

# SPID 04\_2023 HVDC Modification

## **Grid Code Modification Report**

05 January 2023



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# Summary

This report and the supporting documentation are in response to the consultation on the proposed High Voltage Direct Current (HVDC) Modification to the Grid Code, which incorporates the European Network Code on High Voltage Direct Current Connections (Commission Regulation (EU) 2016/1447 of 26 August 2016)<sup>1</sup> into the Grid Code.

Prior to the development of the HVDC Modification proposal, SONI proposed and consulted<sup>2</sup> upon the technical parameters of the HVDC Network Code on 09 November 2018. On 05 April 2023 SONI submitted and finalised the proposal<sup>3</sup> for the HVDC technical parameters and these were approved by the UR on 11 July 2023. Therefore prior to the development of this modification proposal, there was significant engagement and consultation on the HVDC Modification proposal.

SONI consulted on the HVDC Modification proposal for a period of 6 weeks from 05/10/2023 until 16/11/2023 and there were no responses received to this consultation.

The modification was presented and discussed at the Grid Code Review Panel (GCRP) on 27/09/2023 pre-consultation and post-consultation on 06/12/2023. The GCRP recommended the modification be progressed for approval.

The red-line and green-line versions of the proposed HVDC modification are submitted alongside this report as supporting documentation, with all supporting documentation for the modification proposal listed in Appendix A.

The modification proposal is submitted for approval.

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<sup>1</sup> [COMMISSION REGULATION \(EU\) 2016/ 1447 - of 26 August 2016 - establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules \(europa.eu\)](#)

<sup>2</sup> [HVDC-Parameter-Consultation-Northern-Ireland.pdf](#)

<sup>3</sup> [Proposal-for-general-application-of-HVDC-Requirements-for-Northern-Ireland....pdf \(soni.ltd.uk\)](#)

# Modification Proposal: HVDC Modification

## Overview

The Network Code on High Voltage Direct Current Connections was made regulation in Commission Regulation (EU) 2016/1447 in August 2016. The purpose of this HVDC modification is to incorporate these requirements into the Grid Code.

## Background

The HVDC Network Code is one of three Connection Codes which form part of the European Network Codes. It 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 DC-connected PPMs, as well as the associated system services while ensuring a more efficient use of the network.

The HVDC Network Code 'entered into force' on 15 September 2016, and 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.

SONI submitted our Proposal for the General Application of the HVDC Requirements for Northern Ireland to the Utility Regulator on 21 December 2018.

On 26.06.19 The Utility Regulator issued a decision paper, granting part-approval of the HVDC Requirements.

SONI re-submitted an updated Proposal for the General Application of the HVDC Requirements for Northern Ireland to the Utility Regulator on 05 April 2023.

On 11.07.23 The Utility Regulator issued a decision paper granting full approval of the HVDC Requirements

This proposed modification is in line with the HVDC Network Code and the UR approved HVDC Requirements.

The purpose of this modification is to incorporate the requirements set out in the HVDC Network Code into the Grid Code.

## Analysis & Opinion

The various Articles and Requirements as stated within the HVDC Network Code have been analysed in detail so that their applicability to the existing SONI Grid Code could be established.

In undertaking this exercise, additional/modified Grid Code Definitions and Requirements have been proposed by SONI to ensure that the Grid Code is in line with the requirements of the HVDC Network Code.

This proposed modification is in line with the HVDC Network Code and the HVDC Requirements.

## Conclusion

This modification will ensure that Grid Code is inclusive of the HVDC Network Code requirements. By incorporating these requirements into the Grid Code, this will enable SONI to efficiently discharge its obligations and to comply with legislation.

This modification is expected to have no other impact than to ensure the accuracy, completeness and applicability of requirements and definitions related to HVDC Units.

## **Consultation responses to proposed Housekeeping Modification**

There were no responses to this proposed modification.

## Assessment against Grid Code Objectives

This modification supports the Grid Code objectives by enabling the efficient operation of the Northern Ireland transmission system.

The proposed modification supports the objectives of the Grid Code as it;

- will permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity;
- facilitates competition;
- promotes the security and efficiency of the Northern Ireland electricity transmission systems; and
- promotes efficiency in the implementation and administration of the Grid Code arrangements.

# **SONI requests for Utility Regulator approval of HVDC Modification**

SONI recommends that the Utility Regulator approve this Grid Code modification in its entirety.

SONI believes that the approval of this modification will:

- Ensure the accuracy of the Grid Code
- Ensures that the Grid Code is in line with the HVDC Network Code
- Provide future HVDC systems with certainty over requirements.

## **Proposed Implementation Date**

SONI believe that early implementation of the modification will benefit both the TSO and HVDC Connections in and to Northern Ireland.

## Appendix – Supporting Documentation

- SONI Consultation on HVDC Modification
- SPID\_04\_2023\_HVDC\_proposal\_redline
- SPID\_04\_2023\_HVDC\_proposal\_greenline
- 2023.07.11 UR decision HVDC
- Proposal-for-general-application-of-HVDC-Requirements-for-Northern-Irela...
- SPID\_04\_2023\_SGCRP\_Mod\_27092023\_HVDC