MODIFICATION PROPOSAL FORM			
Proposer *(Company)*	**Date of receipt** *(assigned by Secretariat)*	**Type of Proposal** *(delete as appropriate)*	**Modification Proposal ID** *(assigned by Secretariat)*
EirGrid/SONI		**Standard**	**Mod_02_26**

Contact Details for Modification Proposal Originator		
Name	**Telephone number**	**Email address**
Akshay Bhat		**akshay.bhat@eirgrid.com**

Modification Proposal Title
Synchronous Condenser SDP_06 Clarifications

Documents affected *(delete as appropriate)*	**Section(s) Affected**	**Version number of T&SC or AP used in Drafting**
TSC Glossary **TSC Appendices** **TSC Agreed Procedures 1, 4**	**TSC Glossary Definitions** **TSC Appendices, Appendix O- 28, 29** **TSC Agreed Procedure 1 – 2.3** **TSC Agreed Procedure 4 – Table 9**	**V31.0**

Explanation of Proposed Change
(mandatory by originator)

This Modification seeks to clarify and refine specific definitions and provisions within the Trading and Settlement Code (T&SC) as they apply to Synchronous Condenser Units (SCUs), in alignment with the design and implementation of SDP 06 initiative. The minor changes associated with this Modification were outlined in the updated I-SEM Technical Specification (ITS) v16.2 and SEMO Data Publication Guide (DPUG) Issue 3.5, published on 23rd April 2026, reflecting the changes to be deployed to the Central Market Systems as part of Release O/P, and are intended to align the T&SC with the corresponding system changes.

Mod_01_25 introduced provisions relating to the treatment of SCUs; however, certain Technical Offer Data definitions were not fully adapted in context of these units. In particular, the definitions of Minimum Off Time, Ramp Rates, and Registered Minimum Output require clarification and minor changes to ensure that they appropriately reflect the operational characteristics of SCUs.

SCUs differ from Generator Units in that they consume energy to provide inertia and reactive power, and their technical parameters must be defined accordingly. The current wording of certain Glossary definitions do not fully capture these characteristics, which may lead to ambiguity in their interpretation and application.

The proposed changes therefore:

- Align the T&SC definitions and provisions with the functionality implemented within systems under SDP 06.
- Introduce specific clarifications within the TSC Glossary to define how these parameters apply to SCUs e.g. treatment of Minimum Off Time following desynchronisation, and Registered Minimum Output reflecting consumption levels;
- Update Appendix O -Instruction Profiling Calculations, to ensure ramping trajectories for SCUs are appropriately referenced.
- Include minor clarification within Agreed Procedures (AP 1 and AP 4) to ensure consistency in registration and data submission requirements for SCUs.

Overall, this Modification is intended to ensure consistency between Code, system implementation, operational treatment of SCUs, and to remove ambiguity in the application of these provisions.

A parallel Modification has also been drafted for the Grid Code and will be presented at the upcoming Joint Grid Code Review Panel (JCRP).

Legal Drafting Change

*(Clearly show proposed code change using **tracked** changes, if proposer fails to identify changes, please indicate best estimate of potential changes)*

TSC Glossary Changes

Minimum Off Time	means the minimum time that a Generator Unit must remain producing no Active Power commencing at the time when it first stops producing Active Power. For Synchronous Condenser Units, means the minimum time that must elapse from the time the unit is Desynchronised before it can be instructed to Start Up
Ramp Down Rate	means the Ramp Rate associated with a decrease in Active Power ~~production~~ by a Generator Unit.
Ramp Rate	means the rate of increase or the rate of decrease in Active Power ~~produced~~ by a Generator Unit (excluding Trading Units, Assetless Units, Interconnector Error Units and Interconnector Residual Capacity Units).
Ramp Up Rate	means the Ramp Rate associated with an increase in Active Power ~~production~~ by a Generator Unit.
Registered Minimum Output	means the minimum level of Output at which a Generator Unit may operate submitted for the Generator Unit in accordance with Appendix H: "Data Requirements for Registration". Registered Minimum Output is zero except for Pumped Storage Units, ~~or~~ Battery Storage Units and Synchronous Condenser Units, for which the Registered Minimum Output shall be equal to the pumping capability, ~~or~~ charging capability, or consumption level respectively.

TSC Appendices Changes

APPENDIX O: INSTRUCTION PROFILING CALCULATIONS

28. The ramp up trajectory of a Generator Unit is a piecewise linear curve that describes the theoretical Output of a Generator Unit over time from Registered Minimum Stable Generation to the Maximum Generation; ~~or~~ in the case of a Battery Storage Unit it is, ~~from~~ the Registered Minimum Output to zero and from Registered Minimum Stable Generation to the Maximum Generation, or in the case of a Synchronous Condenser Unit, from the Registered Minimum Output to Maximum Generation, determined, as applicable, by:

(a) The following Technical Offer Data:

(i) Maximum Generation;

(ii) Registered Minimum Stable Generation;

(iii) Ramp Up Rates 1, 2, 3, 4 & 5;

(iv) Ramp Up Break Point 1, 2, 3 & 4;

(v) Dwell Time Up 1, 2 & 3;

(vi) Dwell Time Up Trigger Point 1, 2 & 3; and

(vii) Registered Minimum Output.

(b) Each segment of the piecewise linear ramp up trajectory for the Generator Unit which is identified by start MW, end MW, rate in MW/min and the time from start MW to end MW.

29. The ramp down trajectory of a Generator Unit is a piecewise linear curve that describes the theoretical Output of a Generator Unit over time from the Maximum Generation for the Generator Unit to Registered Minimum Stable Generation; ~~or~~ in the case of a Battery Storage Unit it is~~,~~ from the Maximum Generation to Registered Minimum Stable Generation and from zero to the Registered Minimum Output, or in the case of a Synchronous Condenser Unit, from Maximum Generation to the Registered Minimum Output, ~~-~~determined, as applicable, by:

(a) The following Technical Offer Data:

(i) Maximum Generation;

(ii) Registered Minimum Stable Generation;

(iii) Ramp Down Rate 1, 2, 3, 4 & 5;

(iv) Ramp Down Break Point 1, 2, 3 & 4;

(v) Dwell Time Down 1, 2 & 3;

(vi) Dwell Time Down Trigger Point 1, 2 & 3; and

(vii) Registered Minimum Output.

(b) Each segment of the piecewise linear ramp down trajectory for the Generator Unit which is identified by start MW, end MW, rate in MW/min and the time from start MW to end MW.

TSC Agreed Procedure 1 - Registration Changes

2.3 Units as Part of Trading Sites

Each Generator Unit (excluding Pumped Storage Units, Interconnector Residual Capacity Units, Interconnector Error Units, Assetless Units), including Trading Units and Demand Side Units shall be registered as part of a Trading Site. The following rules apply to registering Units as part of Trading Sites:

(a) Each Trading Site shall contain at least one Generator Unit (except where the Generator Unit is registered as a Trading Unit).

(b) Where the Generator Unit registered on a Trading Site is a Demand Side Unit or a Synchronous Condenser Unit, no other Generator Unit can be registered on that site.

(c) All Trading Sites must record to it an Associated Supplier Unit or a Trading Site Supplier Unit.

(d) Any Party registering an Autoproducer Site must register a Trading Site Supplier Unit as part of the relevant Trading Site.

(e) A Trading Unit can only be registered on a Trading Site that is an Autoproducer Site. Each Unit registered as part of a Trading Site shall be registered to the same Participant except where the Party does not intend to register a Trading Site Supplier Unit.

(f) A Trading Site containing an Aggregated Generator Unit must record to it an Associated Supplier Unit.

(g) This Associated Supplier Unit may be registered by a different Participant to the Participant registering the Generator Unit.

(h) A Supplier Unit can be registered as an Associated Supplier Unit for multiple Trading Sites.

(i) A Trading Site Supplier Unit can only contain Demand related to the Trading Site to which it is registered.

(j) The Firm Access Quantity of a Trading Site shall be recorded within the Participation Notice, where a Generator Unit operates under a Connection Agreement which provides for a Firm Access Quantity which is less that the Maximum Export Capacity of the relevant site.

TSC Agreed Procedure 4: Transaction Submission and Validation Changes

Table 1: Business Data per Element

Class / Element	Screen Name	Comment	Data Category
MPR / Resource Balancing	Participant Name	The name of the Market Participant whose resource is being modified.	RD
	Resource Name	Short name for the Resource that is being modified.	RD
	Resource Type	The type under which a specific resource is registered. Valid values: Generator, Demand Side Unit, Assetless Trading Unit, Trading Unit, External Unit, Supplier Unit, Interconnector, Capacity Aggregation Unit, Interconnector Error Unit, Interconnector Residual Capacity Unit.	
	Start Date	Start Date from when the submitted data is to become effective.	RD
	End Date	End Date to when the submitted data is effective	RD
	Fuel Type	Valid values: BATTERY_STORAGE (BATTERY), BIOMASS, COAL, COMBINED_HEAT_AND_POWER (CHP), COMPRESSED_AIR_STORAGE (CAS), DISTILLATE, FLY_WHEEL, GAS, HYDRO, MULTI_FUEL, NUCLEAR, OIL, PEAT, PUMP_STORAGE (PUMP), Solar Power Units will be set equal to WIND, WIND, SYNCHRONOUS_CONDENSER, OTHER	RD
	Dispatchable	Indicate that the resource is dispatchable (True or False)	RD
	Priority Dispatch	Indicate that the resource is priority dispatch (True or False)	RD
	Energy Limited	Indicate that the resource is energy limited resource (True or False)	RD

Modification Proposal Justification
(Clearly state the reason for the Modification)

This Modification is proposed to ensure that the T&SC definitions relating to Synchronous Condenser Units (SCUs) are clearly specified and consistently applied.

Following Mod_01_25, certain Technical Offer Data parameters have not been fully adapted for SCUs, creating potential ambiguity in their interpretation. This Modification addresses these gaps by clarifying key definitions and aligning them with system implementation under SDP 06.

Overall, the changes support clearer, more consistent application of the Code for SCUs and better alignment between market rules and system operation.

Code Objectives Furthered
(State the Code Objectives the Proposal furthers, see Section 1.3 of T&SC for Code Objectives)

This Modification is considered to better facilitate the following Code Objectives:

- *Objective (b) – to facilitate the efficient, economic and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner,* by clarifying definitions and ensuring consistent application of Technical Offer Data parameters for Synchronous Condenser Units;

- *Objective (e) – to provide transparency in the operation of the Single Electricity Market*, by removing ambiguity in the interpretation of key definitions and improving clarity for Participants and System Operators; and

- *Objective (f) – to ensure no undue discrimination between persons who are parties to the Code,* by providing clear and consistent treatment of SCUs within the Code framework.

Implication of not implementing the Modification Proposal
(State the possible outcomes should the Modification Proposal not be implemented)

If this Modification is not implemented, certain definitions within the T&SC will remain misaligned with the operational characteristics of Synchronous Condenser Units and the associated system implementation.

This may lead to ambiguity in the interpretation and application of key parameters.

While this Modification is linked to Mod_01_25, it should not impact the implementation of the Market Management System (MMS) Release O/P scheduled for end June 2026.

Working Group *(State if Working Group considered necessary to develop proposal)*	**Impacts** *(Indicate the impacts on systems, resources, processes and/or procedures)*
N/A	These changes have already been incorporated as part of the MMS Release O/P build. As such, no additional system development or resource effort is required for their implementation.

Please return this form to Secretariat by email to modifications@sem-o.com

Notes on completing Modification Proposal Form:

1. **If a person submits a Modification Proposal on behalf of another person, that person who proposes the material of the change should be identified on the Modification Proposal Form as the Modification Proposal Originator.**
2. **Any person raising a Modification Proposal shall ensure that their proposal is clear and substantiated with the appropriate detail including the way in which it furthers the Code Objectives to enable it to be fully considered by the Modifications Committee.**
3. **Each Modification Proposal will include a draft text of the proposed Modification to the Code unless, if raising a Provisional Modification Proposal whereby legal drafting text is not imperative.**
4. **For the purposes of this Modification Proposal Form, the following terms shall have the following meanings:**

Agreed Procedure(s):	**means the detailed procedures to be followed by Parties in performing their obligations and functions under the Code as listed in Appendix D "List of Agreed Procedures".**
T&SC / Code:	**means the Trading and Settlement Code for the Single Electricity Market**
Modification Proposal:	**means the proposal to modify the Code as set out in the attached form**
Derivative Work:	**means any text or work which incorporates or contains all or part of the Modification Proposal or any adaptation, abridgement, expansion or other modification of the Modification Proposal**

The terms "Market Operator", "Modifications Committee" and "Regulatory Authorities" shall have the meanings assigned to those terms in the Code.

In consideration for the right to submit, and have the Modification Proposal assessed in accordance with the terms of Section 2 of the Code (and Agreed Procedure 12), which I have read and understand, I agree as follows:

1. **I hereby grant a worldwide, perpetual, royalty-free, non-exclusive licence:**

   1.1 **to the Market Operator and the Regulatory Authorities to publish and/or distribute the Modification Proposal for free and unrestricted access;**

   1.2 **to the Regulatory Authorities, the Modifications Committee and each member of the Modifications Committee to amend, adapt, combine, abridge, expand or otherwise modify the Modification Proposal at their sole discretion for the purpose of developing the Modification Proposal in accordance with the Code;**

   1.3 **to the Market Operator and the Regulatory Authorities to incorporate the Modification Proposal into the Code;**

   1.4 **to all Parties to the Code and the Regulatory Authorities to use, reproduce and distribute the Modification Proposal, whether as part of the Code or otherwise, for any purpose arising out of or in connection with the Code.**

2. **The licences set out in clause 1 shall equally apply to any Derivative Works.**

3. **I hereby waive in favour of the Parties to the Code and the Regulatory Authorities any and all moral rights I may have arising out of or in connection with the Modification Proposal or any Derivative Works.**

4. **I hereby warrant that, except where expressly indicated otherwise, I am the owner of the copyright and any other intellectual property and proprietary rights in the Modification Proposal and, where not the owner, I have the requisite permissions to grant the rights set out in this form.**

5. **I hereby acknowledge that the Modification Proposal may be rejected by the Modifications Committee and/or the Regulatory Authorities and that there is no guarantee that my Modification Proposal will be incorporated into the Code.**