Grid Code Modification Proposal Form



Email to gridcode@eirgrid.com

Title of Modification Proposal:

MPID 286 Correction of Connection Voltage Graphs for 110kV and 220kV Systems under CC.7.3.6.5

MPID (EirGrid Use Only): 286

Date:	16 October 2020		
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Grid Code Version:	8.1		
Grid Code Section(s) Impacted by Modification Proposal:	CC.7.3.6.5		

Modification Proposal Justification:

The purpose of this modification is to correct an error in clause CC.7.3.6.5.

CC.7.3.6.5 shows a maximum voltage withstand capability of 1.118 p.u. for connections at 110 kV and 220 kV. In the case of 110 kV and 220 kV, this would require equipment to have the capability to continually withstand 123 kV and 246 kV respectively.

As per clause CC.8.3.2, the maximum transmission system voltages during a transmission fault for 110 kV and 220 kV are nominally 123 kV and 245 kV respectively. This equates to an upper voltage limit of 1.118 p.u. for 110 kV transmission systems and 1.114 p.u. for 220 kV transmission systems. The values in clause CC.7.3.6.5 should be aligned with the values stated in clause CC.8.3.2.

To rectify this error, we propose separating out the graphs for 110 kV and 220 kV , retaining the upper voltage limit for 110 kV systems of 1.118 p.u. and correcting the upper voltage limit for 220 kV systems to 1.114 p.u.

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 110 kV to 300 kV inclusive to be 1.118 p.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 0 CC.7.3.6.5 Generation Units connecting to the Transmission System shall comply with the following Reactive Power requirements at Registered Capacity (P_{max}) at the Connection Point; -110kV and 220kV Connection Voltage 1 15 1.10 1.05 1.00 0.95 0.50, 0.90 0.00 0. 110kV Connection Voltage 1.15 1.10 -0.33, 1.118 0.33, 1.118 (p.u.) 1.05 1.00 0.95 0.33, 0.90 -0.33, 0.90 0.90 0.85

-0.4

-0.3

-0.2

-0.1

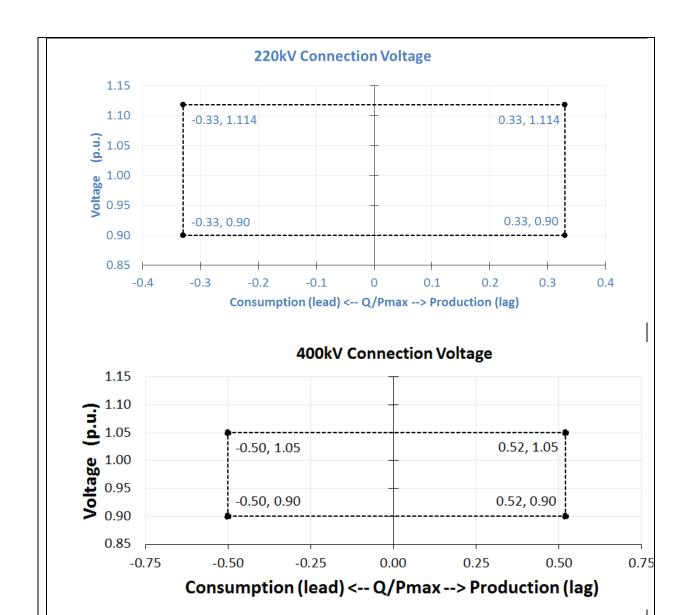
0.1

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

0.2

0.3

0.4



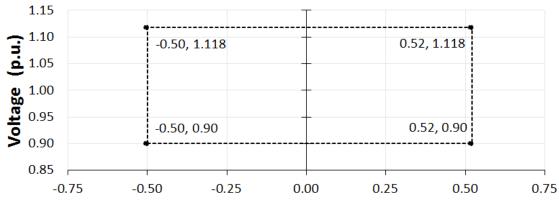
Green-line Version of Impacted Grid Code Section(s) - show proposed final text:



CC.7.3.6.5

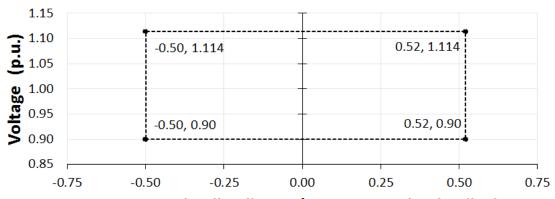
Generation Units connecting to the Transmission System shall comply with the following Reactive Power requirements at Registered Capacity ($P_{\rm max}$) at the Connection Point;

110kV Connection Voltage



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

220kV Connection Voltage



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

