

## Grid Code Conformity of INTILION|scalebloc and INTILION|scalestac

### **Abstract:**

***The following document explains the conformity of the INTILION|scalebloc and INTILION|scalestac product series with European Grid Code regulations and the responsibility of integrators.***

Regulation EU 2016/631 "Requirements for Generators" (NC-RfG), which came into effect on May 17, 2016, describes the network connection regulations in the European electricity grid ("UCTE network"). However, the RfG offers design options for the individual countries. Germany has therefore designed the VDE-AR-N 4105: 2018 and VDE-AR-N 4110: 2018. UK, for example, the G99.

Many countries in the EU do not (yet) have their own national grid connection guidelines. To date only Germany, UK and Denmark (Technical Regulation 3.3.1 for Electrical Energy Storage Facilities) (as of March 15, 2020) have their own regulations for energy storage systems. All other EU countries refer to "older" standards or to the EU standard EN 50549 (a uniform European standard).

In principle, the manufacturer's CE declaration, as well as the grid code certificates of the respective country are necessary for the on-grid connection of the battery storage systems. These documents allow the connection and operation of battery storage systems to the grid.

So far the grid code certificate EN 50549 (standard European Gridcode) and for Germany the VDE-AR-N 4105: 2018 and VDE-AR-N 4110: 2018 are available for the INTILION|scalebloc and INTILION|scalestac. Further specific grid code certificate will follow soon. This means that it is currently possible to install the INTILION|scalebloc in Germany and other countries referring to the EN 50549.

For the installation of the INTILION|scalebloc outside of Germany, it is therefore important to ensure that the respective grid operator accepts the German certificates VDE-AR-N 4105 and VDE-AR-N 4110 or the European standard EN 50549. **The local integrator or partner has the full responsibility for the clarification with the local distribution network operator (DSO or DNO) and for the grid conformity in the corresponding country. The same applies to direct end customers.**

It should also be clarified to what extent other regulations that do not affect the grid connection must be considered. The local integrator or partner should have this information and fulfill those requirements.

### **Additional Information:**

The built-in battery inverter in the battery storage system has a connected load of 25 kVA up to 68.5 kVA for the scalebloc and up to 400 kVA for the scalestac. Therefore, these battery storage systems do not include an integrated network and system protection (NS-protection). If NS-protection is required by the local grid operator, it must be added externally. Please ask the local grid operator whether NS-protection is required.

### **Additional guidance:**

***Please check with the local grid operator if the certificates of VDE-AR-N 4105 and VDE-AR-N 4110 and EU standard EN 50549 are sufficient for the on-grid connection. Please make sure to have this confirmation of the local grid operator (in writing). The local distribution network operator (DSO or DNO) may prohibit the connection and operation of the battery storage system.***

*Please ask your INTILION representative if you did not already receive a copy of the certificates. Since many countries do not yet have their own national grid connection guidelines, the German certificates (VDE-AR-N 4105 and VDE-AR-N 4110) or the European standard EN 50549 are accepted by many countries.*

We are looking forward to realizing this project together with you!