

**Grid Code
Modification
Recommendation Form**



Title of Recommended Proposal:
MPID 289 Incorporation of HVDC requirements into the Grid Code

MPID: 289

Date:	10 May 2021
Recommended at GCRP Meeting No.:	01/2021 (meeting dated 23 March 2021)
Grid Code Version:	Version 9 of the Grid Code was the current version when this modification was proposed and recommended.
Grid Code Section(s) Impacted by Recommended Proposal:	Various – further details are available in the document entitled ‘MPID289_GC10_HVDC_Article_Incorporation_Locations’.

The Reason for the Recommended Modification:

Commission Regulation (EU) 2016/1447 of 26 August 2016 establishes a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules (hereafter referred to as HVDC). The HVDC seeks to provide a clear legal framework for grid connections and facilitate electricity trading whilst ensuring system security, facilitating the integration of HVDC connections, including direct current-connected (DC-connected) Power Park Modules (PPMs), as well as the associated system services while ensuring a more efficient use of the network.

The HVDC ‘entered into force’ on 15 September 2016, and it applies to HVDC systems and DC-connected PPMs that conclude a final and binding contract for the purchase of their main plant after 15 September 2018.

A **Non-HVDC Unit** does not have to comply with HVDC, and is defined as:

HVDC Unit	<p>An Interconnector or DC-connected PPM that is not a Non-HVDC Unit.</p> <p>In addition, HVDC Units, which are comprised of:</p> <ul style="list-style-type: none"> a) embedded Interconnectors within one control area and connected to the Transmission System, and/or b) embedded Interconnectors within one control area and connected to the Distribution System when a cross-border impact is demonstrated to the TSO. The relevant TSO shall consider the long-term development of the network in this assessment <p>shall not be subject to Grid Code clauses CC.15.16 to CC.15.19.6, if one or more of the following conditions apply:</p> <ul style="list-style-type: none"> 1) the Interconnector has at least one Interconnector Converter Station owned by the TSO; 2) the Interconnector is owned by an entity which exercises control over the TSO; or 3) the Interconnector is owned by an entity directly or indirectly controlled by an entity which also exercises control over the TSO.
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A **HVDC Unit** does have to comply with HVDC, and is defined as:

Non- HVDC Unit	<p>An Interconnector or DC-connected PPM with a signed Connection Agreement:</p> <ul style="list-style-type: none">a) Connected to the Network on or before the 15th September 2018; orb) Whose owner has concluded a final and binding contract for the purchase of the main Plant on or before the 15th September 2018 and provides evidence of same, as acknowledged by the TSO, on or before 15th of March 2019. Such evidence shall at least contain the contract title, its date of signature and date of entry into force, and the specifications of the main Plant to be constructed, assembled, or purchased. <p>A Non-HVDC that under goes modernisation, refurbishment or replacement of equipment which drives a modification to its Connection Agreement, and had concluded a final and binding contract for the purchase of the Plant being modified after the 15th September 2018 will be deemed a HVDC Unit.</p>
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It is important to note that, as per Article 4 of the HVDC, following modernisation, refurbishment or replacement of equipment to a non-HVDC Unit, some or all of the HVDC requirements may become applicable.

The full text of the HVDC is available on the [ENSTO-E website](#).

History of Progression through GCRPs, Working Group and/or Consultation:

Prior Consultation and Approval of Submitted Parameters

As part of the national implementation of HVDC, the relevant TSO of each member state were required to submit a proposal for requirements of general application. It was not a requirement of HVDC to consult upon the proposal for all the requirements of general application prior to submission to the CRU. However, EirGrid, as TSO issued a consultation document on all the requirements of general application in the interest of transparency. This was to ensure that EirGrid had the best information available to them when EirGrid submitted an appropriate set of recommendations to the CRU for the proposal of requirements of general application. This public consultation began on 9 November 2018 and ran for a period of 4 weeks.

The TSO received one individual submission. A summary of the submission were included in the EirGrid HVDC proposal for the general application of technical requirements in accordance with Articles 11 – 50 of the HVDC to Interconnectors and DC-connected PPMs. On the 21 December 2018, EirGrid submitted this [proposal](#) to the CRU.

On the 12 October 2020, the CRU issued their [decision paper](#) in relation to EirGrid's proposal.

Please note that the relevant consultation, proposal and decision paper are available on the [Network Codes page](#) of the EirGrid website. Please scroll down to the consultation sections of that webpage for further details.

Granted derogations

On 22 May 2020, EirGrid submitted three Derogation requests to the CRU. The Derogation requests were in relation to:

- HVDC Article 18.1 Voltage Withstand Capability

- HVDC Article 39.8 Frequency Sensitive Mode
- HVDC Article 40.1 Voltage Withstand Capability

The CRU issued their [decision paper](#), approving these derogation requests on 22 October 2020.

The proposed Grid Modification has been drafted in line with the CRU decision paper and the approved derogations.

GCRP Meeting 03 November 2020

Miriam Ryan, from EirGrid, provided an update to the panel members on the HVDC decision paper issued by the CRU, the approved HVDC derogations and the work being done by the TSO on the incorporation of the HVDC into the Grid Code.

GCRP Meeting 23 March 2021

The Grid Code modification proposal, MPID 289, was presented to the members at the GCRP meeting that took place on 23 March 2021. The members agreed with the proposed changes.

Summary Note of any Objections to the Recommended Change from GCRP Members or Consultation Responses:

There were no objections raised by the GCRP members in relation to the proposed modification, MPID 289.

Outcome of any GCRP Meeting Actions Relating to the Recommended Modification:

There were no actions taken at the meeting in relation to the proposed modification, MPID 289.

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

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

See document entitled "210305_GC10 Red Line Version" attached to the 'MPID 289 Grid Code Modification Recommendation' email.

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

See document entitled "210305_GC10 Green Line Version" attached to the 'MPID 289 Grid Code Modification Recommendation' email.