



# **Market Operator Monthly Report**

## **May 2014**

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### 1 Executive Summary

This Single Electricity Market Operator's (SEMO) report covers the month of operation of May 2014 and is published in accordance with the Single Electricity Market (SEM) Committee decision and Clause 2.144 of the Trading and Settlement Code. Trading and Settlement Code

During the month of May 2014, Settlements had no late publications as per the Trading and Settlement code.

148 general queries were received in May 2014. During the same period 114 general queries were resolved.

There were nine defaults by Participants during May 2014. The largest of these was an Energy Initial invoice for €949.09, which was remedied the next working day.

Formal queries continue to be answered well within the timelines stipulated in the Trading and Settlement (Code).

## 2 Monthly Statistics

### Code Breaches

Breaches of the Trading & Settlement Code were noted in the following areas.

Code Breaches			
Area		Major	Minor
Data Providers		-	9
Market Participants	Pricing & Scheduling	-	-
	Settlement	-	-
	Funds Transfer	9	-
	Credit Risk Management	-	-
SEMO	Pricing & Scheduling	-	7
	Settlement	-	-
	Funds Transfer	1	-
	Credit Risk Management	-	-
	Other	-	-
<b>Total</b>		<b>10</b>	<b>16</b>

Table 1 - Code Breaches

Further details of each of the code breaches noted above are set out in [Appendix A](#)

Key:

- Major Breach - late publishing of invoices, default notices issued for non-payment or similar.
- Minor Breach - deadlines not met, but any financial implication to Participants. This includes late posting of pricing and settlement runs.

### ***Joining and Terminating Parties and Units***

There was one party joined the Market in May 2014.

- PY\_000131 Genpower (NI) Ltd

There were no terminating parties in May 2014.

Eight new units became effective in the Market in May 2014.

- GU\_401520 – Bruckana Wind Farm
- SU\_400170 – Bruckana Supply Company Limited
- GU\_501270 – Gortmullan Energy Limited
- GU\_401580 – Lisheen Wind Farm Phase 2
- GU\_401570 – Booltiagh 2 Wind Farm
- GU\_401560 – Booltiagh Wind Farm
- GU\_401551 – Ballymartin Wind Farm Phase 2
- GU\_401550 – Ballymartin Wind Farm Phase 1

Six units were de-registered from the Market in May 2014.

- GU\_401320 – Lishenn Wind Farm II Ltd
- GU\_401370 – Ballymartin Wind Farm Phase 2
- GU\_401410 – Ballymartin Wind Farm Phase 1
- GU\_401420 – Booltiagh 2 Wind Farm
- GU\_401430 – Booltiagh Wind Farm 1
- GU\_500180 – Snugborogough Generator Unit

### ***Suspension of Participants***

There have been no Suspension Orders issued by the Market Operator at this time.

### 3 Financial Statistics

#### Total Charges for Each Currency

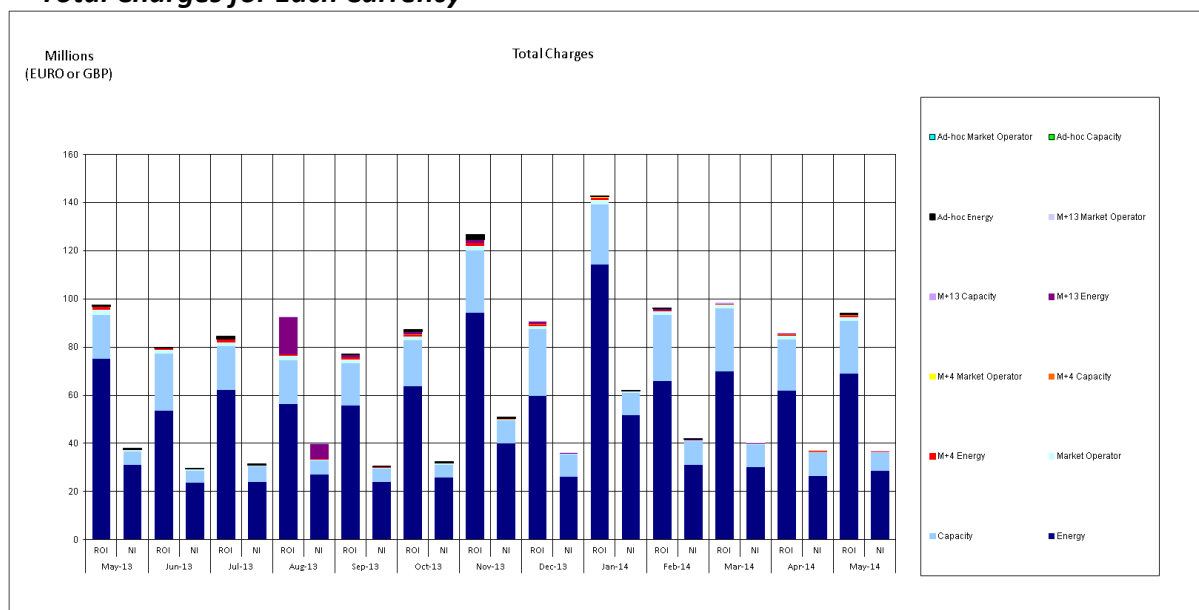


Figure 1 - Total Charges for Each Currency

Market	May 2014	
	ROI	NI
Energy	€68,945,192	£28,649,958
Capacity	€22,029,382	£7,313,397
Market Operator	€1,615,436	£439,832
M+4 Energy	€629,905	£149,812
M+4 Capacity	€213,411	£34,909
M+4 Market Operator	€7,659	£998
M+13 Energy	€192,422	£58,387
M+13 Capacity	€21,031	£9,960
M+13 Market Operator	€1,110	£469
Ad-hoc Energy	€429,407	£0
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
<b>Total</b>	<b>€94,084,955</b>	<b>£36,657,721</b>

Table 2 - Total Charges for Each Currency

Notes relating to Table 2 and 3:

- Month of inclusion based on Invoice Date.
- Amounts are after application of Settlement Reallocations.
- Previous month's data is available in [Appendix G](#).

## Total Payments for Each Currency

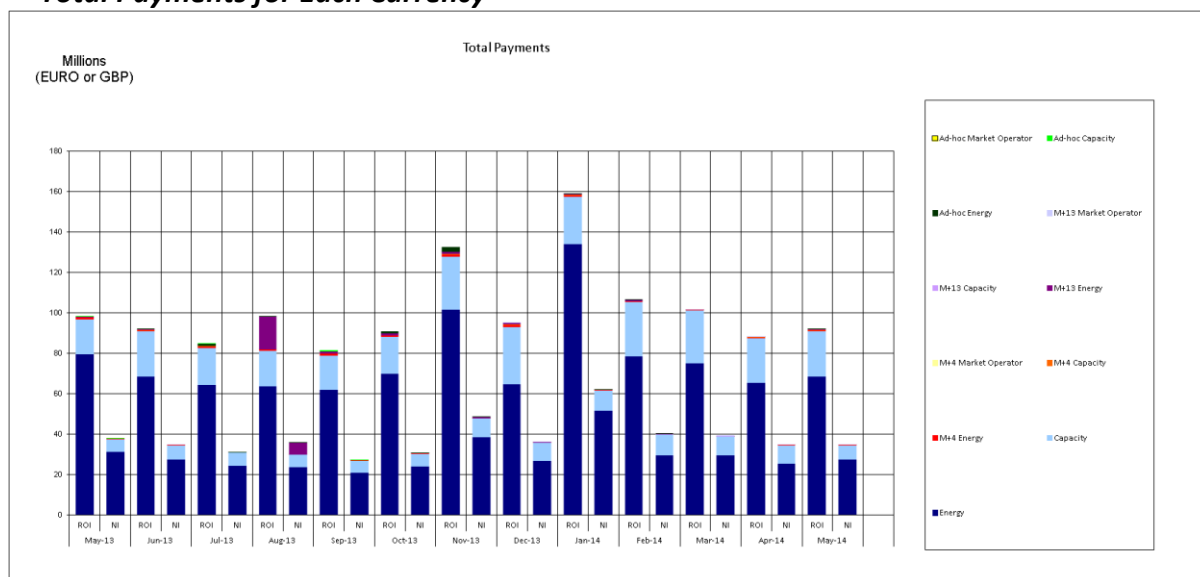


Figure 2 - Total Payments for Each Currency

Market	May 2014	
	ROI	NI
Energy	€68,502,490	£27,515,054
Capacity	€22,405,052	£7,036,489
M+4 Energy	€652,683	£150,145
M+4 Capacity	€210,308	£37,453
M+4 Market Operator	€7,807	£1,000
M+13 Energy	€249,030	£81,714
M+13 Capacity	€16,426	£13,718
M+13 Market Operator	€1,110	£469
Ad-hoc Energy	€9,581	£4
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
<b>Total</b>	<b>€92,054,487</b>	<b>£34,836,045</b>

Table 3 - Total Payments for Each Currency



**Total Balancing Costs**

Balancing Costs arise in the Energy and Capacity markets when the summed payments to the SEM from Participants in respect of their Supplier Units do not meet the summed payments to Participants from the SEM in respect of their Generator Units.

Although, it is intended the Energy Payments and Energy Charges should be balanced through the mechanism of the Error Supplier Unit in each jurisdiction, because Energy Payments are made against Market Schedule Quantities while the Error Supplier Unit volumes are calculated against Metered Generation, the different application of Loss Factors means that there is frequently an imbalance between the Energy Payments and Energy Charges.

With regard to the Energy Settlement, the Balancing Costs have been calculated as follows for the entire month:

May 2014	
Imbalance (Energy Only)	-€18,317,779.72

Table 4 - Balancing Costs for Energy Settlement

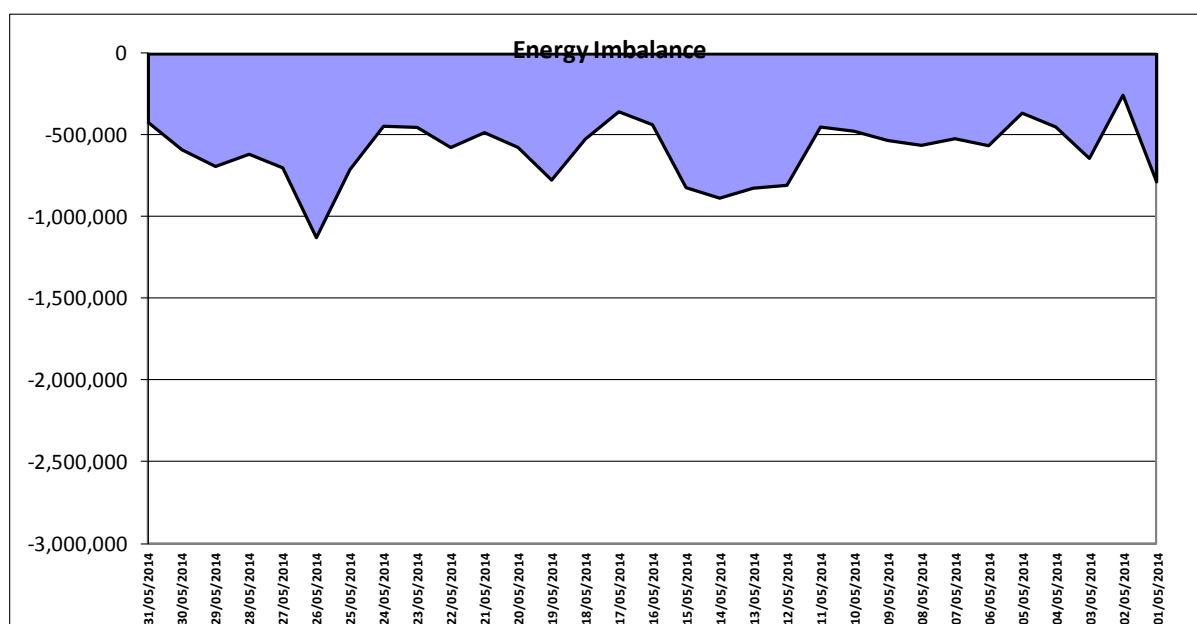


Figure 3 – Energy Imbalances

The full Balancing Cost of the SEM is determined by the summation of the daily payment amounts for Energy Imbalance, Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges combined with the weekly Make Whole Payments and Testing Charges.

Historical values for testing charges have been provided in [Appendix E](#).

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The figures for the full Balancing Cost of the SEM since the last Market Operator report are shown below, as well as the VAT Balancing Costs.

In tables 5 and 6 below:

- Positive values indicate Payments were greater than Charges.
- Negative values indicate Charges were greater than Payments.

Date Of Invoice	Week No	SEM Balancing Costs	VAT Balancing Costs
02/05/2014	16	-€420,682.47	€188,369.50
09/05/2014	17	€347,401.87	-€241,641.43
16/05/2014	18	-€886,208.32	€41,357.12
23/05/2014	19	-€1,046,996.68	-€292,108.29
30/05/2014	20	-€686,867.4713	-€79,044.71

**Table 5 - Balancing Costs for Trading Payments and Charges**

SEM Balancing Costs are provided based on daily exchange rates, VAT Balancing Costs are based on the Invoicing day exchange rate. VAT Balancing costs exclude Currency Cost related VAT.

It is intended that the algorithms set out in the Trading and Settlement Code will lead to a balanced Capacity Market. However, rounding precisions within the systems may result in an imbalance being introduced into the equations. This imbalance may lead to funding requirements to ensure that all payments out are made as per the terms of the Code.

With regard to the Capacity Settlement, the Balancing Costs have been as follows:

May 2014	
Capacity Charges	-€39,177,865.98
Capacity Payments	€39,177,587.42
Balancing Costs	-€278.55
VAT	€1,776.78

**Table 6 - Balancing Costs for Capacity Settlement**

## Market Operator Monthly Report

Historical figures, the current financial year full Balancing Costs for both Trading and Capacity are provided in [Appendix H](#). VAT Balancing costs exclude Currency Cost related VAT.

### **Total Currency Costs**

Currency Costs in the SEM are calculated with respect to the difference in Exchange Rates due to two components:

- 1) Invoice Currency Costs: - in respect of the difference between the Trading Day Exchange Rate (and Annual Capacity Exchange Rate in respect of Capacity Settlement) and the Exchange Rate on the Date of Invoice (being the date of issue of the Invoice) for Trading Payments and Charges.
- 2) Payment Period Currency Costs: - in respect of the difference between the Exchange Rates between the Date of Invoice and the Date of Payment.

Although the Code uses the term Currency Cost, the currency differences may end up as a benefit or a cost to the Participant depending on how the Exchange Rate fluctuates between the Billing Period, Invoice Date and Payment Date. In the table below, where this value is positive this means there was an overall benefit to Participants, negative values mean there was an overall cost to Participants resulting from trading in two currencies. Figures are shown in Sterling (£).

Last Date Of Billing Period	Date Of Invoice	Week No	Currency Costs For Energy Settlement (Invoice and Payment)	Currency Cost Adjustment for Inter-jurisdictional SRAs	Total Currency Cost
26/04/2014	02/05/2014	16	£ 4,361.61	£ 0.00	£ 4,361.61
03/05/2014	09/05/2014	17	£ 1,466.64	-£ 2,200.00	-£ 733.36
10/05/2014	16/05/2014	18	-£ 17,220.42	£ 0 00	-£ 17,220.42
17/05/2014	23/05/2014	19	-£ 6,659.29	£ 8,216.08	£ 1,556.78
24/05/2014	30/05/2014	20	-£ 424.40	£ 0.00	-£ 424.40

**Table 7 - Total Currency Costs for Trading Payments and Charges**

The Total Currency Cost figures detailed above show the Currency Cost for each Billing Period including Invoice Currency Costs, Payment Period Currency Costs, and Inter-jurisdictional SRA Currency Costs.

Over the period of this report Currency Costs for each week represented a benefit to Participants of up to £4,361.61 and a cost of £-17,220.42. Whether Currency Costs are a cost or benefit to Participants is directly related to whether the currency is rising or falling between the billing period, invoice date and payment dates.

Settlement Reallocation Agreements between the two currency zones continue to present volatility in the Currency Costs that appear in the Energy market each week. The value of these adjustments is detailed separately above in each Billing Period.

The Currency Costs, for the current financial year, with respect to Initial Capacity Settlement are set out below. Figures are shown in Sterling (£).

## Market Operator Monthly Report

Date Of Invoice	Capacity Month	Currency Costs For Capacity Settlement
11/06/2014	May 2014	-£5,999.96

**Table 8 - Total Currency Costs for Capacity Payments and Charges**

### ***Cumulative Imperfections Costs Vs Budget***

The value of Cumulative Imperfections Costs Vs Budget is calculated as the sum of Total Constraint Payments, Total Uninstructed Imbalance Payments, Total Testing Charges and Total Make Whole Payments, as compared against the Total Imperfections Charges, being the weekly budget for these Imperfections Costs.

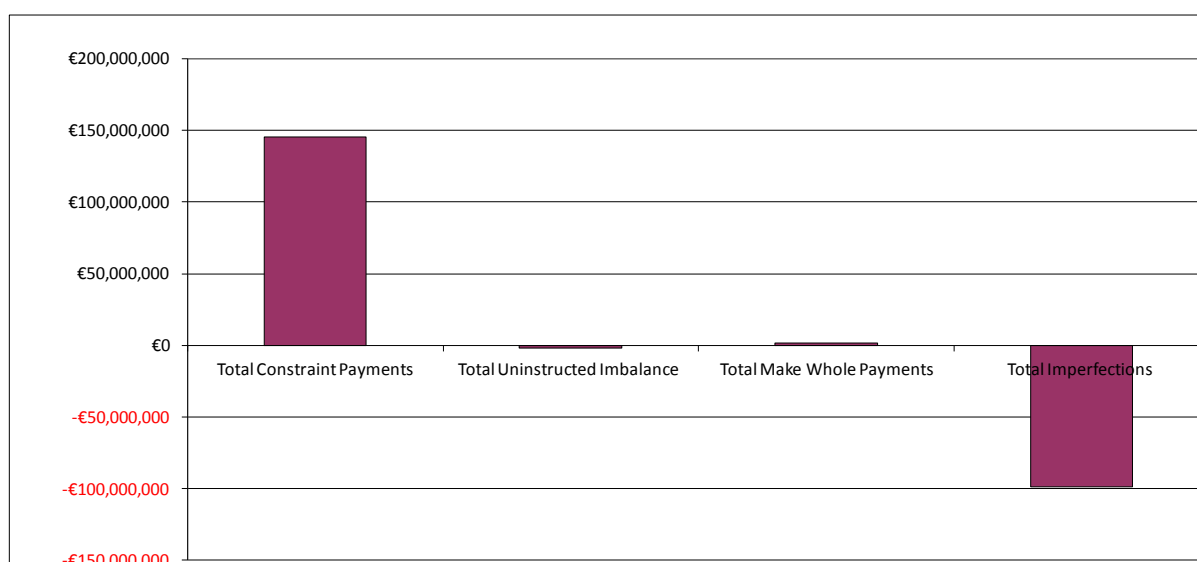
These values have been collected across the months since the start of the new financial year, 1st October 2013. The values expressed in Euros are as follows.

This table makes use of the values taken from the Initial Settlement Run of Trading payments and charges.

Total Constraint Payments	Total Uninstructed Imbalance	Total Make Whole Payments	Total Imperfections
€145,463,145.56	-€1,995,128.70	€1,903,374.64	-€98,351,227.19

**Table 9 – Cumulative Imperfections Costs Vs Budget**

This is demonstrated in the figure below.



**Figure 4 - Cumulative Imperfections Costs Vs Budget**

The daily and weekly data that comprised these values is shown in [Appendix E](#).

## Market Operator Monthly Report

### Financial Changes between Initial Settlement and Subsequent Reruns

The following graphs provide a breakdown of resettlement amounts for the M+4 resettlement period of January 2014 and M+13 resettlement period of April 2013 for Energy and Capacity.

#### 3.1.1 Energy Market

Note: - For Figure 6, 8, 9, net values are shown.

- Positive amounts indicate net additional payments by Participants (Charges).
- Negative amounts indicate net additional payment to be made to Participants (Payments).

The reverse is true for Figure 7 & 10.

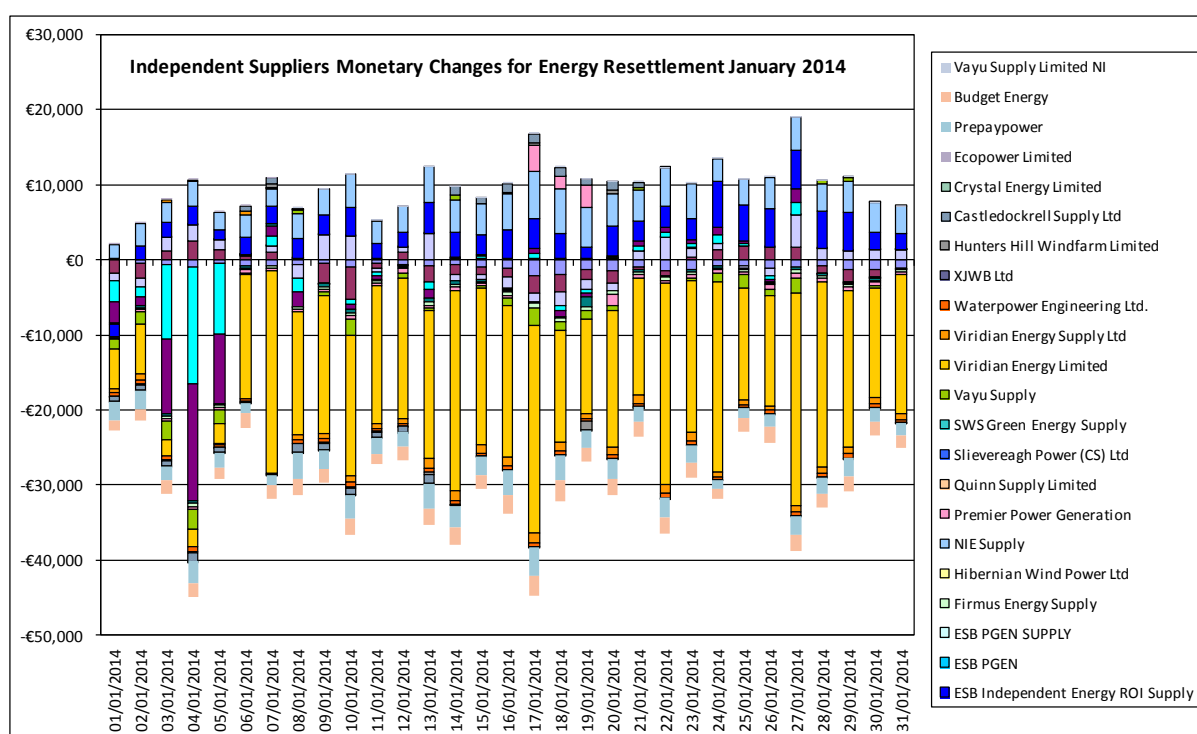


Figure 5 – Independent Suppliers Monetary Changes for Energy Resettlement – January 2014

The above variances relates purely to rounding for Participant's between Initial and M+4 Resettlement.

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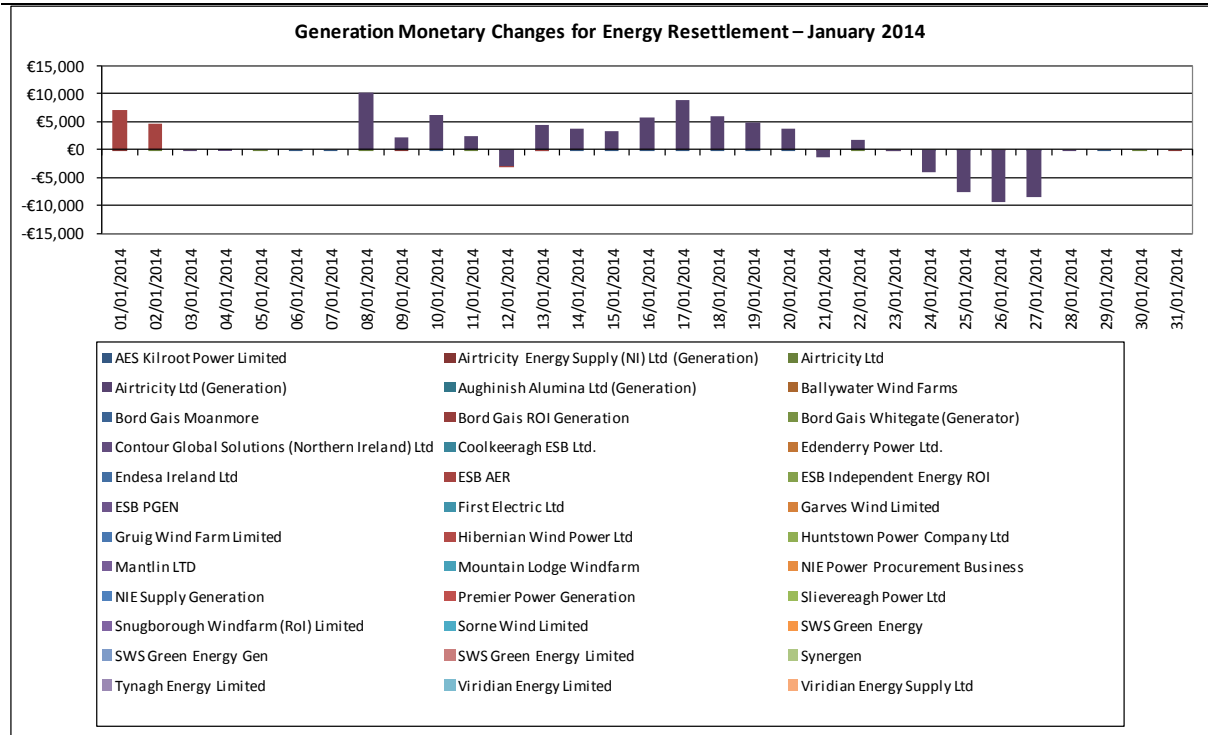


Figure 6 – Generation Monetary Changes for Energy Resettlement – January 2014

Changes noted above are driven by updates to Meter Data.

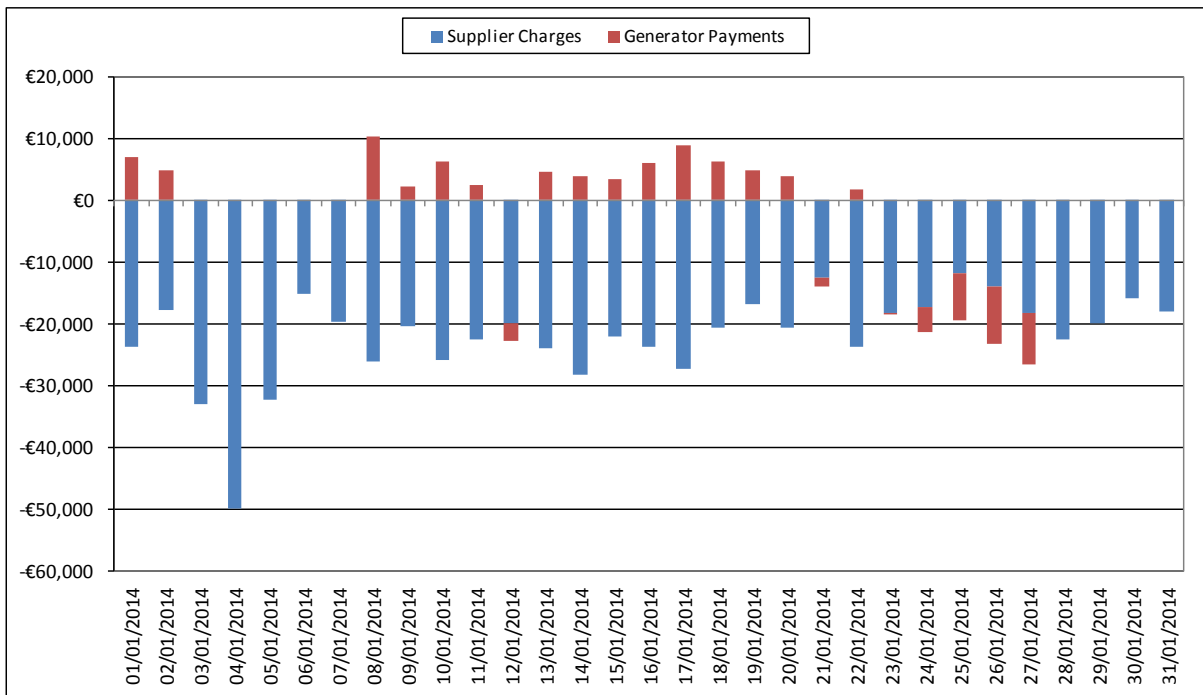


Figure 7 – Total Monetary Changes for Energy Resettlement – January 2014

M+13 Resettlement

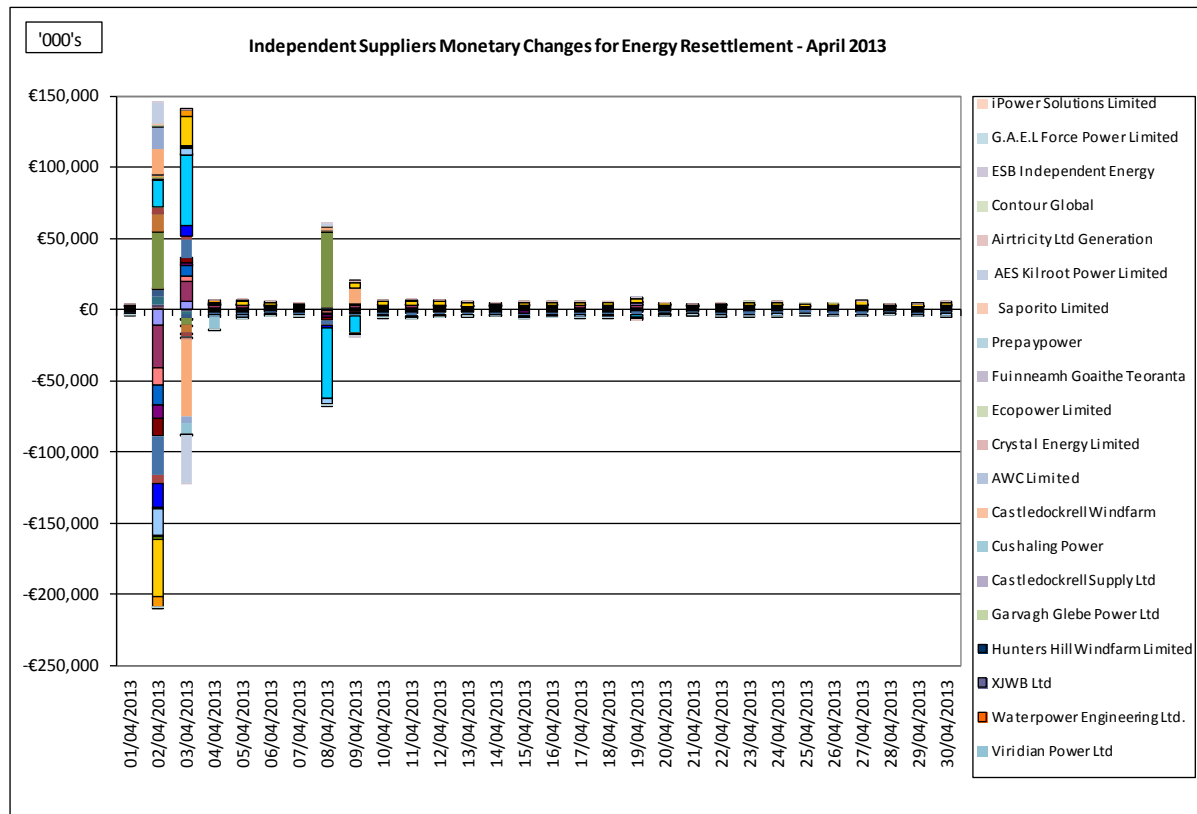


Figure 8 - Independent Suppliers Monetary Changes for Energy Resettlement – April 2013

Changes noted above are driven by updates to Non-Price Effecting Metered Demand from the original Day +4 submissions and a re-price on Trade Dates 2<sup>nd</sup>, 8<sup>th</sup> and 19<sup>th</sup> April 2013.

# Market Operator Monthly Report

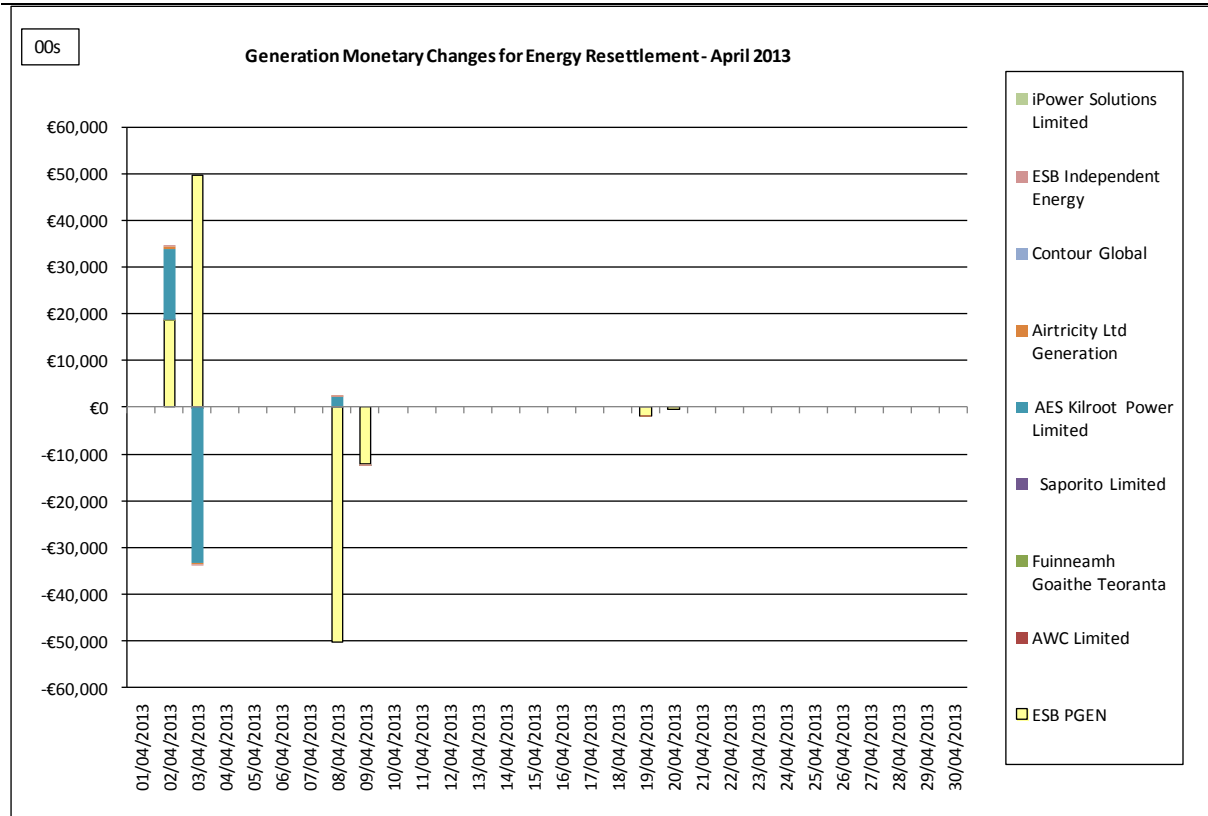


Figure 9 - Generation Monetary Changes for Energy Resettlement – April 2013

Changes noted above are due to re-prices on Trade Dates 2<sup>nd</sup>, 8<sup>th</sup> and 19<sup>th</sup> April 2013.

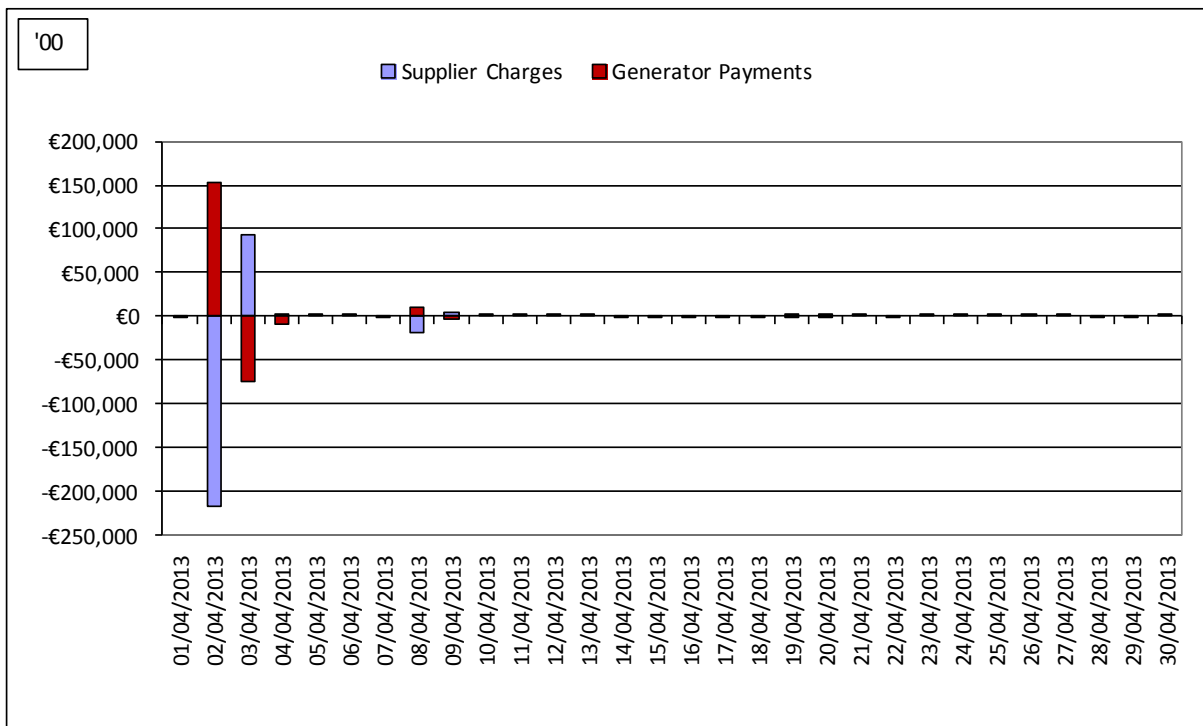


Figure 10 - Total Monetary Changes for Energy Resettlement – April 2013



## Market Operator Monthly Report

### 3.1.2 Capacity Market

Note: - For Figure 12, 13 & 16 net values are shown.

- Positive amounts indicate net additional payments by Participants (Charges).
- Negative amounts indicate net additional payment to be made to Participants (Payments)

The reverse is true for Figure 14 & 22.

The changes in Capacity are graphed below showing the variance in monetary terms as opposed to percentage terms. As the Jurisdictional Error Supply Units can be significantly affected by resettlement, this is more reflective of the monetary redistribution in M+4 and M+13. Please also note that as of June 2011 the Jurisdictional Error Supply Unit (ROI) is now a Retail Supply unit. The Jurisdictional Error Supply Unit (NI) is unchanged.

#### M+4 Resettlement

Under resettlement, charges originally attributed to the Jurisdictional Error Supplier Units, have now been redistributed among Market Participants.

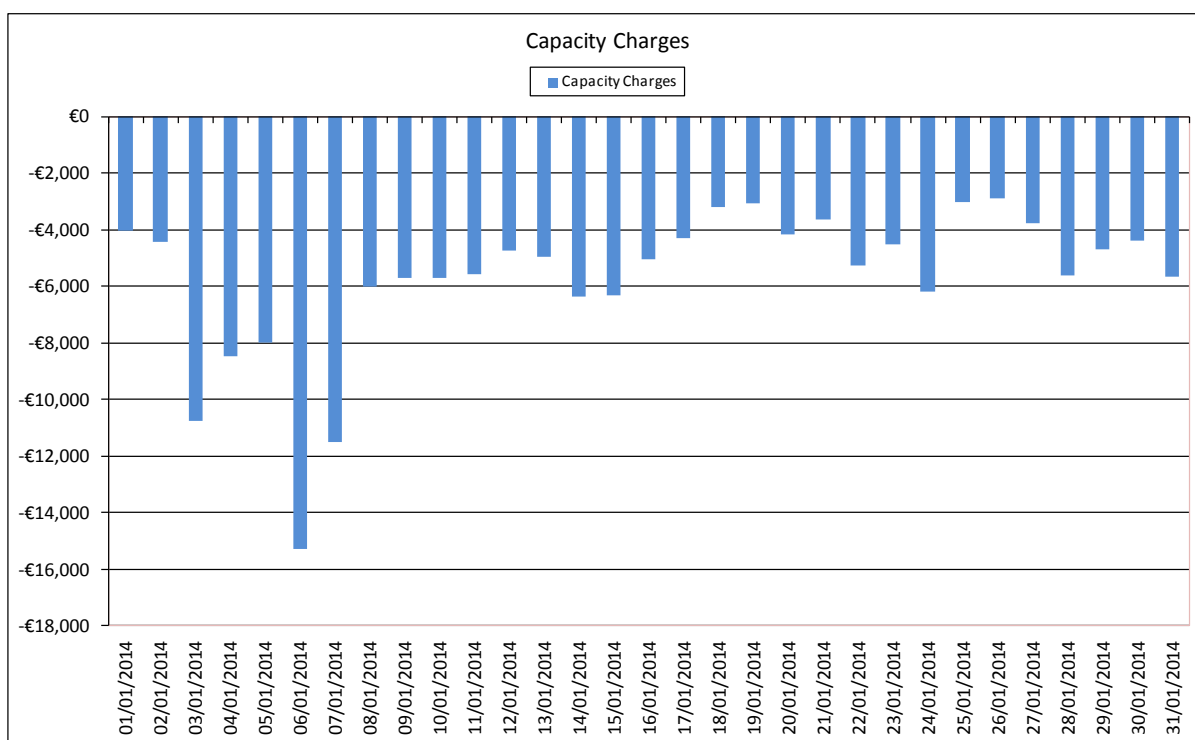


Figure 11 - Independent Suppliers Monetary Changes for Capacity Resettlement – January 2014

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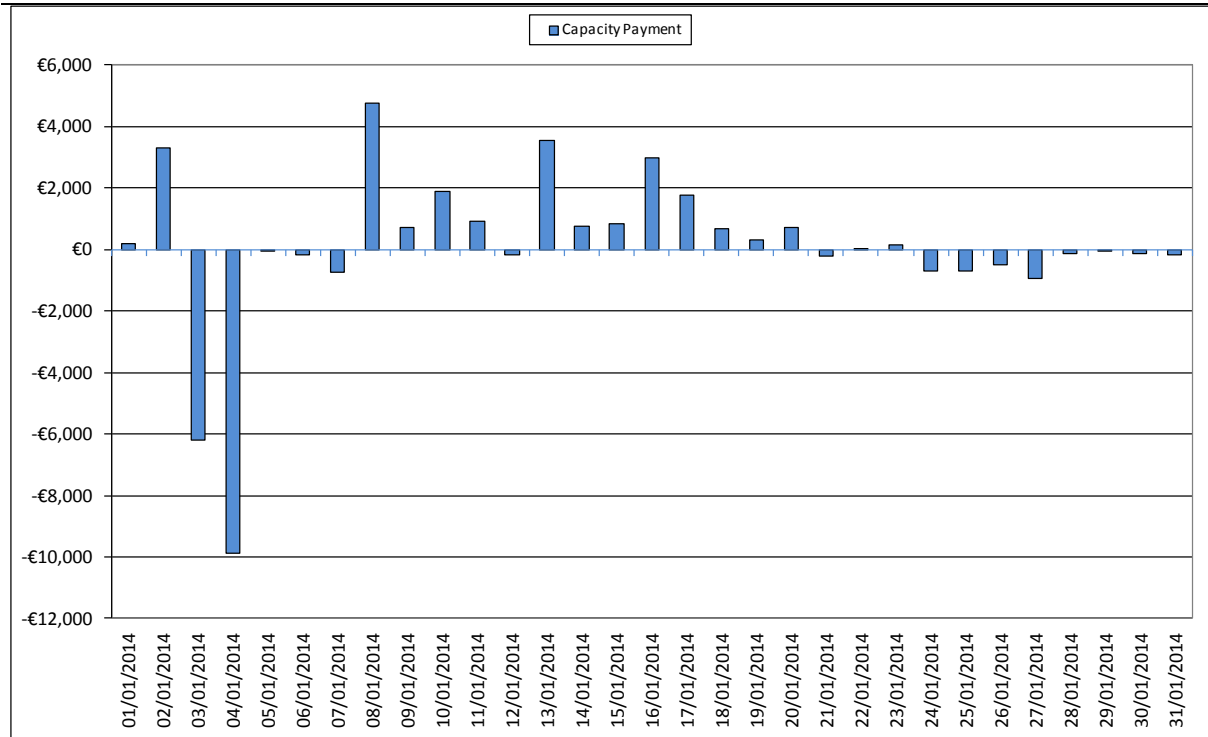


Figure 12 - All Generation Monetary Change for Capacity Resettlement – January 2014

The changes above are driven by updated meter data for Autonomous Price Taker generators.

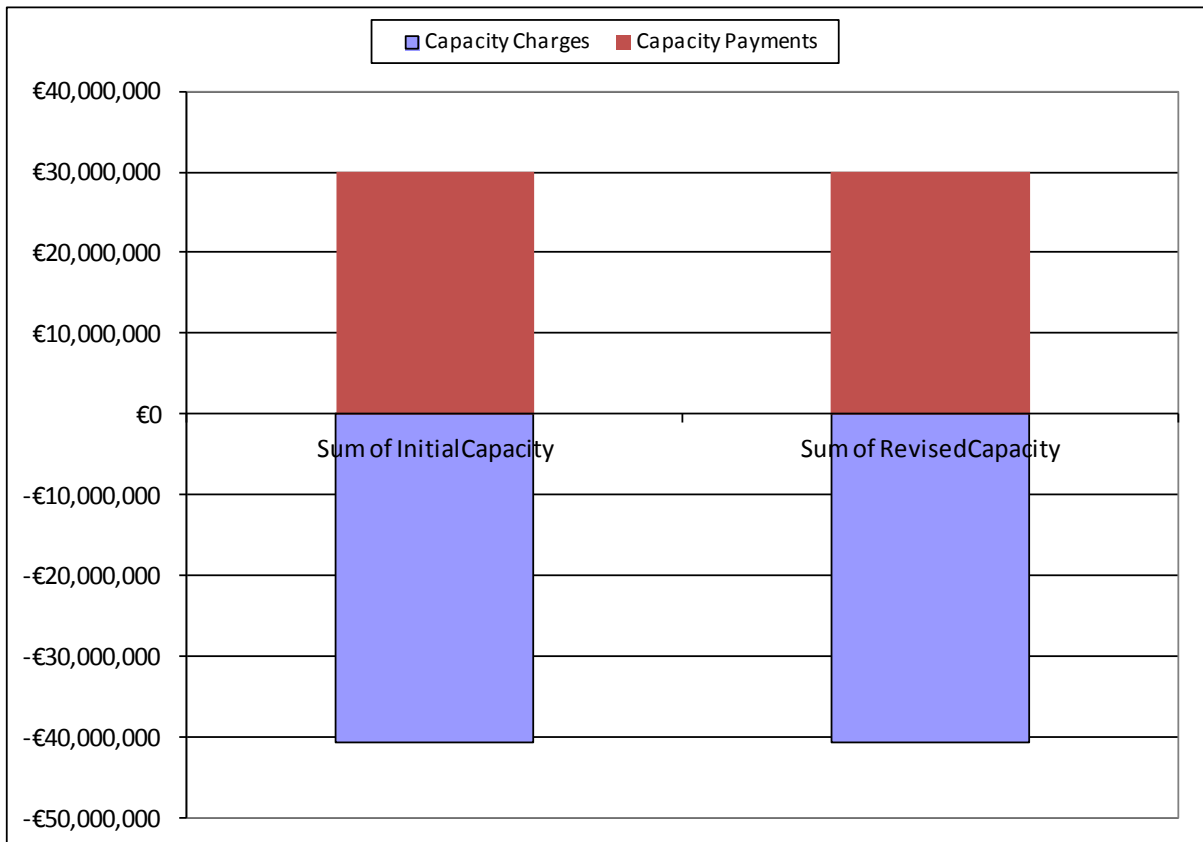


Figure 13 - Comparison of Distribution of Monetary Amounts between Capacity Initial and Resettlement January 2014

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The above graph demonstrates that due to all the individual changes to payment and charge amounts on a Supplier or Generator Unit basis, the overall Capacity Market resettlement Charge and Payment amounts have not changed due to resettlement.

## M+13 Resettlement

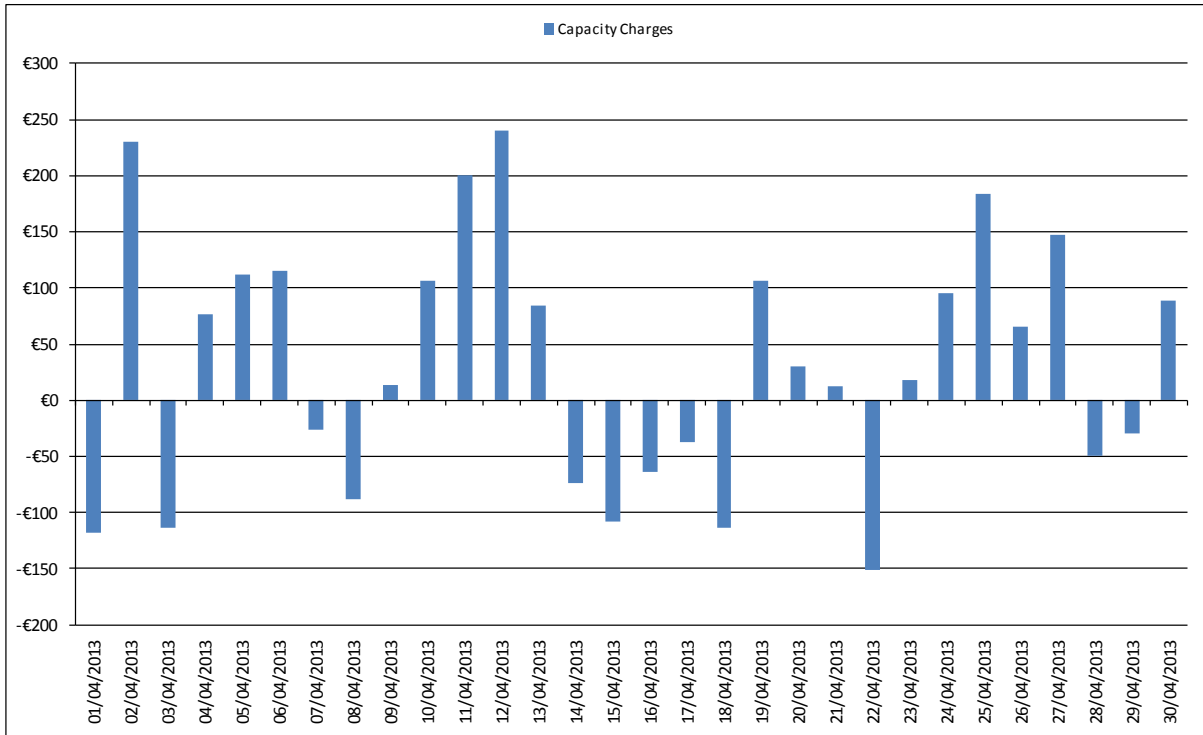


Figure 14 - Independent Suppliers Monetary Changes for Capacity Resettlement – April 2013

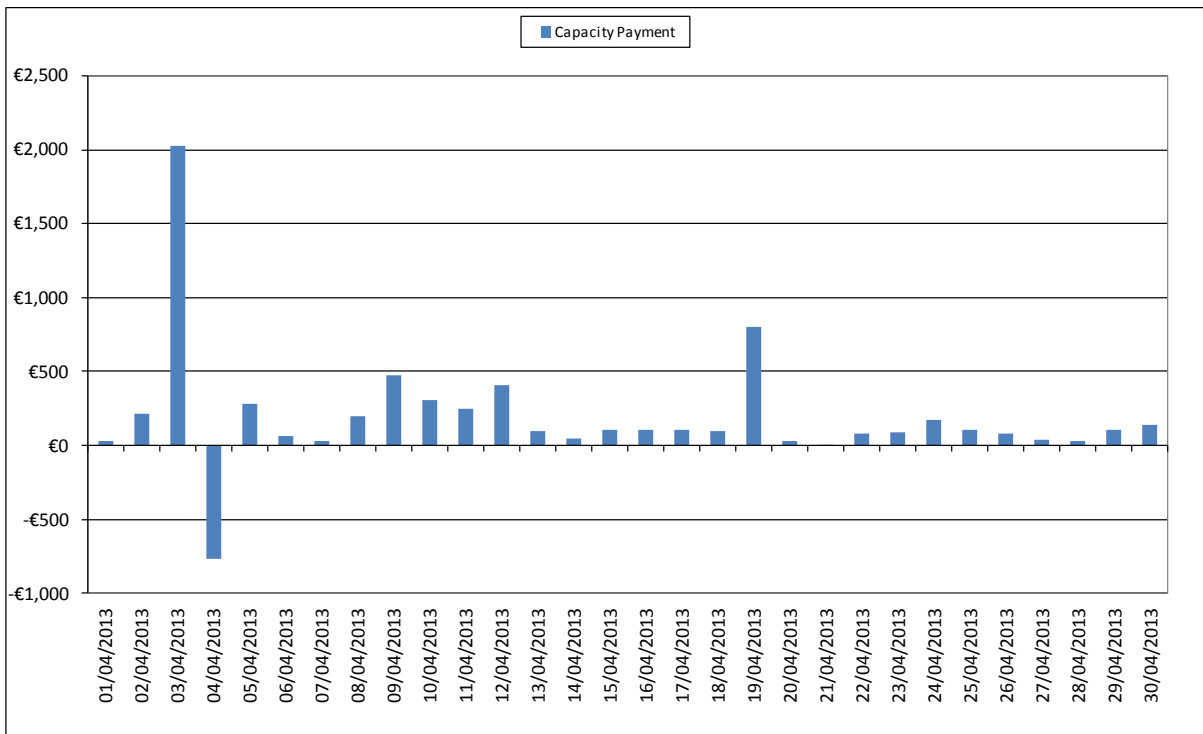


Figure 15 - All Generation Monetary Change for Capacity Resettlement – April 2013

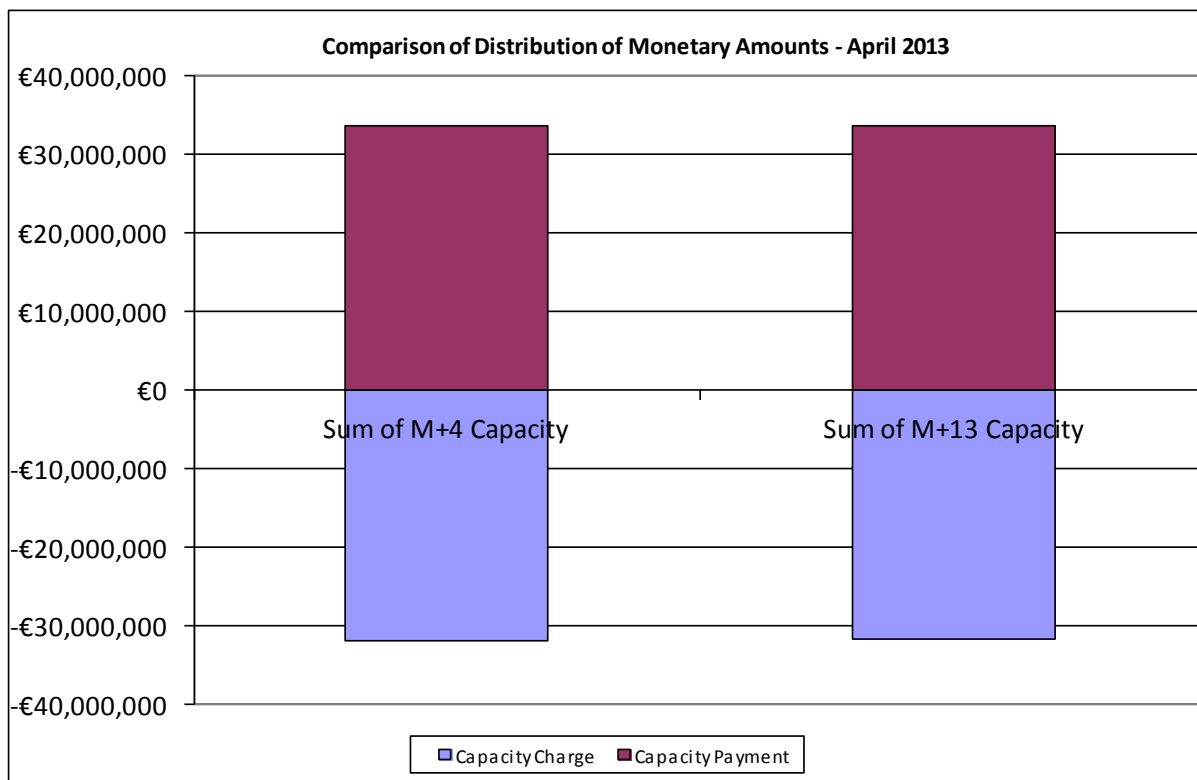


Figure 16 - Comparison of Distribution of Monetary Amounts between M+4 Capacity Resettlement and M+13 Capacity Resettlement – April 2013

The above graph demonstrates despite all the individual changes to payment and charge amounts on a Supplier or Generator Unit basis, the overall Capacity Market resettlement Charge and Payment amounts have not changed due to resettlement.

## 4 Helpdesk Call Statistics

The statistics presented in Table 10 - Helpdesk Call Statistics covers the month of May 2014.

	Received	Resolved within the period	Not Resolved	Resolved in the period	Resolution Time (Working Days)	Resolved On Time
Normal	143	109	34	136	2.76	116
Important	3	3	0	3	2.74	0
Urgent	2	2	0	2	3.97	0
Settlement	19	10	9	16	6.63	16
Credit	0	0	0	0	0.00	0
Dispute	0	0	0	0	0.00	0
Data	1	0	1	0	0.00	0
<b>Total/Average</b>	<b>168</b>	<b>124</b>	<b>44</b>	<b>157</b>	<b>3.22</b>	<b>132</b>

Table 10 – Helpdesk Statistics

Definitions:

- *Resolved within the Period* refers to queries raised and resolved within the calendar month of May 2014.
- *Resolved in the Period* refers to queries resolved within May 2014, and includes queries raised before this time.
- *Resolution Time (Working Days)* refers to average time to resolve, in working days, for this category of query. It is calculated based on all queries for the category, not just May 2014.
- *Not Resolved* refers to queries raised but not resolved within May 2014.
- *Urgent* are general queries which may have an impact on market operations. SEMO has an internal objective to resolve these within 3 working days; however, this is not mandated service level under the Trading & Settlement Code.
- *Disputes* are where a dispute has been raised over the outcome of a data or settlement query.

The average resolution time for General Queries has increased by 2.08 working days in May from 1.07 working days in April to 3.15 working days in May. SEMO has a metric to resolve General Queries within 20 Working Days. These include queries received over the phone and e-mail. There were no queries logged in May 2014 that took over 20 working days to resolve. There are currently 4 pending calls that have been open longer than 20 working days.

Data and Settlement Queries generally continue to be responded to within the timelines required by the Code, i.e. one calendar month. No Formal Query timeline extensions were required during May 2014 with regard to formal Settlement Queries.

## 5 Disputes and Queries

### *List of Disputes by Topic*

As of 12<sup>th</sup> June there are no outstanding Disputes.

**Table 11 - List of Disputes**

### *List of Queries by Topic*

#### 5.1.1 Data Queries

There were two formal data queries raised during the month of May 2014. Out of this one was upheld and one not upheld.

Topic	Number Of Queries
MIUN Issues	1

**Table 12 – Upheld Data queries by topic**

- One Query relating to MIUN was upheld. It has assessed against the Settlement Recalculation Threshold and as the impact is less than 3% a reprice of the SEM is not required. Materiality of the issue was assessed and it has been deemed to be of low materiality (<50k) this will be corrected as part of the next scheduled resettlement which is M+4.

#### 5.1.2 Settlement Queries

There were nineteen Settlement queries raised in May 2014. Out of this nine were upheld. As at 12<sup>th</sup> June 2014 there are five open queries.

Topic	Number Of Queries
Commercial Offer Data	2
Dispatch Instructions	2
Meter Data	1
Eligible Availability	1
MIUN Issues	2
Capacity	1

**Table 13 – Upheld Settlement queries by topic**

- Two queries relating to Commercial Offer Data (COD) were upheld. The two queries was deemed to be of Low materiality (<€50,000), however, one of the queries is raised against the final scheduled M+13 settlement rerun and an ad hoc resettlement is required. The other one will be corrected during the next scheduled resettlement which is M+4.
- Two queries in relation to Dispatch Instructions were upheld. These were deemed to be of low materiality and will be corrected during the next scheduled resettlement which is M+4.

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- One query relating to Meter Data was upheld. The issue was deemed to be of low materiality (<€50,000), and will be corrected during the next scheduled resettlement which is M+4.
- One query relating to Eligible Availability was upheld. The issue was deemed to be of low materiality (<€50,000) and will be corrected during the next scheduled resettlement which is M+4.
- Two queries relating to MIUNs were upheld. These will be corrected during the next scheduled resettlement which is M+4.
- One query relating to Capacity was upheld. The issue was deemed to be of low materiality (<€50,000) and will be corrected during the next scheduled resettlement which is M+4.

### *Unresolved Queries*

There are five unresolved Settlement queries as at 12<sup>th</sup> June 2014. There are no unresolved Data queries.

A full list of all the Data and Settlement queries raised is contained in [Appendix B](#).

### 6 Central Systems

#### *Proportion of Default Data Used*

On review of the Commercial Offer Data used in the MSP runs, 72.53% of data used was submitted by Participants through the normal Bid-Offer process. 27.02% of the data used was based on Standing Commercial Offer Data. 0.45% of the data used was based on adjusted offer data. None of the data used was based on Default Commercial Offer Data (Default differs from Standing in that it is based on the initial Default data submitted during registration process and not on more recent Standing Data submitted by the Participant through the Market Participant Interface). Details by unit are provided in [Appendix F](#).

#### *Proportion of Estimated Meter Data used in Initial Settlement and Resettlement*

This is not calculable presently.

#### *List of System Errors and Re-runs*

##### **6.1.1 Re-Pricing and Resettlement Runs**

There were four Re-Price runs carried out in May 2014.

There were no Resettlement runs carried out in May 2014.

##### **6.1.2 System Errors**

There were no defects identified in May 2014 that required resettlement. There were no system defects identified in May 2014 that required re-pricing.

Details are provided in Appendix C: List of All System Errors and Failures.



## Market Operator Monthly Report

### 6.2 Operational Timings

This section lists the operation timings of MSP software runs and Settlement runs.

There are five run types for MSP software,

- Ex-Ante 1 Indicative, run on Trading Day – 1 calendar day,
- Ex-Ante 2 Indicative, run on Trading Day – 1 calendar day,
- With In Day 1 Indicative, run on Trading Day,
- Ex-Post Indicative, run on Trading Day + 1 calendar day, and
- Ex-Post Initial, run on Trading Day + 4 calendar days.

The following tables and graphs provide details for the postings of the MSP for May 2014.

#### 6.2.1 MSP Postings May 2014

Process	On Time	< 1 hr late	> 1 hr late	Not done
Gate Close EA	31-31	0-31	0-31	0
Post EA1	30-31	0-31	1-31	0
Post EA2	30-31	0-31	0-31	1
Post WD1	31-31	0-31	0-31	0
Post EP1	31-31	0-31	0-31	0
Post EP2	31-31	0-31	0-31	0

Table 14 - Operational Timings

Process	On Time	< 1 hr late	> 1 hr late	Not done
Gate Close	100%	0%	0%	0%
Post EA1	96%	0%	4%	0%
Post EA2	96%	0%	0%	4%
Post WD1	100%	0%	0%	0%
Post EP1	100%	0%	0%	0%
Post EP2	100%	0%	0%	0%

Table 15 - Operational Timings (% on time)

# Market Operator Monthly Report

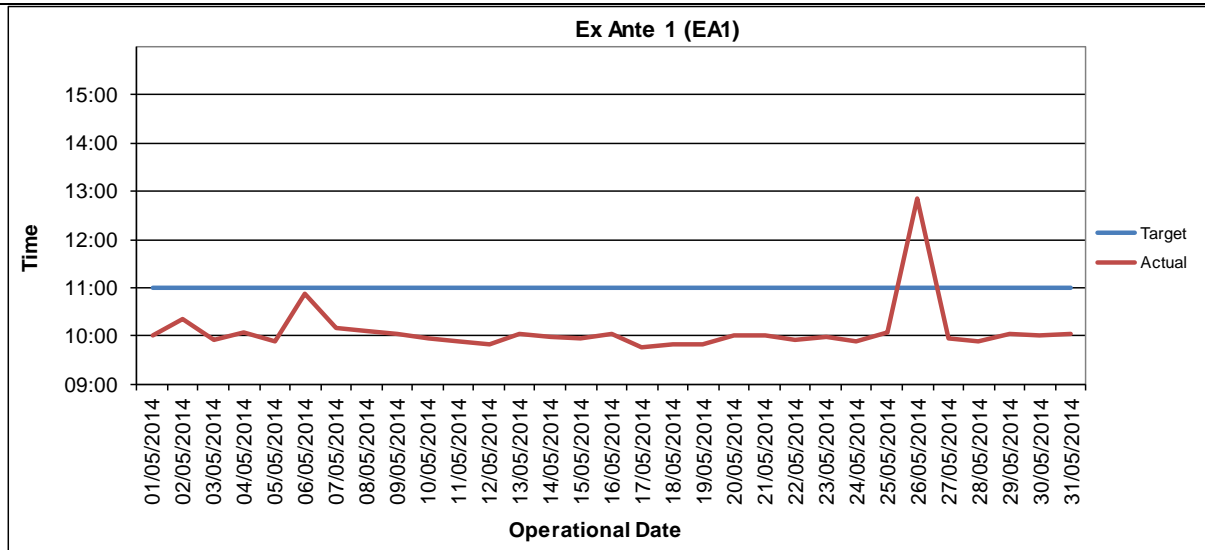


Figure 17 – Ex-Ante 1

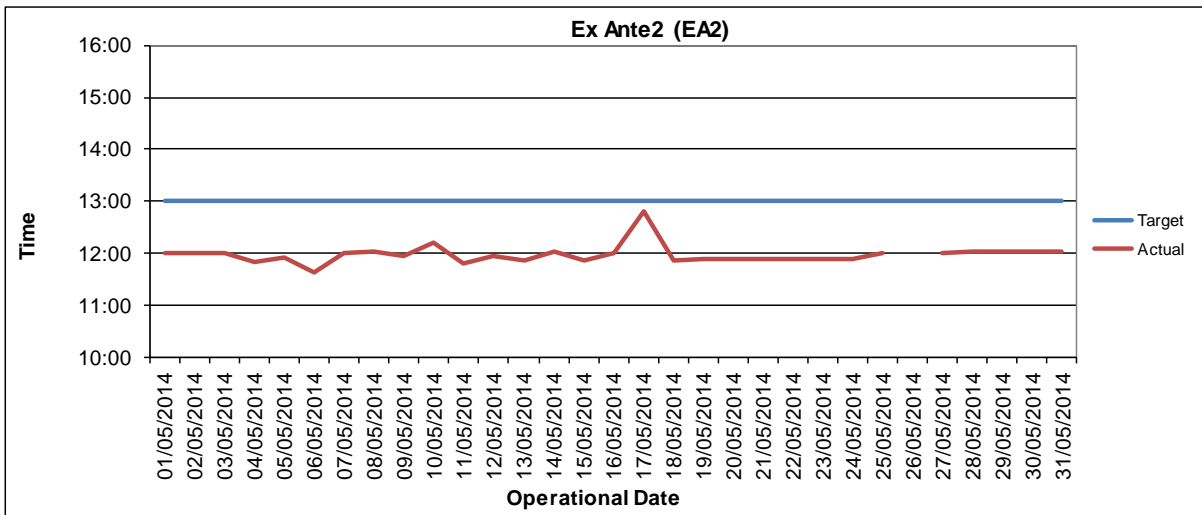


Figure 18 – Ex-Ante 2

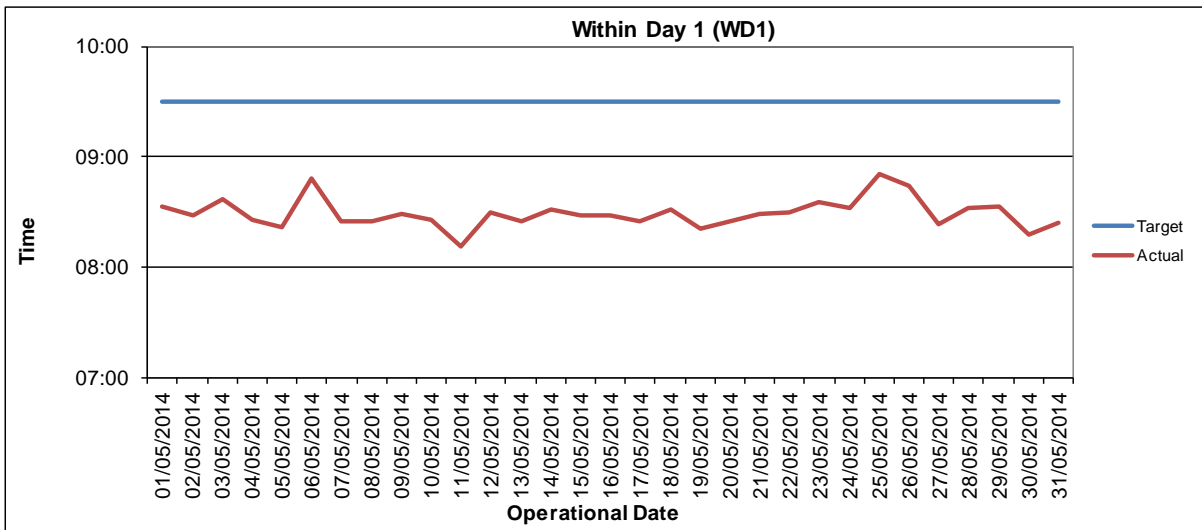


Figure 19 – Within Day 1

## Market Operator Monthly Report

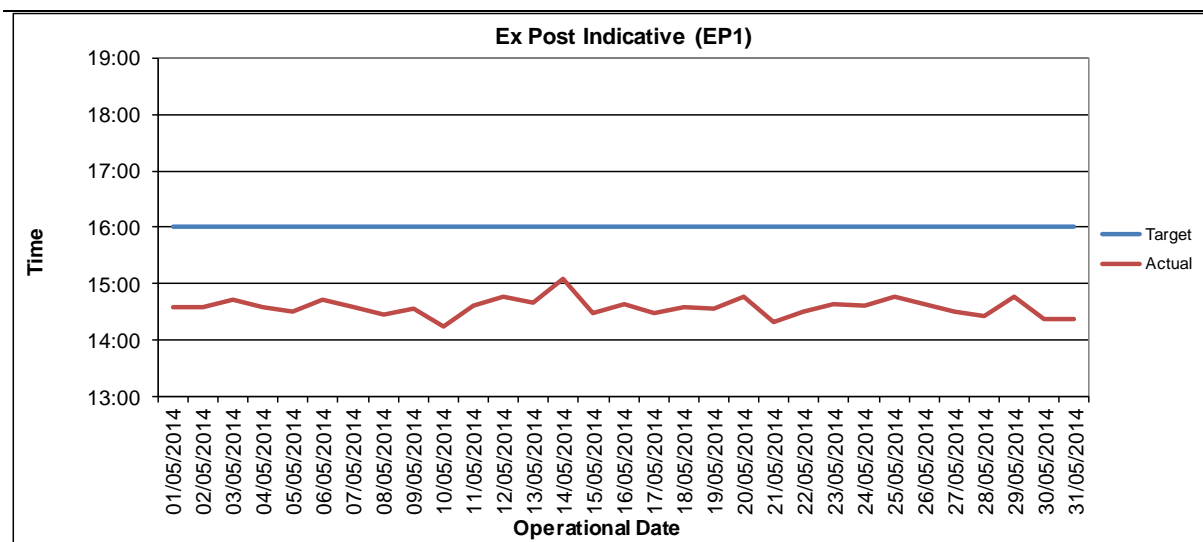


Figure 20 - Ex-Post Indicative

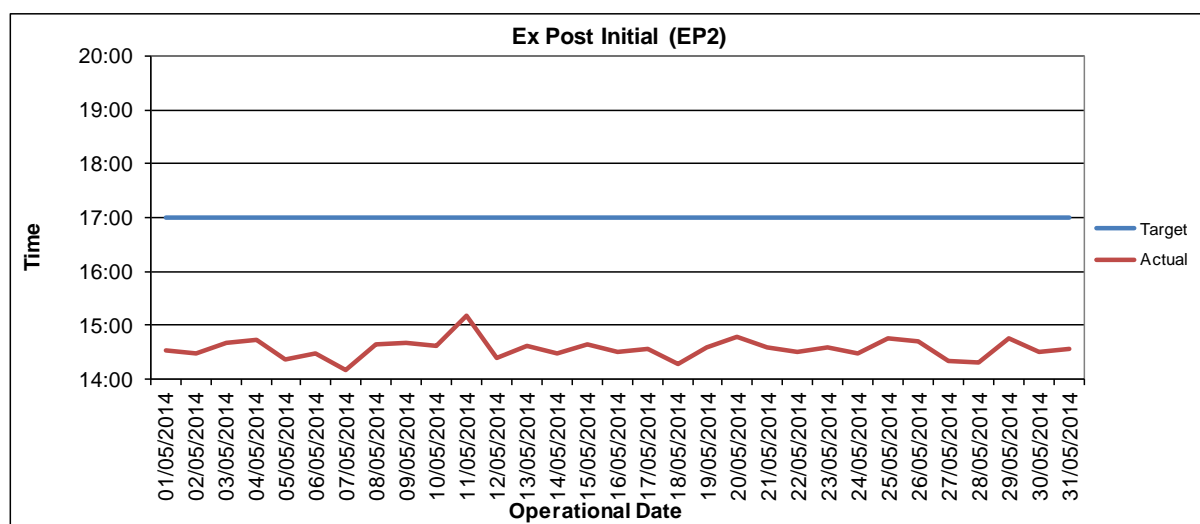


Figure 21 - Ex-Post Initial

Details of the operational timings of the Market System and Price (MSP) runs and Gate Closure are provided in [Appendix D](#).

# Market Operator Monthly Report

## 6.2.2 MSP Algorithms

The Market Operator has two different certified solvers used to determine Unit Commitment. These solvers use the Lagrangian Relaxation (LR) and Mixed Integer Programming (MIP) methodologies.

The primary solver used in the SEM is Lagrangian Relaxation (LR). Under certain schedule outcomes where a significant pricing event is observed, the MSP software is re-run using the Mixed Integer Programming (MIP) solver. The outcomes of the two solvers are compared. Where solution determined using the MIP solver provides a better overall solution, this solution may be selected for publishing. An updated policy document on the use of MIP has been published and is available on the SEMO website [here](#).

In May 2014, there were one instances of publishing with the MIP solver.

Details of historical runs and dates where the MIP algorithm has been used for published results is provided in [Appendix I](#).

## 6.2.3 Settlement Postings May 2014

The publication timings for Settlement runs are provided below.

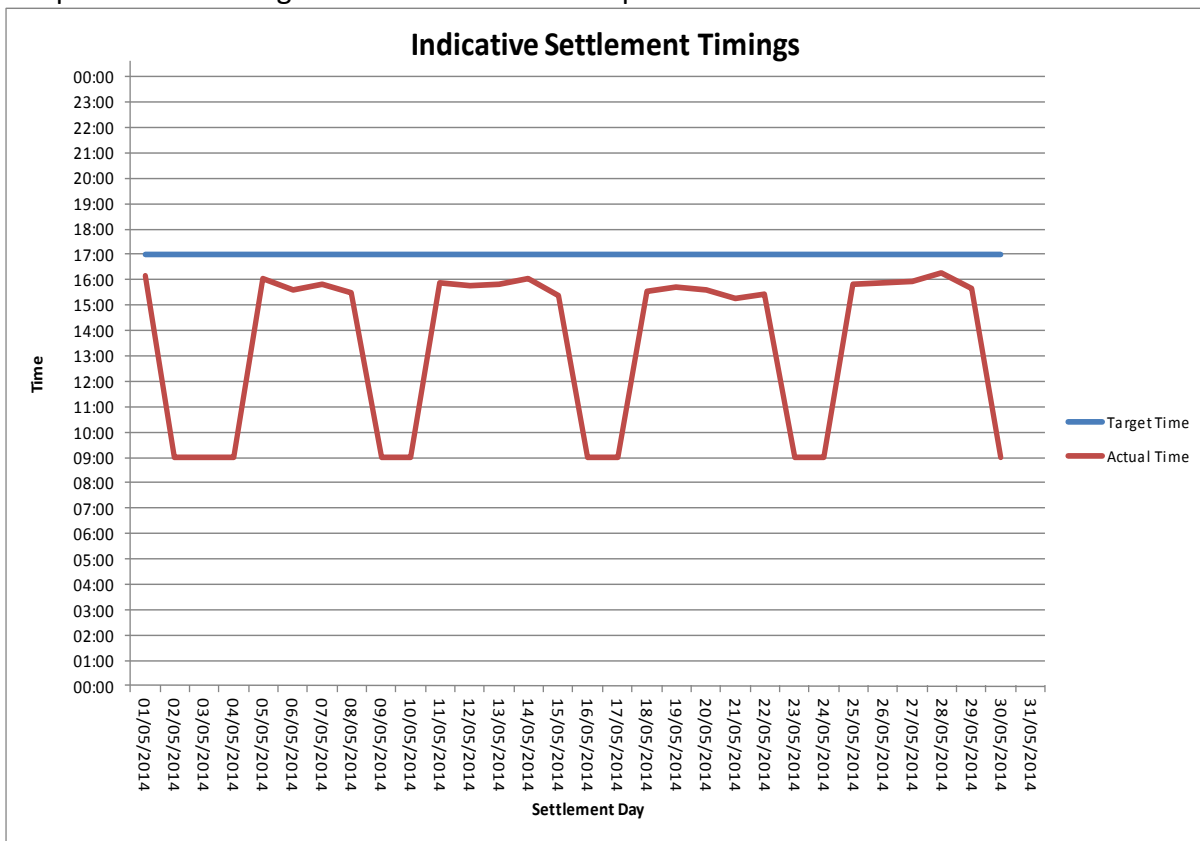
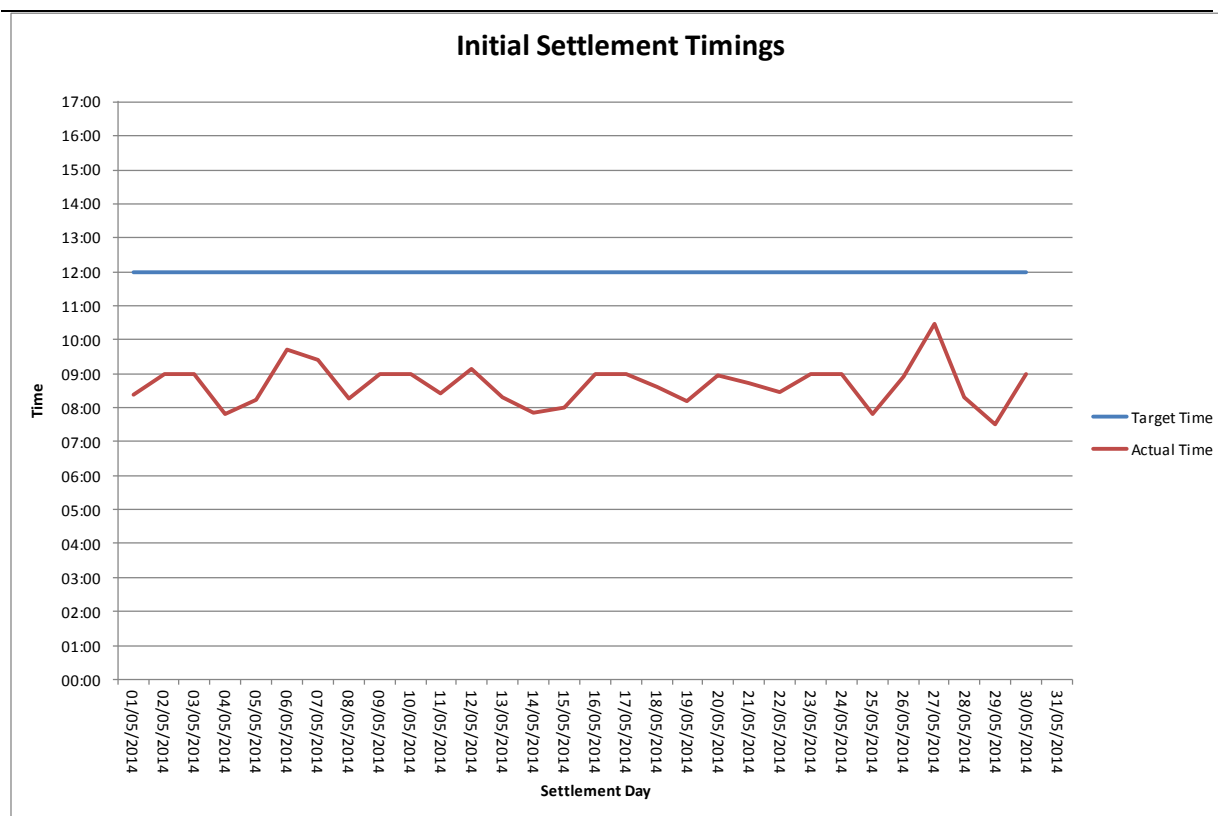


Figure 22 - Indicative Settlement Postings

## Market Operator Monthly Report



**Figure 23 - Initial Settlement Postings**

Further details of any delays noted above are provided in Appendix A

### 6.5 Market System Releases

#### 6.5.1 Release SEM R2.4.0 (Deployed: May 16<sup>th</sup>, 2014)

The SEM R2.4.0 release to the Central Market Systems was successfully deployed on May 16<sup>th</sup>, 2014.

The following table outlines the approved scope for this release:

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

## Market Operator Monthly Report

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### 6.5.2 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 was Friday, February 21st, 2014.

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

The approved scope for this release is as follows:

CR Ref.	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

The design phase for this release is currently underway.

To support this release, SEMO intends to put in place the necessary communication framework to give maximum visibility and optimum engagement with our key stakeholders. This framework will include:

- Interface documentation set as applicable (e.g. MPI User Guide, MPUD etc);
- Updates on release progress at each Market Operator Conference Call (MOCC) and Modifications Committee meeting; and
- A dedicated phase of Market Testing to support the release.

### 6.5.3 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 published on May 14<sup>th</sup>. This date has been set to:

**Friday, September 5<sup>th</sup>, 2014**

### 7 Occasional Components

#### *Disaster Recovery/Business Continuity Tests*

There was one Business Continuity Tests performed during May 2014.

#### *Administered Settlement*

There was no requirement to run Administered Settlement during May 2014.

#### *Communications or Systems Failures*

There were a number of Market Interface System issues during May 2014;

Market Operations reported a problem when trying to select multiple invoices for printing. The issue was recreated in a non-production environment and a call was opened with Brady. They discovered that they had packaged an old piece of application code as part of the R2.4.0 May release. A fix was delivered, tested in non-production and then released into production.

Market Operations contacted Market Systems IT on-call with an issue with the EirGrid Wind Forecast file which was failing – Market Operations wanted IT to verify that there were no issues with Market Systems & interfaces. No issues were identified with the systems – it was later discovered that there was a problem on the TSO side with the file contents.

Market Systems IT daily checks discovered XML errors for one participant. The issue was investigated and no problem existed on the market side. The participant was contacted who acknowledged an issue on their side.

SONI TSO reported an issue when trying to submit a meter fee. Investigation by Market Systems & Market Operations found that this error was an expected response for a unit changing type.

SONI IT on-call contacted Market Systems IT on-call with a problem accessing AMP web service. Market Systems on-call checked & verified that they could access the web service outside the SONI office network. A call was logged with Unicorn to verify that there was no issue on the AMP web interface. Unicorn reported that there was no problem with the interface. This information was passed back to SONI who confirmed that there was a problem on the SONI side and a contingency file was sent to the IA for processing.

A number of SEMO & Market System users reported problems accessing SEMO Citrix. The SEMO Citrix access was been redirected to the outside interface requiring users to use an RSA fob. EirGrid IT was contacted, they confirmed that amendments had been made to the internal proxy setup which included the SEMO exceptions. Once these changes were reversed access to SEMO Citrix was restored.

Market Systems IS discovered a problem with an internal application load-balancer. There was no impact to any application as the CMS has two load-balancer units always active. The faulty unit had its firmware upgraded and put back in operation.

There were a number of issues with the MIUN calculator during May:

An issue was identified with the MIUN calculator, a call was logged with the vendor who investigated & addressed the problem.

The IA reported a problem with the expected output files when amending the NTC files for Moyle. The issue was passed to the vendor and Market Systems on-call. The MIUN files were modified with Market Operations agreement and the updated files loaded through file exchange.

Market Operations reported an issue with the MIUN calculator for WD1. The issue was discovered with application service, once restarted it addressed the problem.

The Market Production Storage Area Network in Dublin generated a number of serious errors. These errors as well as all relevant log files were passed to Dell in the form of a P1 call. Dell recommended an onsite engineer with parts be dispatched immediately. Market Systems took the decision to move the CMS production database off of this setup and move it to Belfast to remove any risk or impact to the CMS. Dell arrived on site and replaced the failed hardware compounds which also included a full SAN reboot.

### ***Denial of Service Attacks***

There was no Denial of Service Attacks during May 2014.

### ***Submission of Parameters to RAs for Approval***

No Parameters were submitted to the Regulatory Authorities in May 2014.



## 8 Appendix A: Detail of Code Breaches

### Market Participant

08/05/2014	Money In	Timing	Participant	Payment Default	PT_400118 Fuinreamh Gaoithe Teoranta defaulted on a Week 52 2013 M+4 Energy invoice.	Participant Error.	A Default Notice was issued to the Participant.	Major
08/05/2014	Money In	Timing	Participant	Payment Default	PT_500039 Mantlin Ltd defaulted on a Week 13 2013 M+13 Energy Invoice.	Participant Error.	A Default Notice was issued to the Participant.	Major
08/05/2014	Money In	Timing	Participant	Payment Default	PT_400118 Fuinreamh Gaoithe Teoranta defaulted on Week 52 2013 M+4 Energy Invoice.	Participant Error.	A Default Notice was issued to the Participant.	Major
08/05/2014	Money In	Timing	Participant	Payment Default	PT_500039 Mantlin Limited defaulted on Week 13 2013 M+13 Energy Invoice.	Participant Error.	A Default Notice was issued to the Participant.	Major
12/05/2014	Money In	Timing	Participant	Payment Default	PT_400136 Cenergise Limited defaulted on an April 2014 Initial FMOC invoice.	Participant error.	A Default Notice was issued to the Participant.	Major
12/05/2014	Money In	Timing	Participant	Payment Default	PT_400129 Templeberry Renewable Energy Supply Ltd defaulted on an April 2014 Initial FMOC invoice.	Participant error.	A Default Notice was issued to the Participant.	Major
12/05/2014	Money In	Timing	Participant	Payment Default	PT_400078 Cushaling Power Ltd defaulted on an April 2014 Initial FMOC invoice.	Participant error.	A Default Notice was issued to the Participant.	Major
14/05/2014	Money In	Timing	Participant	Payment Default	PT_400118 Fuinreamh Gaoithe Teoranta defaulted on a Week 1 2014 M+4 Energy invoice.	Participant Error.	A Default Notice was issued to the Participant.	Major
21/05/2014	Money In	Timing	Participant	Payment Default	PT_400118 Fuinreamh Gaoithe Teoranta defaulted on a week 2 2014 M+4 invoice of EUR0.04	Participant error	A Default Notice was issued to the Participant	Major

**Table 16 - Code Breaches – Market Participants**

### Data Provider

05/05/2014	EA1	Timing	EirGrid TSO	File Submission	The Eirgrid Wind Forecast for Trading Day 06/05/2014 was not recieved by 09:30.	Failed submission due to GU_401520 missing from the Wind Forecast file.	Eirgrid submitted a corrected file at 10:49.	Minor
06/05/2014	EA1	Timing	EirGrid TSO	File Submission	The EirGrid Wind Forecast for Trading Day 07/05/2014 was not recieved by 09:30.	Failed submission due to GU_401520 missing from the Wind Forecast file.	EirGrid submitted a corrected file at 09:55.	Minor
11/05/2014	WD1	Timing	Moyle IA	Operational	MOYLE MIUNs were incorrect for WD1 Trading Day 11/05/2014	MIUN calculator produced incorrect MIUN data.	IT provided a revised MIUN file. This was uploaded to the CMS and MIUNs were published at 09:32. This was communicated to Participants via a Market Message at 09:33.	Minor

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19/05/2014	EA2	Quality	Moyle IA	<a href="#">File Submission</a>	Delay in the publication of MIUN's for EWIC & MOYLE interconnectors for TD20/05/2014.	MIUNs were not produced for MOYLE & EWIC this lead to the initial delay & the ZERO files were submitted for manual uploading.	Zero MIUN's values were published at 13:06.	Minor
20/05/2014	WD1	Quality	EWIC IA	<a href="#">File Submission</a>	MOYLE & EWIC MIUN's for Within Day TD20.05.2014 were incorrect.	MIUN's produced were incorrect as per original file submitted.	MOYLE & EWIC MIUN's were set to zero and files successfully uploaded / published at 09:19.	Minor
22/05/2014	EA2	Quality	Moyle IA	<a href="#">File Submission</a>	Ex-Ante 2 MOYLE MIUN's were to be set to zero as advised by functional IT.	MOYLE MIUN's were unable to be processed due to the failure of the calculator to find a feasible solution .	A zero file was submitted & uploaded at published before the 13:00 deadline.	Minor
23/05/2014	WD1	Quality	Moyle IA	<a href="#">File Submission</a>	Within Day MOYLE MIUN's for TD23/05/2014 needed to be revised & set to zero.	Incorrect MIUN's for MOYLE were produced.	A zero file was submitted and uploaded successfully and MIUN's were published at 10:02.  A further revision was required due to incorrect information in the 1st uploaded file as advised by functional IT. This was communicated to the market and further revision was published at 10:27.	Minor
25/05/2014	EA1	Timing	EirGrid TSO	<a href="#">File Submission</a>	The EirGrid Wind Forecast for Trading Day 26/05/2014 was not recieved by 09:30, delaying the publication of the EA1 Market Schedule and MIUNs.	Failed submission due to new unit registrations missing from the Wind Forecast file.	EirGrid submitted a corrected file at 12:46 which was loaded through the Market Participant Interface. The EA1 Market Schedule and MIUNs were published at 12:53.	Minor
25/05/2014	EA2	Timing	EirGrid TSO	<a href="#">File Submission</a>	EA2 for Trading Day 26/05/2014 was cancelled under Scenario 1 (EA1 not published by 11:00)	The correct EirGrid Wind Forecast for Trading Day 26/05/2014 was not recieved by 09:30, delaying the EA1 run. The EA1 Market Schedule and MIUNs were published at 12:53.	EA2 had to be cancelled due to the delay in publication of EA1	Minor

**Table 17 - Code Breaches – Data Providers**

## Market Operator Monthly Report

### SEMO - Pricing and Scheduling

09/05/2014	WD1	Quality	SEMO	Operational	MIUN's were incorrect for WD1 Trading Day 09/05/2014	MIUN calculator produced incorrect MIUN data.	IT provided a revised MIUN file. This was uploaded to the CMS and MIUNs were published at 09:35. This was communicated to Participants via a Market Message at 09:39	Minor
14/05/2014	WD1	Quality	SEMO	Operational	A change to ATC file was submitted on 14/05/2014.	This was due to a trip on the moyle interconnector.	A revised file was submitted to the SEM and received revised MIUN file.	Minor
15/05/2014	EA2	Timing	SEMO	File Submission	Ex-Ante 2 TD16/05/2014 MIUN's were delayed past the 13:00 deadline.	The MIUN software was unable to calculate MIUN's for ExAnte 2 due to a database issue with the vendor.	MIUN's for both interconnectors were published at 14:43.	Minor
15/05/2014	WD1	Quality	SEMO	File Submission	Functional advised that there was a problem with the revised file that was uploaded for Within Day and that a further revision was required.	File produced & uploaded for the MOYLE revision was incorrect and a further revision was required.	The 2nd revision file was submitted and successfully uploaded and a delay in the publication of WD1 MIUN's as they were published at 12:33	Minor
15/05/2014	WD1	Quality	SEMO	File Submission	Within Day (WD1) MOYLE MIUNs were incorrect as per original file submitted after DSP for TD15/05/2014.	MIUN's produced were incorrect and functional advised that MOYLE needed to be revised.	MOYLE was revised and MIUN's published at 09:54.	Minor
15/05/2014	WD1	Quality	SEMO	System	There was a change to the ATC for MOYLE on 15/05/2014.	MOYLE interconnector tripped and a revised MIUN file for Ex-Ante was submitted.	MIUN file was uploaded & revised MIUNs published at 22:28 in time for Within Day 15/05/2014.	Minor
16/05/2014	EA2	Timing	SEMO	Operational	MIUNs for EA2 for TD 17/05/2014 were published after the 13:00 deadline.	A revised ATC file was sent by the IA on the 16/05/2014 at 07:00. This was not picked up for EA1 and for EA2 the MA used the data submitted for TD 17th Optimization Horizon rather than 18th. The IA had to be contacted and therefore, EA2 was not DSP'd until 12:47. The MIUN calculator then failed and an automated file had to be sent through by the IT analyst.	MIUN's for both interconnectors were published at 13:09	Minor

**Table 18 - Code Breaches – Pricing and Scheduling**

### SEMO – Settlements

There were no issues to report in May 2014

**Table 19 - Code Breaches – Settlements**

## Market Operator Monthly Report

### *SEMO - Funds Transfer*

Issue Number	Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T&SC Breach
3966	12/05/2014	Money In	Timing	SEMO	Payment Default	The EWIC IRCU April 2014 Initial was issued to the Interconnector Administrator after the cut off point of 12:00	There was an error in the initial calculations so a new invoice had to be calculated and issued	The new invoice was issue to the IA with an invoice date of 13/05/2014	Major

**Table 20 - Code Breaches – Funds Transfer**

### *SEMO - Credit Management*

There were no issues to report in May 2014

**Table 21 - Code Breaches – Credit Management**

### *SEMO – Other*

There were no issues to report in May 2014

**9 Appendix B: List of Queries by Type**

*Data Queries*

Summary Title	Description	ID	Logged On	Date sent to MP
MIUN Issue	On Trade Date 01.05.2014, EWIC tripped from 00:22 until the end of the trading day. However, in the preliminary PIR file, there is data for some of these periods.	Interconnector Administrator	2014-05-06	2014-05-15

**Table 21 - Data Queries**

**Settlement Queries**

Summary Title	Description	ID	Logged On	Date sent to MP
Commercial Offer Data	This Invoice showed a revised constraint payment at M+13 of 4,700. TEL's calculation of constraints based upon the latest available ENLIEGX files differ to the that of SEM and align to the initial D+4 invoice. Please note that this was originally logged as a Data query under reference F0058677 and this was cancelled and logged as F0058681.	Tynagh Energy	2014-05-01	2014-05-27
Commercial Offer Data	GU_400272 (MP3). Difference in Constraints. This unit received a sync instruction at 17:54 and should have been paid a Hot start. It would appear Market Operator applied a Warm start.	PT_400030	2014-05-28	2014-06-09
Dispatch Instructions	A dsync instruction issued on the 30th April at 22:58 which is not reflected in the DQ profile. This impacts both 30th April and 1st May resulting in uninstructed imbalance charges.	PT_400030	2014-05-12	2014-05-12
Dispatch Instructions	Incorrect Dispatch Instructions were sent to the SEM for GU_400540 (Huntstown Unit 2) on the 27/04/2014. A Correction that was made to the 28/04/2014 caused change in D+4 data for the 27/04/2014. A SYNC was added to Dispatch Instructions on the 27/04/2014 for GU_400540.	Eirgrid	2014-05-26	2014-06-05
Metered Generation	A dsync instruction issued on the 30th April at 22:58 which is not reflected in the DQ profile. This impacts both 30th April and 1st May resulting in uninstructed imbalance charges.	Gaelforce	2014-05-02	2014-05-08

## Market Operator Monthly Report

Eligible Availability	EA values appear to be missing in the data provided for settlement periods from 5th to 11th December 2013. CPP values have been calculated for this period. Could you review and confirm the EA values used to calculate the CPP figures for these dates.	PT_400030	2014-05-27	2014-06-03
MIUN Issue	Querying the MGEU_IA_NIMOYLE_I_NIMOYLE values in PIR for the following settlement dates: 21/04/2014 for trading periods 05:30 – 06:00. 25/04/2014 for trading periods 21:30 – 23:00. The values in the Error report in AMP are different to the PIR for this settlement date. Can you please confirm what values are applied to generator the MG EU value for these periods?	NI Moyle	2014-05-06	2014-05-16
MIUN Issue	In the Initial PIR reports for EWIC for Calendar Dates 6th and 8th May 2014, there is one value in each report which does not tie-up with the IA's data. Could someone possibly have a look at this? The issue has already been mentioned to Andrew Tait.  I've attached the two PIR files and have added to each, the value we have in the IA systems	Interconnector Administrator	2014-05-15	2014-05-23
Capacity	Following receipt of SEE Airtricity LTD PT_400021 Initial Capacity invoice for April 2014, it reported the Capacity Payments and Capacity Availability for Unit GU_401380 are different from expected. GU_401380 was on an outage in April 2014, we in turn submitted daily out turn availability for the 1st - 7th and the 9th - 19th April 2014 to availabilityprofiles@eirgrid.com. Consequently for the 12th April we would have been expecting Total Capacity Availability to the value of 565.3 MW Monetary impact is around three thousand EURS. Our query therefore relates to this deviation from our submitted declared Availability and expected capacity revenue for the 12/04/2014.	PT_400021	2014-05-30	2014-06-09

Table 22 - Settlement Queries

## 10 Appendix C: List of All System Errors and Failures

The definitions of the statuses used for the List of All System Errors and Failures are:

- In Progress: Fix being identified and implemented.
- Resolved: Fix has been implemented, but reruns have not been performed.
- Closed: Required reruns have been performed and error-failure has been completely rectified.

Note: Items in the List of All System Errors and Failures that have status 'Closed' in this months report will not appear in subsequent Monthly Market Operator Reports as they are no longer open issues.

Issue No.	Description	Effect	Fixed from	Re-Pricing	Resettlement	Status
-	There were no system defects identified in May 2014 that required repricing or resettlement	-	-	-	-	-

**Table 23 - List of System Errors and Failures**



## 11 Appendix D: Details of Operational Timings

### *Market Schedule and Price Runs*

Operational Date	EA1		EA2		WD1		EP1		EP2	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
01/05/2014	11:00	09:58	13:00	12:08	09:30	08:41	16:00	14:43	17:00	14:26
02/05/2014	11:00	09:57	13:00	12:02	09:30	08:32	16:00	14:49	17:00	14:20
03/05/2014	11:00	10:03	13:00	11:54	09:30	08:25	16:00	14:37	17:00	14:55
04/05/2014	11:00	09:55	13:00	11:57	09:30	08:23	16:00	14:29	17:00	14:43
05/05/2014	11:00	09:56	13:00	11:52	09:30	08:33	16:00	14:22	17:00	14:37
06/05/2014	11:00	10:03	13:00	11:53	09:30	08:30	16:00	15:10	17:00	14:50
07/05/2014	11:00	09:56	13:00	11:50	09:30	08:33	16:00	15:01	17:00	14:36
08/05/2014	11:00	10:03	13:00	12:01	09:30	08:18	16:00	14:42	17:00	14:34
09/05/2014	11:00	10:00	13:00	12:03	09:30	08:35	16:00	14:52	17:00	14:34
10/05/2014	11:00	10:02	13:00	12:35	09:30	08:26	16:00	14:46	17:00	14:44
11/05/2014	11:00	10:06	13:00	11:55	09:30	08:16	16:00	14:36	17:00	14:47
12/05/2014	11:00	10:05	13:00	12:04	09:30	08:32	16:00	14:38	17:00	14:36
13/05/2014	11:00	10:08	13:00	11:50	09:30	08:23	16:00	14:47	17:00	14:37
14/05/2014	11:00	09:54	13:00	11:37	09:30	08:25	16:00	14:50	17:00	14:28
15/05/2014	11:00	10:03	13:00	12:12	09:30	08:37	16:00	14:40	17:00	14:29
16/05/2014	11:00	10:01	13:00	11:52	09:30	08:34	16:00	14:41	17:00	14:23
17/05/2014	11:00	10:02	13:00	12:00	09:30	08:22	16:00	14:31	17:00	14:27
18/05/2014	11:00	10:02	13:00	11:51	09:30	08:29	16:00	14:31	17:00	14:34
19/05/2014	11:00	09:56	13:00	11:53	09:30	08:19	16:00	14:25	17:00	14:43
20/05/2014	11:00	09:48	13:00	11:42	09:30	08:17	16:00	14:33	17:00	15:00
21/05/2014	11:00	09:50	13:00	11:43	09:30	08:14	16:00	14:37	17:00	14:39
22/05/2014	11:00	09:46	13:00	11:50	09:30	08:42	16:00	14:46	17:00	14:14
23/05/2014	11:00	10:01	13:00	11:54	09:30	08:23	16:00	15:03	17:00	14:37
24/05/2014	11:00	10:00	13:00	12:00	09:30	08:34	16:00	14:43	17:00	14:36
25/05/2014	11:00	10:04	13:00	11:58	09:30	08:25	16:00	14:17	17:00	14:31
26/05/2014	11:00	12:52	13:00		09:30	08:32	16:00	14:39	17:00	14:37
27/05/2014	11:00	10:02	13:00	12:02	09:30	08:31	16:00	14:46	17:00	14:39
28/05/2014	11:00	10:04	13:00	12:00	09:30	08:36	16:00	14:41	17:00	14:35
29/05/2014	11:00	10:01	13:00	12:01	09:30	08:34	16:00	14:40	17:00	14:32
30/05/2014	11:00	10:03	13:00	12:01	09:30	08:33	16:00	14:42	17:00	14:40
31/05/2014	11:00	10:03	13:00	12:01	09:30	08:33	16:00	14:42	17:00	14:40

Table 24 – MSP Runs

## Market Operator Monthly Report

### Settlement Runs

Trading Day	INDICATIVE				INITIAL			
	Target Date	Actual Date	Target Time	Actual Time	Trading Day	Actual Date	Target Time	Actual Time
01/05/2014	02/05/2014	02/05/2014	17:00	16:08	01/05/2014	08/05/2014	12:00	08:22
02/05/2014	06/05/2014	06/05/2014	17:00	09:00	02/05/2014	09/05/2014	12:00	09:00
03/05/2014	06/05/2014	06/05/2014	17:00	09:00	03/05/2014	09/05/2014	12:00	09:00
04/05/2014	06/05/2014	06/05/2014	17:00	09:00	04/05/2014	09/05/2014	12:00	07:48
05/05/2014	06/05/2014	06/05/2014	17:00	16:03	05/05/2014	12/05/2014	12:00	08:14
06/05/2014	07/05/2014	07/05/2014	17:00	15:37	06/05/2014	13/05/2014	12:00	09:43
07/05/2014	08/05/2014	08/05/2014	17:00	15:51	07/05/2014	14/05/2014	12:00	09:24
08/05/2014	09/05/2014	09/05/2014	17:00	15:28	08/05/2014	15/05/2014	12:00	08:17
09/05/2014	12/05/2014	12/05/2014	17:00	09:00	09/05/2014	16/05/2014	12:00	09:00
10/05/2014	12/05/2014	12/05/2014	17:00	09:00	10/05/2014	16/05/2014	12:00	09:00
11/05/2014	12/05/2014	12/05/2014	17:00	15:53	11/05/2014	16/05/2014	12:00	08:26
12/05/2014	13/05/2014	13/05/2014	17:00	15:47	12/05/2014	19/05/2014	12:00	09:09
13/05/2014	14/05/2014	14/05/2014	17:00	15:50	13/05/2014	20/05/2014	12:00	08:19
14/05/2014	15/05/2014	15/05/2014	17:00	16:03	14/05/2014	21/05/2014	12:00	07:50
15/05/2014	16/05/2014	16/05/2014	17:00	15:21	15/05/2014	22/05/2014	12:00	08:01
16/05/2014	19/05/2014	19/05/2014	17:00	09:00	16/05/2014	23/05/2014	12:00	09:00
17/05/2014	19/05/2014	19/05/2014	17:00	09:00	17/05/2014	23/05/2014	12:00	09:00
18/05/2014	19/05/2014	19/05/2014	17:00	15:34	18/05/2014	23/05/2014	12:00	08:36
19/05/2014	20/05/2014	20/05/2014	17:00	15:43	19/05/2014	26/05/2014	12:00	08:11
20/05/2014	21/05/2014	21/05/2014	17:00	15:37	20/05/2014	27/05/2014	12:00	08:57
21/05/2014	22/05/2014	22/05/2014	17:00	15:16	21/05/2014	28/05/2014	12:00	08:43
22/05/2014	23/05/2014	23/05/2014	17:00	15:25	22/05/2014	29/05/2014	12:00	08:28
23/05/2014	26/05/2014	26/05/2014	17:00	09:00	23/05/2014	30/05/2014	12:00	09:00
24/05/2014	26/05/2014	26/05/2014	17:00	09:00	24/05/2014	30/05/2014	12:00	09:00
25/05/2014	26/05/2014	26/05/2014	17:00	15:50	25/05/2014	30/05/2014	12:00	07:49
26/05/2014	27/05/2014	27/05/2014	17:00	15:54	26/05/2014	02/06/2014	12:00	08:55
27/05/2014	28/05/2014	28/05/2014	17:00	15:56	27/05/2014	03/06/2014	12:00	10:29
28/05/2014	29/05/2014	29/05/2014	17:00	16:17	28/05/2014	04/06/2014	12:00	08:18
29/05/2014	30/05/2014	30/05/2014	17:00	15:40	29/05/2014	05/06/2014	12:00	07:31
30/05/2014	02/06/2014	02/06/2014	17:00	09:00	30/05/2014	06/06/2014	12:00	09:00
31/05/2014	02/06/2014	02/06/2014	17:00	09:00	31/05/2014	06/06/2014	12:00	09:00

Table 25 - Settlement Runs

## 12 Appendix E: Imperfections Charge

This appendix provides daily data for the Constraint Payments, Uninstructed Imbalance Payments and Imperfections Charges, and as well as the weekly values of Make Whole Payments and Testing Charges.

The following table is updated to take account of the values calculated in the Initial Settlement runs only.

Historical information will be shown in Appendix E until completion of the current financial year. Information prior to that can be found in previous Monthly Market Operator Reports.

Date	Constraints Payments	Uninstructed Imbalances Payments	Imperfections Charges
01/01/2014	€955,074.54	€15,701.02	-€363,523.63
02/01/2014	€869,584.76	-€51,270.96	-€411,223.19
03/01/2014	€981,299.90	-€6,763.65	-€416,729.57
04/01/2014	€842,597.58	-€984.25	-€406,468.19
05/01/2014	€1,017,892.87	-€3,304.71	-€374,451.32
06/01/2014	€1,027,467.78	€69,008.95	-€421,209.86
07/01/2014	€1,131,050.74	-€4,313.68	-€429,731.89
08/01/2014	€652,565.38	-€39,328.22	-€457,907.14
09/01/2014	€748,152.68	-€40,827.41	-€453,780.43
10/01/2014	€803,817.65	-€48,315.21	-€448,048.96
11/01/2014	€915,704.71	-€4,318.18	-€411,522.40
12/01/2014	€921,530.28	-€9,195.15	-€379,307.86
13/01/2014	€641,244.74	-€20,649.97	-€453,955.42
14/01/2014	€570,633.32	-€31,654.28	-€466,747.71
15/01/2014	€789,788.53	-€3,878.25	-€443,384.59
16/01/2014	€619,904.29	-€24,560.52	-€456,869.59
17/01/2014	€515,211.70	-€66,689.58	-€454,608.47
18/01/2014	€520,405.35	-€19,031.76	-€421,586.87
19/01/2014	€808,100.39	-€9,045.86	-€397,800.00
20/01/2014	€917,028.91	-€62,048.37	-€448,388.85
21/01/2014	€976,768.66	-€27,263.63	-€444,554.65
22/01/2014	€617,107.10	-€48,174.53	-€447,356.40
23/01/2014	€636,348.17	€11,856.06	-€449,699.08
24/01/2014	€858,787.11	-€3,889.75	-€436,805.26
25/01/2014	€867,668.14	€24,013.08	-€387,936.33
26/01/2014	€1,067,111.91	€8,950.68	-€369,381.21
27/01/2014	€667,942.56	-€16,961.92	-€434,460.28
28/01/2014	€857,567.91	-€2,690.66	-€447,652.80
29/01/2014	€700,070.05	-€18,250.06	-€461,431.27
30/01/2014	€686,455.61	-€5,466.72	-€462,829.04
31/01/2014	€777,271.35	€2,344.09	-€442,761.53
01/02/2014	€1,092,287.94	€46,296.79	-€399,482.81
02/02/2014	€1,040,876.64	-€7,906.04	-€372,329.72
03/02/2014	€814,552.07	-€23,152.17	-€442,954.07
04/02/2014	€765,620.92	-€4,186.12	-€446,429.95
05/02/2014	€619,745.34	-€24,997.27	-€447,492.36

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06/02/2014	€570,059.13	-€14,226.00	-€454,172.29
07/02/2014	€733,072.53	-€5,600.31	-€442,576.92
08/02/2014	€1,126,907.52	€1,739.38	-€390,725.34
09/02/2014	€654,441.39	€49,019.47	-€374,840.33
10/02/2014	€769,918.90	-€26,132.58	-€448,629.96
11/02/2014	€743,530.15	€740.24	-€449,191.11
12/02/2014	€790,821.83	-€29,220.96	-€445,981.56
13/02/2014	€730,779.98	-€898.33	-€445,971.03
14/02/2014	€698,505.74	-€1,078.62	-€458,004.41
15/02/2014	€634,027.20	€15,043.38	-€395,023.34
16/02/2014	€566,490.77	-€9,244.53	-€388,347.11
17/02/2014	€650,193.75	-€11,780.63	-€447,842.88
18/02/2014	€546,435.98	-€32,788.64	-€454,115.28
19/02/2014	€661,463.66	€2,436.11	-€441,435.28
20/02/2014	€627,222.04	-€36,929.66	-€429,485.89
21/02/2014	€772,285.98	-€33,430.62	-€424,158.80
22/02/2014	€1,047,041.63	€15,965.37	-€384,643.79
23/02/2014	€647,688.10	€6,359.48	-€365,258.95
24/02/2014	€593,693.03	€32,810.10	-€427,977.07
25/02/2014	€673,092.66	€47,042.36	-€425,753.08
26/02/2014	€737,469.64	€33,371.98	-€427,771.92
27/02/2014	€599,427.86	€18,597.29	-€438,598.48
28/02/2014	€486,170.94	€35,027.71	-€436,398.07
01/03/2014	€551,273.11	€13,733.62	-€402,126.07
02/03/2014	€253,643.88	€21,061.91	-€380,791.02
03/03/2014	€838,469.31	€31,907.86	-€440,202.27
04/03/2014	€532,230.85	-€34,892.63	-€449,787.29
05/03/2014	€569,397.10	€23,555.80	-€438,585.32
06/03/2014	€627,047.33	€28,301.63	-€445,574.58
07/03/2014	€791,058.04	-€23,188.94	-€422,122.27
08/03/2014	€524,758.24	€10,428.20	-€373,550.80
09/03/2014	€757,796.75	-€45,810.91	-€384,189.33
10/03/2014	€554,422.76	-€50,527.70	-€435,033.51
11/03/2014	€490,320.26	-€80,176.23	-€441,302.05
12/03/2014	€474,930.61	-€50,381.14	-€448,528.36
13/03/2014	€535,105.11	-€90,832.92	-€452,732.25
14/03/2014	€750,264.06	-€16,885.72	-€425,233.91
15/03/2014	€565,699.81	€6,798.70	-€370,939.19
16/03/2014	€260,949.62	€8,107.37	-€352,376.53
17/03/2014	€564,851.76	€17,272.05	-€364,550.61
18/03/2014	€461,877.22	-€10,830.22	-€397,299.39
19/03/2014	€638,241.59	€2,103.82	-€404,183.93
20/03/2014	€366,615.71	-€20,983.02	-€414,658.34
21/03/2014	€596,761.02	-€1,539.05	-€422,392.61
22/03/2014	€421,180.67	€3,792.17	-€386,455.45
23/03/2014	€533,746.14	-€13,893.35	-€370,919.40
24/03/2014	€556,053.41	-€5,517.38	-€412,252.02
25/03/2014	€499,032.80	-€21,665.91	-€424,799.72
26/03/2014	€645,898.84	-€47,573.09	-€436,022.93
27/03/2014	€618,021.01	-€94,304.81	-€440,855.08

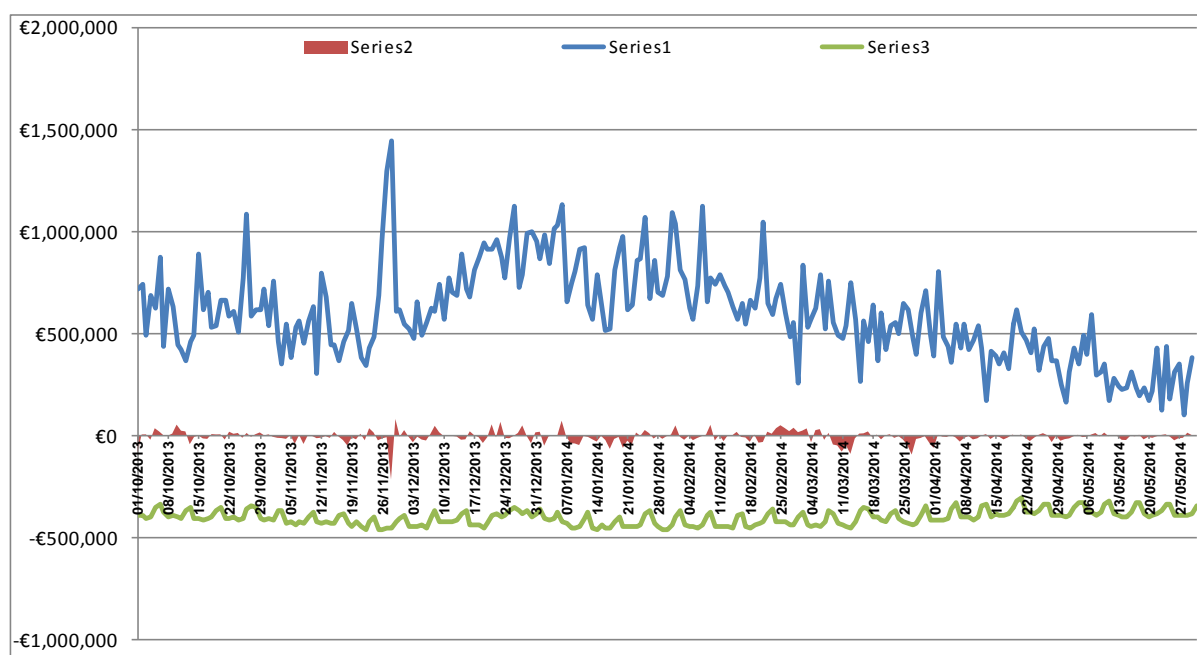
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28/03/2014	€474,746.28	-€19,091.39	-€428,576.54
29/03/2014	€396,800.83	-€14,274.61	-€390,148.61
30/03/2014	€601,577.41	-€5,279.56	-€347,892.04
31/03/2014	€709,881.34	-€36,965.35	-€413,090.30
01/04/2014	€493,506.80	-€62,047.30	-€420,270.95
02/04/2014	€390,689.63	€1,285.10	-€416,199.09
03/04/2014	€805,100.52	-€7,736.37	-€419,384.63
04/04/2014	€480,942.40	-€9,391.04	-€410,276.35
05/04/2014	€437,083.55	€30.09	-€365,827.83
06/04/2014	€361,422.25	-€11,522.38	-€330,325.19
07/04/2014	€548,948.94	-€31,726.93	-€399,979.51
08/04/2014	€424,359.83	-€13,685.38	-€398,299.01
09/04/2014	€549,232.01	-€5,003.33	-€401,907.82
10/04/2014	€419,557.15	-€21,387.03	-€413,392.52
11/04/2014	€464,961.09	-€16,069.99	-€403,394.20
12/04/2014	€538,279.15	-€1,971.04	-€349,655.90
13/04/2014	€429,660.02	€4,249.05	-€337,368.15
14/04/2014	€173,425.17	-€19,212.43	-€398,627.50
15/04/2014	€409,386.74	-€5,372.55	-€388,585.54
16/04/2014	€387,544.85	-€8,738.90	-€391,905.20
17/04/2014	€353,527.14	-€21,038.69	-€393,877.38
18/04/2014	€406,743.60	-€11,653.05	-€383,249.86
19/04/2014	€326,411.09	€1,994.99	-€351,174.26
20/04/2014	€542,284.63	-€4,968.48	-€321,329.94
21/04/2014	€612,266.82	€2,530.54	-€311,006.56
22/04/2014	€507,354.80	-€13,928.47	-€373,861.21
23/04/2014	€468,135.27	-€29,267.76	-€380,271.71
24/04/2014	€406,217.05	-€12,686.25	-€386,511.77
25/04/2014	€522,164.29	€890.22	-€371,853.20
26/04/2014	€316,953.67	€8,739.69	-€338,460.42
27/04/2014	€434,994.12	-€842.19	-€338,502.78
28/04/2014	€471,489.47	-€34,016.83	-€395,652.40
29/04/2014	€367,047.29	-€4,206.25	-€395,371.12
30/04/2014	€366,195.91	-€27,414.20	-€393,628.42
01/05/2014	€246,053.16	-€19,877.85	-€403,408.92
02/05/2014	€164,891.37	-€16,241.91	-€394,309.86
03/05/2014	€313,454.83	-€6,018.51	-€355,317.37
04/05/2014	€430,617.78	€1,155.53	-€327,028.46
05/05/2014	€347,517.05	-€10,044.89	-€326,831.33
06/05/2014	€487,998.49	-€8,440.55	-€373,854.74
07/05/2014	€397,934.98	€2,071.56	-€379,285.51
08/05/2014	€592,137.89	€9,579.27	-€392,179.12
09/05/2014	€298,375.07	-€6,659.56	-€374,231.73
10/05/2014	€309,315.85	€11,549.56	-€342,295.24
11/05/2014	€349,749.11	-€5,463.16	-€325,086.80
12/05/2014	€166,271.11	-€239.14	-€385,574.87
13/05/2014	€279,317.38	-€5,163.93	-€392,422.70
14/05/2014	€237,720.41	-€23,285.90	-€403,609.34
15/05/2014	€222,011.67	-€24,282.91	-€398,967.77
16/05/2014	€233,415.69	-€3,024.00	-€377,298.82

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17/05/2014	€308,186.07	-€6,138.88	-€332,321.56
18/05/2014	€234,907.17	€1,363.53	-€333,272.56
19/05/2014	€192,322.12	-€20,970.09	-€388,734.22
20/05/2014	€234,992.31	-€9,746.08	-€399,176.24
21/05/2014	€173,709.13	-€13,617.56	-€389,481.89
22/05/2014	€214,372.91	-€5,978.99	-€381,807.55
23/05/2014	€429,485.31	€104.55	-€368,448.27
24/05/2014	€120,386.81	€3,517.61	-€340,924.69
25/05/2014	€431,999.65	-€7,602.62	-€338,246.61
26/05/2014	€176,577.63	-€25,612.19	-€392,322.04
27/05/2014	€308,483.53	-€15,136.56	-€392,314.32
28/05/2014	€352,011.89	-€13,476.82	-€391,502.13
29/05/2014	€99,509.99	€11,099.11	-€395,064.51
30/05/2014	€255,905.57	€89.21	-€386,852.62
31/05/2014	€379,068.63	€152.04	-€343,634.28

**Table 26 - Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges**



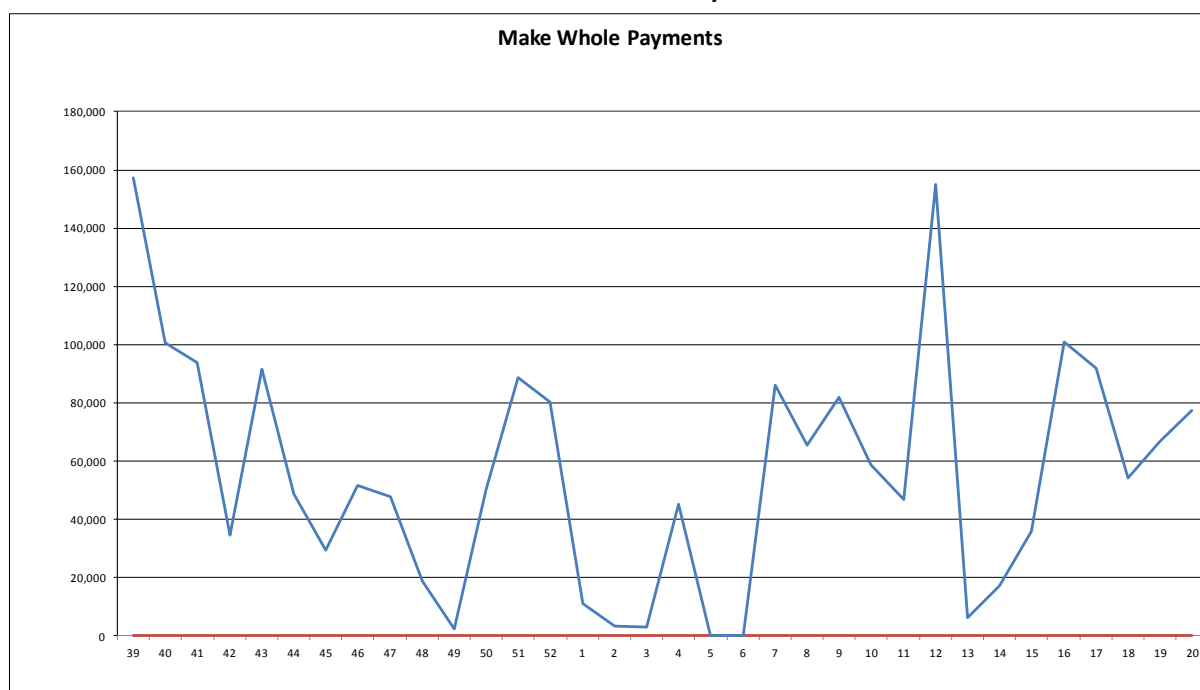
**Figure 24 - Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges**

Week No	Make Whole Payments
39	€157,154.18
40	€100,559.86
41	€93,700.82
42	€34,755.70
43	€91,699.33
44	€48,763.34
45	€29,311.13

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46	€51,580.95
47	€47,924.57
48	€18,836.02
49	€2,320.81
50	€50,370.62
51	€88,625.27
52	€80,442.97
1	€11,198.45
2	€3,215.89
3	€2,907.21
4	€45,212.77
5	€0.24
6	€0.21
7	€86,074.69
8	€65,438.76
9	€82,008.00
10	€58,736.16
11	€46,720.09
12	€154,971.87
13	€6,346.71
14	€17,151.75
15	€35,987.24
16	€101,005.68
17	€91,892.49
18	€54,274.01
19	€66,864.22
20	€77,322.61

**Table 27 - Make Whole Payments**



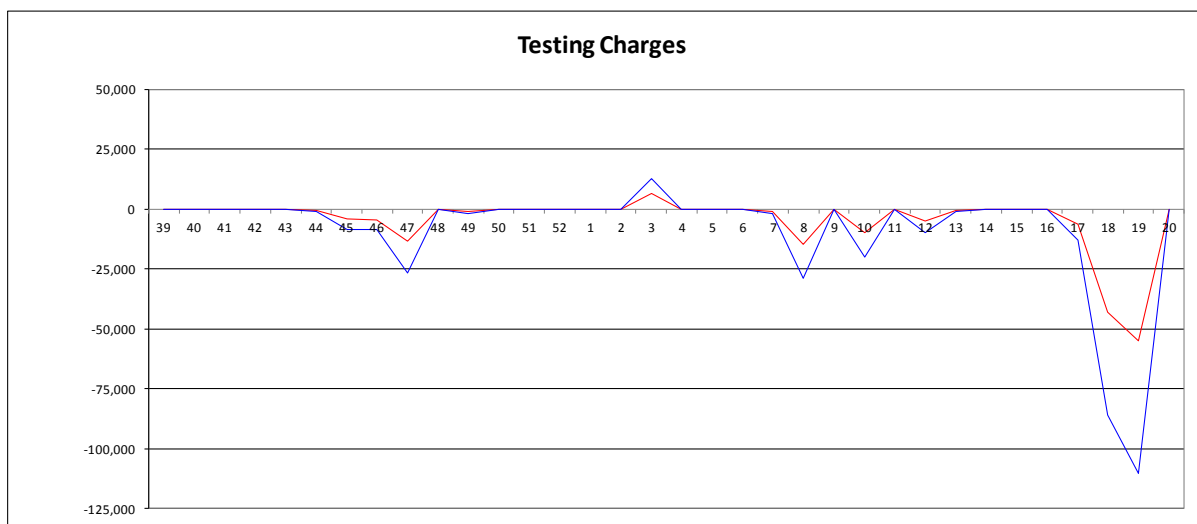
**Figure 25 - Make Whole Payments**

Week No	Testing Charges
39	€0.00

# Market Operator Monthly Report

40	€0.00
41	€0.00
42	€0.00
43	€0.00
44	-€464.74
45	-€4,169.12
46	-€4,361.08
47	-€13,358.69
48	€0.00
49	-€983.42
50	€0.00
51	€0.00
52	€0.00
1	€0.00
2	€0.00
3	€6,382.50
4	€0.00
5	€0.00
6	€0.00
7	-€971.99
8	-€14,525.39
9	€0.00
10	-€10,047.37
11	€0.00
12	-€4,842.44
13	-€452.54
14	€0.00
15	€0.00
16	€0.00
17	-€6,369.87
18	-€42,879.16
19	-€55,135.72
20	€0.00

**Table 28 - Testing Charges**



**Figure 24 - Testing Charges**



### 13 Appendix F: Default Commercial Offer Data Used

The table below lists for each unit the number of times in operations during May 2014 where the Commercial Offer Data was based on a Participant submission within the Market window, or based on Standing Data or Default Data submitted.

PNAME	RNAME	Manual	Adjusted	Standing	COUNT
PT_400116	DSU_401400			31	31
PT_400090	DSU_401270	31			31
PT_400106	DSU_401330	39			39
PT_400101	DSU_401300	31			31
PT_500074	GU_501250		24		24
PT_400021	GU_401600	25			25
PT_400024	GU_400120	31			31
PT_400024	GU_400121	31			31
PT_400026	GU_400140	32			32
PT_400030	GU_400180	35			35
PT_400030	GU_400181	37			37
PT_400030	GU_400182	37			37
PT_400030	GU_400183	35			35
PT_400030	GU_400200	39			39
PT_400030	GU_400201	36			36
PT_400030	GU_400202	35			35
PT_400030	GU_400203	40			40
PT_400030	GU_400210	35			35
PT_400030	GU_400211	36			36
PT_400030	GU_400220	35			35
PT_400030	GU_400221	35			35
PT_400030	GU_400240	36			36
PT_400030	GU_400250	35			35
PT_400030	GU_400251	35			35
PT_400030	GU_400252	37			37
PT_400030	GU_400260	35			35
PT_400030	GU_400270	36			36
PT_400030	GU_400271	38			38
PT_400030	GU_400272	39			39
PT_400030	GU_400280	35			35
PT_400030	GU_400281	35			35
PT_400030	GU_400290	36			36
PT_400030	GU_400300	36			36
PT_400030	GU_400311	37			37
PT_400030	GU_400323	35			35
PT_400030	GU_400360	34			34
PT_400030	GU_400361	34			34
PT_400030	GU_400362	34			34
PT_400030	GU_400363	34			34
PT_400030	GU_400370	35			35
PT_400030	GU_400850	36			36
PT_400032	GU_400430	29			29
PT_400034	GU_400940	29			29

## Market Operator Monthly Report

PT_400034	GU_401090	29		29
PT_400034	GU_401440	29		29
PT_400035	GU_400480	55		55
PT_400037	GU_400500	32		32
PT_400041	GU_400530	58		58
PT_400044	GU_400540	53		53
PT_400054	GU_400620	29		29
PT_400055	GU_400630	29		29
PT_400062	GU_401550	5		5
PT_400062	GU_401551	5		5
PT_400062	GU_401560	5		5
PT_400062	GU_401570	5		5
PT_400062	GU_401580	5		5
PT_400064	GU_400750	31		31
PT_400064	GU_400751	31		31
PT_400064	GU_400752	31		31
PT_400064	GU_400753	31		31
PT_400064	GU_400754	31		31
PT_400064	GU_400760	31		31
PT_400064	GU_400761	31		31
PT_400064	GU_400762	31		31
PT_400064	GU_400770	31		31
PT_400064	GU_400771	31		31
PT_400064	GU_400780	31		31
PT_400064	GU_400781	31		31
PT_400075	GU_400930	40		40
PT_400077	GU_400950	29		29
PT_400078	GU_401010	31		31
PT_400078	GU_401011	31		31
PT_500024	GU_500040	37		37
PT_500024	GU_500041	31		31
PT_500027	GU_500130	86		86
PT_500027	GU_500131	86		86
PT_500027	GU_500140	86		86
PT_500040	GU_500280	31		31
PT_500040	GU_500281	31		31
PT_500040	GU_500282	31		31
PT_500040	GU_500283	31		31
PT_500040	GU_500284	31		31
PT_500045	GU_500820	31		31
PT_500045	GU_500821	31		31
PT_500045	GU_500822	31		31
PT_500045	GU_500823	31		31
PT_500045	GU_500824	31		31
PT_500045	GU_500825	31		31
PT_500048	GU_500904	52		52
PT_500050	GU_501040	29		29
PT_500050	GU_501050	29		29
PT_500050	GU_501150	29		29
PT_500050	GU_501190	29		29
PT_500053	GU_501130	31		31
PT_500066	GU_501210	29		29

## Market Operator Monthly Report

PT_400021	GU_400021			31	31
PT_400021	GU_400050			31	31
PT_400021	GU_400060			31	31
PT_400021	GU_400070			31	31
PT_400021	GU_400080			31	31
PT_400021	GU_400591			31	31
PT_400021	GU_400600			31	31
PT_400021	GU_400910			31	31
PT_400021	GU_400920			31	31
PT_400021	GU_401080			31	31
PT_400021	GU_401380			31	31
PT_400021	GU_401600			7	7
PT_400025	GU_400130			31	31
PT_400030	GU_400310			31	31
PT_400032	GU_400380			14	14
PT_400032	GU_400430			4	4
PT_400034	GU_400940			4	4
PT_400034	GU_401090			4	4
PT_400034	GU_401440			4	4
PT_400038	GU_400550			31	31
PT_400050	GU_400650			31	31
PT_400050	GU_400660			31	31
PT_400050	GU_401000			31	31
PT_400050	GU_401060			31	31
PT_400050	GU_401150			31	31
PT_400050	GU_401240			31	31
PT_400050	GU_401250			31	31
PT_400054	GU_400620			4	4
PT_400055	GU_400630			4	4
PT_400062	GU_400730			31	31
PT_400062	GU_400731			31	31
PT_400062	GU_400840			31	31
PT_400062	GU_401310			31	31
PT_400066	GU_401320			31	31
PT_400066	GU_401370			31	31
PT_400066	GU_401410			31	31
PT_400066	GU_401420			31	31
PT_400066	GU_401430			31	31
PT_400077	GU_400950			4	4
PT_400082	GU_401100			31	31
PT_400087	GU_401230			31	31
PT_400123	GU_401470			31	31
PT_500021	GU_500010			31	31
PT_500021	GU_500740			31	31
PT_500021	GU_501160			31	31
PT_500032	GU_500211			31	31
PT_500032	GU_501120			31	31
PT_500039	GU_500270			31	31
PT_500044	GU_500720			31	31
PT_500047	GU_500790			31	31
PT_500050	GU_501040			4	4
PT_500050	GU_501050			4	4

## Market Operator Monthly Report

PT_500050	GU_501150			4	4
PT_500050	GU_501190			4	4
PT_500061	GU_501170			31	31
PT_500062	GU_501180			31	31
PT_500066	GU_501210			4	4
PT_400021	I_ROIEWIC	31			31
PT_500075	I_NIMOYLE	51			51
PT_500024	I_NIMOYLE	31			31
PT_400114	I_ROIEWIC	4			4
PT_500021	I_NIMOYLE	31			31
PT_500031	I_NIMOYLE	31			31
PT_500069	I_NIMOYLE	92			92
PT_500058	I_NIMOYLE	31			31
PT_400096	I_ROIEWIC	92			92
PT_500037	I_NIMOYLE	31			31
PT_400113	I_ROIEWIC	31			31
PT_400136	I_ROIEWIC	65			65
PT_400115	I_ROIEWIC	31			31
PT_500070	I_NIMOYLE	35			35
PT_400108	I_ROIEWIC	34			34
PT_400099	I_ROIEWIC	31			31
PT_400030	I_ROIEWIC	33			33
	<b>Total</b>	<b>3847</b>	<b>24</b>	<b>1433</b>	<b>5304</b>
	<b>Percentage</b>	<b>72.5%</b>	<b>0.5%</b>	<b>27.0%</b>	<b>100%</b>

Table 29 - Default Commercial Data Used

## 14 Appendix G: Total Charges and Payments Data

The tables below list historical values for Total Charges and Total Payments in the SEM by month and currency since start of the SEM.

- Month of inclusion based on invoice date.
- Amounts are after application of Settlement Reallocation.

Market		Energy	Capacity	Market Operator	M+4 Energy	M+4 Capacity	M+4 Market Operator	M+13 Energy	M+13 Capacity	M+13 Market Operator	Ad-hoc Energy	Ad-hoc Capacity	Ad-hoc Market Operator	Total
May-13	ROI	£75,322,037.00	£18,225,439.33	£1,992,774.31	£1,158,818.37	£146,111.71	£15,573.02	£111,887.20	£28,127.61	£1,193.04	£152,210.12	£652.17	£0.00	97,154,823.88
	NI	£31,159,914.52	£5,593,300.54	£573,502.76	£82,329.55	£16,818.23	£626.00	£137,450.86	£29,792.11	£1,305.88	£59,854.79	£266.11	£0.00	37,655,161.35
Jun-13	ROI	£53,639,376.33	£23,772,504.60	£1,559,489.89	£540,072.04	£142,565.06	£7,016.24	£102,851.57	£13,071.70	£771.48	£998.47	£0.00	£0.00	79,778,717.38
	NI	£23,668,207.38	£5,028,617.48	£449,494.74	£57,959.79	£29,005.42	£934.94	£79,008.70	£15,600.91	£697.05	£156,734.88	£0.00	£0.00	29,486,261.29
Jul-13	ROI	£62,352,631.32	£18,204,333.81	£1,583,236.61	£975,631.58	£172,502.45	£7,848.20	£63,562.31	£16,373.37	£690.66	£904,389.43	£100,791.99	£0.00	84,381,991.73
	NI	£23,916,092.51	£6,533,901.21	£432,681.38	£92,026.95	£16,773.81	£694.39	£14,400.35	£3,081.82	£130.14	£204,040.13	£152.19	£0.00	31,213,974.88
Aug-13	ROI	£56,496,937.96	£18,035,531.87	£1,912,592.26	£627,109.44	£97,756.86	£9,727.88	£15,214,588.11	£12,273.00	£808.64	£0.00	£0.00	£0.00	92,407,326.02
	NI	£27,126,182.07	£5,775,203.97	£544,995.28	£40,928.60	£52,444.19	£3,674.11	£6,235,909.64	£5,483.53	£223.46	£0.00	£0.00	£0.00	39,785,044.85
Sep-13	ROI	£55,820,919.05	£17,453,995.09	£1,590,840.77	£871,046.03	£104,726.26	£5,239.42	£999,727.04	£165,703.71	£11,019.16	£0.00	£324,142.04	£0.00	77,347,358.57
	NI	£24,090,106.60	£5,421,565.87	£449,859.41	£232,772.49	£25,268.64	£1,265.21	£119,141.06	£13,356.37	£112.60	£0.00	£78,558.74	£0.00	30,432,006.99
Oct-13	ROI	£63,823,874.40	£19,230,805.66	£1,459,680.53	£665,669.95	£112,389.91	£4,962.50	£1,056,400.80	£25,936.14	£883.81	£1,141,610.70	£0.00	£0.00	87,522,214.40
	NI	£25,790,053.14	£5,439,039.21	£415,013.56	£77,362.24	£11,759.56	£437.51	£286,637.75	£5,978.86	£356.54	£375,245.80	£0.00	£0.00	32,401,884.17
Nov-13	ROI	£94,237,410.27	£26,111,830.04	£1,768,924.89	£1,095,479.88	£186,255.41	£10,667.03	£1,203,541.15	£58,436.00	£1,881.53	£2,162,845.35	£0.00	£0.00	126,837,271.55
	NI	£40,120,956.32	£9,383,627.04	£512,345.05	£79,171.25	£13,455.28	£753.82	£304,333.70	£18,778.73	£614.32	£591,913.98	£0.00	£0.00	51,025,949.49
Dec-13	ROI	£59,731,699.86	£27,864,400.43	£1,135,385.04	£777,997.00	£175,711.33	£8,515.85	£874,795.89	£44,746.05	£1,825.43	£0.00	£0.00	£0.00	90,615,076.88
	NI	£26,108,999.75	£9,220,782.35	£325,646.22	£58,193.58	£77,917.35	£571.58	£137,253.25	£14,599.87	£487.47	£0.00	£0.00	£0.00	35,944,451.42
Jan-14	ROI	£114,421,340.65	£24,793,160.86	£2,129,762.27	£798,055.27	£127,352.61	£7,984.34	£204,139.96	£36,418.59	£1,561.86	£473,584.35	£0.00	£0.00	142,993,360.76
	NI	£51,824,850.54	£9,142,377.84	£617,870.56	£62,006.75	£10,003.11	£595.49	£67,335.86	£14,491.45	£574.85	£141,821.26	£0.00	£0.00	61,881,927.71
Feb-14	ROI	£66,102,607.16	£27,393,747.26	£1,496,376.58	£305,733.65	£76,911.71	£2,819.89	£479,013.35	£22,451.87	£9,128.65	£381,194.91	£0.00	£0.00	96,269,985.03
	NI	£31,130,342.59	£9,846,758.26	£422,869.99	£25,720.60	£3,900.39	£240.37	£187,918.65	£15,303.03	£942.92	£235.51	£0.00	£0.00	41,634,232.31
Mar-14	ROI	£70,041,213.49	£26,285,336.21	£1,449,159.95	£261,906.17	£61,216.38	£2,226.19	£92,283.95	£30,407.22	£960.16	£0.00	£0.00	£0.00	98,224,709.72
	NI	£30,175,818.70	£9,293,564.48	£406,620.40	£46,940.79	£7,639.04	£408.77	£52,408.32	£11,933.67	£470.83	£0.00	£0.00	£0.00	39,995,805.00
Apr-14	ROI	£62,098,778.40	£21,155,742.39	£1,388,175.41	£528,104.58	£142,466.39	£4,901.73	£242,053.48	£38,030.86	£1,783.00	£0.00	£0.00	£0.00	85,600,036.24
	NI	£26,448,426.91	£9,644,850.74	£386,840.18	£307,948.88	£77,962.26	£2,649.15	£53,805.05	£9,613.13	£381.03	£0.00	£0.00	£0.00	36,932,477.33
May-14	ROI	£68,945,192.38	£22,029,381.87	£1,615,436.17	£629,905.18	£213,410.99	£7,659.07	£192,421.65	£21,030.53	£1,110.05	£429,407.30	£0.00	£0.00	94,084,955.19
	NI	£28,649,957.73	£7,313,397.03	£439,831.96	£149,812.37	£34,908.87	£997.82	£58,386.93	£9,959.93	£468.77	£0.03	£0.00	£0.00	36,657,721.44

Table 30 - Total Charges by Month

## Market Operator Monthly Report

Market		Energy	Capacity	M+4 Energy	M+4 Capacity	M+4 Market Operator	M+13 Energy	M+13 Capacity	M+13 Market Operator	Ad-hoc Energy	Ad-hoc Capacity	Ad-hoc Market Operator	Total
May-13	ROI	€79,510,881.07	€17,301,213.34	€1,115,672.13	€140,740.46	€14,573.32	€112,291.28	€35,779.70	€1,189.42	€224,599.73	€414.39	€0.00	€98,457,354.84
	NI	€31,347,092.48	€6,357,978.47	€111,377.22	€21,468.44	€1,305.48	€139,334.16	€23,234.36	€1,305.31	€1,089.56	€473.49	€0.00	€38,004,558.97
Jun-13	ROI	€62,856,676.93	€22,620,279.73	€495,012.84	€137,864.81	€7,303.60	€61,553.46	€12,972.87	€771.42	€7,168.09	€0.00	€0.00	€86,199,603.75
	NI	€20,005,532.91	€5,952,891.95	€123,662.20	€32,894.53	€1,059.57	€67,817.83	€15,562.24	€697.08	€160,132.43	€0.00	€0.00	€26,360,250.74
Jul-13	ROI	€64,373,421.59	€18,247,432.96	€964,041.86	€173,902.58	€7,906.35	€55,507.11	€17,916.41	€690.80	€924,828.19	€100,969.43	€0.00	€84,866,617.28
	NI	€24,434,329.71	€6,507,406.51	€94,802.99	€15,679.58	€710.78	€12,978.92	€1,777.48	€130.12	€206,821.52	€0.00	€0.00	€31,274,637.61
Aug-13	ROI	€63,981,400.27	€17,490,496.02	€574,908.31	€103,763.23	€10,083.25	€16,006,162.20	€10,709.76	€808.95	€986.69	€0.00	€0.00	€98,179,318.68
	NI	€23,798,215.28	€6,256,493.76	€56,417.87	€47,293.31	€2,768.68	€5,757,671.12	€6,849.67	€223.45	€18,449.41	€0.00	€0.00	€35,944,382.55
Sep-13	ROI	€62,051,092.84	€16,936,760.25	€1,068,679.90	€128,081.30	€7,144.86	€971,541.05	€151,818.04	€11,020.17	€0.00	€416,852.38	€0.00	€81,742,990.79
	NI	€21,229,997.89	€5,817,250.40	€156,880.27	€5,515.98	€108.46	€19,000.09	€25,023.77	€112.65	€0.00	€92.64	€0.00	€27,253,982.15
Oct-13	ROI	€70,147,828.86	€18,147,894.98	€704,498.56	€112,615.82	€6,476.59	€907,795.23	€25,996.67	€883.97	€1,040,063.76	€0.00	€0.00	€91,094,054.44
	NI	€24,161,387.51	€6,338,740.34	€71,964.41	€11,643.56	€445.89	€216,015.53	€5,767.60	€356.54	€303,081.27	€0.00	€0.00	€31,109,402.65
Nov-13	ROI	€101,727,467.69	€26,117,243.83	€1,224,763.25	€189,998.42	€12,263.50	€1,215,831.35	€57,206.41	€1,470.22	€2,187,635.43	€0.00	€0.00	€132,733,880.10
	NI	€38,593,632.08	€9,396,822.98	€111,667.01	€10,330.33	€754.66	€405,512.07	€19,818.44	€503.29	€523,998.04	€0.00	€0.00	€49,063,038.90
Dec-13	ROI	€65,016,104.57	€28,265,983.93	€814,481.63	€237,772.30	€8,560.54	€742,019.49	€45,101.88	€1,753.62	€0.00	€0.00	€0.00	€95,131,777.96
	NI	€26,883,033.60	€8,854,167.97	€62,225.77	€25,458.47	€563.46	€254,389.50	€14,183.48	€467.80	€0.00	€0.00	€0.00	€36,094,490.05
Jan-14	ROI	€134,009,133.84	€23,642,517.67	€793,440.19	€126,432.23	€7,824.65	€221,578.57	€36,894.00	€1,646.36	€479,971.01	€0.00	€0.00	€159,319,438.52
	NI	€51,714,479.92	€10,157,332.65	€82,843.03	€10,154.76	€543.56	€66,035.81	€14,046.97	€605.11	€109,684.36	€0.00	€0.00	€62,155,726.17
Feb-14	ROI	€78,679,881.12	€26,819,095.36	€304,687.52	€76,805.50	€2,536.46	€531,739.65	€29,343.21	€10,349.43	€443,421.38	€0.00	€0.00	€106,897,859.63
	NI	€29,747,186.53	€10,347,544.45	€37,918.21	€4,082.15	€214.26	€179,315.25	€9,737.45	€350.80	€3.55	€0.00	€0.00	€40,326,352.65
Mar-14	ROI	€75,149,006.14	€26,180,620.54	€259,644.98	€60,397.08	€2,170.67	€127,303.70	€28,200.28	€960.40	€0.00	€0.00	€0.00	€101,808,303.79
	NI	€29,749,446.42	€9,292,032.85	€46,950.40	€8,326.93	€408.65	€52,017.29	€13,760.80	€471.08	€0.00	€0.00	€0.00	€39,163,414.42
Apr-14	ROI	€65,482,679.64	€21,981,963.17	€549,302.08	€147,627.43	€4,399.40	€259,726.57	€38,566.49	€1,783.33	€0.00	€0.00	€0.00	€88,466,048.11
	NI	€25,517,456.45	€8,979,409.88	€303,950.50	€73,719.22	€2,138.60	€56,294.66	€9,188.57	€381.08	€0.00	€0.00	€0.00	€34,942,538.96
May-14	ROI	€68,502,489.93	€22,405,052.21	€652,683.44	€210,307.65	€7,807.32	€249,029.58	€16,425.79	€1,110.17	€9,581.32	€0.00	€0.00	€92,054,487.41
	NI	€27,515,054.00	€7,036,489.15	€150,145.26	€37,452.65	€999.79	€81,713.52	€13,718.04	€468.77	€3.89	€0.00	€0.00	€34,836,045.07

Table 31 - Total Payments by Month

## 15 Appendix H: Full Balancing Costs

Historical figures for full Balancing Costs of both the Trading and Capacity Markets, for the current financial year (October to September), are provided below. Information related to periods before this is available in previous Monthly Market Operator Reports.

- Positive values indicate Payments were greater than Charges.
- Negative values indicate Charges were greater than Payments.

### Trading Market

Date Of Invoice	Week No	SEM Balancing Costs	VAT Balancing Costs
04/10/2013	38	-€674,643.65	-€7,304.11
11/10/2013	39	€1,470,454.75	€282,967.81
18/10/2013	40	€1,565,540.72	€261,420.05
25/10/2013	41	€1,216,501.47	-€203,049.68
01/11/2013	42	€1,582,640.50	€227,924.39
08/11/2013	43	€2,175,993.38	€368,919.09
15/11/2013	44	€234,229.47	€89,641.72
22/11/2013	45	€893,912.83	€182,707.89
29/11/2013	46	€112,506.60	€1,606.89
06/12/2013	47	€2,647,032.97	€215,777.46
13/12/2013	48	€752,640.18	€133,576.36
20/12/2013	49	€1,841,603.06	€263,539.44
03/01/2014	50	€2,846,523.20	€390,127.91
03/01/2014	51	€3,745,323.83	€500,276.98
10/01/2014	52	€3,597,778.03	€450,932.98
17/01/2014	1	€3,228,601.37	€473,806.13
24/01/2014	2	€1,326,598.20	€473,806.13
31/01/2014	3	€2,554,714.89	€273,646.36
07/02/2014	4	€2,844,930.59	€413,677.68
14/02/2014	5	€2,595,824.97	€344,267.69
21/02/2014	6	€2,011,856.07	€289,132.53
28/02/2014	7	€1,795,332.18	€260,445.50
07/03/2014	8	€1,243,165.04	€640,903.32
14/03/2014	9	€842,764.84	€498,771.98
21/03/2014	10	€566,483.84	€51,979.84
28/03/2014	11	€604,404.46	€287,653.95
04/04/2014	12	€1,005,736.03	€ 304,802.51
11/04/2014	13	€508,440.18	€ 423,038.98
18/04/2014	14	-€217,860.87	€ 56,687.76
25/04/2014	15	€843,391.20	-€ 37,846.05
02/05/2014	16	-€420,682.47	€188,369.50
09/05/2014	17	€347,401.87	-€241,641.43
16/05/2014	18	-€886,208.32	€41,357.12
23/05/2014	19	-€1,046,996.68	-€292,108.29
30/05/2014	20	-€686,867.47	-€79,044.71

Table 32 – Full Balancing Costs for Trading Charges and Payments

Note: SEM Balancing Costs are provided based on daily exchange rates; VAT Balancing Costs are based on the Invoicing Date Trading Day exchange rate. VAT Balancing costs exclude Currency Cost related VAT.

### *Capacity Market*

Invoice Month	SEM Balancing Costs	VAT Balancing Costs
October 2013	-€304.76	-€94.05
November 2013	-€372.56	€2,045.28
December 2013	-€394.40	€-454.73
January 2014	-€424.40	-€1,164.62
February 2014	-€330.78	-€1,955.12
March 2014	-€332.7	€5,757.11
April 2014	-€294.96	-€3,446.68
May 2014	-€278.55	€1,776.78

**Table 33 - Balancing Costs for Capacity Settlement**

Note: SEM Capacity Balancing Costs and VAT Balancing Costs are provided based on Annual Capacity exchange rate. VAT Balancing costs exclude Currency Cost related VAT.



## 16 Appendix I: MSP Algorithms

The Market Operator has two different certified solvers used to determine Unit Commitment. These solvers use the Lagrangian Relaxation (LR) and Mixed Integer Programming (MIP) methodologies.

The primary algorithm used in the SEM is Lagrangian Relaxation (LR). Under certain schedule outcomes this solution is compared to results achieved using MIP. The SEMO policy on the use of MIP has been updated and is available from the SEMO website [here](#).

Historical information on runs and dates where the MIP algorithm has been used for published results is provided below.

Month	Ex-Ante	Ex-Ante 2	Ex-Post Indicative	Ex-Post Initial	Within Day
May 2013	-	-	-	-	-
June 2013	-	18/06/2013	-	-	-
July 2013	-	-	-	25/07/2013	16/07/2013
August 2013	-	13/08/2013	14/08/2013	-	05/08/2013
September 2013	-	24/09/2013	05/09/2013	12/09/2013	03/09/2013 30/09/2013
October 2013	-	-	30/10/2013	07/10/2013, 24/10/2013 & 30/10/2013	-
November 2013	-	-	14/11/2013 20/11/2013	14/11/2013	17/11/2013 30/11/2013
December 2013	02/12/2013 03/12/2013	02/12/2013	02/12/2013 21/12/2013	-	19/12/2013

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Month	Ex-Ante	Ex-Ante 2	Ex-Post Indicative	Ex-Post Initial	Within Day
January 2014	07/01/2014	-	05/01/2014 19/01/2014	04/01/2014 19/01/2014 21/01/2014	-
February 2014	26/02/2014	-	-	-	-
March 2014	-	26/03/2014 27/03/2014	15/03/2014 27/03/2014	22/03/2014	13/03/2014
April 2014	-	11/04/2014	-	07/04/2014	
May 2014	-	-	-	-	26/05/2014

Table 34 - MIP Algorithms

Operational Date	Trade Date	Run Type	LR Peak SMP	MIP Peak SMP	Published
04/03/2013	05/03/2013	EA1	€586.55	€301.78	MIP
11/03/2013	11/03/2013	WD1	€629.46	€333.37	MIP
11/03/2013	12/03/2013	EA2	€561.28	€221.27	MIP
12/03/2013	11/03/2013	EP1	€1,350.64	€699.49	MIP
15/03/2013	11/03/2013	EP2	€1,350.64	€699.49	MIP
17/03/2013	18/03/2013	EA1	€576.04	€346.00	MIP
18/03/2013	19/03/2013	EA2	€682.41	€346.00	MIP
19/03/2013	18/03/2013	EP1	€576.04	€372.23	MIP
20/03/2013	24/03/2013	EP2	€625.32	€168.48	MIP
21/03/2013	21/03/2013	WD1	€596.97	€259.45	MIP
27/03/2013	26/03/2013	EP1	€508.83	€265.65	MIP
30/03/2013	30/03/2013	WD1	€556.86	€396.00	MIP
30/03/2013	29/03/2013	EP1	€732.81	€414.64	MIP
30/03/2013	26/03/2013	EP2	€509.19	€265.65	MIP
09/04/2013	09/04/2013	WD1	€710.75	€123.59	MIP
29/04/2013	29/04/2013	WD1	€1000.00	€168.92	MIP
17/06/2013	18/06/2013	EA2	€576.24	€84.08	MIP
16/07/2013	16/07/2013	WD1	583.17	48.11	MIP
29/07/2013	25/07/2013	EP2	€591.29	€97.59	MIP
05/08/2013	05/08/2013	WD1	€1,000	€47.02	MIP
12/08/2013	13/08/2013	EA2	€591.14	€91.37	MIP
15/08/2013	14/08/2013	EP1	€590.51	€79.91	MIP
03/09/2013	03/09/2013	WD1	€591.42	€96.56	MIP
06/09/2013	05/09/2013	EP1	€598.70	€116.29	MIP
16/09/2013	12/09/2013	EP2	€1000.00	€313.90	MIP
23/09/2013	24/09/2013	EA2	€609.58	€98.56	MIP

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30/09/2013	30/09/2013	WD1	-€100.00	€31.47	MIP
11/10/2013	07/10/2013	EP2	€1000.00	€77.71	MIP
28/10/2013	24/10/2013	EP2	€517.40	€517.40	MIP
31/10/2013	30/10/2013	EP1	€596.88	€363.43	MIP
03/11/2013	30/10/2013	EP2	€596.88	€363.43	MIP
15/11/2013	14/11/2013	EP1	€555.85	€511.00	MIP
18/11/2013	14/11/2013	EP2	€679.09	€511.00	MIP
17/11/2013	17/11/2013	WD1	€638.64	€572.75	MIP
21/11/2013	20/11/2013	EP1	€ -100.00	€268.28	MIP
30/11/2013	30/11/2013	WD1	€568.78	€283.21	MIP
01/12/2013	02/12/2013	EA1	€569.78	€264.13	MIP
01/12/2013	02/12/2013	EA2	€569.78	€265.85	MIP
02/12/2013	02/12/2013	WD1	€651.62	€243.25	MIP
02/12/2013	03/12/2013	EA1	€1000.00	€311.25	MIP
21/12/2013	21/12/2013	WD1	€637.14	€308.15	MIP
23/12/2013	19/12/2013	EP2	€633.99	€371.89	MIP
08/01/2014	04/01/2014	EP2	€683.07	€550.00	MIP
06/01/2014	05/01/2014	EP1	€683.07	€550.86	MIP
06/01/2014	07/01/2014	EA1	€609.67	€238.04	MIP
20/01/2014	19/01/2014	EP1	€678.86	€592.00	MIP
23/01/2014	19/01/2014	EP2	€678.86	€592.00	MIP
25/01/2014	21/01/2014	EP2	€683.13	€405.24	MIP
26/02/2014	27/02/2014	EA1	€567.34	€172.40	MIP
13/03/2014	09/03/2014	EP2	€1000.00	€359.19	MIP
15/03/2014	15/03/2014	WD1	€1166.98	€101.84	MIP
22/03/2014	21/03/2014	EP1	€583.98	€337.87	MIP
26/03/2014	27/03/2014	EA2	€1000.00	€337.87	MIP
27/03/2014	27/03/2014	WD1	€1000.00	€486.54	MIP
27/03/2014	28/03/2014	EA2	€1000.00	€179.49	MIP
10/04/2014	11/04/2014	EA2	€539.67	€143.88	MIP
03/04/2014	07/04/2014	EP2	€573.67	€670.25	MIP
26/05/2014	26/05/2014	WD1	€578.28	€301.71	MIP

Table 35 - MIP Vs LR Peak Price Comparison