Grid Code Modification Proposal Form



Email to gridcode@eirgrid.com

Title of Modification Proposal:

MPID 279 Correction of Connection Voltage Graphs for 110kV and 220KV Systems under PPM1.6.3.4

MPID (EirGrid Use Only): 279

Date:	16 June 2020		
Company Name:	EirGrid		
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Grid Code Version:	8		
Grid Code Section(s)	PPM1.6.3.4		
Impacted by Modification			
Proposal:			

Modification Proposal Justification:

The purpose of this modification is to correct an error in clause PPM1.6.3.4.

PPM1.6.3.4 shows a maximum voltage withstand capability of 1.12p.u. for connections at 110 kV and 220 kV. In the case of 110kV and 220 kV, this would require equipment to have the capability to continually withstand 123.2kV and 246.4 kV respectively.

As per clause CC.8.3.2, the maximum transmission system voltages during a transmission fault for 110kV and 220kV are nominally 123kV and 245kV respectively. This equates to an upper voltage limit of 1.118p.u. for 110kV transmission systems and 1.114p.u. for 220kV transmission systems. The values in clause PPM1.6.3.4 should be aligned with the values stated in clause CC.8.3.2

To rectify this Grid Code inconsistency, we propose separating out the graphs for 110kV and 220kV and correcting the upper voltage limits within them to state 1.118p.u. for 110kV systems and 1.114p.u. for 220kV systems.

It should also be noted that the European Comission Regulation 2016/631 establishing a network code on requirements for grid connection of generators (RfG), Article 16.2 requires the maximum voltage limit for 110kV to 300kV inclusive to be 1.118p.u, which would require a continuous voltage rating of 246 kV for 220 kV plant. We consider that this is an error in the network codes and we have requested a derogation from the CRU to reflect the voltage limits, as defined in CC.8.3.2.

Red-line Version of Impacted Grid Code Section(s) - show proposed changes to text:

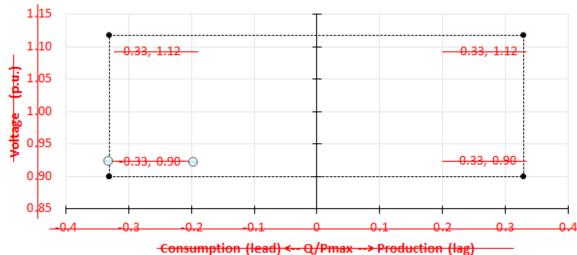
Deleted text in strike-through red font and new text highlighted in blue font



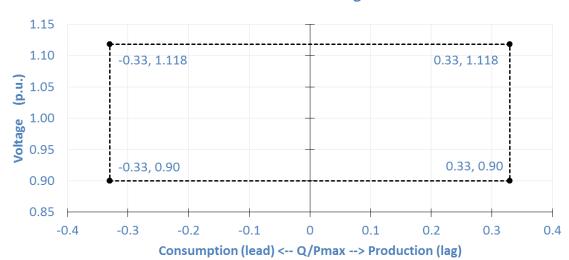
PPM1.6.3.4

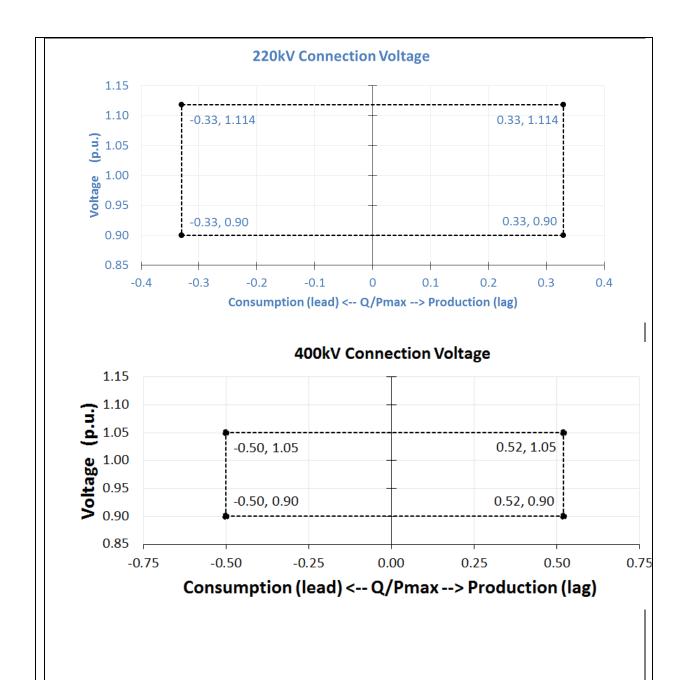
Without prejudice to PPM1.6.3.1, **Controllable PPMs** shall comply with the following **Reactive Power** requirements at **Registered Capacity** at the **Connection Point**;





110kV Connection Voltage





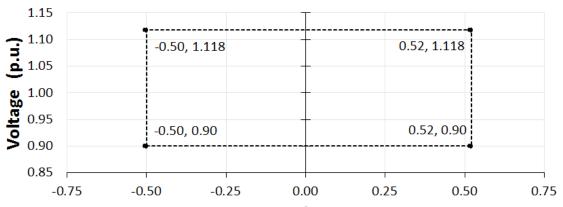
Green-line Version of Impacted Grid Code Section(s) - show proposed final text:



PPM1.6.3.4

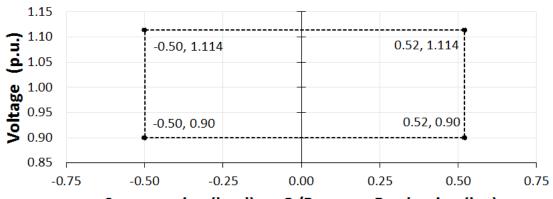
Without prejudice to PPM1.6.3.1, **Controllable PPMs** shall comply with the following **Reactive Power** requirements at **Registered Capacity** at the **Connection Point**;

110kV Connection Voltage



Consumption (lead) <-- Q/Pmax --> Production (lag)

220kV Connection Voltage



Consumption (lead) <-- Q/Pmax --> Production (lag)

