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RULES FOR ELECTRIC SERVICE  
RULE 12- DISTRIBUTED ENERGY RESOURCE (DER) INTERCONNECTION  
SERVICE

A. PURPOSE

The Distributed Energy Resource Interconnection Service (DERIS) shall be applied to all new DER interconnections with the distribution system effective January 1, 2021, and as further provided in this Rule. DERs shall include inverter-based alternative energy sources and systems, as defined in the Alternative Energy Portfolio Standards Act of 2004 (73 P.S. §§ 1648.1 - 1648.8), and storage resources (batteries).

B. APPLICATION

- (1) This Rule shall apply to all inverter-based DERs, whose interconnection applications are received on or after January 1, 2021.
- (2) This Rule shall apply to all customers who receive Basic Utility Supply Service under Rate Schedules RS, GS-1, GS-3, and LP-4.

C. DEVICE REQUIREMENTS

(1) Renewable Energy Connection –

The online portal allows customers to apply to interconnect the DER Management Devices with the distribution system. Refer to the REMSI Renewable Energy Connection under PPL Electric's Electric Rates and Rules for additional information.  
<https://www.pplelectric.com/utility/about-us/electric-rates-and-rules.aspx>

(2) Smart Inverters —

From January 1, 2021, through December 31, 2021, all new inverters connected to the distribution system must meet: (1) UL 1741 Supplement A as amended or supplemented and (2) the communication requirements under IEEE 1547-2018 as tested by or on behalf of the Company. Beginning January 1, 2022, PPL Electric will transition to requiring new inverters that connect to the distribution system to comply with IEEE 1547-2018 and to be certified to UL 1741 Supplement B. During the transition period of January 1, 2022, through December 31, 2022, each new inverter connecting to PPL Electric's distribution system must either: (1) meet UL 1741 Supplement A (as amended or supplemented) and the communication requirements under IEEE 1547-2018 (as tested by or on behalf of the Company); or (2) comply with IEEE 1547-2018 and be certified to UL 1741 Supplement B. Beginning January 1, 2023, new inverters connecting to the distribution system must comply with IEEE 1547-2018 and must be certified to UL 1741 Supplement B. The list of smart inverters that meet these requirements will be made publicly available and regularly updated on the Company's REMSI website.

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## RULE 12 - DISTRIBUTED ENERGY RESOURCE (DER) INTERCONNECTION SERVICE (Continued)

### C. DEVICE REQUIREMENTS {Continued}

#### (2) Smart Inverters (Continued) -

Notwithstanding the above, if a customer installs a new inverter on an existing DER installation or upgrades an existing DER installation after January 1, 2021, the customer may install a replacement inverter of a similar make and model as the existing inverter, provided that any such inverter meets the Commission's applicable standards and requirements set forth in its regulations.

#### (3) DER Management Device –

All DERs whether Customer-Owned or Third Party-Owned that are applying to interconnect with PPL Electric's distribution system must install smart inverters as defined in Rule 12(C)(2). Additionally, for the term of the pilot program described in Rule 12(D), a DER Management Device owned, installed, and maintained by the Company will be connected to the data port of the smart inverter for any new DER installation. The DER Management Device may use the Meter Network radios to connect wirelessly to PPL Electric's RF mesh network. These devices shall be installed and maintained in accordance with Company's "Rules for Electric Meter and Service Installations (REMSI)". Refer to the REMSI DER Management Device section as well as the Commission-approved Settlement and the Pilot Implementation Plan filed at Docket No. P-2019-3010128 for additional information.

### D. PILOT PROGRAM

Beginning January 1, 2021, the Company will conduct a pilot program to test and evaluate: (1) the costs and benefits to the distribution system operation and design of monitoring DERs through the DER Management Devices 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 the distribution system operation of active management of DERs through DER management devices as compared to the benefits available through the use of inverter autonomous grid support functions.

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## RULE 12 - DISTRIBUTED ENERGY RESOURCE (DER) INTERCONNECTION SERVICE (Continued)

### D. PILOT PROGRAM (Continued)

Two control groups for the pilot program will 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 Distributed Energy Resources Management System (DERMS) and may make operational decisions based on DER operational information obtained through the DER Management Devices.

The pilot program will begin January 1, 2021 and will end three years after the control groups are established. Refer to the Commission-approved Settlement and the Pilot Implementation Plan filed at Docket No. P-2019-3010128 for more information on the details and design of the pilot program.

### E. ANNUAL REPORTS

Pursuant to the Commission-approved Settlement and the Pilot Implementation Plan filed at Docket No. P-2019-3010128, the Company shall file annual reports with the Commission providing detailed quantitative information germane to evaluation of the results of the pilot program. The reports shall be publicly available and shall not contain any identifying customer information. The annual reports shall be filed within 30 days following the end of each program year.