, 75.37, 75.38, 75.39, and 75.40 of the Commission's regulations and any additional waivers of regulations necessary to implement the DER Management Plan as modified by the terms and conditions of the Settlement; and (c) directed the Company to file a tariff supplement to become effective on one day's notice that is consistent with the *pro forma* tariff supplement attached as Appendix A to the Settlement.

49. On December 23, 2020, pursuant to Ordering Paragraph 4 of the Commission's Order, PPL Electric filed its compliance tariff supplement (*i.e.*, Supplement No. 311 to Tariff Electric – Pa. P.U.C. No. 201) to become effective on one day's notice. Supplement No. 311 established PPL Electric's Tariff Rule 12 setting forth certain rules and requirements for the Company's DER Management Plan, including the pilot program.

50. On January 6, 2021, the Commission issued a Secretarial Letter approving the Supplement No. 311.

51. On January 13, 2021, the Company filed a corrected Original Page 14C.3 for its compliance tariff supplement.

52. On January 19, 2021, PPL Electric filed its DER Management Pilot Implementation Plan pursuant to Paragraph 61 of the Commission-approved Settlement.

53. On February 8, 2021, the OCA, NRDC, SEF, and Sunrun filed Comments on the DER Management Pilot Implementation Plan.

54. On March 1, 2021, PPL Electric filed its Revised DER Management Pilot Implementation Plan.

55. On August 9, 2021, the OCA filed a Notice of Withdrawal of Appearance for Phillip D. Demanchick, Esquire.

56. On October 29, 2021, PPL Electric filed Supplement No. 322 to Tariff Electric Pa. P.U.C. No. 201 ("Supplement No. 322") at Docket No. R-2021-3029322 to modify Rule 12 of its tariff, so that inverters must be certified to UL 1741-SB beginning January 1, 2023, instead of January 1, 2022, as stated originally in Rule 12 of the tariff. The Company filed this tariff supplement to give inverter manufacturers and DER installers more time to produce inverters and obtain inverters, respectively, that are certified to UL 1741-SB.

57. On January 13, 2022, the Commission entered an Order at Docket No. R-2021-3029322 approving Supplement No. 322.

58. On January 23, 2023, NRDC filed a Notice of Withdrawal of Appearance for Mark Szybist, Esquire.

59. On February 28, 2023, PPL Electric filed a Second Revised DER Management Pilot Implementation Plan.

60. On March 13, 2023, SEF filed a Notice of Withdrawal of Appearance for Kenneth L. Mickens, Esquire, and Entry of Appearance for Judith D. Cassel, Esquire and Micah R. Bucy, Esquire.

61. On April 13, 2023, Sunrun filed a Notice of Withdrawal of Appearance for James Van Nostrand, Esquire, and Entry of Appearance for Adam E. Gersh, Esquire.

62. On April 20, 2023, PPL Electric filed its 2023 DER Management Report, capturing Program Year Zero (January 1, 2021, to March 21, 2022) and Program Year 1 (March 22, 2022, to March 21, 2023) of the DER Management pilot program.

63. On August 8, 2023, SEF filed another Notice of Withdrawal of Appearance for Kenneth L. Mickens, Esquire, and Entry of Appearance for Judith D. Cassel, Esquire and Micah R. Bucy, Esquire.

64. On January 18, 2024, the JSPs filed their Petition for Rescission or Amendment of the Commission's Order. The JSPs also filed a Notice of Appearance for Bernice I. Corman, Esquire.

65. For the reasons explained below, the JSPs' Petition should be denied.

II. LEGAL STANDARDS

66. The Commission's standard for reviewing petitions for rescission or amendment following final orders was set forth in *Duick v. Pennsylvania Gas and Water Co.*, 56 Pa. P.U.C. 553, 559, 1982 Pa. PUC LEXIS 4 (Order dated Dec. 17, 1982) ("*Duick*") (emphasis added):

> A petition for reconsideration, under the provisions of 66 Pa.C.S. § 703(g), may properly raise any matters designed to convince the Commission that it should exercise its discretion under this code section to rescind or amend a prior order in whole or in part. In this regard we agree with the Court in the *Pennsylvania Railroad Company* case, wherein it was said that "[p]arties …, cannot be permitted by a second motion to review and reconsider, to raise the same questions which were specifically considered and decided against them…." What we expect to see raised in such petitions are new and novel arguments, not previously heard, or considerations which appear to have been overlooked or not addressed by the Commission.

See Petition of Elite Energy Solutions, LLC for Rescission of the Pa. PUC's Final Order entered Aug. 25, 2020 and Reinstatement of Its License to Operate as a Broker/Marketer of Elec. Gen. Supplier Servs., 2021 Pa. PUC LEXIS 226, at *4-5 (Order entered June 17, 2021) (stating that the *Duick* standards govern petitions for rescission or amendment).

67. The *Duick* standard does not permit a petitioner to raise issues and arguments considered and decided below such that the petitioner obtains a second opportunity to argue properly resolved matters. *Duick*, 56 Pa. P.U.C. 553, 559.

68. In addition, for petitions for rescission specifically, the Commission has stated that "[t]o establish a proper basis for rescission, a petitioner must first establish the existence of newly discovered evidence, a substantial change in circumstances, or an error of fact or law." *Feleccia v. PPL Elec. Utils. Corp.*, Docket No. C-20016210 (Order entered Mar. 7, 2003) (citing *Duick* at 559).

69. Further, the Commonwealth Court has held that "because the relief of rescission or amendment under Section 703(g) may result in the disturbance of final orders," a petition for rescission or amendment "should be granted judiciously and only under appropriate circumstances." *W. Penn Power Co. v. Pa. PUC*, 659 A.2d 1055, 1065 (Pa. Cmwlth. 1995) (emphasis added) (citing *City of Pittsburgh v. Pa. Dep't of Transp.*, 416 A.2d 461 (Pa. 1980)).

70. More importantly, "the Commission must conduct an evidentiary hearing before rescinding or amending a prior order" under Section 703(g) of the Public Utility Code. *Armstrong*, 835 A.2d 409, 420 (citation omitted).

71. "Merely allowing for 'notice and comment' d[oes] not satisfy Section 703 hearing requirements or due process." *Popowsky v. Pa. PUC*, 805 A.2d 637, 643 (Pa. Cmwlth. 2002)

(citing *Scott Paper Co. v. Pa. PUC*, 558 A.2d 914 (Pa. Cmwlth. 1989)), *allowance of appeal denied*, 847 A.2d 60 (Pa. 2004).

72. As explained in the following section, the JSPs' Petition should be denied because: (a) the Petition fails to meet the high legal standard for rescission or amendment of Commission orders; and (b) even if the Commission were to give credence to the JSPs' unfounded allegations and arguments, the Commission cannot rescind or amend its Order without holding a hearing "to present evidence or cross-examine witnesses" as required under "Chapter 7 of the Public Utility Code" and "due process." *Id.*

III. ARGUMENT

73. In their Petition, the JSPs request the following:

a. "[R]escind the December 20 [sic], 2020 Order[21] approving the Pilot and its implementation Plan[22] in its entirety, and/or partially rescind and amend the Order to direct that the Pilot be adjusted to allow for an opt out for distributed solar systems." Petition, p. 25.

b. "[A]ddress this Petition expeditiously" and "limit the scope of these proceedings to a narrow inquiry focusing exclusively on whether it should terminate the Pilot in its entirety, and/or allow for distribution solar systems to opt out of being subject thereto." Petition, pp. 1, 25.

74. As explained in the following sections, the Commission should reject these requests and deny the JSPs' Petition.

[21] The Commission's Order was entered on December 17, 2020, not December 20, 2020.

[22] The Commission's December 17, 2020 Order did not approve the Pilot Implementation Plan. The initial Pilot Implementation Plan was filed on January 19, 2021, in accordance with the terms of the Commission-approved Settlement.

A. THE JSPS' PETITION SHOULD BE DENIED BECAUSE IT DOES NOT MEET THE COMMISSION'S STANDARD FOR RESCISSION OR AMENDMENT

75. The Commission should deny the JSPs' Petition because it lacks any credible factual or legal support to rescind or amend the Commission's December 17, 2020 Order, which unanimously approved the Joint Petition for Settlement of All Issues in PPL Electric's DER Management Plan proceeding. As set forth in the following sections, the JSPs fail to raise any newly discovered evidence, a substantial change in circumstances, or an error of fact or law that would warrant the Commission to take the extreme step of rescinding or amending its Order, and even if they did, the Commission cannot rescind or amend its Order without holding an evidentiary hearing.

1. PPL Electric Fully Supports Renewable Energy Development, Including Solar, in Its Service Territory

76. An inaccurate theme runs throughout the JSPs' Petition—that PPL Electric's actions are inhibiting solar development and unduly harming customers, solar installers, and the solar industry at large.[23]

77. In reality, PPL Electric wholly supports the development and interconnection of renewable energy, including solar, in its service territory.

78. The DER Management Plan is a prime example of the Company's support for encouraging the safe, reliable, and cost-effective interconnection of DERs.

79. In this proceeding, PPL Electric argued that its DER Management Plan would: (a) provide substantial benefits to customers, the Company, and the Commonwealth by improving the safety, quality, efficiency, stability, and reliability of the Company's operations and service; and

[23] *See, e.g.*, Petition, pp. 2, 4, 10-20, 23.

(b) facilitate the increased deployment of DERs through the Company's service territory. (PPL St. No. 1, pp. 16-21.)

80. PPL Electric further noted the issues it was experiencing on its distribution system due to DERs and argued that it needed to get ahead of future issues, rather than addressing them only after DER penetration levels increase to the point where PPL Electric is experiencing wide-spread issues. (PPL St. No. 1-R, pp. 44-48.)

81. By implementing the DER Management Plan and conducting the pilot program, PPL Electric can better address the challenges presented by DERs and help facilitate the safe, reliable, and cost-effective interconnection of increased levels of DERs.

82. In addition, PPL Electric reviews and approves 80% of all interconnection applications within 24 hours, with over 88% of residential interconnection applications approved in that timeframe.

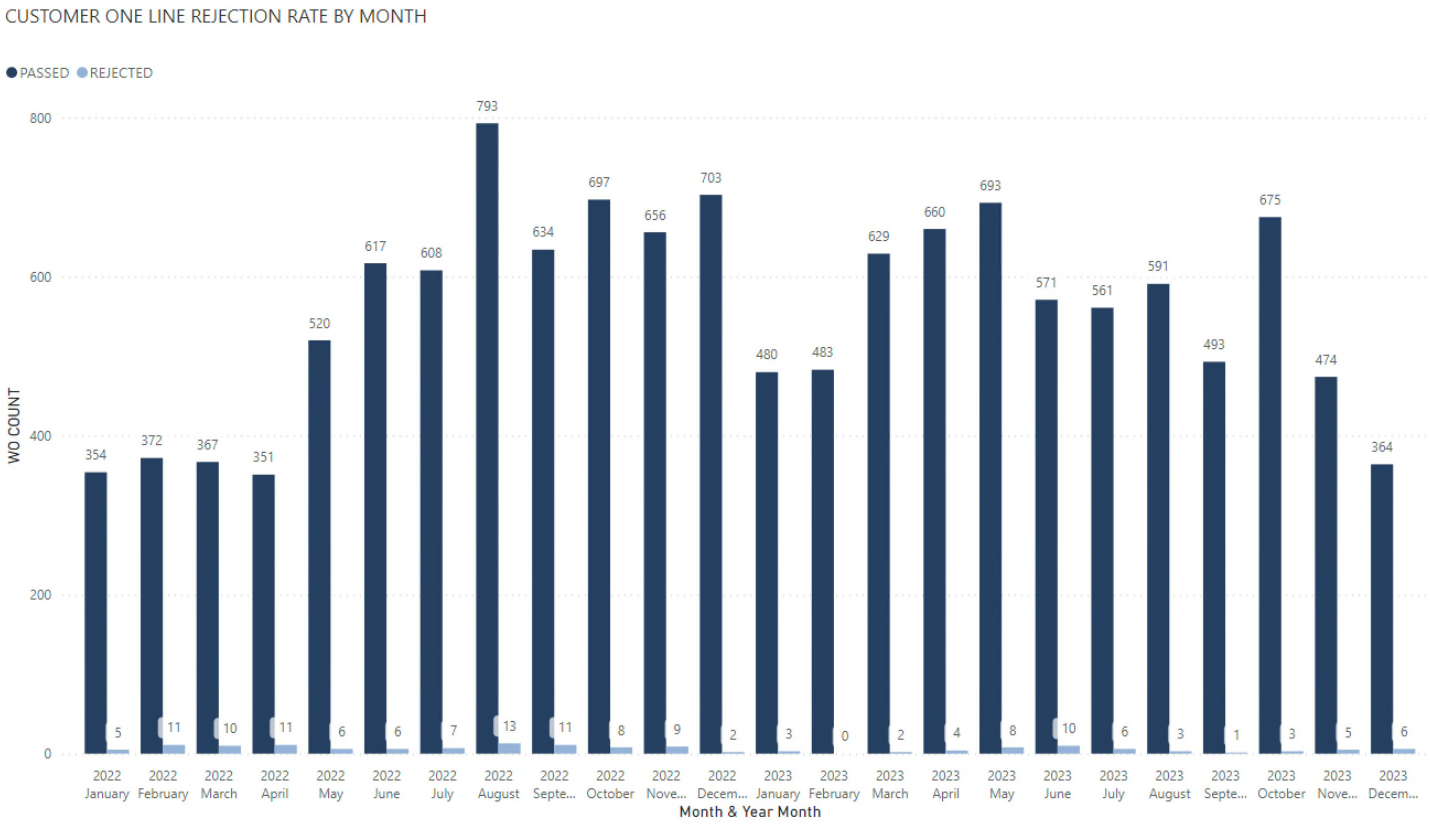
83. Such speedy review and approval of the interconnection applications, in turn, leads to reduced lead time for the installation and interconnection of DERs.

84. At the same time, PPL Electric approves the vast majority of interconnection applications that are submitted.

85. Even when PPL Electric initially rejects interconnection applications, the Company actively works with the installers and applicants to correct the issues with the applications and system design so that the interconnection can be approved.

86. These efforts are reflected in the following Figure 1, which compares the Company's interconnection application approvals (inclusive of ones that the Company initially rejected and ultimately worked with the applicants to resolve) and the interconnection applications that were rejected (even after any efforts to help resolve the applications' issues):

Figure 1
Interconnection Applications Approved and Rejected from Jan. 2022 to Dec. 2023



87. Moreover, PPL Electric filed the DER Management Petition to encourage more DER deployments in the Company's service territory, facilitate more DER installations on its circuits without the need for additional capital investments by the Company or interconnection applicants, and leverage smart inverters' functionalities to improve the safety, reliability, and adequacy of PPL Electric's electric distribution system.

88. In fact, when the Commission unanimously approved the Settlement, former Chairman Brown Dutrieuille "commend[ed] PPL for being in the vanguard of distributed energy advancement," noting that "[t]aking this next step in managing distributed energy has the potential

to permit PPL to better control power quality, reliability, and safety throughout the grid while further fostering investment in resources such as rooftop solar and combined heat and power."[24]

89. As explained in Sections III.A.2, *infra*, PPL Electric's DER Management Plan is achieving the Company's goals, such as historic growth in safe and reliable DER interconnections, the production of millions of dollars in deferred capital investments, and improvements to the safety, reliability, and adequacy of the Company's electric service. Those benefits are only expected to increase over time as the Company's DER Management Plan and pilot program continue.

90. The DER Management Plan's goals also align with PPL Corporation's broader strategy to reduce carbon emissions, support electrification, and encourage the development of renewable energy at both the wholesale and distribution level.

91. In PPL Corporation's 2022 Sustainability Report, PPL Corporation set forth its Sustainability Priorities and its Clean Energy Transition Strategy.

92. Under its Sustainability Priorities, PPL Corporation aims to: (a) decarbonize its generation; (b) position the grid to enable clean energy resources; (c) drive digital innovation and research and development ("R&D"); (d) decarbonize its non-generation operations; and (e) engage in environmental stewardship and resource management.[25]

93. PPL Corporation also outlined four points to its Clean Energy Transition Strategy: (1) decarbonizing its generation; (2) driving digital innovation and R&D to enable new technologies; (3) positioning the grid as an enabler for clean energy resources, including modernizing the grid, integrating utility scale renewables and distributed energy resources,

[24] *PPL Elec. Utils. Corp. Petition for Approval of Tariff Modifications and Waivers of Regulations Necessary to Implement its Distributed Energy Resources Management Plan*, Docket No. P-2019-3010128 (Statement of Chairman Gladys Brown Dutrieuille dated Dec. 17, 2020) (emphasis added).

[25] PPL Corporation's Sustainability Report at 14.

advancing electrification, and supporting the adoption of electric vehicles ("EVs"); and (4) decarbonizing its non-generation operations.[26]

94. At a higher level, PPL Corporation's initiatives are designed to achieve net-zero carbon emissions by 2050, with interim targets of a 70% reduction from 2010 levels by 2035, an 80% reduction by 2040, and not burning unabated coal by 2050.[27]

95. The Company's DER Management Plan is a key component of PPL Corporation's efforts to encourage and facilitate the transition to clean energy resources, while continuing to provide safe, reliable, adequate, and reasonable electric service to customers.

96. The Commission should reject the JSPs' inappropriate demand to rescind the Commission's Order approving the Settlement, which will hinder PPL Electric's ability to achieve these goals that benefit the Company, its customers, and the Commonwealth as a whole.

2. The DER Management Plan Has Produced or Is Projected to Produce Significant Benefits and Cost Savings

97. The JSPs inaccurately assert that the DER Management pilot program is not producing and will not produce significant benefits and cost savings, asserting that the Company's DER Management pilot program has shown $1,500 of savings attributed to active management and $1,261,500 in savings attributed to autonomous inverter functions.[28]

98. In actuality, the DER Management pilot program has produced or is projected to produce significantly more benefits and cost savings.

99. Indeed, the JSPs err by focusing on only one year's worth of data that was reported in the 2023 DER Management Report and failing to recognize the future benefits and cost savings under the pilot program.

[26] *Id.* at 15.
[27] *Id.* at 16.
[28] *See, e.g.*, Petition, pp. 21-22.

100. For example, under Use Case #7, the Company has been evaluating how active management can increase hosting capacity and defer capital investments that are required for safe and reliable DER integration.[29]

101. Although PPL Electric reported $1,500 in cost savings attributable to active management for Use Case #7 in its 2023 DER Management Report, those experienced cost savings did not include the future savings projected by PPL Electric.

102. The Company currently projects savings of approximately $3.27 million attributable to actively managing Volt/VAR to increase hosting capacity or defer capital upgrade costs for customers applying for interconnection, assuming that the pilot program continues in its current form and is not terminated.

103. In fact, if the Commission decides to terminate the pilot program now, PPL Electric estimates that a total of approximately $6.52 million in capital investment savings over the term of the pilot program, including the $3.27 million under Use Case #7, will be lost.

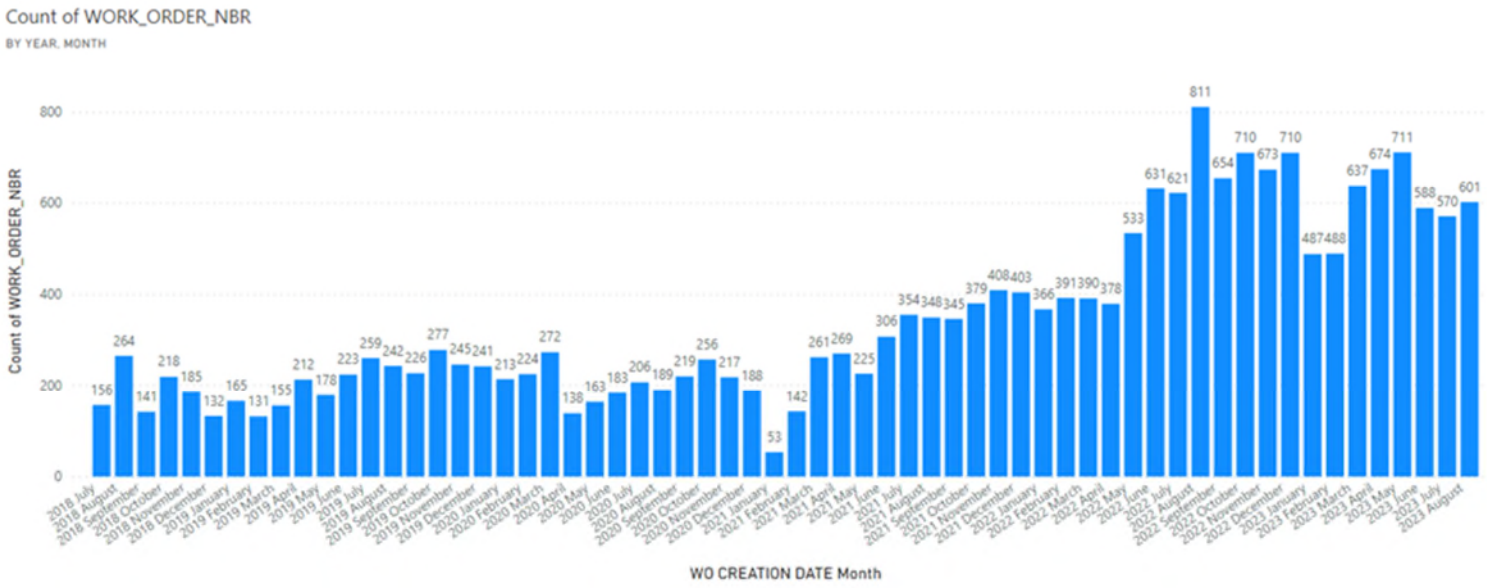
104. In addition, the JSPs overlook that the Company's DER Management Plan and pilot program are fostering historic growth in the safe and reliable interconnection of DERs in PPL Electric's service territory by increasing hosting capacity and facilitating more cost-effective interconnections.

105. PPL Electric has seen significant increases in both the number of DERs and nameplate capacity added to its system.

106. As shown in the following Figure 2, PPL Electric has seen an exponential growth in interconnection application work orders after the DER Management Plan became effective on or about January 1, 2021:

[29] Second Revised DER Management Plan, Attachment C, p. 5.

Figure 2
Interconnection Application Work Orders from July 2018 to Aug. 2023[30]



107. As further support, in 2019, before the pilot program, PPL Electric saw a total of 1,229 new DER interconnections, totaling 29.2 MW of capacity.

108. By comparison, in 2023, while the pilot program has been in place, PPL Electric interconnected 4,225 new DERs, adding up to 44.5 MW of capacity.

109. All of this information demonstrates that the DER Management pilot program is encouraging and facilitating more DER interconnections and that the Commission should reject the JSPs' allegations that the pilot program is negatively affecting the deployment of solar in PPL Electric's service territory.

[30] PPL Electric notes that the number of total interconnection application work orders shown in Figure 2 does not equal the total number of interconnection applications approved and rejected in Figure 1, as a very small number of the applications had more than one work order.

3. Tesla Has a History of Undermining the Pilot Program—Seeking Undue Preference or Advantage over Its Competitors, Vandalizing or Tampering with PPL Electric's Equipment, and Now Seeking to Rescind or Amend the Pilot Program

110. The JSPs generally allege that the Company's DER Management Plan is harming solar developments and the solar industry at large by, among other things, limiting the inverters that can be used in the Company's service territory and causing "communications and functionality" issues.[31]

111. Tesla has caused most, if not all, of these alleged issues.

112. First, Tesla has refused to provide any of the necessary information and equipment so that the Company can add Tesla's inverters to its approved inverter list.

113. Tesla is the only inverter manufacturer refusing to provide that information and equipment to PPL Electric.

114. From the Company's view, Tesla wants PPL Electric to treat Tesla differently from every other inverter manufacturer and exempt Tesla from the requirements under the Company's Commission-approved tariff and the Commission's Order.

115. However, under Pennsylvania law, PPL Electric cannot exempt Tesla from those requirements and grant them undue preference or advantage.[32]

116. It is well-established that public utilities' tariffs have the "force and effect of law" and are binding on both the utilities and their customers.[33]

[31] Petition, pp. 2-5, 10-23.

[32] The JSPs also fail to establish why Telsa should be granted such undue preference or advantage.

[33] *PPL Elec. Utils. Corp. v. Pa. PUC*, 912 A.2d 386, 402 (Pa. Cmwlth. 2006) (citing 66 Pa. C.S. § 1303 and *Pa. Elec. Co. v. Pa. PUC*, 663 A.2d 281, 284 (Pa. Cmwlth. 1995)).

117. Therefore, PPL Electric must strictly adhere to the terms and conditions of its tariff, including Tariff Rule 12 that sets forth requirements for inverters and DER interconnections in the Company's service territory.[34]

118. In addition, Section 1502 of the Public Utility Code prohibits PPL Electric from granting, as to service, an undue preference or advantage to any third party.[35]

119. Thus, Pennsylvania law prohibits granting Tesla an undue preference or advantage by exempting it from those requirements, as such exemption would be anti-competitive conduct, would violate PPL Electric's Commission-approved tariff[36] and the Commission's Order,[37] and would constitute unreasonably discriminatory service.[38]

120. Second, the purported "communications and functionality" issues identified in the JSPs' Petition[39] are due to Tesla's after-market modification of Delta and SolarEdge inverters.

121. Under IEEE 1547-2018, the DER must support at least one of the protocols specified in Table 41 of the standard, which are: (a) IEEE Standard 2030.5 (SEP2); (b) IEEE Standard 1815 (DNP3); and (c) SunSpec Modbus.

122. The Delta and SolarEdge inverters at issue utilize SunSpec Modbus as their communications protocol.

123. As contemplated by Modbus over Serial Line Specification and Implementation Guide V1.02 protocol specifications, every inverter in a multi-inverter set-up must have a unique Modbus identification number.

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[34] *See id.*; *see also* 66 Pa. C.S. § 1303.

[35] *See* 66 Pa. C.S. § 1502.

[36] *See id.* § 1303 (requiring public utilities to adhere to their tariffs); *PPL Elec. Utils. Corp. v. Pa. PUC*, 912 A.2d 386, 402 (Pa. Cmwlth. 2006) (citing 66 Pa. C.S. § 1303 and *Pa. Elec. Co. v. Pa. PUC*, 663 A.2d 281, 284 (Pa. Cmwlth. 1995)).

[37] *See, e.g., id.* §§ 316, 502.

[38] *See id.* § 1502.

[39] Petition, p. 19.

124. Therefore, multi-inverter set-ups with these Delta and SolarEdge inverters must have a "leader" inverter and a series of "follower" inverters, with each inverter having its own unique Modbus identification number.

125. Here, however, Tesla inserts a ZigBee chip in the Delta and SolarEdge inverters that results in each inverter having the same Modbus identification number, making every inverter assume a "leader" inverter role and preventing the Company from communicating with all the inverters.

126. Tesla's after-market modification to these inverters prohibits the Company from monitoring and managing the DERs associated with those inverters, as required under the Company's Commission-approved tariff[40] and the Commission-approved Settlement.[41]

127. Furthermore, by failing to network the inverters, Tesla's actions contravene the Company's "Smart Inverters and DER Pilot Management Requirements" under PPL Electric's Rules for Electric Meter and Service Installations ("REMSI"), which state:

> Inverter-based DER installations where more than one inverter is installed at a premise **require that the inverters are networked together as part of the installation**. Inverters shall be networked together such that all applicable inverters can accept commands from the Company-owned DER Management Device connected to a port earmarked and labeled for use by PPL. These inverters shall be networked together using instructions or best practices provided by the inverter manufacturer, or a multi-drop networking solution.[42]

128. PPL Electric actively worked with Tesla on these "communications and functionality" issues from July 2022 until July 2023, when Tesla declared it was leaving the Company's service territory.

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[40] *See* Tariff Rule 12, Supp. No. 333 to Electric Pa. P.U.C. No. 201, Second Revised Page 14C.1.

[41] *See* Settlement ¶¶ 54-63.

[42] "Smart Inverters and DER Pilot Management Requirements," PPL Electric's Rules for Electric Meter and Service Installations (REMSI) (updated Dec. 1, 2023) (emphasis in original), *available at* https://www.pplelectric.com/utility/about-us/electric-rates-and-rules/remsi/approved-metering-and-equipment-tables-index/solar-inverters.

129. On February 6, 2023, the Company even supplied Tesla with the exact software code for a firmware update to Tesla's gateways that would resolve the issues.

130. On March 30, 2023, Tesla also emailed PPL Electric informing the Company that it was working on a firmware update that would resolve the issues as well.[43]

131. However, Tesla refused to implement PPL Electric's hand-crafted firmware update or the one that Tesla was developing on its own.

132. Meanwhile, both before and after PPL Electric provided Tesla with the technical solution, **Tesla personnel intentionally vandalized or tampered with PPL Electric's DER Management devices on at least eight occasions**.

a. Incidents 1 and 2

133. On or about February 22, 2023, PPL Electric discovered that Tesla disconnected and removed two of PPL's DER Management devices.

134. The first device was disconnected and removed on February 21, 2023, at 88 Oak Ledge Avenue, Schuylkill Haven, PA 17972 ("Incident 1"), while the second device was disconnected and removed on February 22, 2023, at 58 Thistle Way, Danville, PA 17821 ("Incident 2").

135. On February 27, 2023, Tesla confirmed in a conversation with PPL Electric that the Company's DER Management devices were removed, that the devices were in Tesla's warehouse in Lancaster, Pennsylvania and that Tesla could return them.

136. PPL Electric demanded that Tesla return the devices to the Company's offices.

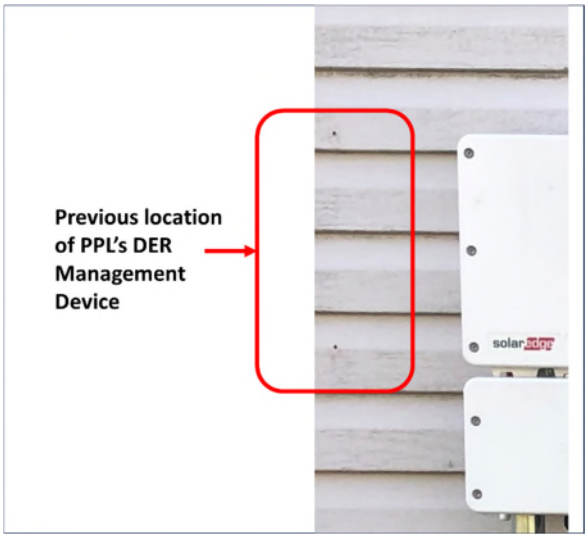
137. On or about February 28, 2023, Tesla returned the device that was disconnected as part of Incident 2; however, despite PPL Electric's explicit demand for the devices to be returned

[43] A true and correct copy of Tesla's email is attached hereto as **Appendix B**.

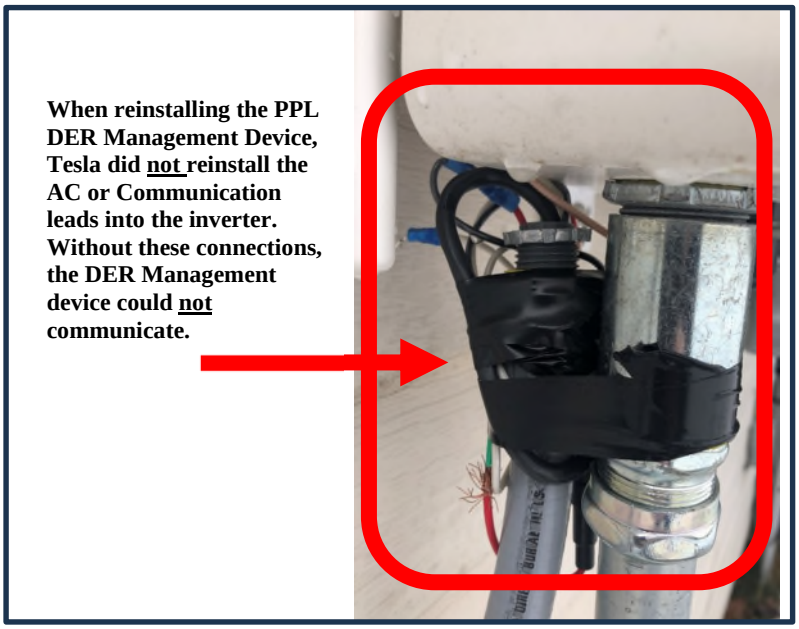
to the Company, Tesla reinstalled the DER Management device at the service address where Incident 1 occurred.

138. Both of these DER Management devices were removed from service by PPL Electric and placed in storage for safety reasons.

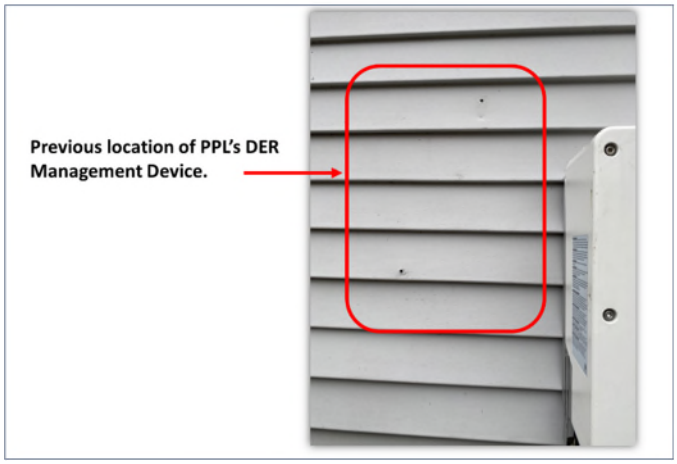
139. Below are pictures of Incident 1 after the DER Management device was removed:



140. Below are pictures of Incident 1 after Tesla inappropriately reinstalled the DER Management device:



141. Below are pictures of Incident 2 after the DER Management device was removed:



b. Incident 3

142. On or about March 13, 2023, PPL Electric discovered that a third DER Management device was disconnected by Tesla at 29 Baldtop Heights, Danville, PA 17821 sometime between February 28, 2023, and March 13, 2023.

143. The Company discovered during a meter change that the device was disconnected, and the customer informed the Company that Tesla removed the device due to alleged communications issues.

144. A picture of that disconnected DER Management device is shown below:

145. After PPL Electric contacted Tesla on March 23, 2023, about the disconnection of this DER Management device, Tesla confirmed in writing on March 28, 2023, that it disconnected the device.

146. The DER Management device suffered severe water damage and could not be used again safely, so the Company installed a new DER Management device at the customer's service address on June 5, 2023.

c. Incidents 4 through 8

147. On or about June 21, 2023, Tesla tampered with and disabled five more DER Management devices.

148. Specifically, Tesla personnel cut open the devices and removed the devices' fuses, rendering the devices inoperable, at the following services addresses: (1) 609 Sherwood Drive, Carlisle, PA 17013; (2) 47 Grayhawk Way, Mechanicsburg, PA 17050; (3) 102 Stone Run Drive, Mechanicsburg, PA 17050; (4) 1090 Red Lane, Danville PA 17821; (5) 1216 Kings Circle, Mechanicsburg, PA 17050.

149. PPL Electric then had to repair the devices to make them operable again.

150. Between June 27, 2023, and July 18, 2023, PPL Electric communicated with Tesla about the tampered-with DER Management devices.

151. PPL Electric even met with Tesla on July 13, 2023, and discussed how the fuses were removed from the DER Management devices at these five service addresses.

152. Then, on July 18, 2023, Tesla emailed PPL Electric that it would be suspending operations in the Company's service territory.

153. Now, Tesla and the other JSPs want the Commission to rescind the pilot program entirely, essentially building upon Tesla's prior efforts to undermine the pilot program by vandalizing or tampering with the Company's DER Management devices.

154. The Commission should take Tesla's indisputable, disreputable, and unlawful actions into account when weighing the JSPs' allegations and their requested relief, as such actions severely impeach their credibility regarding any criticisms of the commission approved pilot program at issue in this proceeding.

4. The JSPs' Petition Contains Several Inaccurate Statements and Gross Mischaracterizations

155. The JSPs' credibility is further undercut by the numerous inaccurate statements and gross mischaracterizations set forth in their Petition.

a. Tesla's ZigBee Chip, Not the DER Management Device, Is Preventing the Inverter Manufacturers from Viewing Error Codes

156. The JSPs erroneously claim that "[t]he communication disruption caused by PPL's DER Management Device prevents manufacturers from remotely viewing error codes, which makes it impossible to remotely diagnose any issue that may arise with a customer's system."[44]

157. PPL Electric confirmed that this is a Tesla-specific problem caused by Tesla's after-market installation of the ZigBee chips in Delta inverters.

158. Inverter manufacturers, including Delta and SolarEdge, can remotely view error codes for their DER systems even with PPL Electric's DER Management device installed.

159. Delta cannot view error codes after Tesla installs the ZigBee chip, regardless of whether a DER Management device is installed or not.

b. Other Jurisdictions Use and Require Fixed Power Factor, Contrary to the JSPs' Claims

160. The JSPs inaccurately declare that New York, California, and Hawaii "do not use fixed power factor or 'actively managed' power factor."[45]

[44] Petition, p. 17.
[45] Petition, p. 22.

161. Fixed power factor is used extensively in other jurisdictions as part of DER interconnections.

162. In fact, New York, California, and Hawaii all require fixed power factor in the grid profiles that must be programmed into the inverters that are used in their jurisdictions.[46]

c. The JSPs Inaccurately Claim that PPL Electric's Inverter Requirements Have Forced Installers to Limit Their Operations or Leave the Service Territory Entirely

163. The JSPs also claim that the pilot program has forced installers to limit or end operations in the Company's service territory.

164. Specifically, the JSPs allege that Tesla decided to end its operations in July 2023, that unidentified other installers have left the territory, and that "AHC limited operations in PPL territory after June 2023."[47]

165. However, Tesla continued to submit interconnection applications beyond that date, including as recently as October 2023.

166. Further, although Tesla asserts that it decided to end operations in the Company's service territory due to the "communications and functionality" issues, as explained above, those issues were actually caused by Tesla.

167. As noted in Section III.A.3, *supra*, the Company supplied the exact software code for a firmware update to Tesla's gateways that would resolve its communications issues, and Tesla itself confirmed that it was working on a firmware update that would resolve the issues as well.

168. Yet, Tesla refused to implement either of these solutions.

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[46] *See* "Meeting Hawaii Utility Interconnect Requirements," SolarEdge (dated June 2021), *available at* https://knowledge-center.solaredge.com/sites/kc/files/meeting_hawaii_utility_interconnect_requirements_na.pdf*;* "SolarEdge Instruction – California Electric Rule 21," SolarEdge (dated Mar. 2019) (used by both New York and California), *available at* https://knowledge-center.solaredge.com/sites/kc/files/se_instruction_california_electric_rule_21_upgrade_instructions.pdf.

[47] *See* Petition, pp. 11, 15, 18.

169. Thus, Tesla cannot blame PPL Electric or the Commission-approved pilot program for its decision to end operations in the Company's service territory when Tesla had two easy solutions: (1) implement the firmware update; or (2) stop inserting the ZigBee chips into the Delta and SolarEdge inverters that were causing the communications issues.

170. In addition, apart from Tesla, PPL Electric is not aware of any other installers that have decided to end operations in its service territory.

171. Even one of the JSPs, Sun Directed, submitted an interconnection application 21 days ago on January 8, 2024.

172. Moreover, AHC's claim that it decided to limit operations in PPL Electric's territory is suspect.

173. PPL Electric has received one interconnection application since July 2018 from AHC, and it was for a 5.76 kW system.

174. The interconnection application was approved on January 10, 2023, and was installed and operational on April 24, 2023.[48]

175. As such, AHC's operations in the Company's service territory were already limited before the pilot program, given that: (a) AHC never submitted an interconnection application to PPL Electric before the pilot program was approved; and (b) the only interconnection application AHC did submit was after the pilot program's approval.

d. The JSPs Erroneously Assert that PPL Electric's Inverter Requirements Limit Customer Choice and System Design

176. The JSPs inaccurately characterize the Company's inverter requirements as limiting customer choice of inverters and inhibiting the design of distributed solar systems.

[48] Notably, upon information and belief, AHC personnel tampered with and disconnected PPL Electric's DER Management device on or about March 1, 2023. PPL Electric reinstalled its DER Management device on May 19, 2023.

177. The JSPs apparently believe that the Company's approved inverter list does not include inverters that are integrated in solar-plus-storage systems and do not provide "viable options" for "commercial leads with single phase service."[49]

178. In actuality, PPL Electric's approved inverter list includes 237 inverters as of January 24, 2024, from 11 different manufacturers,[50] with more inverters from 8 additional inverters manufacturers in the pipeline, that cover the vast majority of inverter manufacturers and inverters that are certified to IEEE 1547-2018 and UL 1741-SB.

179. Also, the Company reviews and approves inverters expeditiously; within approximately two weeks.

180. Therefore, as new inverters come to market, PPL Electric can review and approve them for use so long as they meet the applicable requirements.

181. Thus, the Company has supported and will continue to support technological advances in the design of DER systems and stands ready to review and approve the inverters for those systems as needed.

182. In fact, regarding integrated inverters for solar-plus-storage systems, PPL Electric's inverter list includes Sol-Ark and Solectria inverters, which are integrated in solar-plus-storage systems, with more to be added as inverter manufacturers and installers may need.

183. The JSPs also reference integrated inverters for "the Tesla Powerwall+, the Electriq Power PowerPod 2 DC-Coupled, the Panasonic EVERVOLT Home Battery, and the Generac PWRcell."[51]

[49] *See* Petition, pp. 11, 14-15.
[50] *See* Appendix A.
[51] *See* Petition, pp. 14-15.

184. However, the Company has never received inquiries for Electriq or Panasonic to review and evaluate their inverters.

185. Also, when PPL Electric asked Tesla for proof of UL 1741-SB certification for Tesla's Powerwall+, Tesla did not respond.

186. Moreover, the Company is actively working on the inverter for the Generac PWRcell; however, Generac's application for certification to meet UL 1741-SB is still pending before UL.

187. Until Generac provides proof of certification to the Company, PPL Electric cannot approve the inverter for use in the Company's service territory.

188. Indeed, under the Commission's definition of "certified," such inverter cannot be used for interconnections subject to the Commission's jurisdiction.[52]

189. Lastly, contrary to Sun Directed's claim that the Company's requirements do not provide "viable options" for "commercial leads with single phase service," the approved inverter list includes 93 inverters that would work for single-phase service for non-residential DER installations for system sizes ranging from 0.19 kW to 15 kW.

e. The JSPs Inaccurately State that PPL Electric's Inverter Requirements Are Increasing the Costs of Solar Installations

190. In their Petition, the JSPs further allege that the Company's requirements are driving up the costs of installations, going so far as to claim that before Tesla ended its operations in PPL Electric's service territory, "Tesla was preparing to implement a PPL-specific project price 'adder' of $0.09 per watt for projects served from Tesla's Manheim warehouse and $0.05 per watt

[52] *See* 52 Pa. Code § 75.22 (defining "certified" as "[a] designation that the interconnection equipment to be used by a customer-generator complies with the following standards, as applicable: (i) IEEE Standard 1547, 'Standard for Interconnecting Distributed Resources with Electric Power Systems,' as amended and supplemented. (ii) UL Standard 1741, 'Inverters, Converters and Controllers for use in Independent Power Systems' (January 2001), as amended and supplemented"); *see, e.g.*, *id.* § 75.34(1)(ii), (2)(iii) (stating that for Level 1 and 2 interconnection requests, "[t]he customer interconnection equipment proposed for the small generator facility" must be "certified").

for projects served from Tesla's Norristown warehouse to reflect the higher costs of PPL-approved inverters."[53]

191. Sun Directed also claims that "[o]ther inverters on PPL's list are too expensive and end up pricing the job out."[54]

192. No evidence, other than bald assertions, has been produced that supports the position that the Company's inverter requirements are driving up installation costs.

193. First, the average cost of single-phase and three-phase inverters on the Company's approved list is $2,600 and $11,100, respectively, while the Company estimates that the average cost of single-phase and three-phase inverters not on the approved list is $2,400 and $15,000, respectively.

194. Second, Tesla wholly fails to provide the underlying support for the price adder of $0.09 per watt for projects sourced from Tesla's Manheim warehouse and $0.05 per watt for projects served from Tesla's Norristown warehouse that Tesla was allegedly contemplating.

195. Also, given the comparison of the average cost of single-phase and three-phase inverters on the Company's approved list and not on the approved list, PPL Electric questions how Tesla could have justified charging these price adders for systems installed in the Company's service territory.

196. Moreover, Tesla could have avoided any contemplated "price adder" entirely by: (a) pushing through the firmware update for the Tesla gateways, which Tesla told PPL Electric it was developing to resolve the issue; or (b) not installing the ZigBee chip in the inverters, which would resolve the networking issue and, by PPL Electric's estimation, reduce the costs of the DER systems by an additional $100 per inverter.

[53] Petition, p. 14.
[54] Petition, p. 14.

f. PPL Electric's DER Management Device Does Not Impede the Production of Solar Renewable Energy Credits ("SRECs")

197. The JSPs allege that "[t]he disruption of communications regarding inverter functioning caused by PPL's DER Management Device also is impeding the ability of customer solar systems to record and report the production data needed to generate SRECs."[55]

198. PPL Electric is neither aware nor has heard of any issues with its DER Management devices affecting SREC production.

199. The Company also does not have record of Tesla or any other installer raising this issue with PPL Electric prior to the Petition.

200. Given the other issues Tesla raised, PPL Electric believes that it would have heard something from Tesla or another installer before the JSPs' Petition if its DER Management devices were indeed interfering with SREC production.

201. Further, even assuming *arguendo* that an instantaneous upload of SREC data were affected, the underlying data in SREC production would still exist and could be pulled from the revenue-grade meter for the DER system to true-up any lapses in communications.[56]

g. A "Solution" for Tesla's Communications and Functionality Issues Did "Materialize," Contrary to the JSPs' Allegation

202. A critical misstatement in the JSPs' Petition is the following:

> Tesla experienced these disruptions with increasing frequency since the Pilot's launch in early 2021, and the problems worsened considerably from spring 2022 until the time Tesla ceased operations. During that time period, Tesla initiated numerous conversations with PPL to find a shared fix that would allow customers' solar systems to function without disruption. **However, despite a concerted effort by both Tesla and PPL to resolve the**

[55] Petition, p. 18.

[56] The Company would encourage Tesla to provide PPL Electric with further information about the affected customers so that the Company can investigate.

issue by means of a technical fix, a solution has not materialized.[57]

203. As noted throughout this Answer, a solution did materialize—Tesla simply has refused to implement it.

204. Specifically, PPL Electric provided Tesla with the exact software code for a firmware update to Tesla's gateways that would resolve the issue.

205. The Company also offered for Tesla to come to PPL Electric's offices so that the Company could prove that the firmware update would resolve the issues and allow the DER Management devices, Tesla's inverters, and Tesla's gateways to work together without issue.

206. Tesla refused the Company's offer and has never implemented the firmware update.

5. The JSPs' Requested Relief Is Completely Inappropriate, Contravenes the Design of the Commission-Approved Settlement, and Is Founded Upon Inapplicable and Undeveloped Legal Arguments

207. The Commission should reject the JSPs' request to rescind or amend the Commission's Order because such relief is wholly inappropriate and legally flawed.

a. Now Is Not the Time to Address the JSPs' Alleged Issues

208. The JSPs' Petition is paradoxically late and premature.

209. The Petition is late because, despite requesting expedited treatment, the JSPs' alleged grounds for rescinding or amending the Order have existed since at least July 2023 and, in some cases, much before that.[58]

210. However, the JSPs then waited several months to file the instant Petition and only now ask the Commission to rescind or amend the Order on an expedited basis.

[57] Petition, p. 19 (emphasis added).
[58] *See* Petition, pp. 10-11, 14-19.

211. The long delay in filing the Petition rebuts any claim that expedited relief is warranted.

212. Meanwhile, the JSPs' Petition is also premature.

213. The Settlement contained a carefully-crafted process to review the merits of the pilot program and evaluate whether it should continue.

214. Specifically, under Paragraph 62 of the Settlement, PPL Electric must file a Petition within 60 days after the end of Program Year 2 to continue or expand the pilot program.[59]

215. Such a filing is due in the next few months, at which time interested parties can petition to intervene and raise their issues with the current pilot program and propose modifications thereto.

216. In addition, the JSPs want to terminate the pilot program before even Program Year 2 of the three-year pilot program is completed.

217. As alleged support, the JSPs heavily rely on statements in the Company's 2023 DER Management Report,[60] which was filed on April 20, 2023.

218. However, PPL Electric's 2024 DER Management Report will be filed by April 22, 2024, and will present new data demonstrating the current and projected performance and benefits of the pilot program.

219. It would be a severe misstep to gauge a three-year pilot program's performance based on only one year's worth of data.

220. In fact, PPL Electric is unaware of any Commission-approved pilot program being terminated before the program ended, and the JSPs fail to identify any prior Commission decision where that occurred.

[59] Settlement ¶ 62.
[60] *See* Petition, pp. 20-22.

b. The JSPs Had Notice and Opportunity to Participate in the DER Management Plan Proceeding—Including Sunrun, Who Intervened in the Proceeding and Ultimately Represented that It Would Not Object to the Settlement

221. All of the JSPs had notice and opportunity to participate in the DER Management Plan proceeding and oppose the Company's proposals or the Settlement.

222. Notice of the DER Management Plan was published in the *Pennsylvania Bulletin*,[61] and PPL Electric served the notice of the filing on three of the JSPs—Tesla, Sun Directed, and Sunrun.[62]

223. Sunrun even intervened in the proceeding but failed to actively participate once a litigation schedule was set.

224. Indeed, Sunrun never submitted any testimony or exhibits.

225. Later, after the active parties achieved the Settlement, Sunrun represented that it would not be objecting to the Settlement.[63]

226. Therefore, even though they had notice and opportunity to oppose the DER Management Plan and, in the case of Sunrun, oppose the Settlement, the JSPs did not.

227. Thus, it is completely inappropriate for the JSPs to request that the Commission should terminate whole pilot program now based on their unsubstantiated and inaccurate allegations.

[61] 49 Pa.B. 3454 (June 29, 2019).

[62] *See* PPL Electric Letter and Certificate of Service Regarding Service of Notice on Solar Entities, Docket No. P-2019-3010128 (dated July 12, 2019).

[63] *See* Settlement, p. 1 n.1.

c. The JSPs' Alternative Requested Relief, Which Would Make Participation in the Pilot Program Voluntary, Should Be Rejected

228. As alternative relief, the JSPs request that the Commission amend its Order to provide an opt-out for participation in the pilot program.[64]

229. The Commission should deny this alternative relief for several reasons.

230. First, the Settlement already limits the scope of participation under the pilot program.

231. Under Paragraph 55 of the Settlement, PPL Electric has a limit of 3,000 DER Management devices that can be installed per year.

232. "DERs installed above the annual limit shall not be part of the pilot program."[65]

233. Therefore, once PPL Electric hits 3,000 DER Management devices installed in a given calendar year, DERs installed beyond that point are interconnected but not included in the pilot program.

234. Notably, in 2023, PPL Electric hit the annual cap of 3,000 DER Management devices on September 18, 2023.

235. In 2024, PPL Electric projects that it will hit the annual cap of 3,000 DER Management devices by July.

236. Second, transforming the pilot program into an opt-out structure would undermine the pilot program's purpose.

237. The pilot program was designed to gather data on the benefits and costs associated with monitoring and managing smart inverters' functionalities across the Company's distribution system.

[64] *See* Petition, pp. 1, 25.
[65] Settlement ¶ 55.

238. Both the quality and quantity of that data would be adversely affected if customers were able to opt out.

239. As a corollary, PPL Electric installed automated metering infrastructure ("AMI") meters for all of its approximately 1.5 million customers with no opt-out.

240. Such system-wide deployment of the AMI meters has brought significant insights to the Company's electric distribution system, such as voltage and 15-minute interval data for every meter.

241. That information helps inform operational and planning decisions for the entire distribution system.

242. Likewise, the DER Management device enables the Company to monitor voltage at the point of interconnection for inverters, giving PPL Electric key insights into how the DERs are affecting voltage levels on the distribution circuits.

243. Without the DER Management devices, PPL Electric would lose out on gathering and viewing that important information.

244. Third, the JSPs' demand for an opt-out is nothing short of another way to undermine and potentially terminate the pilot program.

245. If the JSPs were to convince a sufficient number of customers to opt out of the pilot program, then the Company would not have enough participants, would not gather enough data, and would be prevented from realizing the full cost savings and benefits associated with the pilot program.

d. The JSPs Present Undeveloped and Irrelevant Legal Arguments to Support Their Requested Relief

246. The JSPs also set forth undeveloped and irrelevant legal arguments in their Petition, asserting that the Commission's Order violated the Commonwealth Documents Law and the AEPS Act and contravenes competitive policies, such as the Choice Act.[66]

247. The Commission should reject these unfounded legal claims.

248. First, the JSPs fail to understand that the Commonwealth Documents Law applies to the promulgation of regulations.[67]

249. In its Order, the Commission did not promulgate or amend any of its regulations, nor did the Commission impose Commonwealth-wide rules. The Commission merely approved a Settlement and tariff requirements for the inverters and DER installations in a single utility's service territory.[68]

250. Also, Pennsylvania appellate courts have expressly held that administrative agencies, such as the Commission, have "two methods for formulating policy that will have the force of law": (1) "rulemaking procedures" under the Commonwealth Documents Law; and (2) "adjudications which constitute binding precedents."[69]

251. In this case, the Commission instituted the inverter requirements through the latter process by adjudicating the Settlement.[70]

252. Second, the JSPs incorrectly assert that the Choice Act has applicability here.

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[66] *See* Petition, pp. 23-24.

[67] *See* 45 P.S. §§ 1102-1602; 45 Pa.C.S. §§ 501-907 (collectively referred to as the "Commonwealth Documents Law").

[68] *See* Order, pp. 1-2.

[69] *Corman v. Acting Sec'y of the Pa. Dep't of Health*, 267 A.3d 561, 574 (Pa. Cmwlth. 2021) (quoting *Pa. Human Rels. Comm'n v. Norristown Area Sch. Dist.*, 374 A.2d 671, 679 (Pa. 1977)).

[70] *See* Order, pp. 1-2.

253. The Choice Act "unbundled" electric utilities' transmission, distribution, and generation functions and created a competitive market for retail electric supply service.[71]

254. Nothing in the Commission's Order affected the competitive market for retail electric supply service.

255. Moreover, PPL Electric's actions have not been anti-competitive.

256. To the contrary, PPL Electric wants to foster the competitive market for solar development, which is why the Company refuses to treat Tesla differently from every other inverter manufacturer.[72]

257. Tesla and the other JSPs should not be permitted to use their Petition "as a sword to attack" the Commission's Order and PPL Electric's Commission-approved tariff "to foster [their] own competitive advantage."[73]

258. In addition, PPL Electric filed Supplement No. 322 at Docket No. R-2021-3029322 to modify Rule 12 of its tariff, so that inverters must be certified to UL 1741-SB beginning January 1, 2023, instead of January 1, 2022, as stated originally in Rule 12 of the tariff.

259. The Company filed this tariff supplement to give inverter manufacturers and DER installers more time to produce inverters and obtain inverters, respectively, that are certified to UL 1741-SB.

260. Third, nothing in the Commission's Order violated the AEPS Act.

[71] *See,e.g.*, 66 Pa. C.S. § 2804(3); *NRG Energy, Inc. Pa. PUC*, 233 A.3d 936, 939-40 (Pa. Cmwlth. 2020) (citations and quotations omitted) (summarizing the passage and effect of the Choice Act).

[72] *See* Section III.A.3, *supra*.

[73] *Indianapolis Power & Light Co. v. Pa. PUC*, 711 A.2d 1071, 1082 (Pa. Cmwlth. 1998).

261. In fact, the Commission's authorization for PPL Electric to require additional equipment for DER interconnections is explicitly contemplated in the Commission's AEPS Act regulations.[74]

262. Furthermore, PPL Electric sought waivers of certain AEPS Act regulations because, at the time the DER Management Petition was filed, IEEE 1547-2018 was not effective,[75] and UL 1741-SB was not finalized.

263. Once IEEE 1547-2018 was amended and UL 1741 was supplemented with UL 1741-SB, IEEE 1547-2018 and UL 1741-SB were automatically incorporated into the Commission's regulations.[76]

264. Therefore, PPL Electric no longer requires the waivers of regulations that the Commission approved in its Order.

265. Finally, as support for their position that the Commission's "failure to conduct a statewide proceeding was legal error as it was contrary to the Commonwealth's [sic] Document [sic] Law and the AEPS Act," the JSPs largely rely on concerns raised by NRDC and SEF about how these issues should be addressed on a statewide basis.[77]

266. Notably, both the NRDC and SEF were signatories to the Settlement and submitted Statements in Support explaining why the Settlement is reasonable and in the public interest.[78]

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[74] *See* 52 Pa. Code § 75.13(k).

[75] Although IEEE 1547-2018 was published in 2018, it was dependent upon the then-forthcoming updates to UL 1741.

[76] 52 Pa. Code § 75.22 (defining "certified" as "[a] designation that the interconnection equipment to be used by a customer-generator complies with the following standards, as applicable: (i) IEEE Standard 1547, 'Standard for Interconnecting Distributed Resources with Electric Power Systems,' as amended and supplemented. (ii) UL Standard 1741, 'Inverters, Converters and Controllers for use in Independent Power Systems' (January 2001), as amended and supplemented").

[77] Petition, pp. 23-24.

[78] Settlement, Appx. G (NRDC Statement in Support); Settlement, Appx. H (SEF Statement in Support).

267. Thus, the Commission should reject the JSPs' undeveloped and irrelevant legal arguments.

B. EVEN IF THE COMMISSION WERE TO GIVE CREDENCE TO THE JSPS' FLAWED ARGUMENTS, PENNSYLVANIA LAW REQUIRES THAT THE MATTER BE SET FOR HEARING

268. As explained thoroughly in the preceding sections, the JSPs' factual and legal arguments are severely flawed and should be rejected.

269. Therefore, the Company respectfully requests that the Commission deny the JSPs' Petition in its entirety.

270. Notwithstanding, to the extent that the Commission affords any weight to the JSPs' unfounded arguments, the Commission cannot and should not rescind or amend the pilot program unless and until the JSPs' claims can be vetted through a full on-the-record proceeding, where the parties can engage in discovery, submit testimony and exhibits, and cross-examine witnesses.

271. As noted in Section II, *supra*, the Commonwealth Court has held that "the Commission must conduct an evidentiary hearing before rescinding or amending a prior order" under Section 703(g) of the Public Utility Code.[79]

272. "Merely allowing for 'notice and comment' d[oes] not satisfy Section 703 hearing requirements or due process."[80]

273. When a petition for rescission or amendment is opposed, the Commission cannot grant that petition without holding "a full hearing, including the development of a record and a decision by the Commission based on that hearing with full findings, in other words, a new adjudication . . . ."[81]

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[79] *Armstrong*, 835 A.2d 409, 420 (citation omitted).

[80] *Popowsky v. Pa. PUC*, 805 A.2d 637, 643 (Pa. Cmwlth. 2002) (citing *Scott Paper Co. v. Pa. PUC*, 558 A.2d 914 (Pa. Cmwlth. 1989)), *allowance of appeal denied*, 847 A.2d 60 (Pa. 2004).

[81] *Popowsky*, 805 A.2d at 643.

274. If the Commission were to grant such a petition "without the opportunity to present evidence or cross-examine witnesses," there would be no "meaningful opportunity to be heard as provided in Chapter 7 of the Public Utility Code or due process."[82]

[82] *Id.* In addition, as the moving parties, the JSPs have the burden to prove that they are entitled to the relief requested. 66 Pa. C.S. § 332(a). The Commission cannot and should not accept as true all of their allegations and, based thereon, rescind or amend its Order approving the Settlement. At the very least, PPL Electric has established through this Answer that there are differences in material fact among the parties that would need to be properly investigated and resolved through an on-the-record proceeding.

IV. CONCLUSION

WHEREFORE, for all the foregoing reasons, PPL Electric Utilities Corporation respectfully requests that the Pennsylvania Public Utility Commission deny the Petition for Rescission or Amendment filed by Tesla, Inc., Sun Directed, American Home Contractors, Sunrun, Inc., and the Solar Energy Industries Association in its entirety.

Respectfully submitted,

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Date: January 29, 2024

Appendix A
Approved Inverter List

PPL Electric Utilities - Approved Smart Inverter List

The most recent version of this list can be found by visiting www.pplelectric.com/DERManagement. ***Google Chrome users:*** *clear your browser cache if you encounter issues viewing the most recent list.*

Last updated: 2023-12-1							
Manufacturer	**Model #**	**Required Equipment for Compatibility**	**Nameplate (kW)**	**Phase(s)**	**Maximum Continuous Output Current (A)**	**Voltage (V)**	**Communication Type**
Chint Power Systems (CPS)	SCA25KTL-DO/US-208		25	Three	69.5	208	Serial (Modbus)
CPS	SCA25KTL-DO/US-480		25	Three	30.5	480	Serial (Modbus)
CPS	SCA36KTL-DO/US-480	"V2" model only	36	Three	43.5	480	Serial (Modbus)
CPS	SCA50KTL-DO/US-480		50	Three	66.2	480	Serial (Modbus)
CPS	SCA60KTL-DO/US-480		60	Three	79.4	480	Serial (Modbus)
CPS	SCH100KTL-DO/US-480		100	Three	126.7	480	Serial (Modbus)
CPS	SCH100KTL-DO/US-600		100	Three	106.8	600	Serial (Modbus)
CPS	SCH125KTL-DO/US-600		125	Three	127	600	Serial (Modbus)
CPS	SCH275KTL-DO/US-800		275	Three	198.5	800	Serial (Modbus)
Delta	E4-TL-US		3.33	Single	16	208	Serial (Modbus)
Delta	E4-TL-US		3.84	Single	16	240	Serial (Modbus)
Delta	E6-TL-US		4.99	Single	24	208	Serial (Modbus)
Delta	E6-TL-US		5.76	Single	24	240	Serial (Modbus)
Delta	E8-TL-US		6.66	Single	32	208	Serial (Modbus)
Delta	E8-TL-US		7.68	Single	32	240	Serial (Modbus)
Delta	M4-TL-US		3.32	Single	16	208	Serial (Modbus)
Delta	M4-TL-US		3.84	Single	16	240	Serial (Modbus)
Delta	M5-TL-US		4.16	Single	20	208	Serial (Modbus)
Delta	M5-TL-US		4.8	Single	20	240	Serial (Modbus)
Delta	M6-TL-US		4.99	Single	24	208	Serial (Modbus)
Delta	M6-TL-US		5.76	Single	24	240	Serial (Modbus)
Delta	M8-TL-US		6.65	Single	32	208	Serial (Modbus)
Delta	M8-TL-US		7.68	Single	32	240	Serial (Modbus)
Delta	M10-TL-US		8.32	Single	40	208	Serial (Modbus)
Delta	M10-TL-US		9.6	Single	40	240	Serial (Modbus)
Delta	M10-4-TL-US		8.32	Single	40	208	Serial (Modbus)
Delta	M10-4-TL-US		9.6	Single	40	240	Serial (Modbus)
Enphase	IQ7-60-2-US	IQ Gateway ENV2-IQ-AM1-240	0.24	Single	1.15	208	Ethernet (2030.5)
Enphase	IQ7-60-2-US	IQ Gateway ENV2-IQ-AM1-240	0.24	Single	1	240	Ethernet (2030.5)
Enphase	IQ7PLUS-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.29	Single	1.39	208	Ethernet (2030.5)
Enphase	IQ7PLUS-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.29	Single	1.21	240	Ethernet (2030.5)
Enphase	IQ7A-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.29	Single	1.39	208	Ethernet (2030.5)
Enphase	IQ7A-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.349	Single	1.45	240	Ethernet (2030.5)
Enphase	IQ7PD-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.19	Single	0.92	208	Ethernet (2030.5)
Enphase	IQ7PD-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.19	Single	0.8	240	Ethernet (2030.5)
Enphase	IQ7PD-84-2-US	IQ Gateway ENV2-IQ-AM1-240	0.21	Single	1.06	208	Ethernet (2030.5)
Enphase	IQ7PD-84-2-US	IQ Gateway ENV2-IQ-AM1-240	0.21	Single	0.88	240	Ethernet (2030.5)
Enphase	IQ7X-96-2-US	IQ Gateway ENV2-IQ-AM1-240	0.315	Single	1.51	208	Ethernet (2030.5)
Enphase	IQ7X-96-2-US	IQ Gateway ENV2-IQ-AM1-240	0.315	Single	1.31	240	Ethernet (2030.5)
Enphase	IQ7AS-66-ACM-US	IQ Gateway ENV2-IQ-AM1-240	0.29	Single	1.39	208	Ethernet (2030.5)
Enphase	IQ7AS-66-ACM-US	IQ Gateway ENV2-IQ-AM1-240	0.349	Single	1.45	240	Ethernet (2030.5)
Enphase	IQ7XS-96-ACM-US	IQ Gateway ENV2-IQ-AM1-240	0.315	Single	1.51	208	Ethernet (2030.5)
Enphase	IQ7XS-96-ACM-US	IQ Gateway ENV2-IQ-AM1-240	0.315	Single	1.31	240	Ethernet (2030.5)
Enphase	IQ8-60-2-US	IQ Gateway ENV2-IQ-AM1-240	0.24	Single	1	240	Ethernet (2030.5)
Enphase	IQ8-60-M-US	IQ Gateway ENV2-IQ-AM1-240	0.24	Single	1	240	Ethernet (2030.5)
Enphase	IQ8PLUS-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.29	Single	1.21	240	Ethernet (2030.5)
Enphase	IQ8PLUS-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.29	Single	1.21	240	Ethernet (2030.5)
Enphase	IQ8M-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.325	Single	1.35	240	Ethernet (2030.5)
Enphase	IQ8M-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.325	Single	1.35	240	Ethernet (2030.5)
Enphase	IQ8A-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.349	Single	1.45	240	Ethernet (2030.5)
Enphase	IQ8A-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.349	Single	1.45	240	Ethernet (2030.5)
Enphase	IQ8H-240-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.38	Single	1.58	240	Ethernet (2030.5)
Enphase	IQ8H-240-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.38	Single	1.58	240	Ethernet (2030.5)
Enphase	IQ8H-208-72-2-US	IQ Gateway ENV2-IQ-AM1-240	0.36	Single	1.73	208	Ethernet (2030.5)

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Manufacturer	**Model #**	**Required Equipment for Compatibility**	**Nameplate (kW)**	**Phase(s)**	**Maximum Continuous Output Current (A)**	**Voltage (V)**	**Communication Type**
Enphase	IQ8H-208-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.36	Single	1.73	208	Ethernet (2030.5)
Enphase	IQ8HC-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.36	Single	1.73	208	Ethernet (2030.5)
Enphase	IQ8HC-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.38	Single	1.58	240	Ethernet (2030.5)
Enphase	IQ8MC-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.31	Single	1.49	208	Ethernet (2030.5)
Enphase	IQ8MC-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.32	Single	1.33	240	Ethernet (2030.5)
Enphase	IQ8AC-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.345	Single	1.66	208	Ethernet (2030.5)
Enphase	IQ8AC-72-M-US	IQ Gateway ENV2-IQ-AM1-240	0.349	Single	1.49	240	Ethernet (2030.5)
Enphase	IQ8X-80-M-US	IQ Gateway ENV2-IQ-AM1-240	0.36	Single	1.73	208	Ethernet (2030.5)
Enphase	IQ8X-80-M-US	IQ Gateway ENV2-IQ-AM1-240	0.38	Single	1.58	240	Ethernet (2030.5)
Enphase	IQ8P-3P-72-E-US	IQ Gateway ENV2-IQC2-AM3-3P	0.475	Three	2.28	208	Ethernet (2030.5)
Enphase	IQ8H-3P-72-E-US	IQ Gateway ENV2-IQC2-AM3-3P	0.38	Three	1.83	208	Ethernet (2030.5)
Ginlong Technologies	Solis-1P3.6K-4G-US	Set Grid Standard to UL-208-18 during commissioning	3.6	Single	17.3	208	Serial (Modbus)
Ginlong Technologies	Solis-1P3.6K-4G-US	Set Grid Standard to UL-240-18 during commissioning	3.6	Single	15	240	Serial (Modbus)
Ginlong Technologies	Solis-1P5K-4G-US	Set Grid Standard to UL-208-18 during commissioning	5	Single	24	208	Serial (Modbus)
Ginlong Technologies	Solis-1P5K-4G-US	Set Grid Standard to UL-240-18 during commissioning	5	Single	20.8	240	Serial (Modbus)
Ginlong Technologies	Solis-1P6K-4G-US	Set Grid Standard to UL-208-18 during commissioning	6	Single	28.8	208	Serial (Modbus)
Ginlong Technologies	Solis-1P6K-4G-US	Set Grid Standard to UL-240-18 during commissioning	6	Single	25	240	Serial (Modbus)
Ginlong Technologies	Solis-1P7.6K-4G-US	Set Grid Standard to UL-208-18 during commissioning	7.6	Single	36.5	208	Serial (Modbus)
Ginlong Technologies	Solis-1P7.6K-4G-US	Set Grid Standard to UL-240-18 during commissioning	7.6	Single	31.7	240	Serial (Modbus)
Ginlong Technologies	Solis-1P10K-4G-US	Set Grid Standard to UL-208-18 during commissioning	10	Single	43.3	208	Serial (Modbus)
Ginlong Technologies	Solis-1P10K-4G-US	Set Grid Standard to UL-240-18 during commissioning	10	Single	41.7	240	Serial (Modbus)
Ginlong Technologies	S6-GC25K-US	Set Grid Standard to UL-480-18 during commissioning	25	Three	33.1	480	Serial (Modbus)
Ginlong Technologies	S6-GC30KLV-US	Set Grid Standard to UL-208-18 during commissioning	30	Three	91.6	208	Serial (Modbus)
Ginlong Technologies	S6-GC33K-US	Set Grid Standard to UL-480-18 during commissioning	33	Three	43.7	480	Serial (Modbus)
Ginlong Technologies	S6-GC36K-US	Set Grid Standard to UL-480-18 during commissioning	36	Three	47.6	480	Serial (Modbus)
Ginlong Technologies	S6-GC40K-US	Set Grid Standard to UL-480-18 during commissioning	40	Three	52.9	480	Serial (Modbus)
Ginlong Technologies	S6-GC50K-US	Set Grid Standard to UL-480-18 during commissioning	50	Three	66.2	480	Serial (Modbus)
Ginlong Technologies	S6-GC60K-US	Set Grid Standard to UL-480-18 during commissioning	60	Three	79.4	480	Serial (Modbus)
Ginlong Technologies	S5-GC75K-US	Set Grid Standard to UL-480-18 during commissioning	75	Three	90.2	480	Serial (Modbus)
Ginlong Technologies	S5-GC80K-US	Set Grid Standard to UL-480-18 during commissioning	80	Three	96.2	480	Serial (Modbus)
Ginlong Technologies	S5-GC90K-US	Set Grid Standard to UL-480-18 during commissioning	90	Three	108.3	480	Serial (Modbus)
Ginlong Technologies	S5-GC100K-US	Set Grid Standard to UL-480-18 during commissioning	100	Three	120.3	480	Serial (Modbus)
Ginlong Technologies	Solis-125K-EHV-5G-US-PLUS	Set Grid Standard to UL-600-18 during commissioning	125	Three	132.3	600	Serial (Modbus)
Ginlong Technologies	Solis-185K-EHV-5G-US-PLUS	Set Grid Standard to UL-600-18 during commissioning	185	Three	178	600	Serial (Modbus)
Ginlong Technologies	Solis-255K-EHV-5G-US-PLUS	Set Grid Standard to UL-800-18 during commissioning	255	Three	184	800	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 3000-TL-XH-US		2.6	Single	12.5	208	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 3000-TL-XH-US		3	Single	12.5	240	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 3800-TL-XH-US		3.29	Single	16	208	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 3800-TL-XH-US		3.8	Single	16	240	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 3800-TL-XH-US(S)		3.29	Single	16	208	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 3800-TL-XH-US(S)		3.8	Single	16	240	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 5000-TL-XH-US		4.33	Single	21	208	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 5000-TL-XH-US		5	Single	21	240	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 6000-TL-XH-US		5.2	Single	25	208	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 6000-TL-XH-US		6	Single	25	240	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 7600-TL-XH-US		6.58	Single	32	208	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 7600-TL-XH-US		7.6	Single	32	240	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 7600-TL-XH-US(S)		6.58	Single	32	208	Serial (Modbus)

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Manufacturer	**Model #**	**Required Equipment for Compatibility**	**Nameplate (kW)**	**Phase(s)**	**Maximum Continuous Output Current (A)**	**Voltage (V)**	**Communication Type**
Shenzhen Growatt New Energy	MIN 7600-TL-XH-US(S)		7.6	Single	32	240	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 8200-TL-XH-US		7.28	Single	35	208	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 8200-TL-XH-US		8.2	Single	35	240	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 9000-TL-XH-US		7.9	Single	38	208	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 9000-TL-XH-US		9	Single	38	240	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 10000-TL-XH-US		8.73	Single	42	208	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 10000-TL-XH-US		10	Single	42	240	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 11400-TL-XH-US		9.88	Single	48	208	Serial (Modbus)
Shenzhen Growatt New Energy	MIN 11400-TL-XH-US		11.4	Single	48	240	Serial (Modbus)
SMA	STP 20-US-50	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	20	Three	24	480	Ethernet (Modbus)
SMA	STP 25-US-50	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	25	Three	30	480	Ethernet (Modbus)
SMA	STP 30-US-50	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	30	Three	36	480	Ethernet (Modbus)
SMA	STP 33-US-41	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	33.3	Three	40	480	Ethernet (Modbus)
SMA	STP 50-US-41	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	50	Three	64	480	Ethernet (Modbus)
SMA	STP 62-US-41	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	62.5	Three	80	480	Ethernet (Modbus)
SMA	SHP 125-US-21	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	125	Three	151	480	Ethernet (Modbus)
SMA	SHP 150-US-21	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	150	Three	151	600	Ethernet (Modbus)
SMA	SHP 165-US-21	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	165	Three	151	630	Ethernet (Modbus)
SMA	SHP 172-US-21	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	172	Three	151	660	Ethernet (Modbus)
SMA	SHP FLEX-US-21	Firmware 4.1.5.R or later, ModbusTCP Enabled, Comission using Grid Code US-IEEE 1547/2018-Cat III	172	Three	151	200-660	Ethernet (Modbus)
SMA	SC 2660 UP-US		2667	Three	2566	600	Ethernet (Modbus)
SMA	SC 2800 UP-US		2800	Three	2566	630	Ethernet (Modbus)
SMA	SC 2930 UP-US		2933	Three	2566	660	Ethernet (Modbus)
SMA	SC 3060 UP-US		3067	Three	2566	690	Ethernet (Modbus)
SMA	SC 4000 UP-US		4000	Three	3850	600	Ethernet (Modbus)
SMA	SC 4200 UP-US		4200	Three	3850	630	Ethernet (Modbus)
SMA	SC 4400 UP-US		4400	Three	3850	660	Ethernet (Modbus)
SMA	SC 4600 UP-US		4600	Three	3850	690	Ethernet (Modbus)
Sol-Ark	SA-8K-48-ST	Software Update to Comm v1438 or newer	8	Single	33.3	208/240	Serial (Modbus)
Sol-Ark	SA-12K-P	Software Update to Comm v1438 or newer	9	Single	37.5	208/240	Serial (Modbus)
Sol-Ark	Limitless 15K-LV	Software Update to Comm v1438 or newer	15	Single	62.5	208/240	Serial (Modbus)
SolarEdge	SE3000H-US		3	Single	12.5	240	Serial (Modbus)
SolarEdge	SE3800H-US		3.3	Single	16	208	Serial (Modbus)
SolarEdge	SE3800H-US		3.8	Single	16	240	Serial (Modbus)
SolarEdge	SE5000H-US		5	Single	21	240	Serial (Modbus)
SolarEdge	SE6000H-US		5	Single	24	208	Serial (Modbus)
SolarEdge	SE6000H-US		6	Single	25	240	Serial (Modbus)
SolarEdge	SE7600H-US		7.6	Single	32	240	Serial (Modbus)
SolarEdge	SE10000H-US		10	Single	42	240	Serial (Modbus)
SolarEdge	SE11400H-US		10	Single	48.5	208	Serial (Modbus)
SolarEdge	SE11400H-US		11.4	Single	47.5	240	Serial (Modbus)
SolarEdge	SE10KUS		10	Three	27.8	208	Serial (Modbus)
SolarEdge	SE10KUS		10	Three	12	480	Serial (Modbus)
SolarEdge	SE14.4KUS		14.4	Three	40	208	Serial (Modbus)

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Manufacturer	**Model #**	**Required Equipment for Compatibility**	**Nameplate (kW)**	**Phase(s)**	**Maximum Continuous Output Current (A)**	**Voltage (V)**	**Communication Type**
SolarEdge	SE17.3KUS		17.3	Three	48.25	208	Serial (Modbus)
SolarEdge	SE30KUS		30	Three	36.5	480	Serial (Modbus)
SolarEdge	SE33.3KUS		33.3	Three	40	480	Serial (Modbus)
SolarEdge	SE40KUS		40	Three	48.25	480	Serial (Modbus)
SolarEdge	SE43.2KUS		43.2	Three	120	208	Serial (Modbus)
SolarEdge	SE50KUS		50	Three	139.5	208	Serial (Modbus)
SolarEdge	SE66.6KUS		66.6	Three	80	480	Serial (Modbus)
SolarEdge	SE80KUS		80	Three	96.5	480	Serial (Modbus)
SolarEdge	SE100KUS		100	Three	120	480	Serial (Modbus)
SolarEdge	SE120KUS		120	Three	144.3	480	Serial (Modbus)
SunPower	Enphase IQ7HS-66-M-US	PV Supervisor 6 (PVS6)	0.369	Single	1.77	208	Ethernet (2030.5)
SunPower	Enphase IQ7HS-66-M-US	PV Supervisor 6 (PVS6)	0.384	Single	1.6	240	Ethernet (2030.5)
SunPower	SPR-E19-320-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-E19-320-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-E19-320-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-E19-320-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-E20-327-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-E20-327-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-E20-327-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-E20-327-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X20-327-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X20-327-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X20-327-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X20-327-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X21-335-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X21-335-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X21-335-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X21-335-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X21-345-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X21-345-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X21-345-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X21-345-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X21-350-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X21-350-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X21-350-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X21-350-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X22-360-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X22-360-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X22-360-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X22-360-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X22-370-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X22-370-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPR-X22-370-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.51	208	Ethernet (2030.5)
SunPower	SPR-X22-370-BLK-E-AC	PV Supervisor 6 (PVS6)	0.315	Single	1.31	240	Ethernet (2030.5)
SunPower	SPWR-A4	PV Supervisor 6 (PVS6)	0.349	Single	1.45	240	Ethernet (2030.5)
SunPower	SPR-A390-G-AC	PV Supervisor 6 (PVS6)	0.349	Single	1.45	240	Ethernet (2030.5)
SunPower	SPR-A400-G-AC	PV Supervisor 6 (PVS6)	0.349	Single	1.45	240	Ethernet (2030.5)
SunPower	SPR-A390-BLK-G-AC	PV Supervisor 6 (PVS6)	0.349	Single	1.45	240	Ethernet (2030.5)
SunPower	SPR-A400-BLK-G-AC	PV Supervisor 6 (PVS6)	0.349	Single	1.45	240	Ethernet (2030.5)
SunPower	SPR-A410-G-AC	PV Supervisor 6 (PVS6)	0.349	Single	1.45	240	Ethernet (2030.5)
SunPower	SPR-A415-G-AC	PV Supervisor 6 (PVS6)	0.349	Single	1.45	240	Ethernet (2030.5)
SunPower	SPR-A420-G-AC	PV Supervisor 6 (PVS6)	0.349	Single	1.45	240	Ethernet (2030.5)
SunPower	SPR-M410-BLK-H-AC	PV Supervisor 6 (PVS6)	0.369	Single	1.77	208	Ethernet (2030.5)
SunPower	SPR-M410-BLK-H-AC	PV Supervisor 6 (PVS6)	0.384	Single	1.6	240	Ethernet (2030.5)
SunPower	SPR-M415-BLK-H-AC	PV Supervisor 6 (PVS6)	0.369	Single	1.77	208	Ethernet (2030.5)
SunPower	SPR-M415-BLK-H-AC	PV Supervisor 6 (PVS6)	0.384	Single	1.6	240	Ethernet (2030.5)
SunPower	SPR-M420-H-AC	PV Supervisor 6 (PVS6)	0.369	Single	1.77	208	Ethernet (2030.5)
SunPower	SPR-M420-H-AC	PV Supervisor 6 (PVS6)	0.384	Single	1.6	240	Ethernet (2030.5)
SunPower	SPR-M425-BLK-H-AC	PV Supervisor 6 (PVS6)	0.369	Single	1.77	208	Ethernet (2030.5)
SunPower	SPR-M425-BLK-H-AC	PV Supervisor 6 (PVS6)	0.384	Single	1.6	240	Ethernet (2030.5)
SunPower	SPR-M425-H-AC	PV Supervisor 6 (PVS6)	0.369	Single	1.77	208	Ethernet (2030.5)
SunPower	SPR-M425-H-AC	PV Supervisor 6 (PVS6)	0.384	Single	1.6	240	Ethernet (2030.5)
SunPower	SPR-M430-H-AC	PV Supervisor 6 (PVS6)	0.384	Single	1.6	240	Ethernet (2030.5)
SunPower	SPR-M430-H-AC	PV Supervisor 6 (PVS6)	0.369	Single	1.77	208	Ethernet (2030.5)
SunPower	SPR-M435-H-AC	PV Supervisor 6 (PVS6)	0.369	Single	1.77	208	Ethernet (2030.5)
SunPower	SPR-M435-H-AC	PV Supervisor 6 (PVS6)	0.384	Single	1.6	240	Ethernet (2030.5)
SunPower	SPR-M440-H-AC	PV Supervisor 6 (PVS6)	0.369	Single	1.77	208	Ethernet (2030.5)
SunPower	SPR-M440-H-AC	PV Supervisor 6 (PVS6)	0.384	Single	1.6	240	Ethernet (2030.5)
Tigo Energy	TSI-3.8K-US	One Tigo Inverter per Application - Multiple Tigo Inverters Will Be Rejected	3.29	Single	16	208	Serial (Modbus)
Tigo Energy	TSI-3.8K-US	One Tigo Inverter per Application - Multiple Tigo Inverters Will Be Rejected	3.8	Single	16	240	Serial (Modbus)

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Last updated: 2023-12-1							
Manufacturer	**Model #**	**Required Equipment for Compatibility**	**Nameplate (kW)**	**Phase(s)**	**Maximum Continuous Output Current (A)**	**Voltage (V)**	**Communication Type**
Tigo Energy	TSI-7.6K-US	One Tigo Inverter per Application - Multiple Tigo Inverters Will Be Rejected	6.58	Single	32	208	Serial (Modbus)
Tigo Energy	TSI-7.6K-US	One Tigo Inverter per Application - Multiple Tigo Inverters Will Be Rejected	7.6	Single	32	240	Serial (Modbus)
Tigo Energy	TSI-11.4K-US	One Tigo Inverter per Application - Multiple Tigo Inverters Will Be Rejected	9.88	Single	48	208	Serial (Modbus)
Tigo Energy	TSI-11.4K-US	One Tigo Inverter per Application - Multiple Tigo Inverters Will Be Rejected	11.4	Single	48	240	Serial (Modbus)
Yaskawa Solectria Solar	PVI 25TL-208		25	Three	69.5	208	Serial (Modbus)
Yaskawa Solectria Solar	PVI25TL-480-R		25	Three	30.5	480	Serial (Modbus)
Yaskawa Solectria Solar	PVI-36TL-480-V2		36	Three	43.5	480	Serial (Modbus)
Yaskawa Solectria Solar	PVI 50TL-480		50	Three	60.2	480	Serial (Modbus)
Yaskawa Solectria Solar	PVI 60TL-480		60	Three	72.2	480	Serial (Modbus)
Yaskawa Solectria Solar	XGI 1500-125/125-UL		125	Three	120	600	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500-125/125-UL-A		125	Three	120	600	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500-125/150-UL		125	Three	144	600	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500-125/150-UL-A		125	Three	144	600	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500-150/166-UL		150	Three	160	600	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500 150/166-UL-A		150	Three	160	600	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500-166/166-UL		166	Three	160	600	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500-166/166-UL-A		166	Three	160	600	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500 175-480		175	Three	210.5	480	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500 200/200-480		200	Three	240.6	480	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500 225-600		225	Three	216.5	600	Ethernet (Modbus)
Yaskawa Solectria Solar	XGI 1500 250/250-600		250	Three	240.6	600	Ethernet (Modbus)

Appendix B

March 30, 2023 Email

From: Beau Millett <bmillett@tesla.com>
Sent: Thursday, March 30, 2023 7:27 PM
To: Kelly, Brendan (Contractor) <BKelly@pplweb.com>; Lauver, Colleen <CLauver@pplweb.com>
Cc: Wallace, Matthew W (Contractor) <MWWallace@pplweb.com>; Dombroski-Diamond, Aliesha M (Contractor) <AMDombroskiDiamond@pplweb.com>; Natacha Caner <ncaner@tesla.com>; Josh Peacock <jospeacock@tesla.com>
Subject: PPL Inverter Monitoring Issues

Good Afternoon PPL,

This message is to follow up on the known monitoring issues between Tesla and PPL equipment configurations. Tesla is currently working on a software solution that will allow both PPL and Tesla to monitor our mutual customers DER system. In the interim, Tesla will no longer be using ZigBee monitoring communications, and will not interfere with PPL's DER monitoring device. We ask that you proceed with issuing PTO to the projects you recently denied.

Let us know if there any additional actions needed to issue out PTO, and please reach out if you have any questions.

Thanks,

Beau Millett | **Technical Project Manager - Utility Approval & Communication** | Energy
8225 Mercury Ct | San Diego, CA 92111
p 858.285.3715 | c 858.255.0946 | e bmillett@tesla.com

VERIFICATION

I, SALIM SALET, being the Vice President – Distribution Operations at PPL Electric Utilities Corporation, hereby state that the facts above set forth are true and correct to the best of my knowledge, information and belief and that I expect PPL Electric Utilities Corporation to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.

Date: 01/29/2024

Salim Salet (Jan 29, 2024 13:49 EST)

Salim Salet