



# **Market Operator's Annual Performance Report**

October 2020 – September 2021

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## **1 Introduction**

On 1 October 2018 the revised Single Electricity Market (SEM) arrangements went live and 30 September 2021 marked the end of the third year of operation.

SONI Ltd. and EirGrid plc, operating as the Single Electricity Market Operator (SEMO) are required under their respective Market Operator 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 streamlining, this annual market operator performance report has been updated to also include a summary of SEMO's KPI Performance the period also. As a result of this, the annual SEMO KPI Outturn Report will no longer be issued as a separate report.

## 2 Executive Summary

This SEMO performance report covers the third year of operation of the revised SEM arrangements from 1 October 2020 to 30 September 2021.

During this period:

- 8 Parties joined the market and 43 units went effective in the market.
- There were 3 Market Management System (MMS) releases deployed.
- 7 Market Operator User Groups (MOUGs) took place; 5 were held via conference call and 2 via MS Teams.
- 1,903 general queries were received, and 1,925 general queries were resolved<sup>1</sup>, with 39 open as of September 2021.
- 203 Formal Settlement queries were raised; 124 have been upheld, 76 not upheld, 2 rejected and 1 withdrawn as of September 2021.
- 11 modifications to the Trading and Settlement Code were approved.
- Participant calls were held weekly to keep Market Participants informed on Market Operator updates, with the option of additional calls if needed.

The four main categories of performance metric covered are:

- Service Delivery
- Change Request Management
- General Market Information
- Manage Stakeholders

The Key Performance Indicators (KPI) incentives applicable in this period, as set out in SEM-19-033, are:

1. Invoicing
2. Credit Cover Increase Notices
3. SEMO Resettlement Queries
4. General Queries
5. System Availability
6. Timely Publication of Key Market Information

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

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<sup>1</sup> 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 areas:

Trading and Settlement Code Breaches			
Area		Major <sup>1</sup>	Minor <sup>2</sup>
Data Providers		-	90
Market Participants	Clearing	76	-
	Credit Risk Management	7	-
Market Operator	Balancing Market	2	125
	Clearing	-	-
	Credit Risk Management	11	28
	Other	-	-
Total		96	243

**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.

#### 3.2 Balancing Market Settlements

##### 3.2.1 Indicative and Initial Settlement Runs

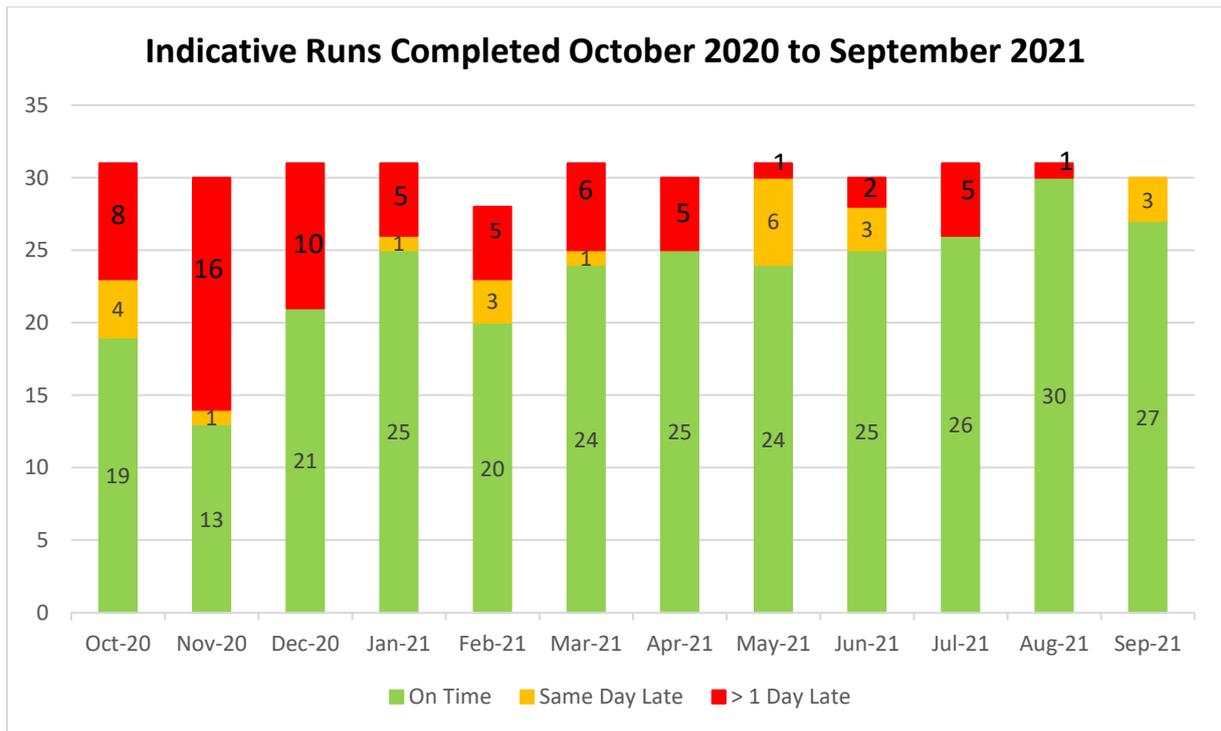
The following series of tables and graphs represent the publications of Indicative and Initial Settlement runs. Every working day SEMO is obliged to issue Indicative and Initial settlement run statements.

Settlement Runs completed 01/10/2020 - 30/09/2021		
	Indicative	Initial
On Time	279	326
Same Day Late	22	20
> 1 Day Late	64	19
Total runs	365	365

**Table 2 - Settlement Runs completed 01/10/2020 - 30/09/2021**

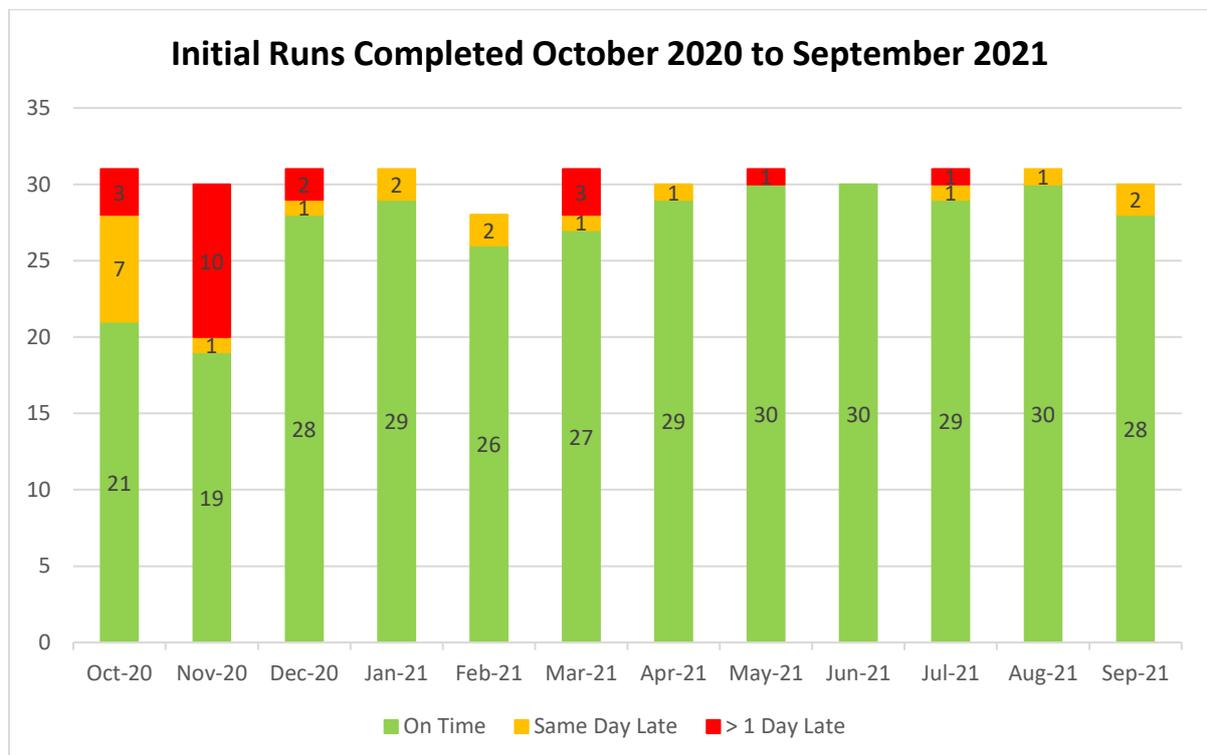
<sup>1</sup> Major Breach – includes the late publishing of settlement documents, default notices issued for non-payment or similar.

<sup>2</sup> Minor Breach – occurs when deadlines not met, but without any financial implication to Participants. This includes late posting of settlement runs.



**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 period<sup>1</sup>.

Settlement Documents completed 01/10/2020 - 30/09/2021	
	No. of Weeks
On Time	60
Same Day Late	0
> 1 Day Late	2*
Total runs	62

**Table 3 - Settlement Documents completed 01/10/2020 - 30/09/2021**

- \* One settlement day which included two settlement documents

### 3.2.3 M+4 & M+13 Resettlement

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

M+13 double weeks, which were implemented in July 2020 to process the backlog of M+13 resettlement months, completed in January 2021. Since that point, M+13 resettlement has been published as per Trading & Settlement Code weekly M+13 timelines.

### 3.2.4 Ad hoc Repricing and Ad-hoc Resettlement Runs

Ad hoc Repricing was initiated on the 4th February 2021; there were 84 calendar days (approximately 1,100 Imbalance Settlement Periods) that were assessed against the 5% price materiality threshold, between February and September 2021. The periods assessed fell between June 2019 and April 2020. Approximately 40% 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" programme commenced in February 2021 which began ad hoc resettlement from the start of the market. There were 28 billing weeks for Ad hoc re-settled in the Balancing Market over the course of the year, with the scheduled ad hoc resettlement of consecutive weeks due to continue throughout the 2021-2022 business year and in line with 2021-2024 SEMO KPIs. A second iteration of ad hoc resettlement for specific weeks from the start of the market is also required to address formal queries now resolved through subsequent release deployments and data corrections.

### 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 2020 to 30th September 2021. 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). There were 7 CCINs that were not

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<sup>1</sup> Up to 2 Settlement Documents issued per week due to KIR #6148

fully honoured within the two days allowed as per Trading & Settlement Code, these were subsequently resolved.

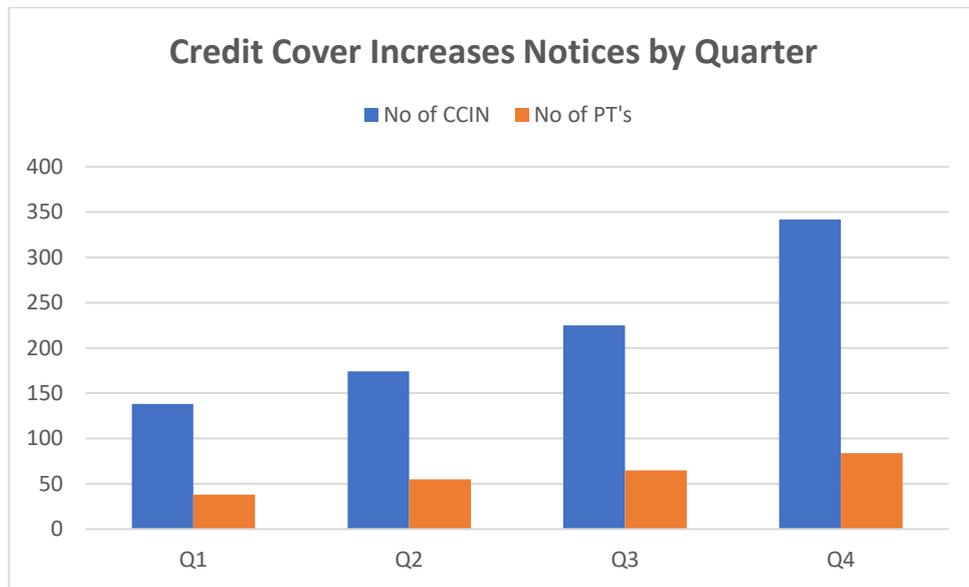


Figure 3 - Credit cover increase notices issued by quarter

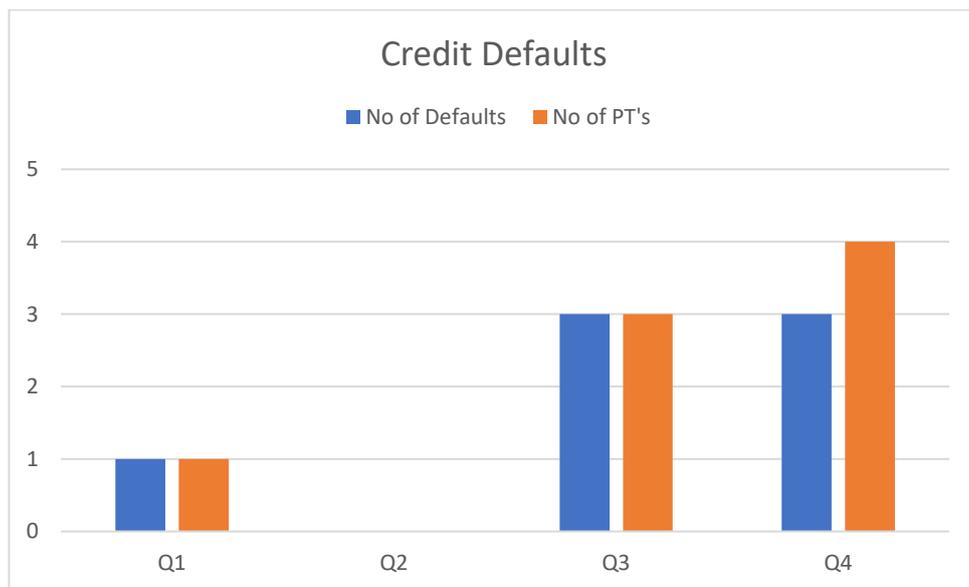


Figure 4 - Default notices issued by quarter<sup>1</sup>

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<sup>1</sup> Please note that the Credit team reported no Credit defaults during the months of January 2021, up till the end of March 2021

### 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 for 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 2020 to 30 September 2021.

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	€ 133,863,927
CPREMIUM	Premium Payment	€ 127,319,392
CFC	Fixed Cost Payment or Charge	€ 23,250,137
CDIFFPIMB	High Imbalance Price Difference Charge	€ 9,730,027
CIMB	Imbalance Payment or Charge	€ 8,463,799
CABBPO	Bid Price Only Accepted Bid Payment or Charge	€ 251,170
CDIFFPID	Intraday Difference Charge	€ 83,872
CTEST	Testing Charge	-€ 149,807
CSOCDIFFP	Difference Payment Socialisation Charge	-€ 389,165
CCA	Currency Adjustment Charge	-€ 530,404
CAOPO	Offer Price Only Accepted Offer Payment or Charge	-€ 1,061,868
CCURL	Curtailment Payment or Charge	-€ 1,823,305
CDIFFCNP	Non Performing Difference Charge	-€ 2,381,292
CUNIMB	Uninstructed Imbalance Charge	-€ 4,197,369
CDIFFCWD	Within-day Difference Charge	-€ 4,617,928
CREV	Residual Error Volume Charge	-€ 29,463,632
CIMP	Imperfections Charge	-€ 317,153,376

<b>Total</b>	<b>-€ 58,805,824</b>
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**Table 4 - Balancing Market Cash Flow Position**

### Capacity Market

The TSOs are the Capacity Renumeration 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	€ 354,505,682
CCC	Capacity Charge	-€ 389,164,884
<b>Total</b>		<b>-€ 34,659,203</b>

**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 SEMC under the relevant Price Control.

Market Operator Charges		
Component	Component Name	€ Payment/Charge
CMOAV	Fixed Market Operator Charge Supplier Units	-€ 20,151
CMOAU	Fixed Market Operator Charge Generator Units	-€ 805,957
CVMO	Variable Market Operator Charge	-€ 16,494,807
<b>Total</b>		<b>-€ 17,320,915</b>

**Table 6 - Market Operator Charges**

### 3.3.2 Financial Changes with re-settlement runs

M+13 was behind schedule at the start of the year and there were various weeks where multiple re-settlement periods were re-settled in a single week. Ad hoc resettlement also commenced during the year and began from the start of the market. Consequently, there were 62 billing weeks for M+13 and 28 billing weeks for Ad hoc re-settled in the Balancing Market over the course of the year. For CRM and MO, there was 13 billing periods (months) re-settled for M+13 and 6 billing periods for Ad hoc. 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 shows 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 2020 to 30 September 2021. Trade date range for each run:

- M+4: 07/06/2020 – 29/05/2021
- M+13: 23/06/2019 – 29/08/2020
- Ad hoc: 01/10/2018 – 13/04/2019

Balancing Market Re-Settlement				
Component	Payment/Charge M+4 €	Payment/Charge M+13 €	Payment/Charge Ad hoc €	Payment/Charge Total €
CFC	€286,328	€1,951,495	€7,201,271	€9,439,095
CPREMIUM	€1,429,324	€2,232,762	€83,985	€3,746,071
CIMP	€1,168,555	€186,941	€170,846	€1,526,342
CUNIMB	-€144,919	€641,216	€202,592	€698,889
CDISCOUNT	-€1,179,138	€1,418,963	€37,509	€277,334
CREV	€8,390	€15,497	€40,452	€64,338
CSOCDIFFP	-€5,907	€5,414	€6,084	€5,592
CTEST	€1,356	€0	€3,553	€4,909
CCA	€2,085	€498	€491	€3,075
CDIFFPIMB	€11,793	€0	-€11,548	€245
CDIFFPID	€0	€0	€0	€0
CDIFFCNP	-€12,697	€0	€11,026	-€1,670
CAOPO	€20,784	€1,249	-€57,963	-€35,930
CABBPO	-€18,323	-€25,898	-€41,122	-€85,342
CDIFFCWD	-€5,951	€116	-€161,610	-€167,445
CCURL	-€8,367	€21,749	-€199,923	-€186,541
CIMB	-€12,208,157	-€1,511,615	-€1,329,344	-€15,049,116
<b>Total</b>	<b>-€10,654,843</b>	<b>€4,938,388</b>	<b>€5,956,301</b>	<b>€239,846</b>

Table 7 - Balancing Market Resettlement

Capacity Market Re-Settlement				
Component	Payment/Charge M+4 €	Payment/Charge M+13 €	Payment/Charge Ad hoc €	Payment/Charge Total €
CCC	€1,617,339	€327,229	€264,541	€2,209,109
CCP	-€2,906,727	€984,224	€0	-€1,922,503
<b>Total</b>	<b>-€1,289,388</b>	<b>€1,311,453</b>	<b>€264,541</b>	<b>€286,606</b>

Table 8 - Capacity Market Resettlement

Market Operator Charges Re-Settlement				
Component	Payment/Charge M+4 €	Payment/Charge M+13 €	Payment/Charge Ad hoc €	Payment/Charge Total €
CMOAU	€0	€0	€0	€0
CMOAV	€0	€0	€0	€0
CVMO	€68,737	€17,391	€16,299	€102,428
<b>Total</b>	<b>€68,737</b>	<b>€17,391</b>	<b>€16,299</b>	<b>€102,428</b>

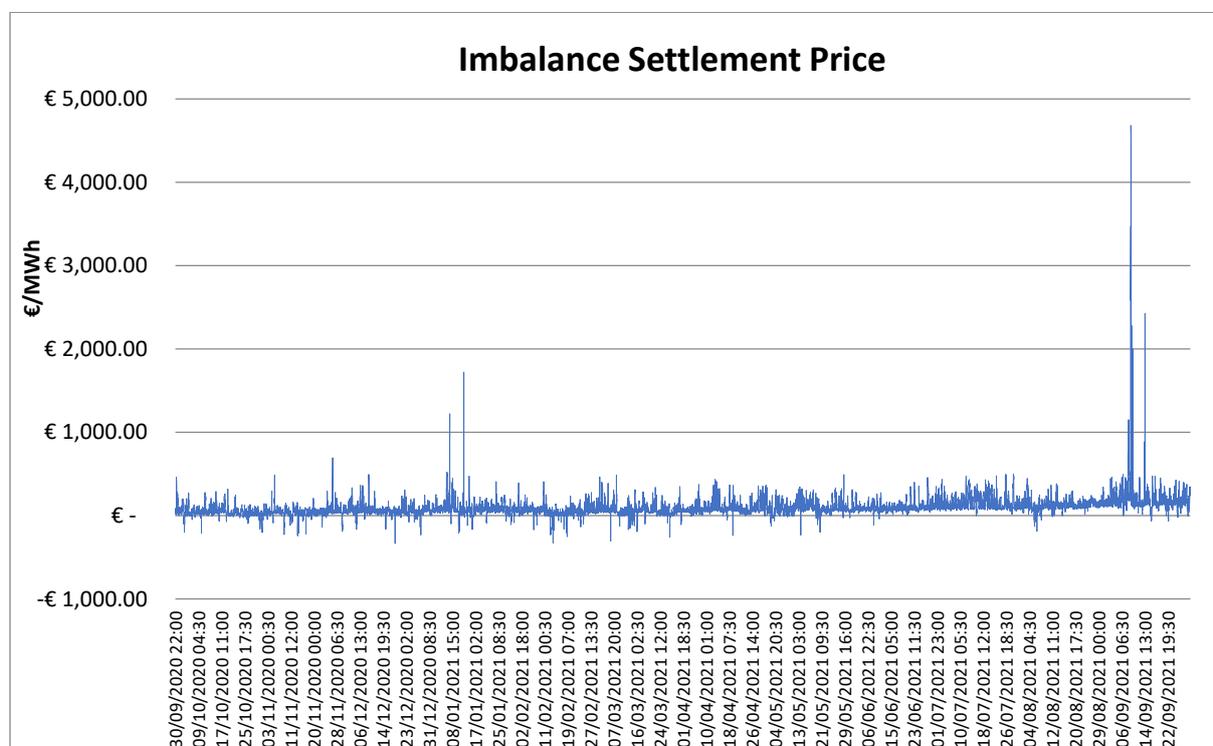
Table 9 - Market Operator Charges Resettlement

### 3.4 Imbalance Price

#### 3.4.1 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 2020 to September 2021. All system calculated Imbalance Settlement Prices are published on this graph; both the Market Back up Price<sup>1</sup> and the 30 minute average of the Imbalance Price. The average Imbalance Settlement Price during this annual period was €92.53. The maximum Imbalance Settlement Price was €4,680<sup>2</sup> and the minimum was -€333.33.



**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,

<sup>1</sup> In June 2021 system release, Mod\_03\_19 took effect; this modification results in the Market Back Up Price being applied for an individual missed 5 minute Imbalance Price, rather than the entire 30 Minute Imbalance Settlement Price.

<sup>2</sup> The published Imbalance Settlement Price was set by a SO Trade Price on the 9<sup>th</sup> September 2021. On Trading Day 29<sup>th</sup> September 2021, Mod\_16\_21 was implemented; this modification removes the Interconnectors from the price setting process by reverting to the Market Back Up Price when the SO Trade Price exceeds the market Strike 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.

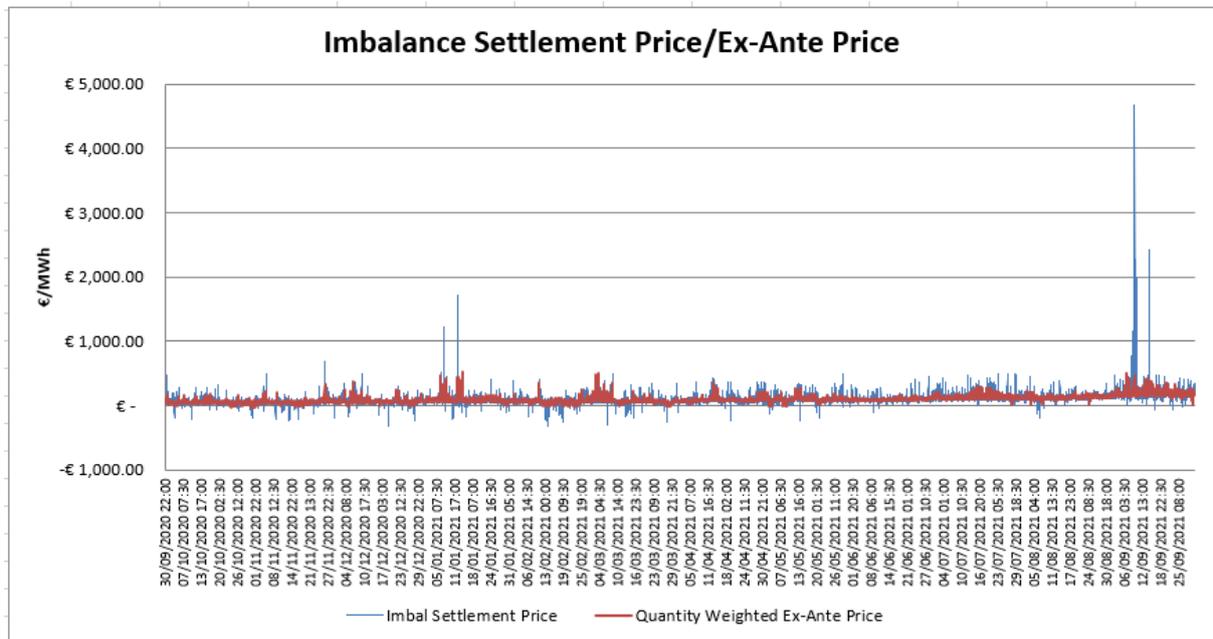


Figure 6 – Imbalance Settlement Price & Quantity Weighted Ex-Ante Price Comparison

Figure 7 highlights the monthly Highest, Lowest and Average half-hour Imbalance Prices for the period October 2020 to September 2021.

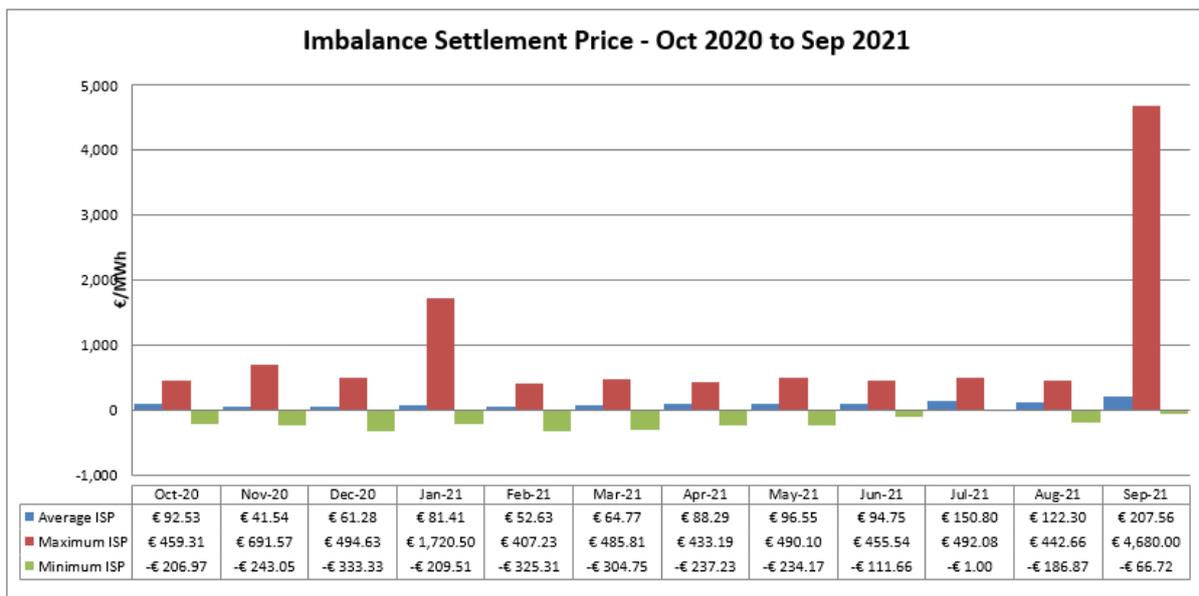
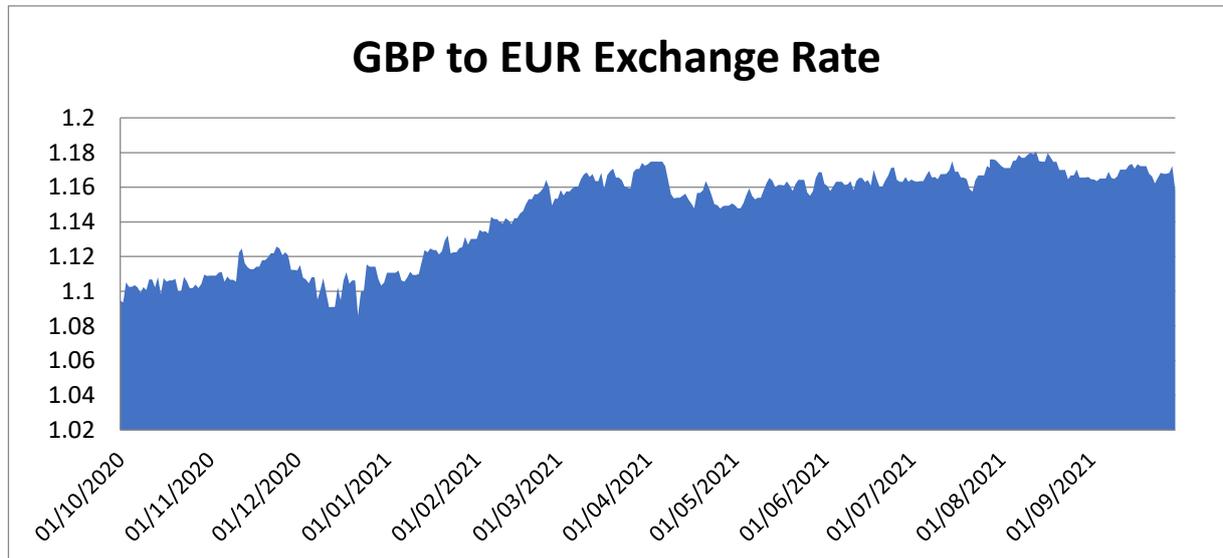


Figure 7 – Highest, Lowest and Average Imbalance Prices

### 3.4.2 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**

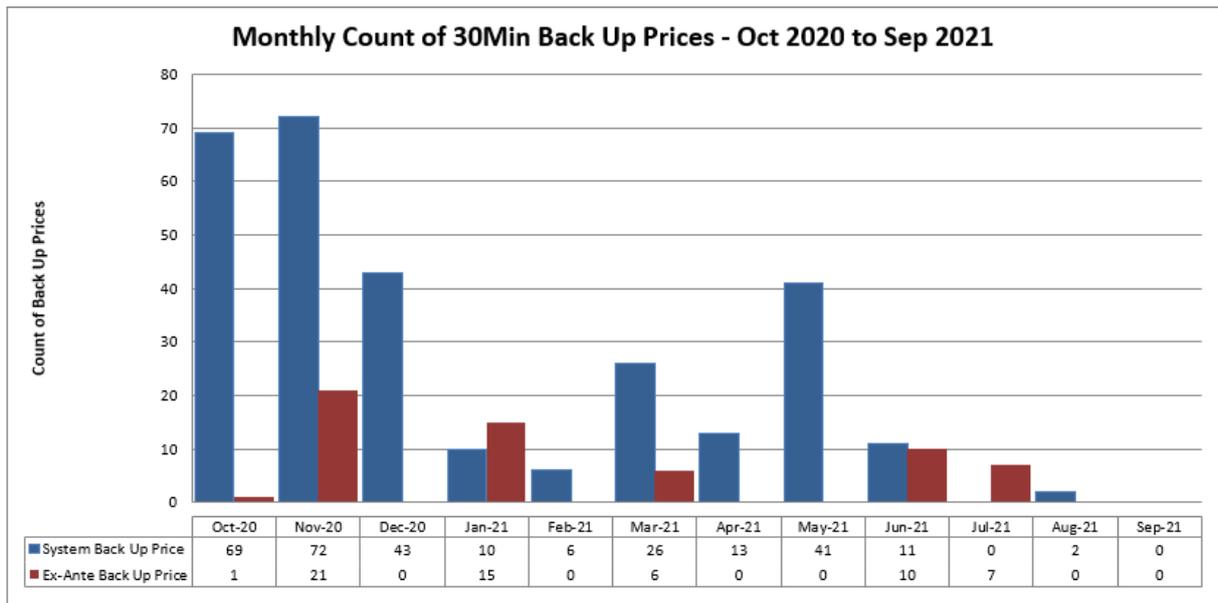
### 3.4.3 Imbalance Price Generation and Back Up Price

**Figure 9** below highlights how many instances in which the Market Back Up Price was published for an Imbalance Settlement Period.

Included in this table is the count of the Market Back Up Price, which;

- pre-implementation of Mod\_03\_19 (29<sup>th</sup> June 2021) this Market Back Up Price is applied, in an Imbalance Settlement Period, if one or more 5 minute Imbalance Prices have not been calculated within that period;
- post-implementation of Mod\_03\_19, the Imbalance Settlement Price includes any 5-minute Imbalance Prices that have calculated in an Imbalance Settlement Period, rather than reverting to the Market Back Up Price for all periods where an Imbalance Price fails to calculate. Any missed 5 minute Imbalance Prices are replaced with the Market Back Up Price;

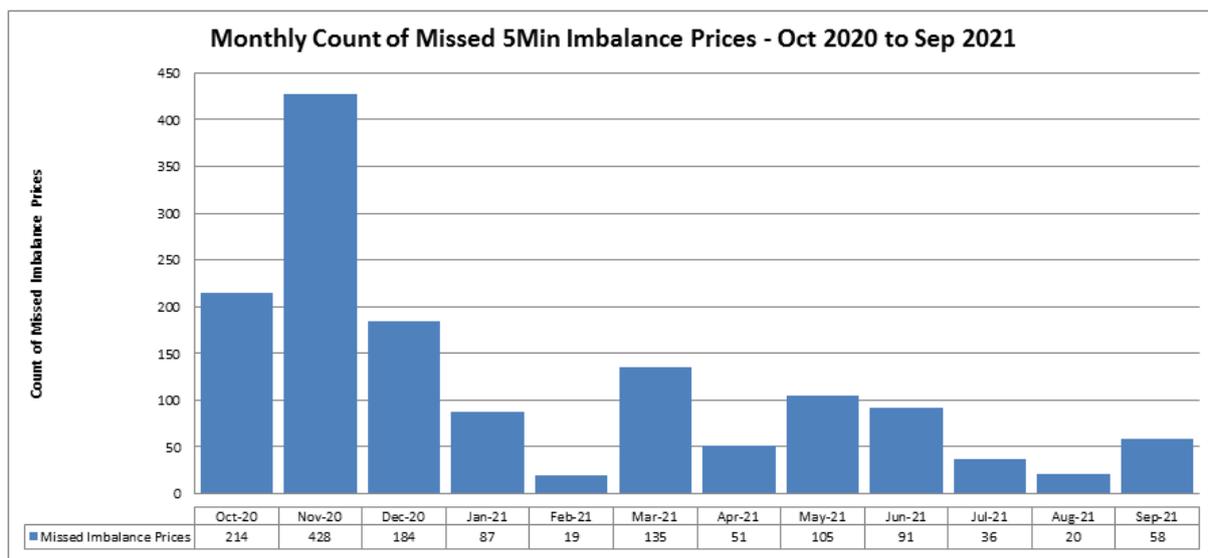
This figure also includes the Ex-Ante Backup Price which is used as a contingency in the event of failure of the automatic Market Back Up Price.



**Figure 9 - Number of Backup Prices used October 2020 to September 2021**

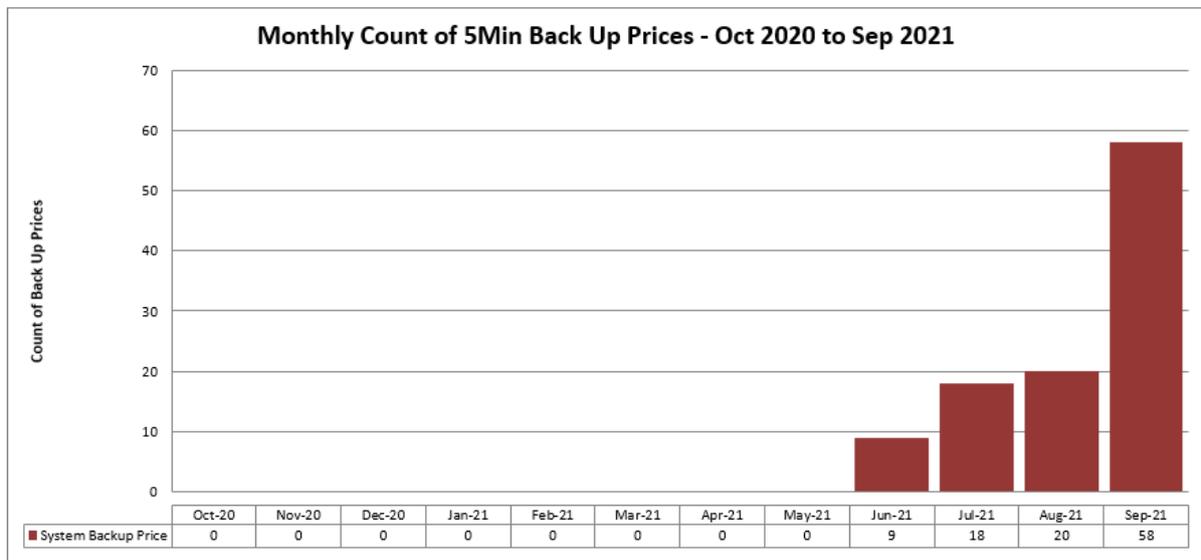
During the year, there was a total of 353 Market Back Up Prices applied (both Ex-Ante and System Back Up Prices), of which 197 applied were due to workflow/system performance issues in which the 5 min imbalance period price did not calculate and 156 applied were due to planned and emergency outages to facilitate Release F and Release G; as well as essential maintenance of the Market Systems.

**Figure 10** highlights how many five 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 Missed 5Min Imbalance Prices**

**Figure 11** captures the instance of where an Imbalance Price was replaced with the Market Back Up Price; this metric applies from June 2021 onwards based on functionality delivered in the Bi-annual System Release as part of Mod\_03\_19.



**Figure 11 – Number of Back Up Prices used October 2020 to September 2021**

### 3.5 Central Systems

#### 3.5.1 System Availability

The table below gives the system availability value for the period of October 2020 to September 2021 as well as the breakdown per system.

System / Application	Annual Availability %
Settlements (CSB)	99.15%
MI	99.93%
MA	99.94%
Reporting (reports publication in the MPI)	99.96%
Website (availability)	100%
<b>Average System Availability</b>	<b>99.80%</b>

**Table 10 - Annual System Availability**

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

- There were no Limited Communication Failure (LCF) requests encountered during 2021.
- There was one General Communication Failure's (GCF) during the month of August 2021.
- There were no General System Failure's (GSF) encountered during 2021.

## 4 Change Request Management

### 4.1 System releases

Please see below the Market System Releases deployed to the Production environment in the period 1 October 2020 to 30 September 2021.

- Release F – Deployed to production on the 3<sup>rd</sup> of November 2020
- Release F.2 - Deployed to production on the 17<sup>th</sup> of November 2020
- Release G – Deployed to production on 29<sup>th</sup> of June 2021.

### 4.2 Modifications

#### 4.2.1 Balancing Market – Trading & Settlement Code Modification Management

The tables that follow give an overview of the activity that has taken place between 1 October 2020 and 30 September 2021. Table 11 shows the dates and number of Modifications Committee Meetings and Working Groups that took place over this period.

Meeting	Date	Location
101	22 <sup>nd</sup> October 2020	Conference Call
102	3 <sup>rd</sup> December 2020	Conference Call
103	11 <sup>th</sup> February 2021	Conference Call
104	28 <sup>th</sup> April 2021	Conference Call
105	17 <sup>th</sup> June 2021	Conference Call
106	7 <sup>th</sup> September 2021	Conference Call
106B (Extraordinary Meeting)	21 <sup>st</sup> September 2021	Conference Call
Working Group – Mod_13_19	10 <sup>th</sup> December 2020	Conference Call
Working Group – Mod_01_21, Mod_02_21 & Mod_04_21	23 <sup>rd</sup> March 2021	Conference Call
Industry Call – Mod_15_19	23 <sup>rd</sup> February 2021	Conference Call
Industry Call – Mod_15_19 (follow up)	26 <sup>th</sup> March 2021	Conference Call

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

At the Modifications Committee Meetings, decisions are made with regard to 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	19
Alternative Versions raised	3
Withdrawn	5
Deferred	2
Extension Granted	1
Recommended for Approval	13
Recommended for Rejection	1
Further Work Required	0
Approved	11
Rejected	1
RA Direction	1

**Table 12 - Modification Proposal Activity**

#### 4.2.2 Publication of the Trading & Settlement Code

Version 23.0 of the Trading & Settlement Code was published on the 15<sup>th</sup> January 2021. Eight Modification Proposals were included in this version, which are noted in the version history of the Trading & Settlement Code Part A.

#### 4.2.3 2020 - Modifications Committee Elections

Modifications Committee Annual Elections commenced in July 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
Alan Mullane	Alan Mullane	Assetless
Ian Mullins	Ian Mullins	Supplier
Andrew Burke	Andrew Burke	Supplier
Kevin Hannafin	Kevin Hannafin	Generator
Cormac Daly	Cormac Daly	Generator

As a result, a number of Modification Proposals were raised relating to Committee composition and structure additional seats were created. The RAs appointed a Renewable Generator Member and a Flexible Participant Member. The number of Supplier Members was increased to 5. The minimum number of Supplier Seats was not appointed therefore the RAs appointed the following Supplier Members:

New Member	Position
Rochelle Broderick	Supplier
Colm Oireachtaigh	Supplier
Andrew Burke	Renewable Generator Member
Paul McGuckin	Flexible Participant Member

The election for Chair and Vice-Chair was scheduled for after the end of the period of this report, in November 2021. The elections were held later to facilitate the detailed discussion on the Committee composition Modification Proposals:

[Mod\\_10\\_21 Temporary Flexible Seat](#)

[Mod\\_11\\_21 Generator, Supplier and Renewable Seat](#)

#### 4.2.4 Balancing Market - Modifications Process Development

Modification Proposals were considered at bi-monthly Modifications Committee Meetings or extraordinary meetings and Working Groups as required, mostly by conference call (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 has continued to process significant levels of activity since going live in October 2018.

Proposals have shifted from those mainly concerned with corrections of errors which have been identified after go-live, to targeting early additions, enhancements, refinements or longer-term projects. Because of the greater impact, 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 Extraordinary meetings, Working Groups and Industry Calls that have been necessary to progress issues.

The main themes that characterised the past year where:

- A number of Modifications were raised following price events in January 2021 that highlighted potential issues with flagging units providing Replacement Reserve during those events and the application of Difference Charges; the following related to those issues: Mod\_01\_21, Mod\_02\_21, Mod\_04\_21, Mod\_14\_21 and Mod\_15\_21.
- A number of Modifications were raised to updated the composition of the Modification Committee to reflect new unit types such as Mod\_07\_21, Mod\_10\_21 and 11\_21
- Other Modifications were for efficiencies and improved processes, included amendments or corrected minor errors such as Mod\_03\_21, Mod\_06\_21, Mod\_09\_21, Mod\_12\_21 and Mod\_13\_21.

Here is the list of Modifications over the past year:

### **Recommended for Approval**

- Mod\_13\_19 Payment for Energy Consumption in SEM for non-energy Services Dispatch
- Mod\_01\_20 PMEA No Energy Action Same Direction as NIV
- Mod\_12\_20 Amendments to DRB Process
- Mod\_13\_20 Transparency of DRB decisions
- Mod\_02\_21 Setting of flag for specific interconnector actions
- Mod\_03\_21 Splitting CEADSU variable
- Mod\_05\_21 Collateral exposure of Autoproducer and DSU
- Mod\_09\_21 Housekeeping 2021
- Mod\_10\_21 Temporary Flexible Seat
- Mod\_11\_21 Generator, Supplier and Renewable Seat
- Mod\_12\_21 Clarification of text regarding the Effective Date of a Modification
- Mod\_13\_21 Interest Modification
- Mod\_16\_21 Temporary use of the Market Back Up Price where an Interconnector Trade Quantity and Price are submitted

### **RA Decision Approved**

- Mod\_12\_20 Amendments to DRB Process
- Mod\_13\_20 Transparency of DRB decisions
- Mod\_02\_21 Setting of flag for specific interconnector actions
- Mod\_03\_21 Splitting CEADSU variable
- Mod\_05\_21 Collateral exposure of Autoproducer and DSU
- Mod\_09\_21 Housekeeping 2021
- Mod\_10\_21 Temporary Flexible Seat
- Mod\_11\_21 Generator, Supplier and Renewable Seat
- Mod\_12\_21 Clarification of text regarding the Effective Date of a Modification
- Mod\_13\_21 Interest Modification
- Mod\_16\_21 Temporary use of the Market Back Up Price where an Interconnector Trade Quantity and Price are submitted

### **Recommended for Rejection**

- Mod\_01\_21 Removal of Difference charges where operational constraints are binding

### **RA Decision Rejected**

- Mod\_01\_21 Removal of Difference charges where operational constraints are binding

### **Withdrawn**

- Mod\_11\_20 Definition of a Supplier Member
- Mod\_04\_21 Expansion of System Service Flag to include Cross-Zonal Actions for System Security reasons
- Mod\_06\_21 Proposing Invoice Improvements to reduce burden on Market Participants
- Mod\_07\_21 Dispatchable Demand Generator Unit 2021
- Mod\_08\_21 Removing the 10MW limit for some Demand Sites to enable Demand Sites that include, or are, an individual battery storage unit > 10MW to participate as part of a Demand Side Unit (DSU)

## 5 General Market Information

### 5.1 Query Management

#### 5.1.1 General Queries

The statistics presented in Table 13 - Helpdesk Query Statistics cover the period of 1 October 2020 to 30 September 2021.

Received	Resolved	Open
1903	1925	39

Table 13 - Helpdesk Query Statistics

#### Definitions

- 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 2021.

#### 5.1.2 Settlement Queries

There were 203 Formal Settlement queries raised from October 2020-September 2021; 124 have been upheld, 76 not upheld, 2 rejected and 1 withdrawn.

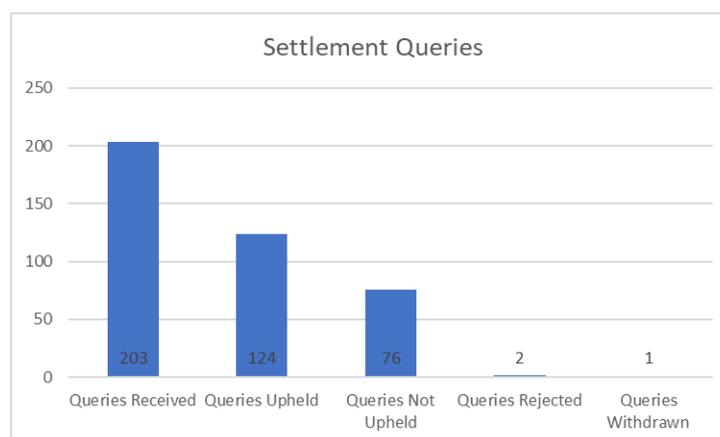


Figure 12 – Settlement Queries 01/10/2020 – 30/09/2021

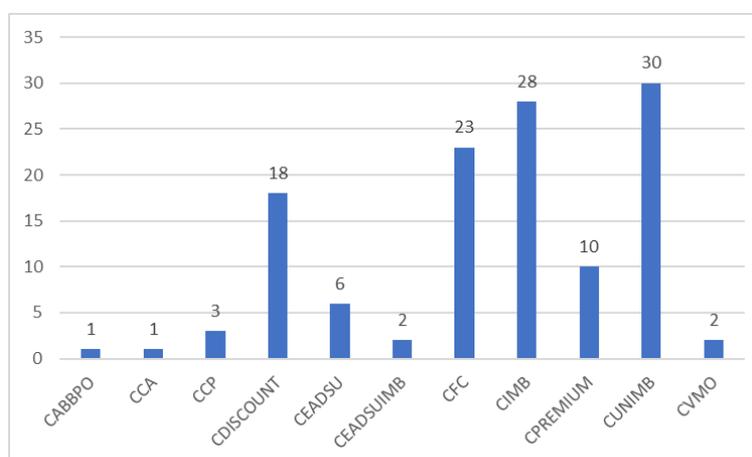


Figure 13 – Upheld Settlement Queries by Topic

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

### Unresolved Queries

No queries raised during October 2020-September 2021 are currently unresolved.

#### 5.1.3 Disputes

There were twenty-five Disputes raised during 1 October 2020 to 30 September 2021. Please see below table which represents the volume of Disputes raised per a Dispute Category.

Dispute Category	Number of Disputes	Disputes Upheld	Disputes not Upheld	Disputes Withdrawn by Participant	Disputes Ongoing
General Dispute	13		2		11
Pricing Dispute	12	1	1		10
Settlement Dispute	0				

**Table 14 - Disputes by Category**

## 5.2 Joining and Terminating Parties and Units

Between 1 October 2020 to 30 September 2021 8 Parties joined the Market and 43 units went effective in the Market. Please see below for further details.

### 5.2.1 Facilitate and Educate participants to accede to the Balancing Market Code

The below Parties joined the Market between 1 October 2020 to 30 September 2021:

Party Name	Party ID	Participant ID	Effective Date
Evermore ES Limited	PY_034090	PT_502522	21/10/2020
Stacks Energy Supply Limited	PY_034093	PT_402576	28/10/2020
Amazon Energy Eoraip Limited	PY_034094	PT_402577	11/11/2020
Lumcloon Power Limited	PY_034098	PT_402579	30/06/2021
Power Management IT Ltd	PY_034097	PT_502525	23/06/2021
Energetech Operations Limited	PY_034104	PT_502531	18/08/2021
LCC Power Limited	PY_034103	PT_402583	01/09/2021
Shannonbridge Power Limited	PY_034099	PT_402580	29/09/2021

**Table 15 - Parties who joined the market October 2020 – September 2021**

The below units went effective in the Market between 01 October 2020 and 30 September 2021:

Party Name	Party ID	Participant ID	Unit ID
ElectroRoute Energy Supply Limited	PY_000171	PT_400200	GU_404460
ElectroRoute Energy Supply Limited	PY_000171	PT_400200	GU_404470
iPower Solutions Limited	PY_000093	PT_500053	DSU_503480
iPower Solutions Limited	PY_000093	PT_500053	SU_500310
Evermore ES Limited	PY_034090	PT_502522	SU_500308
Stacks Energy Supply Limited	PY_034093	PT_402576	SU_400350
Stacks Energy Supply Limited	PY_034093	PT_402576	GU_404330
Electricity Exchange Limited	PY_000114	PT_502516	DSU_503460
Electricity Exchange Limited	PY_000114	PT_502516	SU_500309
Amazon Energy Eoraip Limited	PY_034094	PT_402577	GU_404340
Amazon Energy Eoraip Limited	PY_034094	PT_402577	SU_400351
Rio Energy Supply Limited	PY_034074	PT_402563	GU_404480
Brookfield Renewable Supply 2 Limited	PY_000135	PT_400157	AU_400129
Brookfield Renewable Supply 2 Limited	PY_000135	PT_400157	AU_400130
Power NI Energy Limited	PY_000035	PT_500028	GU_503910
Energy Trading Ireland Limited	PY_000113	PT_400111	DSU_403620
Energy Trading Ireland Limited	PY_000113	PT_400111	SU_400357
Glanaruddery Energy Supply Limited	PY_000164	PT_400202	GU_404490
Glanaruddery Energy Supply Limited	PY_000164	PT_400202	GU_404500
Glanaruddery Energy Supply Limited	PY_000164	PT_400202	SU_400359
Next Kraftwerke GmbH	PY_034068	PT_502511	AU_500121
MFT Energy A/S	PY_000252	PT_400330	AU_400132
MFT Energy A/S	PY_000252	PT_502530	AU_500120
Power NI	PY_000035	PT_500028	GU_503780
Power NI	PY_000035	PT_500028	SU_500311
Gaelectric Green Energy Limited	PY_000144	PT_500086	GU_503930
Gaelectric Green Energy Limited	PY_000144	PT_500086	GU_503940
Power NI	PY_000035	PT_500028	GU_503920
Bord Gais Energy Limited	PY_000027	PT_400028	AU_400118
Statkraft Markets GmbH	PY_034046	PT_502514	GU_503950
Statkraft Markets GmbH	PY_034046	PT_502514	GU_503960
Statkraft Markets GmbH	PY_034046	PT_404520	GU_404510
Statkraft Markets GmbH	PY_034046	PT_404520	GU_404520
New Measured Power Limited t/a PINERGY	PY_000148	PT_400173	AU_400133
Lumcloon Power Limited	PY_034098	PT_402579	GU_404360
Lumcloon Power Limited	PY_034098	PT_402579	GU_404370
Power Management IT Ltd	PY_034097	PT_502525	AU_500118
Energetech Operations Limited	PY_034104	PT_502531	AU_500122
Prepay Power Limited	PY_000087	PT_400080	GU_404560
LCC POWER LIMITED	PY_034103	PT_402583	SU_400358
LCC POWER LIMITED	PY_034103	PT_402583	AU_400131
Shannonbridge Power Limited	PY_034099	PT_402580	GU_404380
Shannonbridge Power Limited	PY_034099	PT_402580	GU_404390

Table 16 - Registrations October 2020- September 2021

The below units de-registered from the Market between 1 October 2020 and 30 September 2021:

Party Name	Party ID	Participant ID	Unit ID
Glencarbry Supply Company Limited	PY_000165	PT_400189	GU_401970
Glencarbry Supply Company Limited	PY_000165	PT_400189	SU_400202
Ballycumber Power Supply Limited	PY_000188	PT_400232	GU_402350
Energia Customer Solutions NI Limited	PY_000042	PT_500030	GU_500211
Glanaruddery Energy Supply Limited	PY_000164	PT_400202	GU_402230
Glanaruddery Energy Supply Limited	PY_000164	PT_400202	GU_402240
Glanaruddery Energy Supply Limited	PY_000164	PT_400202	SU_400225
Energia Customer Solutions NI Limited	PY_000042	PT_500030	GU_501400
Gaelectric Green Energy Limited	PY_000144	PT_500086	GU_501480
Gaelectric Green Energy Limited	PY_000144	PT_500086	GU_501490
Energia Customer Solutions NI Limited	PY_000042	PT_500030	GU_501280
Crystal Energy Limited	PY_000086	PT_400081	SU_400148
LCC POWER LIMITED	PY_000099	PT_400137	AU_400117
LCC POWER LIMITED	PY_000099	PT_400137	SU_400173
Erova Energy Supply Limited	PY_034045	PT_402539	GU_403780

**Table 17 - De-Registrations October 2020 – September 2021**

#### **Termination of Participants**

There were no terminating parties between 1 October 2020 and 30 September 2021.

#### **Suspension of Participants**

No Suspension Orders were issued by the Market Operator between 1 October 2020 and 30 September 2021.

## **6 Manage Stakeholders**

### **6.1 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 2020-2021 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;
- Ongoing collaboration in relation to Guarantees of Origin and Fuel Mix Disclosure processes, including the rolling and annual Fuel Mix Disclosure calculations, and the Green Source Product Verification.

### **6.2 Facilitate Interaction with Customers**

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

- Facilitated Monthly Market Operator User Groups, more details can be found in Appendix E;
- Held weekly Participant calls providing Market Operator updates;
- Facilitated calls and meetings with Market Participants on specific topics as required;
- Facilitated registration calls and meetings for both new and existing Market Participants as required;
- Facilitated individual stakeholder meetings as required.

## 7 KPI Incentives 2020-2021

### 7.1 KPI Overview

The SEMC published on the 04 July 2019 its SEMO Key Performance Indicators Decision Paper SEM-19-033. Under this paper SEMO is subject to performance assessment against six KPIs related to

1. Invoicing
2. Credit Cover Increase Notices
3. SEMO Resettlement Queries
4. General Queries
5. System Availability
6. Timely Publication of Key Market Information

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.

The agreed SEMO Key Performance targets are set out in Table 18<sup>1</sup> below.

Metric	Weighting	Lower Bound Target	Upper Bound Target
1 Invoicing	15%	97%	100%
2 Credit Cover Increase Notices	10%	97%	100%
3 SEMO Resettlement Queries	20%	<15 incidents per quarter	<5 incidents per quarter
4 General Queries	5%	95% resolved within 20 business days	99% resolved within 20 business days
5 System Availability	15%	99%	99.9%
6 Timely Publication of Key Market Information	35%	90% <sup>2</sup>	100%

**Table 18 - Summary of the agreed Key Performance Indicators**

<sup>1</sup> Extract from Table 4 and Table 7 of SEM-19-033 Decision Paper.

<sup>2</sup> A maximum of 75% of the award can be considered only if the 90% lower bound target is met for each of the key reports listed as part of the KPI. In addition to this, if the 90% lower bound target is met for all reports required under the TSC and Data Publication Guide, 100% of the award can be achieved. The final amount awarded is dependent on where the outturn performance percentage is within the target bounds.

## Conditions to be applied to the KPIs

The decision paper SEM-19-033 Section 2.5 also outlines the following KPI parameters:

- The KPIs determined by the SEM Committee will come into effect from 1 October 2019 and apply for the remaining two periods of the SEMO price control.
- Where applicable, metrics should be delivered within one hour of the targeted time.
- External factors which are demonstrably outside of the Market Operator’s direct control are to be excluded e.g. Limited Communication failure by Market Participants, late provision of data by the Meter Data Provider, Government policy changes, Regulatory Authorities’ policy changes etc.
- In terms of assessing the KPIs, a measure is to be taken at the end of each Quarter using the average value of each KPI over that period.
- The KPI incentive pot will be set at 4% of total OpEx revenue for each year. Any KPI reward will be recovered through an adjustment to the K-Factor.
- The amounts included in this report are based on the original OpEx revenue as stated in 2017 monies. Inflation to 2022 monies will be applied when adjusting for the K-Factor.

## 7.2 Invoicing

### 7.2.1 Invoicing Outturn Performance 2020/21

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

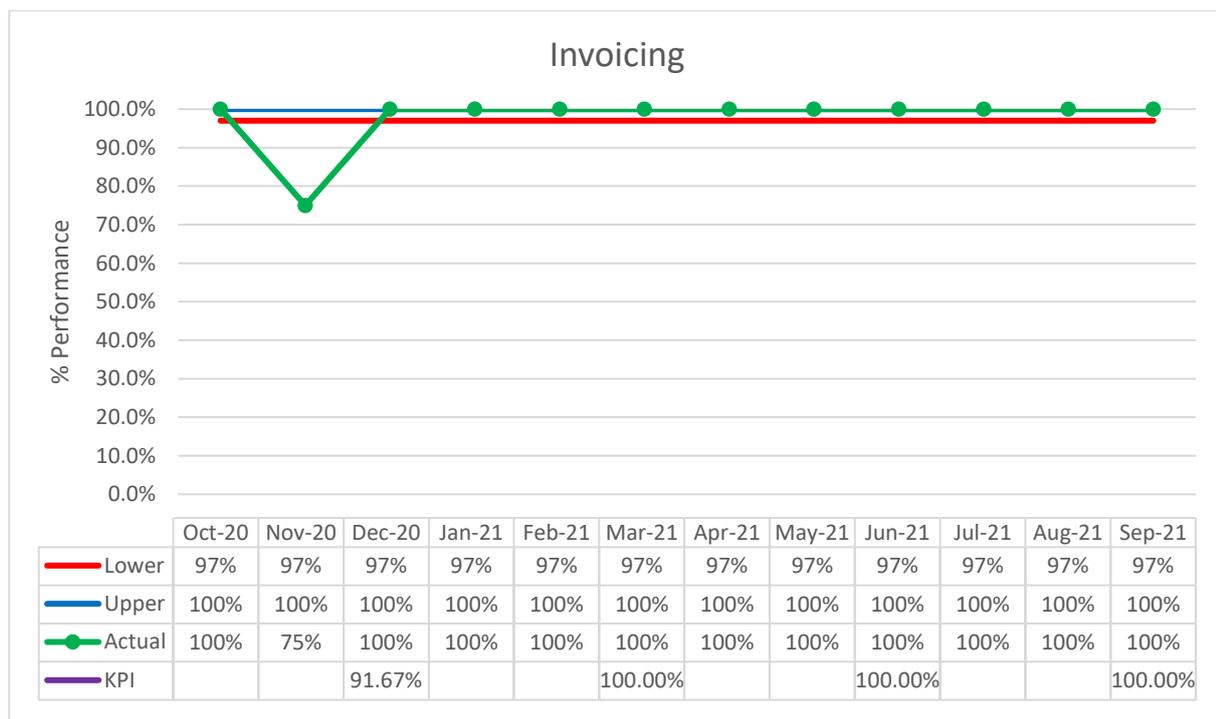


Figure 14 - Invoicing Performance

The upper bound target was achieved in Quarters 2, 3 and 4 of the Financial Year as shown in Figure 14 above. Neither the upper nor lower bound target was reached in Quarter 1.

Regarding the performance of invoicing in Quarter 1, the instruction profiler for settlement date 24/11/2020 failed which prevented system processing and in turn caused delays to settlement

publication times. A hotfix was provided, and processing continued on 01/12/2020. This error resulted in 1 out of 4 settlement dates being late in November 2020.

### 7.3 Credit Cover Increase Notices

#### 7.3.1 Credit Cover Increase Notices Outturn Performance 2020/21

The target for the Credit Cover Increase Notices (CCIN's) KPI was 97% with an upper bound limit of 100%.

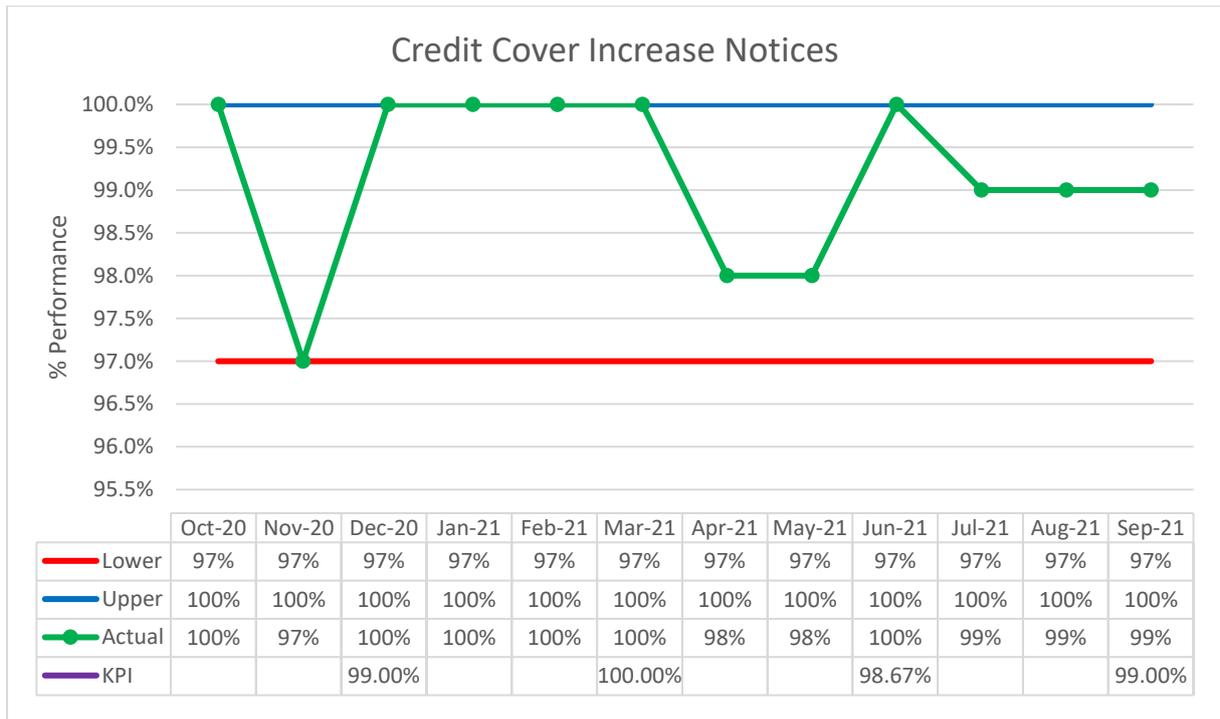


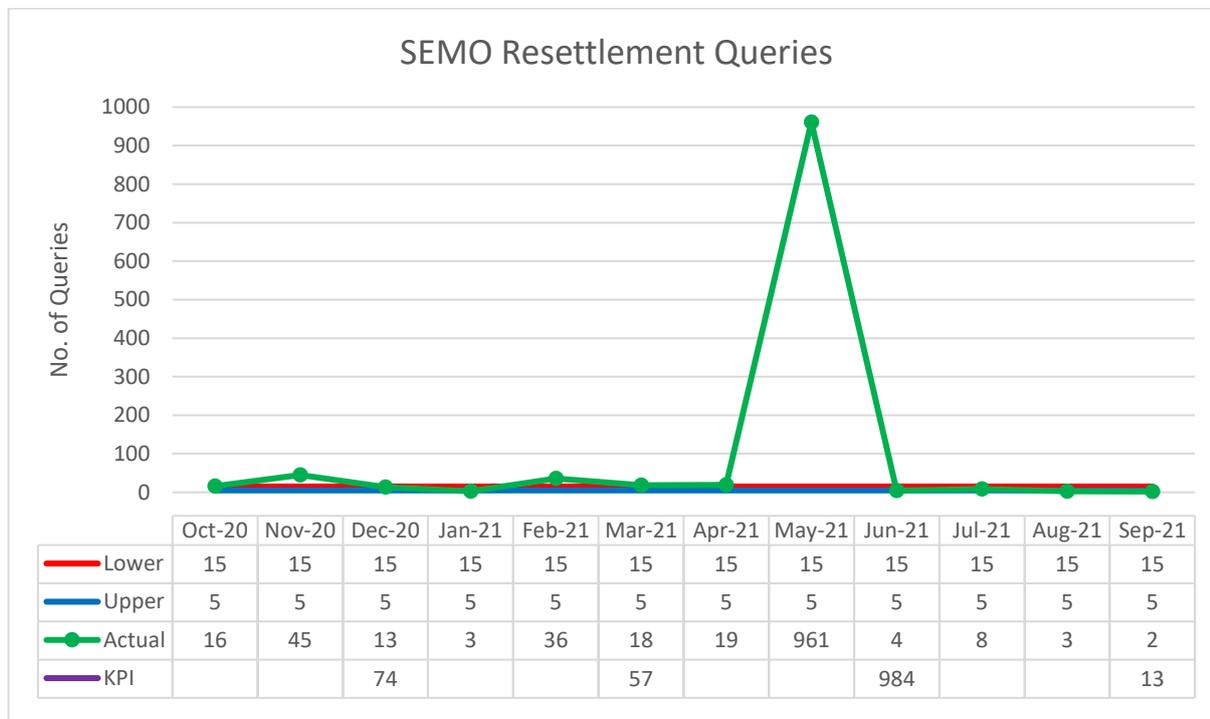
Figure 15 - Credit Cover Increase Notice Performance

The lower bound target was achieved in all four Quarters of the Financial Year, as shown in Figure 15 above. The upper bound target was achieved in Quarter 2.

## 7.4 SEMO Resettlement Queries

### 7.4.1 SEMO Resettlement Queries Outturn Performance 2020/21

The target for SEMO Resettlement Related Queries was 'less than 15' upheld queries which require Resettlement per Quarter.



**Figure 16 - SEMO Resettlement Related Queries Performance**

The upper bound of this metric was five per Quarter. This target was not achieved in any four Quarters of the financial year, as shown in Figure 16 above.

The lower bound of this metric was fifteen per Quarter. This target was achieved in Quarter 4 of the financial year, as shown in Figure 16 above.

The performance targets for this KPI were set against historic stable market operation as seen in the SEM. The outturn performance against this incentive shows that these targets were overly ambitious for a new market and in the context of that set out above. Further consideration should have been given to the fact that SEMO is now tasked with not only Balancing Market Settlement but Capacity Market and Imbalance Settlement also.

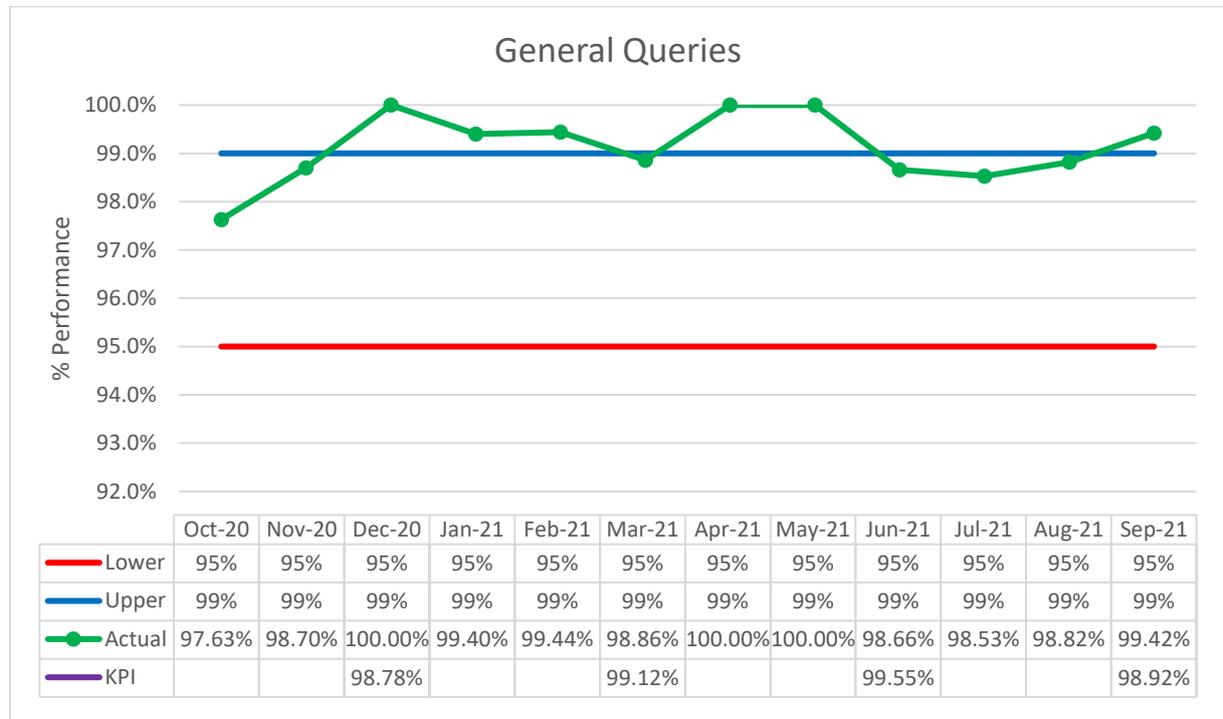
There are three broad categories of areas driving formal queries;

1. Defects;
2. Processing Errors; and
3. Incorrect Parameters/Registrations.

## 7.5 General Queries

### 7.5.1 General Queries Outturn Performance 2020/21

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 20 working days.



**Figure 17 - General Queries Performance**

In financial year 2020-2021 SEMO resolved 1,925 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.

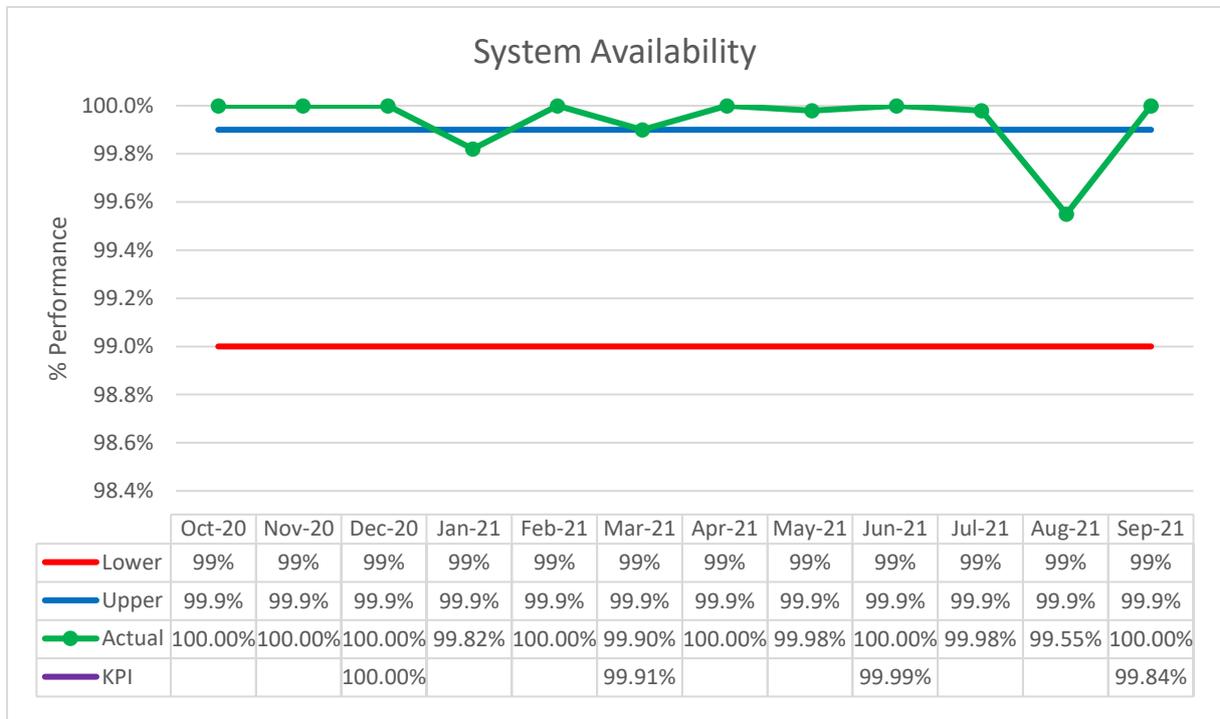
The lower bound target was achieved in Quarters 1, 2, 3 and 4 as shown in Figure 17 above.

The upper bound target was achieved in Quarters 2 and 3 of the financial year, but not in Quarters 1 and 4.

## 7.6 System Availability

### 7.6.1 System Availability Outturn Performance 2020/21

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



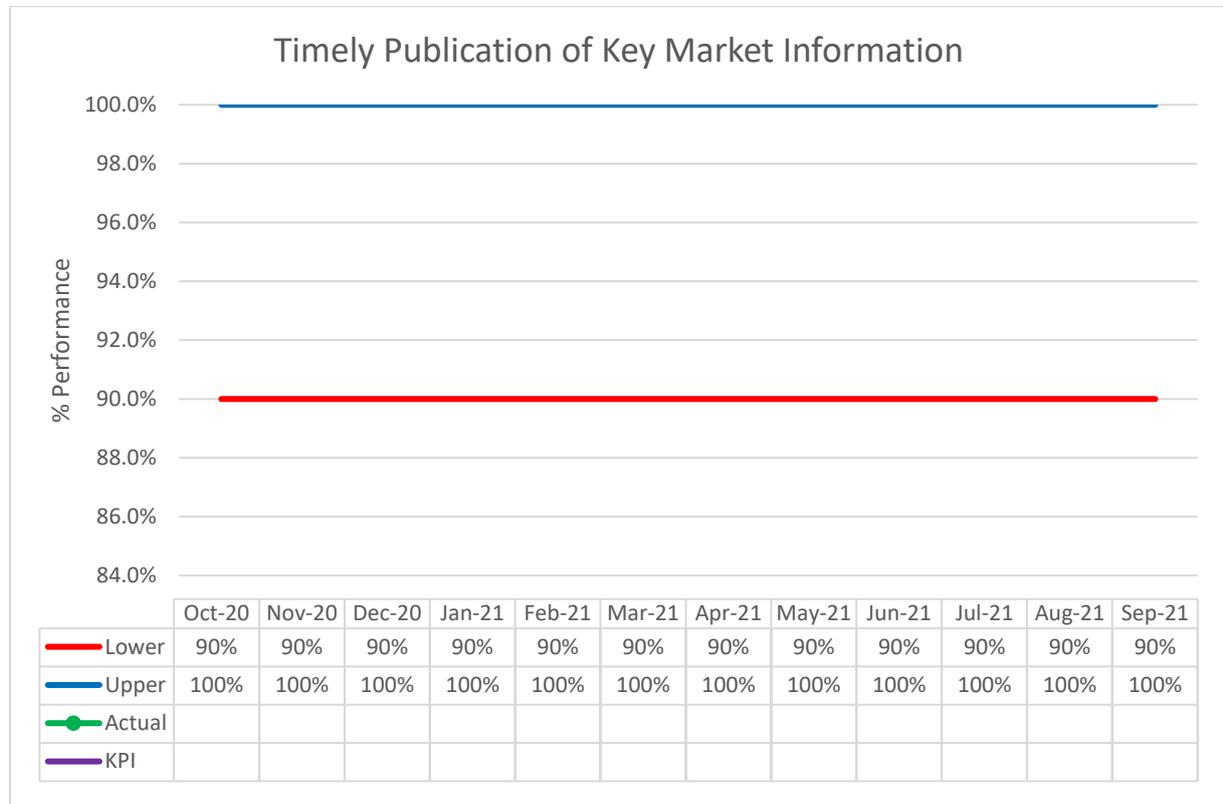
**Figure 18 – System Availability Performance**

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 achieved in Quarters 1, 2 and 3.

## 7.7 Timely Publication of Key Market Information

### 7.7.1 Timely Publication of Key Market Information Outturn Performance 2020/21

The target for the Timely Publication of Key Market Information KPI was 90% with an upper bound of 100%.



**Figure 19 – Timely Publication of Key Market Information Performance**

Due to the restrictions in retrieving data on a timely basis meant it was not practicable for SEM to seek to hit meet these KPIs bases<sup>1</sup>. As a result, neither the upper nor lower bound target was achieved in Quarter 1, 2, 3 and 4 of the Financial Year.

SEMO has and continues to seek to ensure that all market information is available in a timely manner.

<sup>1</sup> One report in particular regarding the Daily Meter Data, caused difficulty in retrieval of the information over the weekend which impacted the KPI requirement of all reports being issued on time.

## 7.8 Performance Summary against KPI Targets

Table 25 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 Revenue Requirement Decision Paper (SEM-19-033). 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. The KPI on SEMO Settlement Queries scored poorly throughout the year however, the lower bound target was met in Quarter 4 which was a noticeable improvement from the previous 3 Quarters. It has been widely known that the I-SEM systems went live with several known issues and defects in particular associated with settlement processes.

SEMP KPI Outturn 2020-2021								
SEMO KPIs - as per SEM-19-033				Performance by Quarter				Overall Performance
Metric	Weighting	Target	Upper Bound	Oct-Dec Q1	Jan-Mar Q2	Apr-June Q3	Jul-Sept Q4	2020-2021
Invoicing	15%	97%	100%	91.67%	100.00%	100.00%	100%	97.92%
Credit Cover Increase Notices	10%	97%	100%	99.00%	100.00%	98.67%	99.00%	99.17%
SEMO Settlement Queries	20%	<15 per Q	<5 per Q	74	57	984	13	1,128
General Queries	5%	95%	99%	98.78%	99.12%	99.55%	98.92%	99.09%
System Availability	15%	99%	99.9%	100%	99.91%	99.99%	100%	99.94%
Timely publication of key market information	35%	90%	100%	-	-	-	-	-

Table 25 - SEMO Performance 2020-2021

## 7.9 Incentive earned by SEMO

The SEMO Revenue Requirement Decision Paper (SEM-18-003) states that the 'KPI incentive pot to be set at 4% of the total OPEX revenue for each year'. The approved OPEX revenue for 2020-2021 was €9,481,346 (2017 Monies)<sup>1</sup>. 4% of this amount translates to a KPI pot of €379,254 in 2017 monies<sup>2</sup>.

Table 26 below illustrates:

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

<sup>1</sup> Ref. Table 7.2 of SEM-10-003

<sup>2</sup> RPI-x will be applied to the incentive earned by SEMO as part of the adjustment to the K-Factor.

<b>Incentive earned per Quarter</b>					
<b>Performance Indicator</b>	<b>Oct-Dec</b>	<b>Jan-Mar</b>	<b>Apr-June</b>	<b>Jul-Sept</b>	
	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>TOTAL</b>
Invoicing	€0	€14,222	€14,222	€14,222	€42,666
Credit Cover Increase Notices	€6,321	€9,481	€5,267	€6,321	€27,391
SEMO Settlement Queries	€0	€0	€0	€3,793	€3,793
General Queries	€4,476	€4,741	€4,741	€4,650	€18,607
System Availability	€14,222	€14,222	€14,222	€13,327	€55,993
Timely publication of key market information	€0	€0	€0	€0	€0
<b>KPI reward per Quarter</b>	<b>€25,019</b>	<b>€42,666</b>	<b>€38,452</b>	<b>€42,312</b>	<b>€148,449</b>
<b>Maximum Available Reward in Quarter</b>	<b>€94,813</b>	<b>€94,813</b>	<b>€94,813</b>	<b>€94,813</b>	<b>€379,254</b>
<b>Percentage of Total Achieved in Quarter</b>	<b>26.39%</b>	<b>45.00%</b>	<b>40.56%</b>	<b>44.63%</b>	<b>39.14%</b>

**Table 26 - Summary of the KPI monetary reward 2020-2021**

Based on a comprehensive set of KPI data SEMO have calculated the KPI reward in Table 26 above to be €148,449 (in 2017 monies). This represents an overall percentage reward of 39.14% of the maximum amount available. This is an increase of 10.8% from 29.34% in 2019/20.

This KPI reward is recovered through the adjustment of the K Factor (see section 2.5 of the SEMO Key Performance Indicators Decision Paper – SEM-19-033<sup>1</sup>).

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<sup>1</sup> [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	Status
06/10/2020	D+1	Timing	EIRGRID	File submission of ACTA data	Delay of 27 mins	Minor	Closed
07/10/2020	D+1	Timing	SONI	File submission of ACTA data	Delay of 4 days	Minor	Closed
08/10/2020	D+1	Timing	SONI	File submission of ACTA data	Delay of 3 days	Minor	Closed
10/10/2020	D+1	Timing	EIRGRID	File submission of ACTA data	Delay of 22 mins	Minor	Closed
10/10/2020	D+1	Timing	SONI	File submission of ACTA data	Delay of 22 mins	Minor	Closed
18/10/2020	D+1	Timing	EIRGRID	File submission of Metering data	Delay of 4 hrs 44mins	Minor	Closed

02/11/2020	D+1	Timing	SONI	File submission of ACTA data	Delay of 33 mins	Minor	Closed
02/11/2020	D+1	Timing	SONI	File submission of DI data	Delay of 35 mins	Minor	Closed
05/11/2020	D+4	Timing	SONI	File submission of DI data	Delay of 9 mins	Minor	Closed
08/11/2020	D+1	Timing	SONI	File submission of DI data	Delay of 10 mins	Minor	Closed
12/11/2020	D+4	Timing	SONI	File submission of DI data	Delay of 13 mins	Minor	Closed
15/11/2020	D+1	Timing	SONI	File submission of DI data	Delay of 15 mins	Minor	Closed
17/11/2020	D+1	Timing	MRSO	File submission of NPEG data	Delay of 2hrs 49mins	Minor	Closed
17/11/2020	D+1	Timing	MRSO	File submission of NPEG data	Delay of 2hrs 50mins	Minor	Closed

03/12/2020	D+4	Timing	SONI	File submission of DI data	Delay of 2hrs and 45 mins	Minor	Closed
06/12/2020	D+1	Timing	SONI	File submission of DI data	Delay of 2hrs 45mins	Minor	Closed
08/12/2020	D+1	Timing	SONI	File submission of ACTA data	Delay of 31 mins	Minor	Closed
11/12/2020	D+4	Timing	SONI	File submission of DI data	Delay of 41 mins	Minor	Closed
13/12/2020	D+4	Timing	SONI	File submission of DI data	Delay of 16mins	Minor	Closed
14/12/2020	D+1	Timing	SONI	File submission of DI data	Delay of 42 mins	Minor	Closed
14/12/2020	D+1	Timing	SONI	File submission of ACTA data	Delay of 29 mins	Minor	Closed
15/12/2020	D+4	Timing	SONI	File submission of DI data	Delay of 1hr and 13 mins	Minor	Closed
15/12/2020	D+1	Timing	SONI	File submission of ACTA data	Delay of 78 mins	Minor	Closed
16/12/2020	D+1	Timing	SONI	File submission of DI data	Delay of 18 mins	Minor	Closed
17/12/2020	D+1	Timing	SONI	File submission of ACTA data	Delay of 23 mins	Minor	Closed
17/12/2020	D+4	Timing	SONI	File submission of ACTA data	Delay of 2 days	Minor	Closed
17/12/2020	D+4	Timing	EIRGRID	File submission of ACTA data	Delay of 2 days	Minor	Closed
28/12/2020	D+1	Timing	EIRGRID	File submission of DI data	Delay of 29 mins	Minor	Closed
31/12/2020	D+1	Timing	SONI	File submission of ACTA data	Delay of 4 days	Minor	Closed

01-03/01/2021	D+1	Timing	EIRGRID	File submission of Metering data	Delay of 2 days	Minor	Closed
31/01/2021	D+4	Timing	EIRGRID	File submission of DI data	Delay of 1 hr 27 mins	Minor	Closed
29/01/2021	D+4	Timing	EIRGRID	File submission of DI data	Delay of 1 hr 53 mins	Minor	Closed
26/01/2021	D+4	Timing	SONI	File submission of ACTA data	Delay of 2 days	Minor	Closed
19/01/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 6 mins	Minor	Closed
19/01/2021	D+1	Timing	SONI	File submission of DI data	Delay of 12 mins	Minor	Closed
18/01/2021	D+1	Timing	EIRGRID	File submission of Metering data	Delay of 72 mins	Minor	Closed
18/01/2021	D+1	Timing	EIRGRID	File submission of ACTA data	Delay of 74 mins	Minor	Closed
18/01/2021	D+1	Timing	EIRGRID	File submission of DI data	Delay of 72 mins	Minor	Closed
16/01/2021	D+4	Timing	SONI	File submission of DI data	Delay of 11 mins	Minor	Closed
15/01/2021	D+4	Timing	EIRGRID	File submission of Metering data	Delay of 73 mins	Minor	Closed
15/01/2021	D+4	Timing	EIRGRID	File submission of DI data	Delay of 2 hrs 18 mins	Minor	Closed

02/02/2021	D+1	Timing	SONI	File submission of ACTA data	Delay of 2hrs 37mins	Minor	Closed
09/02/2021	D+4	Timing	MRSO	File submission of Metering data	Delay 1 day	Minor	Closed
12/02/2021	D+1	Timing	MRSO	File submission of Metering data	Delay 1 day	Minor	Closed
13/02/2021	D+1	Timing	MRSO	File submission of Metering data	Delay 1 day	Minor	Closed
14/02/2021	D+1	Timing	MRSO	File submission of Metering data	Delay 1 day	Minor	Closed
14/02/2021	D+1	Timing	EIRGRID	File submission of ACTA data	Delay of 66 mins	Minor	Closed
16/02/2021	D+4	Timing	EIRGRID	File submission of ACTA data	Delay of 2 days	Minor	Closed
18/02/2021	D+4	Timing	SONI	File submission of DI data	Delay of 65 mins	Minor	Closed
23/02/2021	D+4	Timing	EIRGRID	File submission of ACTA data	Delay of 2 days	Minor	Closed
25/02/2021	D+1	Timing	MRSO	File submission of Metering data	Delay 1 day	Minor	Closed

30/03/2021	D+1	Timing	SONI	File submission of Metering data	Delay 1 hr 56 mins	Minor	Closed
30/03/2021	D+4	Timing	SONI	File submission of Metering data	Delay 4 days	Minor	Closed
30/03/2021	D+4	Timing	SONI	File submission of ACTA data	Delay of 2 days	Minor	Closed
31/03/2021	D+1	Timing	SONI	File submission of Metering data	Delay 1 hr 52 mins	Minor	Closed
31/03/2021	D+4	Timing	SONI	File submission of Metering data	Delay 2 days	Minor	Closed

01/04/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 68 mins	Minor	Closed
01/04/2021	D+4	Timing	SONI	File submission of Metering data	Delay of 1 day	Minor	Closed
02/04/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 3 days	Minor	Closed
02/04/2021	D+1	Timing	EirGrid	File submission of Metering data	Delay of 3 days	Minor	Closed
03/04/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 2 days	Minor	Closed
04/04/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 1 day	Minor	Closed
05/04/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 16 mins	Minor	Closed
05/04/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 62 mins	Minor	Closed
06/04/2021	D+4	Timing	SONI	File submission of DI data	Delay of 2 days	Minor	Closed
07/04/2021	D+4	Timing	SONI	File submission of Metering data	Delay of 1 day	Minor	Closed
09/04/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 2 days	Minor	Closed
10/04/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 1 day	Minor	Closed
23/04/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 1 day	Minor	Closed

01/05/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 37 mins	Minor	Closed
20/05/2021	D+4	Timing	SONI	File submission of DI data	Delay of 1 hr 36mins	Minor	Closed
21/05/2021	D+1	Timing	MRSO	File submission of Metering data	Delay of 59 mins	Minor	Closed
22/05/2021	D+1	Timing	MRSO	File submission of Metering data	Delay of 59 mins	Minor	Closed
23/05/2021	D+1	Timing	MRSO	File submission of Metering data	Delay of 59 mins	Minor	Closed
23/05/2021	D+1	Timing	SONI	File submission of DI data	Delay of 1 hr 37mins	Minor	Closed
25/05/2021	D+4	Timing	SONI	File submission of Metering data	Delay of 1 day	Minor	Closed
26/05/2021	D+4	Timing	SONI	File submission of Metering data	Delay of 1 day	Minor	Closed
27/05/2021	D+4	Timing	SONI	File submission of Metering data	Delay of 1 day	Minor	Closed
28/05/2021	D+1	Timing	SONI	File submission of Metering data	1 day	Minor	Closed
28/05/2021	D+4	Timing	SONI	File submission of Metering data	Delay of 4hrs 8mins	Minor	Closed
29/05/2021	D+1	Timing	SONI	File submission of Metering data	1 day	Minor	Closed
30/05/2021	D+1	Timing	SONI	File submission of Metering data	1 day	Minor	Closed
31/05/2021	D+1	Timing	SONI	File submission of Metering data	46 mins later	Minor	Closed

08/06/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 78 mins	Minor	Closed
15/06/2021	D+4	Timing	EirGrid	File submission of Metering data	Delay of 1 day	Minor	Closed
01/08/2021	D+1	Timing	SONI	File submission of Metering data	Delay of 1 min	Minor	Closed
13/09/2021	D+1	Timing	SONI	File submission of ACTA data	Delay of 2 hrs 56 mins	Minor	Closed
10/09/2021	D+4	Timing	SONI	File submission of ACTA data	Delay of 3 hrs 26 mins	Minor	Closed

Table 27 - Meter data provider breaches

### Market Participant Breaches

Month	Default Notices Issued	No. of Parties
Oct-20	10	8
Nov-20	8	7
Dec-20	3	3
Jan-21	7	6
Feb-21	4	3
Mar-21	7	7
Apr-21	2	2
May-21	7	6
Jun-21	10	7
Jul-21	14	8
Aug-21	2	2
Sep-21	2	2
Total	76	61

Table 28 - Clearing Default Notices

Month	No. of CCIN issued	No. of Participants
Oct-20	53	14
Nov-20	10	6
Dec-20	75	18
Jan-21	54	12
Feb-21	60	22
Mar-21	60	21
Apr-21	60	18
May-21	79	24
Jun-21	86	23
Jul-21	85	14
Aug-21	77	26
Sep-21	180	44

Table 29 - CCINs issued

Month	No. of defaults issued	No. of Participants
Oct-20	-	-
Nov-20	-	-
Dec-20	-	-
Jan-21	-	-
Feb-21	-	-
Mar-21	-	-
Apr-21	-	-
May-21	-	-
Jun-21	3	3
Jul-21	-	-
Aug-21	1	1
Sep-21	3	3
<b>Total</b>	<b>7</b>	<b>7</b>

Table 30 - Credit Default Notices

### Market Operator Defaults

Indicative			
Month	On Time	Same Day Late	> 1 Day Late
Oct 2020	19	4	8
Nov 2020	13	1	16
Dec 2020	21	0	10
Jan 2021	25	1	5
Feb 2021	20	3	5
Mar 2021	24	1	6
Apr 2021	25	0	5
May 2021	24	6	1
Jun 2021	25	3	2
Jul 2021	26	0	5
Aug 2021	30	0	1
Sep 2021	27	3	0
<b>Totals</b>	<b>279</b>	<b>22</b>	<b>64</b>

Table 31 - Delays to Indicative Settlement Runs

Initial			
Month	On Time	Same Day Late	> 1 Day Late
Oct 2020	21	7	3
Nov 2020	19	1	10
Dec 2020	28	1	2
Jan 2021	29	2	0
Feb 2021	26	2	0
Mar 2021	27	1	3
Apr 2021	29	1	0
May 2021	30	1	0
Jun 2021	30	0	0
Jul 2021	29	1	1
Aug 2021	30	1	0
Sep 2021	28	2	0
<b>Totals</b>	326	20	19

**Table 32 - Delays to Initial Settlement Runs**

## Appendix B: Settlement publication delays

### 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 Indicatives completed late on target date	Minor	Closed
Oct	4th,13th,14th	3	Indicative	Timing	SEMO	Processing Timeline	Overrun of processing time required	Processing delayed due to competing processes running in parallel	Processing continued and Indicatives completed late on target date	Minor	Closed
Oct	6th-12th	7	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
Oct	18th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	EirGrid MDP data received late	MDP data received and Indicatives completed late after target date	Minor	Closed
Nov	1st	1	Indicative	Timing	SEMO	Processing Timeline	Overrun of processing time required	Processing delayed due to competing processes running in parallel	Processing continued and Indicatives completed late on target date	Minor	Closed
Nov	2nd	1	Indicative	Timing	SEMO	Processing Timeline	Overrun of processing time required	Processing delayed due to competing processes running in parallel	Processing continued and Indicatives completed late after target date	Minor	Closed
Nov	3rd-9th	7	Indicative	Timing	SEMO	Processing Timeline	Overrun of processing time required	Processing delayed due to competing processes running in parallel	Processing continued and Indicatives completed late after target date	Minor	Closed
Nov	17th	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
Nov	24th-30th	7	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
Dec	1st	1	Indicative	Timing	SEMO	Day-Ahead/Intra-Day Trading (DA/IDT) Data	Processing DA/IDT data	DA/IDT data did not import successfully	DA/IDT data imported and Indicatives completed late after target date	Minor	Closed
Dec	2nd	1	Indicative	Timing	SEMO	Processing Issue	Issue with CIM	CIM load delayed IP processing	CIM issue resolved and Indicatives completed late after target date	Minor	Closed
Dec	4th-6th	3	Indicative	Timing	SEMO	Day-Ahead/Intra-Day Trading (DA/IDT) Data	Processing DA/IDT data	DA/IDT data required manual upload	DA/IDT data imported and Indicatives completed late after target date	Minor	Closed
Dec	12th-13th	2	Indicative	Timing	SEMO	Connection Issues	Slow processing due to system issues.	Slow processing due to system issues	Processing continued and indicative published after due date	Minor	Closed
Dec	15th	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
Dec	22nd-23rd	2	Indicative	Timing	SEMO	Processing Issue	Issue with PUSH processing	PUSH failure	PUSH issue resolved and Indicatives completed late after target date	Minor	Closed
Jan	1st-3rd	3	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	EirGrid MDP data received late	MDP data received and Indicatives completed late after target date	Minor	Closed
Jan	13th	1	Indicative	Timing	SEMO	Processing Issue	Issue with CIM	CIM load delayed IP processing	CIM issue resolved and Indicatives completed late on target date	Minor	Closed
Jan	18th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	EirGrid MDP data received late	MDP data received and Indicatives completed late after target date	Minor	Closed
Jan	28th	1	Indicative	Timing	SEMO	Processing Issue	Issue with PUSH processing	PUSH failure	PUSH issue resolved and Indicatives completed late after target date	Minor	Closed

Feb	2nd	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
Feb	4th	1	Indicative	Timing	SEMO	Processing Issue	Issue with PUSH processing	PUSH failure	PUSH issue resolved and Indicatives completed late after target date	Minor	Closed
Feb	10th	1	Indicative	Timing	SEMO	Processing Issue	Processing error made in data processing	Processing error.	Issue resolved and processing continued. Indicative completed same day late.	Minor	Closed
Feb	12th-15th	4	Indicative	Timing	SEMO	Late Settlement Data	Smart Metering cut over Data Provider (MDP) data	MRSO MDP data received late	MDP data received and Indicatives completed late after target date	Minor	Closed
Feb	24th	1	Indicative	Timing	SEMO	Processing Issue	Issue with CIM	Delay with CIM upload	CIM issue resolved and Indicatives completed late on target date	Minor	Closed
Mar	12th-14th	3	Indicative	Timing	SEMO	Processing Issue	Issue with PUSH processing(KRI 209,601)	PUSH failure	PUSH issue resolved and Indicatives completed late after target date	Minor	Closed
Mar	17th	1	Indicative	Timing	SEMO	Processing Issue	Issue with CIM	Common Information Model (CIM) load delayed IP processing	CIM issue resolved and Indicatives completed late after target date	Minor	Closed

Mar	28th	1	Indicative	Timing	SEMO	Processing Timeline	Additional analysis required(short day review)	Additional financial analysis required	Analysis completed and Indicatives completed late on target date	Minor	Closed
Mar	30th	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
Mar	31st	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
Apr	2nd-5th	4	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
Apr	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
May	14th-16th	3	Indicative	Timing	SEMO	Day-Ahead/Intra-Day Trading (DA/IDT) Data	Processing DA/IDT data	DA/IDT data required manual upload	DA/IDT data imported and Indicatives completed late on target date	Minor	Closed
May	21st-22rd	2	Indicative	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	MRSO/SONI MDP data received late	MDP data received and Indicatives completed late on target date	Minor	Closed
May	23rd	1	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

May	31st	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
Jun	8th	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
Jun	9th	1	Indicative	Timing	SEMO	Processing Issue	Issue with CIM	CIM load delayed IP processing	CIM issue resolved and Indicatives completed late on target date	Minor	Closed
Jun	21st	1	Indicative	Timing	SEMO	Processing Issue	Issue with PUSH processing	Slow PUSH times	PUSH issue resolved and Indicatives completed late on target date	Minor	Closed
Jun	26th	1	Indicative	Timing	SEMO	Day-Ahead/Intra-Day Trading (DA/IDT) Data	Processing DA/IDT data	Missing DA/IDT data	DA/IDT data imported and Indicatives completed late after target date	Minor	Closed
Jun	27th	1	Indicative	Timing	SEMO	Processing Timeline	Processing backlog	Backlog from previously delayed runs	Backlog worked through and Indicatives completed late after target date	Minor	Closed
Jul	4th	1	Indicative	Timing	SEMO	Processing Issue	Duplication of QFPN values	QFPN values were duplicated preventing further processing being completed	Indicative completed late after target date	Minor	Closed
Jul	10th-13th	4	Indicative	Timing	SEMO	Day-Ahead/Intra-Day Trading (DA/IDT) Data	Processing DA/IDT data	Missing DA/IDT data	DA/IDT data imported and Indicatives completed late after target date	Minor	Closed

Aug	23rd	1	Indicative	Timing	SEMO	System Outage	Processing ceased due to system outage.	System Failure	System restored and processing re-commenced. Indicative completed late after target date	Minor	Closed
Sep	13th	1	Indicative	Timing	SEMO	Late Settlement Data	Late Actual Availabilities (ACTA) files	NI ACTA files received late	ACTA data received and Indicatives completed late on target date	Minor	Closed
Sep	18th-19th	2	Indicative	Timing	SEMO	Processing Issue	Calculations re ran following entry of backup prices.	Backup prices required updating in CSB.	Processing continued and Indicatives completed late on target date	Minor	Closed

## Initial Settlement

Oct	4th-6th	3	Initial	Timing	SEMO	Late Settlement Data	Late Actual Availabilities (ACTA) files	NI ACTA files received late	ACTA data received and Initials completed late after target date	Minor	Closed
Oct	7th	1	Initial	Timing	SEMO	Processing Timeline	Additional analysis required	Additional financial analysis required	Analysis completed and Initials completed late on target date	Minor	Closed
Oct	18th,23rd	2	Initial	Timing	SEMO	Processing Timeline	Additional analysis required	Additional financial analysis required	Analysis completed and Initials completed late on target date	Minor	Closed
Oct	24th,25th	2	Initial	Timing	SEMO	Processing Timeline	Processing backlog	Backlog from previously delayed runs	Backlog worked through and Initials completed late on target date	Minor	Closed
Oct	26th	1	Initial	Timing	SEMO	Processing Timeline	Overrun of processing time required	Processing delayed due to competing processes running in parallel	Processing continued and Initials completed late on target date	Minor	Closed
Oct	28th	1	Initial	Timing	SEMO	Processing Timeline	Overrun of processing time required	Processing delayed due to competing processes running in parallel	Processing continued and Initials completed late on target date	Minor	Closed
Nov	3rd,4th	2	Initial	Timing	SEMO	Processing Timeline	Overrun of processing time required	Processing delayed due to competing processes running in parallel	Processing continued and Initials completed late after target date	Minor	Closed
Nov	19th-25th	7	Initial	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	IP had to be re-run	IP issue resolved and Initials completed late after target date	Minor	Closed
Nov	26th	1	Initial	Timing	SEMO	Processing Timeline	Processing backlog	Backlog from previously delayed runs	Backlog worked through and Initials completed late after target date	Minor	Closed
Nov	29th	1	Initial	Timing	SEMO	Processing Issue	Issue with CIM	CIM load delayed IP processing	CIM issue resolved and Initials completed late on target date	Minor	Closed
Dec	2nd	1	Initial	Timing	SEMO	Processing Timeline	Additional analysis required	Additional financial analysis required	Analysis completed and Initials completed late on target date	Minor	Closed
Dec	17th	1	Initial	Timing	SEMO	Processing Issue	Issue with PUSH processing	PUSH failure	PUSH issue resolved and Initials completed late after target date	Minor	Closed
Dec	28th	1	Initial	Timing	SEMO	Processing Issue	Issue with Instruction Profilers (IPs)	Slow IP processing	IP issue resolved and Initials completed late after target date	Minor	Closed
Jan	12th	1	Initial	Timing	SEMO	Processing Timeline	Additional analysis required	Additional financial analysis required	Analysis completed and Initials completed late on target date	Minor	Closed
Jan	25th	1	Initial	Timing	SEMO	Processing Issue	Issue with PUSH processing	PUSH failure	PUSH issue resolved and Initials completed late on target date	Minor	Closed

Feb	9th	1	Initial	Timing	SEMO	Processing Timeline	Processing backlog	Backlog from previously delayed runs due to v13.00.00 Retail Market Release on the ROI Central Market Systems and TIBCO Central HUB (ROI & NI).	Backlog worked through and Initials completed late on target date	Minor	Closed
Feb	14th	1	Initial	Timing	SEMO	Processing Timeline	Additional analysis required	Additional financial analysis required	Analysis completed and Initials completed late on target date	Minor	Closed
Mar	9th	1	Initial	Timing	SEMO	Processing Issue	Issue with PUSH processing	PUSH failure	PUSH issue resolved and Indicatives completed late after target date	Minor	Closed
Mar	29th	1	Initial	Timing	SEMO	Processing Issue	Issue with Meter Data Provider (MDP) data	Failed ACTA import	ACTA issue resolved and Initials completed late after target date	Minor	Closed
Mar	30th	1	Initial	Timing	SEMO	Processing Issue	Issue with Meter Data Provider (MDP) data	Failed ACTA import	ACTA issue resolved and Initials completed late after target date	Minor	Closed
Mar	31st	1	Initial	Timing	SEMO	Processing Issue	Issue with Meter Data Provider (MDP) data	Failed ACTA import	ACTA issue resolved and Initials completed late after target date	Minor	Closed
Apr	01st	1	Initial	Timing	SEMO	Processing Timeline	Processing backlog	Backlog from previously delayed runs	Backlog worked through and Initials completed late on target date	Minor	Closed
May	25th	1	Initial	Timing	SEMO	Late Settlement Data	Late Meter Data Provider (MDP) data	SONI MDP data received late	MDP data received and Initials completed late after target date	Minor	Closed
Jul	7th	1	Initial	Timing	SEMO	Processing Timeline	Additional analysis required	Additional financial analysis required	Analysis completed and Initial completed late after target date	Minor	Closed
Jul	31st	1	Initial	Timing	SEMO	System Issue	Users unable to access CSB system	Standard IT issue which had an unexpected impact on CSB	Initial completed late on target date	Minor	Closed
Aug	1st	1	Initial	Timing	SEMO	System Issue	Unable to access internal processing system.	Windows Certificate update impact	Processing continued and Initial completed late on target date	Minor	Closed
Sep	8th	1	Initial	Timing	SEMO	Processing Timeline	Additional analysis required	Additional financial analysis required	Analysis completed and Initials completed late on target date	Minor	Closed
Sep	16th	1	Initial	Timing	SEMO	Processing Timeline	Additional analysis required	Additional financial analysis required	Analysis completed and Initials completed late on target date	Minor	Closed

**Table 33 - Settlement Publication Delays**

## Appendix C: List of Queries by Type

Upheld Queries
1 query relating to CABBPO was upheld
1 query relating to CCA was upheld
3 queries relating to CCP were upheld
18 queries relating to CDISCOUNT were upheld
6 queries relating to CEADSU were upheld
2 queries relating to CEADSUIMB were upheld
23 queries relating to CFC were upheld
28 queries relating to CIMB were upheld
10 queries relating to CPREMIUM were upheld
30 queries relating to CUNIMB were upheld
2 queries relating to CVMO were upheld

**Table 34- Upheld Queries**

## Appendix D: Imbalance Prices

Month	Published Imbalance Prices	Expected Count of Imbalance Prices	Missed Imbalance Prices
Oct	8726	8940	214
Nov	8212	8640	428
Dec	8744	8928	184
<b>Quarter 1 Total</b>	<b>25682</b>	<b>26508</b>	<b>826</b>
Jan	8841	8928	87
Feb	8045	8064	19
Mar	8781	8916	135
<b>Quarter 2 Total</b>	<b>25667</b>	<b>25908</b>	<b>241</b>
Apr	8589	8640	51
May	8823	8928	105
Jun	8549	8640	91
<b>Quarter 3 Total</b>	<b>25961</b>	<b>26208</b>	<b>247</b>
Jul	8892	8928	36
Aug	8921	8928	20
Sep	8640	8640	58
<b>Quarter 4 Total</b>	<b>26453</b>	<b>26496</b>	<b>114</b>

Table 35 – Missed 5Min Imbalance Prices

Month	Market Back Up Prices	Ex-Ante Market Back Up Price	Published Imbalance Settlement Prices	Expected Count of Imbalance Settlement Prices
Oct	69	1	1420	1490
Nov	72	21	1347	1440
Dec	43	0	1445	1488
<b>Quarter 1 Total</b>	<b>184</b>	<b>22</b>	<b>4212</b>	<b>4418</b>
Jan	10	15	1463	1488
Feb	6	0	1338	1344
Mar	26	6	1454	1486
<b>Quarter 2 Total</b>	<b>42</b>	<b>21</b>	<b>4255</b>	<b>4318</b>
Apr	13	0	1427	1440
May	41	0	1447	1488
Jun	11	10	1419	1440
<b>Quarter 3 Total</b>	<b>65</b>	<b>10</b>	<b>4293</b>	<b>4368</b>
Jul	0	7	1481	1488
Aug	2	0	1486	1488
Sep	0	0	1440	1440
<b>Quarter 4 Total</b>	<b>2</b>	<b>7</b>	<b>4407</b>	<b>4416</b>

Table 36 – Application of 30Min Market Back Up Price

Month	Period Starting	Min Price	Period Starting	Max Price	Avg Price
October	10/10/2020 05:45	-€ 344.14	01/10/2020 12:25	€ 490.10	€ 46.40
November	14/11/2020 00:25	-€ 1,000.00	08/11/2020 11:00	€ 5,499.17	€ 42.16
December	05/12/2020 06:25	-€ 1,000.00	09/12/2020 17:10	€ 495.04	€ 61.55
January	08/01/2021 03:55	-€ 1,000.00	12/01/2021 17:05	€ 1,720.50	€ 81.62
February	13/02/2021 21:35	-€ 1,000.00	01/02/2021 17:40	€ 563.97	€ 52.72
March	13/03/2021 02:20	-€ 1,000.00	02/03/2021 18:15	€ 550.19	€ 64.83
April	19/04/2021 14:20	-€ 578.35	14/04/2021 14:15	€ 495.20	€ 88.26
May	03/05/2021 09:20	-€ 366.40	15/05/2021 23:25	€ 495.31	€ 96.63
June	09/06/2021 03:15	-€ 384.65	11/06/2021 16:50	€ 490.10	€ 94.69
July	03/07/2021 02:35	-€ 40.35	03/07/2021 17:00	€ 499.75	€ 150.76
August	06/08/2021 23:05	-€ 1,000.00	20/08/2021 00:10	€ 522.37	€ 122.29
September	26/09/2021 10:05	-€ 195.32	09/09/2021 13:40	€ 4,683.49	€ 207.55

**Table 37 – High/Low/Average 5Min Imbalance Prices**

Month	Period Starting	Min Price	Period Starting	Max Price	Avg Price
October	10/10/2020 05:30	-€ 206.97	01/10/2020 07:30	€ 459.31	€ 92.53
November	13/11/2020 23:00	-€ 243.05	26/11/2020 17:00	€ 691.57	€ 41.54
December	19/12/2020 03:00	-€ 333.33	09/12/2020 17:00	€ 494.63	€ 61.28
January	10/01/2021 22:30	-€ 209.51	12/01/2021 17:30	€ 1,720.50	€ 81.41
February	14/02/2021 01:00	-€ 325.31	10/02/2021 17:30	€ 407.23	€ 52.63
March	06/03/2021 17:30	-€ 304.75	08/03/2021 18:00	€ 485.81	€ 64.77
April	19/04/2021 14:30	-€ 237.23	13/04/2021 07:00	€ 433.19	€ 88.29
May	13/05/2021 22:00	-€ 234.17	29/05/2021 09:30	€ 490.10	€ 96.55
June	09/06/2021 03:00	-€ 111.66	28/06/2021 10:00	€ 455.54	€ 94.75
July	16/07/2021 03:00	-€ 1.00	29/07/2021 13:30	€ 492.08	€ 150.80
August	06/08/2021 23:00	-€ 186.87	03/08/2021 12:00	€ 442.66	€ 122.30
September	23/09/2021 01:30	-€ 66.72	09/09/2021 15:30	€ 4,680.00	€ 207.56

**Table 38 – High/Low/Average 30Min Imbalance Settlement Prices**

## Appendix E: Market Operator User Groups

Market Operator User Group (MOUG)	
Date	Location
08/10/2020	Conference Call
25/11/2010	Conference Call
17/12/2020	Conference Call
28/01/2021	Conference Call
25/03/2021	Conference Call
27/05/2021	MS Teams
09/09/2021	MS Teams

Table 39 – 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. For the weekly energy markets and Variable Market Operator Charge (VMOC) initial invoices the target is 12:00 each Friday. The target publication for initial Capacity settlement documents is at 12:00 seven working days after the end of each month, and the target publication for the Fixed Market Operator Charge (FMOC) settlement documents is the first Friday after the end of the month at 12:00.

In a letter from the RAs addressed to SEMO on 05 November 2019 on clarifications regarding KPIs applied to SEMO (the “KPI Clarifications Letter”), 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 ad-hoc releases that have an impact on measurement of this KPI are excluded.

### Credit Cover Increase Notices (CCINs)

The Credit Cover Increase Notices targets refer to the percentage of occurrences where the CCINs (issued as part of the Credit Cover Reports) are published on time. Three credit reports should be issued each day, with publication of each required by 9:45am, 12:45pm and 4:15pm. CCIN reports are used to inform market participants that their posted collateral cover is less than their required collateral cover. Participants then have two working days in which to rectify this on receipt of the CCIN.

As set out in the KPI Clarifications Letter, the credit cover increase notice 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 ad-hoc releases that have an impact on measurement of this KPI are excluded.

### SEMO Resettlement Queries

If the market is settled incorrectly, a market participant raises a query to ensure the error is rectified. This metric 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. The materiality of a formal query determines whether an ad hoc Resettlement run is required.

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.

Not all Formal Queries are the result of SEMO driven issues; others are driven by external factors outside of SEMO's control. The measure is to reduce the number of SEMO related issues hence the number of SEMO upheld query incidents and Resettlements per quarter.

As set out in the KPI Clarifications Letter, 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 20 business days. A General Query is defined within this metric as any request logged at the SEMO helpdesk. While the Trading and Settlement Code (TSC) places no obligation on SEMO to respond to general queries, SEMO endeavoured to answer all queries received (1,903 general queries in 2020-21) within set timelines. At times, depending on the complexity, scale, resource issues and operational performance, the time taken to respond to these queries can exceed 20 business days. This target is designed to maintain efficiency and customer focus within SEMO.

As set out in the KPI Clarifications Letter, the general queries assumptions to be applied are as follows:

- i. Queries unresolved for more than 20 business days 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 percentage of time infrastructure systems are said to be in a functioning condition to the total time it is required or expected to be available. Availability of the systems is the responsibility of SEMO. High availability ensures a prearranged level of operational performance will be met during a contractual measurement period as follows:

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. Reporting and Market Monitoring system between 9am-5pm Monday to Friday
4. Registration system between 9am-5pm Monday to Friday
5. Website availability between 8am-6pm Monday to Friday

As set out in the KPI Clarifications Letter, 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. As the market monitoring system is not yet operational, the availability of the Market Participant Interface will be monitored in its place until it is built and implemented, however this will need to be explicitly noted in MO performance reporting for transparency.
- iv. The overall calculation of system availability is based on the average of the measured availability of systems 1-5 in the KPI.

**Timely Publication of Key Market Information**

The Timely Publication of Key Market Information targets refer to the percentage of occurrences where the market information listed as part of the KPI is published on time and is accurate and complete at the time of publication (to achieve 75% of this KPI). In order to achieve 100% of this KPI, publication of complete and accurate market information in a timely manner as set out in the TSC and I-SEM Data Publication Guide is required. This is based on the percentage of occurrences where such market information is published on time and is accurate and complete at the time of publication.

Commercial Offer Data
Four Day Aggregated Rolling Wind Unit Forecast
Hourly Dispatch Instructions Report
Imbalance Price
Imbalance Price Supporting Information Report
Half Hourly PNs
Long Term Schedules Operational Schedule Report
RTUC Operational Schedule Report
PN and BOD data for the full trading day and day ahead
Hourly Forecast Imbalance Report
Four Day Rolling Wind Power Unit Forecast aggregated by Jurisdiction
Metered Generation by Jurisdiction

As set out in the KPI Clarifications Letter, the timely publications of key market information assumptions to be applied are as follows:

- i. Where the accuracy and completeness of data is outside of SEMO’s control, its performance against the KPI is not affected.
- ii. As per the decision paper, external factors which are demonstrably outside of the Market Operator’s direct control are to be excluded. This includes planned outages, planned releases, ad-hoc releases and data feeds outside of the MO’s control.
- iii. The second part of the metric applies to all reports published through the Market Participant Interface.