



Regulatory Authority Annual Report

Market Operator Performance

Period: 1st October 2017 to 30th September 2018

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1 Introduction

SONI Ltd. and EirGrid plc, operating as the Single Electricity Market Operator (SEMO) are required under Condition 17 and 10 of their respective Market Operator Licences to provide an annual report to the Regulatory Authorities on Market Operator Performance.

The period covered by this annual report is for financial year 2017/2018 (from 1st October 2017 through to 30th September 2018).

In line with all other reports from SEMO, Quarters will be defined according to the financial year as follows:

- Q1 = 1st October to 31st December
- Q2 = 1st January to 31st March
- Q3 = 1st April to 30th June
- Q4 = 1st July to 30th September

The four main categories of performance metric covered are:

- Manage Change
- Service Delivery
- Manage Stakeholders
- Provide Information

An additional section, providing a review of key areas of the SEM, is also included.

2 Manage Change

2.1 IT Capital Expenditure

2.1.1 IT Capital Expenditure 2017-2018

The section provides a summary of approved capital business cases.

In 2017-18 the Central Market Systems remained in maintenance mode as per the preferred Central Market Systems Roadmap. Consequently no Capital business cases were progressed in this year.

2.2 System Releases

- *Central Market Systems Releases (01-Oct-2017 – 30-Sep-2018)*

As the Central Market Systems are in Maintenance Mode, as per the Agreed Central Market Systems Roadmap, there were no Bi-Annual Releases deployed this year.

- *Central Market Systems Roadmap*

As the Central Market Systems are in Maintenance Mode there is no further Roadmap activity.

The bi-annual release contract came to an end with the SEM R2.8.0 release.

- **POMAX Release 6.2.0 (CR355 – Settlement SEM End Date)**

On Thursday, 04th October 2018, Release 6.2.0 was deployed to the SEM Settlement System (POMAX). The Release allowed SEMO to specify the SEM Market End Date. The Release also re-configured the Settlement System so that all Markets (Energy / VMOC / Capacity / FMOC) ended on the End Date specified.

The SEM Market End Date was set as: 23:00 – Sun 30th September 2018

2.3 Modification Management

The tables that follow give an overview of the activity that has taken place between 1st Oct 2017 and 30th Sept 2018. Table 1 and Table 2 show the dates and number of Modifications Committee Meetings that took place over this period.

Meeting	Date	Location
76	19 th October 2017	Dublin
77	21 st November 2017	Belfast
78	12 th December 2017	Dublin
79	25 th January 2018	Belfast
80	28 th February 2018	Conference Call
81	13 th March 2018	Belfast

82	23 rd March 2018	Conference Call
83	25 th April 2018	Dublin
84	21 st June 2018	Belfast
85	16 th August 2018	Dublin
86	6 th September 2018	Belfast

Table 1: Modifications Committee Meetings

Modification Committee Meetings	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Total
Scheduled meetings	2	2	2	2	8
Other meetings	1	2	0	0	3
Working Groups	0	0	0	0	0

Table 2: Modification Committee Meetings & Working Groups

At the Modifications Committee Meetings, decisions are made with regard to progressing various Modification Proposals. Table 3 and Figure 1 give an outline of the amount of activity that has taken place in each quarter.

Modification Proposal Activity	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Total
Raised	13	13	10	8	44
Alternative Versions raised	3	4	2	3	12
Withdrawn	0	0	1	0	1
Deferred	4	1	3	2	10
Extension Granted	0	0	0	0	0
Recommended for Approval	9	15	7	10	41
Recommended for Rejection	0	0	0	1	1
Further Work Required	0	1	0	0	1
Approved	3	9	10	20	42
Rejected	0	0	0	1	1

Table 3: Modification Proposal Activity

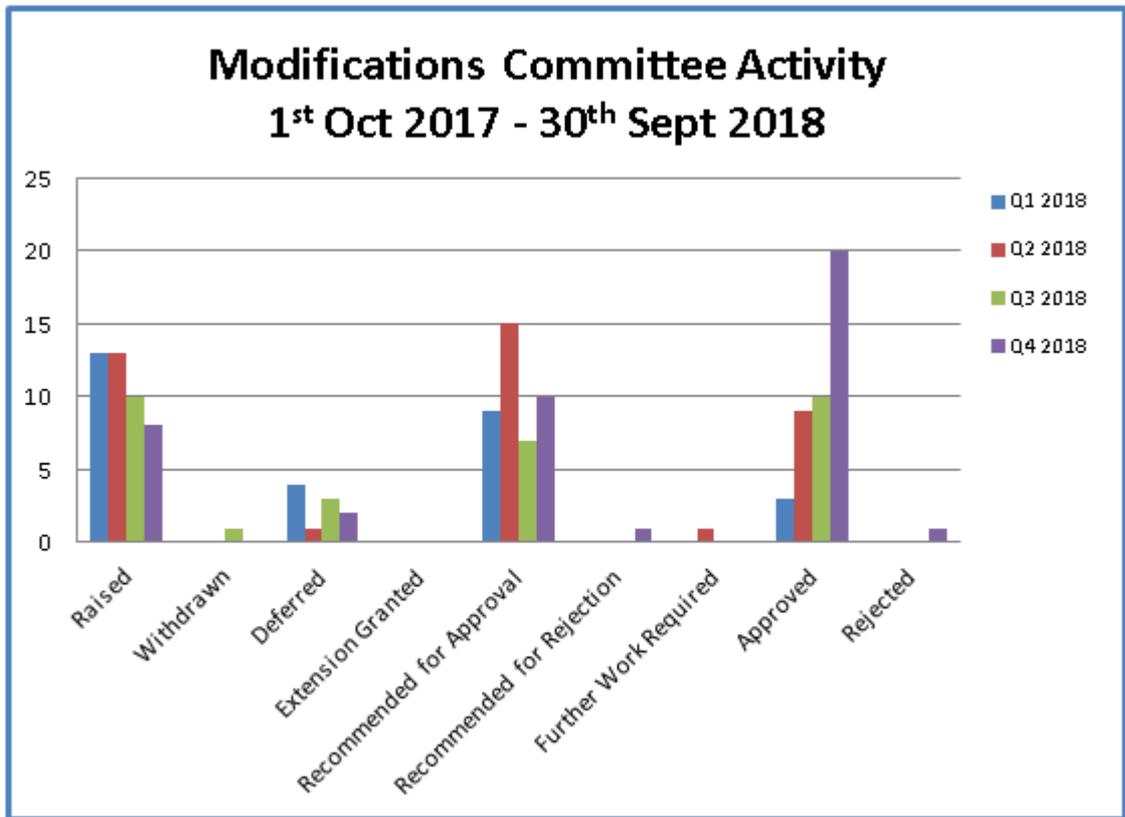


Figure 1 - Modifications Committee Activity

Finally, Table 4 and Figure 2 show the progress made on all the Modification Proposals submitted since the beginning of the SEM in November 2007 and their status at the end of each quarter.

Modification Proposal Status	End Q1 2018	End Q2 2018	End Q3 2018	End Q4 2018
Raised	371	384	394	402
Withdrawn	53	53	54	54
Deferred	4	2	4	2
Recommended for Rejection	0	0	0	1
Recommended for Approval	9	15	14	0
Approved	3	13	21	44
Implemented	283	283	283	283
Rejected	18	18	18	19

Table 4: Modification Proposal Status at end of each Quarter

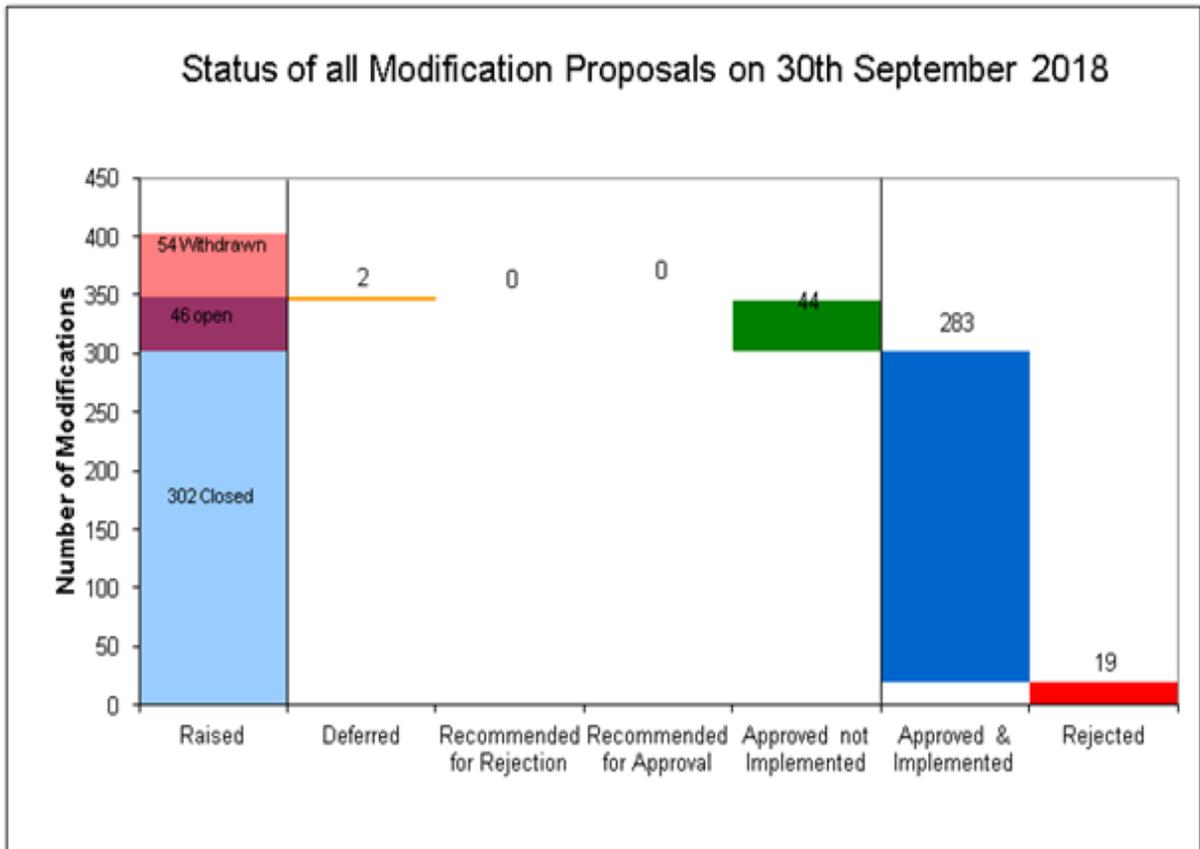


Figure 2 - Status of Modification Proposals from 1st November 2007 to 30th Sept 2018

2.3.1 Publication of the Trading & Settlement Code

Due to the large volume of Modifications Proposals raised during this period it was decided that Version 21.0 of the Trading & Settlement Code and the Agreed Procedures will be published following I-SEM go-live. Forty four Modifications will be included in this version.

2.3.2 2016 - 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 elected to the Modifications Committee

Expired Member	New Member	Position
Brian Mongan	Sinead O'Hare	Generator
Paraic Higgins	Paraic Higgins	Generator
Jim Wynne	Jim Wynne	Supplier
Colm O'Gormain	Philip McDaid	Supplier
Paddy Finn	Paddy Finn	DSU

Table 5 - Modifications Committee Elections

The election for Chair and Vice-Chair took place in September with Julie-Anne Hannon (Bord Gais) returned as Chair and William Steele (Power NI) elected to the position of Vice-Chair.

2.4 Modifications Process Development

Modification Proposals were considered at bimonthly Modifications Committee Meetings alternating between Belfast and Dublin or conference call where applicable (see Table 1).

Full details of all modifications progressed during the year are available in the Modifications section of the SEMO website.

Recommended for Approval

- Mod_06_17 : Transitional Credit Cover Provisions
- Mod_07_17 : Credit Assessment Volume for Generator Units
- Mod_08_17 : Decremental Price Quantity Pair Submission
- Mod_09_17 : Solar in I-SEM
- Mod_10_17 : Ex-Ante Quantities Deferral
- Mod_11_17 : Deferral of Information Imbalance Charges
- Mod_12_17 : Outage Adjusted Wind and Solar Forecast Reports
- Mod_14_17 : Part B Suspension When Suspended Under Part A
- Mod_15_17 : Credit Treatment for Adjusted Participants
- Mod_13_17 : Transitional Credit Cover Provisions
- Mod_16_17 : Funding in relation to EirGrid/SONI payment obligations
- Mod_17_17 : Recovery of Costs due to Invalid Ex-Ante Contracted Quantities in Imbalance Settlement
- Mod_18_17 : Net Inter Jurisdictional Flow Submission
- Mod_01_18 : Notification of Suspension to SEM NEMOs
- Mod_02_18 : Meter Data Publication Timing
- Mod_04_18 : Reporting and Publication for Operational Schedules, Dispatch Instructions, Forecast Availability and SO Trades
- Mod_05_18 : Clarification of Administered Scarcity Pricing function for scenarios not yet covered in rules
- Mod_06_18 : Clarification of Marginal Energy Action Price calculation including scenario when all actions are flagged
- Mod_07_18 : Clarifications of use of variable “b” in NIV and PAR Tagging scenarios
- Mod_08_18 : Mod_08_18 Clarification of rules used to determine the value of Price Average Reference Tag (TPAR)
- Mod_09_18 : Interim Credit Treatment for Participants with Trading Site Supply Units
- Mod_10_18 : Amendment to Capacity Settlement Publication from Monthly to Daily
- Mod_11_18 : Correction of Minor Material Drafting Errors
- Mod_12_18 : Modification to Part B Agreed Procedure 17
- Mod_13_18 : Calculating Obligated Capacity Quantities for Units Not Yet Commissioned

- Mod_14_18 : Change to timing of publication of Trading Day Exchange Rate
- Mod_15_18 : Clarifications for Instruction Profiling
- Mod_16_18 : Interim Suspension Delay Periods
- Mod_17_18 Transitional Provisions for Cutover
- Mod_19_18 Part B Housekeeping 1
- Mod_22_18 Part B Credit Cover Signage & Subscript Correction
- Mod_20_18 Agreed Procedure Updates
- Mod_21_18 Application of Settlement Reallocation Agreements
- Mod_23_18 Payment and Invoice Day Exchange for Part A Currency Costs Post Cutover
- Mod_26_18 Market Back Up Price Reference Corrections
- Mod_2_17 Unsecured Bad Energy Debt And Unsecured Bad Capacity Debt Timelines Version 2
- Mod_24_18 Use of Technical Offer Data in QBOA
- Mod_28_18 Ordering of Pseudo Dispatch Instructions for QBOA with the same Instruction Issue Time and Instruction Effective Time
- Mod_29_18 Part B Schedule Production Cost Definition
- Mod_30_18 Market Back Up Price Amendment
- Mod_31_18 Imbalance Pricing during Outages of the Imbalance Pricing System

RA Decision Approved

- Mod_03_17: Treatment of Transmission Losses for Trading Sites with Contiguous Autoproducers in I-SEM (Part B)
- Mod_04_17: Solar in the SEM (Part A)
- Mod_05_17 : Amendment to the form of Authority for the purpose of removing the Restricted Authority Provision (Part B)
- Mod_02_17 - Unsecured Bad Energy Debt & Unsecured Bad Capacity Debt Timelines
- Mod_06_17 - Transitional Credit Cover Provisions
- Mod_07_17 - Credit Assessment Volume for Generator Units
- Mod_08_17 - Decremental Price Quantity Pair Submission
- Mod_09_17 - Solar in I-SEM
- Mod_10_17 - Ex-Ante Quantities Deferral
- Mod_11_17 - Deferral of Information Imbalance Charges
- Mod_12_17 - Outage Adjusted Wind and Solar Forecast Reports
- Mod_14_17 - Part B Suspension When Suspended Under Part A
- Mod_15_17 – Credit Treatment for Adjusted Participants
- Mod_16_17 Funding in relation to EirGrid/SONI payment obligations

- Mod_17_17 Recovery of Costs due to Invalid Ex-Ante Contracted Quantities in Imbalance Settlement
- Mod_07_18 Clarifications of use of variable “b” in NIV and PAR Tagging scenarios
- Mod_01_18 : Notification of Suspension to SEM NEMOs
- Mod_02_18 : Meter Data Publication Timing
- Mod_04_18 Reporting and Publication for Operational Schedules, Dispatch Instructions, Forecast Availability and SO Trades
- Mod_05_18 Clarification of Administered Scarcity Pricing function for scenarios not yet covered in rules
- Mod_06_18 Clarification of Marginal Energy Action Price calculation including scenario when all actions are flagged
- Mod_08_18 Clarification of rules used to determine the value of Price Average Reference Tag (TPAR)
- Mod_10_18 Amendment to Capacity Settlement Publication from Monthly to Daily
- Mod_11_18 Correction of Minor Material Drafting Errors
- Mod_13_17 Deferral of SEM NEMO Credit Reports and Non-acceptance of Contracted Quantities
- Mod_18_17 Net Inter Jurisdictional Flow Submission
- Mod_07_18 Mod_07_18 Clarifications of use of variable “b” in NIV and PAR Tagging scenarios
- Mod_09_18 Interim Credit Treatment for Participants with Trading Site Supply Units
- Mod_12_18 Modification to Part B Agreed Procedure 17
- Mod_13_18 Calculating Obligated Capacity Quantities for Units Not Yet Commissioned
- Mod_14_18 Change to Timing Of Publication of Trading Day Exchange Rate
- Mod_15_18 Clarification for Instruction Profiling
- Mod_16_18 Interim Suspension Delay Periods
- Mod_17_18 Transitional Provisions for Cutover
- Mod_19_18 Part B Housekeeping
- Mod_20_18 Agreed Procedure Updates
- Mod_21_18 Application of Settlement Reallocation Agreements
- Mod_22_18 Part B Credit Cover Signage and Subscript Correction
- Mod_23_18 : Payment and Invoice Day Exchange for Part A Currency Costs Post Cutover
- Mod_24_18 Use of Technical Offer Data in QBOA
- Mod_26_18 Market Back Up Price Reference Corrections
- Mod_27_18 Interim Arrangements in Appendix O for Instruction Profiling and Bid Offer Acceptance Quantity Outcomes in a Subset of Undo Scenarios
- Mod_28_18 Ordering of Pseudo Dispatch Instructions for QBOA with the same Instruction Issue Time and Instruction Effective Time

- Mod_29_18 Part B Schedule Production Cost Definition
- Mod_30_18 Market Back Up Price Amendment
- Mod_31_18 Imbalance Pricing during Outages of the Imbalance Pricing System

Recommended for Rejection

- Mod_27_18 Interim Arrangements in Appendix O for Instruction Profiling and Bid Offer Acceptance Quantity Outcomes in a Subset of Undo Scenarios

RA Decision Rejected

- Mod_27_18 Interim Arrangements in Appendix O for Instruction Profiling and Bid Offer Acceptance Quantity Outcomes in a Subset of Undo Scenarios

Withdrawn

- Mod_18_18 : Transitional Regulatory Reporting

3 Service Delivery

These metrics indicate how timely SEMO were in producing reports to Market Participants.

3.1 Core Market Operations Function Performance

SEMO is obligated on every day to close the market gate, issue ex-ante indicative schedules and run indicative and initial pricing runs. Every working day SEMO is obliged to issue initial and indicative settlement runs statements.

The following series of graphs shows the percentage of all reports issued in the last year by quarter that were on time, late by less than an hour or late by over an hour. In summary most reports were issued on time or within an hour of the required time. Where initial reports go out over an hour late (infrequent) these still are delivered on the day (less than 3 hours late). The full details of the reasons for the delays are provided in the Monthly Market Operator Reports.

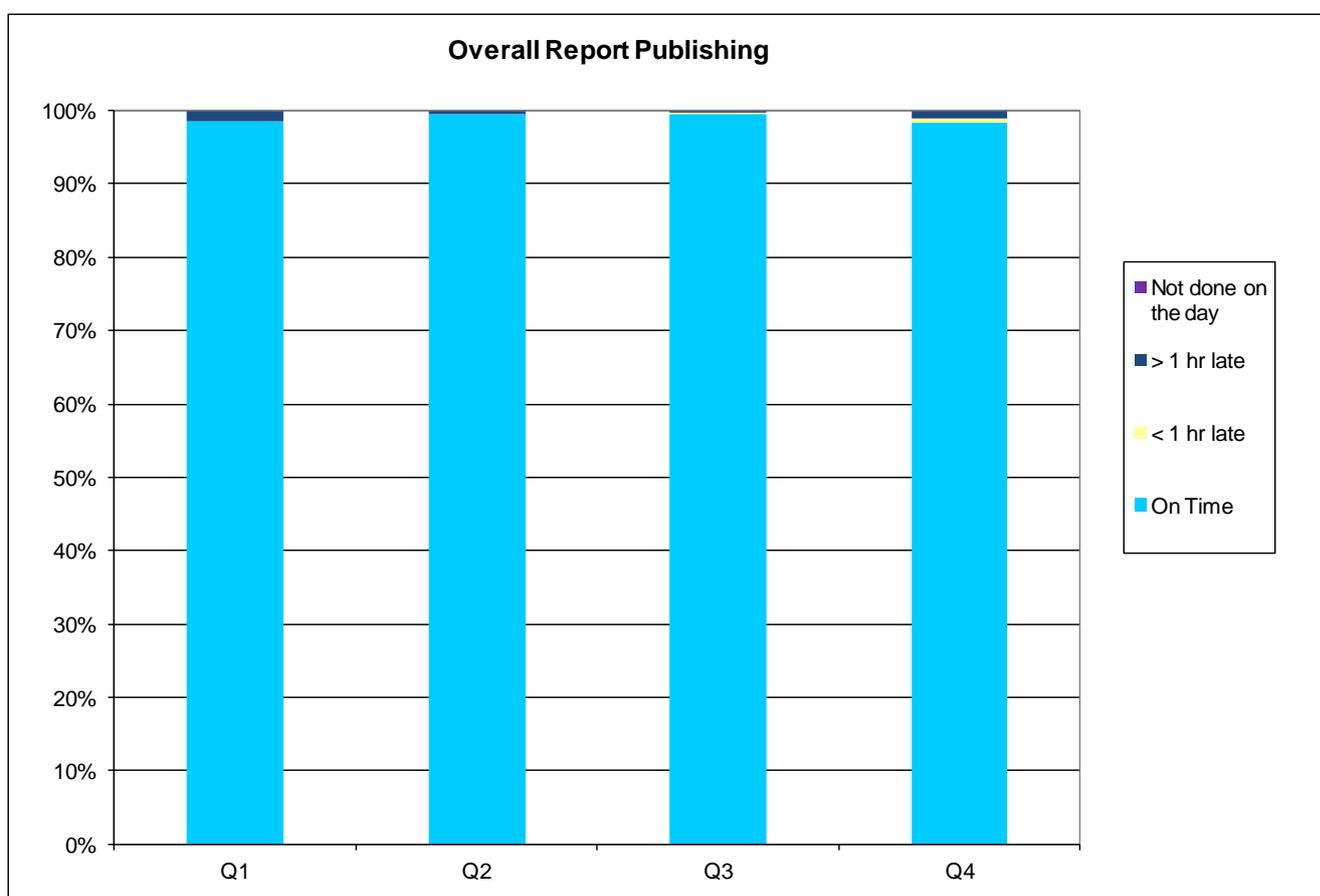


Figure 3 - Overall Daily report publication

Gate closure is a significant market event as all bids and offers are required to be captured at that point.

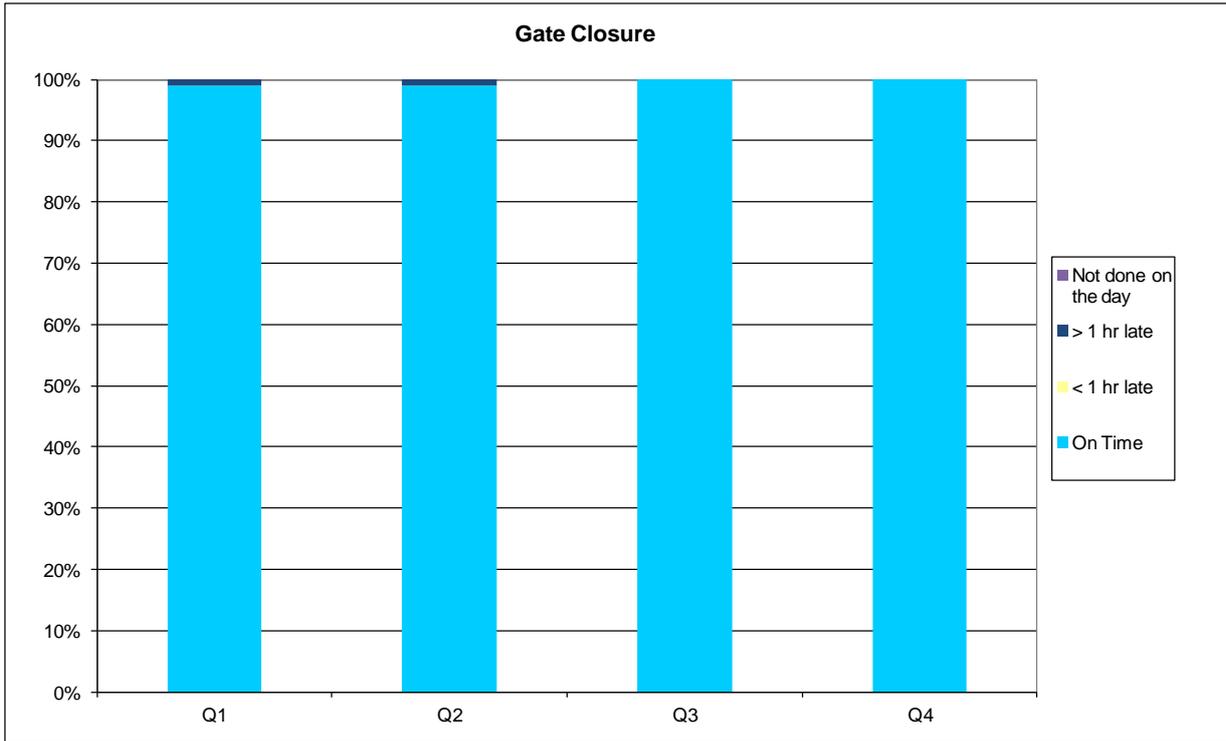


Figure 4 - Gate Closure performance

The initial Pricing and Settlement reports go out on a working day for the relevant calendar day. These reports are used in the final settlement of the market.

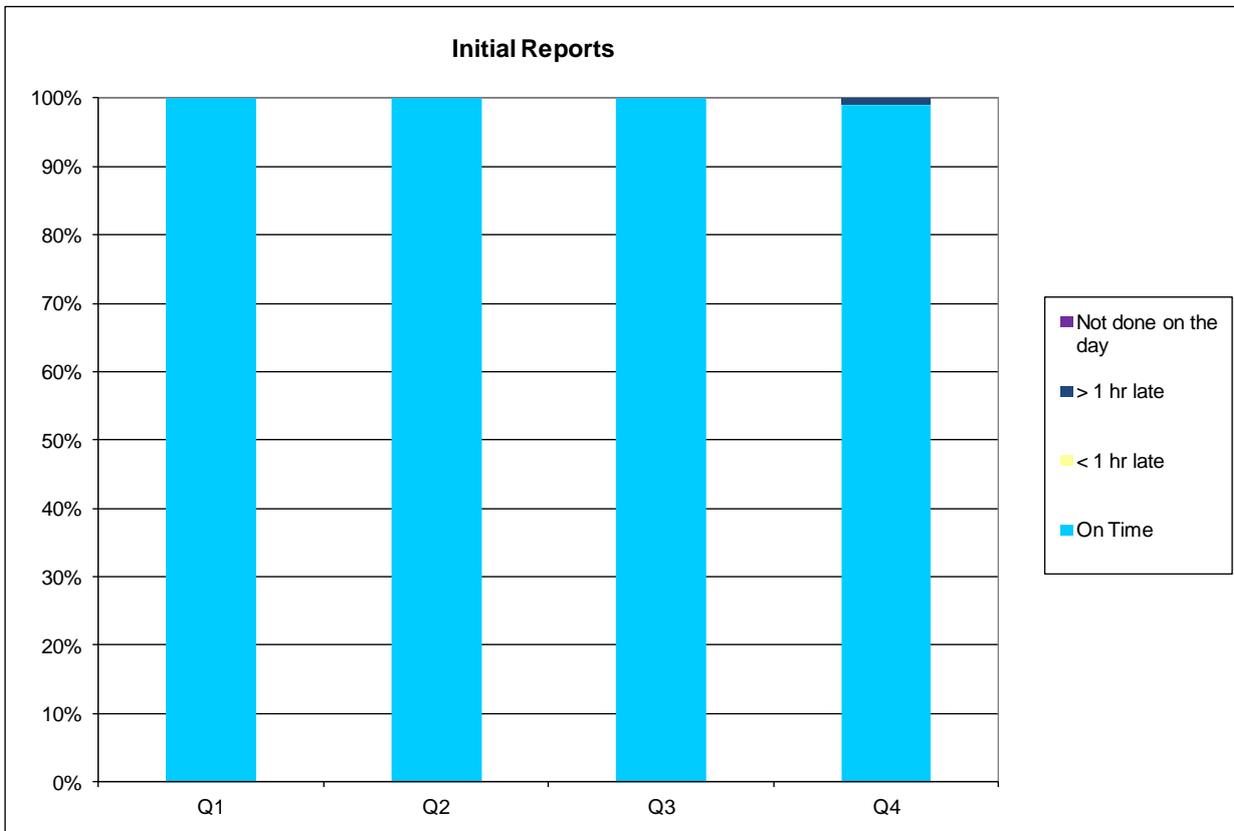


Figure 5 - Initial Report Performance

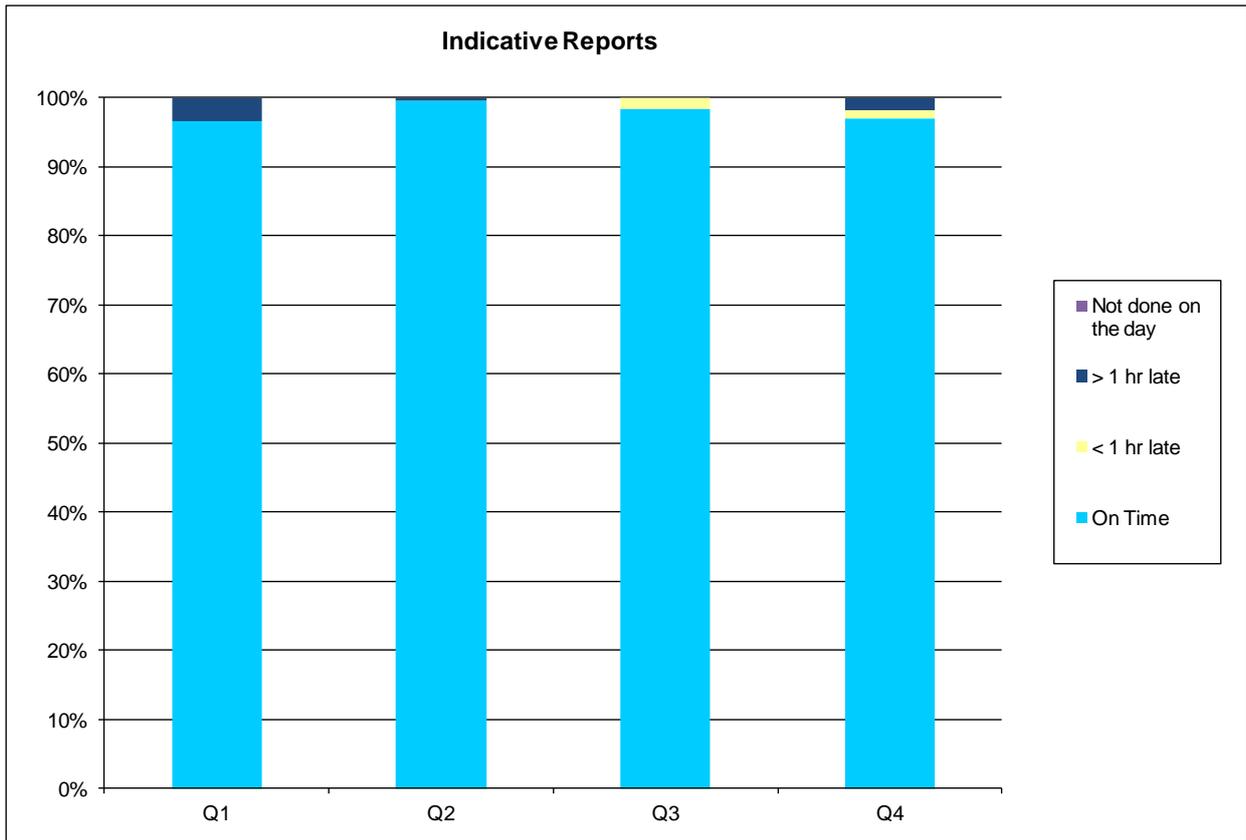


Figure 6 - Performance of Indicative Reports

3.2 *Planned Re-Settlement M+4 & M+13*

Resettlement occurred on time for the year as scheduled in the Settlement Calendar.

3.3 *Ad-hoc Re-Pricing and Ad-hoc Resettlement Runs*

There were 3 Ad-hoc re-pricing runs issued during Financial Year 2017 / 2018.

Ad-hoc Resettlements was carried out for 16 events. These were the result of incorrect Meter Data submissions, incorrect Dispatch Instructions or Actual Availabilities being sent by the respective TSO, operational errors by SEMO, as well as system defects.

More detailed narratives of each of these events can be found in the Quarterly reports.

3.4 *Administration of Credit Cover*

The SEM has been collateralised according to the T&SC provisions for the whole period from 1st October 2017 to 30th September 2018. At times, the collateralisation may be slightly less than the calculated requirement due to the time allowed by the T&SC for Participants to comply with a Credit Cover Increase Notice (CCIN). There were 15 CCINs that were not fully honoured within the two days allowed as per T&SC. However these CCINs were resolved by 5pm the next day.

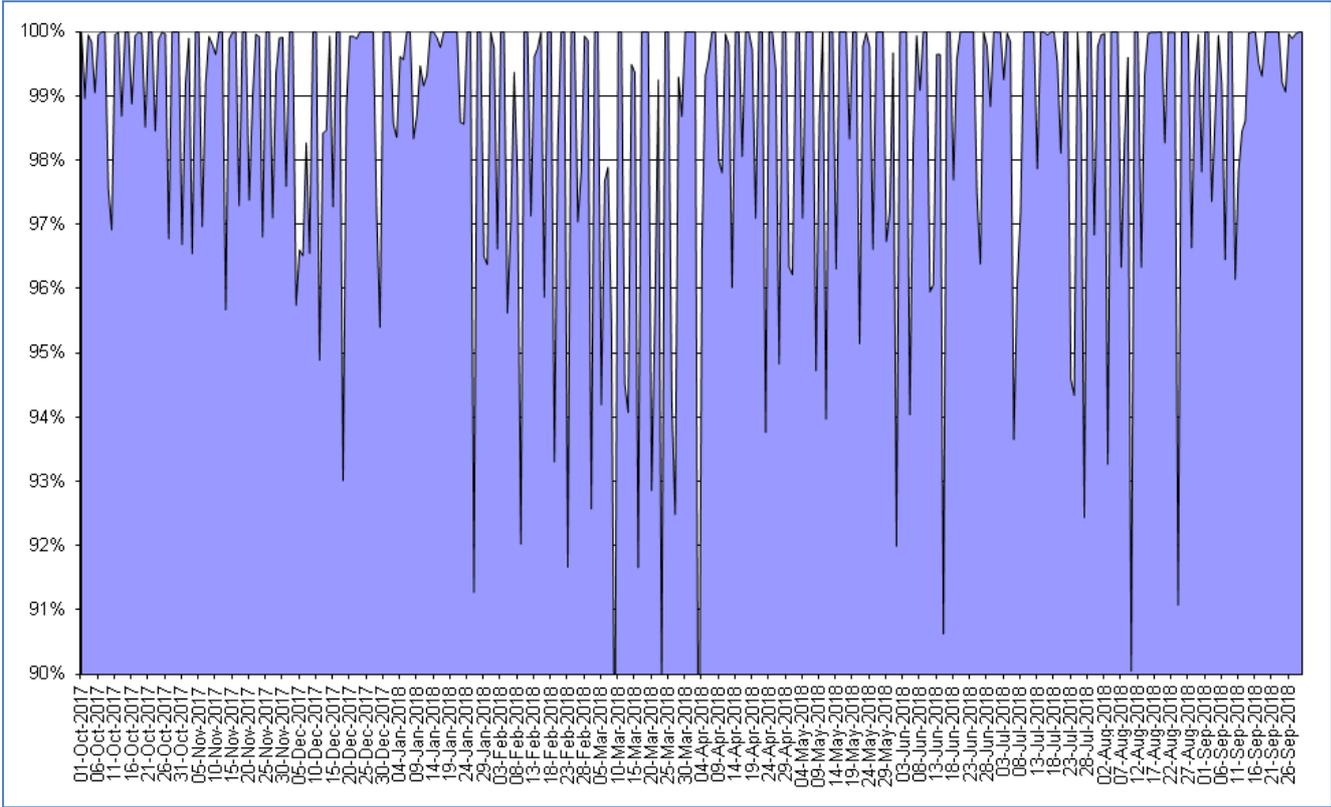


Figure 7 - Market Collateralisation

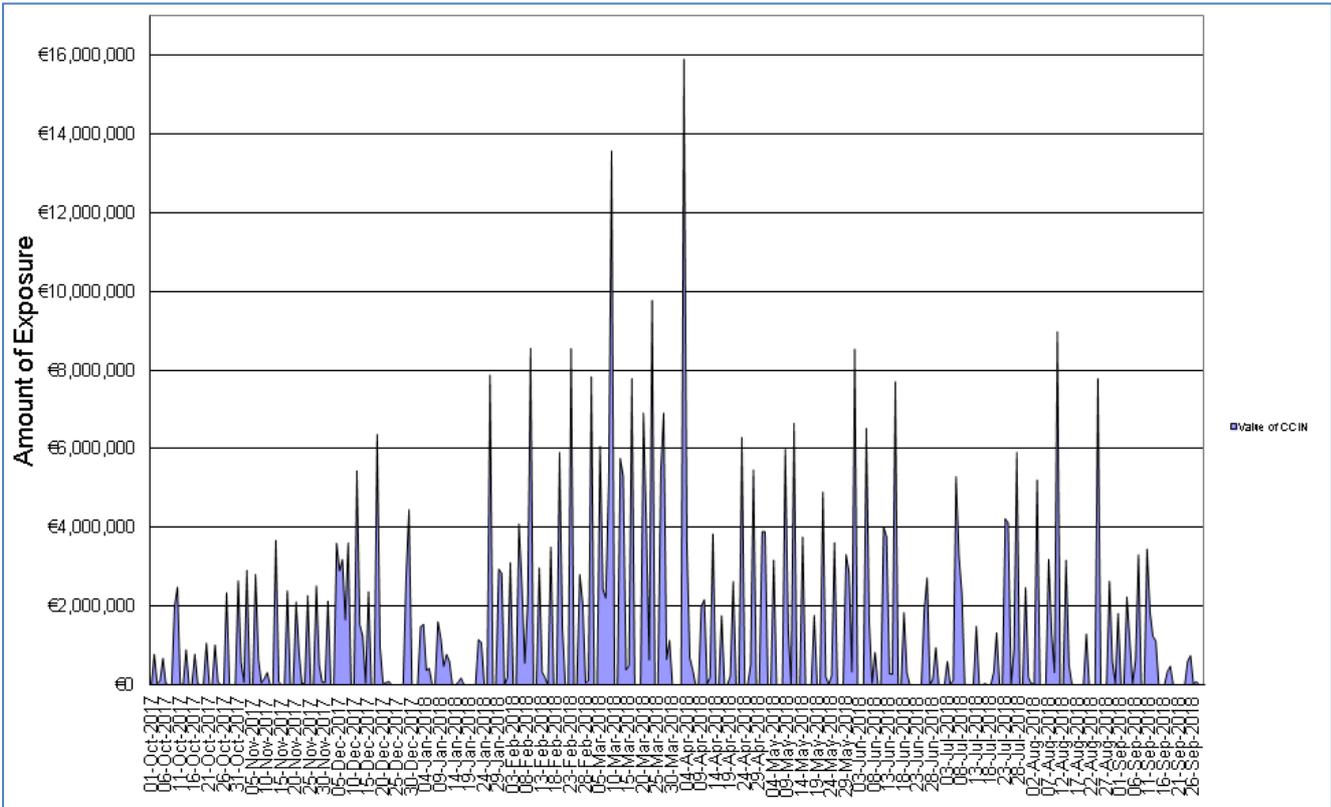


Figure 8 - Credit Cover Increase Notice Amounts per Day

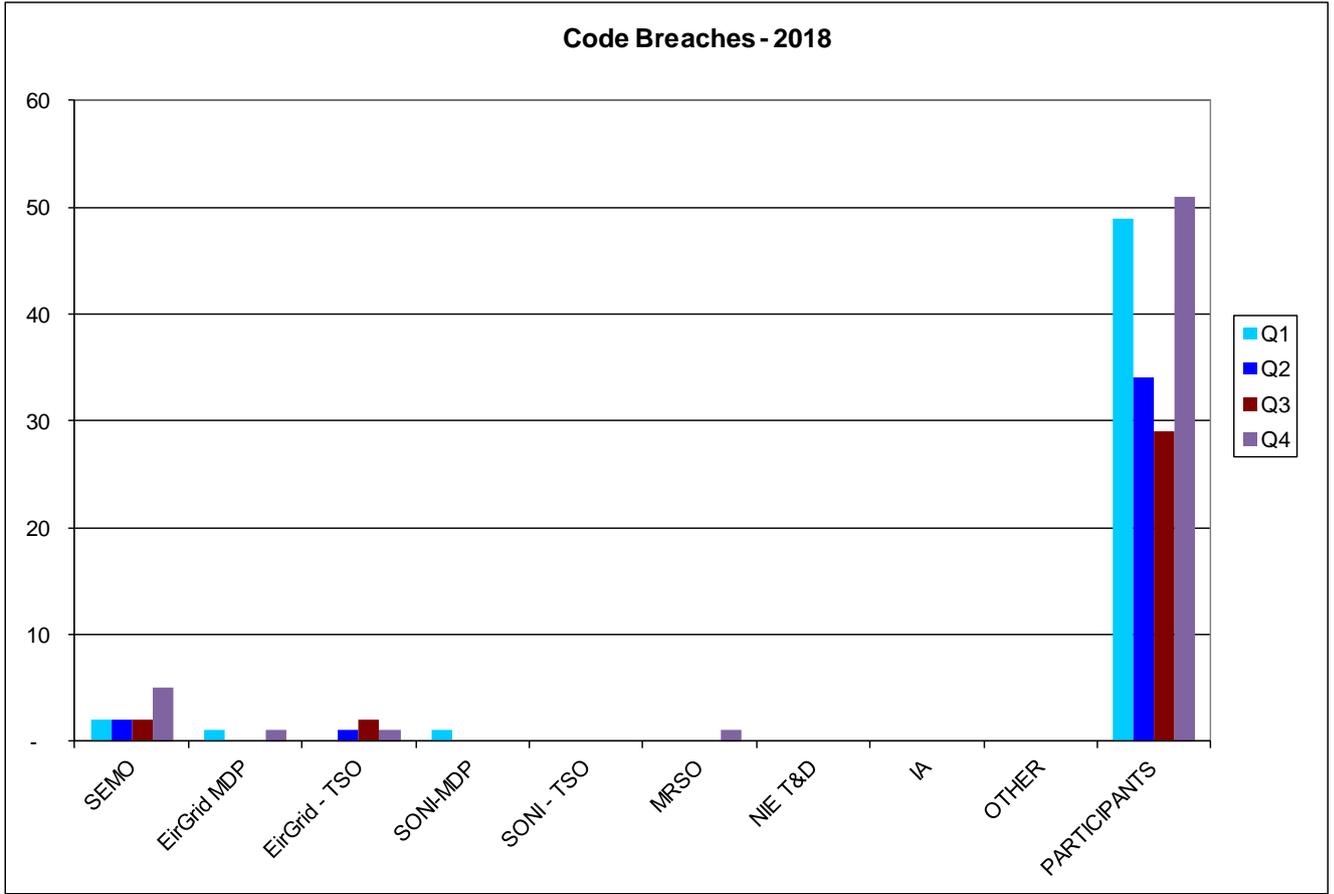


Figure 10- Number of Trading and Settlement Code Breaches

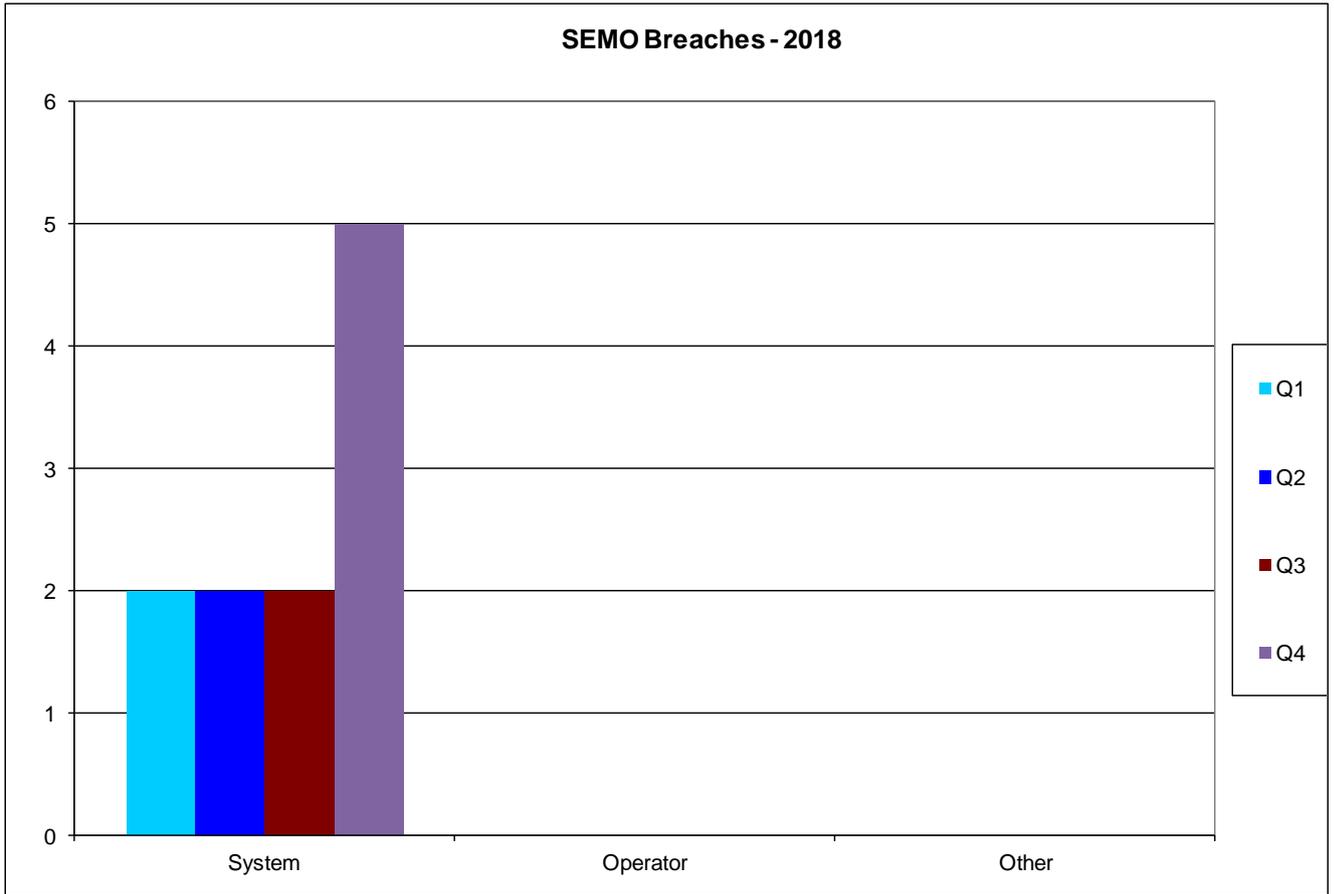


Figure 11 - Source of SEMO Trading and Settlement Code Breaches

4 Manage Stakeholders

4.1 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 2017-2018 are summarised below:

- Market Operator Performance – Monthly, Quarterly and Annual reporting on SEMO operations and financials were issued throughout the year.
- Yearly parameters for SEM and I-SEM issued according T&SC requirements;
- Other reporting obligations –KPI reporting was also provided;
- Collaboration on ad hoc investigations into market outcomes;
- Ongoing collaboration in relation to Guarantees of Origin and Fuel Mix Disclosure including the Green Source Product Verification process;
- Ongoing collaboration for the delivery of the I-SEM design;
- Ongoing collaboration in the area of Trading and Settlement Code modification with a large volume of proposals delivered as required ahead of I-SEM go live;
- New areas of collaboration via Capacity Market Rules Working groups and Exchange Committees commenced.

5 Provide Information

The Trading and Settlement Code (T&SC) obligates SEMO to answer formal, data and settlement queries within a given timeframes. In financial year 2017/2018, SEMO has received 70 Formal Queries; all were answered within the timelines prescribed under the T&SC.

General queries have no prescribed timelines for response however SEMO aims to answer these within 15 working days.

5.1 Customer Queries in a timely Manner

5.1.1 Query and Dispute Management:

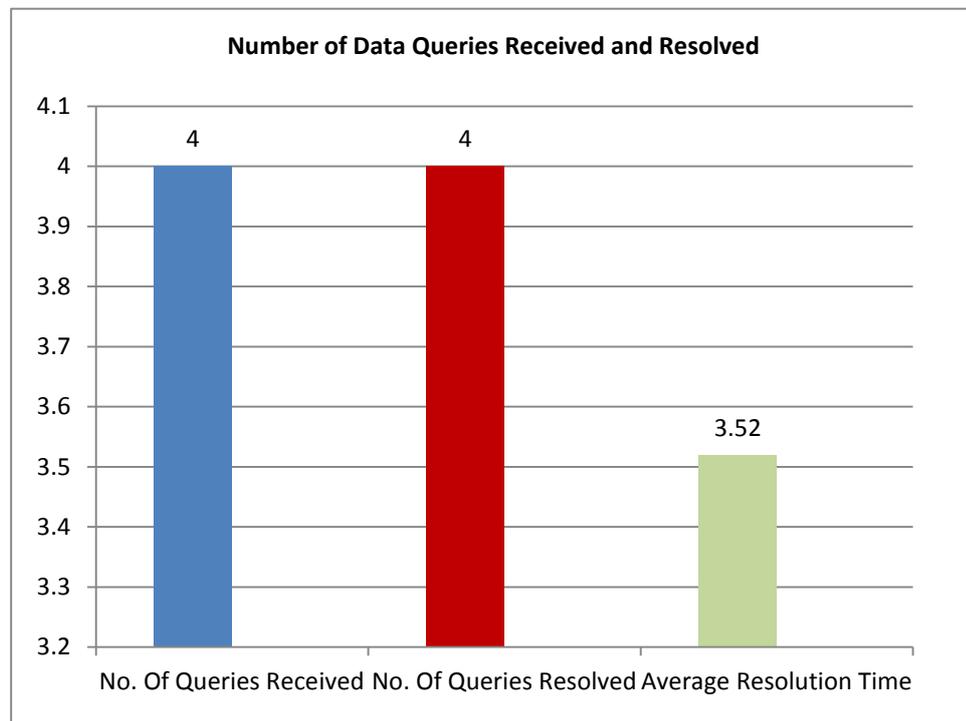


Figure 12 - Number of Data Queries submitted and Resolved up to 30th September 2018

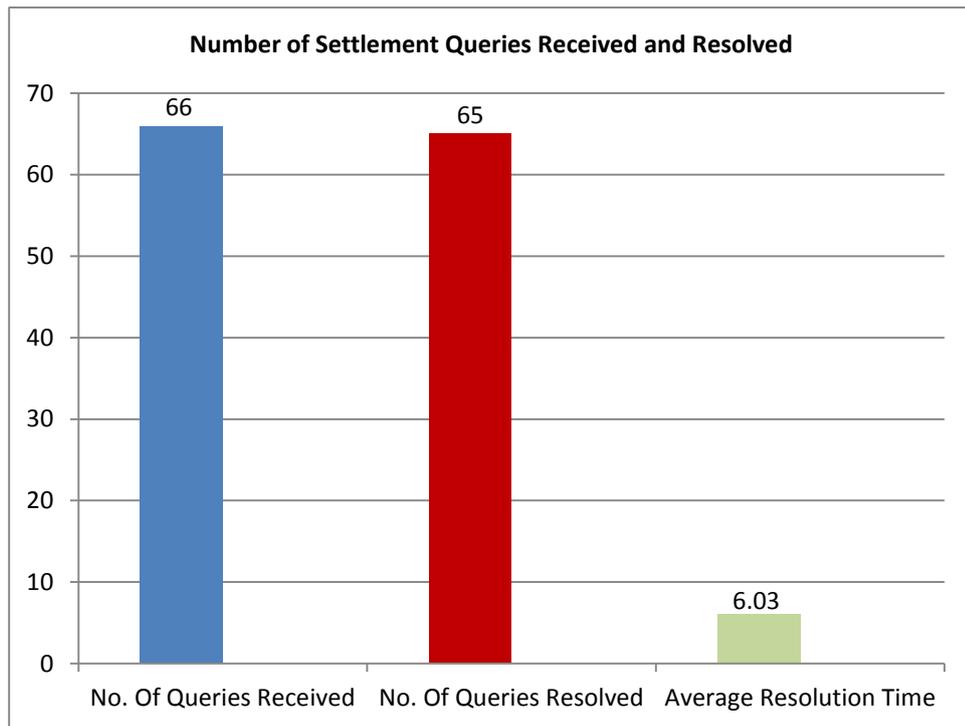


Figure 13 - Number of Settlement Queries submitted and Resolved up to 30th September 2018

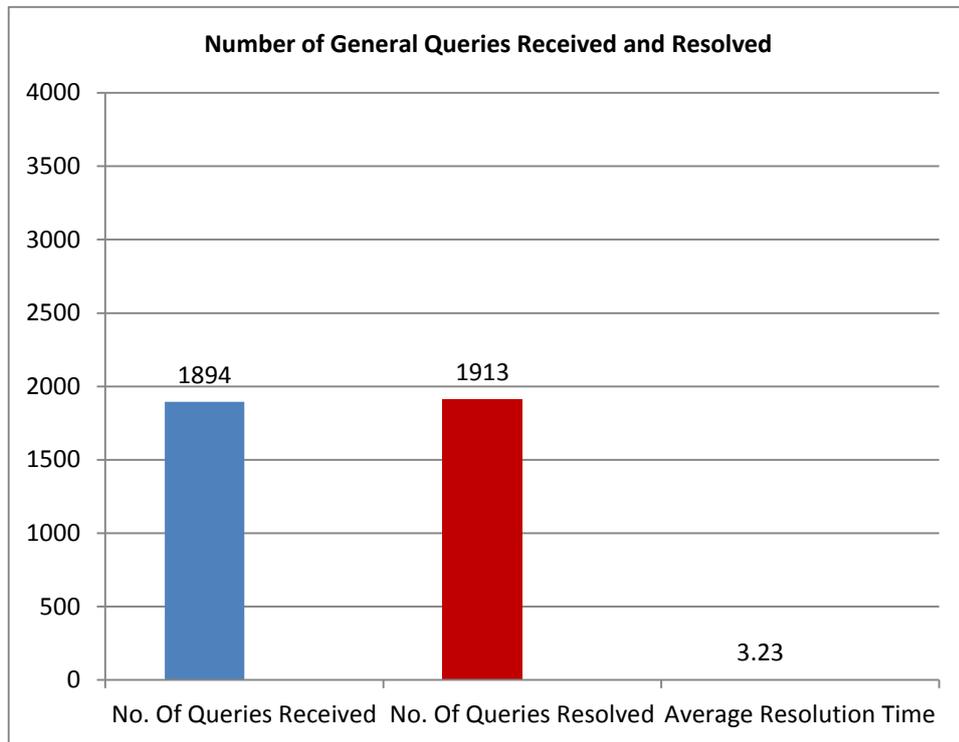


Figure 14 - Number of General Queries Submitted and Resolved up to 30th September 2018

The general query volumes have decreased from 2125 submitted in the previous financial year, to 1913 submitted from October 2017 to September 2018 (difference of 212).

- SEMO are proactively engaging with Participants through a number of forums to help reduce the number of general queries submitted.
- A market currently winding down due to ISEM and less change implemented in the last financial year.



Figure 15- Average Working Days to Answer Queries up to 30th September 2018

Further commentary on the Formal Queries is provided in section 6.1.

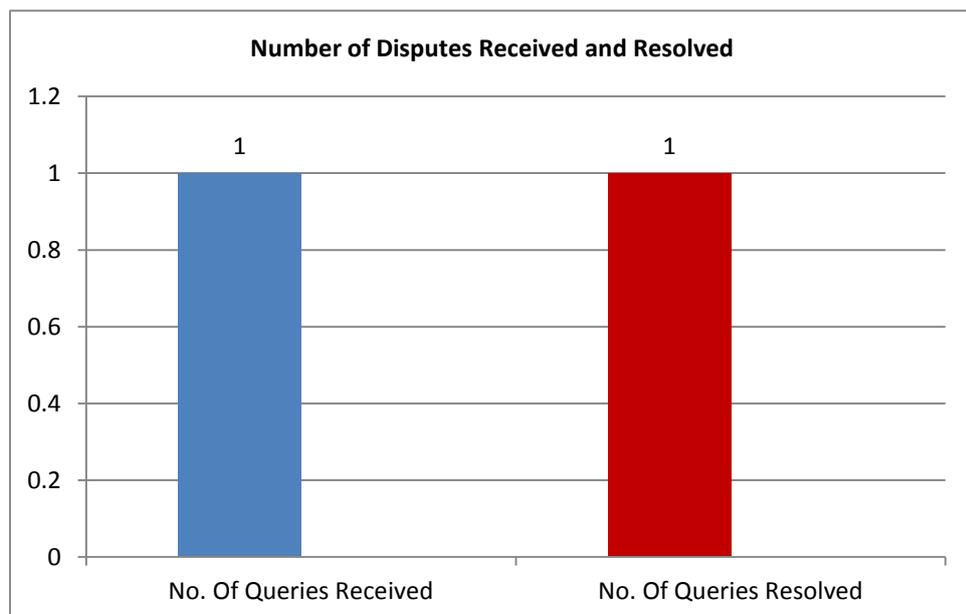


Figure 16 - 1 Formal Dispute between 1st October 2017 and 30th September 2018, which was resolved 18th of December 2017.

5.2 Facilitate and Educate participants to accede to the Code

Since 01st October 2017, the following parties have registered in the market.

Party ID	Party Name / Participant Name	Jurisdiction	Effective Date
PY_000192	In Commodities A/S	EU	06/10/2017
PY_000193	3T Power Limited	NI	12/12/2017
PY_000194	Ronaver Energy Limited	ROI	07/02/2018
PY_000195	Cloghaneleskirt Energy Supply Limited	ROI	07/08/2018
PY_000196	B&R Supply Limited	ROI	21/02/2018
PY_000198	Warmhill Limited	ROI	26/04/2018
PY_034045	Erova Energy Supply Limited	ROI	06/06/2018
PY_034046	Statkraft Markets GmbH	EU	20/07/2018

Table 6 - Party Registrations

Since 1st October 2017, additional generation or supply units have been added to the following participants.

Party	Unit ID	Jurisdiction	Unit Name	Effective Date
PY_000043_Viridian Energy Limited	GU_402200	ROI	Tullynamoyle 3 Windfarm	10/10/2017
PY_000132_Cnoc Energy Supply Limited	SU_400180	ROI	Cnoc Energy Supply Ltd	17/10/2017
PY_000166_Megawatts Power Trading Limited	SU_400221	ROI	Megawatts Power Trading	14/11/2017
PY_000027_Bord Gais Energy Supply	GU_402160	ROI	Tullynamoyle Wind Farm 2	21/11/2017
PY_000046_ESB Independent Energy ROI Generation	GU_402190	ROI	Castlepook Wind Farm	21/11/2017
PY_000191_Brookfield Renewable Supply 4 Limited	GU_402310	ROI	Knockalassa Windfarm	21/11/2017
PY_000173_Shamrock Energy Supply	SU_400223	ROI	Shamrock Energy Supply	21/11/2017
PY_000177_OAK ENERGY SUPPLY LIMITED	GU_402130	ROI	Cordal 2 Windfarm	28/11/2017

PY_000178_Harp Energy Supply Limited	GU_402170	ROI	Coollegrean Windfarm	28/11/2017
PY_000190_Plum Energy Supply Limited	GU_402270	ROI	Boolinrudda Windfarm	28/11/2017
PY_000191_Brookfield Renewable Supply 4 Limited	GU_402320	ROI	Knocknatallig Wind Farm	28/11/2017
PY_000177_OAK ENERGY SUPPLY LIMITED	SU_400218	ROI	Oak Energy Supply	28/11/2017
PY_000178_Harp Energy Supply Limited	SU_400220	ROI	Harp Energy Supply	28/11/2017
PY_000190_Plum Energy Supply Limited	SU_400226	ROI	Plum Energy Supply Limited	28/11/2017
PY_000177_OAK ENERGY SUPPLY LIMITED	GU_402110	ROI	Cordal Windfarm	28/11/2017
PY_000183_Teevurcher Supply Limited	SU_400224	ROI	Teevurvher Supply Limited	05/12/2017
PY_000021_SSE Airtricity Limited	GU_402210	ROI	Leanamore	12/12/2017
PY_000164_Glanaruddery Energy Supply Limited	GU_402230	ROI	Glanaruddery Windfarms 1	12/12/2017
PY_000164_Glanaruddery Energy Supply Limited	GU_402240	ROI	Glanaruddery Windfarms 2	12/12/2017
PY_000027_Bord Gais Energy Supply	GU_402250	ROI	Scartaglen WF Gate 2	12/12/2017
PY_000027_Bord Gais Energy Supply	GU_402260	ROI	Scartaglen WF Gate 3	12/12/2017
PY_000164_Glanaruddery Energy Supply Limited	SU_400225	ROI	Glanaruddery Energy Supply	12/12/2017
PY_000035_NIE Supply Generation	GU_501680	NI	Rathsherry Windfarm	12/12/2017
PY_000022_SSE Airtricity Energy Supply NI Ltd	GU_501690	NI	Maghaberry Road	20/02/2018
PY_000126_Wirelite Sensors Ltd	DSU_402180	ROI	Endeco DSU5	06/03/2018
PY_000126_Wirelite Sensors Limited	SU_400222	ROI	Endeco DSU5	06/03/2018
PY_000022_SSE Airtricity Energy Supply NI Ltd	GU_501720	NI	ELGINNY HILL WIND FARM	20/03/2018
PY_000022_SSE Airtricity Energy Supply NI Ltd	GU_501700	NI	Shantavny Scotch Wind Farm	27/03/2018
PY_000022_SSE Airtricity Energy Supply NI Ltd	GU_501710	NI	Crockandun Wind Farm	27/03/2018

PY_000184_ElectroRoute Energy Supply NI	SU_500094	NI	ElectroRoute Energy Supply NI	10/04/2018
PY_000193_3T Power Limited	SU_500095	NI	3T Power Limited	10/04/2018
PY_000182_Bally Wind Supply Limited	SU_400230	ROI	Bally Wind Supply	01/05/2018
PY_000182_Bally Wind Supply Limited	GU_402340	ROI	Cappawhite B	01/05/2018
PY_000054_Vayu Limited	GU_402280	ROI	Cloghaneleskirt Wind Farm	08/05/2018
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PY_000189_Energi Danmark A/S	PT_500124_I_NIMOYLE	NI	Energi Danmark Moyle	09/05/2018
PY_000196_B&R Supply Limited	SU_400233	ROI	B&R Supply Limited	22/05/2018
PY_000176_Microsoft Ireland Energy Limited	GU_402300	ROI	Kelwin Power Plant	05/06/2018
PY_000176_Microsoft Ireland Energy Limited	SU_400228	ROI	Microsoft Ireland Energy	05/06/2018
PY_000035_NIE Supply Generation	GU_501750	NI	Cornavarrow	03/07/2018
PY_000191_Brookfield Renewable Supply 4 Limited	SU_400231	ROI	Brookfield Renewable Supply 4 Limited	10/07/2018
PY_000167_Pallas Energy Supply Limited	GU_401980	ROI	Clahane Wind Farm Extension	17/07/2018
PY_000167_Pallas Energy Supply Limited	SU_400203	ROI	Pallas Energy Supply Limited	17/07/2018
PY_000113_Energy Trading Ireland Limited	DSU_501600	NI	ETI (NI) DSU4	24/07/2018
PY_000113_Energy Trading Ireland Limited	SU_500092	NI	ETI (NI)_TSSU4	24/07/2018
PY_000022_SSE Airtricity Energy Supply NI Ltd	GU_501730	NI	Castlecraig Wind Farm	31/07/2018
PY_000035_NIE Supply Generation	GU_501740	NI	Teiges Wind Farm	31/07/2018

Table 7 - Unit Registrations

Since 1st October 2017, the following units have de-registered or had a change in classification type

Party ID	Party Name / Participant Name	Unit ID	Type of Registration	Jurisdiction	Generation or Supply	Effective Date
PY_000022	PT_500021_SSE Airtricity Energy Supply NI Limited	GU_501620	Unit Type Change – APTG - VPTG	NI	Generatio n	10/10/201 7
PY_000022	PT_500021_SSE Airtricity Energy Supply NI Limited	GU_501630	Unit Type Change – APTG - VPTG	NI	Generatio n	10/10/201 7
PY_000085	PT_500050_Hunter s Hill Windfarm Limited	GU_501430	Unit Type Change – APTG - VPTG	NI	Generatio n	21/11/201 7
PY_000168	PT_500110_Brookf ield Green Energy NI Limited	GU_501580	De-registration	NI	Generatio n	21/11/201 7
PY_000144	PT_500103_Gaelec tric Green Energy Limited	GU_501480	Unit Type Change – APTG - VPTG	NI	Generatio n	06/02/201 8
PY_000031	PT_500026_ESB Independent Energy NI Interconnector	PT_500026_I_NI MOYLE	De-registration	NI	Virtual	21/03/201 8
PY_000168	PT_500110_Brookf ield Green Energy NI Limited	GU_501580	De-registration	NI	Generatio n	27/03/201 8
PY_000168	PT_500119_Brookf ield Green Energy NI Ltd	GU_501640	De-registration	NI	Generatio n	27/03/201 8
PY_000035	PT_500034_Power NI	GU_501680	Unit Type Change – APTG - VPTG	NI	Generatio n	27/03/201 8
PY_000022	PT_500021_SSE Airtricity Energy Supply NI Limited	GU_501550	De-registration	NI	Generatio n	22/05/201 8
PY_000075	PT_500046_Firmus Energy (Supply) Ltd	SU_500071	De-registration	NI	Supply	31/07/201 8

Table 8 - Deregistration or Changes of Status

5.3 Facilitate Interaction with Customers

5.3.1 Stakeholder Events

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

- Facilitated Registration calls and meetings for both new and existing Market Participants as required

6 SEM Review

6.1 Formal Queries

Since Market go live in Nov 2007, SEM has observed a continuing reduction in the volume of queries submitted by Participants until financial year 2010/2011. At that point, the number of Formal Queries started to increase again and until reverting to 2010 level within 2015/2016 with continued reduction until a slight increase in 2017/2018 as per Figure 17 below.

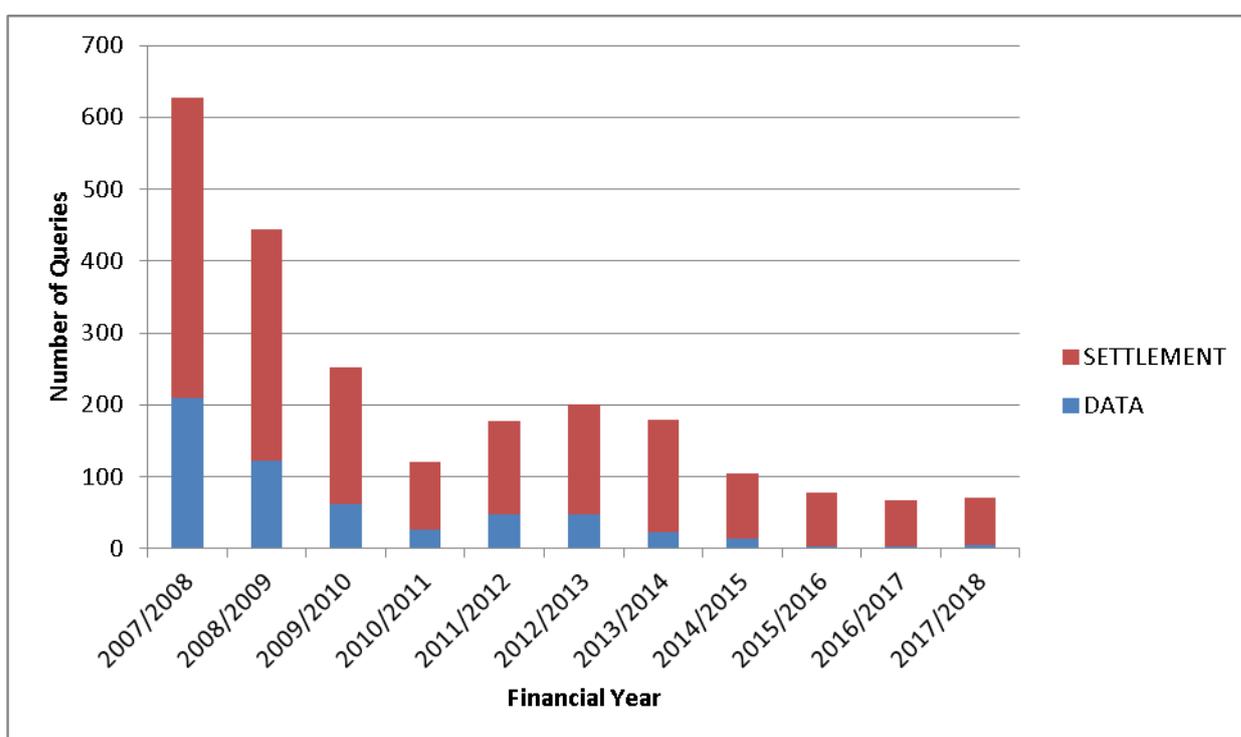


Figure 17 – Number of Formal Data and Settlement Queries Received per Year

A decrease of issues relating to the major releases introducing significant additional functionalities from 2012 (Intra-Day Trading, Global Aggregation, MIUN calculator etc), has been observed. Additional functionalities (and associated issues resulting from these changes) have contributed to the increase of formal queries received until Financial Year 2013/2014. There has been a reduction of 25% compared to the previous year and a continuing reduction of 13% through 2016/2017. There has been a slight increase of 4% through 2017/2018. The stabilization of issues and minimized major deployment resulting in further defects has contributed to the decrease since 2015/2016. Details are included in Table 9 below.

Row Labels	Data	Settlement	Grand Total	% Change
2007/2008	209	418	627	-
2008/2009	122	322	444	-29%
2009/2010	62	190	252	-43%
2010/2011	26	94	120	-52%
2011/2012	47	131	178	48%
2012/2013	47	154	201	13%
2013/2014	22	157	179	-11%
2014/2015	13	91	104	-42%

2015/2016	3	75	78	-25%
2016/2017	3	65	68	-13%
2017/2018	5	66	71	4%

Table 9 - Formal Data and Settlement Queries Received

The breakdown of the reasons behind Data Queries received is shown in Figure 18 below.

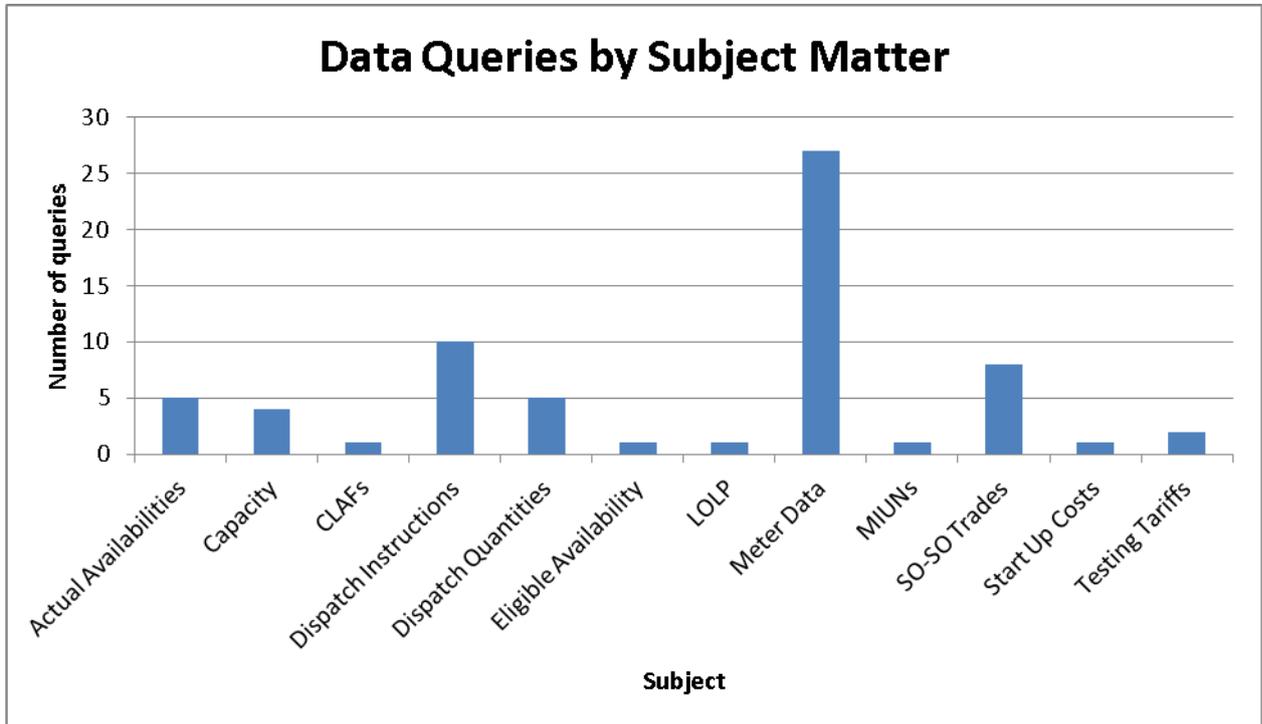


Figure 168 - Data Queries by subject matter

The most common resolution for Data Queries, shown in Figure 19, were data feed submission issues and confirmations of errors in input data. All five data queries were upheld.

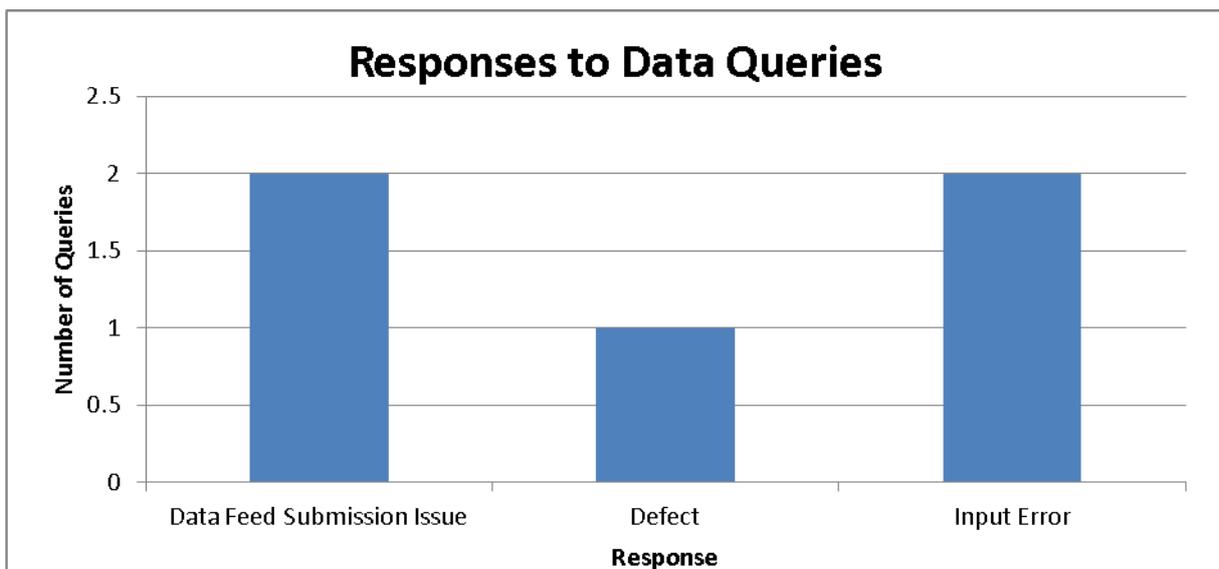


Figure 179 - Responses to Data Queries

With regards to Settlement queries, Figure 20 below shows the breakdown of queried items for financial year 2017/2018.

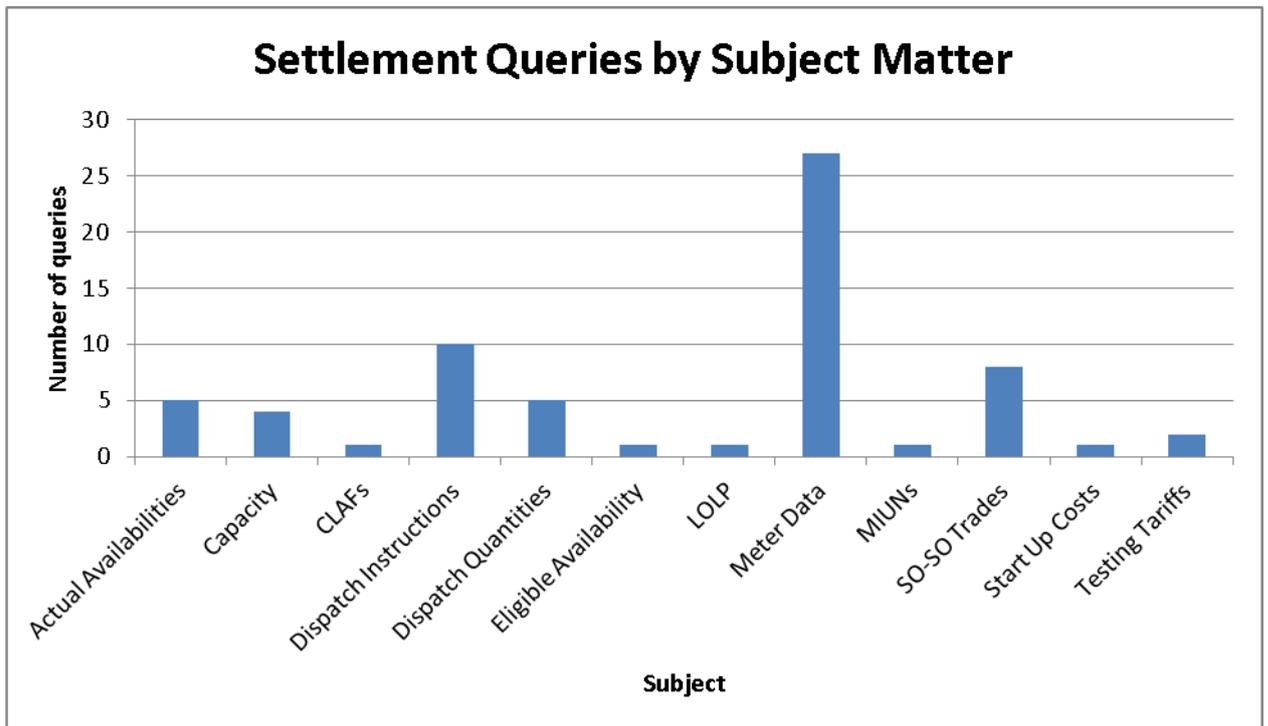


Figure 20 - Settlement Queries by subject matter

The most common Settlement Queries received were on Meter Data, followed by Dispatch Instructions.

Figure 20 shows that the vast majority of all Settlement Queries were due to incorrect input data sent to the SEM closely followed by Meter File Submission Issues. SEMO recognises that improvements have been made to processes from data providers to try and reduce these errors and will continue to actively liaise with the relevant parties to highlight and resolve issues in a timely manner.

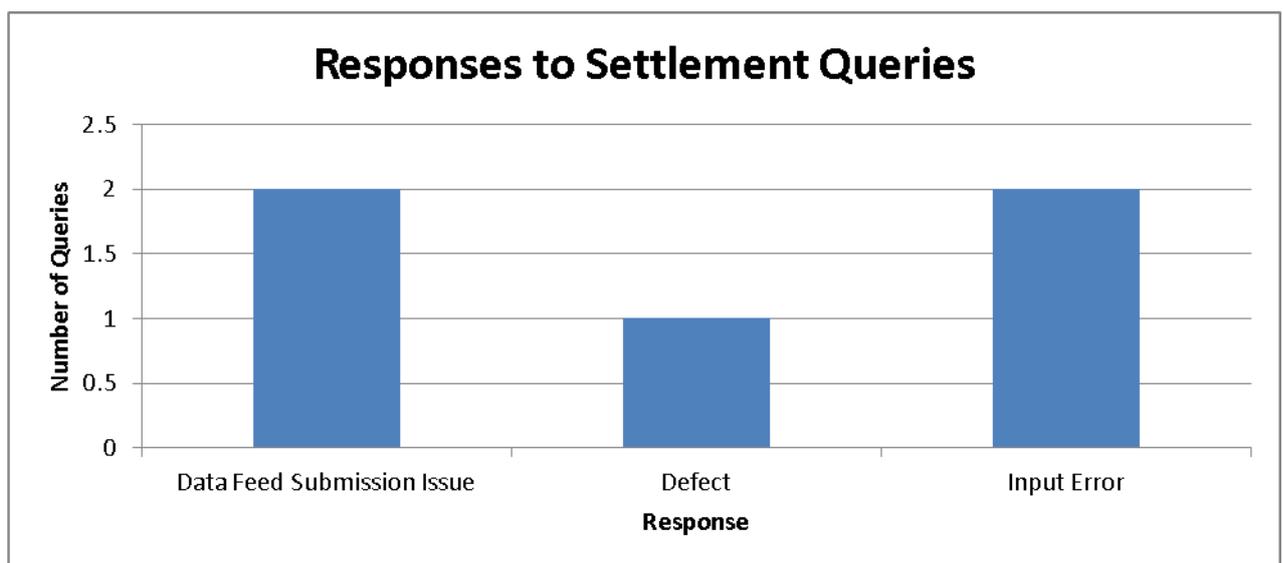


Figure 21 - Responses to Settlement Queries

The overall trend for all Formal queries since Market go live, confirms that the number of spurious queries has diminished and that queries not upheld now represent a minority of all queries received.

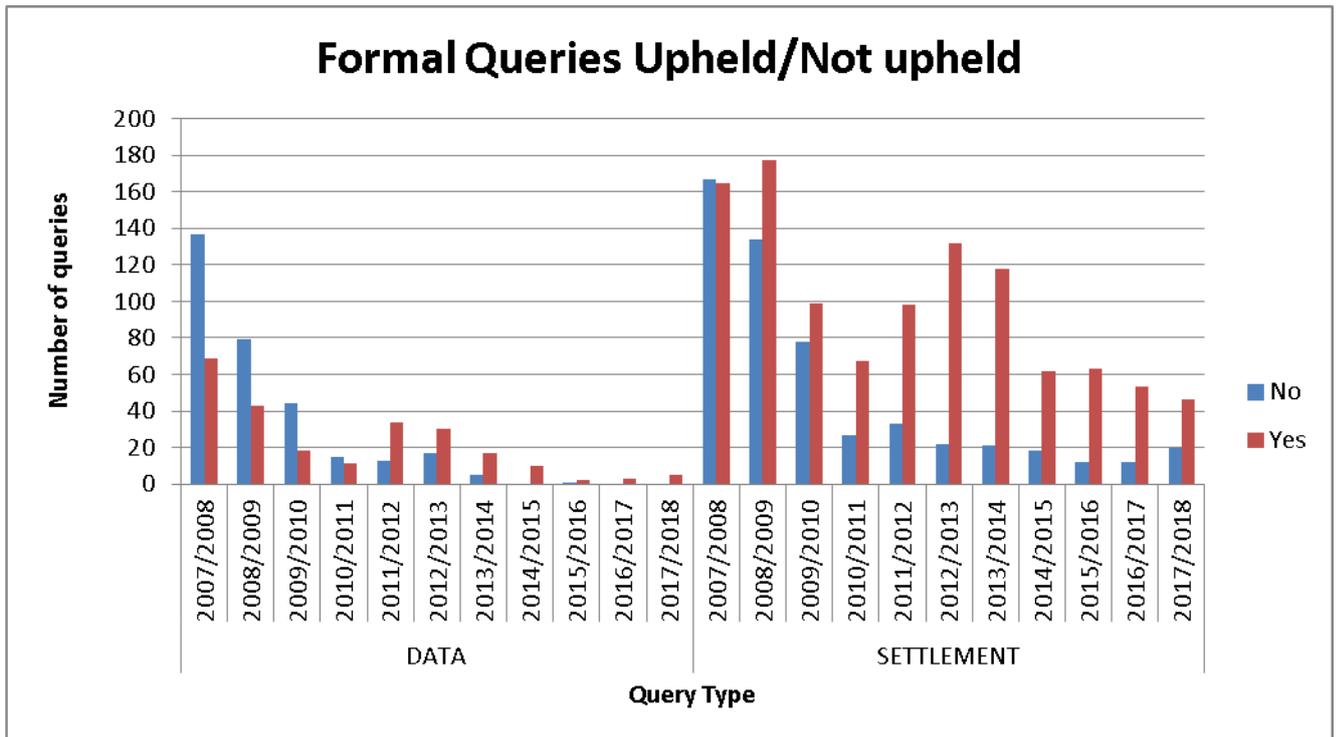


Figure 22 – Upheld (‘Yes’)/Not Upheld (‘No’) Formal Queries

Figure 23 below shows that out of all queries not upheld the majority of them were due to incorrect understanding or for confirmation that the data queried was, in fact, correct. The below table details settlement queries as all Data Queries were upheld within the financial year of 2017/2018.

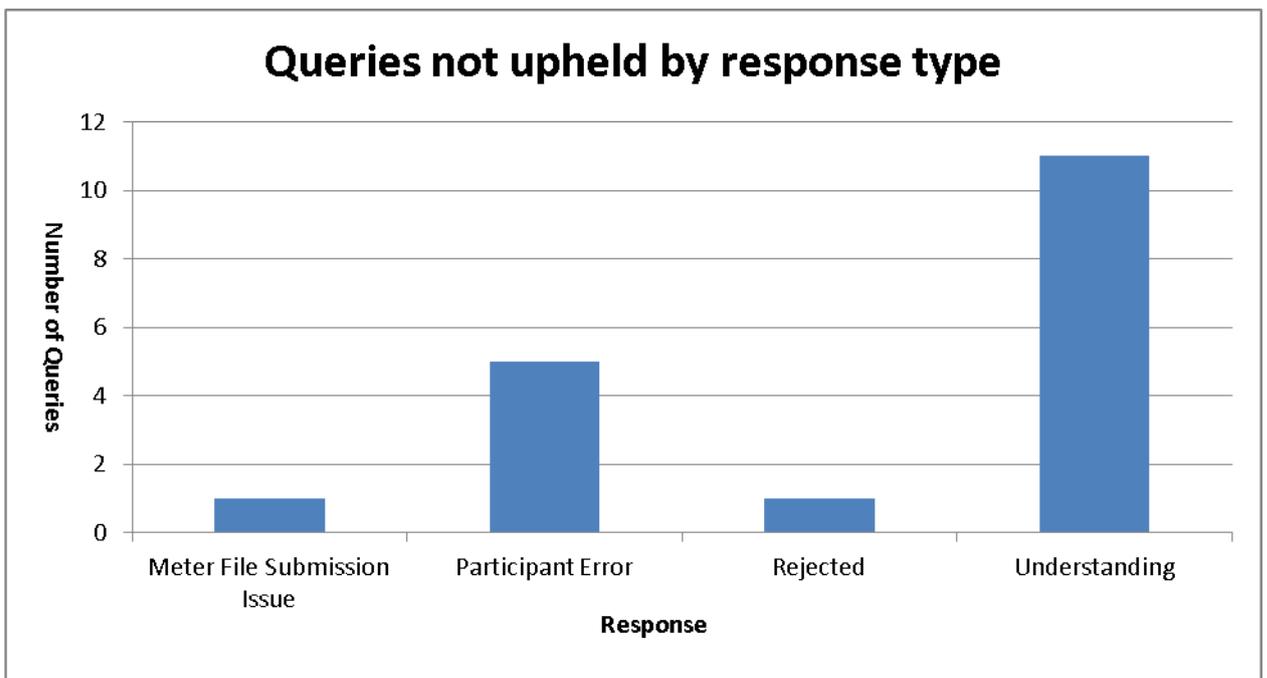


Figure 1823 –Formal Queries Not Upheld by response type – Financial year 2017/2018

The following graph in Figure 24 show the resolution times for Data and Settlement Queries compared with the previous years. Queries continue to be responded to within the required timelines set out in the Trading & Settlement Code¹ and resolution times have reduced since the previous year.

In this financial year 2017/2018 there was one Formal query extension for a Settlement Query. Requests for 10 Day extensions to the timeline were heavily used in the first years of market operations. Response time continue to be below the T&SC maximum allowed.

At times SEMO has delayed closing off some queries to allow efficient scheduling of runs in Market Operations.

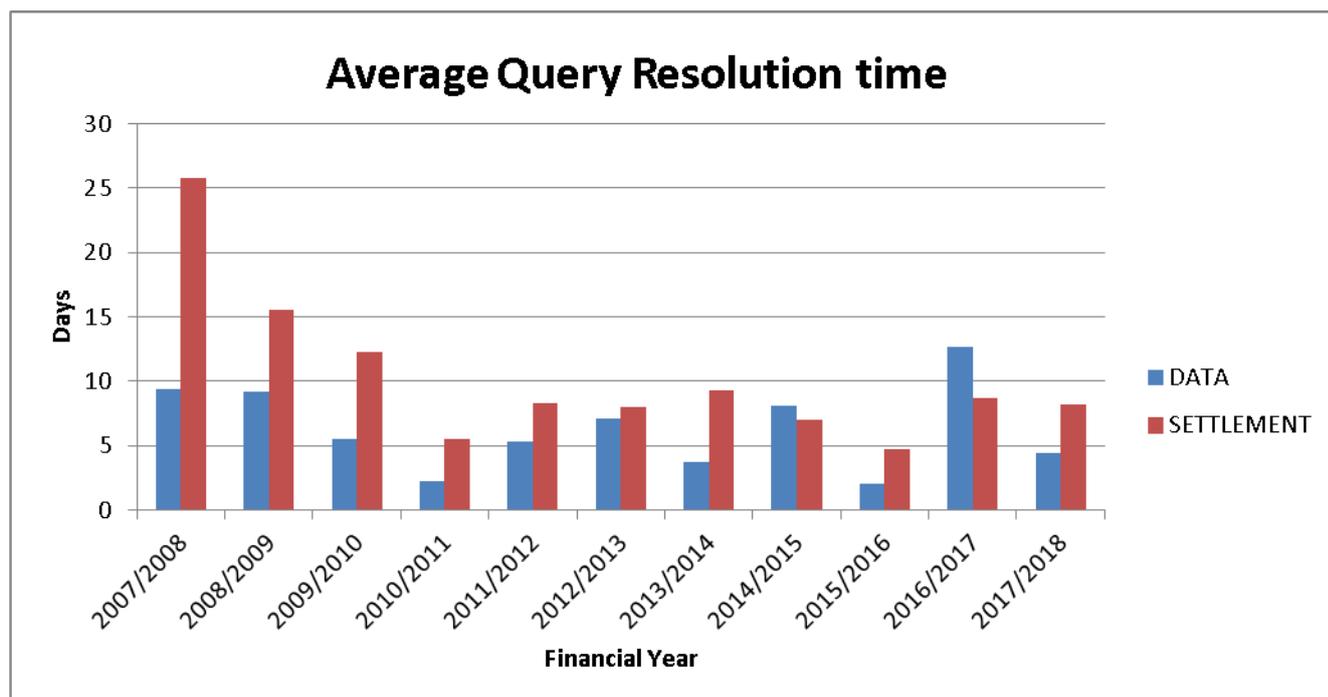


Figure 24 – Response Times for Data & Settlement Queries

6.2 Market Review

Figure 25 **Error! Reference source not found.** below shows the summed Daily Generator Availability and the Load Weighted Average System Marginal Price across the financial year being reported.

The Availability over the current financial year was greater than previous year.

Volume weighted average SMP was also higher than the previous year. In financial year 2016/2017 this was €49.89 compared to €60.36 in current financial year 2017/2018.

¹ Please note that graph shows number of actual days instead of working days; this explains how some queries seems to exceed the T&SC timelines. This is particularly evident in the Data Query graph as a number of queries were responded after the Christmas break.

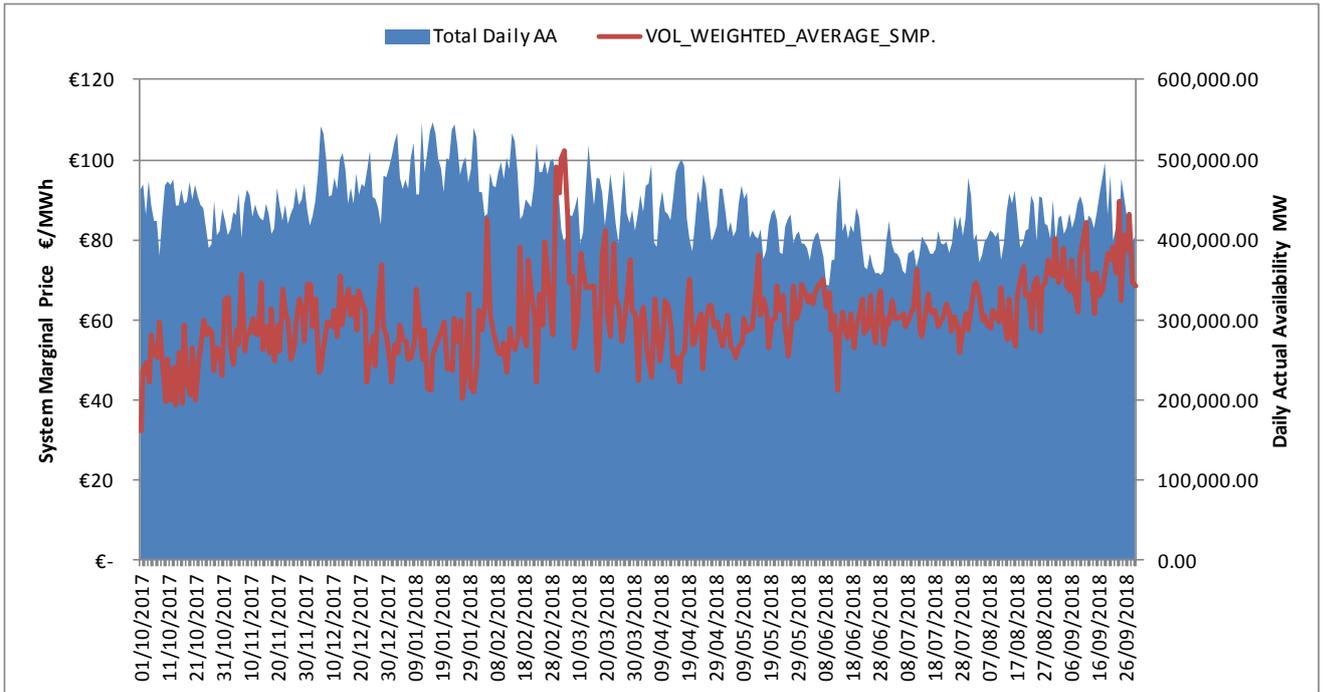


Figure 19 – Daily Total Availability and Volume Weighted Average SMP

In Figure 26 below, it is shown how the SMP highest spike occurred during a period of high Demand which happened at the same time as an Availability dip.

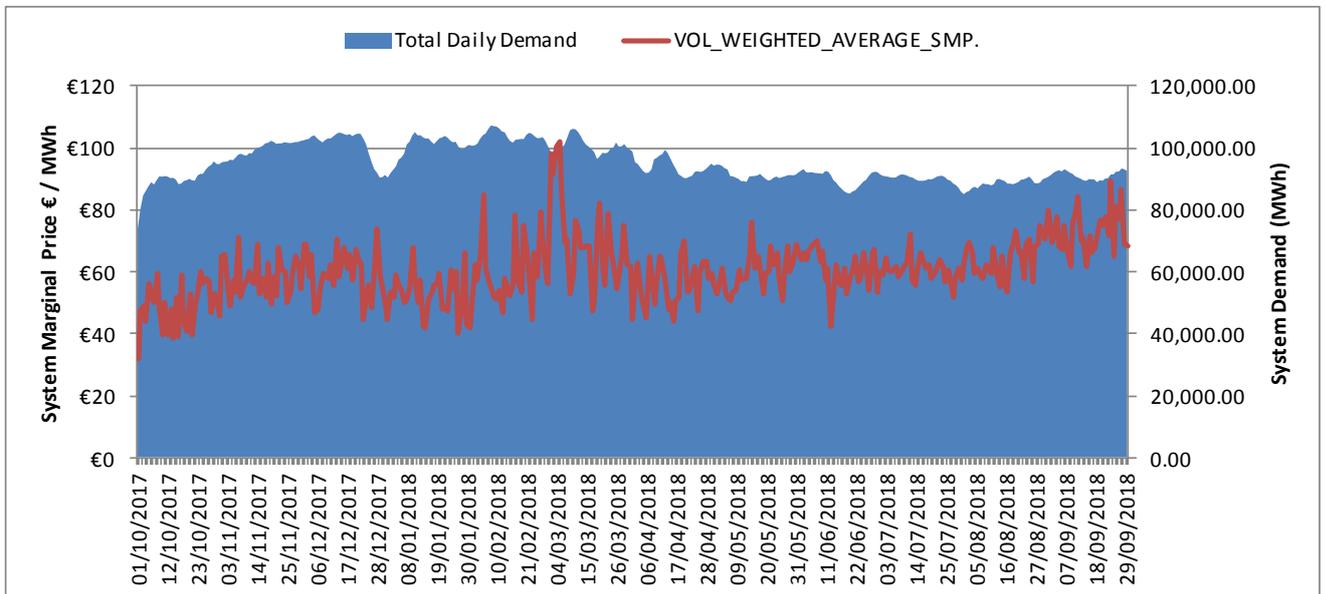


Figure 20 –Total Daily Metered Demand and Volume Weighted Daily SMP

Figure 27 compares the total monthly metered Demand values for each year since 2012. Demand level for calendar year 2017/2018 was marginally higher than levels observed the previous year.

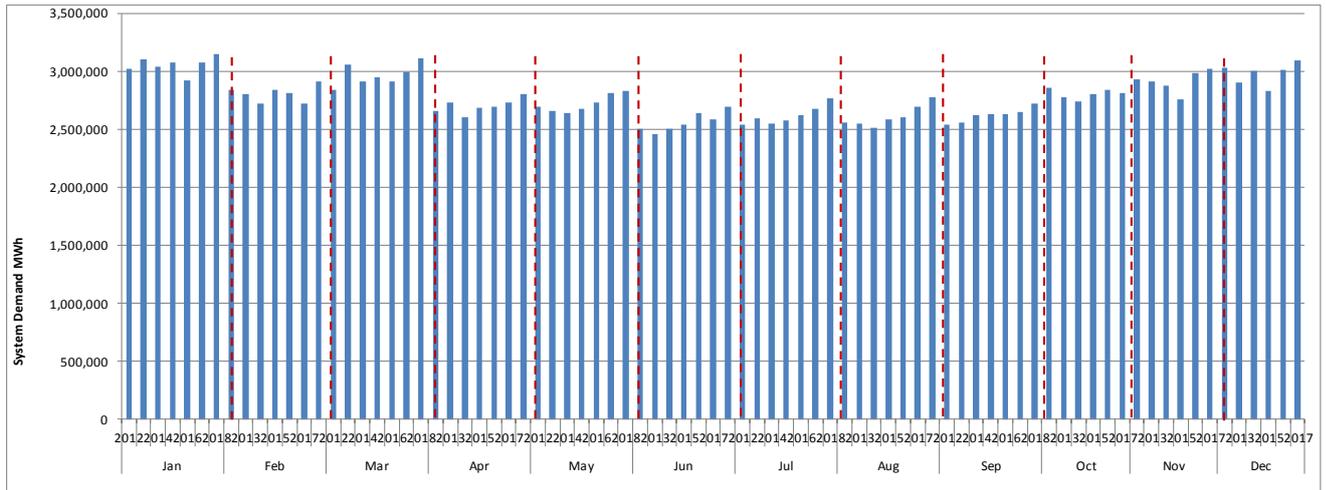


Figure 21 – Total Monthly Metered Demand, Jan 2010 to Sept 2018 Comparison

Throughout the year, variations in Demand and the Availability of plants lead to significant changes in Margin. When Margin is compared to Load Weighted Average SMP, it is clearly visible how the SMP is inversely affected by the Margin. Similarly to previous years, a pattern is discernible in Figure 28 with the highest price spikes over the periods of lowest margins.

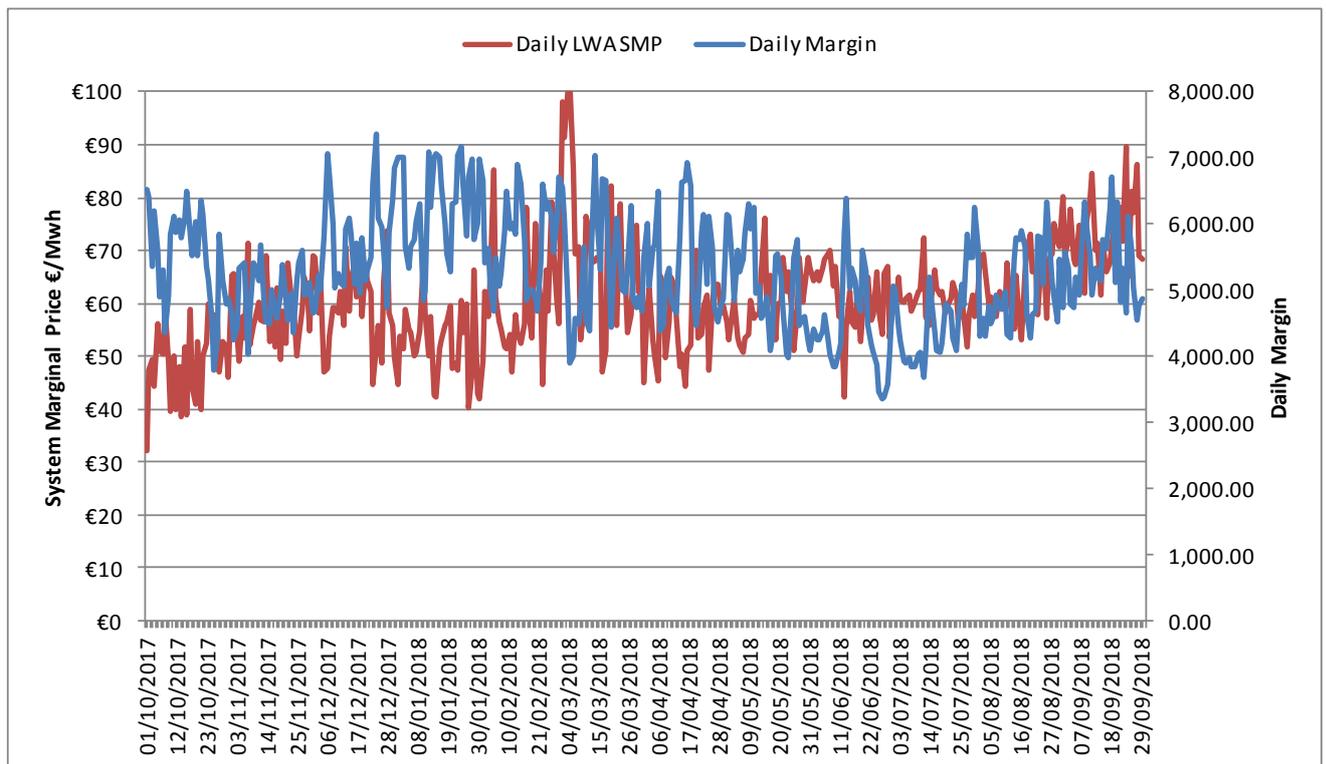


Figure 22 - Average Margin and Volume Weighted SMP

Figure 29 below shows the average daily SMP values by Trading Periods for the whole financial year from October 1st, 2017 to September 30th, 2018 for the three main run types. Similar to previous years the runs on average converge closely for most of the day with small variances concentrated over the morning and the evening peaks.

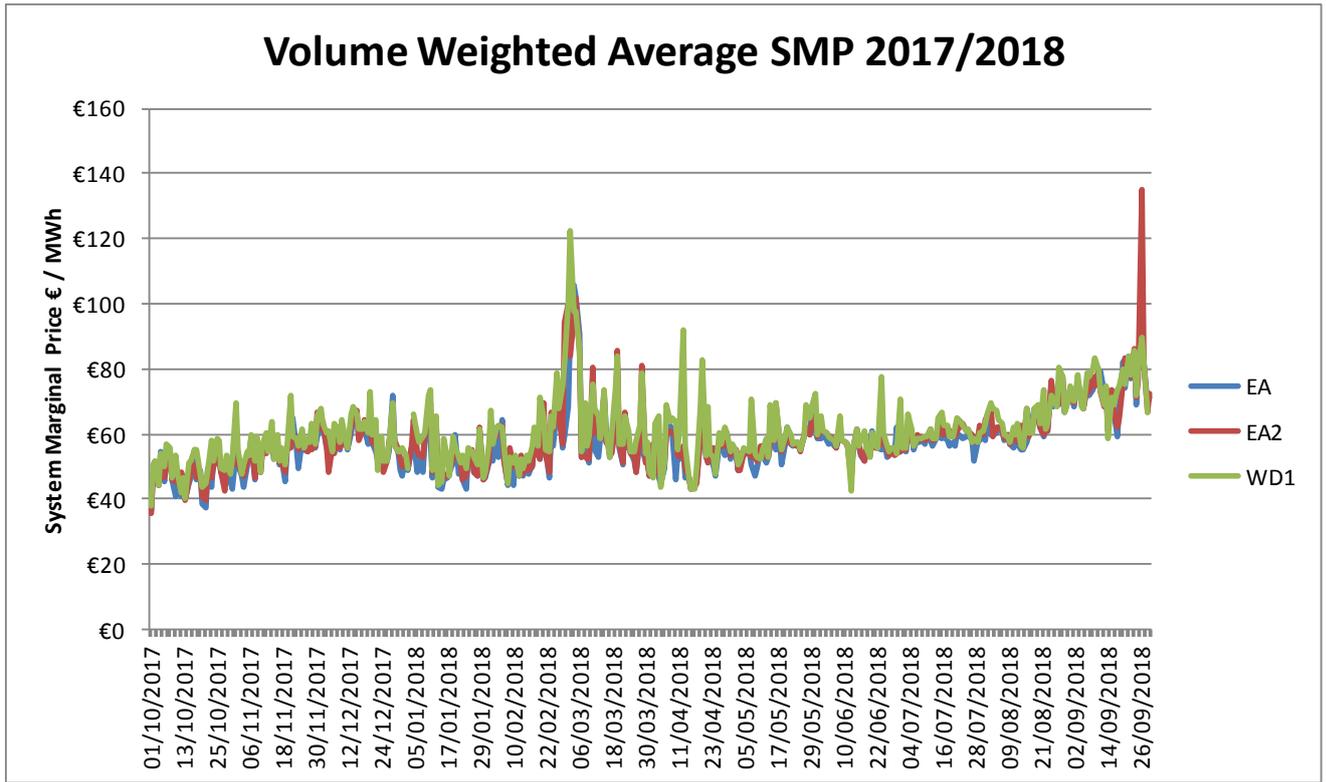


Figure 23 – Volume Weighted Average SMP from 1st Oct 2017 to 30th Sep 2018

Figure 30 below illustrates how the EA2 and WD1 compare with the EA throughout the trading day, again small variations, on average, are observed over the morning and evening peak.

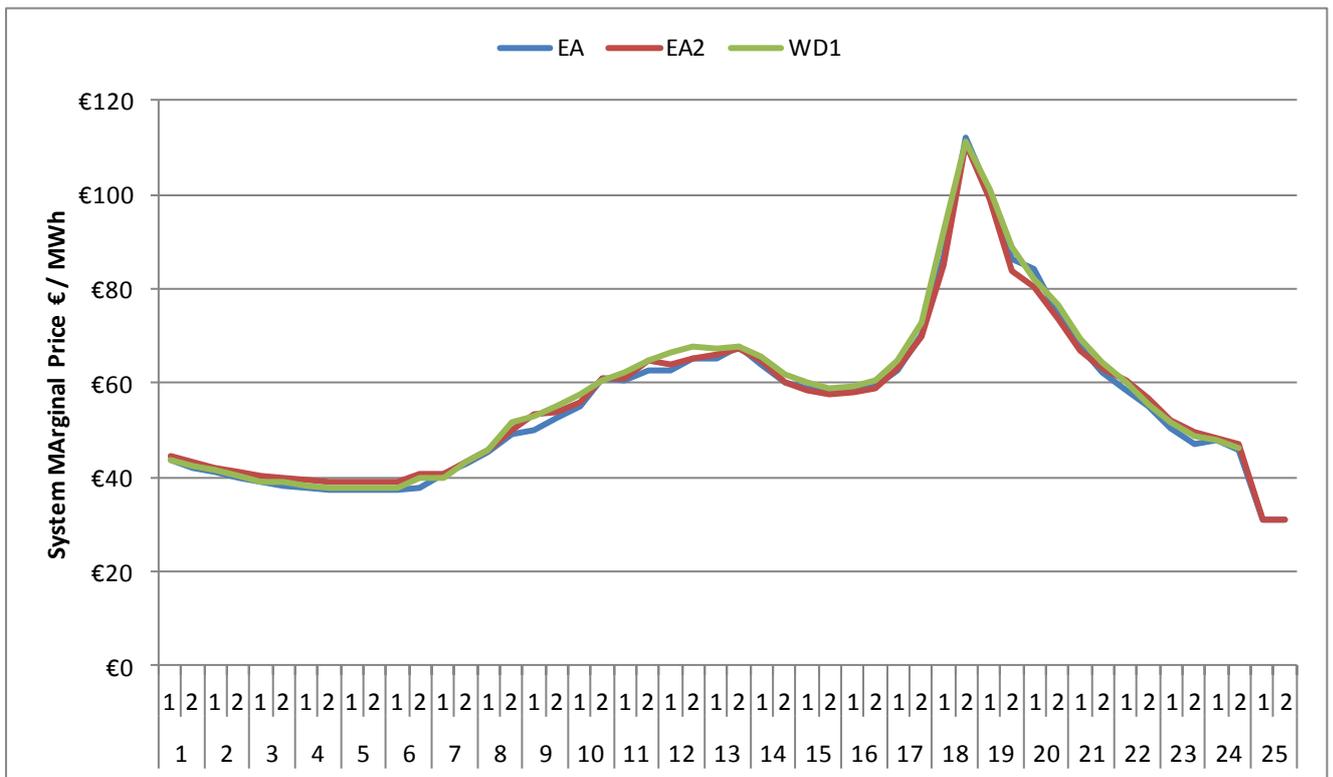


Figure 24 – Volume Weighted Average SMP by Trading Period from 1st Oct 2017 to 30th Sep 2018

6.3 Other Studies and Work

6.3.1 Guarantees of Origin and Fuel Mix Disclosure

SEMO is the issuing body of Guarantees of Origin (GO) in Ireland. SEMO began registering interested parties for the scheme in December 2011 and registration has been open to eligible Production Devices since. To be eligible for GOs a Production Device must generate electricity from a renewable source and must not be in receipt of support from a support scheme. There are 37 Account Holders and 111 Production Devices currently registered in the Online Registry.

There was 4 new Account Holders registered in the last year.

SEMO utilise [CMO.Grexel](#) as the Online Registry for GOs. CMO.grexel is compliant with the [EECS](#) (European Energy Certificate System), a standardization system for European Guarantees of Origin (GOs). SEMO has been a member of the [Association of Issuing Bodies](#) (AIB) since May 2015. AIB facilitate the international exchange of GOs via an inter-registry telecommunications hub.

For the period October 2017 to September 2018:

- 2,150,618 GOs were issued on the Online Registry.
- 836,983 GOs were imported from Norway, another AIB member
- 658,465 GOs were exported to Norway, another AIB member
- 2,556,181 GOs were cancelled for use in Fuel Mix Disclosure (FMD) in Ireland.
- No Ex-Domain cancellations were processed in this period (cancelling GOs for use in FMD in a country that is not a member of the AIB).

The Fuel Mix Disclosure (FMD) Enduring Solution is a separate annual project linked to Guarantees of Origin. SEMO is the calculating body for the FMD of both Ireland and Northern Ireland. The disclosure calculation for 2011 was the first year that the enduring solution was in place; this meant that Suppliers could declare GOs in their Fuel Mix submissions. This method is being used going forward. Suppliers have received their fuel mix breakdowns and the final publication of the data by the Regulatory Authorities has been completed for the 2017 calculation.

The Green Source Products Verification is done after the Annual Fuel Mix Disclosure Calculation. The Regulation of Green Source Products Decision Paper [CER/15/205](#) was published by the CER in August 2015. The 2017 disclosure period was the second year of the verification process. The purpose of this verification process is to ensure that any Supplier offering Green Source Products has claimed sufficient Green Attributes (GOs and PSO) in their Fuel Mix Disclosure declaration to cover their sales of Green Source Products. The final results of the 2017 verification process were communicated to the Commission for the Regulation of Utilities (CRU) on 15/08/2018.

6.3.2 REMIT

SEMO continue to comply with their obligations under Regulation (EU) No 1227/2011; as an Organised Market Place reporting market transactional data to the Agency for Cooperation of Energy Regulators (ACER).