

Grid Code Modification Proposal Form

Email to gridcode@eirgrid.com



Title of Modification Proposal: Incorporation of Synchronous Condenser Units (SCUs)

MPID (EirGrid Use Only): 319

Date:	19 Nov 2024
Company Name:	EirGrid
Applicant Name:	Melissa Dunne
Email Address:	GridCode@eirgrid.com
Grid Code Version:	Version 14.2
Grid Code Section(s) Impacted by Modification Proposal:	Various - see document entitled "MPID319_SCUs_Incorporation_GridCodeModLocations_DecGCRP" for full list of Grid Code Sections impacted by this modification proposal.

Modification Proposal Justification:

Purpose:

The purpose of this modification is to incorporate a Synchronous Condenser Unit (SCU) user type into the EirGrid Grid Code.

Background:

An Implementation Note for Synchronous Condenser Units (SCUs) was published by SONI and EirGrid in October 2022 to offer guidance to those planning to connect SCUs in order to provide system services within Ireland and Northern Ireland, specifically in relation to the application of Grid Codes within both jurisdictions. This Implementation Note did not propose any Grid Code modifications at the time but allowed for the submission of stakeholder feedback on its contents with the intention of implementing SCUs into the Grid Codes in the future.

On 20th March 2024, the incorporation of Synchronous Condenser Units (SCUs) into the Grid Codes as a new User type was brought as a discussion item to the SONI and EirGrid Joint Grid Code Review Panel Meeting (JGCRP). A draft red-line and green-line version of both the SONI and EirGrid Grid Codes demonstrating SCU incorporation was circulated to JGCRP members post this meeting, and members were asked to submit feedback on the documentation by 3rd May 2024. Upon receiving feedback from industry, the TSO issued a response document on 26th July 2024 and requested further feedback by 16th August 2024. After TSO review of additional feedback, further engagement was required between the TSO, industry and OEMs to solidify voltage regulation requirements for SCUs, which was indicated to JGCRP members at the JGCRP meeting on 24th September 2024.

The modification proposal has been revised since it was presented as a discussion item in March 2024. The changes include:

- Voltage control strategies used by the TSO will include utilisation of Synchronous Condenser Unit Reactive Power capability by means of suitably acting Voltage Regulation System control of Synchronous Condenser Units only. SCUs are not required to have the capability to receive and respond to Mvar Dispatch Instructions issued by the TSO. SCUs will only be required to have the capability to receive and respond to Sync and Desync Dispatch Instructions from the TSO. This has been reflected in OC.4.4.1.3, and also in the Scheduling and Dispatch Code 2 section of the Grid Code.

- In SCU1.4.7.2, the word “implemented” has been replaced with the word “initiated” to clarify the requirement that SCUs shall initiate a change to the Reactive Power (Q) control set-point or Voltage Regulation (kV) Set-point within 20 seconds of receipt of the appropriate signal from the TSO. The change is not required to be completed within 20 seconds.
- In SCU1.6.10, pole slip protection has been removed and replaced with loss of excitation protection.

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

As per the document titled “MPID319_SCUs_Incorporation_Redline_GCV14.2”.

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

As per the document titled “MPID319_SCUs_Incorporation_Greenline_GCV14.2”.