



SEM Capital Investment

Market System Development Plan 2022
Consultation Report – February 2023

Abstract

This document outlines the consultation responses received regarding the MSDP 2022 and prioritisation of capital projects planned for SEMO for the period between 1 October 2022 and 30 September 2025.

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1. Introduction

SONI and EirGrid, in their capacity as licenced Market Operators, are required to produce a Market System Development Plan (MSDP) for approval by the Utility Regulator (UR) and the Commission for Regulation of Utilities (CRU) for the development of the Single Electricity Market (SEM) Trading and Settlement System. This three year plan is produced in accordance with Condition 16 of the [SONI SEM Operator Licence](#) and in accordance with Condition 4 of the [EirGrid Market Operator Licence](#).¹

This document is the MSDP 2022 consultation report developed by the Single Electricity Market Operator (SEMO) following the [MSDP Consultation](#) (which was published for consultation on the SEMO website (the ‘Consultation Paper’)). This MSDP 2022 covers the period from 1st October 2022 to 30th September 2025.

As outlined in the Consultation Paper, there are a number of factors that will influence where SEMO’s capital expenditure is focused in the coming years to facilitate the efficient, economic and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner.

There are several often-competing challenges and limitations to the delivery of major projects which mean that not all potential projects can be simultaneously delivered during the period in question. Therefore, the aim of the consultation process was to seek feedback from stakeholders regarding the prioritisation of projects during the MSDP period in question. This MSDP consultation report has considered the responses that were submitted together with the prioritisation that was put forward by SEMO in the Consultation Paper.

SEMO welcomes and will consider all feedback. SEMO received four responses from industry to the MSDP 2022 consultation, from Bord na Móna (BnM), Energy Storage Ireland (ESI), Energia and the Demand Response Association of Ireland (DRAI). Common feedback was received with regards to the prioritisation of some projects and for allocating more resources to interim solutions, in particular for Battery Energy Storage Systems (BESS). Contrasting priorities were received regarding the Demand Side Management (DSM) enduring solution for energy payments project. SEMO also received feedback from the UR and CRU (together the ‘Regulatory Authorities’) regarding the MSDP 2022 Report which has also been taken on board by SEMO.

Section 2 of this consultation report will first summarise the main points received from each respondent. Section 3 will then address the responses received regarding Known Issues Reporting, Future Market Projects and any feedback regarding themes that were not covered in the Consultation Paper.

Following the consultation responses received, SEMO will now work together with the Regulatory Authorities to further the implementation of the relevant projects using the updated priorities as set out in this paper.

¹ The relevant licences require a plan for the following two calendar years, but the Regulatory Authorities are content with a three-year look-ahead applying to tariff years. The Regulatory Authorities are currently considering the timing and format of this document going forward.

2. Consultation Responses

2.1 Bord na Móna (BnM)

BnM provided feedback on each Future Market Project, highlighting in particular the work stream relating to the implementation of Articles 12 and 13 under the Clean Energy Package (CEP). BnM emphasised a need for clarity in relation to how these articles will be operationalised. While they do not object to the current actions outlined, they ask for further detail.

2.2 Demand Response Association of Ireland (DRAI)

DRAI's response focused on the impact of demand response on achieving energy policy and climate action projects. DRAI also highlighted the importance of energy payments for Demand Side Units (DSU) and the positive impact such additional payments would have on demand side participation. Conversely, another respondent was of the view that the enduring solution for DSU energy payments would be of low significance in solving RES-E penetration and Security of Supply issues.

DRAI also commented on the layout and ranking of the Future Market Projects, and definition of the pertinent lenses. SEMO has taken this feedback on board and will take it into consideration with any future publications regarding the Future Market Projects.

2.3 Energy Storage Ireland (ESI)

Energy Storage Power Station (ESPS) integration was highlighted by ESI (and BnM) as a high priority in terms of regulatory requirements, RES-E integration and Security of Supply. They also stressed the importance of the commercial impact of this project. ESI advise that the majority of current and future storage project investments are made using wholesale market revenues as an essential basis for investment. ESI noted their proposal to enable export dispatch of Battery Energy Storage Systems (BESS) and their engagement with TSOs and RAs. The ESI position on BESS has also been endorsed by Energia.

2.4 Energia

In addition to the above, Energia highlighted the importance of SEMO's systems being able to support both current market requirements and those associated with the energy transition. Energia also mentioned Secondary Trading in Capacity markets in their response. However, as Secondary Trading in Capacity Markets is associated with the Capacity Market Code under EirGrid and SONI's Transmission System Operator Licences respectively and not part of the Trading And Settlement Code, this is outside the scope of the MSDP. It is worth noting that as part of this, Energia also asked for improvement in communication of project timelines, suggesting a collaborative stakeholder technology forum or committee.

While all the feedback received will be considered, SEMO also acknowledges the relatively small number of responses which may therefore not be representative of all stakeholders.

2.5 Regulatory Authorities

The Regulatory Authorities provided feedback to SEMO in September 2022, and in November 2022 following the SEM Oversight Committee's review of the MSDP 2022. SEMO has taken these

comments on board and have updated the MSDP 2022 Report accordingly to ensure the most recent regulatory decisions and publications have been taken account of since time of consultation of this report.

3. MSDP Modifications Following Consultation Response

3.1. SEMO Known Issues Reporting

In the Consultation Paper SEMO included information regarding the Known Issues that have not been resolved or planned for resolution in a specific market release.

SEMO received one response regarding the prioritisation of Known Issues from BnM, who requested that three changes be prioritised. These were firstly, the Incorrect QBOA Order Profile and SO Trade Volumes as they can be price impacting. In addition, User Contacts in MPI were requested to be prioritised due to the administrative work caused by this issue for market participants.

In relation to these Known Issues, the Incorrect QBOA Order Profile has been addressed in Release I. In addition, analysis is ongoing on the User Contacts in MPI and a script provided by the vendor to correct this issue. The Known Issues Report will be updated with the latest status of these issues going forward. In relation to the third Known Issue of SO Trade Volumes, the scope for the Bi-Annual Market System Release K has now been finalised. SEMO therefore welcomes this feedback which will be considered for future Market System Releases as this Known Issue is currently in analysis and has not yet been planned for resolution.

DRAI, ESI and Energia did not provide any comments on the Known Issues Reporting.

3.2. Future Market Projects

The following section addresses in detail the responses received regarding the prioritisation of the Future Market projects. SEMO will then outline the decision regarding the prioritisation of these projects and the next steps regarding their implementation where it is possible to do so.

3.2.1. Energy Storage Power Station Integration

Both ESI and BnM agreed with SEMO's assessment of this project in relation to Ireland's legal/regulatory requirements, the RES-E target and security of supply. However, both argued the commercial impact of the project should be considered high.

On reflection, a high rating would be more appropriate given the significant commercial impact of greater renewable energy and lower dependence on high price fossil fuels. Energy storage is a key enabler of this transition.

Solutions for the implementation of Energy Storage Power Stations, particularly with respect to battery storage, is included in the scope of the Scheduling & Dispatch Project being initiated by SEMO and the TSOs referenced in the above section in respect of SEM-22-009.

3.2.2. Demand Side Management enduring solution for energy payments

Contrasting views regarding the prioritisation of this project were received in response to the consultation. The DRAI highlighted the adverse impact that the lack of energy payments for DSUs has on demand side participants and the importance of these initiatives in achieving the objectives as set out under the consultation paper future project value matrix. However BnM indicated in their response that this project would score poorly under the same value matrix lenses.

SEMO note that at the time of the MSDP consultation, the SEM Committee's consultation, [SEM-22-036](#), *Enduring Solution to Enable Energy Payments in the Balancing market for DSUs - A*

Consultation, recently closed. [SEM-22-036](#) consulted on a phased approach to implement an enduring solution to allow DSUs to participate in the market as signalled within the Electricity Regulation and Directive.

In November 2022, the SEM Committee published [SEM-22-090](#), “Enduring Solution to Enable Energy Payments in the Balancing Market for DSUs – Decision Paper”. The status of this project has been updated to “Not Optional” in the MSDP report.

3.2.3. Multi Regional Loose Volume Coupling

This project is not optional based on the relevant requirements. SEMO acknowledges the BnM response which accepted this project as not optional, and no change has been made from the original consultation.

3.2.4. CEP Article 8 - 30-minute MTU

This project is not optional based on the relevant requirements. SEMO acknowledges the BnM response which accepted this project as not optional, and no change has been made from the original consultation.

3.2.5. "SEMC decision 22-009 Dispatch, Redispatch and Compensation Pursuant to Regulation (EU) 2019/943 (Article 12 and part of 13)"

SEMO's prioritisation of this project was supported by BnM's consultation response which considered this project as their highest priority out of the Future Market Projects. BnM highlighted the importance of early engagement with industry in designing an enduring solution and would like to see further detail on the program, including regarding the implementation of Article 13 which is likely to be outside of the 2023-25 MSDP period. BnM also outlined that the commercial impact of this project should be ranked as high rather than medium.

The implementation of this project is not optional and is considered to be of high importance in achieving the renewables target of up to 80% as outlined in the [Climate Action Plan](#) and a target of 80% as agreed by the NI Assembly as an amendment to the [Climate Change \[No.2\] Bill](#)). While SEMO acknowledges the different view with respect the ranking under commercial impact, we consider that this project is high priority and will be progressed within this timeframe.

SEMO acknowledges the need for industry engagement on this issue in order to interpret and implement the high-level policy outlined by SEMC. The implementation of a solution for the treatment of non-priority dispatch renewables in scheduling and dispatch will be included in the scope of the Scheduling & Dispatch Project being initiated by SEMO and the TSOs. An [information note](#) on the engagement plan was issued to industry in advance of industry wide workshops in the Autumn.

Plans with respect to the implementation of the solution for Article 13 (7), noting those outlined in SEM-22-009, will be developed and shared with industry after the conclusion of the judicial reviews on this issue that have been submitted to the High Court in Ireland.

3.2.6. Greenlink

SEMO welcomes BnM's acknowledgement of the importance of the Greenlink interconnector to the all-island electricity system. BnM argued the categorisation of Greenlink for security of supply, achieving RES-E targets and the commercial impact should be downgraded to medium.

Greenlink will reduce constraints on the level of market coupling between the SEM and GB. As outlined in the ENTSO-E [Power Facts \(2019\)](#) publication, increasing the coupling of markets leads to lower prices for consumer and greater social welfare. Greenlink will provide further access to excess capacity in GB when prices are relatively higher in the SEM. SEMO acknowledge that forecasting the benefits of future interconnection is very much dependant on the input assumptions utilised in that assessment.

As highlighted by BnM, there is a regulatory requirement through the [Cap and Floor](#) to deliver the Greenlink Interconnector and this project must therefore be prioritised in this context.

3.2.7. Synchronous Condenser Scheduling and Compensation

BnM responded outlining the importance of this project for the deployment of synchronous condensers and for the electricity system. While this project will have a significant commercial impact on synchronous condensers and will have secondary impacts on the end consumer, SEMO consider that the secondary impact on the end consumer should be categorised as medium rather than high.

As a number of the projects listed in the MSDP involve changes to the same set of business systems and processes, SEMO and TSOs have considered where it would be appropriate to group these under a single project. The Scheduling & Dispatch Project, previously referenced with respect to SEM-22-009 above, has been initiated by SEMO and the TSOs and solutions for the implementation of synchronous condensers have been included in the scope of this wider project.

3.2.8. Trading and Settlement Code Modifications/Market participant change

BnM responded regarding this project requesting that enough bandwidth be left in SEMO's work plans to address these changes as needed. SEMO concurs with BnM's view regarding the importance of these changes and will prioritise SEMC approved change requests/ modifications accordingly.

3.2.9. Defect fix

SEMO acknowledges BnM's response which highlighted the importance of defect fixes and ensuring enough resources are available to deal with defect fixes as they occur. SEMO concurs with this response and will prioritise this project accordingly.

3.2.10. Reserve from Wind & New Technologies

BnM acknowledge the need for reserve from new technologies may be limited at present but argue this will likely increase over time. Therefore, BnM suggest for the impact on >70% renewables for this project to be increased from medium to high, whilst arguing for the provision of proper incentives and market structures to encourage the necessary investment.

SEMO agree with the views of BnM and consider that the potential impact on renewable targets may be greater than considered. As a number of the project listed in the MSDP involve changes to the same set of business systems and processes, SEMO and TSOs have considered where it would be appropriate to group these under a single project. The Scheduling & Dispatch Project, previously referenced with respect to SEM-22-009 above, has been initiated by SEMO and the

TSOs and solutions for how to account for reserves from wind and other new technologies have been included in the scope of this wider project and work will progress on this initiative.

3.3. Other themes

3.3.1. Interim solutions

Both Energia and ESI outlined that they would like to see more resources allocated to improved interim solutions, in particular for the export dispatch of Battery Energy Storage Systems (BESS) in the energy market. ESI noted that they are currently engaging with the TSOs and RAs regarding their proposal for interim workaround measures that would enable the export dispatch of BESS.

Energia reiterated their strong support for an appropriately designed Key Performance Indicator (KPI) to ensure system developments are completed to integrate storage within targeted timelines. SEMO believes the current KPI as set out in the SEMO price control decision [SEM-21-073](#) captures Energia's concerns regarding integration of storage within the energy market.

The Scheduling & Dispatch Project initiated by SEMO and the TSOs includes the development of solutions in relation to Battery Energy Storage Systems.

3.3.2. Communication of Timelines

Responses to the consultation from two parties set out their preference for more information regarding project timelines. ESI highlighted clarity is needed regarding the steps to achieve the enduring solution. Energia suggested a collaborative stakeholder technology forum or committee would be beneficial to allow for dialogue on system developments, in particular in relation to Secondary Trading in the Capacity Market.

SEMO acknowledge the importance of clarity regarding implementation timelines with respect to the Scheduling & Dispatch Project.

SEMO and the TSOs are currently working on a plan to develop the detailed design on dispatch and scheduling changes to include:

- Treatment of new non-priority dispatch renewable generation
- Wind dispatch tool enhancements
- Energy Storage Power Station (ESPS) capability
- Low carbon inertia services capability
- Fast frequency response capability
- Reserve services capability dispatch and scheduling from new providers

SEMO and the TSOs continue to progress the Scheduling and Dispatch work. During 2022, the project team carried out engagement with industry representatives and held industry workshops.

SEMO would like to note the current platforms, through which updates are already given, including the Market Operator User Group, the SEMO Focus Group, as well as other project specific workshops taking place.

SEMO's response with regards to engagement surrounding Secondary Trading in the Capacity Market is set out in the below section 3.3.3.

3.3.3. Secondary Trading in the Capacity Market

In their response, Energia set out their view regarding the limitations of Secondary Trading in the Capacity Market, the timelines for the implementation of the modification and engagement regarding this project.

The obligations in respect of the operation of Capacity Market Secondary Trading are with the System Operators under the Capacity Market Code. As such, this would not be covered under this document. SEMO is not in a position to respond directly to these comments as this is outside the scope of the MSDP. The participant should contact the Capacity Market team in the System Operators directly in this regard.

3.4. Feedback from Regulatory Authorities

Following submission of the draft consultation report and updated MSDP report, the Regulatory Authorities came back with some feedback in September 2022, and in November 2022 following a review by the SEM Oversight Committee. As a number of months have passed since the MSDP consultation closed, there have been some decisions published by the SEM Committee which impact the projects set out in the Future Project Value Matrix.

The changes to the MSDP report include:

1. Update to the scope of Release K to account for the removal from Mod_14_21.
2. Update the status of the DSU energy payments projects to also be “Not Optional” given it is specifically identified in the SEM Committee Forward Work Programme and following SEM Committee Decision SEM-22-090 published on 25 November 2022.
3. Update the MSDP Document for it to be more Market Operator focused.

4. Conclusion and Next Steps

SEMO acknowledges the feedback from all respondents and thanks them for their helpful input which SEMO has taken on board.

It should be noted that the consultation process did not identify any new projects, nor has it led to any wholesale changes to the assessment provided in the project matrix outlines in the original consultation. SEMO will now work with the RAs to further the implementation of the relevant projects.

As per Condition 16 of SONI’s SEM Operator Licence and Condition 4 of EirGrid’s Market Operator Licence, SEMO will make the MSDP Report 2022 available on SEMO’s website following the RAs’ approval of the MSDP Report.