SolarPower Europe commenting on Solar + Storage or Solar+Wind at utility-scale projects

Connecting non-synchronous power-generating modules of different underlying technologies at the same connection point (e.g. Solar+Storage or Solar+Wind) is a **positive development of the renewable industry, as it will allow for better utilization of the grid**. At the same time, this allows developers to reduce investment costs and grid connection costs. This is a win-win situation – better grid utilization and lower costs.

<u>The issue with the framework proposed by ACER on the 19 December 2023:</u>

Connecting non-synchronous power-generating modules of different underlying technologies at the same connection point (e.g. Solar+Storage or Solar+Wind) is a positive development of the renewable industry, as it will allow for better utilization of the grid. At the same time, this allows developers to reduce investment costs and grid connection costs. This is a win-win situation – better grid utilization and lower costs.

This requires a new approach to determine the significance of a power park module. **SolarPower Europe supports the approach according to which the determination of significance is based on the maximum capacity of a PPM, understood as the maximum injection capacity of the power park module which is agreed between the developer and the grid operator.** This is a solution that is already implemented by several TSOs such as REE in Spain, and Fingrid in Finland.

This can be exemplified by a generating facility consisting of 40 MW solar + 10 MW storage connected at the same point with a grid connection capacity of 40 MW according to the grid connection agreement. The generating plant is constructed in a way, that the solar and storage will never generate more than 40 MW, which is equal to the grid connection capacity. The capacity for determining significance should be 40 MW instead of 50 MW, which is the fully aggregated value, if the power-generating module is constructed in such a way, and this is agreed upon between the relevant system operator and the power-generating facility owner.

However, in the current text, it is not clear how the RfG network code envisions the rules for the determination of the significance of PPMs in the case of collocated solar + storage or solar + wind, and whether ACER supports our approach.

- The whereas (11), in the following sentence '*Electricity storage integrated to a power-generating module used solely for the purpose of meeting the respective requirements of this Regulation should be considered as part of such module while its capacity should*

not count towards the power-generating module capacity', does not confirm the adoption of our approach, but seems to limit the possibility to rely on maximum capacity to battery storage used for grid forming purposes only.

- We understand that the definition (16) read together with article 5 means that the determination of significance should be based on the notion of maximum capacity, understood as the maximum injection capacity agreed on between the project developer and the grid operator.

→ *(16) 'maximum capacity' or 'Pmax' means the maximum continuous active power which a power-generating module can produce, less any demand or losses associated solely with facilitating the operation of that power-generating module as specified in the connection agreement or as agreed between the relevant system operator and the power-generating facility owner, or determined by other appropriate means, where an agreement is not required;*

→ *Article 5, paragraph 2. Power-generating modules, excluding V2G electric vehicles and associated V2G electric vehicle supply equipment below 1 MW maximum capacity, within the following categories shall be considered as significant:*

- *(a) maximum capacity of 0,8 kW or more (type A);*
- *(b) where the capacity of the power-generating module is below the threshold specified in accordance with the procedure laid out in paragraph 4: (i) maximum capacity at or above a threshold specified by each relevant TSO in accordance with paragraph 3 (type B). This threshold shall not be above the limits for type B power-generating modules contained in Table 1; (ii) maximum capacity at or above a threshold specified by each relevant TSO in accordance with paragraph 3 (type C). This threshold shall not be above the limits for type C power-generating modules contained in Table 1; or (iii) maximum capacity at or above a threshold specified by each relevant TSO in accordance with paragraph 3 (type D). This threshold shall not be above the limits for type D power-generating modules contained in Table 1;*
- *(c) where the capacity of the power-generating module is above or equal to the threshold, specified in accordance with the procedure laid out in paragraph 4: (i) connection point below 110 kV and maximum capacity at or above type B threshold contained in Table 1; (ii) connection point below 110 kV and maximum capacity at or above a threshold specified by each relevant TSO in accordance with paragraph 3 (type C). This threshold shall not be above the limits for type C power-generating modules contained in Table 1; or (iii) connection point at 110 kV or above (type D). 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 in accordance with paragraph 3. This threshold shall not be above the limit for type D power-generating modules contained in Table 1*

We therefore ask the European Commission to clarify the interpretation of such paragraphs and ensure that the determination of significance can be calculated based on the maximum injected capacity.

In addition, it is important for further clarification on how to treat such cases. Ideally, this should be added to articles 2 and 5. Alternatively, **this should be addressed in the implementation guidance document**, particularly on the calculation of the injection capacity for collocated systems and how the determination of significance of the PPM should be applied.