

20/03/2024

JGCRP Meeting

20 March 2024



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Introduction

Introduction: 10 minutes

- a) Welcome Members.
- b) Minutes and Actions from [Previous Meeting](#) (go to 06 December 2023).

Discussion: 30 minutes

- a) Incorporation of Synchronous Condenser Units.
- b) Incorporation of Energy Storage Power Stations Phase 2 (EirGrid MPID318 and SONI SPID_03_2024); and
- c) Non-priority dispatch of Renewables (EirGrid MPID320 and SONI SPID_01_2024).

Updates: 10 minutes

- a) CRU.
- b) Utility Regulator.

AOB. 5 minutes



Discussion

Incorporation of Synchronous Condenser Units



SCU Discussion

This is a JGCRP discussion item only. No proposal or discussions on SCUs will take place at individual GCRPs.

Draft modification proposals will be sent to all members with the minutes from this meeting on 2nd April 2024. This will include a full redline and greenline of both the SONI and EirGrid Grid Codes.

Feedback will be collected on the draft modification, with the intention of proposing them at the individual GCRPs in summer 2024.



Purpose of Draft Modification

- To incorporate the [Grid Code Implementation Note for Synchronous Condensers](#) and Industry feedback received thereon.
 - Originally published October 2022
 - Requirements would hence be regulated, giving certainty to all parties
- Ensure the needs of Low Carbon Sources of Inertia (LCSI) System Services are captured within the Grid Code.
- Future proof for Scheduling and Dispatch Tranche 2, where possible.
- Follows the existing Grid Code methodology as much as possible.

Synchronous Condenser Grid Code Implementation Note

Version 1.0 – October 2022

Disclaimer

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New User Type

- We propose that Synchronous Condenser Units (SCUs) are an entirely new user type within the Grid Code
 - They are not bound by any existing EU Connection Network Codes (including the RfG).
 - They are not a subset of an existing user type, such as Generators or PPMs.
 - Existing synchronous generators with a clutch for synchronous compensation should apply existing Generator requirements, not SCU.
- SCU requirements are modified versions of Generator requirements.
- SCUs have been included explicitly within GC, PC, PC.A, CC, OC, SDC1, SDC2 and Definitions sections. A new SCU section has been added (EirGrid Only).

SCU Definition

- Proposed SCU definition is:

Synchronous Condenser Unit (SCU)

A synchronous machine designed to operate as a motor with no prime mover providing **Synchronous Compensation** and zero **Active Power Generation** but with non-zero **Active Power Demand**. [May include **Apparatus** such as a flywheel to increase its inertia constant.] The **Synchronous Condenser Unit** shall be subject to **Central Dispatch**.

Synchronous Condenser Unit Operator

A person who operates a **Synchronous Condenser Unit** and is subject to the **Grid Code** pursuant to any agreement with the **TSO** or otherwise.

Other Key Changes

- New SCU Derogation section.
- New PC.A section is proposed for Planning Data Requirements.
- MVar Set Point Control and Voltage Set Point Control are both be included and will be measured at the connection point.
- New CC Schedule 3 section (SONI only).
- SCU signal list included (EirGrid only).
- New SCU Section (EirGrid only).



Thank you!
Questions?



Reminder- drafts will be sent to all members on 2nd April 2024.

If you have any feedback you would like to share once you have reviewed the draft, please email GridCode@SONI.ltd.uk or GridCode@EirGrid.com



20/03/2024

Incorporation of Energy Storage Power Stations Phase 2

EirGrid MPID318 and SONI
SPID_03_2024



MPID318 and SONI SPID_03_2024

ESPS Phase 2

This modification proposes changes to the areas of common governance between the SONI and EirGrid Grid Codes. Hence, it has been developed in parallel and, where possible, requirements align.

All discussion of both MPID318 and SPID_03_2024 should take place at the Joint GCRP, so that members have all information available to them and do not miss any discussion topics that might take place at individual meetings.

At each individual meeting, we will seek agreement on whether to progress these modifications to their next stage.



MPID318 and SONI SPID_03_2024

ESPS Phase 2

The purpose of this modification proposal is to incorporate Energy Storage Power Station (ESPS) unit type into all sections of the Grid Code that were not included in the previous modifications MPID 304 and SPID_03_2022.

MPID 304 and SPID_03_2022 Incorporated the Battery ESPS Implementation Note into the PPM and Settings Schedule only. This modification proposal reviewed all other sections of both codes and proposes any changes needed to fully incorporate ESPSs.

The requirements of the ongoing Scheduling and Dispatch Program were included in this modification.



MPID318 and SONI SPID_03_2024

ESPS Phase 2

Key changes within this proposal are:

- The addition of the Planning Data Requirements for ESPSs (in PC.A.9 for EirGrid, PC.A2 and PC.A3 for SONI).
- Removal of Energy Storage Power Station Demand as a defined term.
- Changes to SDC1 and SDC2 required by the Scheduling and Dispatch Program.
- Inclusion of requirement for ESPSs acting as demand to disconnect or switch to export if the transmission system experiences an under-frequency event (OC.5 for EirGrid, OC.4 For SONI) as per EU Regulations.
- Update to several defined terms to include ESPSs.



MPID318 and SONI SPID_03_2024 ESPS Phase 2

Thank you!

Questions?

We will seek agreement on whether to progress these modification proposals at the individual GCRP meetings today.



20/03/2024

Non-priority Dispatch of Renewables

EirGrid MPID320 and SONI
SPID_01_2024.



Non-Priority Dispatch of Renewables

- ❖ SONI and EirGrid, under the Scheduling and Dispatch Programme (SDP), are proposing modifications to their respective Grid Codes to facilitate the operation of non-priority dispatch of renewables.
- ❖ The proposed modifications seek to support the TSOs in meeting Regulation (EU) 2019/943 Clean Energy for all Europeans Package (CEP) mandates and in achieving NI and IE renewables targets.
- ❖ The primarily reference the Scheduling & Dispatch Code 1 section of the Grid Codes, which is a Section Under Common Governance.
- ❖ The SEM Committee published a proposed decision on the treatment of new renewables, SEM-21-027, 'Proposed Decision on Treatment of New Renewable Units in the SEM', in April 2021, based on parts of Articles 12 and 13 of the CEP, which set out new rules with respect to the treatment of renewable generators in energy markets, including requirements that TSOs provide for the inclusion of certain renewable generators in energy markets without Priority Dispatch.



Non-Priority Dispatch of Renewables

- ❖ SEM-21-027 states that controllable, non-dispatchable generators without priority dispatch (a.k.a. Non-Priority Dispatch Renewables, or NPDRs) are to be treated on an economic basis in a similar manner to dispatchable generators for ‘dispatch’ (i.e. energy balancing), including:
 - Submission of Commercial Offer Data,
 - Submission of Technical Offer Data, and
 - Submission of Physical Notifications reflective of ex-ante position.
- As such, the proposed modifications capture the impact of this decision on the Grid Code.



NPDR - Proposed modifications to the SDCs

Clause	Context	Red Line Version Text <i>Deleted text in strike-through-red-font and new text highlighted in blue font</i>	Green Line Version Text
SDC1.4.4.5 Commercial Offer Data (a)	NPDRs will be required to submit Commercial Offer Data as per SEMC decision.	<p>(a) Each:</p> <ul style="list-style-type: none">• Generator;• Energy Storage Generator;• Pumped Storage Generator;• Demand Side Unit Operator; and• Generator Aggregator, <p>Shall in respect of:</p> <p>Each of its CDGUs;</p> <p>Each of its Controllable PPMs without Priority Dispatch;</p> <p>Each of its Energy Storage Power Station Demand;</p> <p>Each of its Pumped Storage Plant Demand;</p> <p>Each of its Demand Side Units; and</p> <p>Its Aggregated Generating Units,</p> <p>submit to the TSO, either directly or by means of an Intermediary on its behalf (if applicable), Commercial Offer Data in accordance with the TSC.</p>	<p>(a) Each:</p> <ul style="list-style-type: none">• Generator;• Energy Storage Generator;• Pumped Storage Generator;• Demand Side Unit Operator; and• Generator Aggregator, <p>Shall in respect of:</p> <p>Each of its CDGUs;</p> <p>Each of its Controllable PPMs without Priority Dispatch;</p> <p>Each of its Energy Storage Power Station Demand;</p> <p>Each of its Pumped Storage Plant Demand;</p> <p>Each of its Demand Side Units; and</p> <p>Its Aggregated Generating Units,</p> <p>submit to the TSO, either directly or by means of an Intermediary on its behalf (if applicable), Commercial Offer Data in accordance with the TSC.</p>



NPDR - Proposed modifications to the SDCs

Clause	Context	Red Line Version Text <i>Deleted text in strike-through red font and new text highlighted in blue font</i>	Green Line Version Text
SDC1.4.4.6 Physical Notifications and Interconnector Schedule Quantities (a)	NPDRs will be required to submit Physical Notifications as per SEMC decision.	<p>(a) Each:</p> <ul style="list-style-type: none"> • Generator, • Pumped Storage Generator, • Demand Side Unit Operator, and • Generator Aggregator. <p>Shall in respect of: Each of its CDGUs; Each of its Controllable PPMs without Priority Dispatch; Each of its Pumped Storage Plant Demand; Each of its Demand Side Units; and Its Aggregated Generating Units, submit to the TSO, either directly or by means of an Intermediary on its behalf (if applicable), Physical Notifications by Gate Closure 1 for the corresponding Trading Days in accordance with the TSC. Physical Notifications shall be technically feasible. Users shall ensure that the accuracy of Physical Notifications is commensurate with Good Industry Practice.</p>	<p>(a) Each:</p> <ul style="list-style-type: none"> • Generator, • Pumped Storage Generator, • Demand Side Unit Operator, and • Generator Aggregator. <p>Shall in respect of: Each of its CDGUs; Each of its Controllable PPMs without Priority Dispatch; Each of its Pumped Storage Plant Demand; Each of its Demand Side Units; and Its Aggregated Generating Units, submit to the TSO, either directly or by means of an Intermediary on its behalf (if applicable), Physical Notifications by Gate Closure 1 for the corresponding Trading Days in accordance with the TSC. Physical Notifications shall be technically feasible. Users shall ensure that the accuracy of Physical Notifications is commensurate with Good Industry Practice.</p>



NPDR - Proposed modifications to the SDCs

Clause	Context	Red Line Version Text <i>Deleted text in strike-through red font and new text highlighted in blue font</i>	Green Line Version Text
SDC1.4.7.7 a)	Controllable PPMs will remain energised unless on outage, including at OMW output.	<p>a) The Synchronising and De-Synchronising times (and, in the case of Pumped Storage Plant Demand and Energy Storage Power Station Demand, and Controllable PPMs, the relevant effective time) shown in the Indicative Operations Schedule are indicative only and it should be borne in mind by Users that the Dispatch Instructions or Active Power Control Set-points could reflect more or different CDGU, Aggregated Generating Unit and/or Controllable PPM, Pumped Storage Plant Demand, Energy Storage Power Station Demand and/or Aggregate Generating Unit Controllable PPM requirements than in the Indicative Operations Schedule. The TSO may issue Dispatch Instructions in respect of any CDGU and/or Aggregated Generating Unit, Controllable PPM, Pumped Storage Plant Demand, Energy Storage Power Station Demand or Aggregated Generating Unit, or Active Power Control Set-points in respect of any Controllable PPM, which has not declared an Availability or Demand Side Unit MW Availability of 0 MW in an Availability Notice. Users with CDGUs and/or Aggregated Generating Units, Controllable PPM, Pumped Storage Plant Demand or Energy Storage Power Station Demand shall ensure that their units are able to be Synchronised, or in the case of Controllable PPMs and Pumped Storage Plant Demand, used at the times Scheduledscheduled, but only if so Dispatched</p>	<p>a) The Synchronising and De-Synchronising times (and, in the case of Pumped Storage Plant Demand and Energy Storage Power Station Demand, and Controllable PPMs, the relevant effective time) shown in the Indicative Operations Schedule are indicative only and it should be borne in mind by Users that the Dispatch Instructions or Active Power Control Set-points could reflect more or different CDGU, Aggregated Generating Unit, Pumped Storage Plant Demand, Energy Storage Power Station Demand and/or Controllable PPM requirements than in the Indicative Operations Schedule. The TSO may issue Dispatch Instructions in respect of any CDGU and/or Aggregated Generating Unit, Pumped Storage Plant Demand, Energy Storage Power Station Demand, or Active Power Control Set-points in respect of any Controllable PPM, which has not declared an Availability or Demand Side Unit MW Availability of 0 MW in an Availability Notice. Users with CDGUs and/or Aggregated Generating Units, Pumped Storage Plant Demand or Energy Storage Power Station Demand shall ensure that their units are able to be Synchronised, or in the case of Controllable PPMs and Pumped Storage Plant Demand, used at the times scheduled, but only if so instructed by the TSO by issue of a Dispatch Instruction or Active Power Control Set-point. Users shall, as part of a revision to the Technical</p>
		<p>instructed by the TSO by issue of a Dispatch Instruction or Active Power Control Set-point. Users shall, as part of a revision to the Technical Parameters, indicate to the TSO the latest time at which a Dispatch Instruction or Active Power Control Set-point is required to meet the scheduled Synchronising time or in the case of Pumped Storage Plant Demand, or Energy Storage Power Station Demand, and Controllable PPMs, the Scheduledscheduled relevant effective time.</p>	<p>Parameters, indicate to the TSO the latest time at which a Dispatch Instruction or Active Power Control Set-point is required to meet the scheduled Synchronising time or in the case of Pumped Storage Plant Demand, Energy Storage Power Station Demand and Controllable PPMs, the scheduled relevant effective time.</p>



NPDR - Changes specific to SONI Grid Code

Clause	Context	Red Line Version Text <i>Deleted text in strike-through red font and new text highlighted in blue font</i>	Green Line Version Text
Definition – MW Availability	<p>NPDRs will be subject to energy balancing actions as per SEMC decision.</p> <p>The term MW Availability is already defined in the PPM Settings Schedule in respect of PPMs that are not ESPSs. For ESPSs, the similar term Available Active Power is used in the PPM Settings Schedule.</p>	<p>The amount of Active Power that the Controllable PPM could produce based on current resource conditions.</p> <p>For Controllable PPMs with the exception of ESPSs, the MW Availability shall only differ from the actual Active Power if the Controllable PPM has been curtailed, constrained, is operating in % MW curtailment mode, or specifically in the case of Controllable PPMs without Priority Dispatch, where dictated by Merit Order set points.</p>	<p>The amount of Active Power that the Controllable PPM could produce based on current resource conditions.</p> <p>For Controllable PPMs with the exception of ESPSs, the MW Availability shall only differ from the actual Active Power if the Controllable PPM has been curtailed, constrained, is operating in % MW curtailment mode, or specifically in the case of Controllable PPMs without Priority Dispatch, where dictated by Merit Order set points.</p>
Definition – MW Set-point	<p>This signal is already referenced in the PPM Settings Schedule, although it is not defined. The term only applies to PPMs which are not ESPSs. For ESPSs, the similar term Active Power Control Set-point is used. Since this modification does not apply to ESPSs, it seems appropriate to define the term MW Set-point in the Grid Code.</p>	<p>The maximum amount of Active Power in MW, set by the TSO, that a Controllable PPM which is not an ESPS is permitted to export.</p>	<p>The maximum amount of Active Power in MW, set by the TSO, that a Controllable PPM which is not an ESPS is permitted to export.</p>



NPDR - Changes specific to EirGrid Grid Code

Clause	Context	Red Line Version Text <i>Deleted text in strike-through red font and new text highlighted in blue font</i>	Green Line Version Text
Definition – Available Active Power	NPDRs will be subject to energy balancing actions as per SEMC decision.	<p>The amount of Active Power that the Controllable PPM could produce based on current resource conditions.</p> <p>For Controllable PPMs with the exception of ESPSs, the Available Active Power shall only differ from the actual Active Power if the Controllable PPM has been curtailed, constrained, or is operating in a restrictive Frequency Response mode, <i>or specifically in the case of Controllable PPMs without Priority Dispatch, where instructed in accordance with Merit Order.</i></p>	<p>The amount of Active Power that the Controllable PPM could produce based on current resource conditions.</p> <p>For Controllable PPMs with the exception of ESPSs, the Available Active Power shall only differ from the actual Active Power if the Controllable PPM has been curtailed, constrained, is operating in a restrictive Frequency Response mode, or specifically in the case of Controllable PPMs without Priority Dispatch, where instructed in accordance with Merit Order.</p>



Thank you!

Questions?



Updates

1. CRU
2. Utility Regulator



AOB

Meeting Minutes will be issued by COB 05 April 2024