



Regulatory Authority Quarterly Report

Market Operator Performance Criteria

December 2013

Table of Contents

1	INTRODUCTION	3
2	MANAGE CHANGE	4
2.1	SOFTWARE DEPLOYMENTS	4
2.2	FUTURE SCHEDULED DEPLOYMENTS	4
2.3	MODIFICATION MANAGEMENT	6
3	SERVICE DELIVERY	6
3.1	CORE MARKET OPERATIONS FUNCTION PERFORMANCE EXCLUDING AD-HOC RE-PRICING AND RESETTLEMENT	11
3.2	PLANNED RESETTLEMENT M+4 AND M+13	15
3.3	AD-HOC PRICING AND AD-HOC RESETTLEMENT RUNS	15
3.4	ADMINISTRATION OF CREDIT COVER	17
3.5	BREACHES OF THE TRADING AND SETTLEMENT CODE	19
4	REGULATORY AFFAIRS	22
4.1	MARKET SYSTEMS DEVELOPMENT PLAN	22
5	PROVIDE INFORMATION	23
5.1	CUSTOMER QUERIES IN A TIMELY MANNER	23
5.2	FACILITATE AND EDUCATE PARTICIPANTS TO ACCEDE TO THE CODE	25
5.3	FACILITATE INTERACTION WITH CUSTOMERS	26
6	REQUIRED CREDIT COVER COVERAGE ANALYSIS	26
6.1	FOREWORD ON REQUIRED CREDIT COVER COVERAGE	27
6.2	SUMMARY OF REQUIRED CREDIT COVER COVERAGE ANALYSIS	27
6.3	OCCURRENCES OF UNDER OR OVER ESTIMATION	27
6.4	EXTENT OF UNDER AND OVER ESTIMATION	29
6.5	MARKET MONETARY EXPOSURE	30
6.6	ALL QUARTERS SUMMARY	30
7	APPENDIX A: REQUIRED CREDIT COVER COVERAGE	30
A)	<i>REQUIRED CREDIT COVER COVERAGE MODELLING ASSUMPTIONS</i>	31

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

2.1.1 Release SEM R2.3.0 (Deployed: November 15th 2013)

The following table outlines the approved scope for the SEM R2.3.0 release to the Central Market Systems:

CR Ref.	System	Description
SEM_PC_CR174	MI	MPI Dropdown values for a Trading Site
SEM_PC_CR186	MA	Export Functionality in MA
SEM_PC_CR265	STL	Task Functionality
SEM_PC_CR310	MA	Run Cancellation Initialisation
SEM_PC_CR312	MI	Run Cancellation Functionality
SEM_PC_CR168	STL	Unnecessary File Import Type selection
SEM_PC_CR311	MI	VTOD Status Changes for Approval
SEM_PC_CR294	STL	DDF Linked to System Type within POMAX file import
SEM_PC_CR203	MA	Displaying UUC Penalty Costs in MA

Brady software (Settlements) was delivered on August 15th, 2013 and the ABB software (MI/MA) was delivered on September 4th, 2013.

System Integration Testing of the software ran to schedule and completed in early November 2013.

Although the approved scope did not have a functional impact on the interfaces between Participant systems and the Central Market Systems, a short phase of Market Test was conducted from October 9th, 2013 to October 25th, 2013 inclusive to facilitate a regression test phase across the SEM.

The release was successfully deployed to schedule on November 15th, 2013.

2.2 Future Scheduled Deployments

2.2.1 Release SEM R2.4.0 (Proposed Deployment: May 2014)

The release cut-off date for the SEM R2.4.0 release to the Central Market Systems was September 27th, 2013. A meeting of the Change Control Forum (CCF) was held on October 23rd, 2013 to formulate a proposed scope for non-Code related change.

Regulatory approval was received for the proposed scope on November 18th, 2013 and the approved scope was published to the industry on November 20th, 2013.

The following table outlines the approved scope for the SEM R2.4.0 release to the Central Market Systems:

CR Ref.	System	Description
SEM_PC_CR271	MI	Automated FX download to the Central Market Systems
SEM_PC_CR320	MI	Dispatch Instruction Validation Change
SEM_PC_CR324	MI	Event Warning for DAM event
SEM_PC_CR292	MI	MDP dropdown in the MPI
SEM_PC_CR226	MI	Pop-up reminder for digital certificate renewal
SEM_PC_CR323	STL	Bad Debt Smearing Calculation
SEM_PC_CR309	STL	Tax File Import
SEM_PC_CR325	STL	Automated Data Imports
SEM_PC_CR326	STL	Historical Process Warnings

The Design phase is under way and is due for completion by January 17th, 2014.

Delivery of the software from our vendors is scheduled for February 28th, 2014.

Preparations are underway for the System Integration Testing of the release which is scheduled to commence on March 3rd, 2014.

As the release will impact on interfaces between the Central Market Systems and Participant systems there will be a Market Test phase. The schedule for Market Test will be communicated in early February 2014.

The deployment of the release will take place in mid May 2014, subject to the successful completion of all testing. The specific date will be communicated in early February 2014.

2.2.2 Release SEM R2.5.0 (Proposed Deployment: October 2014)

The release cut-off date for the SEM R2.5.0 release to the Central Market Systems is:

Friday, February 21st, 2014

2.3 Modification Management

SEMO Modifications Committee	
Report Period: 01 October 2013 to 31 December 2013	
Modification Committee Summary	Total
Number of Meetings held	2
<ul style="list-style-type: none"> • Modifications Committee Meeting 51 (8 October) • Modifications Committee Meeting 52 (05 December) 	1
	1
Modification Proposal Activity in this period	
Standard Modification Proposals raised	5
Alternative Versions of Proposals raised	1
Urgent Modification Proposals raised	0
Modification Proposals 'Withdrawn'	1
New Modification Proposals 'Deferred' as of end of this period	1
Existing Modification Proposals 'Deferred' as of end of this period	2
Existing Modification Proposals 'Further Work Required' as of end of this period	1
Modification Proposals 'Recommended for Approval'	5
Modification Proposals 'Recommended for Rejection'	0
RA Determinations in this period	
RA Decision Papers 'Extension Granted'	1
RA Decision Papers 'Further Work Required'	0
RA Decision Papers 'Approved'	1
RA Decision Papers 'Rejected'	0
Summary of All Modifications to Date (31 December 2013)	
Total raised to date	329
Total 'Withdrawn' to date	47
Currently 'New or Deferred' in process	4
Currently 'Recommended for Rejection'	0
Currently 'Recommended for Approval'	4
Currently 'Approved' (awaiting Implementation)	0
Total 'Implemented' to date	261
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>

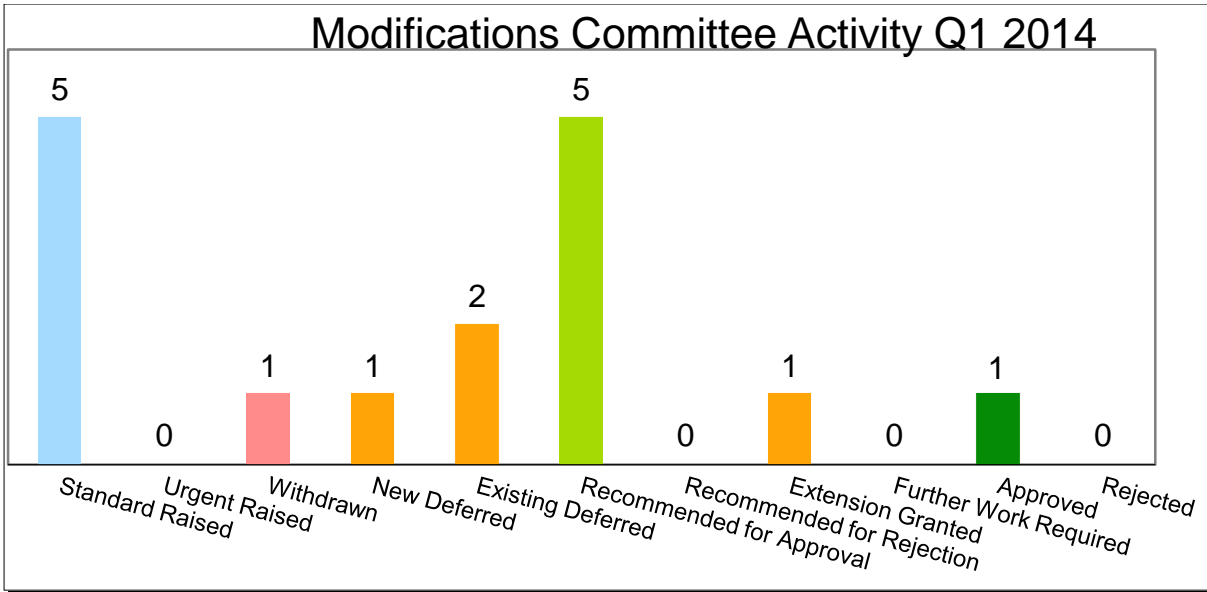


Figure 1: Modifications Summary Quarter 1 2014

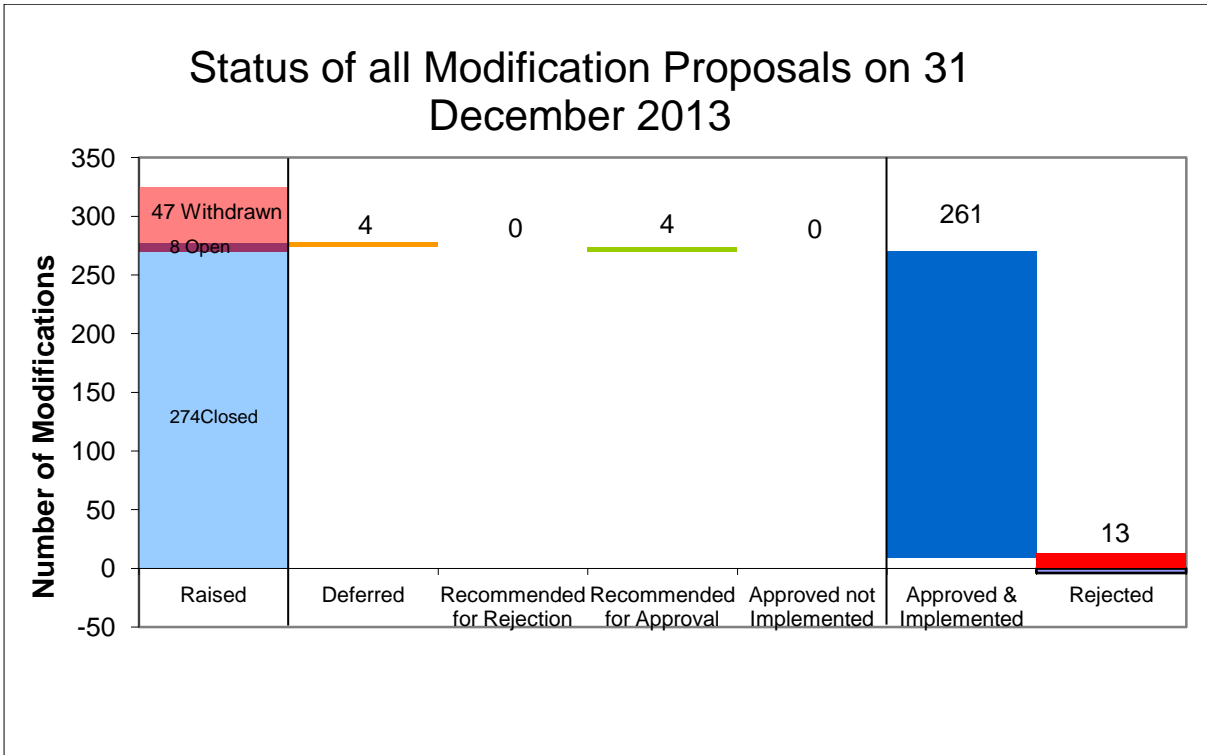


Figure 2: Modifications Status to Date on 31 December 2014

2.4 Modifications Process Development

Modifications in Quarter 1 2014

Two Modifications Committee Meetings convened in Q1 of 2014. Modifications Committee Meeting 51 took place on 8th October in Belfast and Modifications Committee Meeting 52 took place on 5th December in Dublin.

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

A decision was previously received from the RAs and discussed at Meeting 50, requesting that further work be carried out on the Final Recommendation Report (FRR) in relation to:

- 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 provided an updated FRR addressing the above issues, for circulation to the Modifications Committee, prior to circulation of the FRR to the RAs for final decision. The proposal was again discussed at length at Meeting 51. The actions below were recorded at the Meeting:

- Participants to submit dissenting views for inclusion in the FRR within a 2 week timeline i.e. by Tuesday 23 October-Closed at Meeting 52
- Any alternative versions of the proposal must also be raised within the 2 week timeline –Closed at Meeting 52

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.

Mod_25_12: Suspension of Interconnector Unit on instruction of Interconnector Owner due to breach of Access Rules

This modification proposed to allow the interconnector owner to request that the Market Operator suspends an interconnector unit if it no longer meets the eligibility requirements, or is in breach of the interconnector access rules. The proposal was previously discussed at Meetings 46 and 47 and was subsequently discussed at Meeting 48, where an action was placed on the proposers to monitor the issue, to assess actual risk in the market and to revert to the Committee with an update in 6 months. An update was provided at Meeting 51 advising that the proposer does not believe the modification will need to be implemented in the next 6 -12 months as the risk levels appear very low at present. Therefore, the proposal was withdrawn at the Meeting. A withdrawal notification was published on the SEMO website.

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

This modification remains deferred pending the result of a TSO RCUC Impact Assessment. An extension was granted by the RAs until 30th March 2014. At Meeting 52 an update was provided advising that the SO may investigate internalising the work by conducting the modelling and relevant analysis on the existing Plexos and RCUC systems. The SO agreed to

report on the progress of work at the first Mods Meeting in the New Year and a greater indication of timescales should become clear at that point.

Mod_02_13: Registration of Charges

A second version of this proposal was drafted by the legal advisers to the Modifications Committee alongside a revised Deed of Charge. The proposed changes will fulfil the Committee's preference of stricter enforcement of an updated Deed of Charge. The proposal was presented by EirGrid Legal at Meeting 52 where the Committee agreed that Participants should review the draft proposal and revert with comments on the proposal to the Secretariat by January 6th 2014.

Mod_09_13_v2: Amendment of AP7 to include the use of e-mail notification and the SEMO public website in the event of a GSF

This modification proposed to amend AP7 to include the use of the SEMO public website and market message e-mail alerts to supplement the current emergency communication methods. An alternative version of the proposal was submitted for consideration at Meeting 51. The proposal was recommended for approval at and was made effective on Friday 18th October. The below actions were recorded at Meeting 51 and were addressed by SEMO at Meeting 52:

- SEMO to ensure all newly registered users are added to the relevant Market Message distribution lists and that all lists are up to date-Closed at Meeting 52
- SEMO IT to issue a clarification between Type 2 lists and Market Alert distribution lists-Closed at Meeting 52

Mod_10_13: Removal of Requirement for SOs to send certain Dispatch Instruction Codes and Instruction Combination Codes for Pumped Storage Units to the MO

This modification proposed to no longer send the different Dispatch Instruction Codes and Instruction Combination Codes which are used to differentiate between the different modes of operation of Pumped Storage units. These instructions are not required by the Instruction Profiler to profile the instructions into Dispatch Quantities in SEM, Therefore, the SOs propose that they are no longer sent to the Market Operator. The proposal was discussed at Meeting 51 where it was recommended for approval. The proposal was made effective on 8th November 2013.

Mod_11_13: Amendment of AP5 to update the encryption key standard from 1024 bit to 2048 bit

This proposal updated the encryption level detailed AP5 to reflect the current encryption standard being used by the Market Operator, it protects against security threats and complies with Certification Authority/Browser forum requirements. Market Participants will continue to obtain and renew digital certificates in the usual way and this modification proposal does not impact on any other areas of the Code. The proposal was recommended for Approval at Meeting 52.

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.

The Committee agreed that AES present at the next Modifications Committee Meeting on the technical analogies between Pumped Storage and Battery Storage.

The below actions were recorded at the Meeting:

- Bi-lateral meeting to take place between AES and SEMO regarding additional information to allow SEMO to conduct an IA
- AES to present at the next Mods Meeting on the technical analogies between Pumped Storage and Battery Storage.
- Participants to consider whether an energy storage MWh De-Minimus level should be put in place for energy storage

A bi-lateral meeting took place between SEMO and AES.

Mod_13_13 Update to AP14 'Disputes'

During a compliance update, the absence of a step with regard to authorisation by the relevant competent party in the dispute resolution process was identified. This proposal corrects closes off this issue. The proposal was recommended for Approval at Meeting 52.

Mod_14_13 Update of references to the SEM Bank in Agreed Procedure 17

The proposal removes the reference to SEM Bank being Danske Bank represented by Northern Bank and NIB as this is no longer valid. The introduction of SEPA will also introduce changes to account references with the introduction of IBAN and BIC numbers as opposed to sort code and account numbers, this is also captured in the proposal. The proposal was recommended for Approval at Meeting 52.

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).

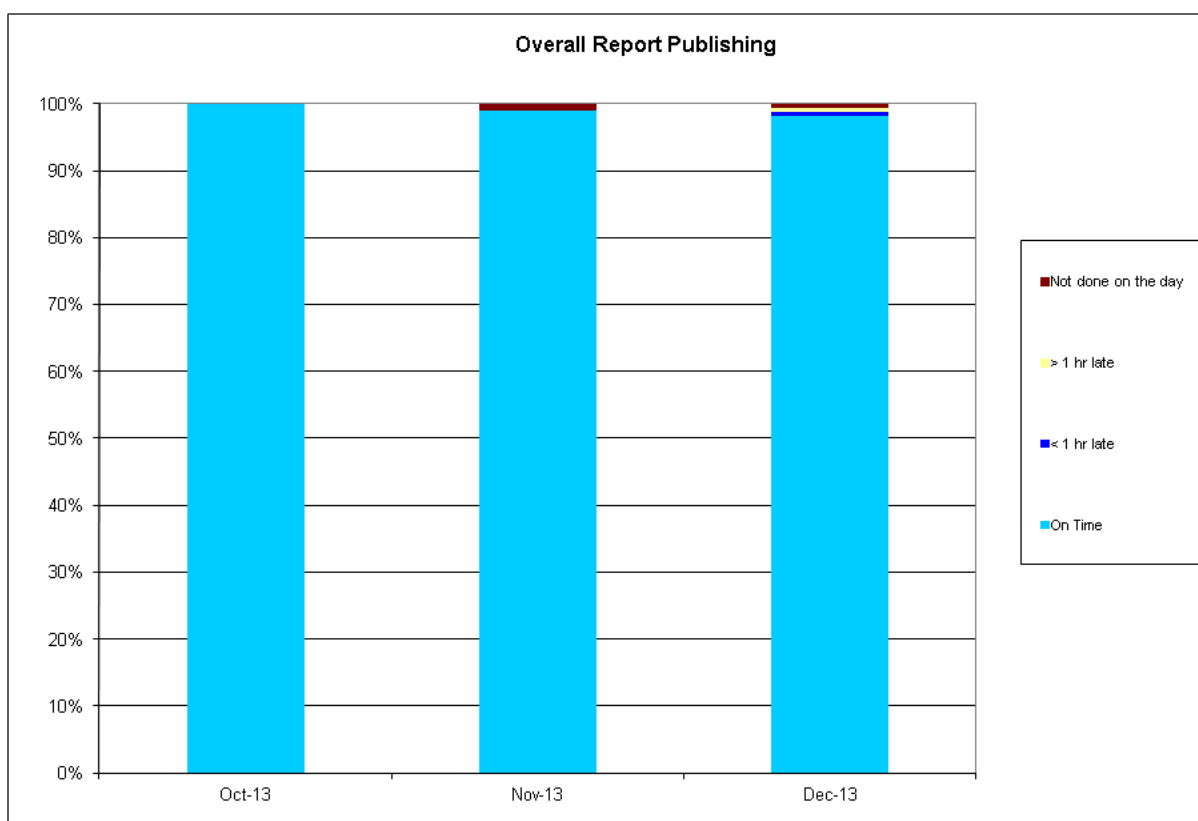


Figure 3 - Overall Daily Report Publication

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

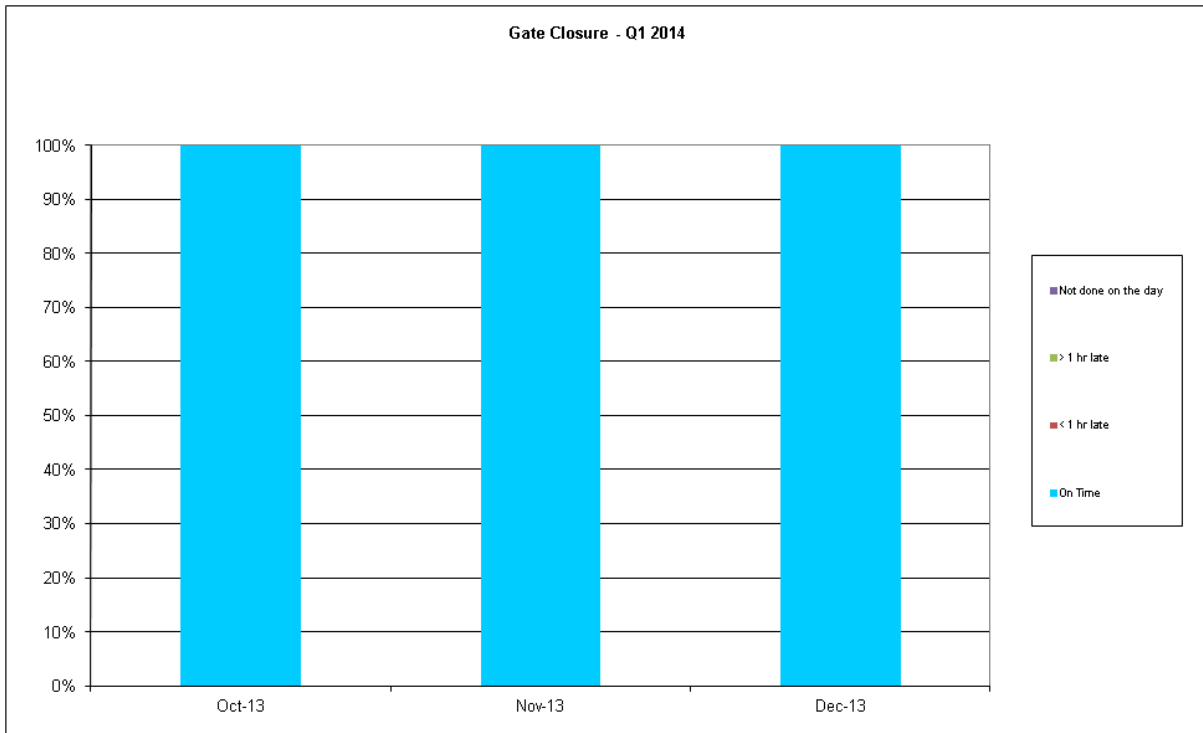


Figure 4 - Gate Closure performance

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.

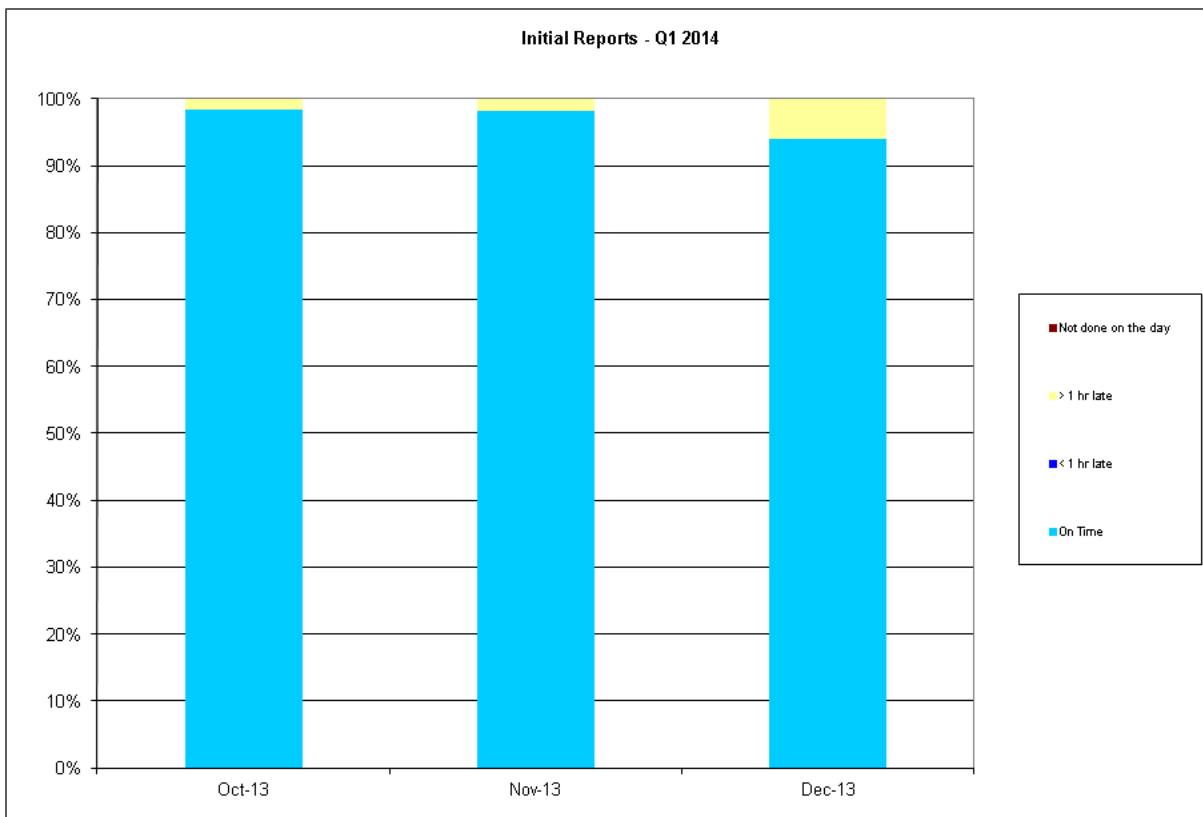


Figure 5 - Initial report performance

During this quarter one Initial Settlement Report (10/12/2013) was published outside of the T&SC timelines. This was due a delay in the associated Ex-Post Initial Market Schedule for Trading Day 10/12/2013.

Four Initial Market Schedules were published outside the Trading and Settlement Code time scales. This was due to a system defect affecting registration changes.

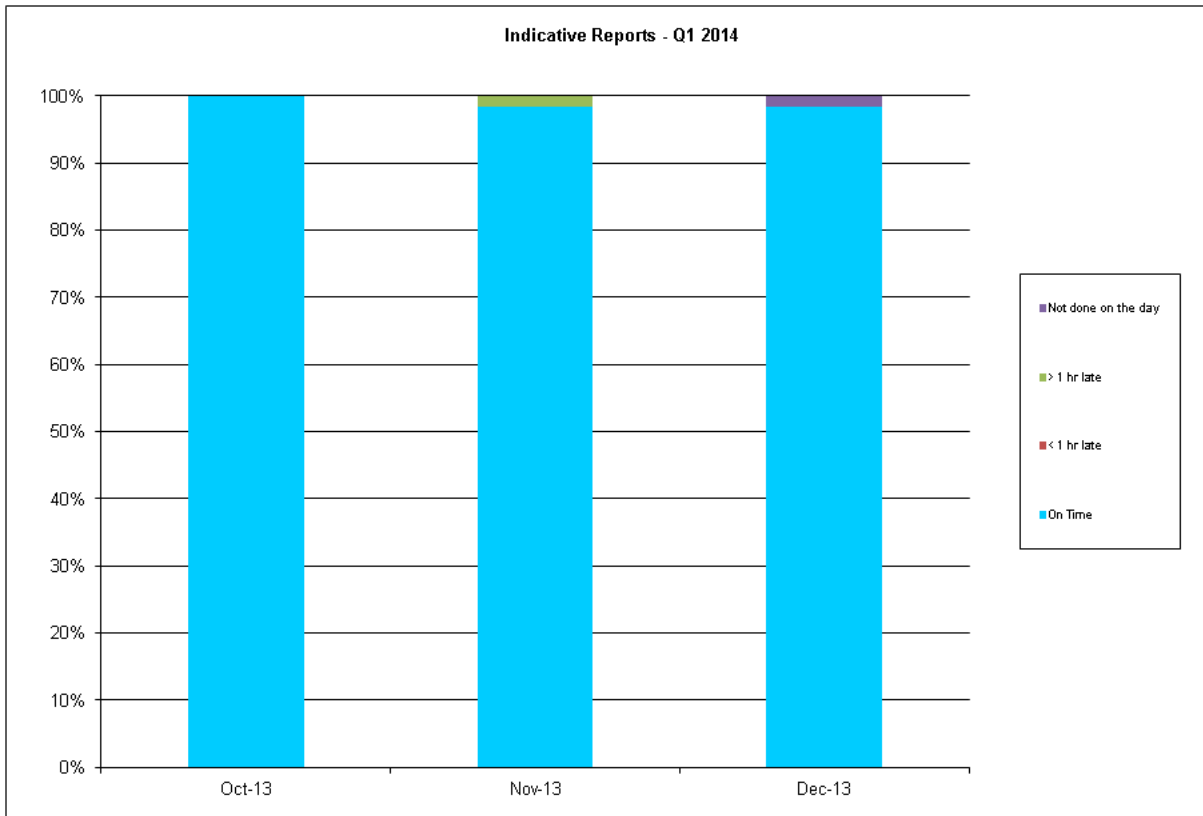


Figure 6 - Indicative report performance

During this quarter all of The Ex-Post Indicative Schedules were published within the Trading and Settlement Code timelines.

All Indicative Settlement Reports were published within the Trading and Settlement Code timelines for this quarter.

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

Scheduled Resettlement has continued to run on time and on schedule.

3.3 Ad-Hoc Pricing and Ad-hoc Resettlement Runs

Thirty Two (32) re-pricing runs were issued during this Quarter and five upheld Settlement Queries that required an Ad-Hoc Resettlement. Details of these are provided below:

Ad-Hoc Pricing

Ad-Hoc Settlement Runs

- **Week 1, 2013:** Ad hoc Energy Resettlement was required due to the re-price of Trading Day 7th, 9th and 10th January 2013. This was required due to a system defect regarding Pump Storage Pond Target Level.
- **Week 6, 2012:** Ad hoc Energy Resettlement was required due to the re-price of Trading Day 14th February 2013. This was required due to a system defect regarding Pump Storage Pond Target Level.
- **Week 8, 2013:** Ad hoc Energy Resettlement was required due to the re-price of Trading Days 25th and 26th February 2013. This was required due to a system defect regarding Pump Storage Pond Target Level.
- **Week 10, 2013:** Ad hoc Energy Resettlement was required due to the re-price of Trading Days 11th and 13th March 2013. This was required due to a system defect regarding Pump Storage Pond Target Level.
- **Week 30, 2012:** Post M+13 Ad hoc Energy Resettlement was required to correct the Uninstructed Imbalance values across the Moyle Interconnector.
- **Week 39, 2012:** Post M+13 Ad hoc Energy Resettlement was required for 28th September 2013. This was correct an issue with Start Costs for one Generator Unit, whereby Warm Start Costs had been applied in error.
- **Week 45, 2012:** Ad hoc Energy Resettlement was required due to the re-price of Trading Days 11th and 13th November 2013. This was required due to a system defect regarding Pump Storage Pond Target Level.
- **Week 50, 2012:** Ad hoc Energy Resettlement was required due to the re-price of Trading Days 12th and 13th December 2013. This was required due to a system defect regarding Pump Storage Pond Target Level.

3.4 Administration of Credit Cover

The SEM has been fully collateralised according to the Trading and Settlement Code provisions during Q1 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 six CCIN's that were not fully honoured within the two days allowed in the code. These CCIN's were resolved the same day after 5pm. For more information on Credit Cover in the SEM, please refer to [section 6](#).

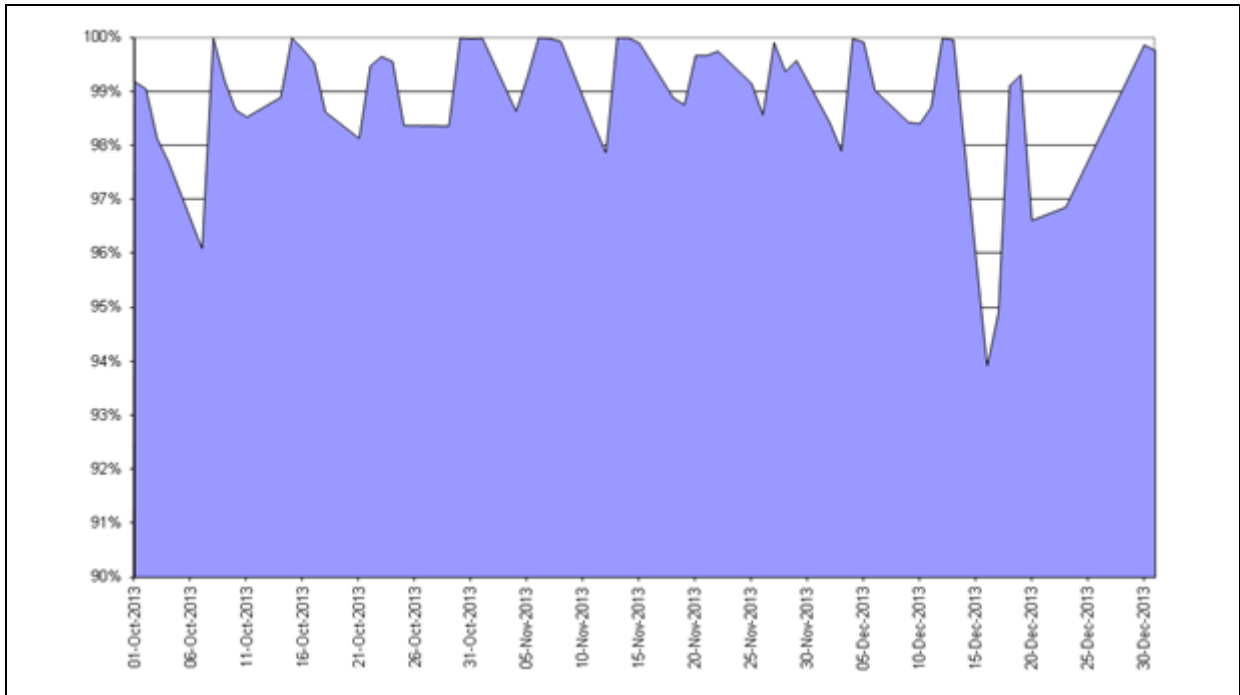


Figure 7 Market Collateralisation in Accordance with Trading and Settlement Code Requirements

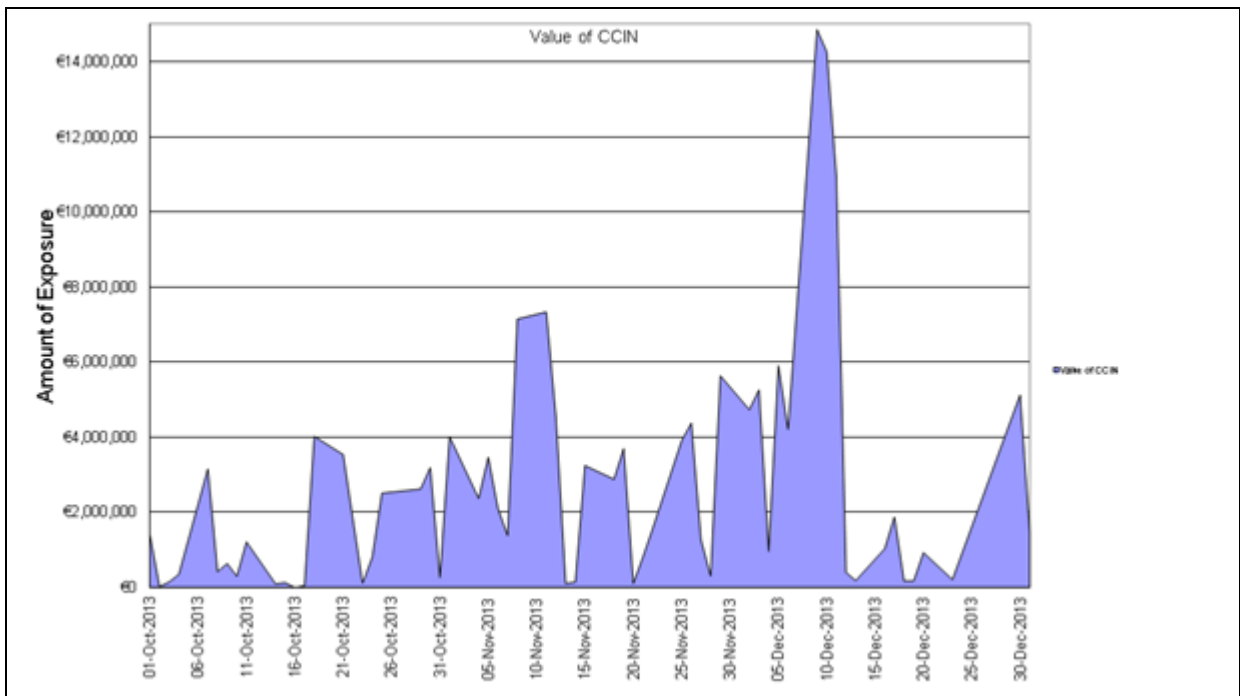


Figure 8 Credit Cover Increase Notice Total Amounts per Day

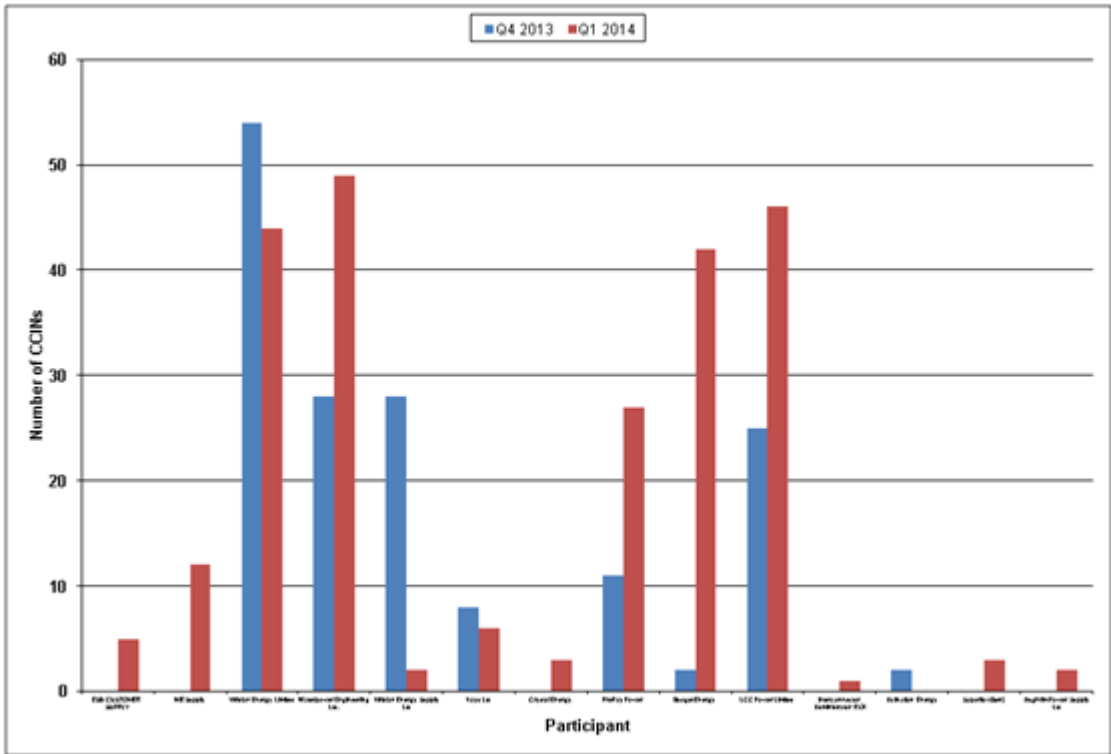


Figure 9 –Number of Credit Cover Increase Notices Issued

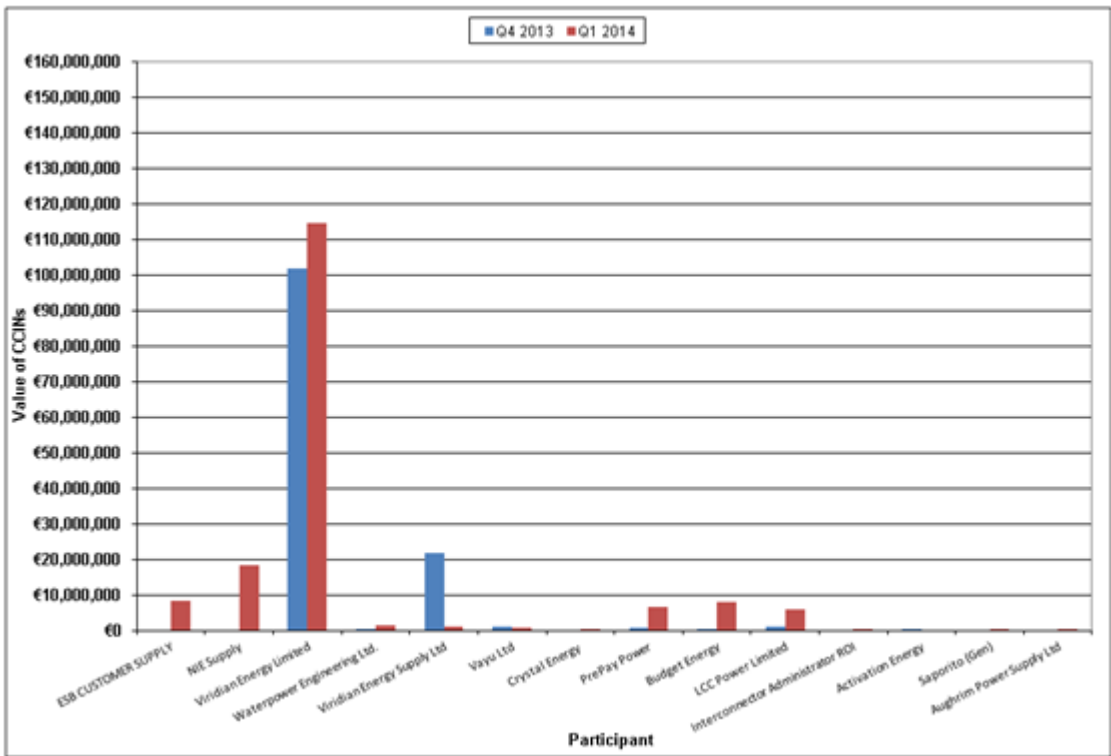


Figure 10 -Value of Credit Cover Increase Notices

The frequency of CCINs increased in Q1 2014 compared to Q3 2013 (241 compared to 158 last quarter) with the greatest number of CCINs issued in November 2013 (86).

These CCINs were distributed across 13 Participants this quarter. The total value of the CCINs issued was just almost €166 million compared to €127 million in the previous quarter.

3.5 Breaches of the Trading and Settlement Code

There were 42 breaches of the Trading & Settlement Code in Q1 2014 that SEMO is aware of. This is down from 44 in Q4 2013.

SEMO was responsible for a total of 5 breaches in the last quarter, down from 8 in Q4 2013.

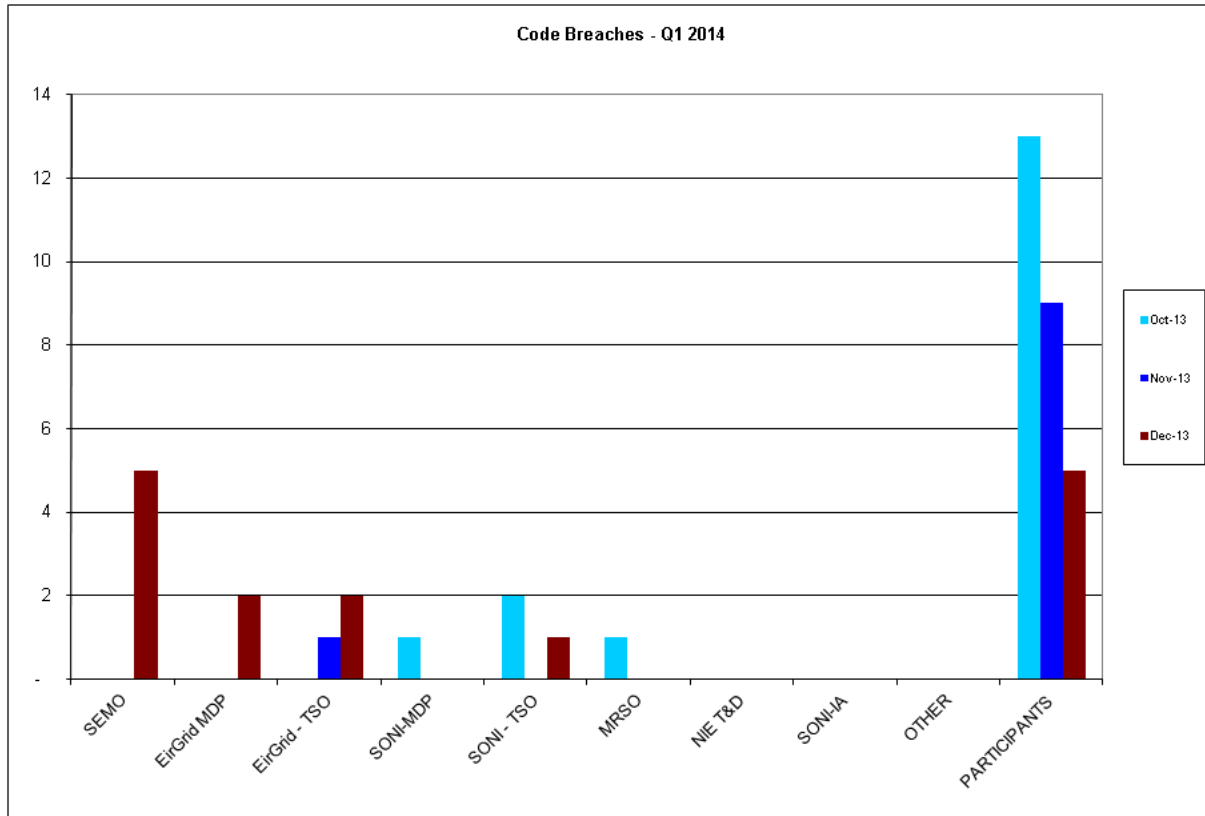


Figure 11 - Number of Trading and Settlement Code Breaches

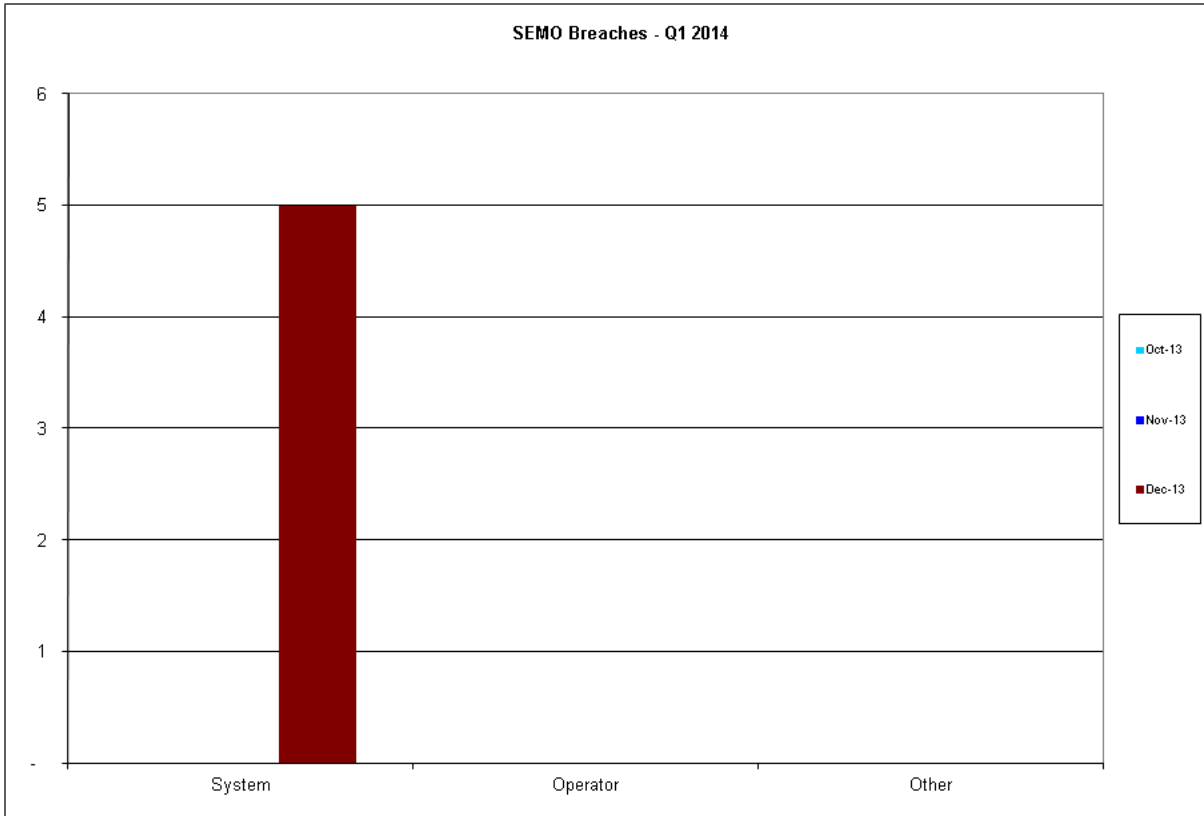


Figure 12 - Source of SEMO Trading and Settlement Code Breaches

4 Regulatory Affairs

4.1 Market Systems Development Plan

Regulatory Affairs have started the compilation of the Market System Development Plan (MSDP) 6 2013 – 2015. A preliminary meeting was held with the Regulatory Authorities to discuss the format and structure of the latest MSDP plan. A first draft of the Market Systems Development Plan is nearing completion. All sections of the plan have been updated and will be distributed internally for review prior to issuing to the Regulatory Authorities.

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 3 new Disputes raised in this quarter and 2 closed. There are currently 17 Disputes outstanding.

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 September 2013.

Market Helpdesk Report: 01/10/2013 to 31/12/2013					
	Received	Resolved within the period	Not Resolved	Resolved in the period	Resolution Time (Working Days)
General	601	547	54	613	1.71
Urgent	3	3	0	3	1.93
Settlement	48	35	13	48	14.33
Required Credit Cover Query	0	0	0	0	0
Dispute	1	0	1	1	31.12
Data Query	2	2	0	2	2.00
Total/Average	655	587	68	667	8.52

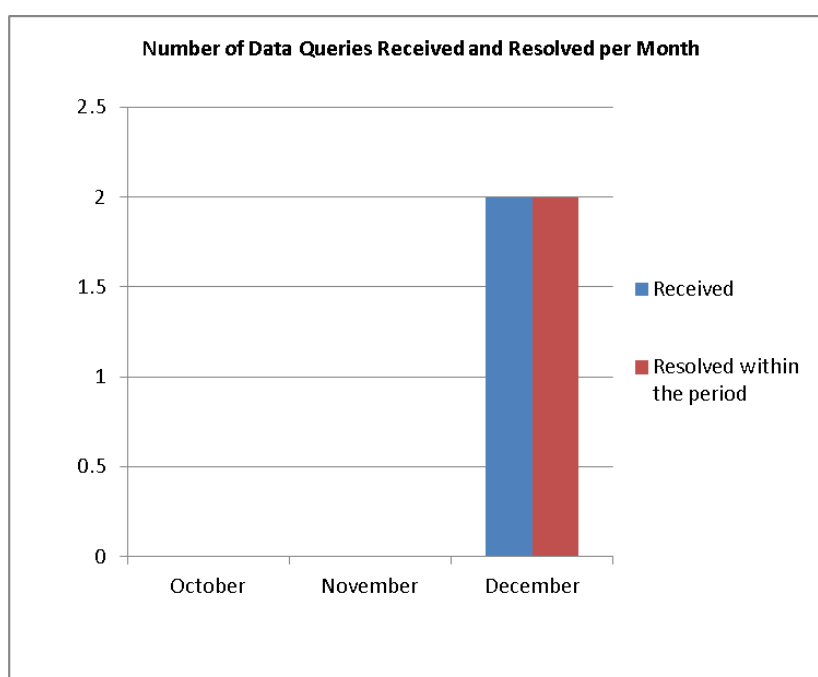


Figure 13 - Number of Data Queries submitted and Resolved per month

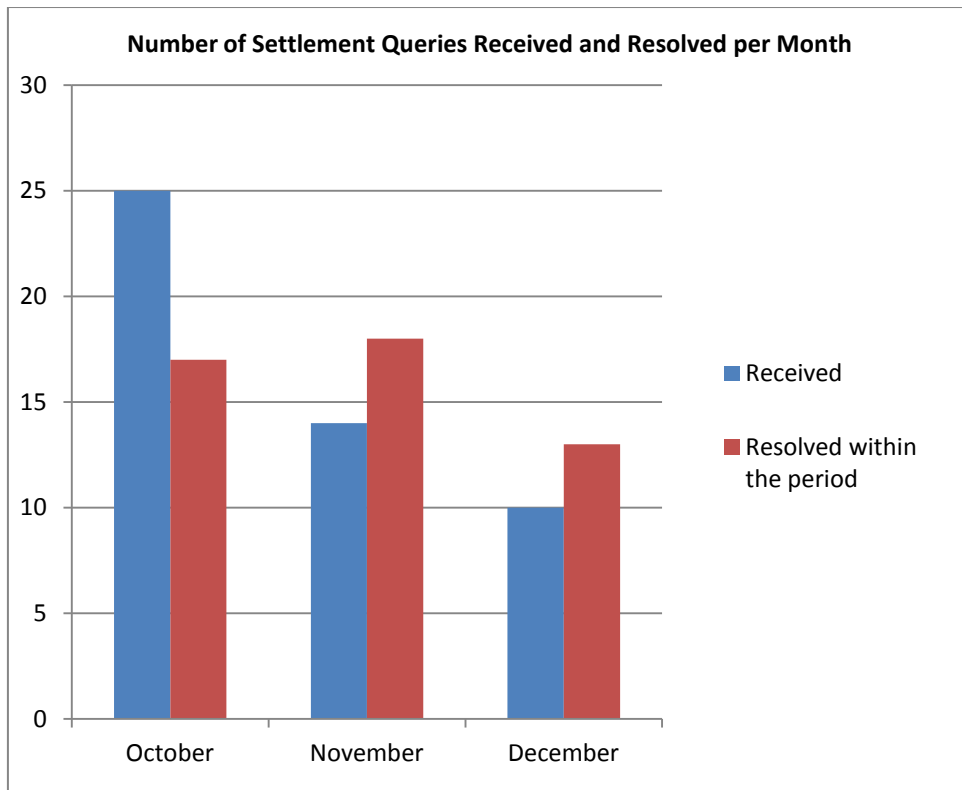


Figure 14 - Number of Settlement Queries submitted and resolved per month

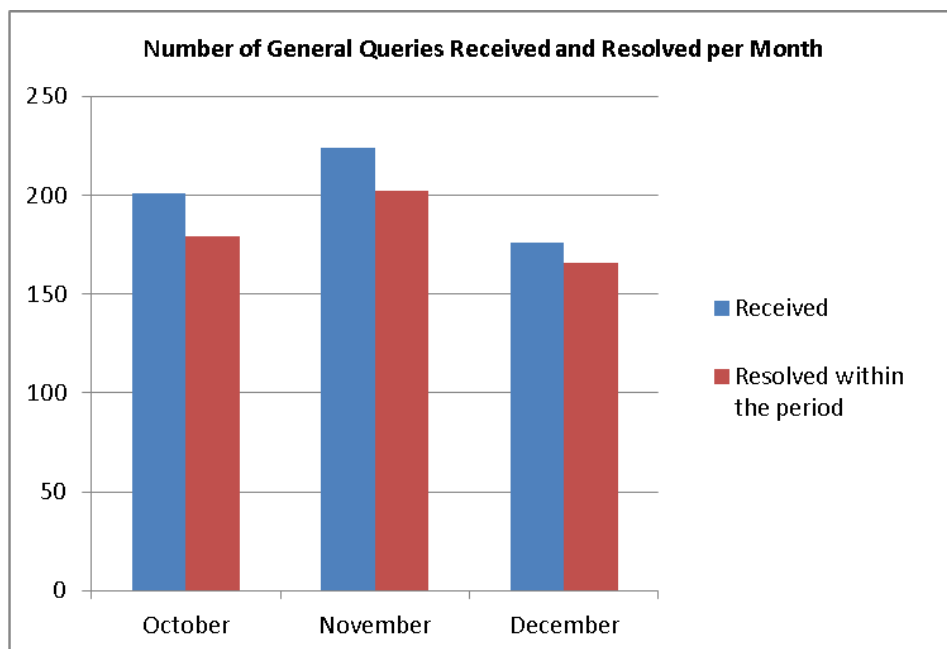


Figure 15 - Number of General Queries submitted and resolved per month

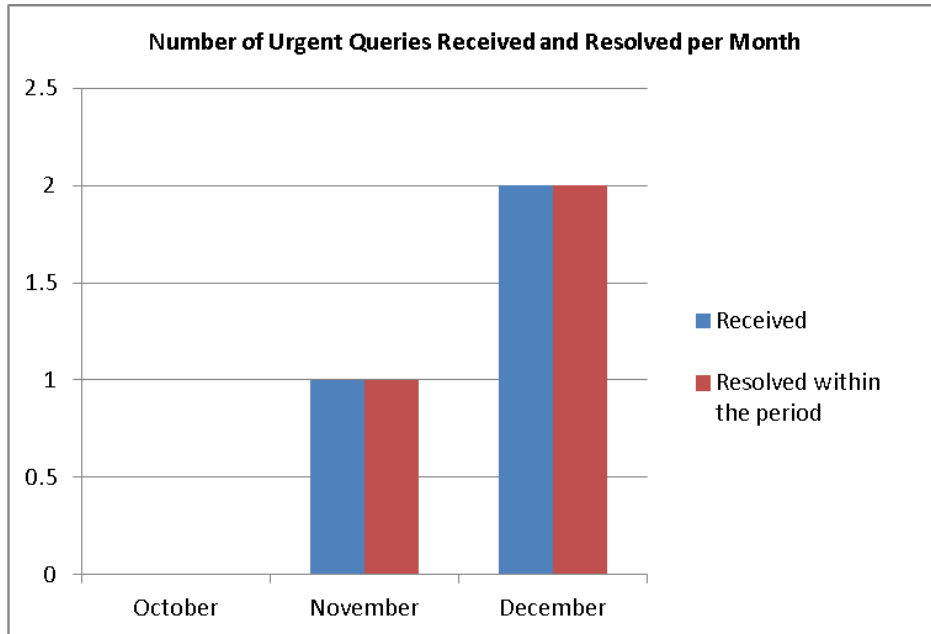


Figure 16 - Number of Urgent Queries submitted and resolved per month

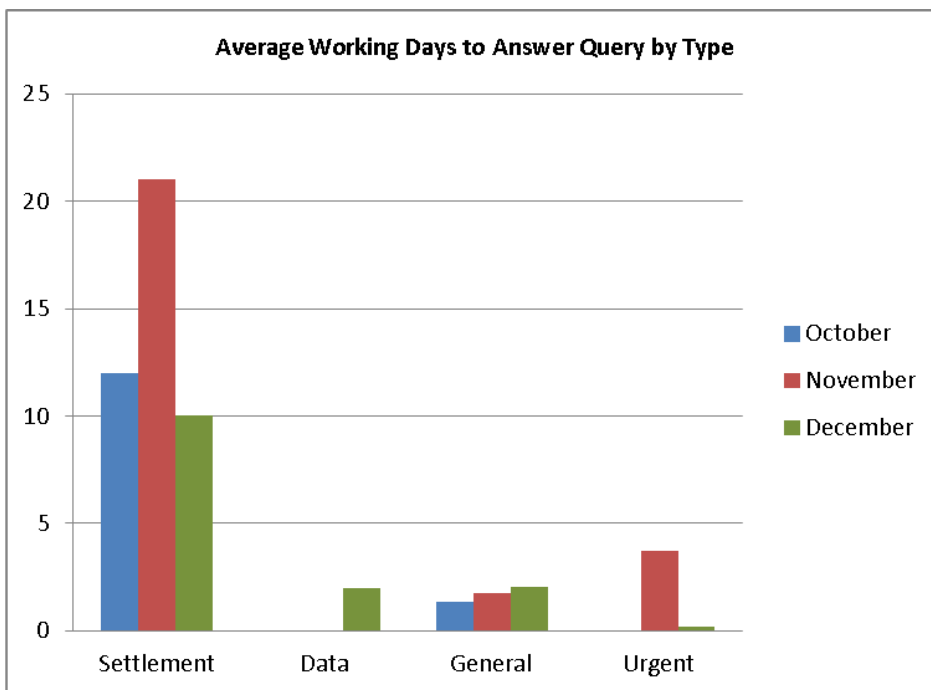


Figure 17 - Average Working Days to answer query type per month

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:

- Panda Power
- Bruckana Supply Company
- Bruckana Wind Farm
- Mount Lucas Supply Company
- Mount Lucas Wind Farm
- LGLP Energy

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.

- A conference call and 2 workshops were facilitated with participants as part of the SEM R2.3.0 release
- DSU Workshops were held on 7th and 15th October
- Market Operator User Group Conference Call (12th November)
- Bilateral meetings were held with five Participants. Topics related to Demand Side Units, Demand Side Capacity Payments, as well as stakeholder meetings to obtain feedback from Participants on their interactions with SEMO.
- Visit from delegation from South African Power Pool (26th November)
- Welcome to the Market training session (19th November)
- Special Topic Conference Call – Re-pricing & Resettlement Call (6th December)

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 29% of the time in Q1 2014. This showed an increase of 11% compared against Q4 2013. This figure is also lower than the long term average of 19% under-estimation since market start. It is, however, 32% lower than the values seen in the same quarter last year.
- The value of each occurrences of under-estimation has increased from the previous quarter from 0.25% to 1.71%, higher than the long term average of 0.89%.
- In Q1 2014, where the RCC Coverage is not sufficient, the market is under-estimated by an average of approximately €4,400,000 on a total market exposure of just under €260 million. The long term average equates to an under-estimation of €2 million on a total average market exposure of €240 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 Q1 2014 period has seen the RCC under-estimated on 29% of credit cover calculations. This is an increase of 4% from the same period last year and an increase of 11% from the previous quarter reported. The average SMP price and the demand both decrease only slightly compared to the previous quarter.

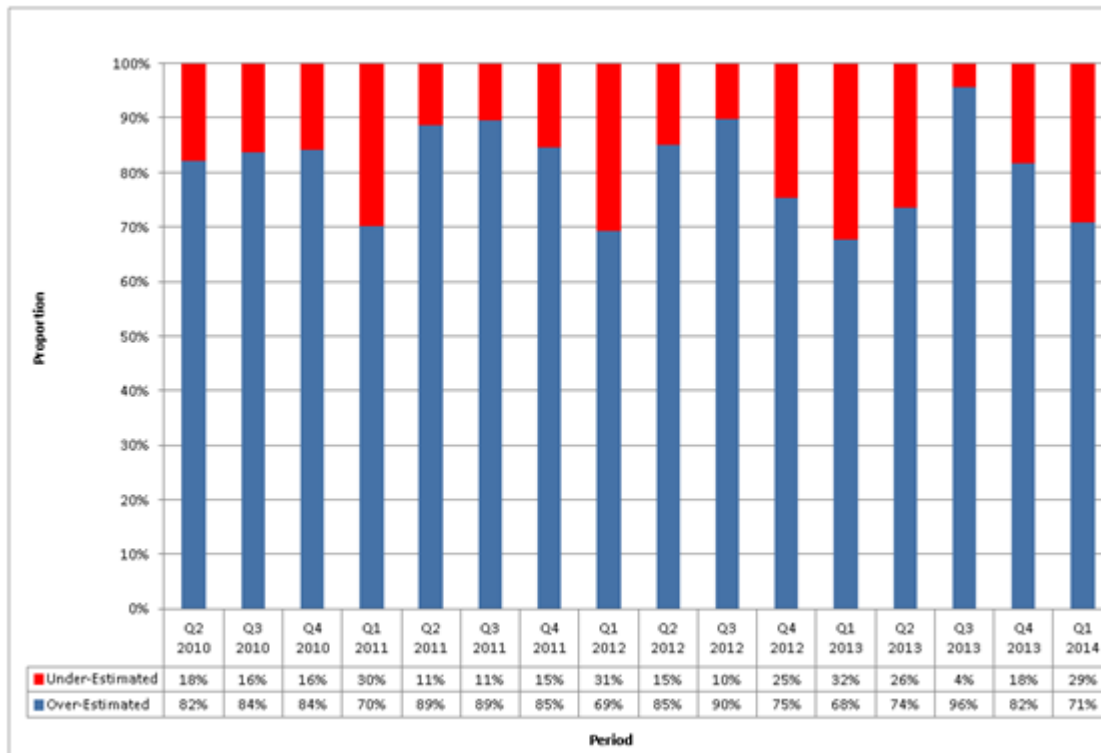


Figure 17- Occurrences of Under or Over Estimation

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 Q1 2014, the daily time weighted average was €64, which is slightly higher than in Q4 2013 (€63). 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 Q1 2014.

Another factor impacting on the proportion of under or over estimation is the variation in the System Demand which, in this quarter, has increased by 12% from previous quarter.

These small variations have limited the amount of under estimation in the current quarter, particularly as demand shows an increasing trend across Q4 2013.

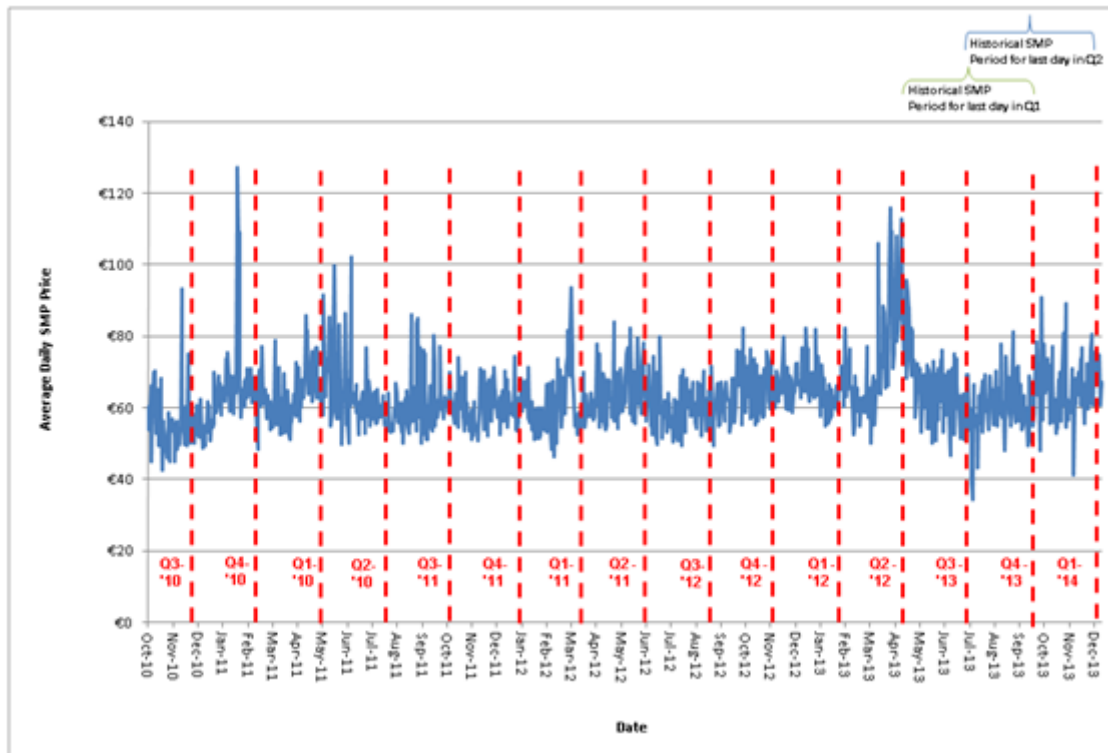


Figure 18- Trend in Average Daily SMP

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.

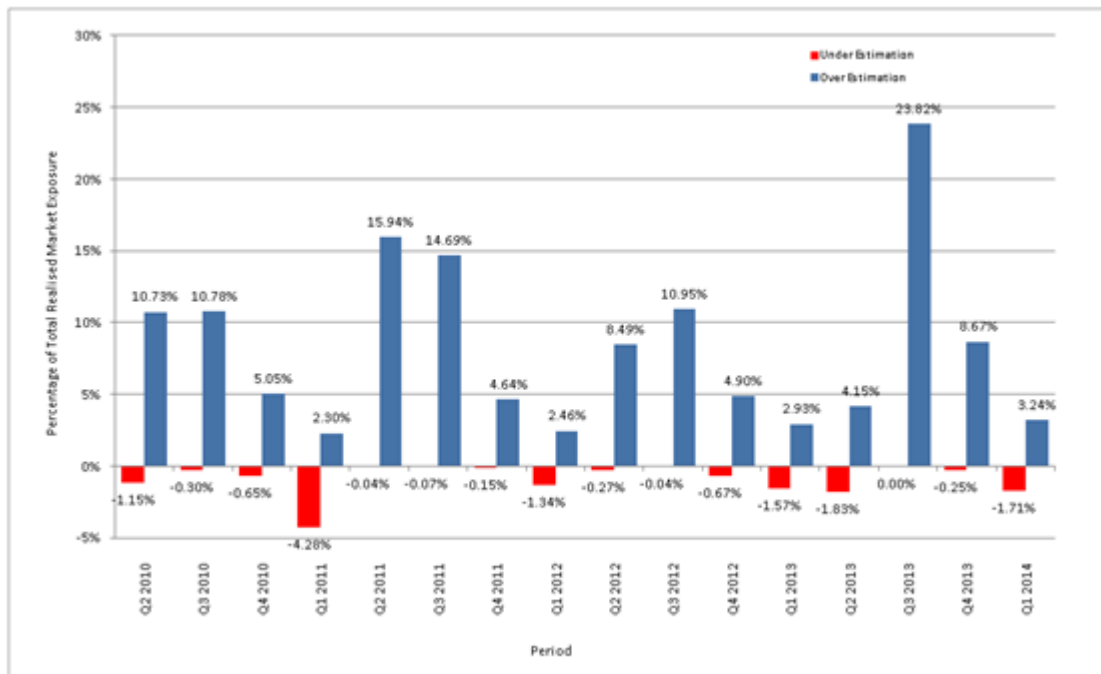


Figure 19 – Extent of Under or Over Estimation when Under or Over Estimation Occurs

The majority of under-estimation, since the start of the market, is below 1%. Q4 2013 is lower with a figure of 1.71%.

Where over-estimation occurs, this has been on average between approximately 8.7% and 27% since the start of the market. In the quarter under analysis, the extent of over-estimation decreased to 3.21% compared to 8.67% in the previous quarter. This is lower than the long term average of 8.7%.

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 Q1 2014, from an average exposure of the market of just under €260 million, the market has had an average RCC under-estimation of just over €4.4 million and an average RCC over-estimation of € 8.3 million on any given day.

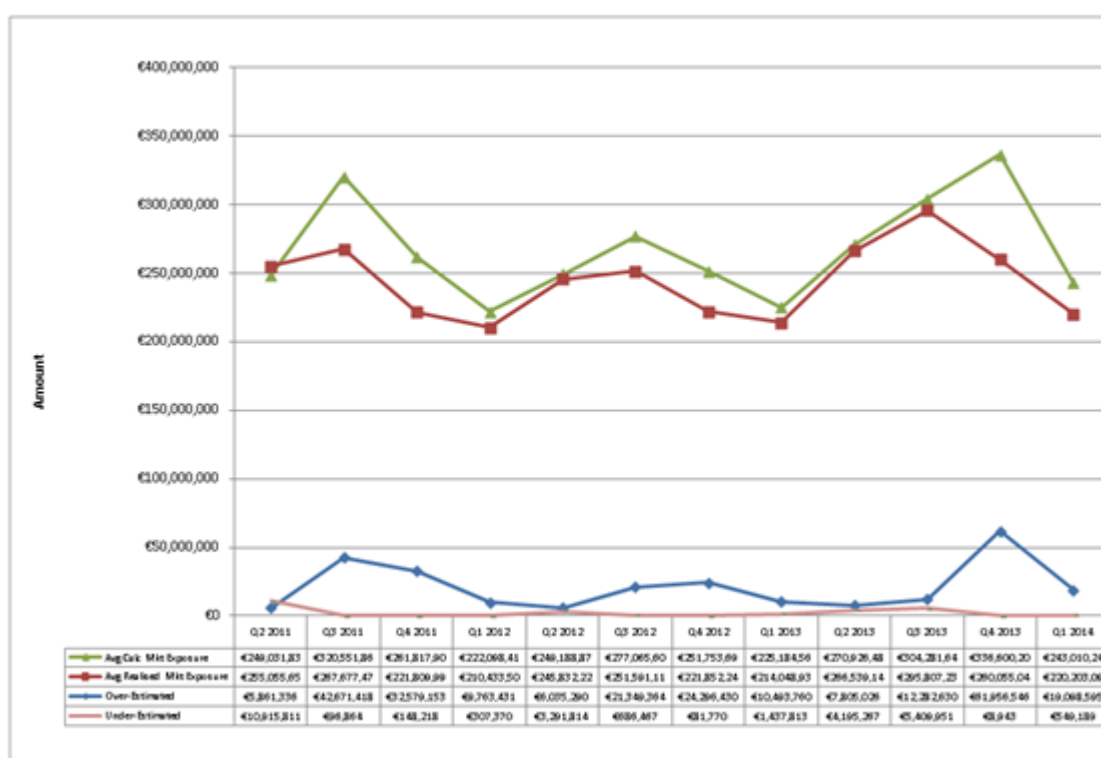


Figure 20 – Monetary Exposure due to Accuracy of Credit Cover Calculations

6.6 All Quarters Summary

For the SEM as a whole, from market start to the end of December 2013, RCC has been under-estimated 19% 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 €2.1 million out of a total average realised market exposure of € 239 million.

With regard to over-estimation, the SEM as a whole has been over-estimated 81% of the time with the over-estimation as a percentage of the total realised market exposure being on average of 8.59%, or €20 million out of a total average realised market exposure of €262 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 22nd October 2013. The value was 0.8262 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 versus calculated UDE for the whole period up to the end of December 2013.
- 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 December 2013).
 - 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 82% of total market exposure, while Capacity is 18% 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 €2.4 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).