



Andrew Karas, Esq.
Staff Attorney
akaras@fairshake-els.org
647 E Market Street,
Akron, OH 44304

2/8/21

Via electronic filing
Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
PO Box 3265
Harrisburg, PA 17105

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

Secretary Chiavetta,

On Behalf of the Natural Resources Defense Council (“NRDC”), please find enclosed *Comments of the Natural Resources Defense Council on Pilot Implementation Plan*. Parties are being served in the manner indicated in the attached Certificate of Service.

Please let me know if you have any questions or concerns. I can be reached at (234) 334-0997 or akaras@fairshake-els.org.

Sincerely,

/s/ Andrew J. Karas
Andrew J. Karas, Esq.

cc: M Szybist, Esq.
E. Collins, Esq.
H. Warren
Per COS

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of PPL Electric Utilities Corporation for
Approval of Tariff Modification and Waivers of
Regulations Necessary to Implement its
Distributed Energy Resources Management Plan

Docket No. P-2019-3010128

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the following *Comments of the Natural Resources Defense Council on Pilot Implementation Plan* was served, in the manner indicated on the persons below, in accordance with the requirements of 52 Pa. Code § 1.54:

Via email only:

Devin T. Ryan, Esq.
David B. MacGregor, Esq.
Post & Schell, P.C.
17 North Second Street
12th Floor
Harrisburg, PA 17101-1601

Kimberly A. Klock, Esq.
Michael J. Schafer, Esq.
PPL Electric Utilities Corporation
2 North 9th Street
Allentown, PA 18101-1179

Phillip D. Demanchick, Esq.
David T. Evrard, Esq.
Office of Consumer Advocate
555 Walnut Street 5th Floor Forum Place
Harrisburg, PA 17101

Kenneth L. Mickens, Esq.
316 Yorkshire Drive
Harrisburg, PA 17111-6933

James Van Nostrand, Esquire
Keyes & Fox LLP
275 Orchard Drive
Pittsburgh, P A 15228

Beren Argetsinger, Esquire
Keyes & Fox LLP.
P.O. Box 166
Burdett, NY 14818

Dated: February 8, 2021

Respectfully submitted,

/s/Andrew J. Karas

Andrew J. Karas, Esq. (Pa Bar ID 321231)
Fair Shake Environmental Legal Services
647 E. Market Street
Akron, OH 44304
Phone: (234) 334-0997
Fax: (412)291-1197
Counsel for Natural Resources Defense Council

Comments of the Natural
Resources Defense Council on
Pilot Implementation Plan

TABLE OF CONTENTS

TABLE OF CONTENTS I

INTRODUCTION..... 1

**1. THE COMPANY SHOULD CONTINUE WORKING WITH CONNECTDER AND
INVERTER MANUFACTURERS TO ENSURE THAT COMPATIBILITY ISSUES BETWEEN
INVERTERS AND THE DER MANAGEMENT DEVICES DO NOT DELAY DEPLOYMENT OF
DERS..... 2**

**2. THE COMPANY SHOULD LIMIT THE USE OF BESPOKE INVERTER SETTINGS IN
CONTROL GROUP INSTALLATIONS..... 6**

3. THE COMPANY SHOULD CLARIFY THE CONTENT OF ITS ANNUAL REPORTS 8

a. Annual reports should include information on PPL’s review of use cases 8

**b. Annual Reports should include all initial inverter settings, including data allowing for regional
comparative analysis..... 9**

c. The Company’s annual reports should include an analysis of DER system size 10

**4. THE COMPANY SHOULD ENSURE CERTAIN PROGRAM DOCUMENTS ARE READILY
ACCESSIBLE TO THE PUBLIC..... 11**

CONCLUSION..... 14

Introduction

On December 17, 2020, the Pennsylvania Public Utility Commission (the “Commission”) entered an Order in the proceeding *Petition of PPL Electric Utilities Corporation for Approval of Tariff Modifications and Waivers of Regulations Necessary to Implement its Distributed Energy Management Resources Plan*, Docket No. P-2019-3010128, which finally approved a *Joint Petition for Settlement of All Issues* (“Settlement”) submitted by PPL Electric Utilities Corporation (the “Company” or “PPL”), the Office of the Consumer Advocate (“OCA”), the Sustainable Energy Fund (“SEF”) and the Natural Resources Defense Council (“NRDC”). Pursuant to the terms of the Settlement, PPL filed a *DER Management Pilot Implementation Plan* on January 19, 2021. A technical collaborative was convened by the Company via phone conference on January 28, 2020, which was attended by representatives of all Parties to the Settlement. The instant *Comments* are filed pursuant to Paragraph 61 of the Settlement, which provides that “Within 20 days after the Pilot Implementation Plan is filed, the Joint Petitioners may file written Comments on the Company’s Pilot Implementation Plan.”

As more fully described *infra*, NRDC respectfully offers suggestions on the following issues: (1) the potential impact of the pilot on DER installation in light of the incompatibility of some inverters with the Company’s ConnectDER devices, (2) appropriate pilot and control group design *vis-à-vis* inverter settings at the time of interconnection, (3) the contents of the Company’s annual reports, and (4) the public availability of documents generated in the pilot.

NRDC appreciates the Company’s work in developing the Pilot Implementation Plan, and thanks the Company in advance for its consideration of NRDC’s perspective.

1. The Company should continue working with ConnectDER and inverter manufacturers to ensure that compatibility issues between inverters and the DER management devices do not delay deployment of DERs.

Under the terms of the Settlement, starting January 1, 2021, all new DERs interconnecting with the Company’s distribution system must have smart inverters that meet the Company’s “interim standards,” which specifically require that an inverter meet: (1) Underwriters Laboratories (“UL”) Standard 1741 Supplement A (“UL 1741 SA”); and (2) the Company’s testing for the communications requirements under the 2018 revisions to the Institute of Electrical and Electronics Engineers (“IEEE”) Standard 1547, “Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces” (“IEEE Standard 1547” or “IEEE 1547- 2018”).¹ The Company agrees to maintain a list of smart inverters meeting the interim standards in a publicly-accessible location on its website.² These interim standards apply during the 2021 calendar year, after which the Company will transition to requiring new DERs to have smart inverters meeting IEEE 1547-2018 and to have been certified with IEEE 1547.1 / UL 1741 Supplement B (“UL 1741 SB”).³

NRDC entered the Settlement in part based upon the Company’s assurance that requiring adherence to the identified technical standards would not unduly delay deployment of DERs.⁴ The Settlement memorializes the Company’s commitment in this regard by requiring that testing under the interim standards be accomplished in an “expeditious [manner] so as not to delay DER interconnections.”⁵

¹ Settlement, ¶ 48.

² *Id.*

³ *See id.* at ¶¶ 48-49.

⁴ *See* PPL Statement 1-RJ, 6-7 (Rejoinder Testimony of Sal Salet, stating “There is no need to wait until January 1, 2022, to launch PPL Electric’s DER Management proposal. The basis for Mr. Warren’s recommendation is his estimation that IEEE 1547-2018 compliant smart inverters will not be readily available on the market by January 1, 2020[.] However...PPL Electric has a robust and detailed interim solution for using certified smart inverters until the IEEE 1547-2018 and UL 1741 standards are finalized and published.”)

⁵ Settlement, ¶ 48.

During the January 28, 2021 technical collaborative call, NRDC and other settling Parties noted reports of delays in rooftop solar installation due to the fact that the list of approved smart inverters did not include any SolarEdge or EnPhase products, two manufacturers that together account for roughly eighty percent (80%) of all U.S. residential solar installations.⁶

The Company explained that the delay with respect to approving SolarEdge products stemmed from the manufacturer's unwillingness to make their smart inverter's communications port available to interconnecting customers. The Company noted that SolarEdge had since "relented from that position[.]" During the course of the technical collaborative call, the Company updated the Parties that SolarEdge products had passed testing requirements under the interim standards, are compatible with the Company's ConnectDER device, and would forthwith be included on the Company's list of approved inverters. At the time of this filing, the Company's list of approved smart inverters now includes SolarEdge products.⁷ Accordingly, the concerns raised specifically with respect to SolarEdge products are moot.

However, issues with qualifying EnPhase products under the interim standards remain. Per the Company's website, "PPL does not support the SEP2 (IEEE Std 2030.5) communications protocol," which is the protocol employed by EnPhase products.⁸

During the technical collaborative call, the Company acknowledged that the problem was not that the Enphase inverters do not meet UL 1741 SA, but that the ConnectDER devices being used by the Company do not currently work with inverters using the SEP2 communications

⁶ Lindsay Cherry and Bryan White, Greentech Media, *SolarEdge and Enphase Now Control 80% of the US Residential Solar Inverter Market* <https://www.greentechmedia.com/articles/read/solaredge-technologies-and-enphase-control-80-of-us-residential-solar-marke> (Dec. 18, 2019).

⁷ See <https://www.pplelectric.com/-/media/PPLElectric/At-Your-Service/Docs/REMSI/Metering-Equipment-Tables/PPL-EU-Smart-Inverter-List.ashx> (Accessed February 8, 2020).

⁸ PPL Electric Utilities Corporation, *Solar Inverters: Rules for Electric Meter and Service Installation (REMSI)*, <https://www.pplelectric.com/utility/about-us/electric-rates-and-rules/remsi/approved-metering-and-equipment-tables-index/solar-inverters> (Jan. 28, 2021).

protocol. The Company committed to providing follow-up communication on the issue, then communicated the following via email on February 2, 2021:

What will PPL Electric do to resolve the issue with the DERs that cannot interconnect because they use Enphase's inverters that employ the IEEE 2030.5 communication protocol?

Answer: PPL Electric has reviewed the Settlement and studied Enphase's inverters in the lab. The Company believes that it will finish testing and validating Enphase's inverters in accordance with communication requirements under IEEE 1547-2018 by this Friday, February 5th. However, the Company cannot guarantee that deadline, and the work may take until next week to complete. Regardless, on Friday, February 5th, PPL Electric will provide the parties with an update on the status of testing and validating Enphase's IEEE 2030.5 inverters.

As stated during the technical conference, PPL Electric has been working internally to develop a solution that allows IEEE 2030.5 inverters to work with the Company's DER Management devices. Based on the Company's discussions with Enphase, Enphase may be separately developing its own solution as well. PPL Electric cannot provide a timeframe for how long Enphase's solution may take to develop. However, PPL Electric estimates that it will have an IEEE 2030.5-compatible DER Management device available to be deployed in approximately 3-4 months. But until that device is available, PPL Electric does not want to delay the interconnection of any new DERs in its service territory that use IEEE 2030.5 inverters, such as Enphase's inverters, assuming that they pass the Company's testing and validation.

As such, PPL Electric would like to rely on Paragraph 56 of the Settlement, which states that "the Company shall not deny or delay the permission to connect and operate a DER due to unavailability of DER management devices" and that "[a]ny DER not equipped with a DER management device for this reason shall not be part of the pilot program." In other words, until the IEEE 2030.5-compatible DER Management device is available, PPL Electric would permit DERs using Company-tested and validated IEEE 2030.5 inverters to interconnect and not be subject to the pilot program. Later, once the IEEE 2030.5-compatible DER Management device becomes available, any new DER interconnection applications that will use an IEEE 2030.5 inverter would be included in the pilot program.

This plan would allow DERs using IEEE 2030.5 inverters, such as Enphase's IEEE 2030.5 inverters, to interconnect as soon as the inverters are tested and validated by PPL Electric. As mentioned previously, PPL Electric hopes to finish testing and validating Enphase's inverters by Friday, February 5th.

Paragraph 56 of the Settlement allows for the installation of DERs that are not equipped with a management device and are excluded from the pilot program “due to unavailability of the DER management device.”⁹ NRDC agrees with the Company’s position that compatibility concerns can constitute “unavailability of the DER management device,” such that an inverter which meets the interim standards but nevertheless has compatibility problems with the ConnectDER device can be allowed to interconnect and be excluded from the pilot program.¹⁰

Nevertheless, the Company should clarify the reasons for the incompatibility between a smart inverter that appears to clearly meet the interim standards and the ConnectDER device, and explain what actions it is taking to ensure that similar issues do not arise with other smart inverters that meet the interim standards. NRDC acknowledges and commends the Company’s commitment to allow installations of any DER using IEEE 2030.5 inverters to move forward while excluding such DER from the pilot study for the time being. But since IEEE 2030.5 is among the permitted communications protocols under IEEE 1547-2018, the Company should clarify why a device utilizing that communications protocol is presently unable to function with the Company’s DER management devices and how it plans to avoid future compatibility issues.

Specifically, it would be useful to better understand the extent to which delays experienced in the installation of EnPhase systems are a manufacturer-specific concern or may more broadly affect installations of smart inverters produced by smaller-scale manufacturers. In any event, the Company should undertake efforts to ensure that other inverter manufacturers are aware of the

⁹ Settlement, ¶56.

¹⁰ The situation more squarely contemplated by Paragraph 56 is that DER management devices might become unavailable due to production shortages. *See* Settlement ¶¶ 55-56. To NRDC’s recollection, it was this fear – rather than compatibility concerns – that served as the driving force behind the Settlement’s inclusion of these terms. *See* NRDC Statement 1-SR, 9-12. In any event, if other Parties disagree with the Company’s position that compatibility issues between EnPhase products and the ConnectDER constitute “unavailability of the DER management device,” NRDC notes its openness to jointly petitioning the Commission to modify the terms of the settlement as may be necessary to allow installation of all smart inverters meeting the interim standards to proceed forthwith.

issue of ConnectDER compatibility with IEEE 2030.5 and the temporary exemption to install affected inverters outside the pilot program. The recommendations made in Section 4, *infra*, may be one useful step the Company could take in furtherance of that goal.

2. The Company should limit the use of bespoke inverter settings in control group installations

The pilot program established by the Settlement is designed to test and evaluate “(1) the costs and benefits to distribution system operation and design of *monitoring* DERs through devices connected to inverters as compared to maintaining distribution system status visibility through other means (e.g., automated meter reading equipment, ADMS systems, modeling); and (2) the costs and benefits to distribution system operation of *active management* of DERs as compared to the benefits available through the use of inverter autonomous grid support functions.”¹¹ In furtherance of these objectives, the Settlement provides that:

Two control groups for the remote active management pilot program shall be established. The first group shall include any DERs connected during the pilot program to the first 75 circuits for which interconnection applications are received by the Company on or after January 1, 2021. The second group shall include the first 1,000 new DERs installed in the Company’s service territory on or after January 1, 2021. DERs connected during the pilot program in the first group shall count toward the 1,000 DERs in the second group. After the second group comprises 1,000 DERs, DERs interconnected to the first 75 circuits will still be added to the first group. For both control groups, DER inverters will operate under autonomous settings only. While the Company may monitor DER operations in the control group by collecting data through the DER management devices, the Company shall not make operational decisions regarding the distribution system based on that information. For DERs that are not part of the control groups, the Company shall be permitted to actively manage the grid support functions of DER inverters using the DER management devices and the Company’s DERMS and may make operational decisions based on DER operational information obtained through the DER management devices.¹²

¹¹ Settlement ¶ 54 (emphasis original).

¹² *Id.* at ¶ 57 (footnote omitted).

Foremost among the concerns raised by NRDC’s testimony in this proceeding was that the benefits of the active management of DERs may not, on a cost-benefit basis, exceed the value provided by autonomous smart inverter functionality.¹³ NRDC noted the novelty of PPL’s request to monitor and manage all DERs in its service area, and in particular noted that no other utility in any other jurisdiction – even those featuring significantly greater levels of DER penetration – have undertaken the approach advocated for by the company.¹⁴ NRDC believes that a fundamental purpose of the pilot is to provide the Company an opportunity to demonstrate the very need for deployment of its DER management devices.¹⁵

The Pilot Implementation Plan provides that, irrespective of an inverter’s placement in a particular control or experimental group, “[p]rior to the customer completing the DER installation and submitting the COC, a Volt/VAR curve will be calculated and stored in a database to be sent to the inverter following its installation. Each Volt/VAR curve will be calculated using the DER’s location on the distribution system, kW nameplate, calculated voltage rise, and other pertinent data.”¹⁶ During the technical collaborative call, the Company further explained that a unique Volt/VAR curve would be calculated based on locational and other relevant data, and sent to each new installation via the Company’s DERMS infrastructure.

NRDC believes that for those DER installations in the control groups, the spirit of the pilot would be better served by using utility default inverter settings in as widespread a fashion as practicable. Utilizing the communications functions of the ConnectDER device at the time of installation simply assumes as true that the management devices are necessary for appropriate Volt/VAR and other default inverter settings to be established. More crucially, the potential

¹³ NRDC Statement 1, 7-8.

¹⁴ *Id.* at 18: 19-22.

¹⁵ *See* Settlement, Appendix G ¶¶ 8-9 (NRDC Statement in Support of Joint Petition for Settlement).

¹⁶ Pilot Implementation Plan, 10.

widespread use of bespoke inverter settings at each DER detracts from the “control” nature of the two non-experimental study groups. The purposes of the pilot will be better served if the Company establishes and publishes standard settings, at least for small (*e.g.*, residential) systems, and to utilize those standards for inverters in the control groups to the extent possible. Under this approach, the Company’s control groups will better resemble the approaches taken in other jurisdictions (*i.e.*, reliance on autonomous smart inverter function *sans* management devices), which will in turn allow for more meaningful comparisons with the Company’s experimental group. While it may be the case that locational and other factors may favor departing from default settings in particular circumstances (*e.g.*, larger DER systems), even then the establishment of default settings will provide valuable lessons about the extent of any limitations with a default setting-centered approach.

3. The Company should clarify the content of its annual reports

a. Annual reports should include information on PPL’s review of use cases

The Pilot Implementation Plan establishes eight use cases which describe relevant circumstances “under which DERs would interact with the electric distribution system.”¹⁷ The Company notes that “[t]hroughout the Pilot’s implementation, as PPL Electric gains more experience, the Company may revise and refine the details of these use cases, adjust the methodology and approaches, use more advanced tools, and adopt industry best practices.”¹⁸ Indeed, the Company’s detailed descriptions of its use cases indicate that PPL plans to use information gathered to change its operational and planning process throughout the pilot.¹⁹

¹⁷ Pilot Implementation Plan, 14.

¹⁸ *Id.*

¹⁹ *Id.*, Attachment C.

The Pilot Implementation Plan commits to including certain quantitative information as part of the Company’s annual reports.²⁰ However, the Pilot Implementation Plan does not make clear that PPL will provide information on what the Company is learning with respect to each use case throughout the Pilot.²¹ The addition of narrative interim assessments of each use case during the pilot will aid all parties in understanding what learning has been accomplished around each use case in ways that might otherwise be difficult to glean from raw data.

During the technical collaborative call, the parties discussed whether reported quantitative metrics will be characterized in terms of its bearing on use cases. As a follow up to that discussion, the Company communicated via email that “PPL Electric is willing to provide information on each of the use cases in its annual reports.” NRDC acknowledges and appreciates PPL’s commitment in this regard, but suggests that it clarify the Pilot Implementation Plan to ensure that “providing information” includes interim assessments as described above.

b. Annual Reports should include all initial inverter settings, including data allowing for regional comparative analysis

As stated above, NRDC believes the purposes of the Pilot would be better served by the establishment of utility default inverter settings, and the deployment of those settings in control group inverters to the extent practicable. Whether such defaults settings or bespoke settings are employed, the Company should provide details on the DERs’ initial settings in its annual reports to allow full evaluation of the impacts of those inverter settings.

Following the technical collaborative call, the Company indicated via email that: “For the annual reports filed with the PUC, PPL Electric is willing to add a list that provides for each DER in the pilot program: (1) a unique customer identifier; (2) the nameplate capacity of the

²⁰ *Id.* at 15-17.

²¹ *Cf. id.* at 14 (listing use cases), 15-17 (listing categories of data to be submitted in annual reports).

DER; and (3) the initial settings established for that DER's smart inverter. For customer privacy reasons, PPL Electric will not provide the customers' names or account numbers."

NRDC appreciates the Company's commitment to including initial smart inverter settings in its annual reports. In addition to the categories of information PPL has indicated that it will provide for each anonymized customer, it would be useful for the Company to identify each customer's feeder line. Being able to cross-reference inverter settings with feeder numbers will greatly aid in developing the circuit-to-circuit comparisons contemplated by the establishment of the Pilot's Control Group 1.²² Additionally, including feeder numbers in annual reports should not impact customer privacy.

c. The Company's annual reports should include an analysis of DER system size

While several Parties (including NRDC) during the course of litigation expressed skepticism that remote active management of DERs will provide marginal benefits beyond the value delivered by autonomous smart inverter functionality, these concerns did not apply with equal force to larger DERs; indeed, the upshot of certain testimony was that remote active control might very well be warranted for systems having higher nameplate capacities.²³ The pilot presents an opportunity to better understand how the marginal value of utility-side DER control may change depending on system size.

The Pilot Implementation Plan does not explicitly contemplate analyzing the marginal benefits of remote management of DERs at certain nameplate capacity thresholds.²⁴ The

²² See *id.* at 4 (defining Control Group 1).

²³ See, e.g., SEF Statement 1-SR, 13 ¶¶ 11-13. (proposing different pilot program strictures for DERs "with capacities exceeding 1 MW AC[.]")

²⁴ See generally Pilot Implementation Plan 15-19 (summarizing contents of annual reports).

Company clarified during the technical collaborative call that it does not intend to specifically study whether marginal benefits are related to the size of DER systems.

NRDC acknowledges and appreciates that the Company has committed to providing “the nameplate capacity of the DER” along with a unique anonymized customer identifier as part of its annual reports. NRDC believes, however, that the Pilot would benefit from the Company’s analysis, reflected in its annual reports, of how nameplate capacity may have bearing upon the marginal benefits of remote active management of DERs.

4. **The Company should ensure certain program documents are readily accessible to the public.**

One of the goals of the pilot study is to advance the public understanding of distributed energy’s overall effect on the grid. For instance, the Settlement explicitly requires the list of smart inverters as well as the annual reports generated pursuant to the pilot study be made available to the public.²⁵ More broadly, the Settlement contemplates utilizing lessons learned through the pilot in subsequent utility proceedings to plan for the growth of distributed energy beyond PPL’s service area.²⁶ For the reasons set forth below, NRDC respectfully suggests that these goals could be better served by specifying in the Pilot Implementation Plan that all pilot documentation will be made available on a dedicated webpage accessible through the the Company’s *Renewable Energy* webpage.²⁷

²⁵ Settlement, ¶¶ 48, 66.

²⁶ Settlement, ¶ 65; *see also id.* at Appendix E, 23 (“the data gathered through this pilot program can be used to better inform the decisions made in any statewide Commission proceeding”).

²⁷ PPL Electric Utilities Corporation, *Renewable Energy: Getting Started with Solar Panels and other Distributed Energy Resources*, <https://www.pplelectric.com/utility/about-us/electric-rates-and-rules/customer-owned-generation> (accessed February 5, 2020).

The Pilot Implementation Plan provides that the “list of smart inverters that meet the Interim Requirements are publicly available and will be regularly updated on the Company’s website.”²⁸

The Company additionally indicates the following:

Customers and installers who are pursuing or are interested in learning more about installing DERs on the PPL Electric distribution system are able to find information and instructions about the updated interconnection process on PPL Electric’s external Rules for Electric Meter and Service Installations (“REMSI”) website and also on the PPL Electric’s Renewable Energy Connection Portal. The frequently asked questions (“FAQs”) section on the REMSI website has been updated to include impacts and details for the Pilot and appropriate PPL Electric contact information.²⁹

With respect to reporting, the Implementation Plan provides that annual reports “will be filed with the Commission at Docket No. P-2019-3010128[.]”³⁰ The Company indicates that the “reports will also be made publicly available[.]” though the Company does not specify whether this means that the Company will make the annual reports separately available on its website without the need for navigating the Commission’s online docket.³¹

During the technical collaborative call, one of the topics discussed was whether the Company would make its default setting ranges available to the public. In a follow-up email to the settling Parties, the Company communicated that “PPL Electric will add the default setting ranges from PPL Electric Exhibit SS-1R to its REMSI website.” NRDC appreciates the Company’s willingness to make this important document publicly available.

NRDC’s review of the REMSI website indicates that the site was designed with installers in mind rather than the general public, and many stakeholders may not find it to be an easily

²⁸ Pilot Implementation Plan, 8.

²⁹ *Id.*, 19.

³⁰ *Id.* at 15.

³¹ *Id.*

navigable resource.³² Additionally, the REMSI website does not appear to include the referenced “frequently asked questions” section, though the “Announcements” sidebar does include a brief mention that “[t]here are new requirements in place that apply to inverter based generation DER applications filed with PPL on or after Jan. 1, 2021. These enable inverter monitoring and management by PPL on certain systems.”³³ NRDC respectfully suggests that the reference to the FAQ section “on the REMSI website” was perhaps intended to mean the FAQ page accessible from the Company’s *Renewable Energy* webpage.³⁴

In any event, NRDC respectfully suggests that in addition to providing the information currently on the REMSI website and elsewhere, the Company should make all relevant pilot documentation available under a separate link accessible through the Company’s *Renewable Energy* webpage.³⁵ This newly created page would collate all pilot documentation (e.g. the Joint Petition for Settlement, the finalized version of the Pilot Implementation Plan, the list of approved inverters, and inverter configuration requirements) which is either not currently available on the Company’s website or is currently scattered in various locations and difficult for all stakeholders to find in one place. Further, as annual reports and associated data are developed, they should be made accessible at this same location. The publication of these resources in one place, more intuitively navigable from the Company’s homepage than the REMSI website, would serve the pilot’s broader educational purposes.

³² PPL Electric Utilities Corporation, *Rules for Electric Meter & Service Installations (REMSI)*, <https://www.pplelectric.com/remsi> (accessed February 5, 2021).

³³ *Id.* (accessed February 5, 2021).

³⁴ PPL Electric Utilities Corporation, *Renewable Energy: Getting Started with Solar Panels and other Distributed Energy Resources*, <https://www.pplelectric.com/utility/about-us/electric-rates-and-rules/customer-owned-generation> (accessed February 5, 2020); see also PPL Electric Utilities Corporation, *Frequently Asked Questions*, <https://www.pplelectric.com/utility/about-us/electric-rates-and-rules/customer-owned-generation/frequently-asked-questions.aspx> (accessed February 5, 2020).

³⁵ PPL Electric Utilities Corporation, *Renewable Energy: Getting Started with Solar Panels and other Distributed Energy Resources*, <https://www.pplelectric.com/utility/about-us/electric-rates-and-rules/customer-owned-generation> (accessed February 5, 2020)/

Conclusion

NRDC appreciates the Company's willingness to consider feedback from the settling Parties both during the technical collaborative conference call and pursuant to the opportunity to submit written comments. NRDC looks forward to the finalization of the Company's Pilot Implementation Plan and the learning to be accomplished in the pilot study.

Respectfully submitted,

/s/ Andrew J. Karas

Andrew J. Karas
Pennsylvania Bar No. 321231
Emily A. Collins
Pennsylvania Bar No. 208990
Fair Shake Environmental Legal Services
647 E. Market Street
Akron, OH 44304

Mark Szybist
Pennsylvania Bar No. 94112
Natural Resources Defense Council
1152 15th Street, Suite 300
Washington, DC 20005

DATED: February 8, 2021

Counsel for natural Resources Defense Council