solaredge

Application Note

IEEE 1547-2018: Utility-Required Profile - Grid Code support via SetApp

Version 1.0

January 2025

MAN-01-01235-1.0

Revision history

Version 1.0, January 2025: Initial version

About

The following document describes the impacts of the IEEE 1547 standard and the application of utility-required grid settings on SolarEdge inverters.

IEEE 1547-2018 background

IEEE std. 1547-2018 is the standard for defining the integration of Distributed Energy Resources (DERs), such as solar panels and energy storage systems, with the electrical grid.

As DER penetration grows, the key focus of IEEE 1547-2018 is to improve and standardize the impact DERs have on grid stability and performance. To ensure grid reliability, stability and resiliency, IEEE 1547-2018 outlines grid-related setting requirements for DER performance in key areas, such as voltage, frequency, and active and reactive power control.

With several states adopting IEEE 1547-2018, or in the process of implementing it, each utility and grid operator may define their own specific settings via a Utility-Required Profile (URP). The goal of the URP settings is for the DER to adequately support the local grid through advanced power control functions such as, voltage regulation, frequency response and grid disturbance ride-through capabilities.
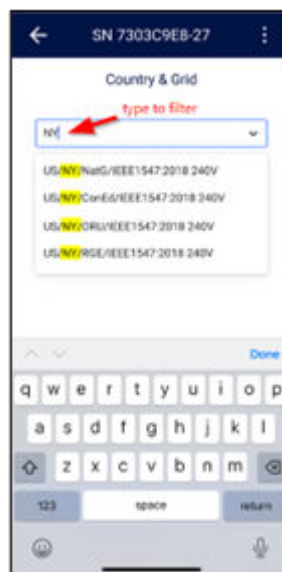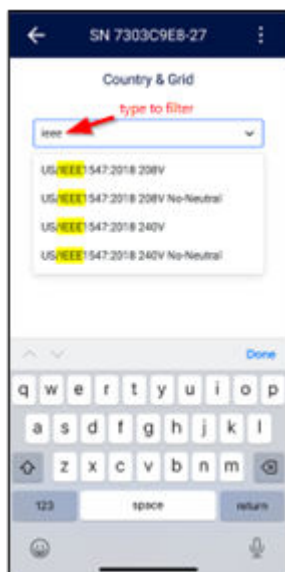
Utility-specific grid codes

To simplify and reduce installation time, SolarEdge supports utility-specific grid codes, via the SetApp mobile application. This allows for predefined grid settings to be applied, based on the Utility-Required Profile (URP) parameters.

Benefits

- **Improved ease of commissioning:** A single grid code applies to all utility-required grid settings.

- **Quick access to recently used grid codes**: The last five recently used grid codes appear at the top of the grid selection list.

- **Search function for quick grid code selection:** In the SetApp **Country & Grid** menu, type the relevant State, Utility or Name to filter applicable grid codes, as displayed in the following images.

- **Rapid deployment of new grid codes:** Future grid codes can be requested as additional states and utilities adopt IEEE 1547-2018.

Support for future grid codes

To request a new grid code be added to the drop-down menu in SetApp, contact us at GridCodeUS@SolarEdge.com.

Include the following required information:

- Utility / Grid Operator Name

- State

- Utility-Required Profile (URP) file

- Supporting documentation