



Regulatory Authority Quarterly Report

Market Operator Performance Criteria

September 2014

Table of Contents

1	INTRODUCTION	3
2	MANAGE CHANGE	4
2.1	SOFTWARE DEPLOYMENTS	4
2.2	FUTURE SCHEDULED DEPLOYMENTS	4
2.2.1	Release SEM R2.5.0 (Proposed Deployment: November 2014)	4
2.2.2	Release SEM R2.6.0 (Proposed Deployment: April 2015)	5
2.3	MODIFICATION MANAGEMENT	6
2.4	MODIFICATIONS RECOMMENDED FOR APPROVAL	8
2.5	DEFERRED MODIFICATIONS	8
3	SERVICE DELIVERY	10
3.1	CORE MARKET OPERATIONS FUNCTION PERFORMANCE EXCLUDING AD-HOC RE-PRICING AND RESETTLEMENT	10
3.2	PLANNED RESETTLEMENT M+4 AND M+13	14
3.3	AD-HOC PRICING AND AD-HOC RESETTLEMENT RUNS	14
3.4	ADMINISTRATION OF CREDIT COVER	14
3.5	BREACHES OF THE TRADING AND SETTLEMENT CODE	16
4	REGULATORY AFFAIRS	18
5	PROVIDE INFORMATION	19
5.1	CUSTOMER QUERIES IN A TIMELY MANNER	19
5.2	FACILITATE AND EDUCATE PARTICIPANTS TO ACCEDE TO THE CODE	22
5.3	FACILITATE INTERACTION WITH CUSTOMERS	22
5.3.1	Stakeholder Events	22
6	REQUIRED CREDIT COVER COVERAGE ANALYSIS	23
6.1	FOREWORD ON REQUIRED CREDIT COVER COVERAGE	23
6.2	SUMMARY OF REQUIRED CREDIT COVER COVERAGE ANALYSIS	23
6.3	OCCURRENCES OF UNDER OR OVER ESTIMATION	23
6.4	EXTENT OF UNDER AND OVER ESTIMATION	25
6.5	MARKET MONETARY EXPOSURE	26
6.6	ALL QUARTERS SUMMARY	26
7	APPENDIX A: REQUIRED CREDIT COVER COVERAGE	27
A)	<i>REQUIRED CREDIT COVER COVERAGE MODELLING ASSUMPTIONS</i>	27

1 Introduction

The Single Electricity Market has been in operation since the 1st November 2007. Under the licence conditions of both EirGrid and SONI to operate the Single Electricity Market (SEM), SEMO has to report to the Regulatory Authorities (RAs) on critical performance metrics. These critical metrics were identified in a letter dated 18th October 2007 from the RAs to SEMO. The letter outlined four main categories of metric:

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

Following the third quarterly meeting with the RAs, some of the metrics were revised under discussion with SEMO. This report has taken these comments on board in its preparation.

Quarters in this report are defined according to the financial year outlined below:

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

2 Manage Change

2.1 Software Deployments

There were no software deployments in the period covered by this report.

2.2 Future Scheduled Deployments

2.2.1 Release SEM R2.5.0 (Proposed Deployment: November 2014)

Approval for the proposed scope for this release was received from the Regulatory Authorities on May 1st, 2014. The High Level Impact Assessment (HLIA) was published to the industry on May 7th, 2014.

The scope for this release is as follows:

CR Reference	System	Description
SEM_PC_CR322	STL	Eligible Availability for Energy Limited Units Under Test
SEM_PC_CR327	MI	Event Queuing
SEM_PC_CR333	STL	Functionality to apply PUGDOG, TTariff on a Trading Day basis
SEM_PC_CR332	STL	Issue Zero Invoices
SEM_PC_CR330	MI	Changes to IART Report
SEM_PC_CR336	STL	HMRC VAT Change*
SEM_PC_CR340	MA	DSI-Processing of Bids**
SEM_PC_CR344	MA	SPOT ATC to override ATC Interval file in UUC**

Table 1: Approved Scope for SEM R2.5.0 – Change Requests

The design phase for this release was completed in June.

During June we were advised that HMRC were introducing new rules with respect to the application of VAT to supplies of wholesale electricity in the domestic UK market. As a result CR336 – *HMRC VAT Change* was added to the release scope. Information in relation to this was published to the industry on June 25th. In addition the following two Change Requests (CR340 and CR344) were added to scope in September:

- SEM_PC_CR340 to ensure optimisation data is handled correctly in DSI and
- SEM_PC_CR344 to ensure interval ATC data is utilized in UUC when required (e.g. when an Interconnector Trips).

The software was delivered by our vendors on July 31st.

System Integration test commenced to schedule runs from August 5th to October 31st.

There will be a brief phase of Market Test which is scheduled to commence on October 13th and conclude on October 24th. The additional change requests outlined above do not impact Market Test.

2.2.2 Release SEM R2.6.0 (Proposed Deployment: April 2015)

The release cut-off date for the SEM R2.6.0 release to the Central Market Systems was Friday September 5th 2014.

As at the Cut-Off Date there were no:

- Approved Modification Proposals or
- New Change Requests submitted to the SDS

As there are no functional changes being proposed, a Change Control Forum (CCF) meeting will not be required. Three technical changes have been proposed by SEMO IT and these are currently being assessed by our vendors. Once assessments are complete SEMO will issue a scope proposal to the Regulatory Authorities and if approved, this will be published to the industry.

2.3 Modification Management

SEMO Modifications Committee	
Report Period: 01 July 2014 to 30 September 2014	
Modification Committee Summary	Total
Number of Meetings held	1
<ul style="list-style-type: none"> • Modifications Committee Meeting 56 (August) 	1
Modification Proposal Activity in this period	
Standard Modification Proposals raised	0
Alternative Versions of Proposals raised	0
Urgent Modification Proposals raised	0
Modification Proposals 'Withdrawn'	0
New Modification Proposals 'Deferred' as of end of this period	0
Existing Modification Proposals 'Deferred' as of end of this period	3
Existing Modification Proposals 'Further Work Required' as of end of this period	1
Modification Proposals 'Recommended for Approval'	1
Modification Proposals 'Recommended for Rejection'	0
RA Determinations in this period	
RA Decision Papers 'Extension Granted'	2
RA Decision Papers 'Further Work Required'	0
RA Decision Papers 'Approved'	0
RA Decision Papers 'Rejected'	0
Summary of All Modifications to Date (30 September 2014)	
Total raised to date	336
Total 'Withdrawn' to date	48
Currently 'New or Deferred' in process (includes anything deemed "further work required")	5
Currently 'Recommended for Rejection'	0
Currently 'Recommended for Approval'	1
Currently 'Approved' (awaiting Implementation)	0
Total 'Implemented' to date	269
Total 'Rejected' to date	13

Details of all Modifications Proposals can be found at <http://www.sem-o.com/MarketDevelopment/Modifications/Pages/Modifications.aspx?Stage=Active>

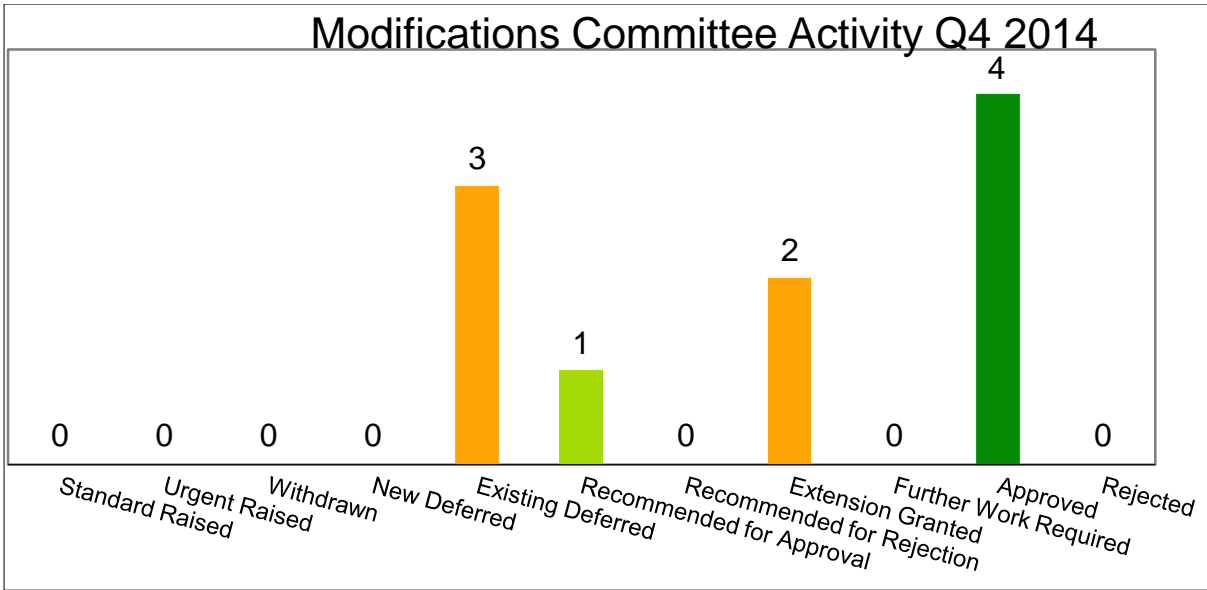


Figure 1: Modifications Summary Quarter 4 2014

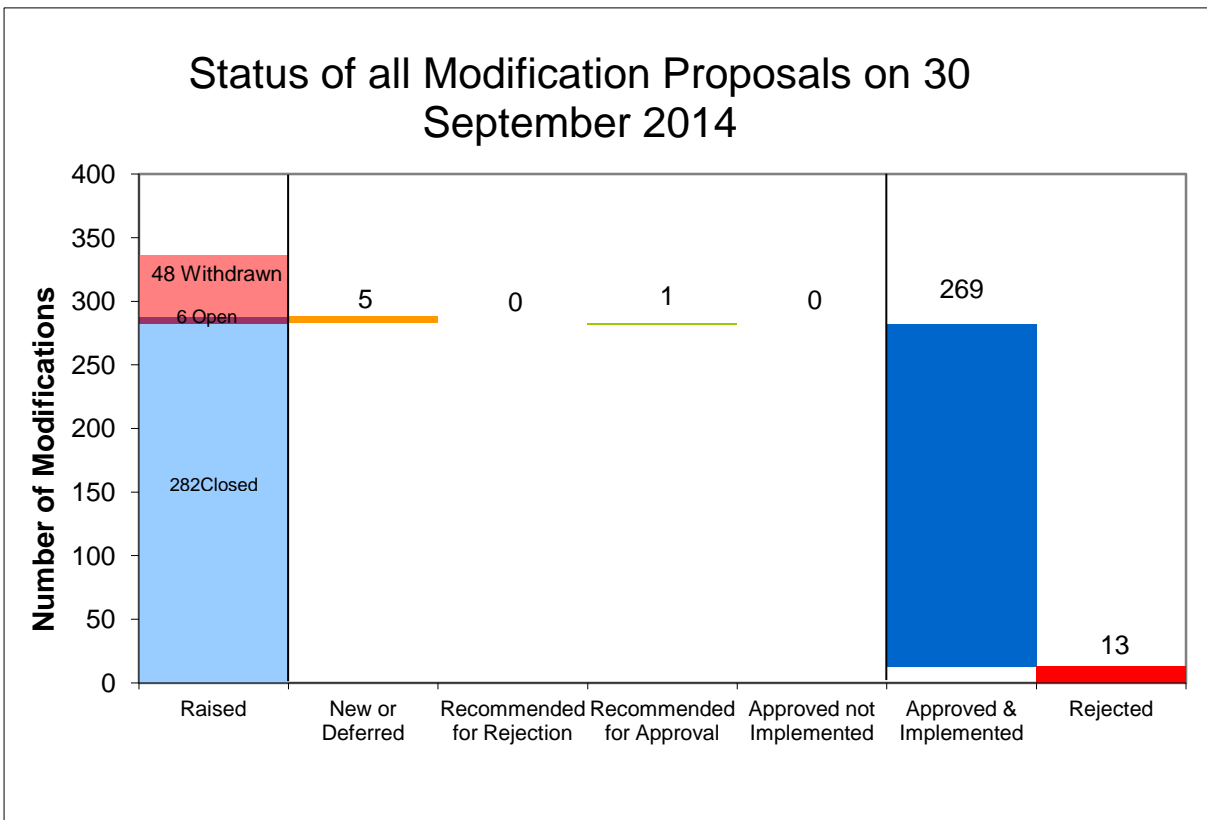


Figure 2: Modifications Status to Date on 30 September 2014

2.4 Modifications Process Development

Modifications in Q4 2014

One Modifications Committee Meeting convened in Q4 of 2014. Modifications Committee Meeting 56 took place on 14th August.

2.4 *Modifications Recommended for Approval*

Mod_07_14 Change to Final Registration Meeting Requirements to allow for email

The proposal was first discussed at Meeting 55. The proposal sought to allow SEMO to hold a final Registration meeting via email, rather than via conference call or in person, when appropriate, for the agreement of a market Effective Date for new market registrations. MDP Member advised of internal company concern in relation to the addition of an email option for the agreement of a market Effective Date. SEMO Registration met with NIE and discussed email option concerns. The proposal was recommended for Approval at Meeting 56 and became effective on 8th September 2014.

2.5 *Deferred Modifications*

Mod_11_12: Proposal to extend the definition of Special Units to include Compressed Air Energy Storage

This modification remains deferred pending the result of a TSO RCUC Impact Assessment. An extension was granted by the RAs until 31st October 2014. An update to the Modifications Committee was previously provided advising that the SO may investigate internalising the work by conducting the modelling and relevant analysis on the existing Plexos and RCUC systems. At Meeting 56 the SO Member advised that a scope is still being developed internally to examine the effect of the storage on various aspects of the system. The proposal is due to be discussed at the next Grid Code Panel meeting in November.

Mod_21_12 (RA Decision): Amendment to Available Transfer Capacity (ATC) definition

The TSO previously provided an updated Final Recommendation Report (FRR) addressing the issues set out by the RAs in their decision that the below topics be addressed in an updated FRR:

- The underlying rationale for the proposal
- The risks of not implementing the proposal and the alternatives that were considered
- The commercial effects of any curtailment of IC flows
- Discrimination introduced in the proposal against IC Users and IC Owners

The TSO is currently addressing comments submitted by Participants pertaining to the FRR. The FRR will be re-issued to the RAs for final decision when the outstanding comments have been addressed by the TSO. TSO Member provided an update at Meeting 54 advising that internal discussions are ongoing in relation to the issue of compensation for Participants and that no further update could be provided on the issue. At Meeting 55, SO Member advised that it is likely that the new market design will provide financial firmness for Participants. At Meeting 56 the SO Member further advised that the options are to address the outstanding issues in the FRR or to withdraw the proposal.

Mod_02_13: Registration of Charges

No deed of charge has been received however Pinsent Masons (PM) has advised that the deed is being reviewed internally. It is hoped to have the updated draft of the deed of charge circulated in advance of Meeting 57. The draft must go to the Committee for a review period of 3 weeks, with a conference call scheduled upon completion of the Committee review period.

- Proposer to draft updated Deed of Charge reflective of the trust arrangements, to be circulated to the Committee & WG Members as soon as possible (for a review period of 3 weeks)
- Secretariat to organise conference call to discuss Deed of Charge (for no sooner than 3 weeks from date of circulation of updated draft)
- Participants to ensure adequate legal representation from their respective companies, is present for the call
- Participants to advise Secretariat of how many company accounts (if any) are utilising CRAs for small invoices (rather than to provide credit cover) no later than COB 3rd July- Four Participants responded advising their companies are using CRAs for small invoices, as opposed to providing credit cover.

The proposal will be again discussed at Meeting 57 however it is hoped for a vote to be taken at Meeting 58 in December.

Mod_12_13 Amendment to Special Units Pumped Storage definition to include Energy Storage

The proposal was put forward by AES Kilroot and seeks to generalise the treatment in the market rules of energy storage units with similar storage capabilities, as opposed to defining rules for every new storage technology that has similar capabilities to that of pumped storage. Following a conference call to agree the scenarios for further market testing, the MO testing has been completed and a market analyst report documenting the findings of the testing has been circulated. As regards the RCUC testing, ABB have successfully run the unit however the SO must check the validity of the save cases. The below action was recorded at Meeting 56:

- Secretariat to schedule conference call for 1 months time, to discuss and/or vote on the proposal, upon receipt of the SO RCUC IA results- **Open**

The proposal will be again discussed at Meeting 57.

3 Service Delivery

This metric indicates how timely SEMO was in producing reports to Participants.

3.1 Core Market Operations Function Performance excluding ad-hoc Re-pricing and Resettlement

SEMO's daily obligations include closing the market gate, issuing Ex-Ante Indicative schedules, running Indicative and Initial pricing runs and issuing Initial and Indicative Settlement runs. The following series of graphs shows the percentage of all reports issued in the Quarter that were on time, late by less than an hour or late by over an hour. In summary, the majority of reports are published on time or within an hour of the required time. Priority is given to the Initial Reports (Ex-Post Initial Pricing Schedule and Initial Settlement Statements).

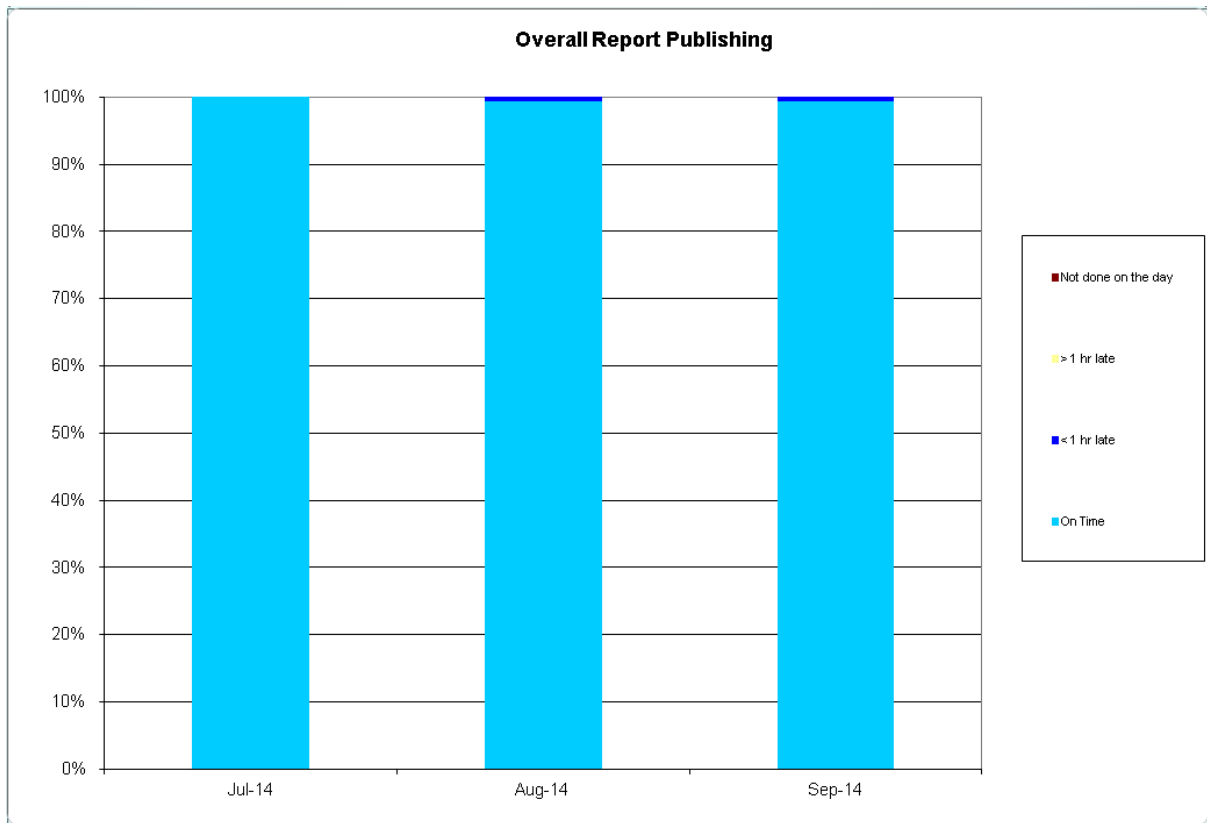


Figure 3 - Overall Daily Report Publication

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

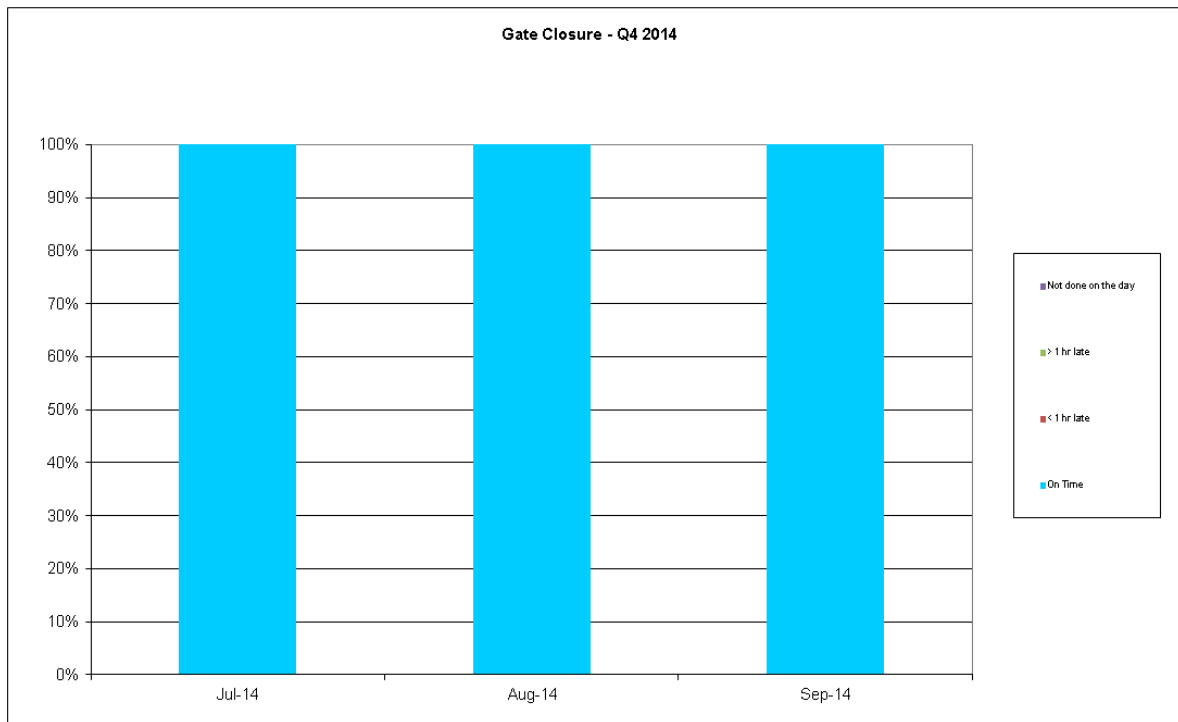


Figure 4 - Gate Closure performance

The Initial Reports (Pricing and Settlement) are published on a calendar and Working Day respectively. It is these reports that are used in the final settlement of the market.

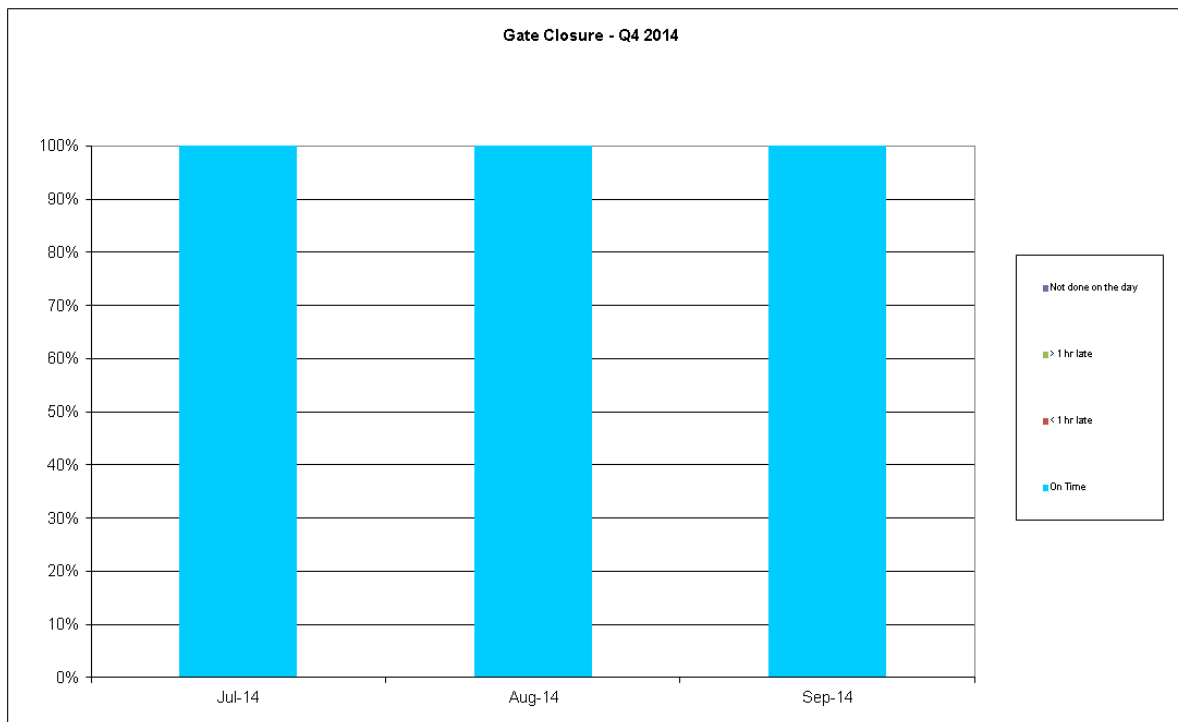


Figure 5 - Initial report performance

All Initial Market Schedules were published within the Trading and Settlement Code time scales.

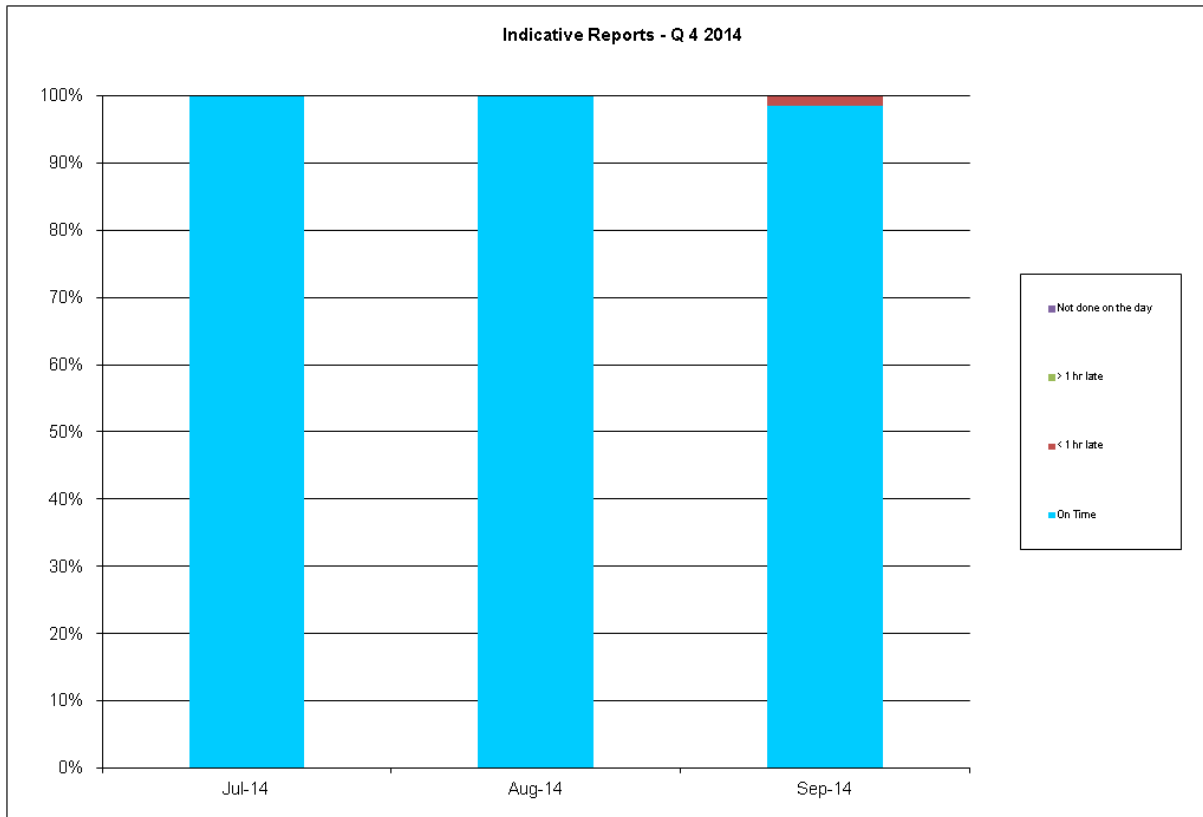


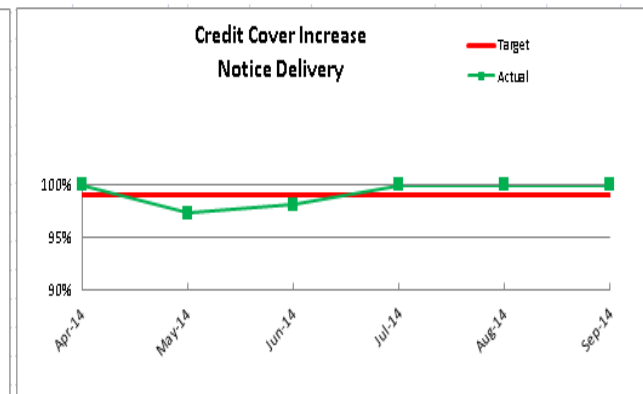
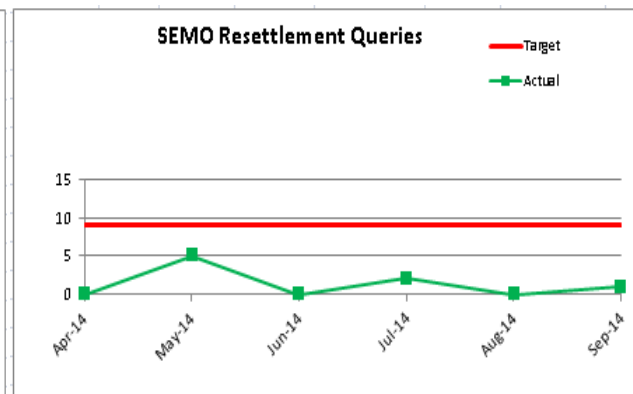
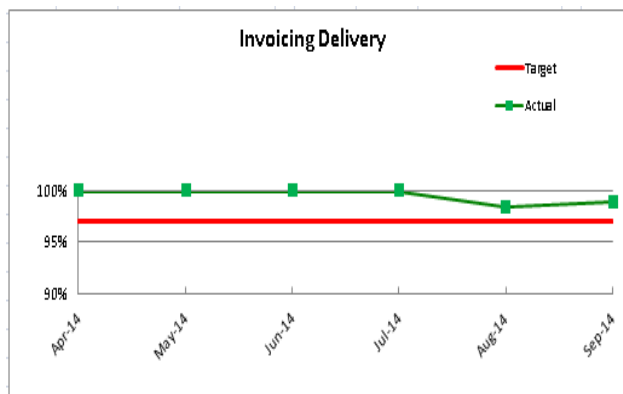
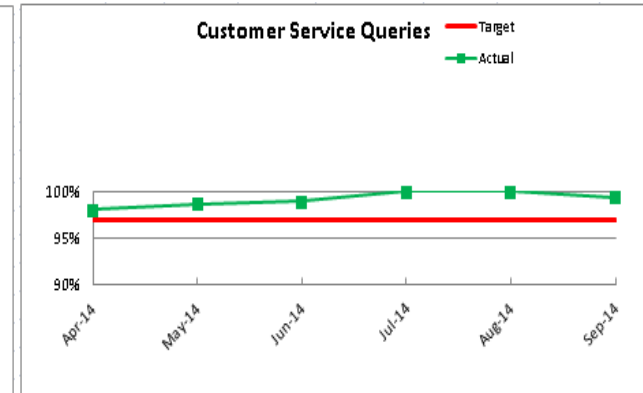
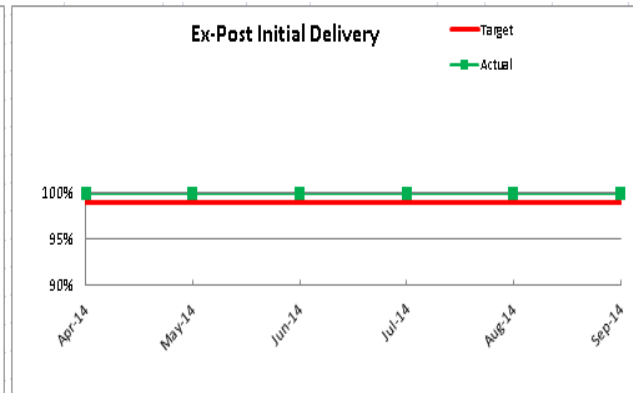
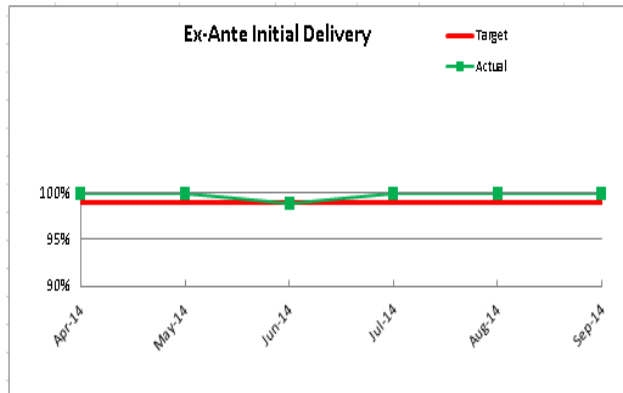
Figure 6 - Indicative report performance

Indicative Settlement reports for Settlement Day 25/09/2014 were published after the T&SC deadline of 17:00.

All Indicative Market Schedules were published within the Trading and Settlement Code time scales.

3.2 SEMO Key Performance Indicators

The following graphs display SEMO performance in line with the Key Performance Indicators as set out in the SEM Revenue & Tariffs decision paper.



3.2 Planned Resettlement M+4 and M+13

M+13 Capacity Invoicing for July 2013 was postponed by one week.

3.3 Ad-Hoc Pricing and Ad-hoc Resettlement Runs

Ad-Hoc Re-pricing

No Re-pricing runs were required during this Quarter.

Ad-Hoc Settlement Runs

- **Week 30, 2013:** Ad-Hoc Energy Resettlement was required for 28th July – 3rd August 2013. This was due to an internal analytical error when carrying out M+13 Resettlement.
- During this period we had intended to fix a defect affecting VPTG units. When processing resettlement however, we uncovered a further issue. This resettlement has now been postponed until after the market release in November 2014.

3.4 Administration of Credit Cover

The SEM has been fully collateralised according to the Trading and Settlement Code provisions during Q4 2014. However at times Posted Credit Cover may be less than the calculated requirement leading to Participants being issued with Credit Cover Increase Notices (CCINs). There were three CCIN that were not fully honoured within the two days allowed in the code, all other CCIN's closed within the two days allowed in the code. For more information on Credit Cover in the SEM, please refer to [section 6](#).

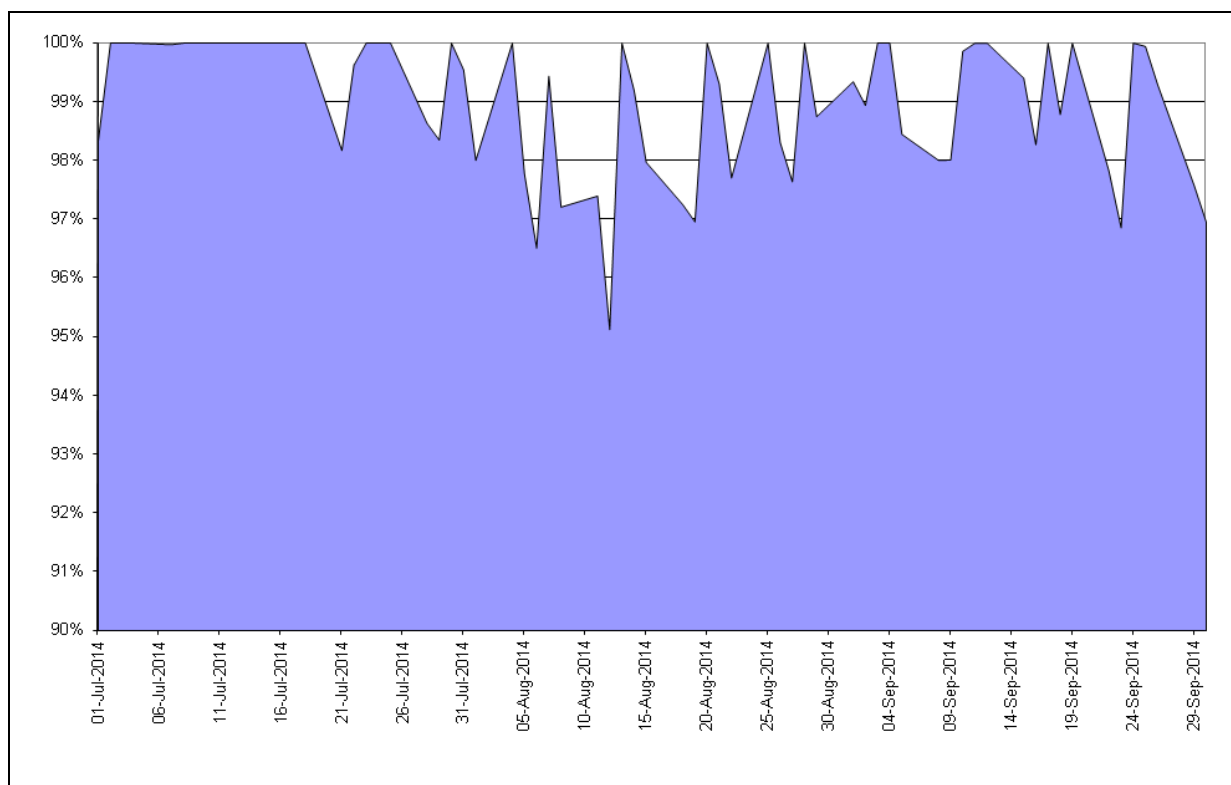


Figure 7 Market Collateralisation in Accordance with Trading and Settlement Code Requirements

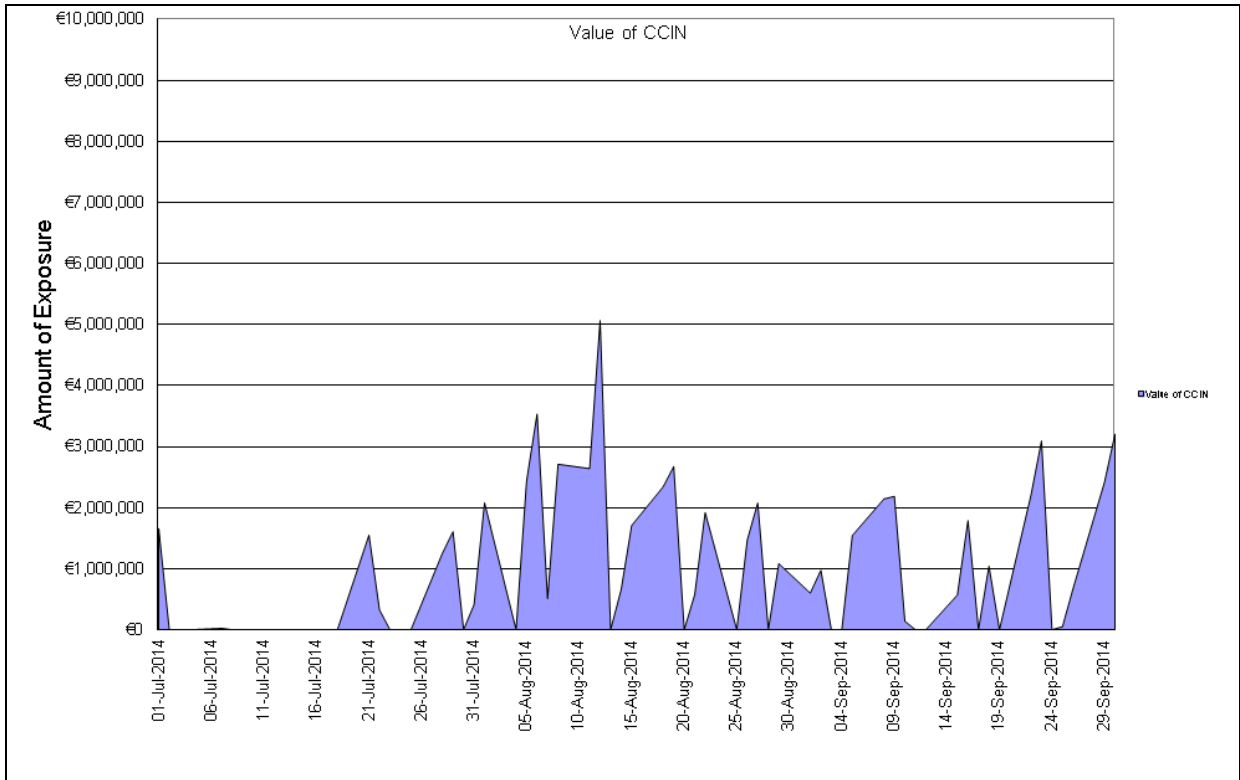


Figure 8 Credit Cover Increase Notice Total Amounts per Day

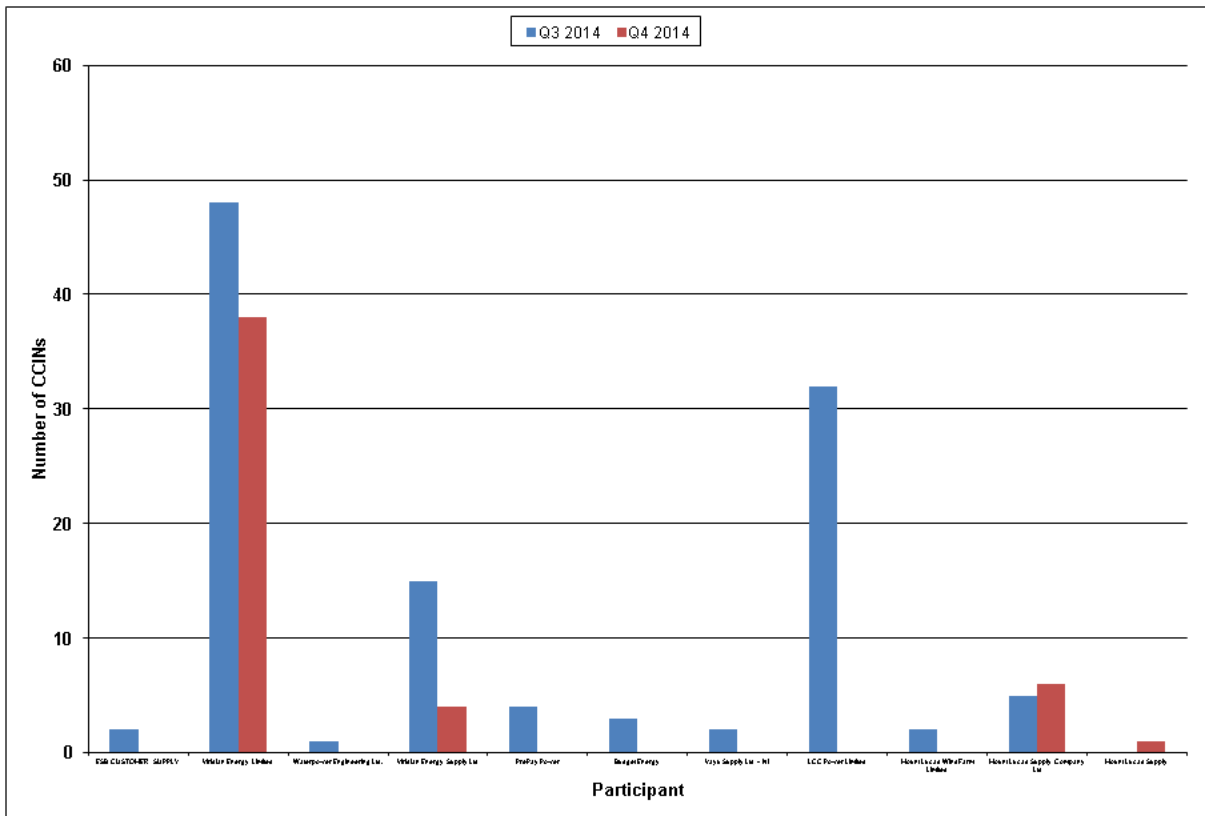


Figure 9 –Number of Credit Cover Increase Notices Issued

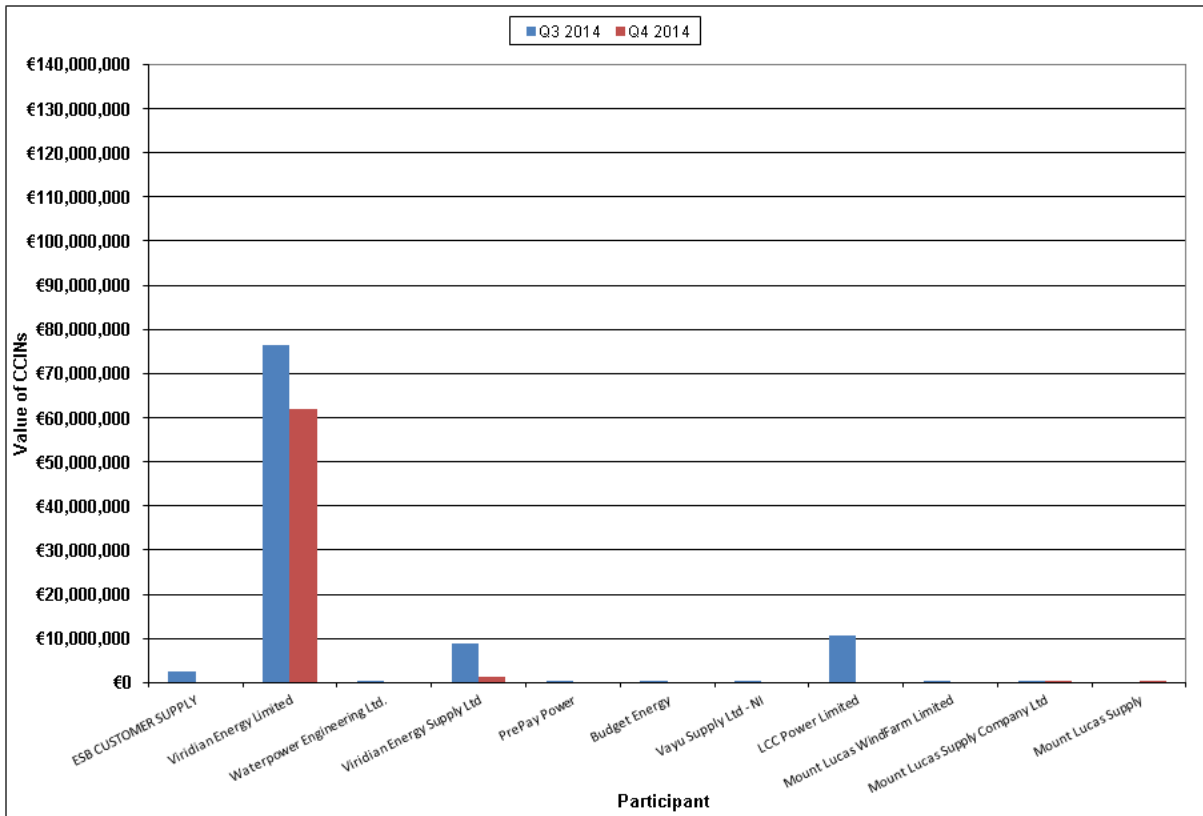


Figure 10 - Value of Credit Cover Increase Notices

The frequency of CCINs decreased in Q4 2014 compared to Q3 2014 (49 compared to 114 last quarter) with the greatest number of CCINs issued in September 2014 (19).

These CCINs were distributed across 3 Participants this quarter. The total value of the CCINs issued was just over €63 million compared to €99 million in the previous quarter.

3.5 Breaches of the Trading and Settlement Code

There were 27 breaches of the Trading & Settlement Code in Q4 2014 that SEMO is aware of. This is down from 39 in Q3 2014.

SEMO was responsible for a total of 4 breaches in the last quarter, down from 15 in Q3 2014.

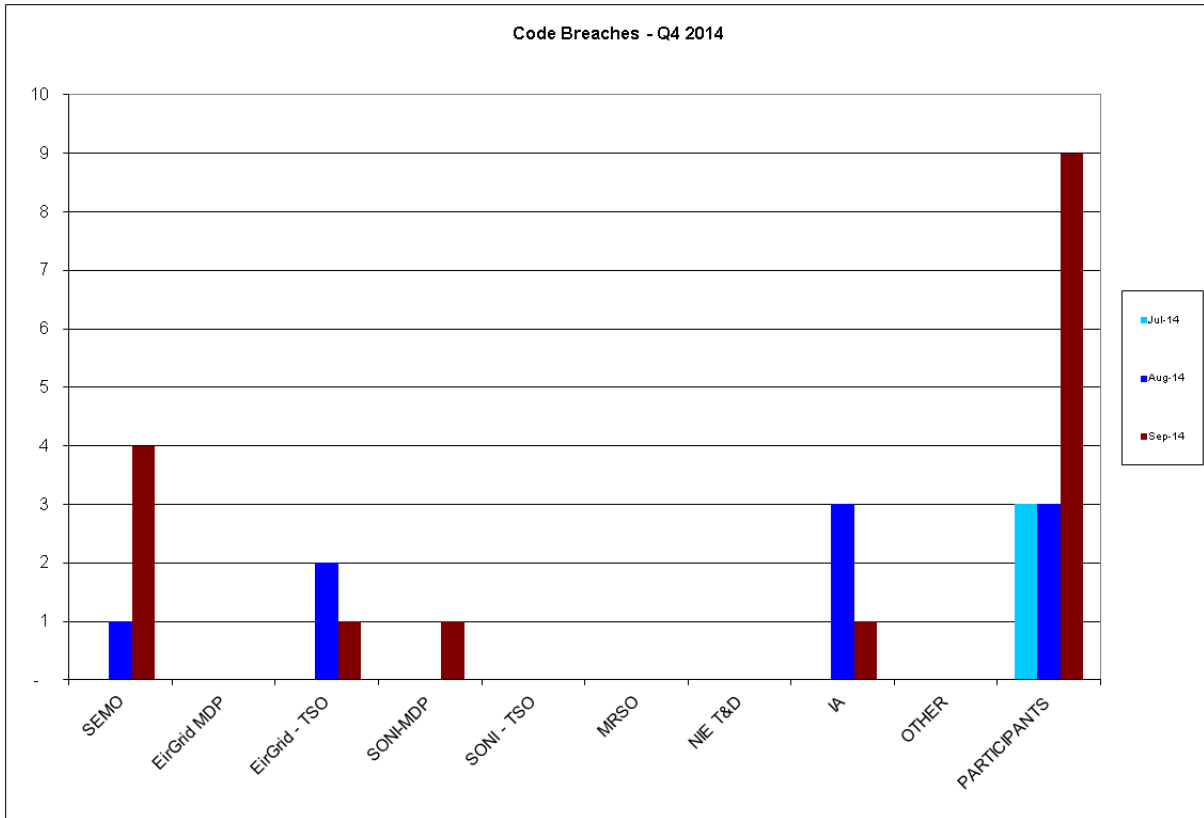


Figure 11 - Number of Trading and Settlement Code Breaches

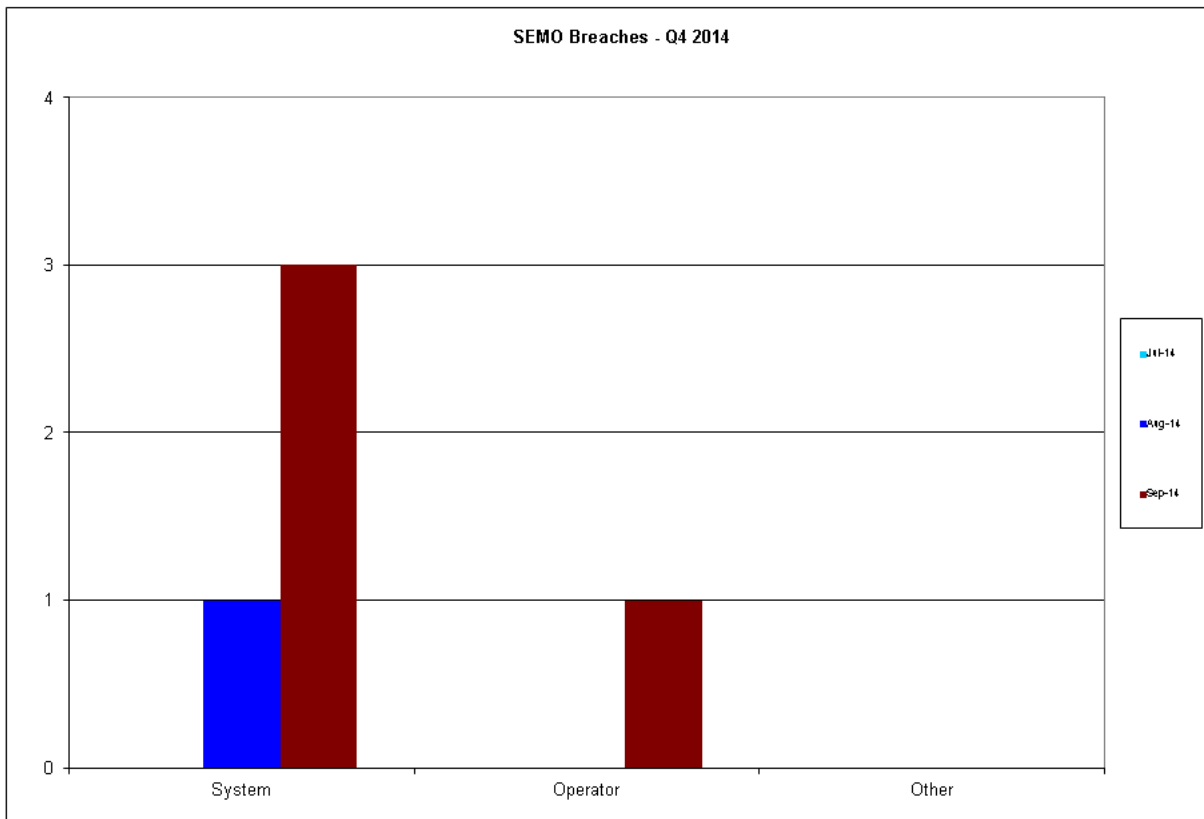


Figure 12 - Source of SEMO Trading and Settlement Code Breaches

4 Regulatory Affairs

4.1 SEMO Tariffs and Imperfections Costs

On 13th August 2014 the Regulatory Authorities approved the Imperfections charge to be applied from October 1st 2014 (SEM-14-076 decision paper Imperfections Charges for October 2014 – September 2015). On 1st September the Market Operator tariffs were also approved by the Regulatory Authorities. The tariffs were published by SEMO on the 5th September and are applicable from the October 1st 2014 to September 30th 2015. A summary of the Imperfections and Market Operator Tariffs are provided in the table below.

Tariff	Euro €
Accession Fee	€1,044
Participation Fee	€2,610
Fixed Generator Charge (per MW)	€47
Fixed Supplier Charge (per Unit)	€159
Total Variable Charge (per MWh)	€0.330
Imperfections Charge (per MWh)	€5.60

5 Provide Information

The Trading and Settlement Code obligates SEMO to answer Data Queries and Settlement Queries within a given time line. Since 1st November 2007, with the exception of two Settlement Queries, all such queries have been answered within the timelines prescribed. This is still the case for this quarter. General queries have no prescribed timeline for response; however, SEMO aims to answer these within 15 Working Days. We aim to answer Urgent General Queries within 3 Working Days. The number of queries answered within SEMO guideline timeframes has improved greatly in the last quarter and continues to be a focus for SEMO.

There were 2 new Disputes raised in this quarter with 1 resolved.

5.1 Customer Queries in a Timely Manner

Details of Data, Settlement and General Queries can be found in the below table and graphs for the Quarter ending 30th of September 2014.

	Received	Resolved within the period	Not Resolved	Resolved in the period	Resolution Time (Working Days)
General	488	429	56	490	2.13
Urgent	13	13	4	17	1.57
Settlement	31	21	10	36	5.96
Required Credit Cover Query	0	0	0	0	0
Dispute	2	0	2	1	10.00
Data Query	4	4	0	4	0.67
Total/Average	538	467	72	548	3.39

Table 2: Query Statistics for Quarter

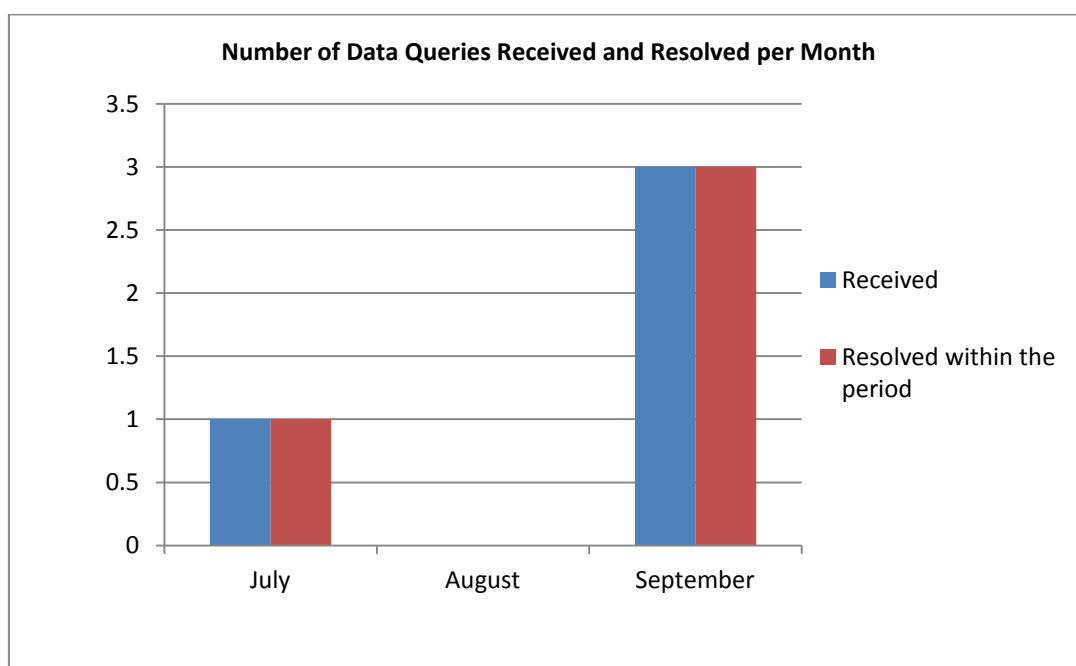


Figure 13 - Number of Data Queries submitted and Resolved per month

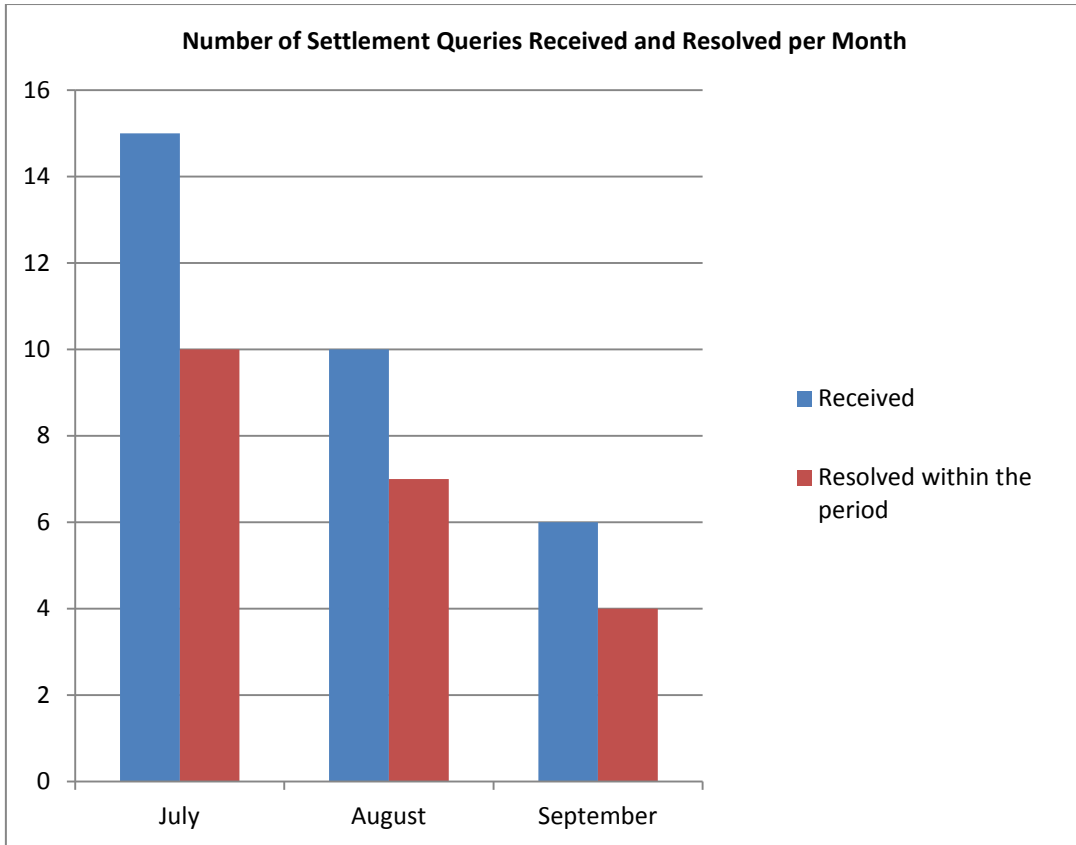


Figure 14 - Number of Settlement Queries submitted and resolved per month

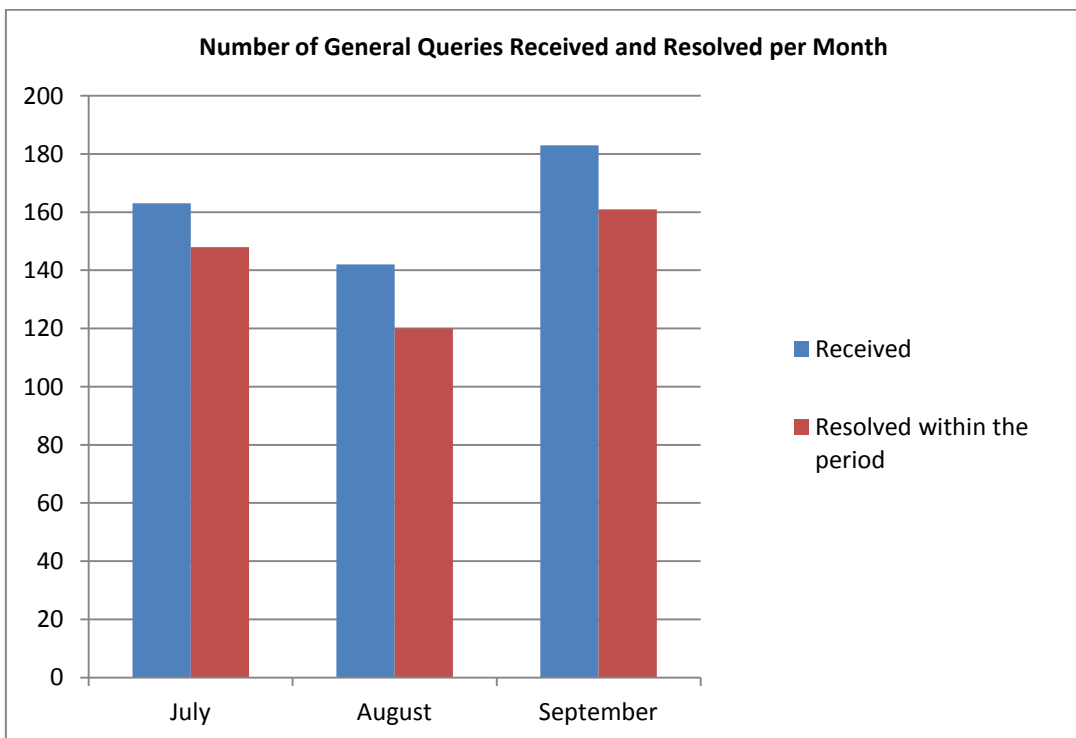


Figure 15 - Number of General Queries submitted and resolved per month

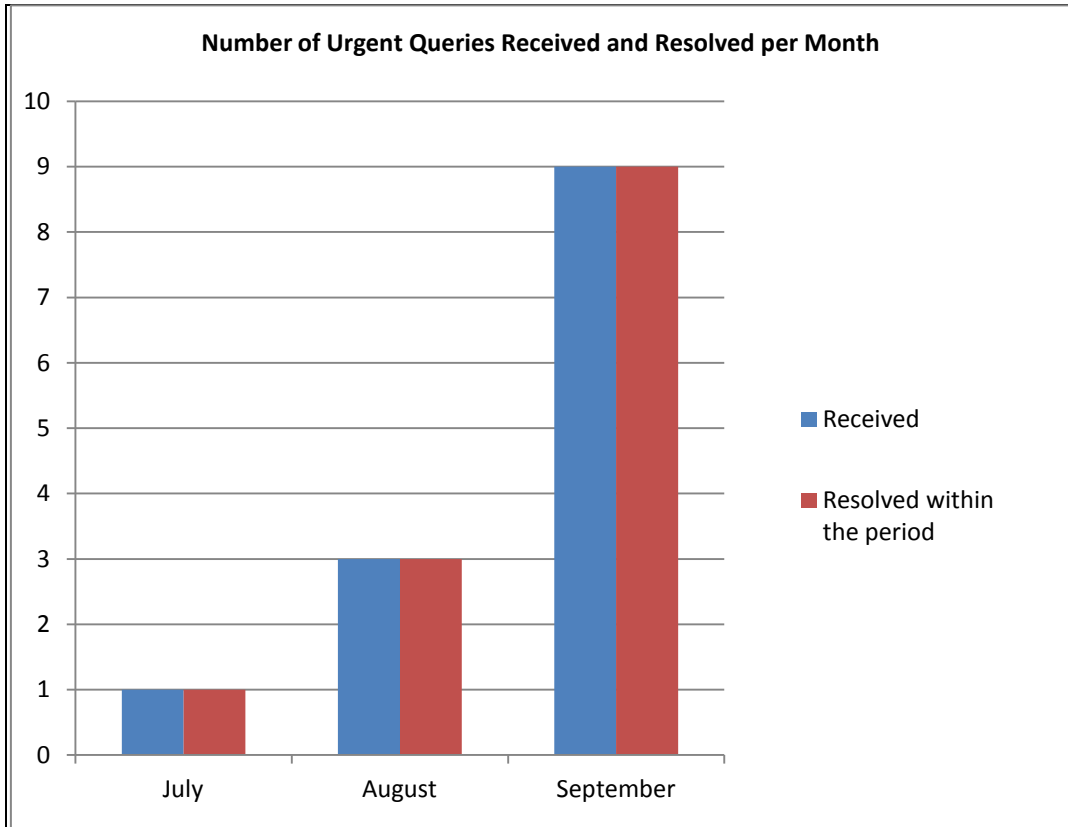


Figure 16 - Number of Urgent Queries submitted and resolved per month

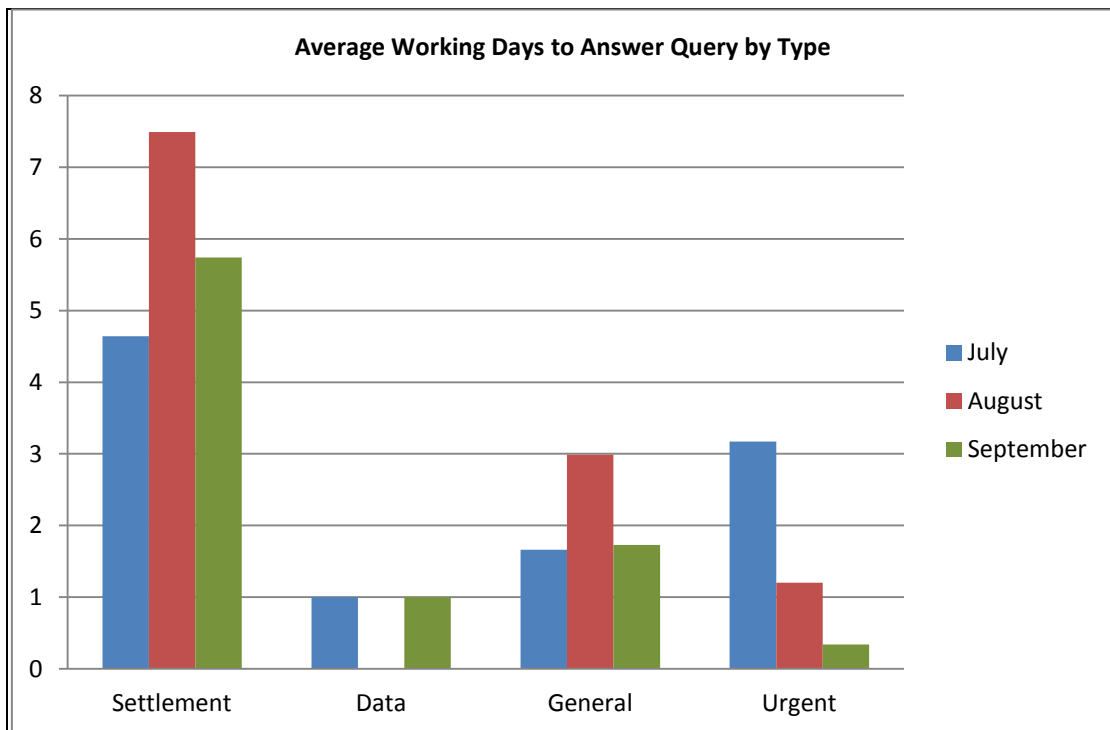


Figure 17 - Average Working Days to answer query type per month

5.2 Facilitate and Educate Participants to accede to the Code

In this period the following companies acceded to and became parties to the Trading & Settlement Code and registered in the Single Electricity Market:

- PY_000131 Genpower (NI)

5.3 Facilitate Interaction with Customers

5.3.1 Stakeholder Events

A summary of the main stakeholder interactions is provided below. This is in addition to the interactions that occur through the market helpdesk and query process.

- Market Operator Conference Call 28th of August 2014
- Welcome to the Market Training Session 20th of August 2014
- Participant Readiness Training Sessions 23rd of September 2014

6 Required Credit Cover Coverage Analysis

6.1 Foreword on Required Credit Cover Coverage

On a quarterly basis the Market Operator (MO) is obliged under decision paper SEM/07/10 to "compare the extent to which calculated RCC was sufficient to meet the actual liabilities realised in respect of each Participant". This report compares how well the calculated Required Credit Cover (RCC) matches the actual (or realised) RCC in the SEM.

Given the complex nature and volumes of data involved in performing an exact comparison of calculated to realised RCC, the modelling performed was based on a number of assumptions which simplified the analysis. Full details of the assumptions used in the RCC Coverage modelling are provided in Appendix A.

In the results below the term 'under-estimation' refers to situations where the calculated RCC was less than the realised RCC meaning the RCC at the time of calculation was less, in hindsight, that it should have been. The reverse is true for 'over-estimation' where the calculated RCC was more than what was actually required.

Occurrences of under-estimation identified in the analysis do not necessarily mean that the market itself was under-collateralised as this is dependent on the level of Posted Credit Cover. The majority of Participants tend to have sufficient levels of Posted Credit Cover to meet fluctuations in RCC. The under-estimation merely identifies where the calculation of RCC was less than ideal relative to the realised RCC.

6.2 Summary of Required Credit Cover Coverage Analysis

The key conclusions on the RCC Coverage are:

- RCC Coverage was under-estimated 5% of the time in Q4 2014. This was equal to the 5% when compared against Q3 2014. This figure is lower than the long term average of 18% under-estimation since market start. It is also lower than the values seen in the same quarter last year (18%).
- The value of each occurrence of under-estimation has increase from the previous quarter of 0.01% to 1.24%, higher than the long term average of 0.86%.
- In Q4 2014, where the RCC Coverage is not sufficient, the market is under-estimated by an average of approximately €2,200,000 on a total market exposure of just over €182 million. The long term average equates to an under-estimation of €9 million on a total average market exposure of €173 million from the beginning of the market.

6.3 Occurrences of Under or Over Estimation

Figure 17 below illustrates the trend in the number of RCC calculations under or over-estimated. For the SEM as a whole, the Q4 2014 period has seen the RCC under-estimated on 5% of credit cover calculations. This is a decrease of 13% from the same period last year and equal to the 5% from the previous quarter reported. The average SMP price and the demand both decreased only slightly compared to the previous quarter.

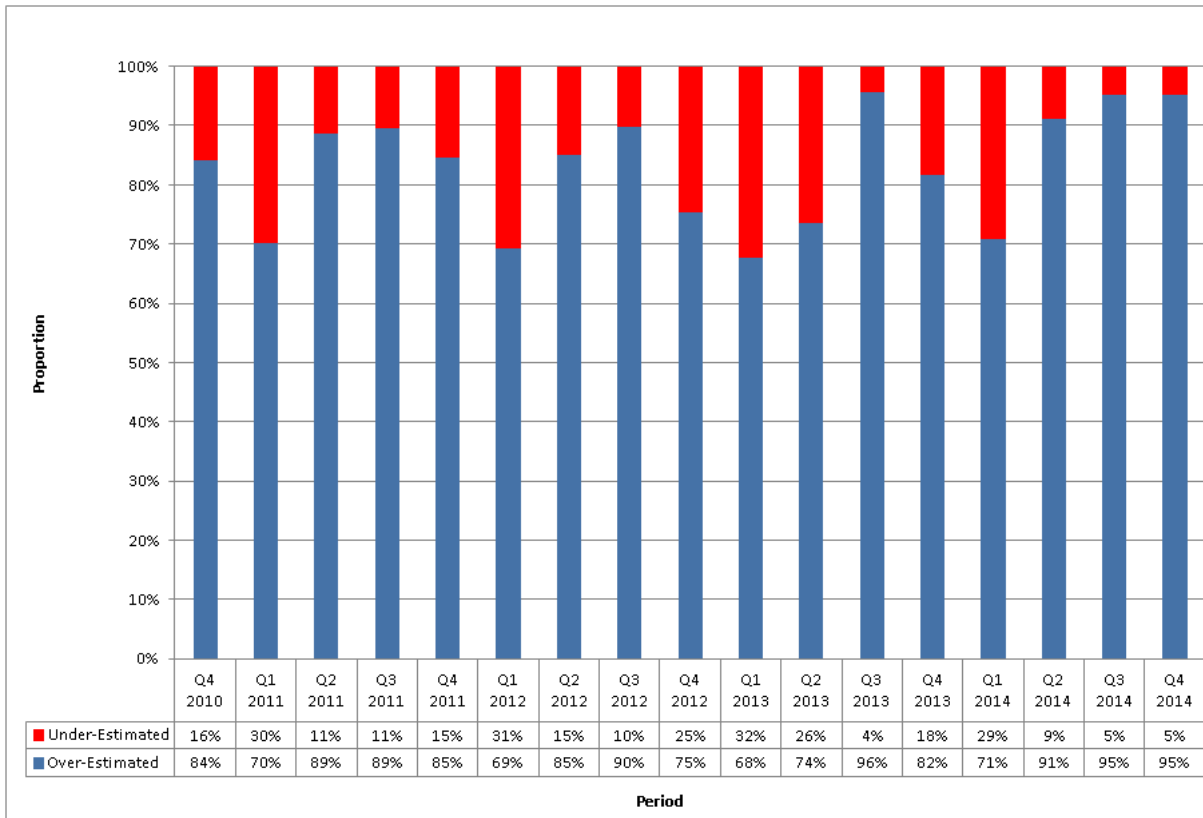


Figure 17- Occurrences of Under or Over Estimation

As discussed in previous reports on RCC Coverage the key factor in the proportion of under or over estimation is the historical SMP relative to the current period SMP.

Figure 18 below illustrates the trend in average daily SMP for Q4 2014, the daily time weighted average was €51, which is lower than in Q3 2014 (€53). The SMP has historically been higher and more volatile in the first years of the market. It had then stabilised at lower values from around Feb 09 until April 2010. From this time on, we have seen SMP only slightly increasing in average value; however, there has been more deviation with higher peak prices being seen in a few times in Q4 2014.

Another factor impacting on the proportion of under or over estimation is the variation in the System Demand which, in this quarter, is equal to the 5% from previous quarter.

These small variations have limited the amount of under estimation in the current quarter, particularly as demand shows a slightly increasing trend across the Q4 2014.

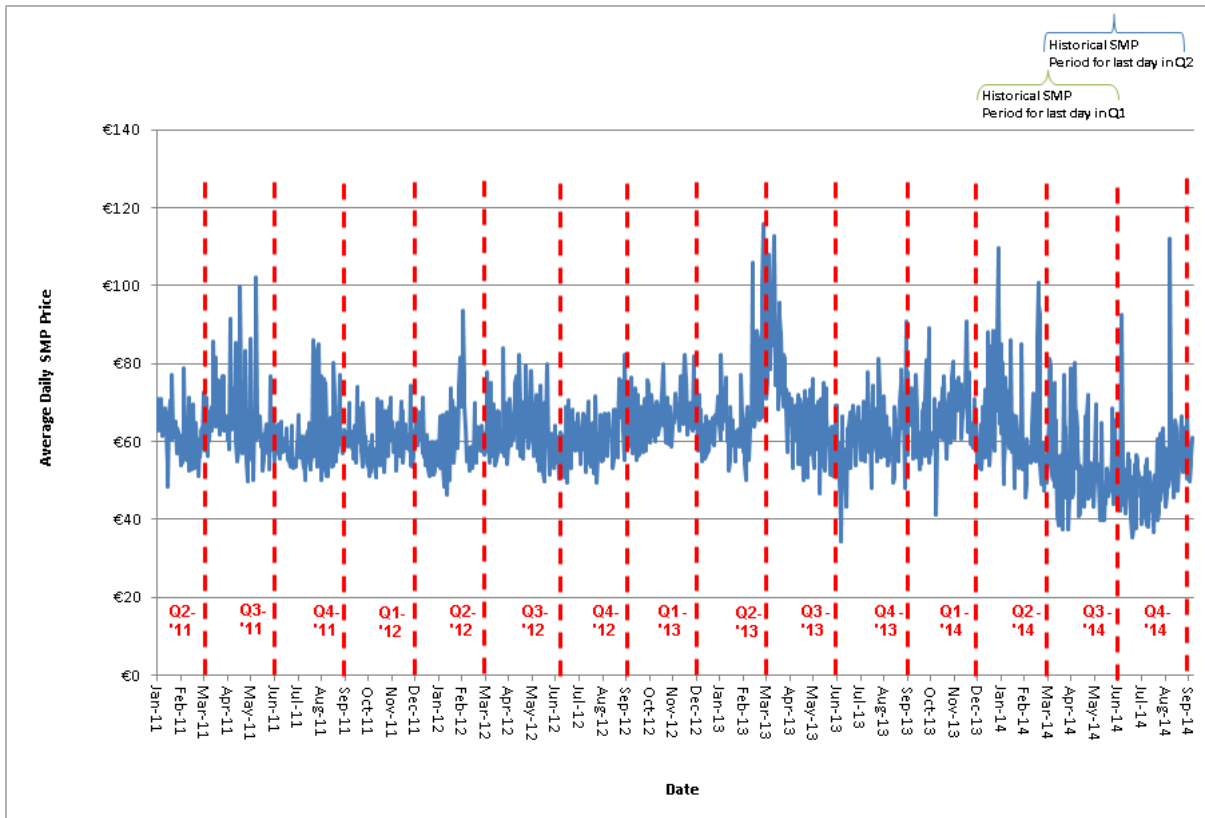


Figure 18- Trend in Average Daily SMP

6.4 Extent of Under and Over Estimation

Figure 19 below illustrates the trend in the extent to which RCC is under or over-estimated, when it occurs.

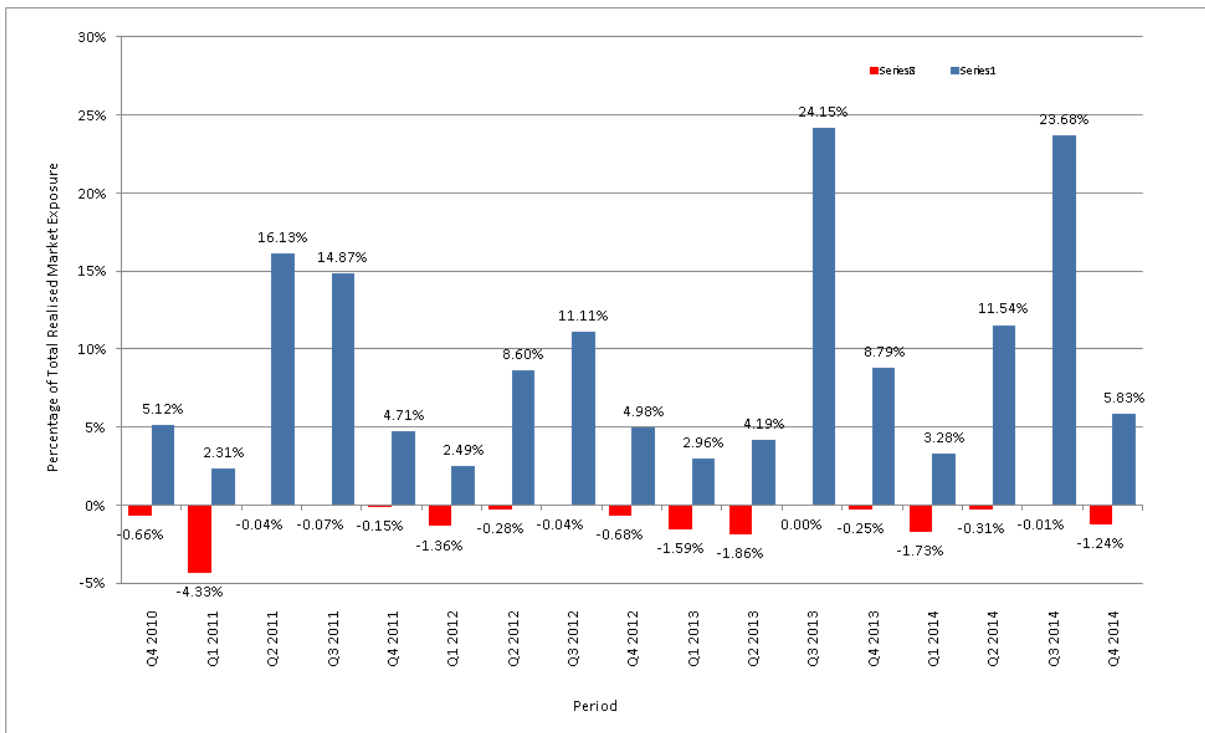


Figure 19 – Extent of Under or Over Estimation when Under or Over Estimation Occurs

The majority of under-estimation, since the start of the market, is below 1%. Q4 2014 is higher with a figure of 1.24%.

Where over-estimation occurs, this has been on average between approximately 1.5% and 27% since the start of the market. In the quarter under analysis, the extent of over-estimation decreased to 5.8% compared to 23.68% in the previous quarter. This is lower than the long term average of 9.17%.

6.5 Market Monetary Exposure

Figure 20 below shows the actual monetary exposure of the SEM (excluding VAT) to these under or over estimations.

In Q4 2014, from an average exposure of the market of just over €173 million, the market has had an average RCC under-estimation of just over €2,200,000 and an average RCC over-estimation of € 10 million on any given day.

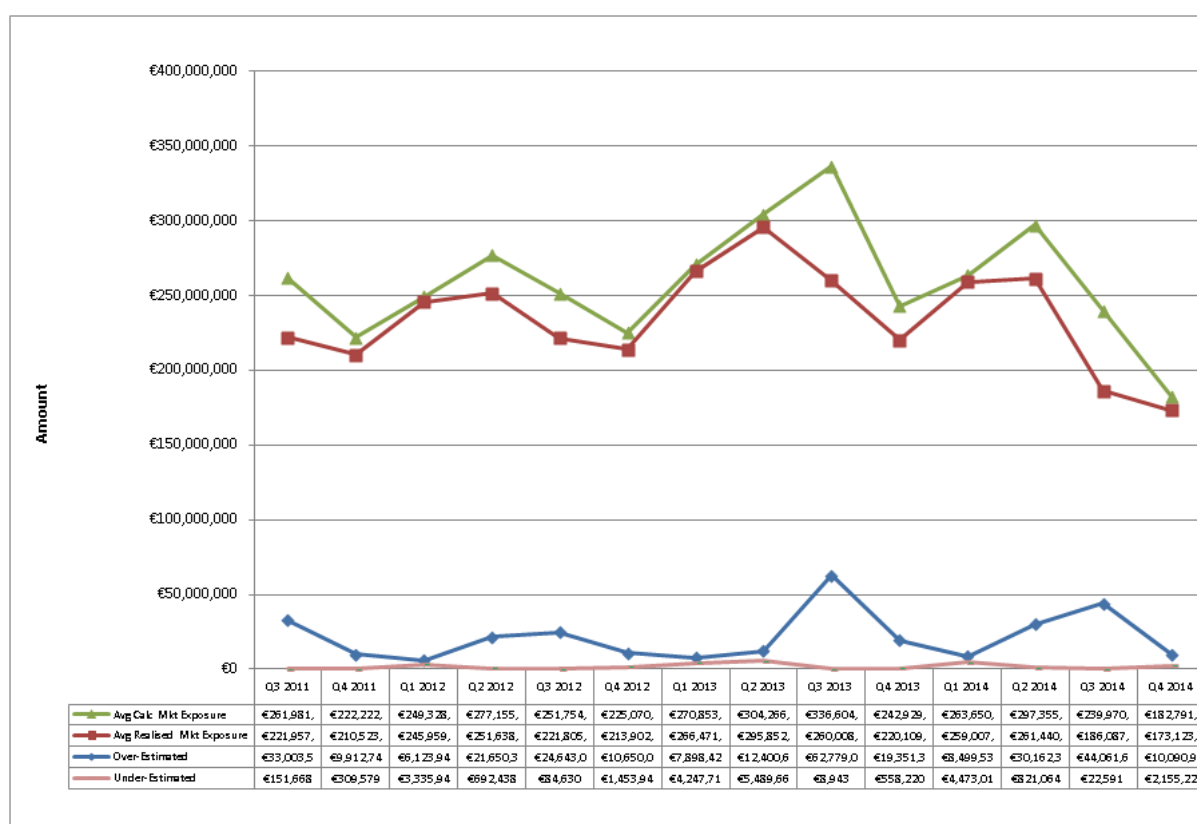


Figure 20 – Monetary Exposure due to Accuracy of Credit Cover Calculations

6.6 All Quarters Summary

For the SEM as a whole, from market start to the end of September 2014, RCC has been under-estimated 18% of the time. Of these occurrences the under-estimation as a percentage of the total realised market exposure is on average less than 1%, or €2.5 million out of a total average realised market exposure of € 255 million.

With regard to over-estimation, the SEM as a whole has been over-estimated 82% of the time with the over-estimation as a percentage of the total realised market exposure being on average 9.17%, or €23million out of a total average realised market exposure of €255 million.

7 Appendix A: Required Credit Cover Coverage

a) Required Credit Cover Coverage Modelling Assumptions

Given the complex nature and volumes of data involved in performing an exact comparison of calculated to realised RCC, the modelling performed was based on a number of assumptions which simplified the analysis.

- Only Participants with Supply Units were considered in the RCC analysis as they are the only Participants that have a positive RCC liability as a result of initial settlement. Generators are considered to have a negative RCC liability (i.e. no liability) as a result of initial settlement. Generators may have a liability due to Resettlement but this is covered in credit cover calculations by the fixed credit cover requirement.
- Analysis was performed on a Participant Account basis for supply accounts only.
- All values were converted into Euros for easy of comparison. The exchange rate used was for trade date 13th October 2014. The value was 0.7882 for Euro to Pounds sterling.
- Settlement values used in the analysis are Initial Settlement values, with the exception of some Indicative Settlement values which were used for the last few days of analysis as initial values were not available. This is also the reason for small adjustments to figures published last quarter.
- When compiling the current report, data was available for the retrieval of the realised vs. calculated UDE for the whole period up to the end of September 2014.
- Results for previous reporting periods may have changed slightly due to adjustments made to the model. This was to exclude units prior to enough historical data being available for the correct comparison of calculated and actual values. The change in values is not material to the results.
- VAT was not included in calculated or realised figures for Actual, Undefined or total market exposure. Proportions and percentages were determined without the application of VAT. This assumption was deemed to have little bearing on the final results as it is a percentage based tax which would apply to both calculated and realised amounts in the same proportions.
- A methodology was employed that simplified the analysis required in determining Actual Exposure and both calculated and realised Undefined Exposure (UDE). The volumes of processing required would otherwise involve repeating calculations for each day of the market for each Participant for both Energy and Capacity, using the snapshot of inputs for that particular day. This functionality is not available in the Credit Risk Management system implemented for the market and is not practical to perform external to the market systems at this point in time.
 - The Energy UDE and Actual Exposure were determined using settlement amounts for each day of the period being analysed (Nov 2007 to June 2014).
 - The UDE period for Energy was kept constant at 16 days when comparing calculated and realised RCC. The modelling does not allow for holidays or delays receiving settlement data for weekends, however, the comparison basis is the same for both calculated and realised RCC. Therefore, this assumption should have minimal effect on the results.

- The Actual Exposure for Energy was kept constant at 14 days. This is based on the average Actual Exposure being 7 days invoiced and 7 days un-invoiced.
- Part of the analysis required the comparison of the under or over estimation to the total market exposure. In order to determine the total market exposure the following methodology was used.
 1. Determine Energy UDE
 2. Determine Energy Actual Exposure
 3. Determine Proportion of Total Exposure made up by Energy and Capacity individually
 4. Determine the Capacity contribution to total exposure using the proportions of Energy and Capacity, and the Energy UDE and Energy Actual Exposure.
- The total market exposure proportion was determined using the following assumptions:
 - Energy has a significantly greater effect on the total exposure in the market relative to Capacity. Energy, based on 2013 financial year, is typically 76% of total market exposure, while Capacity is 24% of total market exposure. This is based on the figures for the period Oct 2012 to Sep 2013, of operation of the market, in which the Energy market was approximately €1.8 billion and a Capacity market of approximately €579 million.
 - VAT was not included in Total Market Exposure figures.
 - Fixed Credit Cover used to provide collateral for Resettlement was not considered as it forms a small proportion of the total exposure and should not affect the calculated versus realised comparisons.
- The first quarter of 2007 only consists of two months, November and December 2007. This is as a result of the market starting on 1st November 2007. All subsequent quarters are three months, and align with the standard reporting year for the market.
- There are only 14 days of analysis included in Q4 2007 as 45 days worth of historical data (HAP) are needed before the calculation of UDE can be determined.
- Please note that as of October 2010 report, reporting graphs now reflect the Financial Year not the Calendar Year as previously presented i.e. Quarter 1 (October – December 2010), Quarter 2 (January – March 2013) and Quarter 3 (April – June 2013).