

Market Operator's Annual Performance Report

October 2023 – September 2024



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1 Introduction

On 1 October 2018 the revised Single Electricity Market (SEM) arrangements went live and 30 September 2024 marked the end of the sixth year of operation.

SONI Ltd. and EirGrid plc, operating as the Single Electricity Market Operator (SEMO) are required under their respective Market Operator (MO) Licenses to provide an annual report on Market Operator Performance to the Regulatory Authorities. The report is published in accordance with section B16.2 of the Trading and Settlement Code, Licence Condition 17(7) of the SONI MO licence and Licence Condition 10(8) of the EirGrid MO Licence.

As part of the SEM Committee's decision on the SEMO Price Control (SEM-21-073), the RAs' stated that it is their preference "to streamline reporting". As part of this streamline, the annual Market Operator Performance report has been updated to also include a summary of SEMO's KPI Performance. As a result, the annual SEMO KPI Outturn Report will not be issued as a separate report.

2 Executive Summary

This SEMO performance report covers the sixth year of operation of the revised SEM arrangements from 01 October 2023 to 30 September 2024.

During this period:

- 17 Parties joined the market, and 75 units went effective in the market.
- There was 1 Market Management System (MMS) release deployed¹.
- 6 Market Operator User Groups (MOUGs) took place; all were held via Microsoft (MS) Teams.
- 42 Thursday Participant calls were held to keep Market Participants informed on Market Operator updates, with the option of additional calls if needed.
- 1997 general queries were received, and 2006 general queries were resolved², with 13 open as of September 2024.
- 182 Formal Settlement queries were raised; 136 have been upheld, 42 not upheld, 2 rejected and 2 withdrawn as of September 2024.
- No Disputes were raised.
- 11 Modifications to the Trading and Settlement Code were raised
- 7 decisions on Modifications to the Trading and Settlement Code were received.

Quarters are defined according to the financial year as follows:

Q1 = 1 October to 31 December

Q2 = 1 January to 31 March

Q3 = 1 April to 30 June

Q4 = 1 July to 30 September

The Key Performance Indicators (KPI) incentives applicable in this period, as set out in SEM-21-073, are:

1. Invoicing
2. SEMO Resettlement Queries
3. Process Rate for Ad Hoc Resettlement to Clear Known Backlog
4. General Queries
5. System Availability
6. Storage Technology Facilitation

¹ Release M was deployed 30 July 2024. As per the [quarterly performance report](#) published 08 February 2024 defect fixes for Release L (L.1) were deployed 14 November 2023. Note the associated hours were included as part of the Market Systems Release L Report.

² Resolved refers to queries resolved within this period, and includes queries raised before this time.

3 Service Delivery

3.1 Trading and Settlement Code Breaches

Breaches of the Trading and Settlement Code were noted in the following area:

Trading and Settlement Code Breaches			
Area		Major ³	Minor ⁴
Data Providers		-	30
Market Participants	Clearing	50	-
	Credit Risk Management	37	-
Market Operator	Balancing Market	1	43
	Clearing	-	-
	Credit Risk Management	8	3
	Other	-	-
Total		96	76

Table 1 – Trading and Settlement Code Breaches

Further details of each of the Trading and Settlement Code breaches noted above are set out in **Appendix A** and **Appendix B**.

³ Major Breach – includes the late publishing of settlement documents, default notices issued for non-payment or similar.

⁴ Minor Breach – occurs when deadlines not met, but without any financial implication to Participants. This includes late posting of settlement runs.

3.2 Balancing Market Settlements

3.2.1 Indicative and Initial Settlement Runs

The following series of tables and graphs represent the publications of Indicative and Initial Settlement runs. Every working day SEMO is obliged to issue Indicative and Initial settlement run statements.

Settlement Runs completed 01/10/2023 – 30/09/2024		
	Indicative	Initial
On Time	329	360
Same Day Late	11	5
> 1 Day Late	26	1
Total runs	366	366

Table 2 – Settlement Runs completed 01/10/2023 – 30/09/2024

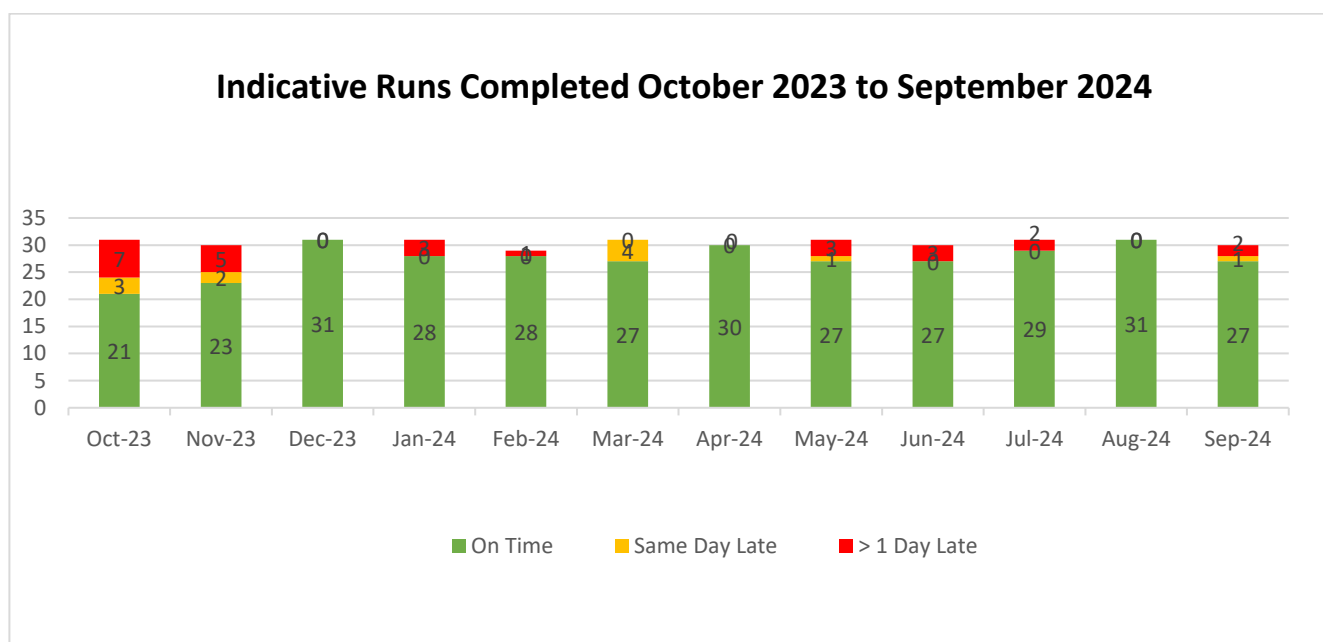


Figure 1 – Indicative Settlement Runs Completed

Further details on publication times can be found in **Appendix B**.

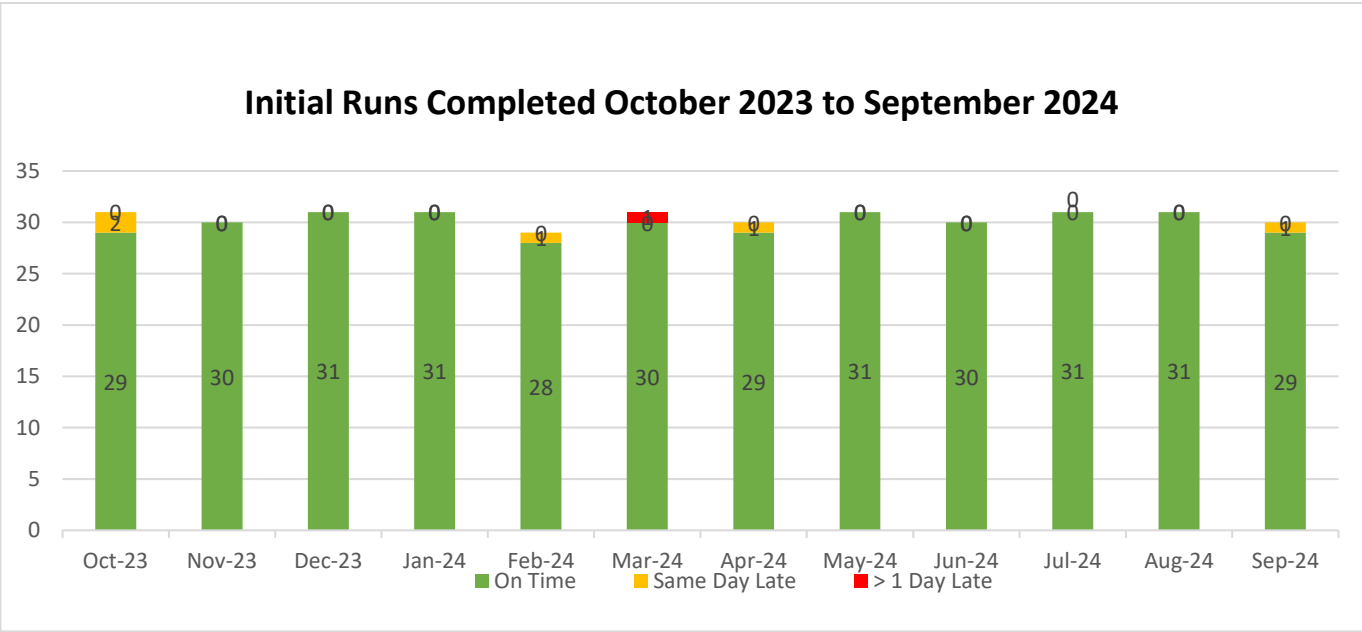


Figure 2 – Initial Settlement Runs Completed

Further details on publication times can be found in Appendix B.

3.2.2 Settlement Documents

The following table represents the publications of Initial Settlement Documents. SEMO is obliged to issue Initial Settlement Documents 5 working days after the last day of the billing period⁵.

Settlement Documents completed 01/10/2023 – 30/09/2024	
	No. of Weeks
On Time	51
Same Day Late	0
> 1 Day Late	1
Total runs	52

Table 3 – Settlement Documents completed 01/10/2023 – 30/09/2024

⁵Up to 2 Settlement Documents issued per week due to KIR #6148

SD Due Date	Settlement Document (SD) Issue	SD Business Days Delayed	Additional Publication Timeline Impacts	Issue Resolution Status
25/03/2024	Settlement Document (SD) creation error caused by Vat Registration data issue submitted into Settlements systems for one PT, which impacted SD vat values for all market participants.	1 Day	Payments In/Out had to be adjusted by one day out for revised Settlement Document publication date.	Vat type was manually corrected in the systems for the one PT, which allowed the Settlement Documents to be published on the <u>26/03/2024</u> . Registration “Data script” also deployed to resolve the issue.

3.2.3 M+4 & M+13 Resettlement

- M+4 resettlement was published as per Trading & Settlement Code weekly M+4 timelines.
- M+13 resettlement was published as per Trading & Settlement Code weekly M+13 timelines.

3.2.4 Ad hoc Repricing and Ad-hoc Resettlement Runs

There was 1 calendar day that was assessed by SEMO against the 5% price materiality threshold, between October 2023 and September 2024: accounting for 14 Imbalance Settlement Periods. The periods assessed fell within July 2022. 100% of the assessed periods met the price materiality threshold; these impacted periods were repriced and the corresponding updated Imbalance Settlement Prices published to the market.

A scheduled “Ad hoc resettlement” program commenced in February 2021 which began ad hoc resettlement from the start of the market, and this has been completed in the 2023-2024 business year. There were 46 billing periods for Ad hoc resettled in the Balancing Market over the course of this year.

BAU ad hoc resettlements for specific weeks have also been processed during the year to address upheld formal queries with high materiality that fall outside the timelines for scheduled resettlement. Over the course of the year, 30 billing periods of these types of ad hoc runs have been published covering both the Balancing and Capacity Markets.

There remain 5 billing periods spanning from 2020 – 2022 that still require resettlement, and we shall be working on solutions for these over the coming months.

3.2.5 Administration of Credit Cover

The SEM has been collateralised according to the Trading & Settlement Code provisions for the whole period from 1st October 2023 to 30th September 2024. At times, the collateralisation may be slightly less than the calculated requirement due to the time allowed by the Trading & Settlement Code for Participants to comply with a Credit Cover Increase Notice (CCIN). During 2023-2024, there were 550 CCIN’s that were fully honoured within the two days allowed as per Trading & Settlement Code, these were resolved.

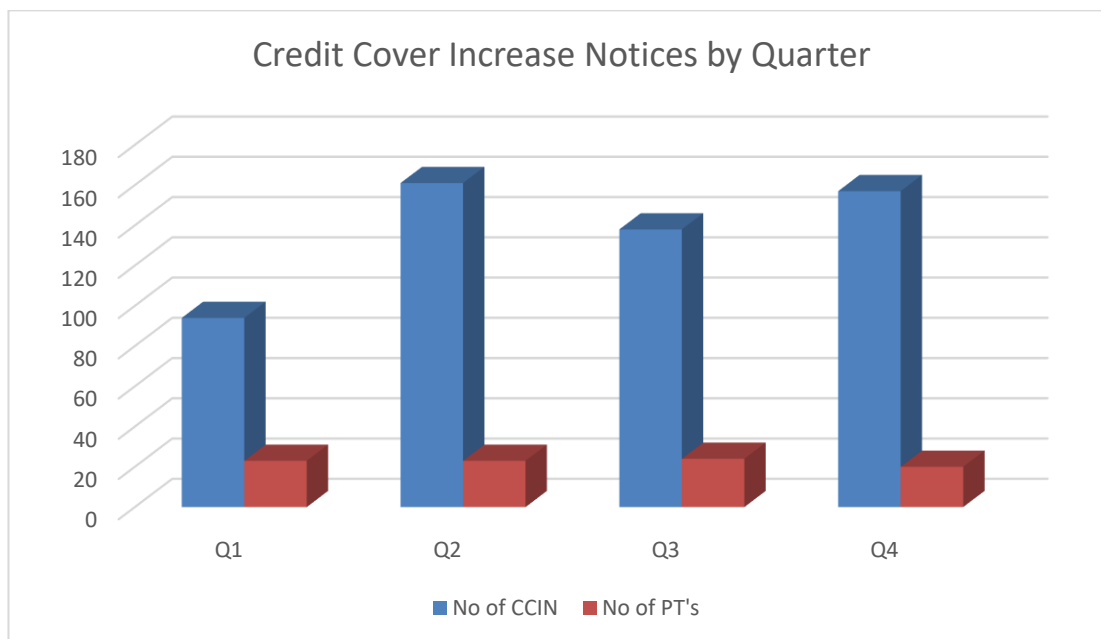


Figure 3 – Credit cover increase notices issued by Quarter

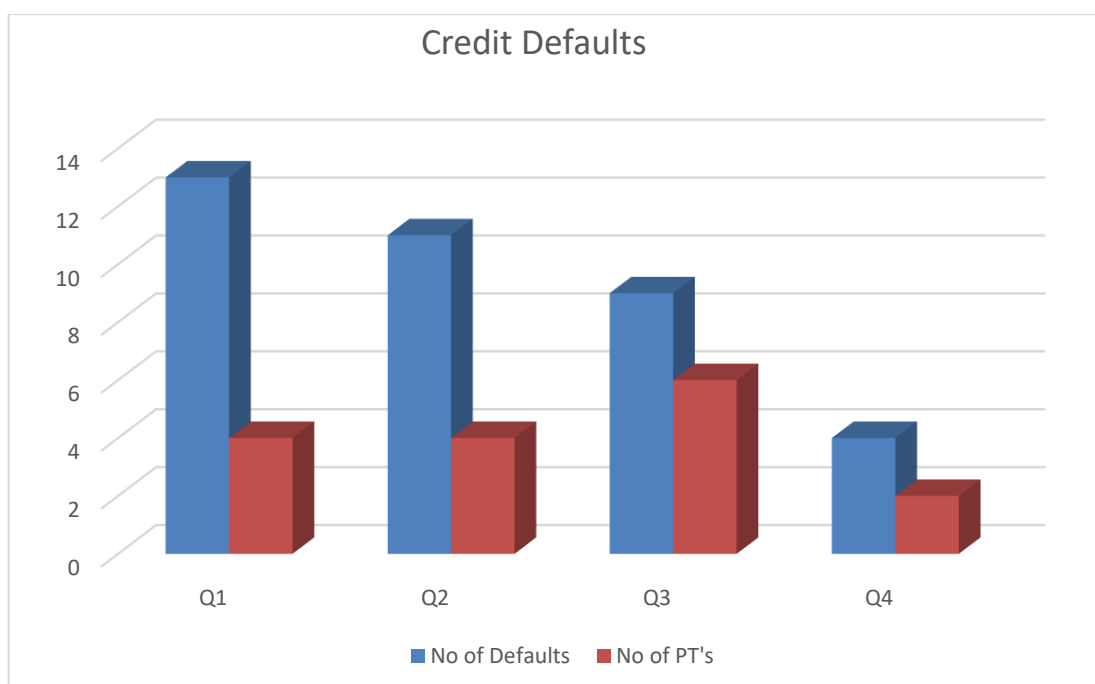


Figure 4 – Default notices issued by Quarter

3.3 Financial Statistics

3.3.1 Cash Flow positions for Balancing Market, Capacity Market and Market Operator Charges Balancing Market

The TSOs are the Balancing Market Operator in the SEM while SEMO is responsible for the settlement of the Balancing Market. The Balancing Market reflects actions taken by the TSOs to keep the system balanced, for example, for differences between the market schedule and actual system demand. It determines the imbalance settlement price for settlement of these balancing actions. This includes any uninstructed deviations from a participant's notified ex-ante position. All data displayed in this section is the trade date data between 1 October 2023 to 30 September 2024.

As this data is extracted from the settlement documents which were published in the aforementioned time span and not the settlement dates contained within the time span, it is not possible to compare the initial runs to re-settlement runs. Consequently, the re-settlement figures below relate to periods which were re-settled over the course of the above date range. Additionally, the re-settlement figures are only the differences (i.e. what a participant was charged/paid in the specific settlement document) contained within the settlement document. It is also not possible to compare the data to SEMO's Regulatory accounts which are based on accounting cut off timelines rather than settlement documents published in the aforementioned time span.

- Positive values indicate Payments were greater than Charges
- Negative values indicate Charges were greater than Payments
- All figures are in Euro
- All charge components which were €0 for the entire year have been excluded.

Balancing Market Cash Flow Position		
Component	Component Name	Payment/Charge
CDISCOUNT	Discount Payment	€190,067,006
CPREMIUM	Premium Payment	€181,651,772
CFC	Fixed Cost Payment or Charge	€104,646,937
CSOCDIFFP	Difference Payment Socialisation Charge	€5,779,720
CIMB	Imbalance Payment or Charge	€1,284,600
CABBPO	Bid Price Only Accepted Bid Payment or Charge	€284,074
CDIFFCWD	Within-day Difference Charge	-€315,846
CTEST	Testing Charge	-€323,465
CCA	Currency Adjustment Charge	-€1,113,946
CAOOPO	Offer Price Only Accepted Offer Payment or Charge	-€2,309,562
CCURL	Curtailed Payment or Charge	-€6,781,060
CUNIMB	Uninstructed Imbalance Charge	-€6,951,040
CREV	Residual Error Volume Charge	-€28,760,974
CIMP	Imperfections Charge	-€443,028,084
Total		-€5,869,866

Table 4 – Balancing Market Cash Flow Position

Capacity Market

The TSOs are the Capacity Remuneration Mechanism (CRM) Delivery body in the SEM while SEMO is responsible for the settlement for the Capacity Market. The Capacity Market is designed to help ensure that the generation capacity in Ireland and Northern Ireland (including Storage, Demand Side Units and Interconnector capacity) is sufficient to meet demand and that the regulatory approved generation adequacy standard is satisfied.

Capacity Market Cash Flow Position		
Component	Component Name	Payment/Charge
CCP	Capacity Payment	€393,489,375
CCC	Capacity Charge	-€444,593,863
Total		-€51,104,488

Table 5 – Capacity Market Cash Flow Position

Market Operator Charges

Market Operator charges are used to recover the costs to SEMO of administering the market as provided for by the SEM Committee (SEMC) under the relevant Price Control.

Market Operator Charges		
Component	Component Name	Payment/Charge
CMOAV	Fixed Market Operator Charge Supplier Units	-€30,322
CMOAU	Fixed Market Operator Charge Generator Units	-€1,232,544
CVMO	Variable Market Operator Charge	-€22,590,879
Total		-€23,853,744

Table 6 – Market Operator Charges

3.3.2 Financial Changes with re-settlement runs

There were 52 billing weeks for M+4, 52 billing weeks for M+13 and 60 billing weeks for Ad hoc re-settled in the Balancing Market over the course of the 2023-2024 financial year. For CRM and MO, there was 12 & 13 billing periods (months) re-settled for M+4 respectively, 12 billing periods each for M+13 CRM and M+13 MO, 18 billing periods for Ad hoc CRM and 1 billing period for Ad hoc MO. Within all of these re-settlements, there were changes to numerous charges and payments as set out below.

These figures represent the differences between the previous settlement run and the re-settlement run. For example, if a unit was charged €100 in CIMB in Initial settlement and this was re-calculated to be €110 in M+4, this would result in a delta of €10 which would be captured in the below tables. Tables 7, 8 and 9 show the overall payments and charges along with the break down per respective re-settlement run for all re-settlements.

All data displayed in this section is extracted from all settlement documents published between 1 October 2023 to 30 September 2024.

Trade date range for each run:

- M+4: 04/06/2023 – 01/06/2024
- M+13: 04/09/2022 – 02/09/2023
- Ad hoc: 13/01/2019 – 19/01/2019, 10/03/2019 – 16/03/2019, 30/06/2019 – 06/07/2019, 27/10/2019 – 14/12/2019, 05/01/2020 – 11/01/2020, 19/01/2020 – 25/01/2020, 12/04/2020 – 18/04/2020, 21/06/2020 – 04/07/2020, 25/10/2020 – 31/10/2020, 06/12/2020 – 19/12/2020, 03/01/2021 – 09/01/2021, 21/02/2021 – 27/02/2021, 27/06/2021 – 03/07/2021, 11/07/2021 – 24/07/2021, 01/08/2021 – 07/08/2021, 15/08/2021 – 28/08/2021, 12/09/2021 – 18/09/2021, 17/10/2021 – 23/10/2021, 31/10/2021 – 06/11/2021, 06/02/2022 – 09/04/2022, 12/06/2022 – 18/06/2022, 26/06/2022 – 02/07/2022, 24/07/2022 – 30/07/2022, 27/11/2022 – 10/12/2022, 01/01/2023 – 14/01/2023, 11/06/2023 – 17/06/2023, 27/08/2023 – 09/09/2023, 17/09/2023 – 14/10/2023, 19/11/2023 – 25/11/2023, 18/02/2024 – 24/02/2024, 09/06/2024 – 22/06/2024, 07/07/2024 – 13/07/2024

Balancing Market Resettlement				
Component	M4	M13	AH	Grand Total
CIMB	-4,112,045	23,736,698	1,475,326	21,099,979
CIMP	561,880	3,872,738	226,126	4,660,744
CFC	758,021	-22,259	2,447,153	3,182,916
CPREMIUM	91,491	399,142	799,018	1,289,651
CDISCOUNT	141,564	200,852	851,189	1,193,604
CUNIMB	504,090	174,678	118,144	796,912
CAOPO	1,110	8,198	60,211	69,518
CSOCDIFFP	9,476	0	60	9,536
CCA	-481	4,990	267	4,776
CABBPO	11,243	-13,483	5,834	3,594
CEADSUIMB	0	0	0	0
CSHORTDIFFP	0	0	0	0
CREIMDIFFP	0	0	0	0
CDIFFPDA	0	0	0	0
CDIFFCDA	0	0	0	0
CDIFFPID	0	0	0	0
CEADSUIDT	0	0	0	0
CEADSUDA	0	0	0	0
CDIFFPIMB	0	0	-1	-1
CDIFFCNP	0	0	-12	-12
CTEST	-106	0	-339	-445
CDIFFCWD	-2,979	-4,845	-7,000	-14,824
CCURL	-37,213	-14,726	1,864	-50,075
CREV	-181,987	-110,003	885	-291,105
Grand Total	-2,255,936	28,231,979	5,978,725	31,954,768

Table 7 – Balancing Market Resettlement

Capacity Market Resettlement				
Component	M4	M13	AH	Grand Total
CCP	301,941	49,604	4,805,414	5,156,959
CCC	-110,259	1,816,472	21,270	1,727,483
Grand Total	191,682	1,866,076	4,826,684	6,884,442

Table 8 – Capacity Market Resettlement

Market Operator Charges Resettlement				
Component	M4	M13	AH	Grand Total
CVMO	11,247	80,698	296	92,241
Grand Total	11,247	80,698	296	92,241

Table 9 – Market Operator Charges Resettlement

3.4 Imbalance Price

There are two types of Imbalance Price referred to in this section; the Imbalance Price which is the price associated with a 5 Minute Imbalance Pricing Period and, secondly, an Imbalance Settlement Price which is calculated as the average of six “5-Minute Imbalance Prices” for a corresponding 30- minute Imbalance Settlement Period.

Figure 5 shows the Imbalance Settlement Prices for the entire year, from October 2023 to September 2024. All system calculated Imbalance Settlement Prices are published on this graph; both the Market Back up Price and the 30-minute average of the Imbalance Price. The average Imbalance Settlement Price during this annual period was €101.94. The maximum Imbalance Settlement Price was €471.88, and the minimum was €-139.71.

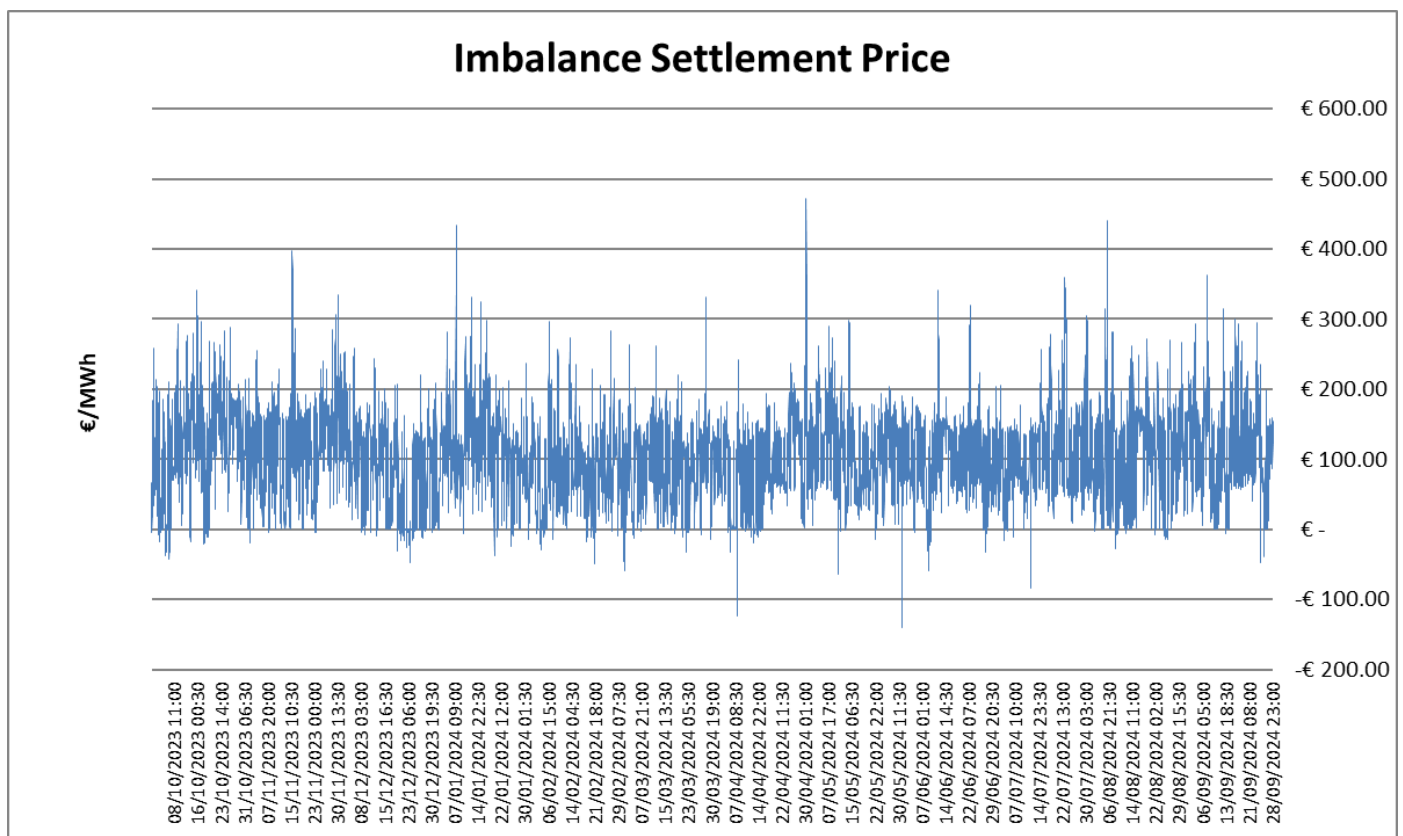


Figure 5 – Imbalance Settlement Price

Figure 6 shows the Quantity Weighted Ex-Ante Price as a comparator to the Imbalance Settlement Price. The Quantity Weighted Ex-Ante Price is the value used by SEMO as the Market Back Up Price, should the Market Operator not be able to calculate an Imbalance Settlement Price; based on the average of the six Imbalance Prices for a given Imbalance Settlement Period.

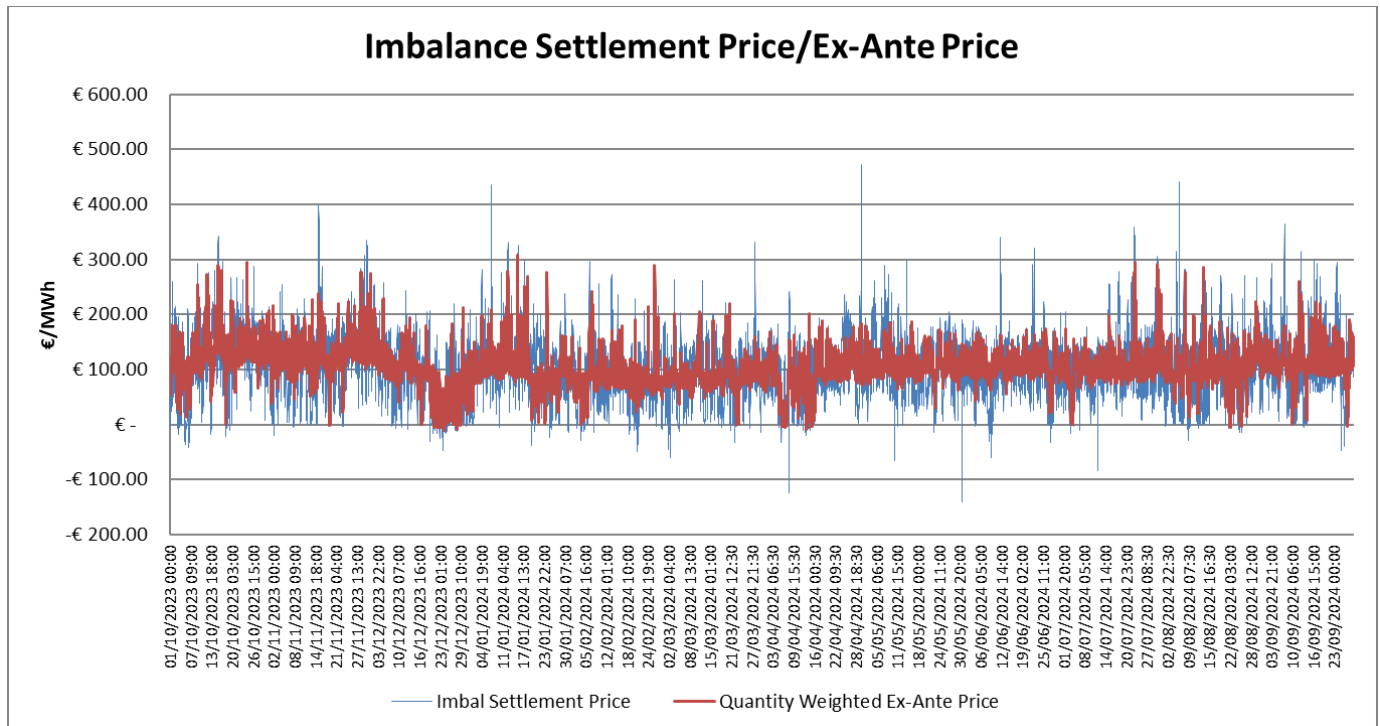


Figure 6 – Imbalance Settlement Price & Quantity Weighted Ex-Ante Price Comparison

Figure 7 highlights the monthly Highest, Lowest and Average half-hour Imbalance Prices for the period October 2023 to September 2024.

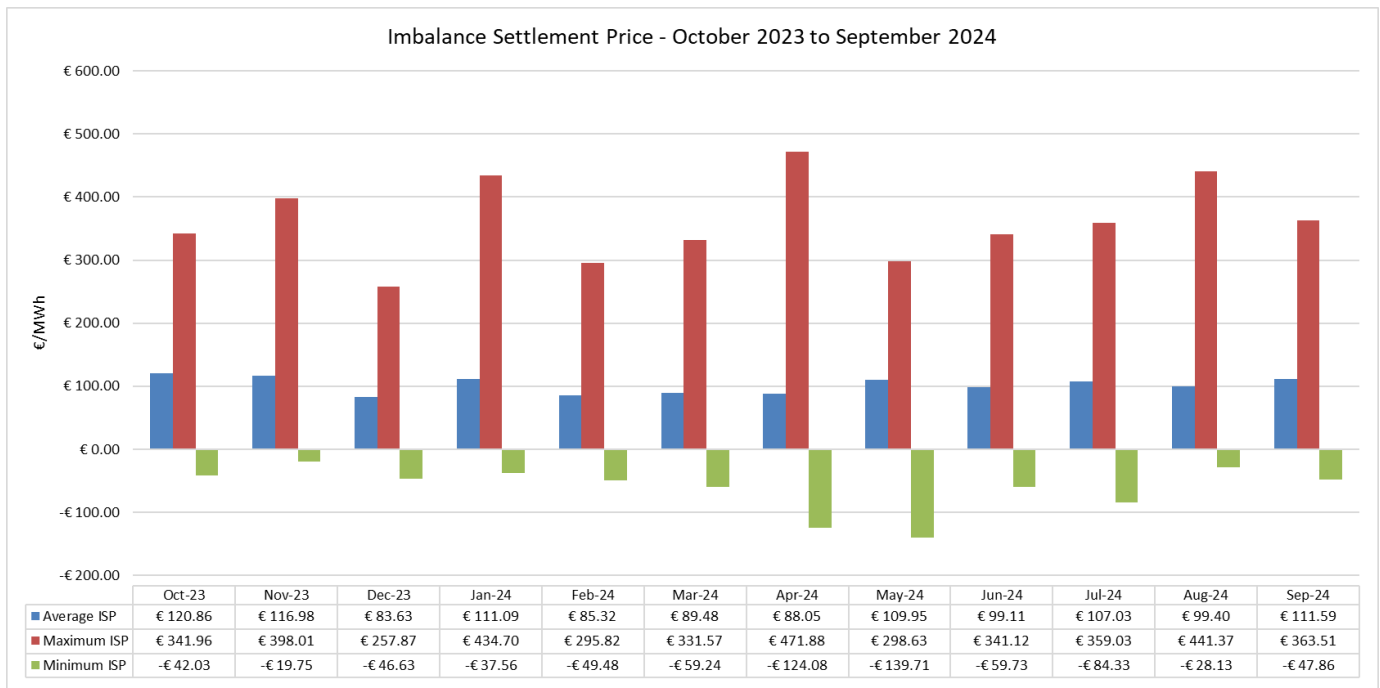


Figure 7 – Highest, Lowest and Average Imbalance Prices

3.4.1 Exchange Rate

The SEM is a dual currency market. Units based in Northern Ireland submit their Offer Data in GBP. All GBP Offer Data is converted to EUR as part of the Balancing Market price setting process. The GBP to EUR exchange rate is captured below in **Figure 8**.

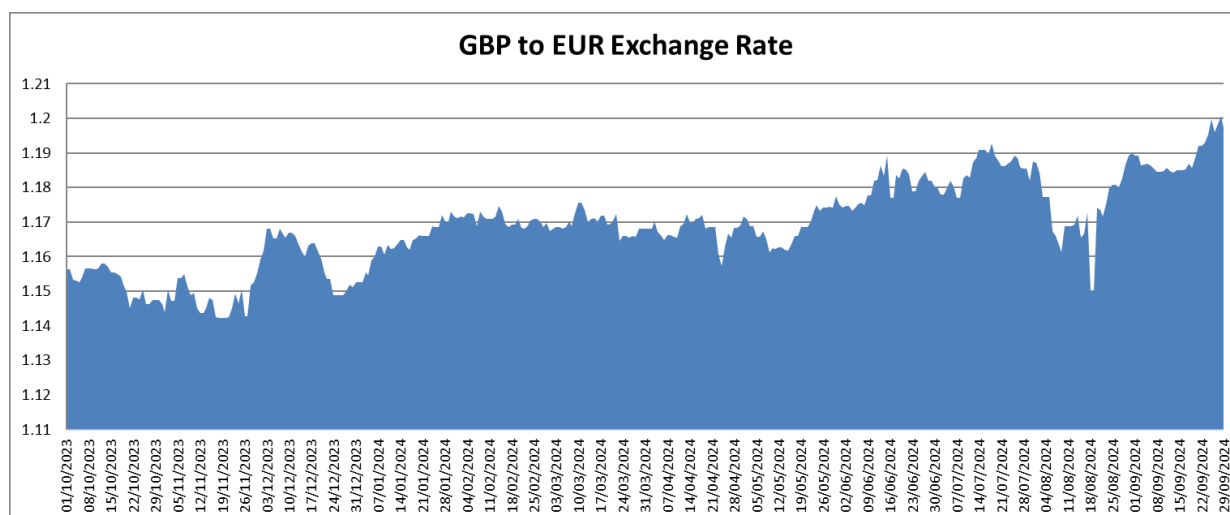


Figure 8 – GBP to EUR exchange rate

3.4.2 Imbalance Price Generation and Back Up Price

Figure 9 below highlights how many instances in which the Market Back Up Price was published for an Imbalance Settlement Period. This figure also includes the Ex-Ante Backup Price which is used as a contingency in the event of failure of the automatic Market Back Up Price.

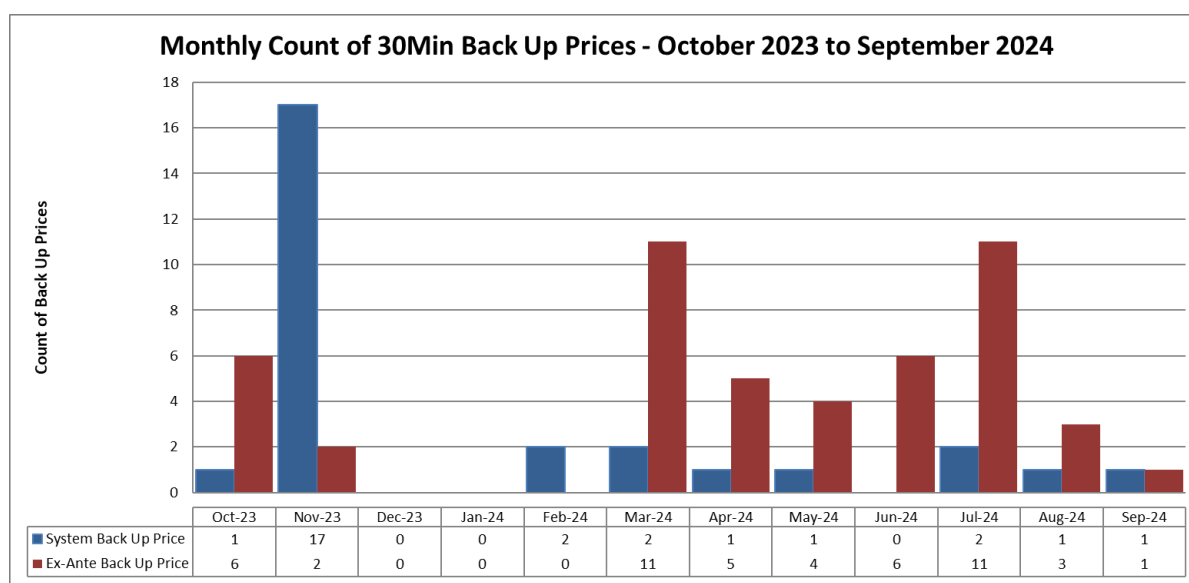


Figure 9 – Number of 30 Minute Backup Prices used October 2023 to September 2024

During the year, there was a total of 77 Market Back Up Prices applied (both Ex-Ante and System Back Up Prices), all 77 Market Back Up Prices were applied due to planned or emergency outages of the Imbalance Pricing application.

Figure 10 highlights how many 5-minute Imbalance Prices were missed in each calendar month. If an Imbalance Price is missed, the system will apply the corresponding Market Back Up Price to that Imbalance Pricing Period.

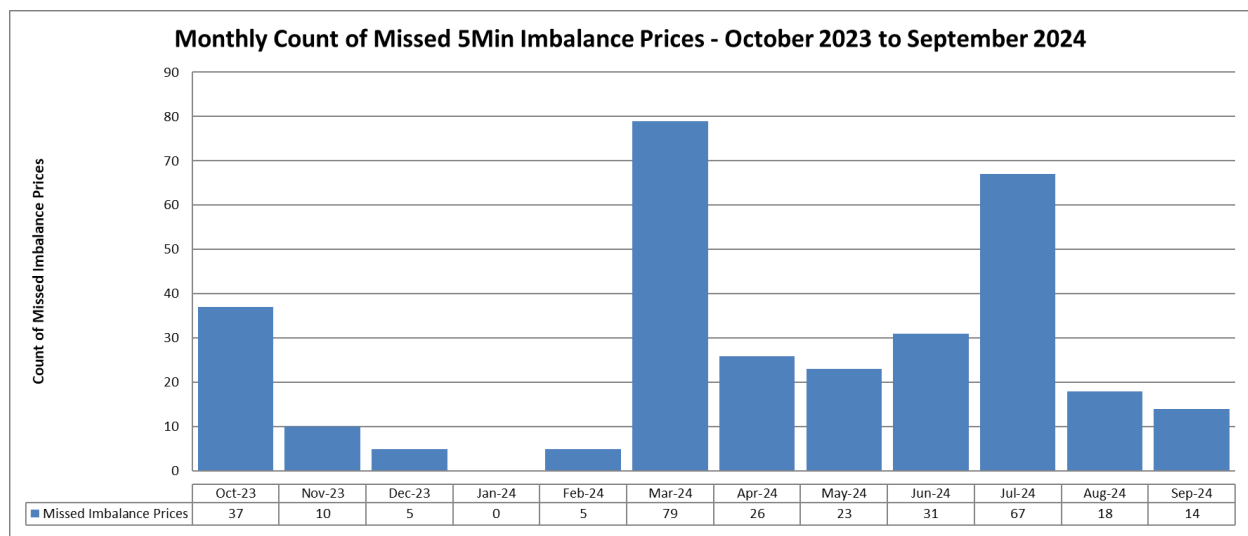


Figure 10 – Summary of 5 minute Missed Imbalance Prices used October 2023 to September 2024

Figure 11 captures the instance where an Imbalance Price was replaced with the Market Back Up Price, which is used as the result of planned or unplanned outages to the Imbalance Pricing calculation.

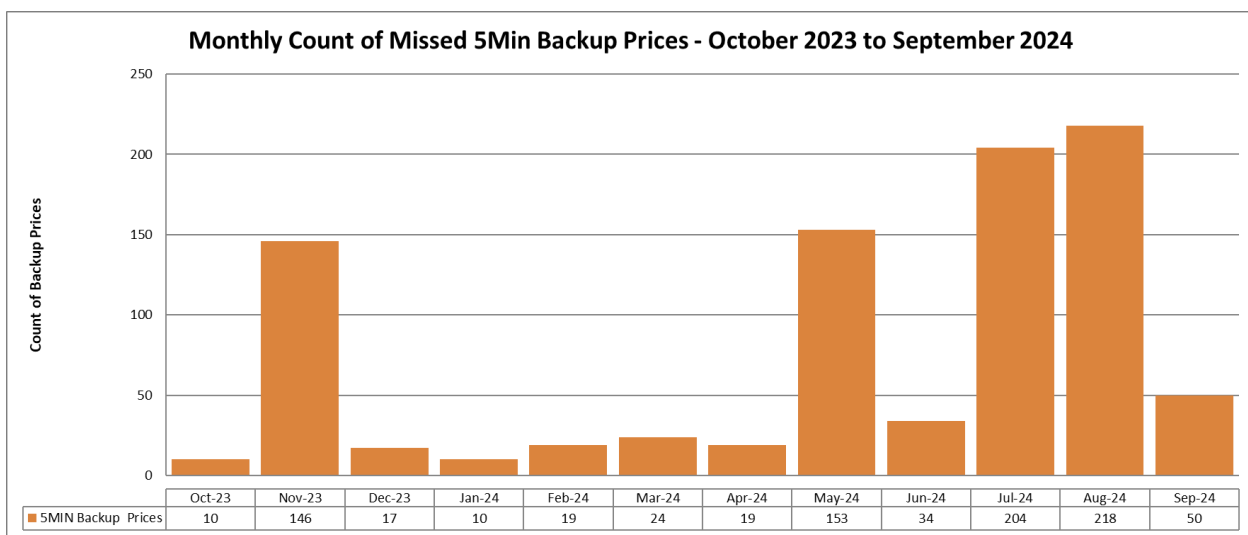


Figure 11 – Number of 5 minute Back Up Prices used October 2023 to September 2024

Supporting information for Figure 10 and Figure 11 can be found in **Appendix D**.

4 Central Systems

4.1 System Availability

Table 10 gives the system availability value for the period of October 2023 to September 2024 as well as the breakdown per system.

System / Application	Annual Availability %
Settlements (CSB)	100%
MI	99.98%
MA	99.85%
Reporting (reports publication in the MPI)	99.81%
Website (availability)	100%
Average System Availability	99.93%

Table 10 – Annual System Availability

4.2 Limited Communication Failure (LCF), General Communication Failure (GCF) and General System Failure (GSF)

- There were no Limited Communication Failure (LCF) requests from October 2023 to September 2024.
- There was one General Communication Failure (GCF) from October 2023 to September 2024.
 - There was a GCF during the month of March 2024. For the duration of the failure, elements of the MO's isolated Market system were operational, however, the Market System could not process all market data. MPI and Physical Notification (PN) submissions were not available to all Parties. Management have represented that Market Operator obligations under the Trading and Settlement Code, in relation to calculation of payments, charges and Settlement were unaffected, no deadlines were missed.
- There was no General System Failure (GSF) from October 2023 to September 2024.

4.3 System Releases

Please see below the Market System Release deployed to the Production environment in the period 1 October 2023 to 30 September 2024.

- Release M – Deployed to production on the 30th of July 2024

5 Modifications

5.1 Balancing Market – Trading & Settlement Code Modification Management

The tables that follow give an overview of the activity that has taken place between 1 October 2023 and 30 September 2024. Table 11 shows the dates and number of Modifications Committee Meetings, Working Groups and Industry Calls that took place over this period.

Meeting	Date	Location
119	19 th October 2023	MS Teams
Industry Call (Mod_11_23)	8 th November 2023	MS Teams
Industry Call (Mod_11_23)	15 th November 2023	MS Teams
120	5 th December 2023	MS Teams
Industry Call (Mod_13_23)	17 th January 2024	MS Teams
Industry Call (Mod_13_23)	24 th January 2024	MS Teams
121	8 th February 2024	MS Teams
122	23 rd April 2024	MS Teams
123	20 th June 2024	MS Teams
124	22 nd August 2024 (Cancelled)	MS Teams
124B	19 th September 2024	MS Teams

Table 11 – Balancing Market: Trading & Settlement Code Modifications Committee Meetings

At the Modifications Committee Meetings, decisions are made regarding progressing various Modification Proposals. Table 12 gives an outline of the amount of activity that has taken place over this annual period.

Modification Proposal Activity	Total
Raised	11
Alternative Versions raised	3
Withdrawn	3
Deferred	5
Extension Granted	0
Recommended for Approval	8
Recommended for Rejection	0
Further Work Required	0
RA Decision Approved	5
RA Decision Rejected	2
RA Direction	0

Table 12 – Modification Proposal Activity

5.2 Publication of the Trading & Settlement Code

Version 29.0 of the Trading & Settlement Code was published on the 24th of October 2024 following an update to the Market Rules section on the SEMO Website. 4 Modification Proposals were included in this version, which are noted in the version history of the Trading & Settlement Code. Publication was delayed due to website upgrades to the Market Rules section of www.sem-o.com.

5.3 2024 – Modifications Committee Elections

Modifications Committee Annual Elections commenced in June with a call for nominations for five expiring positions on the Modifications Committee. The following nominees were automatically elected to the Modifications Committee due to the minimum number of nominees being made:

Expired Member	New Member	Position
Robert McCarthy	Cormac Daly	DSU Member
David Caldwell	David Caldwell	Supplier Member
Bryan Hennessy	Bryan Hennessy	Supplier Member
Paraic Higgins	Andrew Kelly	Generator Member
Stacy Feldmann	Stacy Feldmann	Generator Member

The election for Chair and Vice-Chair was scheduled following this with Stacy Feldmann appointed as Chair and Andrew Burke appointed as Vice Chair.

5.4 Balancing Market – Modifications Process Development

Modification Proposals were considered at bi-monthly Modifications Committee Meetings or extraordinary meetings, Working Groups and industry calls as required, held via Microsoft Teams (see Table 11). Full details of all modifications progressed during the year are available in the [Balancing Market Modifications section](#) of the SEMO website.

The Trading and Settlement Code Modifications area continues to process significant levels of activity since I-SEM going live in October 2018; however, the trend for proposals is to target smaller enhancements and refinements or longer-term re-design projects. Because of the greater impact of the latter, these types of proposals tend to have a longer lifespan over a larger number of industry meetings requiring a higher level of analysis and impact assessments. This is confirmed by the number of additional industry calls that have been necessary to progress issues.

The main themes that characterized the past year were:

- A number of meetings and industry calls were dedicated to Modifications arising from the Scheduling and Dispatch project for the integration of Batteries and Non-Priority Dispatch Renewables.
- SEMO preparatory action for Art.13.7 of the Clean Energy Package raised as 'Urgent' as it had to happen following the approval of the Imperfection tariff in early September and the effective date of the Imperfection Tariff on the 1st of October
- And several Modifications were raised from SEMO to close off minor inconsistencies, defects or housekeeping amendments to the Trading and Settlement Code.

List of Modifications over the past year:

Recommended for Approval

- Mod_09_23 Correction to the calculation of SDPIMB
- Mod_10_23 Market Compensation for Firm Curtailment Look Back Period
- Mod_11_23 SDP_02 Battery Integration
- Mod_13_23 SDP_01 Treatment of Non-Priority Dispatch Renewables
- Mod_02_24 SDP_02 Battery Integration V3
- Mod_04_24 SEMO Housekeeping 2024
- Mod_05_24 Clarification of Start Up Payment Conditions
- Mod_06_24 SEMO preparatory actions for ART13.7 CEP

RA Decision Approved

- Mod_17_22 System Action Repricing
- Mod_09_23 Correction to the calculation of SDPIMB
- Mod_04_24 SEMO Housekeeping 2024
- Mod_05_24 Clarification of Start Up Payment Conditions
- Mod_06_24 SEMO preparatory actions for ART13.7 CEP

RA Decision Rejected

- Mod_07_22 Indexation to Calculation of Capacity Payments for New Capacity
- Mod_01_23 Remuneration of Commissioning Unit

Withdrawn

- Mod_12_23 Extension to timing for Execution of Deeds
- Mod_01_24 Inclusion of Difference Charges in Calculation of Make Whole Payment Revenue
- Mod_03_24 Update of Difference Charge Calculation Logic

6 General Market Information

6.1 Query Management

The statistics presented in Table 13 – General Queries cover the period of 1 October 2023 to 30 September 2024.

Received	Resolved	Open
1997	2006	13

Table 13 – General Queries - October '23 – September '24

Definitions

- Received refers to the queries raised between 01 October 2023 and 30 September 2024.
- Resolved refers to queries resolved within this period, and includes queries raised before this time.
- Open refers to queries raised but not resolved as of 30 September 2024.

6.2 Settlement Queries

There were 182 Formal Settlement queries raised from October 2023 – September 2024; 136 have been upheld, 42 not upheld, 2 rejected and 2 withdrawn as of September 2024.

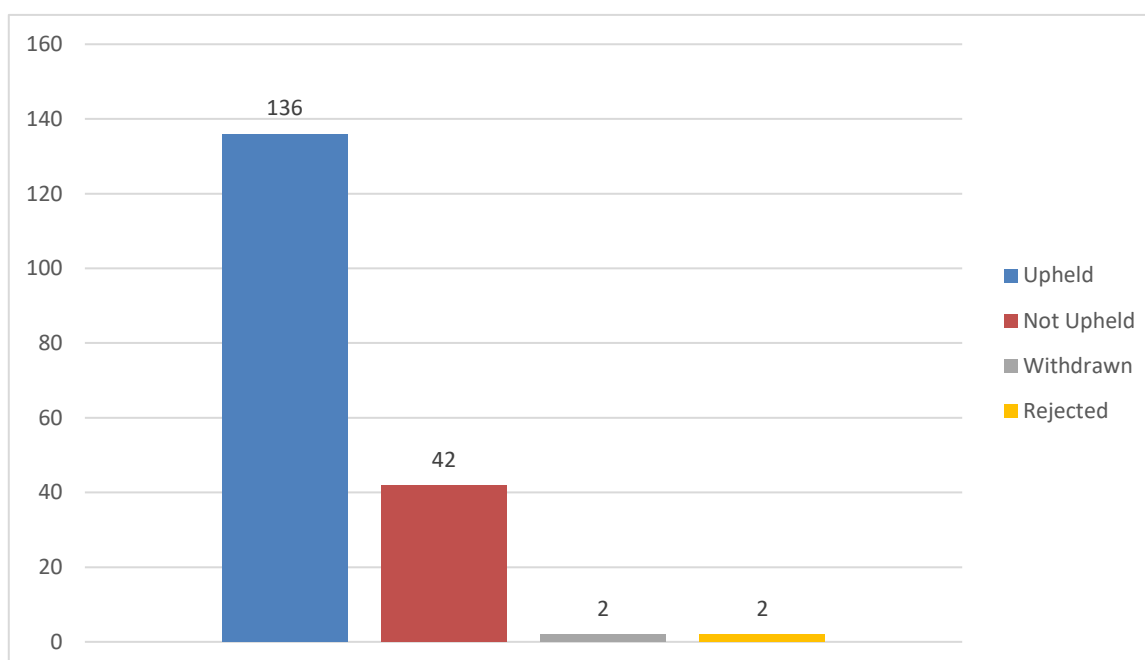


Figure 12 – Settlement Queries - 01 October 2023 – 30 September 2024

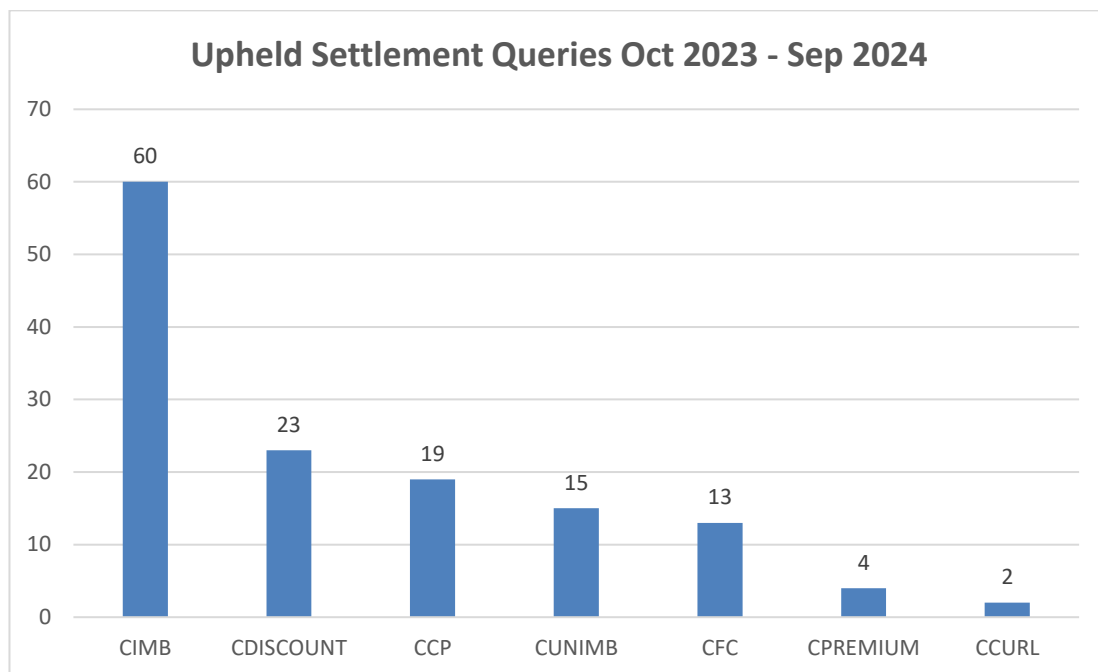


Figure 13 – Upheld Settlement Queries by Query Type

Further Details on Settlement queries that have been upheld can be found in **Appendix C**.

Unresolved Queries

- No queries raised during October 2023 – September 2024 were unresolved.

6.3 Disputes

There were no Disputes raised between 1 October 2023 to 30 September 2024.

7 Joining and Terminating Parties and Units

Between 01 October 2023 to 30 September 2024; 17 Parties joined the Market, and 75 units went effective in the Market. Please see below for further details.

The below Parties joined the Market between 01 October 2023 to 30 September 2024:

Party Name	Party ID	Effective date
Elgin Trading and Optimisation Services Limited	PY_034160	18/10/2023
Green.ai ApS	PY_034164	06/12/2023
Tullabeg Solar Limited	PY_034171	13/12/2023
EP NI Energy Limited	EP NI Energy Limited	09/01/2024
JWM Energia sp. z o.o.	PY_034161	24/01/2024
Trisolaris AG	PY_034170	17/01/2024
Quent ApS	PY_034176	10/04/2024
Ares Market Services Limited	PY_034165	17/04/2024
Aarhus Energy A/S	PY_034178	29/05/2024
Share Energy Trading Ltd	PY_034175	19/06/2024
Timahoe North Supply DAC	PY_034180	28/08/2024
Cobblestone Energy DMCC	PY_034187	04/09/2024
Arosource ApS	PY_034188	10/07/2024
Derrinlough Wind Farm Supply DAC	PY_034189	04/09/2024
EirGrid (as Interconnector Administrator for Greenlink)	IA_GRNLK	31/07/2024
Greenlink Interconnector	IO_GRNLK	31/07/2024
EirGrid (as TSO for Greenlink)	TSO_GRNLK	31/07/2024

Table 14 – Parties who joined the market October 2023 – September 2024

The following units went effective in the Market between 01 October 2023 to 30 September 2024:

Party Name	Party ID	Participant ID	Unit ID	Effective date
ESB	PY_000030	PT_400030	GU_403620	11/10/2023
ESB	PY_000030	PT_400030	SU_400382	11/10/2023
ESB	PY_000030	PT_400030	GU_406510	29/11/2023
ESB	PY_000030	PT_400030	SU_400395	29/11/2023
ESB	PY_000030	PT_400030	GU_403680	06/12/2023
ESB	PY_000030	PT_400030	SU_400384	06/12/2023
ESB	PY_000030	PT_400030	GU_403570	06/12/2023
ESB	PY_000030	PT_400030	SU_400392	06/12/2023
ESB	PY_000030	PT_400030	GU_403610	13/12/2023
ESB	PY_000030	PT_400030	SU_400383	13/12/2023
ESB	PY_000030	PT_400030	GU_403600	13/12/2023
ESB	PY_000030	PT_400030	SU_400387	13/12/2023
Huntstown Power Company Limited	PY_000033	PT_400035	GU_405860	13/12/2023
Power NI Limited	PY_000035	PT_500028	AU_500141	08/11/2023
Power NI Limited	PY_000035	PT_500028	AU_500142	08/11/2023
Energia Customer Solutions Limited	PY_000043	PT_400043	GU_406530	22/11/2023
Energia Customer Solutions Limited	PY_000043	PT_400043	SU_400380	13/12/2023
Orsted Ireland Green Energy Limited	PY_000068	PT_400062	GU_404200	25/10/2023
Energy Trading Ireland Limited	PY_000113	PT_500067	DSU_501610	25/10/2023
Energy Trading Ireland Limited	PY_000113	PT_500067	SU_500093	25/10/2023

Energy Trading Ireland Limited	PY_000113	PT_500067	DSU_503490	25/10/2023
Energy Trading Ireland Limited	PY_000113	PT_500067	SU_500314	25/10/2023
Microsoft Ireland Energy Ltd	PY_000176	PT_400220	GU_405840	11/10/2023
Statkraft Markets GmbH	PY_034046	PT_402540	SU_400388	11/10/2023
Elgin Trading and Optimisation Services Limited	PY_034160	PT_402627	AU_400146	18/10/2023
Elgin Trading and Optimisation Services Limited	PY_034160	PT_402627	SU_400396	25/10/2023
Green.ai ApS	PY_034164	PT_502551	AU_500136	06/12/2023
Tullabeg Solar Farm Limited	PY_034171	PT_402630	GU_406470	13/12/2023
Bord Gais Energy Limited	PY_000027	PT_400028	GU_406560	10/01/2024
ESB	PY_000030	PT_400030	GU_404920	10/01/2024
ESB	PY_000030	PT_400030	SU_400393	10/01/2024
iPower Solutions Limited	PY_000093	PT_402574	DSU_403650	13/03/2024
iPower Solutions Limited	PY_000093	PT_402574	SU_400364	13/03/2024
Endeco - Wirelite Sensors Limited	PY_000126	PT_400133	AU_400157	28/02/2024
Captured Carbon Limited	PY_000146	PT_500112	GU_504230	14/02/2024
Microsoft Ireland Energy Limited	PY_000176	PT_400220	PT_400220	17/01/2024
Microsoft Ireland Energy Limited	PY_000176	PT_400220	GU_406580	24/01/2024
Statkraft Markets GmbH	PY_034046	PT_402540	GU_406570	13/03/2024
Statkraft Markets GmbH	PY_034046	PT_402540	GU_406540	27/03/2024
Convex Energy GmbH	PY_034067	PT_402558	AU_400153	17/01/2024

Convex Energy GmbH	PY_034067	PT_402558	AU_400154	17/01/2024
Convex Energy GmbH	PY_034067	PT_402558	AU_400155	17/01/2024
EP NI ENERGY LIMITED	PY_034134	PT_502539	GU_504110	10/01/2024
EP NI ENERGY LIMITED	PY_034134	PT_502539	GU_504120	27/03/2024
JWM Energia sp. z o.o.	PY_034161	PT_502548	AU_500133	24/01/2024
Trisolaris AG	PY_034170	PT_502555	AU_500139	17/01/2024
Quent ApS	PY_034176	PT_502559	AU_500144	10/04/2024
Endeco - Wirelite Sensors Limited	PY_000126	PT_400133	GU_406600	17/04/2024
Endeco - Wirelite Sensors Limited	PY_000126	PT_400133	SU_400399	17/04/2024
Ares Market Services Limited	PY_034165	PT_502552	AU_500137	17/04/2024
Power NI	PY_000035	PT_500028	GU_504240	01/05/2024
Flogas Enterprise Solutions Limited	PY_000054	PT_500055	GU_504260	22/05/2024
Aarhus Energy A/S	PY_034178	PT_502560	AU_500145	29/05/2024
Flogas Enterprise Solutions Limited	PY_000054	PT_400051	SU_400403	12/06/2024
Share Energy Trading Ltd	PY_034175	PT_502558	SU_500316	19/06/2024
EirGrid (as Interconnector Administrator for Greenlink)	IA_GRNLK	IA_GRNLK	IEU_ROIGRLK	31/07/2024
Greenlink Interconnector	IO_GRNLK	IO_GRNLK	I_ROIGRLK	31/07/2024
Yuno Limited	PY_000087	PT_400080	SU_400400	10/07/2024
Yuno Limited	PY_000087	PT_400080	SU_400401	10/07/2024
Microsoft Energy Ireland Limited	PY_000176	PT_400220	GU_407330	25/09/2024
Microsoft Energy Ireland Limited	PY_000176	PT_400220	GU_407340	31/07/2024

European Commodity Clearing	PY_000254	PT_400310	AU_400149	31/07/2024
Cloncreen Wind Farm Supply DAC	PY_034137	PT_402608	GU_407320	21/08/2024
FluxSmart Ltd	PY_034139	PT_402609	AU_400164	14/08/2024
FluxSmart Ltd	PY_034139	PT_402609	AU_400165	14/08/2024
Quent ApS	PY_034176	PT_502559	AU_500152	10/07/2024
Quent ApS	PY_034176	PT_502559	AU_500153	10/07/2024
Timahoe North Supply DAC	PY_034180	PT_402633	GU_406590	28/08/2024
Timahoe North Supply DAC	PY_034180	PT_402633	SU_400398	04/09/2024
Arosource ApS	PY_034188	PT_502564	AU_500148	10/07/2024
Derrinlough Wind Farm Supply DAC	PY_034189	PT_402639	GU_406620	04/09/2024
Derrinlough Wind Farm Supply DAC	PY_034189	PT_402639	SU_400402	31/07/2024
EirGrid (as TSO for Greenlink)	TSO_GRNLK	TSO_GRNLK	IRCU_ROIGRLK	31/07/2024

Table 15 - Registrations October 2023- September 2024

The below 22 units de-registered from the Market between 1 October 2023 and 30 September 2024:

Party Name	Party ID	Participant ID	Unit ID	Effective date
ESB	PY_000030	PT_400030	GU_400180	29/11/2023
ESB	PY_000030	PT_400030	GU_400630	25/10/2023
ESB	PY_000030	PT_400030	SU_400139	29/11/2023
EP Kilroot Limited	PY_000070	PT_500045	GU_500822	04/10/2023
EP Kilroot Limited	PY_000070	PT_500045	GU_500823	04/10/2023
Statkraft Markets GmbH	PY_034046	PT_402540	GU_405120	11/10/2023
LCC POWER LIMITED	PY_000099	PT_500057	GU_503310	14/02/2024
Statkraft Markets GmbH	PY_034046	PT_402540	GU_405900	17/01/2024
Convex Energy GmbH	PY_034067	PT_402558	AU_400139	17/01/2024
Convex Energy GmbH	PY_034067	PT_402558	AU_400140	17/01/2024
Convex Energy GmbH	PY_034067	PT_402558	AU_400150	17/01/2024
Energia Customer Solutions Limited	PY_000043	PT_400043	GU_400650	17/04/2024
Gruig Wind Farm Limited	PY_000074	PT_500047	GU_500790	01/05/2024
SSE Generation Ireland Ltd	PY_000071	PT_400064	GU_400750	11/09/2024
SSE Generation Ireland Ltd	PY_000071	PT_400064	GU_400751	11/09/2024
SSE Generation Ireland Ltd	PY_000071	PT_400064	GU_400752	11/09/2024
SSE Generation Ireland Ltd	PY_000071	PT_400064	GU_400753	11/09/2024
SSE Generation Ireland Ltd	PY_000071	PT_400064	SU_400134	11/09/2024

Statkraft Markets GmbH	PY_034046	PT_402540	GU_406540	25/09/2024
Statkraft Markets GmbH	PY_034046	PT_402540	GU_406570	31/07/2024
Calvi Energy Services Limited	PY_034109	PT_402587	AU_400135	21/08/2024
Quent ApS	PY_034176	PT_502559	AU_500144	10/07/2024

Table 16 - De-Registrations October 2023 – September 2024

Termination of Participants

- There were no terminating parties between 1 October 2023 and 30 September 2024.

Suspension of Participants

- No Suspension Orders were issued by the Market Operator between 1 October 2023 and 30 September 2024.

Supplier of Last Resort (SoLR)

- No SoLR events were called by the Regulators between 1 October 2023 and 30 September 2024.

8 Stakeholder Engagement

8.1 Structured Approach to Regulatory interface

SEMO and the Regulatory Authorities have developed a good working relationship around a number of formal interactions. The highlights of 2023-2024 are summarised below:

- Yearly parameters for SEM issued according to Trading & Settlement Code requirements.
- Ongoing collaboration in the area of Trading & Settlement Code modification with a large volume of proposals delivered as required.
- Monthly discussion with the Market Monitoring Unit (MMU) to track items of interest relating to market monitoring, compliance, and surveillance.
- Monthly meetings in relation to Guarantees of Origin (GO) and Fuel Mix Disclosure (FMD) processes, including the rolling and annual Fuel Mix Disclosure calculations, and the Green Source Product Verification, as well as collaboration on developing areas of the GOs and FMD such as granular GOs, transparency of FMD etc.
- Ongoing collaboration with regards to analysis underpinning consultation and market changes with recurrent biweekly meetings.

8.2 Facilitate Interaction with Customers

SEMO is proactive in interaction with its stakeholders. In the past 12 months SEMO has:

- Facilitated Bi-monthly Market Operator User Groups (MOUG), more details can be found in **Appendix E**.
- Held one SEMO Focus Group meeting with Industry participants and Regulatory Authorities.
- Held weekly Participant calls providing Market Operator updates.
- Facilitated calls and meetings with Market Participants on specific topics.
- Facilitated Registration calls and meetings for both new and existing Market Participants.

9 KPI Incentives 2023-2024

9.1 KPI Overview

The SEMC published on the 10 September 2021 its SEMO 2021 – 2024 Price Control Decision Paper SEM-21-073. Under this paper SEMO is subject to performance assessment against six KPIs related to

1. Invoicing
2. SEMO Resettlement Queries
3. General Queries
4. System Availability
5. Storage Technology Facilitation
6. Ad hoc Resettlement Process Rate

Please see Appendix F for a summary of each of the KPIs.

These KPIs are intended to:

- Incentivise Improvements in performance by attaching financial rewards to specific measures of performance.
- Allow for increased visibility of the operation of a regulated entity which can help inform future price reviews and lead to better outcomes for market participants and consumers.

As per the current SEMO price control decision, SEMO Key Performance targets are set out in Table 17¹ below.

¹ Extract from Table 5.4 of SEM-21-073 Decision Paper.

KPI Number	Final Annual KPIs 2021-2024						
	Metric	Weighting			Target	Upper Bound	KPI Reward in year 2021/22
		2021/22	2022/23	2023/24			
1	Invoicing	15%	15%	25%	97%	100%	€ 73,800
2	SEMO Re-settlement Queries	20%	20%	30%	<15 per Qtr	<5 per Qtr	€ 98,400
3	Process Rate for Ad Hoc Resettlement to Clear Known Backlog	20%	20%	0%	6 weeks ad hoc completed in 4 week period	8 weeks ad hoc completed in 4 week period	€ 98,400
4a	General Queries (resolved within 20 business days)	5%			95%	99%	€ 24,600
4b	General Queries (resolved within 17 business days)		10%		95%	99%	
4c	General Queries (resolved within 15 business days)			15%	95%	99%	
5	System Availability	15%	15%	25%	99%	99.9%	€ 73,800
6	Storage Technology Facilitation	25%	20%	5%	Successful Implementation of enduring solution enabling full participation in BM	N/A	€ 123,000
	Maximum Available Reward Per Year based on 4% of Opex Allowance for 2021/22	100%	100%	100%			€ 492,000

Table 17 - Summary of the agreed Key Performance Indicators as per SEM-21-073

Conditions applied to the KPIs

The decision paper SEM-21-073 also outlines the following KPI parameters:

- The KPIs determined by the SEM Committee will come into effect from 1 October 2021 and apply until 30 September 2024.
- The incentive reward available to SEMO is 4% of the total proposed Opex allowance provided across the three-year period (equates to €1.5M) and KPIs will be measured on a quarterly basis.

9.2 Invoicing

9.2.1 Invoicing Outturn Performance 2023/24

The target for the Invoicing KPI was 97% with an upper bound limit of 100%.

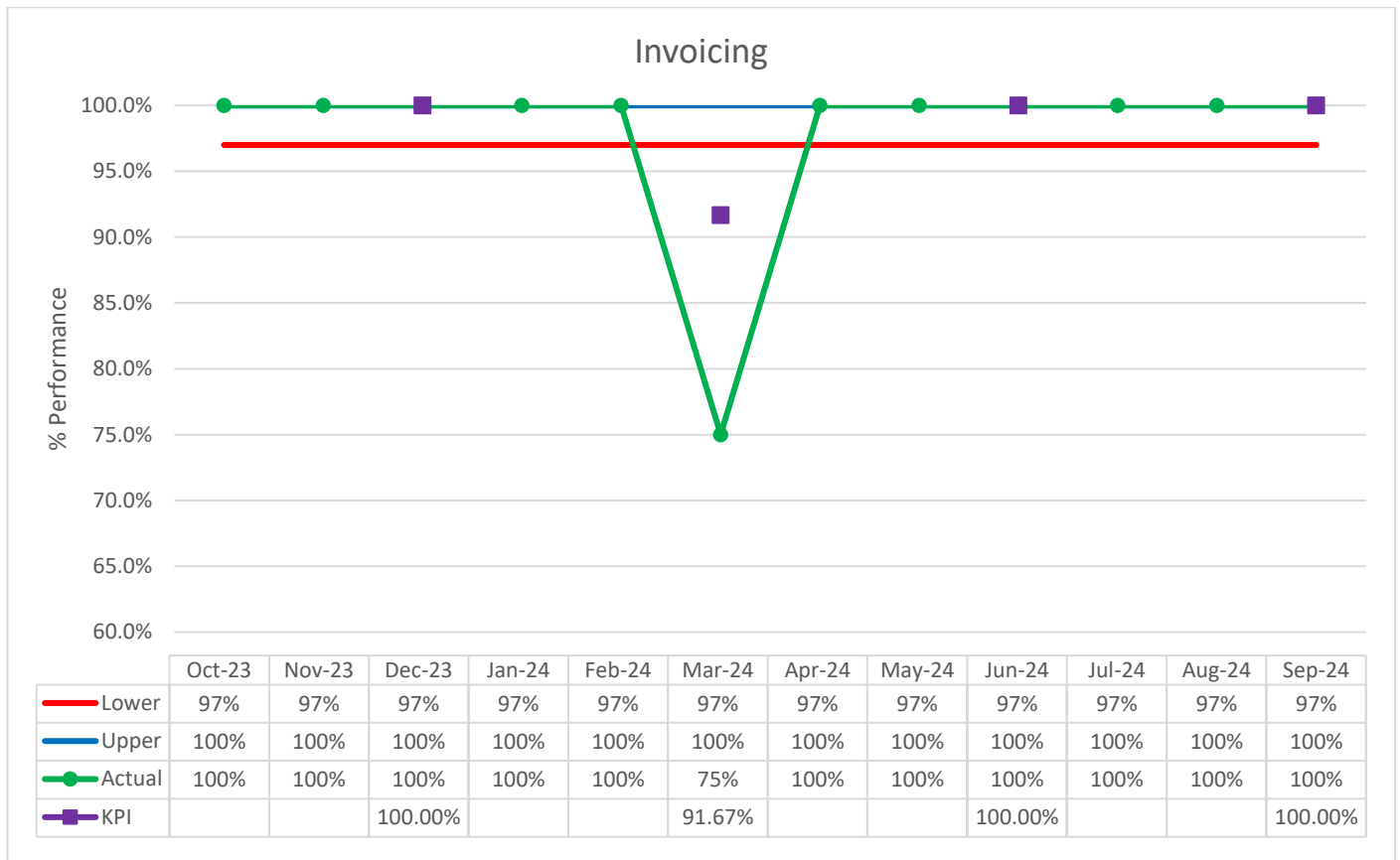


Figure 14 - Invoicing Performance

The upper bound target was achieved in Quarters 1, 3 and 4 of the Financial Year as shown in Figure 14 above. In March 2024 there was a delay due to the impact of a registration data issue that impacted Settlement Document publication.

Please see **Appendix F** for further detail on the invoicing performance.

9.3 SEMO Resettlement Queries

9.3.1 SEMO Resettlement Queries Outturn Performance 2023/24

The target for SEMO Resettlement Related Queries was <15 per Quarter upheld queries which require Resettlement per Quarter, with an upper bound limit of <5 per Quarter.

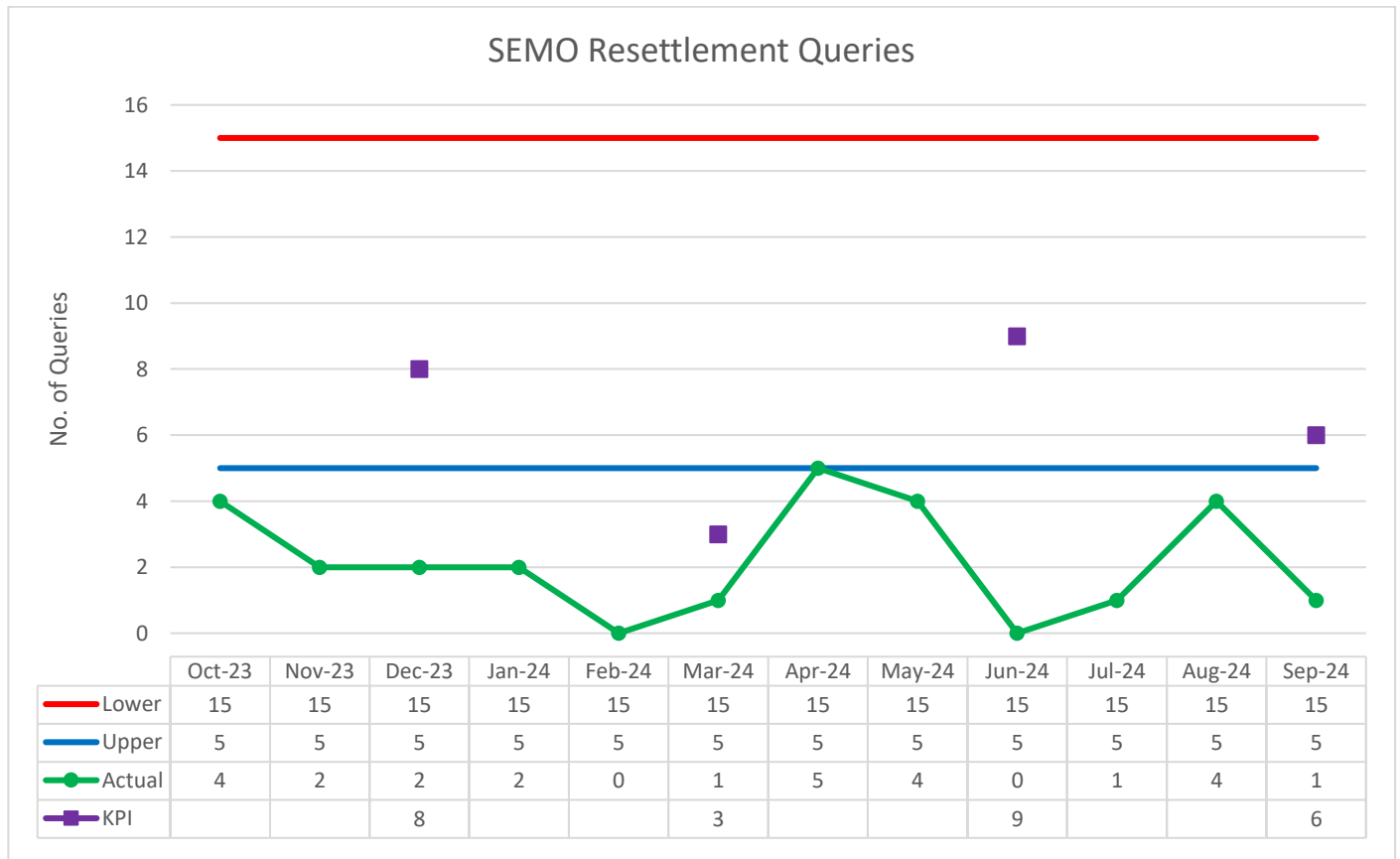


Figure 15 - SEMO Resettlement Related Queries Performance

The upper bound of this metric was five per Quarter. This target was achieved in Quarter 2 of the financial year, as shown in Figure 15 above.

The lower bound of this metric was fifteen per Quarter. This target was achieved in all Quarters of the financial year, as shown in Figure 15 above.

There are three broad categories of areas driving formal queries:

1. Registration errors
2. Defects
3. Operational Errors

We had 25 incidents this year, evenly split between defects and operational errors.

9.4 Process Rate for Ad Hoc Resettlement to Clear Known Backlog

9.4.1 Process Rate for Ad Hoc Resettlement to Clear Known Backlog Performance Outturn 2023/24

The target for the Process Rate for Ad Hoc Resettlement to Clear Known Backlog is 6 weeks ad hoc resettlement to be completed in a 4 week period, with the upper bound target of 8 weeks hoc resettlement to be completed in a 4 week period.

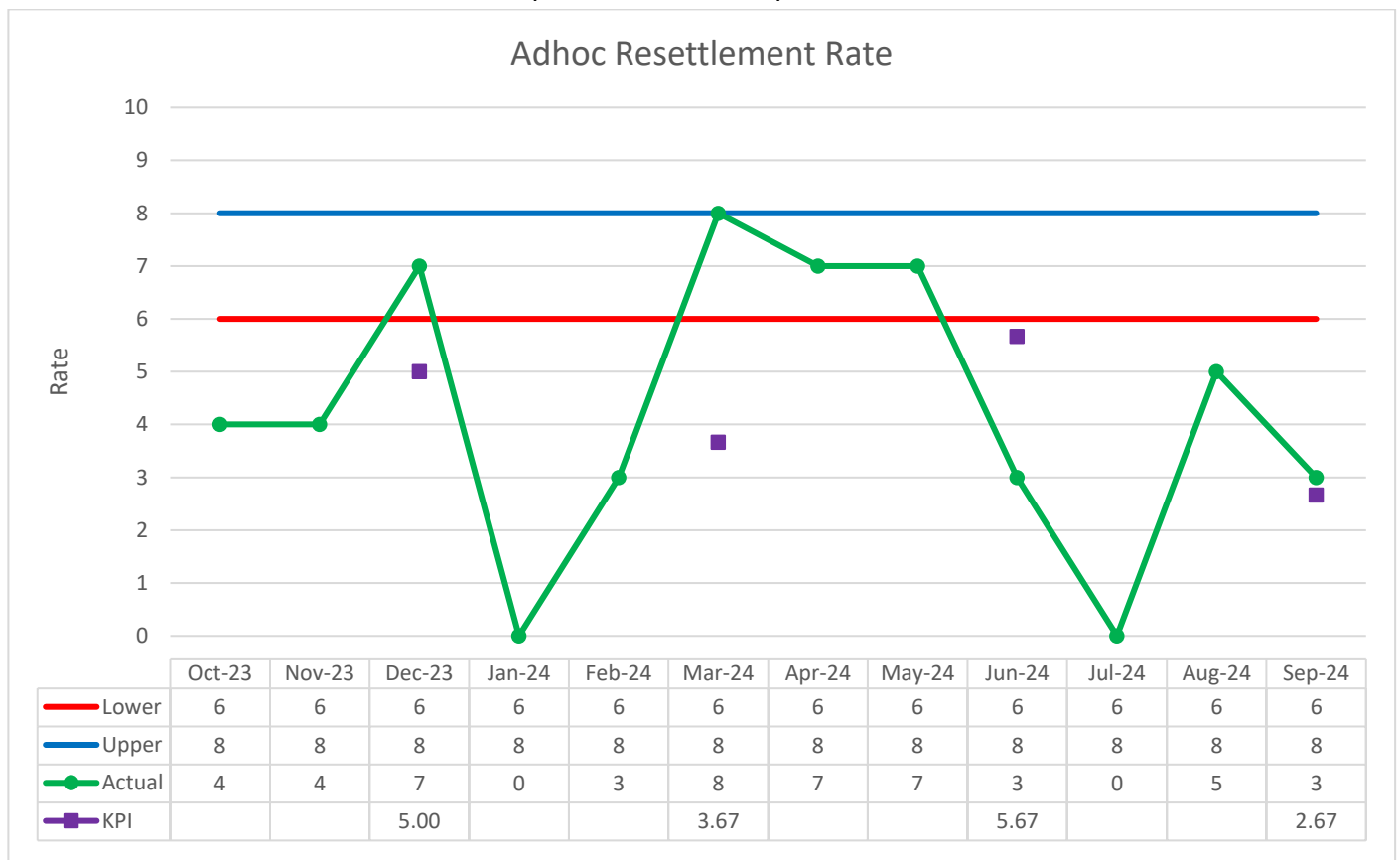


Figure 16 - Process Rate for Ad Hoc Resettlement

The upper bound of this metric equates to an average of 8 weeks ad hoc resettlement in a 4-week period over the course of each quarter. The lower bound of this metric equates to an average of 6 weeks ad hoc resettlement in a 4-week period over the course of each quarter. This target was not achieved as ad hoc volumes had slowed down due to Iteration 1 being completed prior to 23/24 and Iteration 2 being completed in December 2023. All ad hoc weeks processed post January 2024 were clean up weeks, with some of these needing vendor assistances. As of September 2024, all known backlog ad hoc weeks were completed except for four weeks which require vendor assistance to resolve.

9.5 General Queries

9.5.1 General Queries Outturn Performance 2023/24

The target for the General Queries Delivery KPI was 95% with an upper bound limit of 99%. The KPI requires that SEMO resolves 99% of its queries within 15 working days during 2023/24.

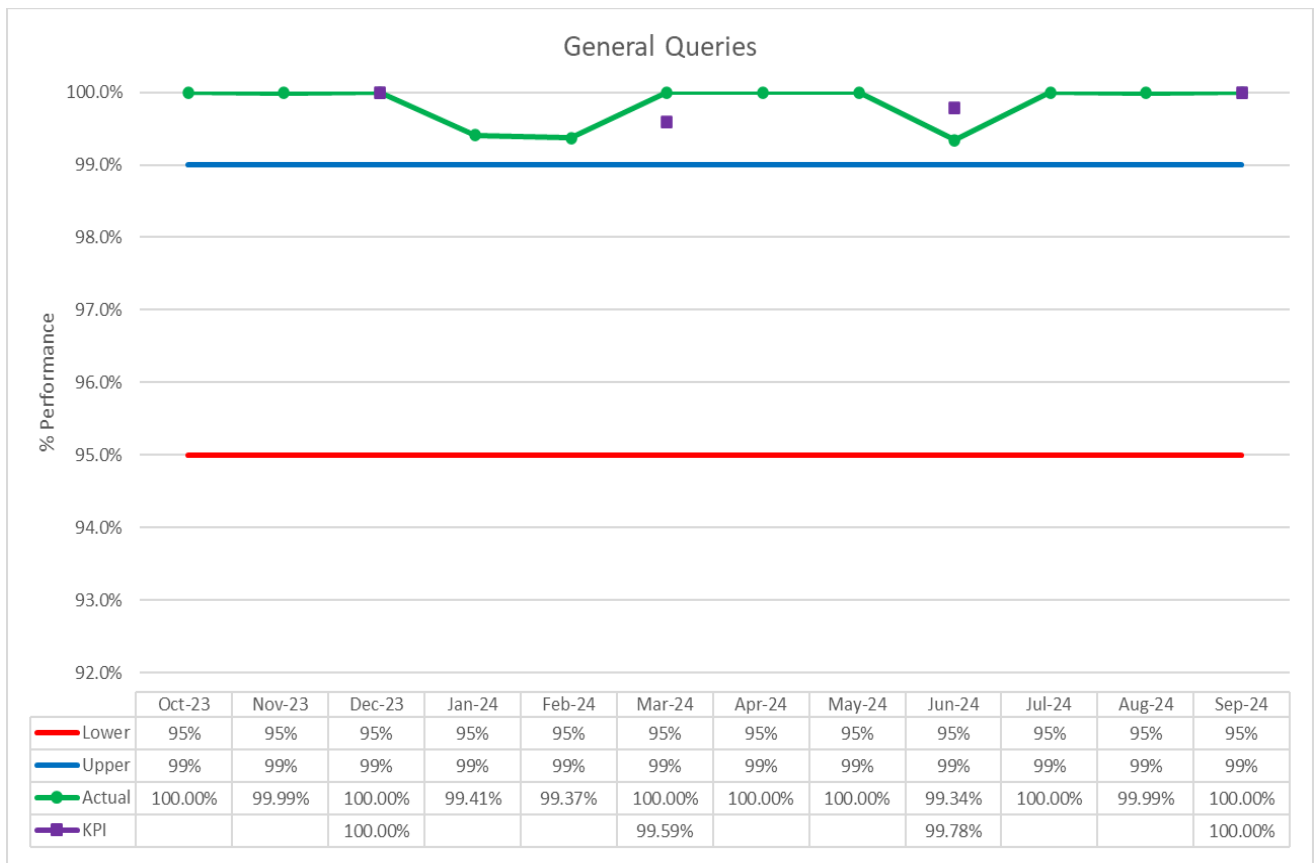


Figure 17 - General Queries Performance

In financial year 2023-2024 SEMO resolved 2001 helpdesk general queries. Query resolution time is impacted by several factors. For example, the complexity and scale of the query received, operational resources availability and the fact that formal and urgent queries have to be prioritized, and often the nature of the request requires cross functional assistance and/or escalation to a third- party vendor.

The lower bound target of this metric was achieved, and the upper bound target was exceeded in all four Quarters of the financial year.

9.6 System Availability

9.6.1 System Availability Outturn Performance 2023/24

The target for the System Availability KPI was 99% with an upper bound of 99.9%.

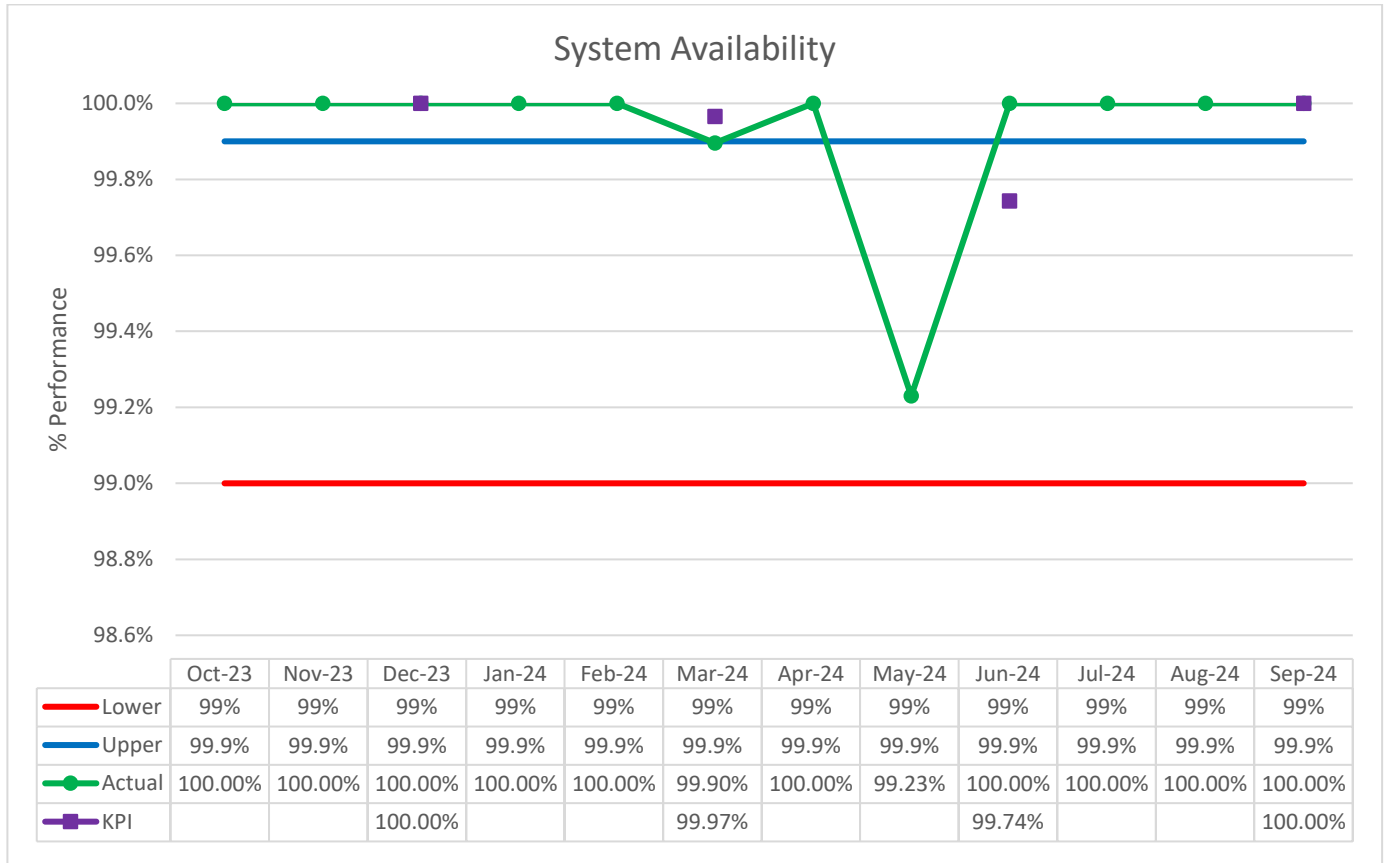


Figure 18 – System Availability Performance

The lower bound target of this metric was achieved in all four Quarters of the financial year. The upper bound target of this metric was exceeded in Quarters 1, 2 and 4 of the financial year.

The System Availability KPI is assessed against the following 5 systems as per SEM-21-073:

1. Balancing Market systems on a 24-hour basis Monday to Sunday
2. Settlement and Credit Clearing system between 9am-5pm Monday to Friday
3. Market Participant Interface on a 24-hour period Monday to Sunday.
4. Registration system between 9am-5pm Monday to Friday
5. Website availability between 8am-6pm Monday to Friday

As per SEM-21-073, please see a breakdown of the system availability for each of the 5 system in the table below.

System / Application	2023/2024 Availability %																Annual Availability %
	Oct-23	Nov-23	Dec-23	Q1	Jan-24	Feb-24	Mar-24	Q2	Apr-24	May-24	Jun-24	Q3	Jul-24	Aug-24	Sep-24	Q4	
Settlements (CSB)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Market Interface (MI)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.77%	99.92%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.98%
Market Applications (MA)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.71%	99.90%	100.00%	98.43%	100.00%	99.48%	100.00%	100.00%	100.00%	100.00%	99.85%
Reporting	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	97.74%	100.00%	99.25%	100.00%	100.00%	100.00%	100.00%	99.81%
Website	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.000%
Average System Availability	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.90%	99.97%	100.00%	99.23%	100.00%	99.74%	100.00%	100.00%	100.00%	100.00%	99.93%

Table 18 – System Availability Performance per System

9.7 Storage Technology Facilitation

9.7.1 Storage Technology Facilitation Outturn Performance 2023/24

The target for the Storage Technology Facilitation KPI requires –

“Successful Implementation of enduring solution enabling full participation in the Balancing Market including:

- Registration difficulties resolved
- Negative PNs can be accepted and processed
- Overall level playing field for storage technology providers”

As stipulated in SEM-21-073, the storage technology assumptions to be applied is that assessment of this KPI will include RAs engagement with SEMO and industry.

This work is currently being progressed under SDP_02 Electricity Storage Power Station (ESPS) of the Scheduling and Dispatch Programme (SDP).

There are six initiatives in scope for SDP and SDP_02 has been identified as the highest priority as part of Tranche 1 for delivery following industry feedback and considering TSOs & MO and consumer interests.

The SDP commenced Phase 2 (Requirements and Design) in mid-March '23 and System Design for ESPS was completed in June 2024. The Plain English description of the trading and settlement and grid code changes of SDP_02 (ESPS) was published via Market Message in September 2023, with the SEMC Modification introduced to the committee in October 2023. The SEM-C Modification Mod_02_24 was recommended for approval by the modifications committee on 23rd April 2024 and was sent for SEM-C final decision on 24th May 2024. Following on from the completion of design which concluded Phase 2, Phase 3 “Execution” commenced with the programme’s system vendors beginning their build of the changes to the TSO and MO systems related to the ESPS initiative. Additionally, as part of Phase 3 operational capability development, business procedures for operations and training are being delivered. The system vendors build, and test activities were completed in Spring 2025 which is then followed by TSO/MO System Test completing in Summer 2025 with a go live planned for November 2025.

9.8 Performance Summary against KPI Targets

Table 19 below, summarises the overall Regulatory Approved KPI targets and the outturn KPI figures per Quarter. The light grey area indicates the KPI targets agreed in the SEMO Price Control Decision Paper (SEM-21-073). The darker grey columns show the percentage outturn achieved by SEMO for each KPI per Quarter while the blue column indicates the average performance over the four Quarters. SEMO scored quite well in some of the KPIs, in particular Invoicing, General Queries, and System Availability. SEMO Settlement Queries were below the target of 15 per quarter based on the metric criteria as set out in the price control decision. However, due to the number of Ad Hoc Resettlements required this year. SEMO did not achieve its target regarding the Process Rate for Ad Hoc Resettlement as the Known Backlog has now been cleared. As stated above, the Storage Technology Facilitation is currently being progressed through the Scheduling and Dispatch Programme and did not achieve its target during FY2022/23.

SEMO KPI Outturn 2023/2024								
SEMO KPIs - as per SEM-21-073				Performance by Quarter				Overall Performance
Metric	Weighting	Target	Upper Bound	Oct-Dec Q1	Jan-Mar Q2	Apr-June Q3	Jul-Sept Q4	2023/24
Invoicing	25%	97%	100%	100.00%	91.67%	100.00%	100.00%	97.92%
SEMO Settlement Queries	30%	<15 per Q	<5 per Q	8	3	9	6	26
Process Rate for Ad Hoc Resettlement to Clear Known Backlog	0%	6 wks adhoc in 4 wk period	8 wks adhoc in 4 wk period	5.00	3.67	5.67	2.67	4.25
General Queries	15%	95%	99%	100.00%	99.59%	99.78%	100.00%	99.84%
System Availability	25%	99%	99.9%	100.00%	99.97%	99.74%	100.00%	99.93%
Storage Technology Facilitation	5%	Successful implementation on enduring solution enabling full participation in the Balancing Market	N/A					

Table 19 - SEMO Performance 2023-2024

9.9 Incentive earned by SEMO

The SEMO Revenue Requirement Decision Paper (SEM-21-073) states that the ‘The incentive reward available to SEMO is 4% of the total proposed OPEX allowance provided across the three-year period (which equates to €1.5M).’ The approved OPEX revenue for 2022-2023 was €12,300,000 (2020 Monies)¹. 4% of this amount translates to a KPI pot of €492,000² in 2020 monies³.

Table 20 below illustrates:

- The earned reward per Quarter
- The maximum available reward per Quarter
- The percentage KPI reward achieved per Quarter

Incentive earned per Quarter 2023/24					
Performance Indicator	Oct-Dec	Jan-Mar	Apr-June	Jul-Sept	
	Q1	Q2	Q3	Q4	TOTAL
Invoicing	€15,375	€0	€15,375	€15,375	€46,125
SEMO Settlement Queries	€25,830	€36,900	€22,140	€33,210	€118,080
Process Rate for Ad hoc Resettlement to Clear Known Backlog	€0	€0	€0	€0	€0
General Queries	€18,450	€18,450	€18,450	€18,450	€73,800
System Availability	€30,750	€30,750	€25,283	€30,750	€117,533
Storage Technology Facilitation	€0	€0	€0	€0	€0
KPI reward per Quarter (in March 2020 monies)	€90,405	€86,100	€81,248	€97,785	€355,538
Maximum Available Reward in Quarter	€107,625	€107,625	€107,625	€107,625	€430,500
Percentage of Total Achieved in Quarter	84.00%	80.00%	75.49%	90.86%	82.59%

Table 20 - Summary of the KPI monetary reward 2023-2024

Based on a comprehensive set of KPI data SEMO have calculated the KPI reward in Table 22 above to be €355,538 (in 2020 monies). This represents an overall percentage reward of 82.59% of the maximum amount available.

It is assumed that this KPI reward is recovered through the adjustment of the K Factor as per previous price controls (see section 2.5 of the SEMO Key Performance Indicators Decision Paper – SEM-19- 033⁴)

¹ Reference figure 3.4 of SEM-21-073

² It is noted that the invoicing target was amended, and the overall available award was reduced by 50%, which has been reflected in Table 22. Please see Appendix F for further detail on the updated invoicing performance metrics.

³ RPI-x will be applied to the incentive earned by SEMO as part of the adjustment to the K-Factor.

⁴ [SEM-19-033](#)

Appendix A: Trading and Settlement Code Breaches

Meter Data Provider Breaches

Ops Date Identified	Run Type	Issue	MDP Provider	Issue Type	Description T&SC Breach	T&SC Breach	Status
04/10/2023	D+1	Timing	SONI	File submission of ACTA data	Delay of 1 hr 38 mins	Minor	Closed
10/10/2023	D+1	Timing	SONI	File submission of Metering data	Delay of 1 hr 30 mins	Minor	Closed
16/10/2023	D+1	Timing	SONI	File submission of ACTA data	Delay of 1 hr	Minor	Closed
24/10/2023	D+1	Timing	MRSO	File submission of Metering data	Delay of 1 hr 45 mins	Minor	Closed
28/10/2023	D+4	Timing	MRSO	File submission of Metering data	Delay of 2 hrs	Minor	Closed
29/10/2023	D+4	Timing	MRSO	File submission of Metering data	Delay of 2 hrs	Minor	Closed
01/11/2023	D+1	Timing	MRSO	File submission of Metering data	Delay of 1 hr 30 mins	Minor	Closed
02/11/2023	D+1	Timing	MRSO	File submission of Metering data	Delay of 1 hr 45 mins	Minor	Closed
17/11/2023	D+1	Timing	SONI	File submission of ACTA data	Delay of 1 hr 30 mins	Minor	Closed
18/11/2023	D+1	Timing	SONI	File submission of ACTA data	Delay of 1 hr 10 mins	Minor	Closed
19/11/2023	D+1	Timing	SONI	File submission of ACTA data	Delay of 1 hr 10 mins	Minor	Closed
28/11/2023	D+1	Timing	SONI	File submission of ACTA data	Delay of 1 day	Minor	Closed

Ops Date Identified	Run Type	Issue	MDP Provider	Issue Type	Description T&SC Breach	T&SC Breach	Status
04/01/2024	D+1	Timing	EirGrid	File submission of ACTA data	Delay of 1 hr 30 mins	Minor	Closed
20/01/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 2 hrs 30 mins	Minor	Closed
26/03/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 1 hr	Minor	Closed
27/03/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 1 hr	Minor	Closed

Ops Date Identified	Run Type	Issue	MDP Provider	Issue Type	Description T&SC Breach	T&SC Breach	Status
12/04/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 2 hr 30 mins	Minor	Closed
18/04/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 12 mins	Minor	Closed
18/04/2024	D+1	Timing	SONI	File submission of DI data	Delay of 18 mins	Minor	Closed
07/05/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 2 hrs	Minor	Closed
17/05/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 1 hr 50 mins	Minor	Closed
18/05/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 2 hr 20 mins	Minor	Closed
21/05/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 1 hr 10 mins	Minor	Closed
25/05/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 3 hr 30 mins	Minor	Closed
15/06/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 1 hr	Minor	Closed
21/06/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 40 mins	Minor	Closed
28/06/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 5 mins	Minor	Closed

Ops Date Identified	Run Type	Issue	MDP Provider	Issue Type	Description T&SC Breach	T&SC Breach	Status
16/07/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 5 mins	Minor	Closed
18/07/2024	D+1	Timing	SONI	File submission of Metering data	Delay of 2 hrs 25 mins	Minor	Closed
06/08/2024	D+1	Timing	EirGrid	File submission of Metering data	Delay of 1 hr	Minor	Closed

Table 21 - Meter Data Provider Breaches October 2023- September 2024

Market Participant Breaches

Month	Default Notices Issued	No. of Parties
Oct-23	7	5
Nov-23	4	3
Dec-23	5	4
Jan-24	8	7
Feb-24	1	1
Mar-24	3	3
Apr-24	4	3
May-24	4	4
Jun-24	4	3
Jul-24	2	1
Aug-24	4	3
Sep-24	4	3
Total	50	40

Table 22- Clearing Default Notices

Month	Default Notices Issued	No. of Parties
Oct-23	8	1
Nov-23	3	2
Dec-23	2	1
Jan-24	1	1
Feb-24	5	1
Mar-24	5	2
Apr-24	4	3
May-24	2	1
Jun-24	3	2
Jul-24	3	1
Aug-24	1	1
Sep-24	0	0
Total	37	16

Table 23 - Credit Default Notices

Market Operator Defaults

Indicative			
Month	On Time	Same Day Late	> 1 Day Late
Oct 2023	21	3	7
Nov 2023	23	2	5
Dec 2023	31	0	0
Jan 2024	28	0	3
Feb 2024	28	0	1
Mar 2024	27	4	0
Apr 2024	30	0	0
May 2024	27	1	3
Jun 2024	27	0	3
Jul 2024	29	0	2
Aug 2024	31	0	0
Sep 2024	27	1	2
Totals	329	11	26

Table 24- Delays to Indicative Settlement Runs

Initial			
Month	On Time	Same Day Late	> 1 Day Late
Oct 2023	29	2	0
Nov 2023	30	0	0
Dec 2023	31	0	0
Jan 2024	31	0	0
Feb 2024	28	1	0
Mar 2024	30	0	1
Apr 2024	29	1	0
May 2024	31	0	0
Jun 2024	30	0	0
Jul 2024	31	0	0
Aug 2024	31	0	0
Sep 2024	29	1	0
Totals	360	5	1

Table 25- Delays to Initial Settlement Runs

SD Due Date	Settlement Document (SD) Issue	SD Business Days Delayed	Additional Publication Timeline Impacts	Issue Resolution Status
25/03/2024	Settlement Document (SD) creation error caused by Vat Registration data issue submitted into Settlements systems for one PT, which impacted SD vat values for all market participants.	1 Day	Payments In/Out had to be adjusted by one day out for revised Settlement Document publication date.	Vat type was manually corrected in the systems for the one PT, which allowed the Settlement Documents to be published on the 26/03/2024 . Registration "Data script" also deployed to resolve the issue.

Table 26 - Market Operator – Balancing Market - Major

Market Operator Breaches (Credit Risk)

Non - Publications	Date	Time	Reason
Yes	02/01/2024	3.30pm	Internal Processing System issue, CSB Database
Yes	03/01/2024	9am	Internal Processing System issue, CSB Database
Yes	03/01/2024	12pm	Internal Processing System issue, CSB Database
Yes	03/01/2024	3.30pm	Internal Processing System issue, CSB Database
Yes	30/04/2024	3.30pm	Non-receipt of IMD3 Results
Yes	22/05/2024	3.30pm	Non-receipt of IMD3 Results
Yes	13/06/2024	3.30pm	Non-receipt of IMD3 Results
Yes	19/07/2024	9am	Operational Systems unavailable

Table 27 - Non-Publications of Credit Reports

Ops Date Identified	PT Name	Time	Reason	Reason
09/11/2023	All	3.30pm	Delayed due to late receipt of data	IMD3 Results received late
22/12/2023	All	9am	Delayed due to late receipt of data	IMD2 Results received late
19/07/2024	ALL	12pm	Delayed due to system	Operational Systems unavailable

Table 28 - Delayed – Credit Publication

Appendix B: Settlement Publication Delays

Market Operator Breaches - Indicative Settlement

Month	Settlement Date	Periods Affected	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T&SC Breach	Status
Oct	1st	1	Indicative	Timing	SEMO	Processing Timeline	Additional analysis required	Additional financial analysis required	Analysis completed and Indicative completed late on target date	Minor	Closed
Oct	4th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Actual Availabilities (ACTA) files	NI ACTA files received late	ACTA data received and Indicative completed late after target date	Minor	Closed
Oct	10th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	SONI MDP data received late	MDP data received and Indicatives completed late after target date	Minor	Closed
Oct	11th	1	Indicative	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Indicatives completed late after target date	Minor	Closed
Oct	12th	1	Indicative	Timing	SEMO	Processing Timeline	System issue	Internal system calculation error	System issue resolved and Indicative completed late on target date	Minor	Closed
Oct	16th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Actual Availabilities (ACTA) files	NI ACTA files received late	ACTA data received and Indicative completed late on target date	Minor	Closed
Oct	24th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	MRSO MDP data received late	MDP data received and Indicative completed late after target date	Minor	Closed
Oct	28th	1	Indicative	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Indicative completed late after target date	Minor	Closed
Oct	29th-30th	2	Indicative	Timing	SEMO	Processing Timeline	Processing backlog	Backlog from previously delayed runs	Backlog worked through and Indicatives completed late after target date	Minor	Closed
Nov	1st	1	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	MRSO MDP data received late	MDP data received and Indicative completed late on target date	Minor	Closed
Nov	2nd	1	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	MRSO MDP data received late	MDP data received and Indicative completed late on target date	Minor	Closed
Nov	9th	1	Indicative	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Indicative completed late after target date	Minor	Closed
Nov	17th - 19th	3	Indicative	Timing	SEMO	Late Settlement Data	Late Actual Availabilities (ACTA) files	NI ACTA files received late	ACTA data received and Indicatives completed late after target date	Minor	Closed
Nov	28th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Actual Availabilities (ACTA) files	NI ACTA files received late	ACTA data received and Indicatives completed late after target date	Minor	Closed

	Month	Settlement Date	Periods Affected	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T&SC Breach	Status
	2024 Jan	1st - 2nd	2	Indicative	Timing	SEMO	Processing Timeline	System issue	Internal system database error	System issue resolved and Indicatives completed late after target date	Minor	Closed
	2024 Jan	4th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Actual Availabilities (ACTA) files	ROI ACTA files received late	ACTA data received and Indicatives completed late after target date	Minor	Closed
	2024 Feb	6th	1	Indicative	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Indicatives completed late after target date	Minor	Closed
	2024 Mar	12th	1	Indicative	Timing	SEMO	Processing Timeline	System issue	Internal system outage	System issue resolved and Indicatives completed late on target date	Minor	Closed
	2024 Mar	18th	1	Indicative	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Indicatives completed late on target date	Minor	Closed
	2024 Mar	20th	1	Indicative	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Indicatives completed late on target date	Minor	Closed
	2024 Mar	27th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	SONI MDP data received late	MDP data received and Indicatives completed late on target date	Minor	Closed

Month	Settlement Date	Periods Affected	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T&SC Breach	Status
May	1st	1	Indicative	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Indicative completed late after target date	Minor	Closed
May	2nd	1	Indicative	Timing	SEMO	Processing Timeline	Processing backlog	Backlog from previously delayed runs	Backlog worked through and Indicative completed late after target date	Minor	Closed
May	7th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	SONI MDP data received late	MDP data received and Indicative completed late on target date	Minor	Closed
May	22nd	1	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	MRSO MDP data received late	MDP data received and Indicative completed late after target date	Minor	Closed
Jun	1st - 3rd	3	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	MRSO MDP data received late	MDP data received and Indicatives completed late after target date	Minor	Closed

	Month	Settlement Date	Periods Affected	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T&SC Breach	Status
	2024 Jul	18th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	SONI MDP data received late	MDP data received and Indicatives completed late after target date	Minor	Closed
	2024 Jul	30th	1	Indicative	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Indicatives completed late after target date	Minor	Closed
	2024 Sep	5th	1	Indicative	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Indicatives completed late after target date	Minor	Closed
	2024 Sep	9th	1	Indicative	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Indicatives completed late after target date	Minor	Closed
	2024 Sep	10th	1	Indicative	Timing	SEMO	Processing Timeline	Processing backlog	Backlog from previously delayed runs	Backlog worked through and Indicatives completed late on target date	Minor	Closed

Initial Settlement

Month	Settlement Date	Periods Affected	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T&SC Breach	Status
Oct	28th-29th	2	Initial	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	MRSO MDP data received late	MDP data received and Initials completed late on target date	Minor	Closed

Month	Settlement Date	Periods Affected	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T&SC Breach	Status
Feb	19th	1	Initial	Timing	SEMO	Processing Issue	Issue with Instruction Profilers	IP had to be re-run	IP issue resolved and Initials completed late on target date	Minor	Closed
Mar	26th	1	Initial	Timing	SEMO	Processing Issue	Issue with Actual Availabilities (ACTA) files	Failed ACTA import	ACTA issue resolved and Initials completed late after target date	Minor	Closed

Month	Settlement Date	Periods Affected	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T&SC Breach	Status
Apr	30th	1	Initial	Timing	SEMO	Processing Timeline	Overrun of processing time required	Processing delayed due to competing processes running in parallel	Processing continued and Initial completed late on target date	Minor	Closed

Month	Settlement Date	Periods Affected	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T&SC Breach	Status
Sep	2nd	1	Initial	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Initials completed late on target date	Minor	Closed

Appendix C: List of Queries by Type

Formal Queries	Upheld	Not Upheld	Rejected	Withdrawn	Total
CIMB	60	14	2	2	78
CDISCOUNT	23	5	0	0	28
CUNIMB	15	10	0	0	25
CCP	19	3	0	0	22
CFC	13	9	0	0	22
CPREMIUM	4	0	0	0	4
CCURL	2	0	0	0	2
CABBPO	0	1	0	0	1
Total	136	42	2	2	182

Table 29 - Queries by Decision Type

Appendix D: Imbalance Prices

Month	Published Imbalance Prices	Expected Count of Imbalance Prices	Missed Imbalance Prices
October	8893	8940	37
November	8496	8640	10
December	8911	8928	5
Quarter 1 Total	26300	26508	52
January	8918	8928	0
February	8328	8352	5
March	8835	8916	79
Quarter 2 Total	26081	26196	84
April	8596	8640	26
May	8752	8928	23
June	8575	8640	31
Quarter 3 Total	25923	26208	80
July	8657	8928	67
August	8692	8928	18
September	8576	8640	14
Quarter 4 Total	25925	26496	99

Table 30 – Missed 5-Min Imbalance Prices

Month	Count of Market Back Up Prices	Count of Ex-Ante Market Back Up Price	Count of Published Imbalance Settlement Prices	Count of Expected Imbalance Settlement Prices
October	1	6	1483	1490
November	17	2	1421	1440
December	0	0	1488	1488
Quarter 1 Total	18	8	4392	4418
January	0	0	1488	1488
February	2	0	1390	1392
March	2	11	1475	1488
Quarter 2 Total	4	11	4353	4368
April	1	5	1434	1440
May	1	4	1483	1488
June	0	6	1434	1440
Quarter 3 Total	2	15	4351	4368
July	2	11	1475	1488
August	1	3	1484	1488
September	1	1	1438	1440
Quarter 4 Total	4	15	4397	4416

Table 31 – Application of 30-Min Market Back Up Price

Month	Period Starting	Min Price	Period Starting	Max Price	Avg Price
October	30/09/2023 23:25	-€ 289.21	17/10/2023 05:40	€ 479.19	€ 120.87
November	05/11/2023 06:15	-€ 96.88	30/11/2023 18:50	€ 577.55	€ 117.00
December	19/12/2023 20:55	-€ 118.70	02/12/2023 17:55	€ 282.35	€ 83.62
January	20/01/2024 02:25	-€ 225.38	07/01/2024 17:30	€ 437.72	€ 111.09
February	21/02/2024 09:40	-€ 202.12	08/02/2024 07:20	€ 376.74	€ 85.33
March	22/03/2024 16:00	-€ 388.44	12/03/2024 09:10	€ 469.57	€ 89.46
April	08/04/2024 01:35	-€ 503.75	30/04/2024 06:45	€ 493.19	€ 88.07
May	31/05/2024 10:35	-€ 999.00	14/05/2024 07:20	€ 348.55	€ 109.98
June	09/06/2024 06:50	-€ 302.23	22/06/2024 18:15	€ 494.24	€ 99.14
July	12/07/2024 05:35	-€ 1,000.00	30/07/2024 15:05	€ 443.03	€ 107.10
August	09/08/2024 01:25	-€ 87.92	06/08/2024 07:10	€ 490.61	€ 99.39
September	25/09/2024 00:45	-€ 257.14	03/09/2024 15:00	€ 472.47	€ 111.56

Table 32 – High/Low/Average 5Min Imbalance Prices

Month	Period Starting	Min Price	Period Starting	Max Price	Avg Price
October	06/10/2023 18:30	-€ 42.03	15/10/2023 18:00	€ 341.96	€ 120.86
November	02/11/2023 02:30	-€ 19.75	15/11/2023 17:30	€ 398.01	€ 116.94
December	23/12/2023 17:30	-€ 46.63	05/12/2023 17:00	€ 257.87	€ 83.77
January	20/01/2024 02:00	-€ 37.56	07/01/2024 17:30	€ 434.70	€ 111.05
February	21/02/2024 09:30	-€ 49.48	06/02/2024 18:00	€ 295.82	€ 85.26
March	02/03/2024 11:00	-€ 59.24	28/03/2024 20:00	€ 331.57	€ 89.47
April	08/04/2024 01:30	-€ 124.08	30/04/2024 07:00	€ 471.88	€ 88.14
May	31/05/2024 10:30	-€ 139.71	14/05/2024 06:30	€ 298.63	€ 109.97
June	09/06/2024 06:30	-€ 59.73	12/06/2024 06:30	€ 341.12	€ 99.01
July	12/07/2024 05:30	-€ 84.33	23/07/2024 07:30	€ 359.03	€ 107.01
August	09/08/2024 01:00	-€ 28.13	06/08/2024 07:30	€ 441.37	€ 99.36
September	25/09/2024 00:30	-€ 47.86	07/09/2024 17:30	€ 363.51	€ 111.65

Table 33 – High/Low/Average 30Min Imbalance Settlement Prices

Appendix E: Market Operator User Group

Market Operator User Group (MOUG)	
Date	Location
09/11/2023	MS Teams
14/12/2023	MS Teams
25/01/2024	MS Teams
14/03/2024	MS Teams
16/05/2024	MS Teams
05/09/2024	MS Teams

Table 34 – MOUG Dates

Appendix F: KPI Metrics Overview

Invoicing

The Invoicing targets refer to the percentage of occurrences where invoices to all participants are published on time. As per the Trading and Settlement Code Part B and Agreed Procedure 15 document:

- The target for the weekly Balancing/Imbalance (BALIMB) Settlement Documents is as per the Settlement Documents for Trading Payments and Trading Charges which, in respect of each Billing Period, shall be produced and issued to all Participants in respect of their Units by 12:00 on Billing Period +5 Working Days.
- The target for Capacity settlement documents is 12:00 ten working days after the end of each month.

The invoicing assumptions to be applied are as follows:

- i. System Operator system failures and issues outside of SEMO's control are to be excluded from the KPI measurement.
- ii. Planned outages, planned releases and releases that have an impact on measurement of this KPI are excluded.

Please note that due to a discrepancy in the invoicing timeframes stated in the Price Control and those in the Trading & Settlement Code Agreed Procedure 15, identified by SEMO as part of the submission of the 2021/2022 iteration of this report to the RA's, the Invoicing KPI was revised from 4 KPI's to 2. This reflects the RA's decision to remove the Variable and Fixed Market Operator Charge targets and to reduce the invoicing incentive by 50%. SEMO continues to issue the Variable and Fixed Market Operator Charge as per the specific timelines in the revised Market Operator Settlement Calendar publishing schedule, introduced in May 2021.

SEMO Resettlement Queries

This KPI refers to the number of upheld formal queries from market participants who have identified errors in settling the market which are attributed to SEMO's operations and processes, including defects and pricing issues. Correction of such errors is completed in either the scheduled Resettlement (M+4 and M+13) or in an ad hoc Resettlement.

Measurement of this KPI is related to the number of SEMO upheld query incidents and Resettlements per Quarter. Multiple Upheld Queries for one incident shall be classified as one Upheld Query Incident. A Formal Query referencing a number of days shall be classified as Multiple Upheld Queries Incidents.

The SEMO resettlement queries assumptions to be applied are as follows:

- i. Multiple Upheld Queries for one incident shall be classified as one Upheld Query Incident.
- ii. Planned outages, planned releases and ad-hoc releases that have an impact on measurement of this KPI are excluded.

General Queries

The General Queries targets refer to the percentage of occurrences where a General Query is not resolved within 15 business days within 2023/24¹. A General Query is defined within this metric as any request logged at the SEMO helpdesk.

The general queries assumptions to be applied are as follows:

- i. Queries unresolved for more than 15 business days during 2023/24 are only counted once against the metric per quarter and not on a rolling basis.
- ii. If further information is requested following resolution of a query this can be counted as a new query.
- iii. If information requested is dependent on third parties and is outside of SEMO's control this does not impact on the calculation of the metric.

System Availability

System availability is the availability of central market systems which the Market Operator has responsibility for according to their required availability. This is the ratio of the time systems are said to be in a functioning condition to the total time they are required to be available and covers the following:

- 1. Balancing Market systems on a 24-hour basis Monday to Sunday
- 2. Settlement and Credit Clearing system between 9am-5pm Monday to Friday
- 3. Market Participant Interface on a 24-hour basis Monday to Sunday
- 4. Registration system between 9am-5pm Monday to Friday
- 5. Website availability between 8am-6pm Monday to Friday

The system availability assumptions to be applied are as follows:

- i. Planned outages, planned releases and ad-hoc releases that have an impact on measurement of this KPI are excluded.
- ii. System Operator events beyond the control of the Market Operator are excluded from the metric.
- iii. Reporting and Market Monitoring system is not yet operational and therefore the Market Participant Interface will be monitored in its place until it is built and implemented.

¹ The number of business days in which SEMO is required to resolve General Queries within for this KPI changes from year to year. The proposed weighting for this KPI also changes. See Table A3 of SEM/21/073 for further breakdown.

- iv. The overall calculation of system availability is based on the average of the measured availability of systems 1-5 in the KPI, however when reporting on this KPI the system availability should be provided for each of the 5 systems.

Storage Technology Facilitation

The Storage Technology Facilitation KPI is the Successful Implementation of enduring solution enabling full participation in the Balancing Market including:

- Registration difficulties resolved
- Negative PNs can be accepted and processed
- Overall level playing field for storage technology providers

The storage technology assumption to be applied is:

- i. Assessment of this KPI will include RAs engagement with SEMO and industry.

Ad hoc Resettlement Process Rate

The Ad hoc Resettlement Process Rate KPI relates to the Accelerated approach to known backlog of ad hoc resettlement existing since SEM Go Live in October 2018.

The ad hoc resettlement process rate assumptions to be applied are:

- i. Known backlog refers to information provided in table below:

Ad hoc (AH) Run Type	Resettlement Period	Formal query count	Billing periods	Ad hoc status July 2021
AH Sequential (1st Iteration)	Oct-2018 to May- 2020	Multiple: Settlements and pricing manifest errors	~ 85	In progress, 16 weeks completed out to Jan 2019
AH Targeted	Oct-2018 to May- 2020	10	~ 15	M13 will resolve, potential AH solution & timing in review
AH Sequential (2nd Iteration)	Oct-2018 to Jan- 2020	19	~ 27	AH solution & timing in review, pending defect fixes & testing
AH Targeted	June-2020 - today	4	~ 2	AH solution & timing in review, pending defect fixes & testing

Table 35 - Ad hoc resettlement backlog as per SEM-21-073