



## ROADMAP FOR MARKET DEVELOPMENT

### **Abstract**

*This document is the Roadmap for Market Development for the  
period 2020-2025*

**Version: FINAL**

**Date – December 2020**

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# ROADMAP FOR MARKET DEVELOPMENT

## Executive Summary

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The *Roadmap* is the fourth and last illustrated overview of the market development path for the wholesale market for electricity. A link to the third Roadmap can be found [here](#).

It is organised into four main sections: Ex-Ante, Capacity, Balancing and Settlement. The forwards markets are outside the scope of the Roadmap. The main objectives are to show Market Participants the priorities with regard to the markets, to present a clear picture of the features being added and to show what the implications are over time of changes to the priorities. The Roadmap is not licence mandated, and the work included is still the subject of various price control submission processes which have not been concluded. However it represents the best information at this time. Market Participants are invited to give feedback which will be considered for subsequent versions. Since the last version of the document progress has been made on Ex-Ante Market projects including inclusion of complex orders. With regard to the Capacity Market work on a Mixed Integer Programme (MIP) Solver is well advanced and is expected to be completed in January 2021. In addition, work has been completed on a solution for Secondary Trading that will include the registration of the secondary transactions but will not involve the delivery of a full secondary trading platform. As a result of the prioritization of these projects, other work is being deprioritized. However, regular releases will continue which will involve the delivery of fixes for known defects and change requests that come through for the Capacity Code.

Repricing and Resettlement functionality will be delivered in mid-2021. Note that projects that may directly result from Brexit have not been included in the Roadmap but may be added in later versions when they have been more clearly identified and scoped but there is a new section included.

This will be the last edition of the Roadmap. In 2021 the projects will be integrated into the *Pathways to 2030 Vision* which will outline how EirGrid and SONI intend on transforming the power system and markets for future generations.

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## Introduction

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This document outlines the December 2020 Roadmap for Market Development (“the Roadmap”) for the period 2020-2025 across all SEM markets to include Ex-Ante, Capacity, Balancing and Settlement. Given the importance of the Settlement function and in the interest of transparency it is split out as a separate category.

One of the objectives of the Roadmap is to give Market Participants a high level overview of the main features and functional changes that are being planned for each market during the period 2020-2025. While all reasonable effort is made to communicate the latest information to Market Participants it has to be acknowledged that the plans are not fixed. It is still the intention of EirGrid and SONI, known here as the TSOs (in their various roles as System Operators, Market Operators etc.) to publish an updated Roadmap every six months to allow for changes and re-prioritisation.

The Roadmap is not mandated by TSO licences nor is it a market code obligation, however, it has been decided by the TSOs to publish it in order to be as transparent and open as possible. Feedback from Market Participants on this document is most welcome and should be sent via email to [info@sem-o.com](mailto:info@sem-o.com) using the subject “Market Development Roadmap” before **31<sup>st</sup> of January 2021** for consideration in advance of the next Roadmap which will be published at the end of June 2021.

# ROADMAP FOR MARKET DEVELOPMENT

## 1. Background

This is the Fourth and last version of the current format Roadmap and should be considered as a continuation of the third Roadmap which was published in June 2020. The Roadmap helps to plan and to articulate strategic thinking which is behind the decision to remove or add key features to a market or central system. It is high level and captures the key priorities in a particular timeframe.

All markets are covered by the Roadmap which helps both the Market Participant and TSOs to develop credible and realistic expectations over time. Many of the projects (in particular those which are scheduled for later years) may not have received full approval at this point and the fact that the projects are listed does not indicate that they have been through all internal controls. Steps such as full capital approval will only happen closer to the commencement of project delivery.

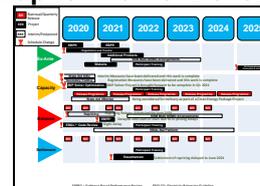
The Roadmap should be considered in conjunction with a number of other documents including the Market Systems Development Plan, however there are a number of differences which are outlined in Figure 1 below. At the time of writing The *Market System Development Plan* has completed a consultation and is awaiting approval by Regulatory Authorities.

### Market System Development Plan



- SEMO Based only
- 2-3 Years
- Includes infrastructure
- Licence Obligation
- *Updated annually*

### Roadmap for Market Development



- All Markets
- 5 Years
- High Level Participant Facing
- EirGrid/SONI Initiative
- Updated every 6 months

Figure 1: Comparison of MSDP and Roadmap

## ROADMAP FOR MARKET DEVELOPMENT

The Clean Energy Package Regulation 2019/943 on the internal market for electricity introduces several significant new requirements for the SEM and while the final implementation of such requirements is still being considered by the Regulatory Authorities, it is likely that significant change will be required to the current market design to ensure that the requirements are fully implemented.

- Articles 12 and 13 of the Regulation require a change to priority dispatch status for renewable plant and market treatment of re-dispatch. A consultation on possible implementation options has already been held by the SEMC and a recent publication indicates that a further Consultation Paper on Non-Market Based Re-dispatch and Compensation will be undertaken in the coming months with a decision paper anticipated in Q2 2021, and a Decision on treatment of new renewable units in the SEM planned for mid- 2021. It is envisaged that following completion of the Consultation and Decision processes set out above, a number of changes may be required to licences, Grid Codes, the Trading and Settlement Code, Balancing Market Principles Statement and market systems.
- Article 6 places requirements on the procurement of Balancing capacity, which has featured in the Regulatory Authorities considerations of Future DS3 system services arrangements, in relation to procuring balancing capacity closer to real time and more closely aligning with energy market requirements. The Regulatory Authorities have indicated that they plan to issue detailed consultations and decision papers on the Future DS3 System Services arrangements over the course of 2021.

Once a clear understanding of the future direction of both Priority Dispatch and re-dispatch and DS3 System Services procurement is available, the implications and design changes for SEM will need to feature in future versions of Market Development Roadmap and the Market System Development Plan.

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### COVID-19 Statement

EirGrid and SONI have implemented a number of precautionary measures in response to the COVID-19 outbreak, in line with the advice from the Department of Health and HSE. Core SEMO activities can still be executed under these arrangements and we have ensured that key market processes remain unaffected during these unprecedented times. As part of

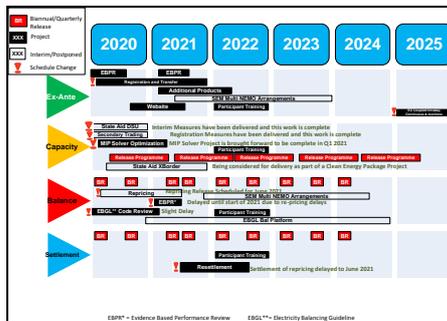
## ROADMAP FOR MARKET DEVELOPMENT

this, steps have been taken to ramp up the protection and resilience of those involved in carrying out these core processes; such steps have included vacating EirGrid and SONI premises of all non-operation-critical individuals. Until such time that these restrictions can be lifted, onsite implementation activities may not be possible.

Furthermore, while we are pleased with our own transition to flexible working, we note that some of our suppliers and partner organisations may experience difficulties in making such a change. As such, delivery plans may require review, and re-baselining, as the situations evolve. We plan to mitigate these risks insofar as is possible and commit to ensuring that impacted parties are made aware of any delays in a clear and timely manner.

## 2. Objectives and Scope of the Roadmap

The Roadmap continues to have the same three main objectives which are outlined in Figure 2.



- To communicate the strategic priorities with regard to all markets
- To present a clear picture of the features being added to the main markets over the next 5 years
- To show the impact of any changes to the strategic priorities on other priorities

**Figure 2: Overall Objectives of the Roadmap**

Given that many of the projects may not be delivered for some time it is not the intention to provide in-depth detail. The Roadmap only includes projects which are Market Participant facing. The Roadmap does not show other projects which may be delivered in the same timeline which may deliver market operation performance improvements e.g. infrastructure improvements.

### Changes to the document since the last Roadmap

While the structure of the document remains the same the following table includes the most significant changes.

Change	Market
A new BREXIT statement is included	
Work on Registration and Transfer changes will extend slightly to Q3 2021	Ex-Ante Markets
There will be additional website development into 2021	Ex-Ante Markets
Work on the EU Coupling will not commence until 2025	Ex-Ante Markets
The MIP Solver Optimization Project which was mandated by the Regulatory Authorities has been brought forward to January 2021	Capacity Market
Evidence Base Performance Review has been delayed	Balancing Market
EBGL Code Review has been delayed slightly	Balancing Market
EBGL Platform project has been delayed	Balancing Market
The timing of repricing programme has been pushed back to June 2021	Balancing Market
The timing of the start of the settlement of repricing has been pushed back to June 2021	Settlement

**Table 1: Main changes to the Roadmap**

### 3. Market Operations Strategy

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Since the last Roadmap there have been two major releases into the market systems which delivered a significant number of defect fixes. As a result, it is intended to increase the size of releases over the next few years that could have capacity for technical and functional improvements.

The Known Issues Report<sup>2</sup> will continue to be published for Market Participants and will outline the key issues that are being addressed. All work requires a commitment of resources and so the blend of projects outlined has to make assumptions around the availability of key internal resources for the work.

While defects are present in a number of areas the main focus is currently on the following:

- Settlement (including reports)
- Pricing in Balancing Market
- Reports in Balancing Market
- Scheduling and Dispatch

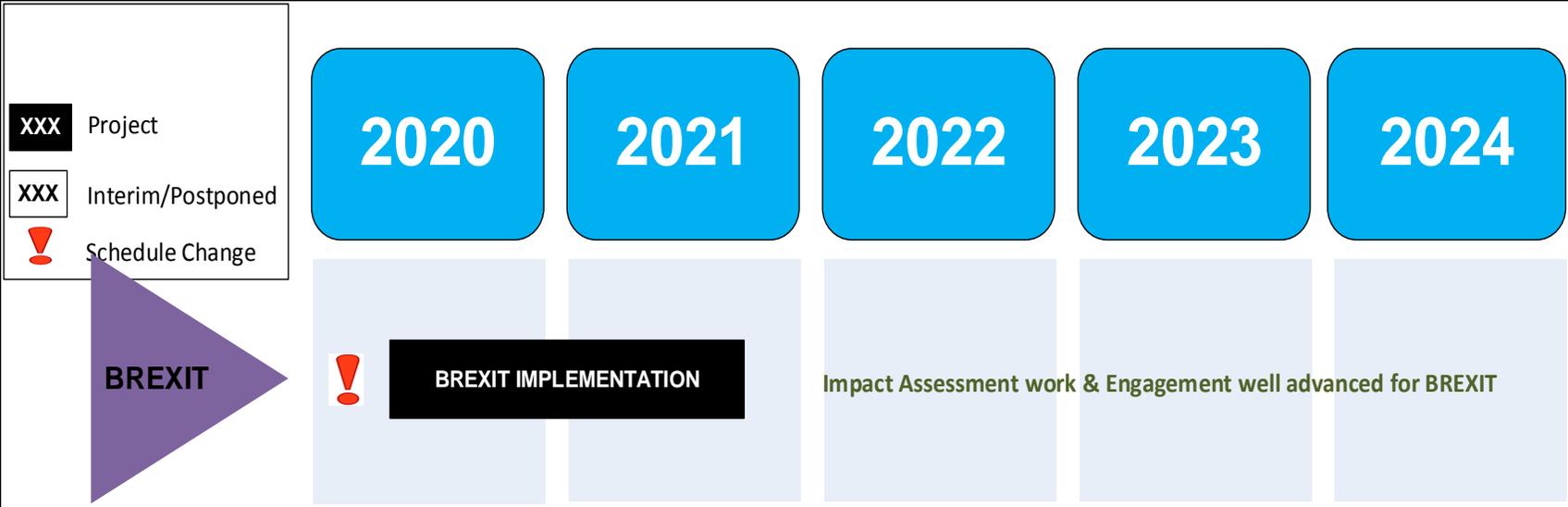
During the I-SEM Project some functionality was removed from scope with the intention of delivering it at a later stage (Day 2). Secondary Trading (See Capacity Roadmap) is a case in point and commences development in 2021.

The Market Operator User Group continues to be the primary communication channel for discussing the Roadmap in addition to the consultation phase. Market Participants are invited to respond to the publication of the document on an ongoing basis.

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<sup>2</sup> [The Known Issues Report is published weekly.](#)

Brexit Status



## ROADMAP FOR MARKET DEVELOPMENT

A BREXIT impact assessment and engagement project is underway.

**Description:** There are a number of scenarios that could apply depending on the outcome to the BREXIT negotiations. As a result, an impact assessment and engagement process is being completed.

The Impact Assessment is currently examining:

- Rules Impact
- Auction and Liquidity Impact
- Tax Impact
- Systems Impact

The engagement process involves:

- Regulatory Authorities
- National Governments
- Vendors including service providers
- Across the SONI and EirGrid in their roles as TSOs and Market Operators
- Market Participants updates via the September, October, November and December MOUGs

**Business Case:** With the GB markets potentially leaving the Internal Electricity Market there is a pressing need to understand the implications of a number of scenarios and to have plans ready regardless of the outcome.

**Risks, Assumptions and Delivery Impact:** The BREXIT transition agreement states that Northern Ireland and Ireland will remain aligned to EU Regulations unless otherwise decided by the NI Assembly which decides it every four years. The uncertainty that remains in advance of the completion of trade negotiations prevents the type of clarity that is needed to deliver specific changes. Without this clarity understandably it is not possible to get regulatory support for significant investments needed to implement a particular plan.

**STATUS UPDATE:** Work has commenced on impact assessing a number of scenarios and identifying some consequential changes. In addition, clear lines of communications have been opened with government departments in order to ensure that the appropriate policies are followed with regard to BREXIT. We have used this to develop a flexible plan which will allow us to transition to new arrangements. However, what we are transitioning to is not clear at this time and won't be until the external trade talks are finalised.

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The two main scenarios being assessed at this time are: Limited Change and GB Markets outside of the IEM. Under the limited change scenario there may be small changes which we will communicate through the MOUG channel.

In the scenario that the GB Markets leave the IEM:

- The DAM moves to being local only with no cross border trade
- The Intra-Day market continues with cross border trade

We are currently impact assessing other areas including:

- There are limited implications for the Capacity Markets under both scenarios
- Settlements is currently being examined in particular with regard to VAT changes
- The main implications for systems centres on the timing of cross zonal capacity calculations and how data feeds are used by the central systems however, there will be no changes to REMIT reporting
- There are no planned changes to the treatment of existing or planning North-South Interconnection
- Our engagement with our vendors has looked at the requirements and changes needed under the scenarios, however, without certainty it is impossible to get commitment to make any changes in the short term.

## 4. Roadmap Overview

The Roadmap covers all markets in order to illustrate where product investments are being prioritised. EirGrid and SONI are planning to deliver a number of projects e.g. rollout of new servers and software updates which will be delivered at the infrastructure level. These are not included in the Roadmap as they do not deliver new features to the market. However, they may improve the performance of the market.

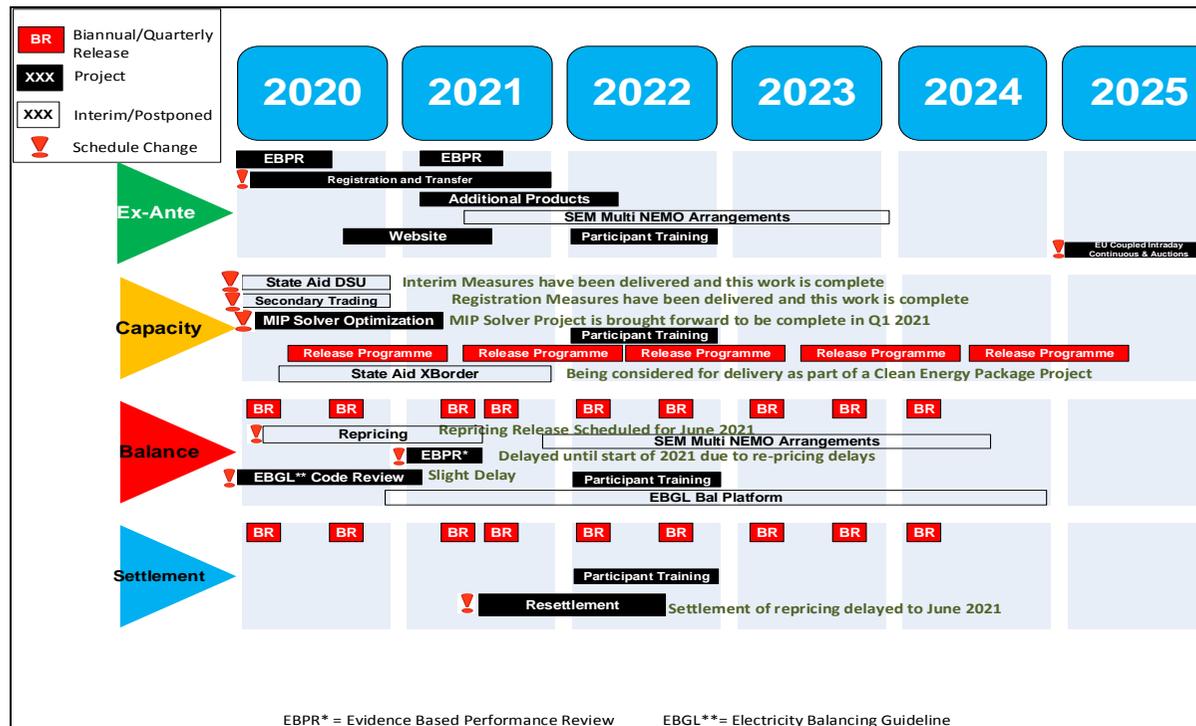


Figure 2: Overall Roadmap

## A. Ex-Ante Markets

A number of Ex-Ante projects have been progressed since the last publication, with some being fully implemented and others close to implementation. Discussions were also held with Exchange Members regarding the prioritisation of product and service enhancements which has led to a revision of some of the priorities and timelines for individual projects. EU intraday coupled unlikely to be progressed for SEM during 2021-2024.



Figure 3: Ex-Ante Roadmap

1) The first significant enhancement added was the commencement of **Intraday Multi-NEMO arrangements in Great Britain**.

**STATUS UPDATE:** This project was delivered on schedule.

2) Ex-Ante markets will undergo an **Evidence Based Performance Review** during 2020 to determine if there are any significant changes that should be investigated based on the performance so far.

**STATUS UPDATE:** A first phase of this project was undertaken with Exchange Members in February 2020. It involved the publication of a discussion paper on product and service enhancement priorities and a subsequent SEMOpX User Group meeting to obtain Exchange Member views. The results of this dialogue were a list of the priority items for product and service enhancements. These have been used as an input to the latest version of the roadmap. Further work, if deemed necessary, will be aligned with the balancing market EBPR planned for the first half of 2021.

3) A **Website Enhancements** project will continue into 2021.

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery Impact:</b>
A number of improvements need to be made to the SEMOpX including: <ul style="list-style-type: none"><li>• REMIT for Brexit</li><li>• Publication of Cross Zonal Capacity and Available Transfer Capability</li></ul>	Market Participants have been vocal about the need to improve the website service offering and there are a number of regulatory requirements that need to be addressed.	The work is complementary to other projects at the time. Assumptions include regulatory capital approval. Risks include a current shortage of technical staff which has impacted the start date.

**STATUS UPDATE:** This project has been delayed due to website resource constraints. More updates are planned for 2021.

4) A number of **Additional Product Improvements** are being developed for the Ex-Ante markets.

<b>Description:</b>	<b>Business Case:</b>	<b>Risk, Assumptions and Delivery Impact</b>
<p>There are a number of additional improvements being considered, for example:</p> <ul style="list-style-type: none"> <li>• IDA: Complex Orders</li> <li>• DAM: Scalable Complex Orders Evaluation</li> <li>• DAM/IDA: blocks or linked blocks</li> <li>• Continuous market: user defined blocks, all or nothing blocks</li> </ul>	<p>Market Participants have requested a number changes to products in the form of additional features or improvements.</p>	<p>This work will span one or more years and involve procurement, solution redesign, build, test and deployment. It assumes close alignment with our service provider EPEX and regulatory capital approval.</p>

**STATUS UPDATE:** The first new product IDA 30 minutes Complex Orders has now been implemented. In addition a forced EUPHEMIA release was delivered earlier this year. SEMOpx is interacting with the European Single Day-Ahead Coupling (SDAC) Committee on the development of DAM scalable complex orders which are being suggested as a replacement for classical complex orders in the day-ahead market by the European SDAC Committee.

5) A number of **Registration and Transfer Improvements** will be made to the Ex-Ante markets.

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery</b>
<p>Unit Registration changes being sought include:</p> <ul style="list-style-type: none"><li>• Effective dating of members and units access to auctions and continuous trading.</li><li>• Allowing units to be transferred from one member to another in the continuous trading system</li></ul>	<p>Market Participants have requested that these changes be made to allow more flexibility in the transfer of units between members adding competition. In addition effective dating of access to auctions and continuous trading markets will mitigate risks and financial consequences of trading when not eligible to do so.</p>	<p><b>Impact:</b></p> <p>This work spans one or more years and may involve procurement, solution redesign, build, test and deployment. It assumes close alignment with our service providers and regulatory capital approval.</p>

**STATUS UPDATE:** Implementation of effective dates for units and members in ETS was completed in November 2019. Reporting of REMIT data at a unit level, which was requested by ACER, was also implemented in February 2020. Based on the outcome of the prioritisation of products and services dialogue with Exchange Members, the allowing of the transfer of units between members in the continuous trading system is being impact assessed, while effective dating for the continuous market has been de-scoped.

6) The **SEM Multi NEMO arrangements**.

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumption and Delivery Impact:</b>
This project involves the redevelopment of the new SEM solution architecture to support multiple NEMOs operating in either Ireland or Northern Ireland.	CACM requires competition in the provision of multiple NEMO arrangements. It could potentially lead to improved liquidity in the markets however, in a small market could lead to reduction in the viability of service offerings in the long term. It is a very large scale project.	As this is a very large project it requires significant procurement work. The scale of the project presents risks around staffing, schedules and assumes that high levels of regulatory support. The impact of Brexit is yet not clear.

**STATUS UPDATE:** SEM Multi Nemo Arrangements will not commence in 2021. Further dialogue will take place with Regulatory Authorities on this.

7) The **EU Coupled Intraday Continuous** is an initiative of TSOs and power exchanges from across Europe to create a joint integrated intraday cross-border continuous market.

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery Impact:</b>
Previously known as XBID (Cross Border Intraday) but now known as Single Intraday Coupling (SIDC), the project would involve the SEM coupling with the EU Intraday continuous market which is currently only a local SEM market.	This is mandated by the EU and is needed to be compliant with CACM (Capacity Allocation and Congestion Management). It enables continuous cross-border trading across Europe.	This work would spans one or more years. This presents risks around staffing, and assumes significant levels of regulatory support and support from existing service providers. The impact of Brexit is not clear.

**STATUS UPDATE:** Based on the outcome of the product and service enhancements prioritisation dialogue this project has been pushed to 2025.

8) A Learning Management System was used very effectively during the I-SEM project to deliver scaled training to Market Participants. A similar **Participant Training** initiative will help to support learning across the industry.

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery Impact:</b>
The development of a Learning Management System to support the administration and delivery of training to Market Participants.	The markets need to continuously adapt to regulatory and technological changes. In order to support this, a Learning Management System will be developed to help Market Participants adapt to change.	The work would take approximately one year and would involve business analysis, procurements and in-house materials development. The provision of quality materials requires a high level of Subject Matter Expert input which impacts on other work.

**STATUS UPDATE:** No change has been made to the schedule for this project. Procurement has not commenced.

9) At present the DAM is the only coupled auction at EU level in the SEM markets. The **EU Coupled Intraday Auction** functions at an EU rather than local level.

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery Impact:</b>
Based on recent developments in Europe the EU Coupled Intraday Auctions aims to couple intraday at a European level. The concept of coupled auctions at a European level is new and is only just beginning to be considered in Europe.	This may be mandated by the EU and may be needed to be compliant with CACM. This would integrate the regional and local intraday auctions of the SEM with the wider EU, leading to greater liquidity.	This work spans one or more years and may involve procurement, solution redesign, build, test and deployment, contractual and procedural changes. The impact of Brexit is not clear.

**STATUS UPDATE:** Based on the outcome of the product and service enhancements prioritisation dialogue this project has been pushed to 2025.

## B. Capacity Market

There are a number of changes that have been made to the previous roadmap publication. Changes to enable Secondary Trading of Awarded Capacity between Capacity Market Units have been implemented. Secondly, a MIP Solver Optimisation project is expected to be complete and ready for use for the Capacity Year 2024/25 T-4 Capacity Auction, which is due to take place on the 21<sup>st</sup> January 2021. Thirdly, a quarterly release programme has commenced which will see improvements being made to the Capacity Market auction platform. Lastly, those elements of State Aid Cross Border & DSU projects related to the Capacity Market have been implemented using interim measures.



Figure 4: Capacity Roadmap

The development of the Capacity Market continues during the next few years thanks to several regulatory mandated decisions as well as improvements to the overall service. Noteworthy projects include:

- 1) & 2) State Aid Requirements - Two projects cover work to implement an EC Commission decision which impact **DSUs** and **Cross Border** Capacity Market participants (those from outside of Ireland and Northern Ireland).

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery Impact:</b>
<p>EC Commission decision C (2017)7789 regarding State Aid SA44464 (2017/N) covers two areas which were not included in the original I-SEM Capacity Market systems: DSUs and Cross border participants.</p>	<p>1) State Aid decision requires that Difference Charges for DSUs be applied on the same basis as for other Generator Units.</p> <p>2) State Aid decision also requires the need to accommodate cross border Capacity Market participants, subject to cooperation with neighbouring states.</p>	<p>1) This has been implemented. The remaining items included in the SEMC consultation on this item, namely the enduring treatment of DSUs in respect of energy payments and metering of DSUs are not required by State Aid and these items will be captured under the Balancing Market in future updates.</p> <p>2) This work will proceed under the associated requirements included in the Clean Energy Package.</p>

**STATUS UPDATE:** Item 1) has been implemented. Developments not required under State Aid decision for enduring treatment of DSUs and DSU metering do not have specific delivery schedules at this point in time as they would require further direction from the Regulatory Authorities. Item 2) is being considered under plans in respect of implementation of the Clean Energy Package.

3) A Learning Management System was used very effectively during the I-SEM project to deliver scaled training to Market Participants. A similar **Participant Training** initiative would help to support learning across the industry.

**STATUS UPDATE:** No change to the schedule for this project. Procurement has not commenced.

4) **Secondary Trading** of Awarded Capacity

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery Impact:</b>
Secondary Trading allows Market Participants to trade Awarded Capacity to manage exposure during outages or other periods of unavailability. .	Interim measures have limited flexibility, do not allow the participant to retain any of the value of the Awarded Capacity for quantities traded, can result in exposure being transferred to the market and can only be used for Scheduled Outages.	The enduring requirements provided for the ability of participants to trade their Awarded Capacity through a series of regular auctions. Implementing secondary auctions would be a high impact change given the complexity the proposed arrangements. It is not clear that there is a positive business case for such a change at this time. Instead, industry led proposals developed by the RAs and TSOs have been implemented to increase the flexibility of the interim arrangements and to provide for a mechanism whereby trades agreed between participants can be registered enabling more flexible management of exposures.

**STATUS UPDATE:** The recent changes in Secondary Trading capture many of the benefits of secondary trading. The TSOs will continue to review secondary trading processes and will bring forward any changes accordingly. Future developments will seek to provide more flexibility in the notice periods and in the submission process. These will require systems changes and the schedule for these changes has not been finalised.

5) There are two projects that will improve the experience of the auction participants. The first project covers **Platform Inputs**.

<p><b>Description:</b></p> <p>The areas relates to Auction inputs including:</p> <ul style="list-style-type: none"> <li>• Improvements in usability and design of interfaces</li> </ul> <p>Develop online qualification and registration layer</p>	<p><b>Business Case:</b></p> <p>The benefits will be seen mainly by Market Participants in terms of superior user experience, reduced input errors and improved audit/security.</p>	<p><b>Risks, Assumptions and Delivery Impact:</b></p> <p>The scope of the work mainly involves business analysis, design, deployment, test and vendor management. The project assumes stability with regard to design but carries some technical risk.</p>
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**STATUS UPDATE:** There is a change to the delivery approach. Both 5) Platform Inputs and 6) Platform Outputs are being rolled into a quarterly release programme.

6) The second area of interest relates to number of **Outputs** from the Capacity Auction Platform.

<p><b>Description:</b></p> <p>There are a number of updates to more adequately reflect the Capacity Market Code including:</p> <ul style="list-style-type: none"> <li>• Improve CMP Reports</li> </ul>	<p><b>Business Case:</b></p> <p>Many of these relate to issues with the original design and defects.</p> <p>The benefits will be seen mainly by Market Participants and streamline</p>	<p><b>Risks, Assumptions and Delivery Impact:</b></p> <p>The scope of the work mainly involves business analysis, design, deployment, test and vendor management. The project assumes stability with regard to design but carries some technical</p>
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- Enable copy and paste functionality to be available to Market Participants
  - Resolve issues with viewing results
- processes and procedures internally.
- risk.

**STATUS UPDATE:** There is a change to the delivery approach. Both 5) Platform Inputs and 6) Platform Outputs are being rolled into a quarterly release programme.

7) A project to improve the **Optimisation** of the capacity algorithm.

**Description:**

Currently, the Capacity Market Auction uses Auction Format C. This solves the auction using an optimisation process to evaluate a limited number of Participant offers above and below the Auction Clearing Price (ACP) to select the optimum set of offers which minimises overall capacity procurement cost whilst providing sufficient Capacity in each geographical area. Any additional offer considered will dramatically increase the number of combinations to be calculated. It is therefore necessary to limit the algorithm to consider only a subset of likely

**Business Case:**

As the Capacity Auction is allocating hundreds of millions euro/pounds, even small improvements in optimality could, in theory, improve welfare by millions. Nevertheless, the implementation would be complex and not without risk. In SEM-19-023 the SEM committee proposed that if possible Format D be used as the enduring Auction Solution Methodology.

**Risks, Assumptions and Delivery Impact:**

Delivery will require resources for design, build, test, and certification. Specialist expertise will be required. There is a risk that any additional benefit accrued through the use of Auction Format D may be outweighed by the associated

solutions. This can result in sub-optimum outcomes. Using a Mixed Integer Programming solver, Auction Format D should result in a more optimal outcome.

implementation and ongoing. Operational costs. There may be knock-on impacts on other Capacity projects which would have to be rescheduled.

**STATUS UPDATE:** This has been brought forward to 2020. Certification of Auction Format D is to take place in December. It is expected that Auction Format D will be used in the upcoming 2024/25 T-4 Capacity Auction in January 2021, subject to the successful implementation and certification.

## C Balancing Market

There are a number of changes to the Balancing Market Roadmap. Firstly, there has been a delay to the rollout of repricing. Functionality to enable settlement of repricing will be deployed at the end of June 2021. Secondly, work on implementing the balancing platforms will be later than outlined in previous reports, due to statements from the European Commission regarding Brexit. Lastly, while the EBGL code review is almost complete it will be early 2021 before it is submitted to the Regulatory Authorities.

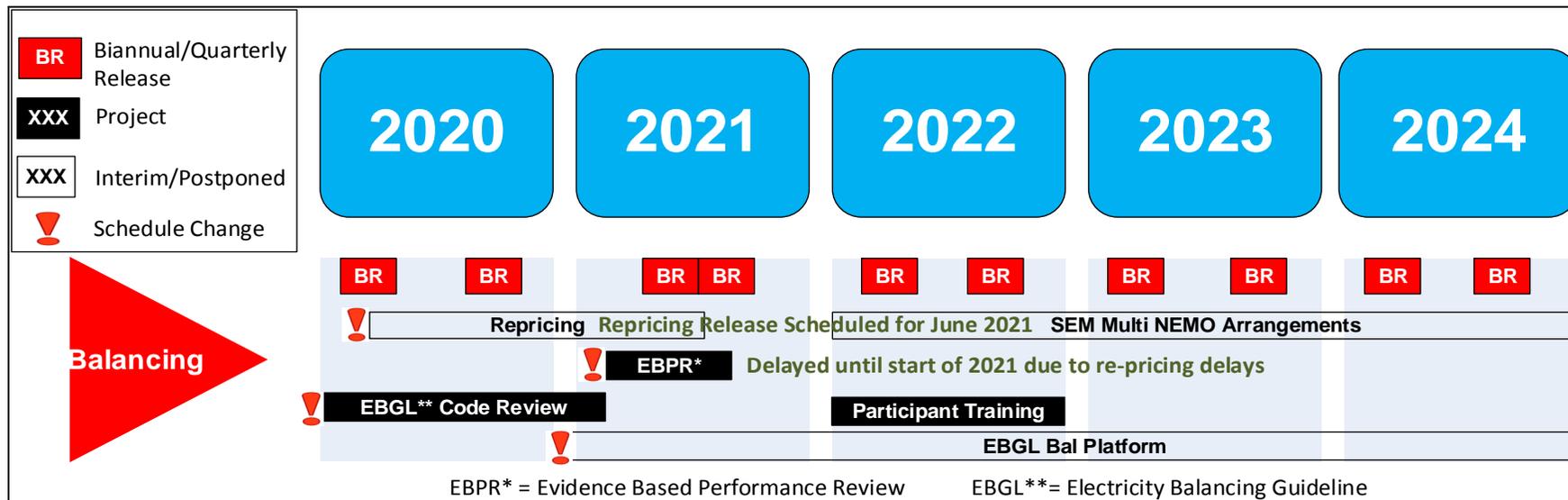


Figure 5: Balancing Market Roadmap

- 1) In the short term, the principle objective of the **Release Programme** continues to be to stabilize central systems in order to improve the experience of Market Participants.

Description	Business Case:	Risks, Assumptions and Delivery Impact:
<p>The Balancing Market releases scheduled for June and October 2021. The main focus of the releases are</p> <ul style="list-style-type: none"> <li>• June (Repricing)</li> </ul> <p>October (03_18 Autoproducer Credit Cover/01_20 PMEA No energy action same direction as NIV)</p>	<p>Market Participants and other key stakeholders have asked for all significant defects to be closed out before adding additional functionality to the Balancing Market. Approximately 790 defects have been closed out. It envisaged that more functional changes will be accommodated in later releases.</p>	<p>The scope of the work involves deployment, testing, release management and vendor management. Support resources will have to be procured in order to deliver this work.</p>

**STATUS UPDATE:** The programme is on schedule to deliver the two 2021 releases on time.

- 2) The **Multi NEMO Arrangements** project will impact on the Balancing Market. See Section A.

**STATUS UPDATE:** SEM Multi Nemo Arrangements will not commence in 2021. Further dialogue will take place with Regulatory Authorities on this.

3) All markets will undergo an **Evidence-Based Performance Review** to determine if there are any significant changes that should be investigated based on the performance of the markets so far.

**STATUS UPDATE:** This work has been moved back to Q1 2021 given the pressure on resources for other work. Inputs will be gathered from user groups' feedback, surveys, review of issues etc. to provide a summary of performance of the markets and proposals for where the focus should be in the short to medium term.

4) **Repricing** is a key function which was originally planned to start in 2020.

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery Impact:</b>
This project includes the deployment of functionality to deliver repricing when updated data is submitted into the system.	There is a need to reprice the majority of days since Go-Live as a result of disputes and known issues etc. Repricing is a mandatory function in the Trading and Settlement code.	The scope of the work involves deployment, testing, release management and vendor management.

**STATUS UPDATE:** There have been challenges with the delivery of an enduring solution. It is not likely to be delivered before the middle of 2021. However, a manual approach has been developed for the interim.

5) A Learning Management System was used very effectively during the I-SEM project to deliver scaled training to Market Participants. A similar **Participant Training** initiative would help to support learning across the industry.

**STATUS UPDATE:** No change to the schedule for this project

6) The **EBGL Balancing Energy Platforms** are initiatives of TSOs from across Europe to create a joint integrated balancing cross-border continuous and auction-based market for different timeframes close to real-time after the intraday market has closed.

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery Impact:</b>
<p>The project involves the SEM coupling with the EU balancing market which is currently only a local SEM market. It requires the local conversion of balancing bids, offers, and balancing needs, to the formats required for submission to the platforms being developed under Project TERRE (Trans-European Replacement Reserves Exchange) for Replacement Reserves, Project MARI (Manually Activated Reserves Initiative) for Manual Frequency Restoration Reserves, and processing the cleared results of those platforms in scheduling, pricing, and settlement.</p>	<p>If the relevant aspects of the EBGL (Electricity Balancing Guideline) apply to the SEM, then this is mandated by the EU and is needed to be compliant. It enables continuous and auction-based cross-border trading across Europe in the balancing timeframe, giving Market Participants in the SEM access to a wider market and potential additional tools for the TSOs to aid in balancing, including the management of interconnector flows.</p>	<p>This is a very large project, work would span a number of years and involve rules modifications, solution design, build, test and deployment, contractual and procedural changes. This presents risks around staffing (and therefore other work), schedules, and assumes significant levels of regulatory support and support from existing service providers. It is assumed that the relevant aspects of the EU EBGL continue to apply to the SEM. Assumptions include regulatory capital approval.</p>

**STATUS UPDATE:** Work on implementing the balancing platforms will be later than outlined in previous reports, due to statements from the European Commission on when they expect Ireland and Northern Ireland to join these platforms within the context of the UK’s exit from the EU. European Commission opinions<sup>3</sup> on Ireland and Northern Ireland’s market reform plans published 30/04/2020,). On the back of these statements, other areas of market development have been prioritised. Some project preparatory work may begin in 2021, but the date by which recoupling with Europe, including these balancing platforms, is expected to be delivered will likely coincide with go-live of the Celtic interconnector to France.

7) The **EBGL Local Code Review** is work which was not included in the original ISEM project but is required to ensure the local balancing market arrangements are compliant with the Electricity Balancing Guideline, either through evidence gathering or identifying changes needed to rules and systems.

Description:	Business Case:	Risks, Assumptions and Delivery Impact:
This project is intended to highlight areas where local arrangements are compliant with the guideline, providing evidence for compliance tracking, and to highlight areas where the local arrangements are not compliant with the guideline. Areas of non-compliance	This is mandated by the EU and is needed to be compliant with EBGL (Electricity Balancing Guideline). It creates transparency and an equal playing field, ensuring and explaining	The work would take less than one year and involve analysis, legal review and rules modifications. This requires a moderate level of Subject Matter Expert input. There is a risk that some aspects of the local arrangements

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<sup>3</sup> [reference](#)

feed into discussions on how to become compliant, such as modifications to the local codes, which would happen under this project, and if required change requests or other changes to systems and processes, which would constitute other projects.	how the same arrangements are present in the SEM as in other European markets, or highlighting changes needed to ensure this will be the case.	may be found to not yet be compliant, which would require new projects to be added requiring solution design, build, test and deployment.
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**STATUS UPDATE:** Analysis of compliance of the SEM arrangements with the EBGL requirements has almost completed, and is expected to be submitted to the Regulatory Authorities in early 2021. The RAs are expected to publish a consultation on this analysis. A public consultation for compliance with Article 18 requirements on having terms and conditions in place which cover the required topics was completed in September 2020 and this proposal will be submitted to the RAs in early 2021.

## D. Settlement

The strategy for Settlement is to fix outstanding defects and to focus on system stability and performance improvements. The [Known Issues Report](#) now includes a section which describes the areas being addressed with release details. The two releases delivered in 2020 provided a number of improvements to Settlement particularly related to CFC and BOAs. The June release in 2021 will include important functionality that enables the settlement of repricing.

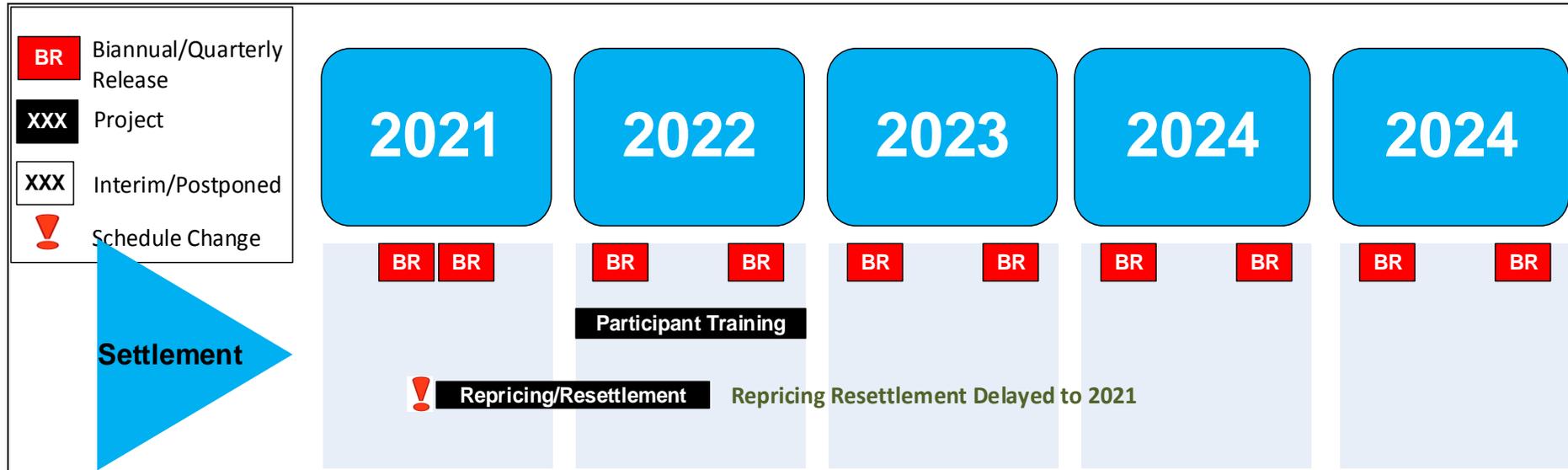


Figure 6: Settlement Roadmap

1) The quarterly release programme continues to deliver fixes for known Settlement defects.

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery Impact:</b>
It was known that the overall ISEM solution went live with a number of defects. Work has been done to address the issues related to performance, specific errors, manual workarounds and data flow that impact on Settlement	This is a major concern for Market Participants who have raised significant numbers of settlement queries.	Fixing defects requires vendor management, development, deployment and test. In addition the delivery of Operational risks relate to parallel running of multiple settlements.

**STATUS UPDATE:** M+4 and M+13 are both operational and hence the project to deliver the functionality and set up the necessary processes has been completed. The deployment of Release G in June 2021 will enable repricing to be settled.

2) A major Repricing change request is due in early 2021 to address outstanding issues which are impacting Resettlement.

<b>Description:</b>	<b>Business Case:</b>	<b>Risks, Assumptions and Delivery Impact:</b>
Resettlement (M+4, M+13 ad-hoc) is a key function but it needs other functional areas such as Repricing to work as key enablers.	This is a major concern for Market Participants who have raised significant numbers of settlement queries. It is a code requirement and there is no alternative to resettlement.	Repricing functionality is required for full resettlement. Operational risks relate to parallel running of multiple settlements.

**STATUS UPDATE:** In order to advance the situation as quickly as possible an interim solution i.e. publication of updated prices and resettlement without the updated flags and tags. This will be washed up after CR158 in post Release G ad-hocs. The enduring solution arrives with release G in June 2020.

- 3) A Learning Management System was used very effectively during the I-SEM project to deliver scaled training to Market Participants. A similar **Participant Training** initiative would help to support learning across the industry. See Page 17 for details.

**STATUS UPDATE:** No change to the schedule for this project. Procurement has not commenced.

## 4. Project Scale & Status

The Roadmap includes a series of projects and initiatives of different sizes. The table below divides the projects into small, medium and large in order to show an estimate of the potential impact on Market Participants anticipated at this stage.

<b><i>Potential Impact on Market Participant Systems</i></b>	<b><i>Explanation</i></b>
Small	Minimal-little development on the Participant side
Medium	Some involvement (minor development testing etc.)
Large	Large scale development required

**Table 2: Project Scales**

<b>Market</b>	<b>Project</b>	<b>Scale</b>	<b>Status</b>
Ex-Ante	Multi NEMO GB (completed)	Small	Complete
Ex-Ante	EBPR <sup>4</sup>	Small	In Progress
Ex-Ante	Participant Training	Small	Yet to commence
Ex-Ante	Registration and Transfer	Small	Brought forward-In Progress
Ex-Ante	Additional Products	Medium	In Progress
Ex-Ante	Website	Medium	In Progress
Ex-Ante	SEM Multi-NEMO Arrangements	Large	Yet to commence
Ex-Ante	EU Coupled Intraday Continuous	Medium	Yet to commence
Ex-Ante	EU Coupled ID Auctions	Medium	Yet to commence

**Table 3: Ex-Ante Project Scale**

<b>Market</b>	<b>Project</b>	<b>Scale</b>	<b>Status</b>
Capacity	State Aid DSU	<sup>5</sup> Large	Interim Complete
Capacity	State Aid X Border	<sup>6</sup> Large	Yet to commence <sup>7</sup>
Capacity	Secondary Trading	Medium	Complete
Capacity	Optimisation	Medium	In Progress
Capacity	Platform Inputs	Medium	In Progress
Capacity	Platform Outputs	Medium	In Progress
Capacity	Participant Training	Small	Yet to Commence

<sup>4</sup> The Evidence Based Performance Review may drive other larger projects

<sup>5</sup> In this case the changes specifically impact certain participant in a significant way

<sup>7</sup> This is now part of CEP implementation and will be subject to further clarity from Regulators following decisions from ACER

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**Table 4: Capacity Project Scale**

Market	Project	Scale	Status
Balancing	Repricing	Medium	In Progress
Balancing	SEM MNA	Large	Yet to commence
Balancing	Participant Training	Small	Yet to commence
Balancing	EBPR	Small	Yet to commence
Balancing	Release Defects/Mods	Medium	In Progress
Balancing	Local Code Review	Small	In Progress
Balancing	Balancing Platform	Large	Yet to commence

**Table 5: Balancing Project Scale**

Area	Project	Scale	Status
Settlements	Resettlements	Small	Complete
Settlements	Participant Training	Small	Yet to commence
Settlements	Release Defects/Mods	Medium	In Progress

**Table 6: Settlement Project Scale**