



**PROPOSALS FOR MAXIMUM CAPACITY
THRESHOLDS OF COMMISSION
REGULATION (EU) 2016/631**

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1. Introduction

The Commission Regulation (EU) 2016/631 establishing a network code on requirements for grid connection of generators [1], is considered as one of the main factors for the creation of solutions and harmonized products necessary for a Pan-European and global power-generation technologies market. The Regulation sets out the connection requirements of the significative power-generation, especially synchronous power-generation modules, power park modules (PPM) and AC-connected offshore PPM, to the transmission system and distribution system. Consequently, the Regulation, helps to ensure fair conditions of competition in the internal electricity market, to ensure system security and the integration of renewable electricity sources, and to facilitate EU wide trade in electricity.

The number of technical requirements and the level of requirements are based on the significance of power-generating modules on the overall system. This significance is used to classify the power-generating modules into different categories. This power-generation classification is based on the generating capacity of the module and the voltage level of the connection, as it is explained within the initial recitals of the Regulation:

“The significance of power-generating modules should be based on their size and their effect on the overall system.”

The types of generation recognized on this Regulation are A, B, C and D, being the A the type demanding less requirements, and the D, the most significant one, and with more stringent requirements. This classification is done in view of the different voltage level at which generators are connected and their maximum generating capacity.

Article 5 of the Regulation sets the limits for the maximum capacity thresholds depending on the Synchronous area:

Synchronous areas	Limit for maximum capacity threshold from which a power-generating module is of type B	Limit for maximum capacity threshold from which a power-generating module is of type C	Limit for maximum capacity threshold from which a power-generating module is of type D
Continental Europe	1 MW	50 MW	75 MW
Great Britain	1 MW	50 MW	75 MW
Nordic	1,5 MW	10 MW	30 MW
Ireland and Northern Ireland	0,1 MW	5 MW	10 MW
Baltic	0,5 MW	10 MW	15 MW

Table 1. Limits for thresholds for type B, C and D power-generating modules.

Power-generating modules within the following categories shall be considered as significant:

Type A: connection point below 110 kV and maximum capacity between 0,8 kW and the lower limit of the type B.

Type B: connection point below 110 kV and maximum capacity at or above a threshold proposed by each relevant TSO and below the limit proposed by the TSO to differentiate the type B to C. This threshold shall not be above the limits for type B power-generating modules contained in Table 1.

Type C: connection point below 110 kV and maximum capacity at or above a threshold specified by each relevant TSO and below the limit proposed by the TSO to differentiate types C and D. This threshold shall not be above the limits for type C power-generating modules contained in Table 1.



Type D: connection point at 110 kV or above. A power-generating module is also of type D if its connection point is below 110 kV and its maximum capacity is at or above a threshold specified by each relevant TSO. This threshold shall not be above the limit for type D power-generating modules contained in Table 1.

2. Proposal

The Regulation, in its Article 5.3, sets out that each relevant TSO, in this case REE, must present a proposal for the maximum capacity thresholds, subject to approval by the national regulatory authority or, where applicable, the Member State.

The proposal presented by REE is based on the next considerations:

- To assure the future operating conditions of the power system, according to the decarbonization goals established at European level.
- To guarantee the reliability, quality and security of supply of the overall power system. This will imply generally, maintaining at least the level of the requirements established in the current legislation about technical requirements for grid connection of generators, and thus, taking the existing thresholds from current legislation.
- To ensure consistency with the Spanish current (or proposed) technical legislation structure and with the power limits proposed on it, so that they may be considered as the types defined within the Regulation.. This way, the exiting limits of capacity, which have been defined taking into account the particular needs of the Spanish power system will be considered and the need of modification of the national current legislation will be minimized, making easier the implementation process.
- Analysis of installation forecast of new power generation after the entry into application of the Regulation. It has been specially evaluated the importance of the technologies based on power electronics (wind power technologies and photovoltaic systems) and their impact to the security of power system.
- Impact of the selection of the thresholds and technical requirements on the generators, based on their capabilities and state of the art.

Taking into account the abovementioned considerations the thresholds proposed for establishing the significance of the Power-generating modules are:

- **Type A: generators with a connection point below 110 kV and maximum capacity above 0,8 kW and at or below 100 kW.**
- **Type B: generators with a connection point below 110 kV and maximum capacity above 100 kW and at or below 5 MW.**
- **Type C: generators with a connection point below 110 kV and maximum capacity above 5 MW and at or below 50 MW.**
- **Type D: generators with a connection point at or above 110 kV or maximum capacity above 50 MW.**



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