



# **Market Operator Monthly Report**

## **April 2015**

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### 1 Executive Summary

This Single Electricity Market Operator's (SEMO) report covers the month of operation of April 2015 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 April 2015, Settlements had no late publications as per the Trading and Settlement code.

169 general queries were received in April 2015. During the same period 164 general queries were resolved.

There were fourteen defaults by Participants during April 2015. The largest of these was an Energy Initial £4,687.30 invoice which was remedied on the same 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		-	2
Market Participants	Pricing & Scheduling	-	-
	Settlement	-	-
	Funds Transfer	14	-
	Credit Risk Management	-	-
SEMO	Pricing & Scheduling	-	7
	Settlement	-	-
	Funds Transfer	-	-
	Credit Risk Management	-	-
	Other	-	-
<b>Total</b>		<b>14</b>	<b>9</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 were no new Parties joining the Market in April 2015.

There were no terminating parties in April 2015.

Three new units became effective in the Market in April 2015.

- Acres Windfarm – APTG – (PT\_400066/GU401820)
- Woodhouse Windfarm – APTG – (PT\_400034/GU401680)
- Cloghboola Windfarm – APTG – (PT\_400162/GU401830)

There were no units de-registered from the Market in April 2015.

One Supplier unit became effective in the Market in April 2015.

- Panda Power Limited – SU – (PT\_400161/SU400185)

### ***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

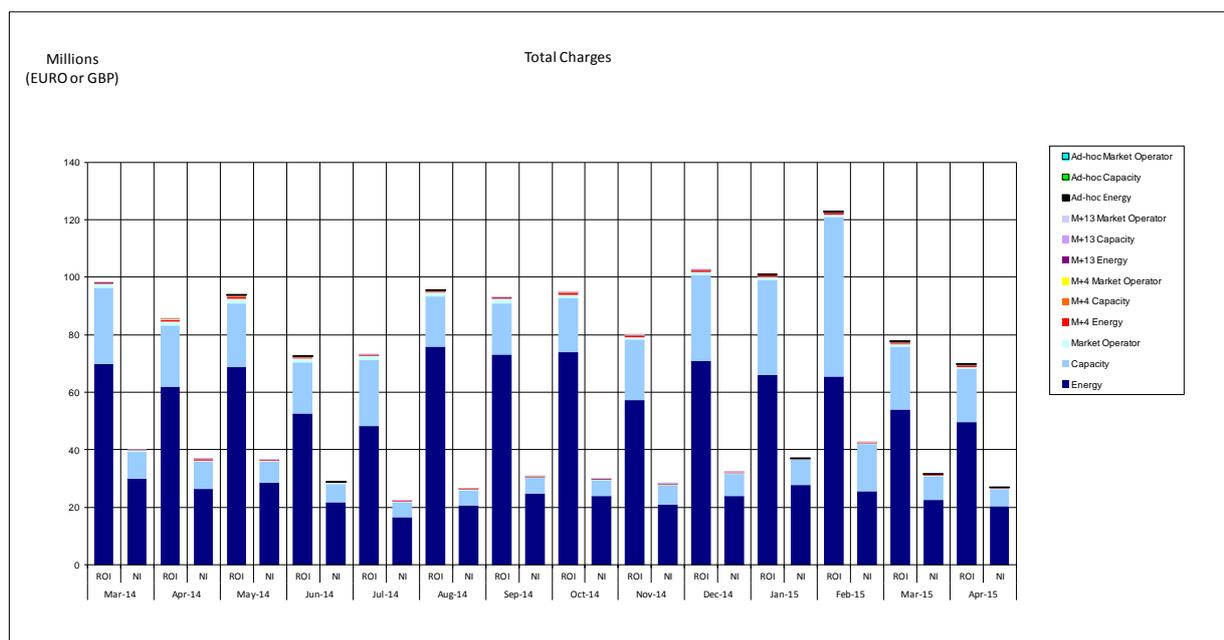


Figure 1 - Total Charges for Each Currency

Market	April 2015	
	ROI	NI
Energy	€49,671,449	£20,444,248
Capacity	€18,463,469	£5,917,010
Market Operator	€767,415	£191,002
M+4 Energy	€442,876	£178,167
M+4 Capacity	€132,859	£60,451
M+4 Market Operator	€2,618	£1,059
M+13 Energy	€174,481	£38,566
M+13 Capacity	€24,019	£8,077
M+13 Market Operator	€807	£245
Ad-hoc Energy	€34,067	£24,964
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
<b>Total</b>	<b>€69,714,060</b>	<b>£26,863,791</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](#).

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## Total Payments for Each Currency

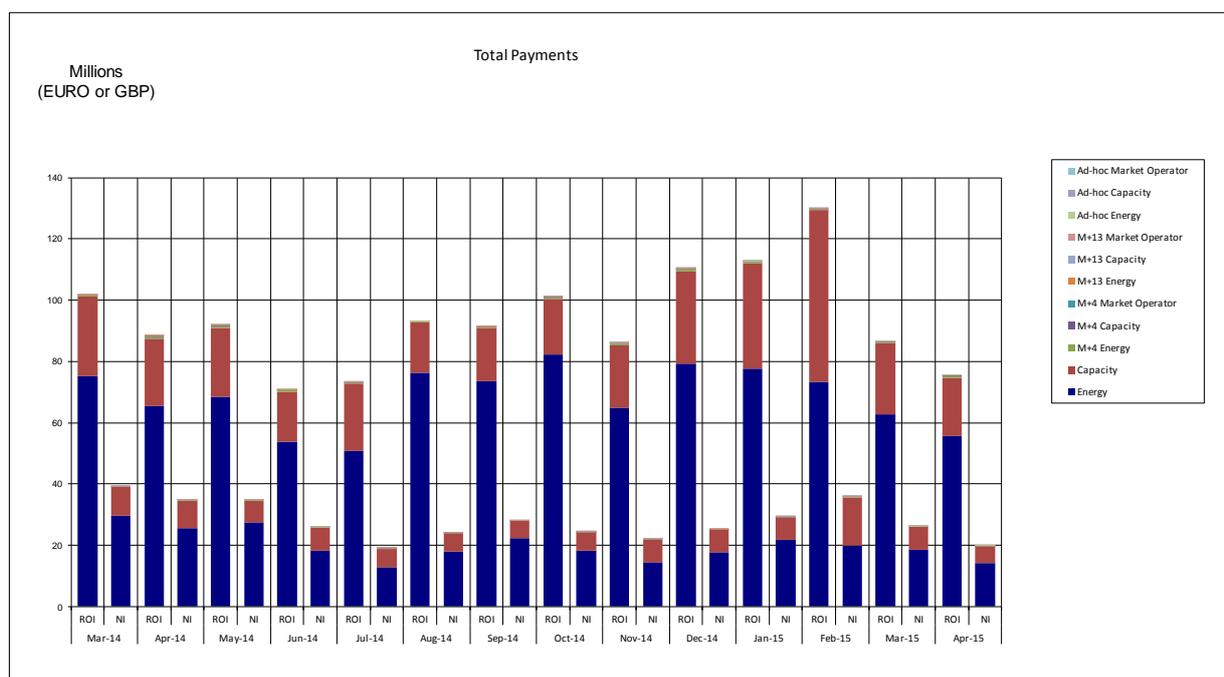


Figure 2 - Total Payments for Each Currency

Market	April 2015	
	ROI	NI
Energy	€55,596,682	£14,229,748
Capacity	€19,228,985	£5,312,670
M+4 Energy	€447,913	£178,040
M+4 Capacity	€132,018	£60,668
M+4 Market Operator	€2,588	£1,059
M+13 Energy	€93,343	£28,971
M+13 Capacity	€23,125	£8,625
M+13 Market Operator	€794	£242
Ad-hoc Energy	€27,655	£20,785
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
<b>Total</b>	<b>€75,553,104</b>	<b>£19,840,808</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.

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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:

April 2015	
Imbalance (Energy Only)	-€13,847,225.36

Table 4 - Balancing Costs for Energy Settlement

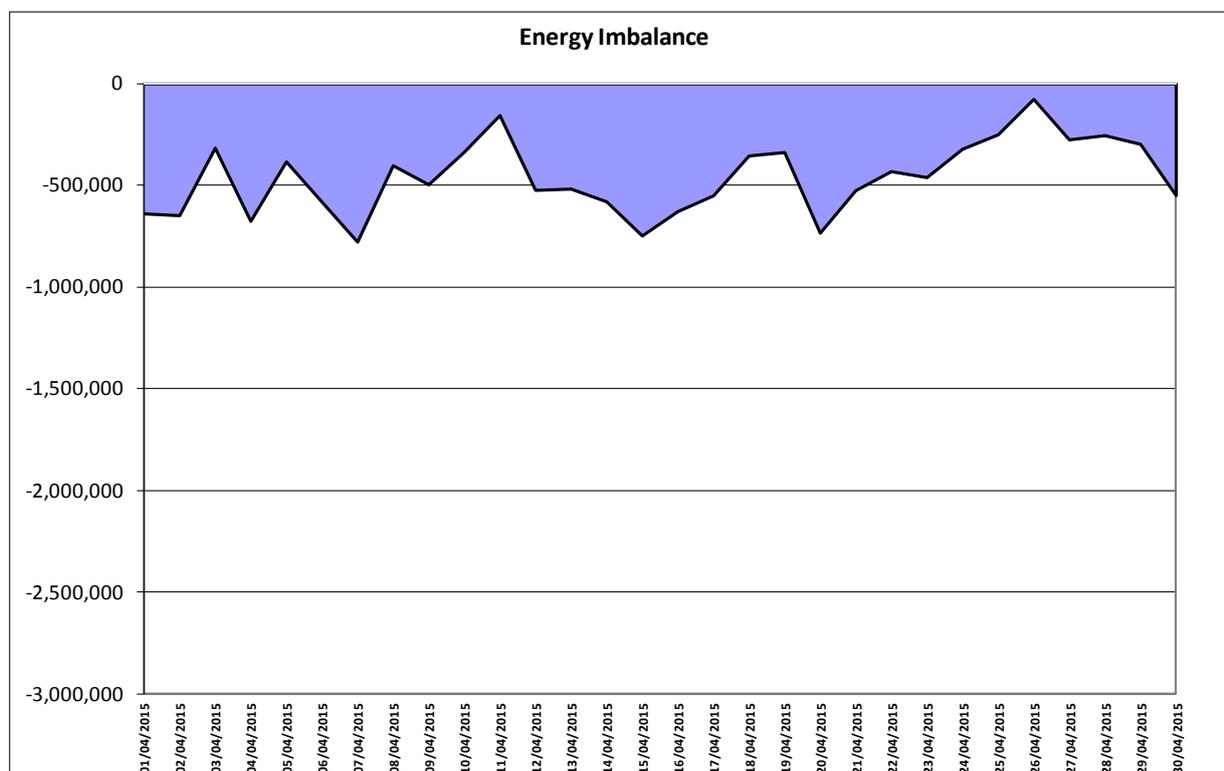


Figure 3 – Energy Imbalances

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](#).

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.

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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
04/04/2015	12	€449,126.81	-€64,651.98
11/04/2015	13	€89,053.88	-€38,664.98
18/04/2015	14	-€1,012,471.70	€128,936.18
24/04/2015	15	-€839,084.24	€128,786.90

**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:

April 2015	
Capacity Charges	-€39,714,545.67
Capacity Payments	€39,714,280.26
Balancing Costs	-€265.40
VAT	-€0.08

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

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)

## Market Operator Monthly Report

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
28/03/2015	03/03/2015	12	-£18,266.29	-£3,514.82	-£21,781.11
04/04/2015	10/03/2015	13	£2,954.74	£3,959.99	£6,914.73
11/03/2015	18/03/2015	14	-£5,868.44	£27,310.01	£21,441.57
18/03/2015	24/03/2015	15	-£5,263.05	£19,844.01	£14,580.96

**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 £21,441.57 and a cost of £21,781.11. 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 (£).

Date Of Invoice	Capacity Month	Currency Costs For Capacity Settlement
12/05/2015	April 2015	£7,848.14

**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

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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 2014. The values expressed in Euros are as follows.

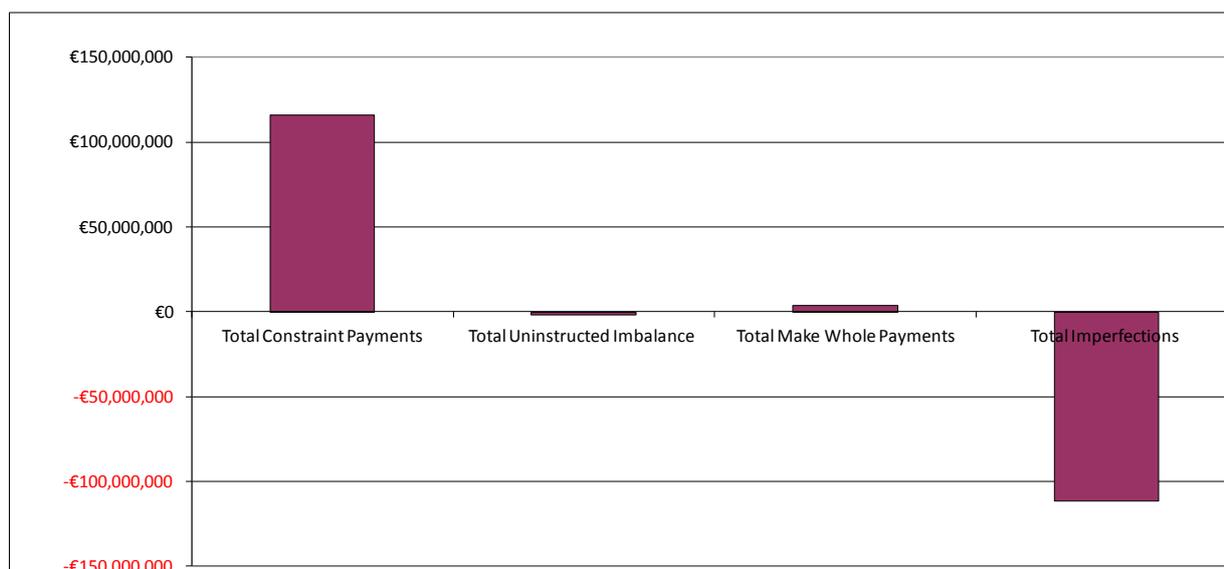
This table makes use of the values taken from the Initial Settlement Run of Trading payments and charges.

Total Constraint Payments	Total Uninstructed Imbalance	Total Make Whole Payments	Total Imperfections
€116,155,454.54	-€1,792,588.74	€3,590,079.31	-€111,709,338.30

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

Note: The Total Constraints Payment figure above has been updated to contain Interconnector Unit Gate variables.

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](#).

### ***Financial Changes between Initial Settlement and Subsequent Reruns***

The following graphs provide a breakdown of resettlement amounts for the M+4 resettlement period of December 2014 and M+13 resettlement period of March 2014 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).

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- Negative amounts indicate net additional payment to be made to Participants (Payments).

The reverse is true for Figure 7 & 10

## M+4 Resettlement

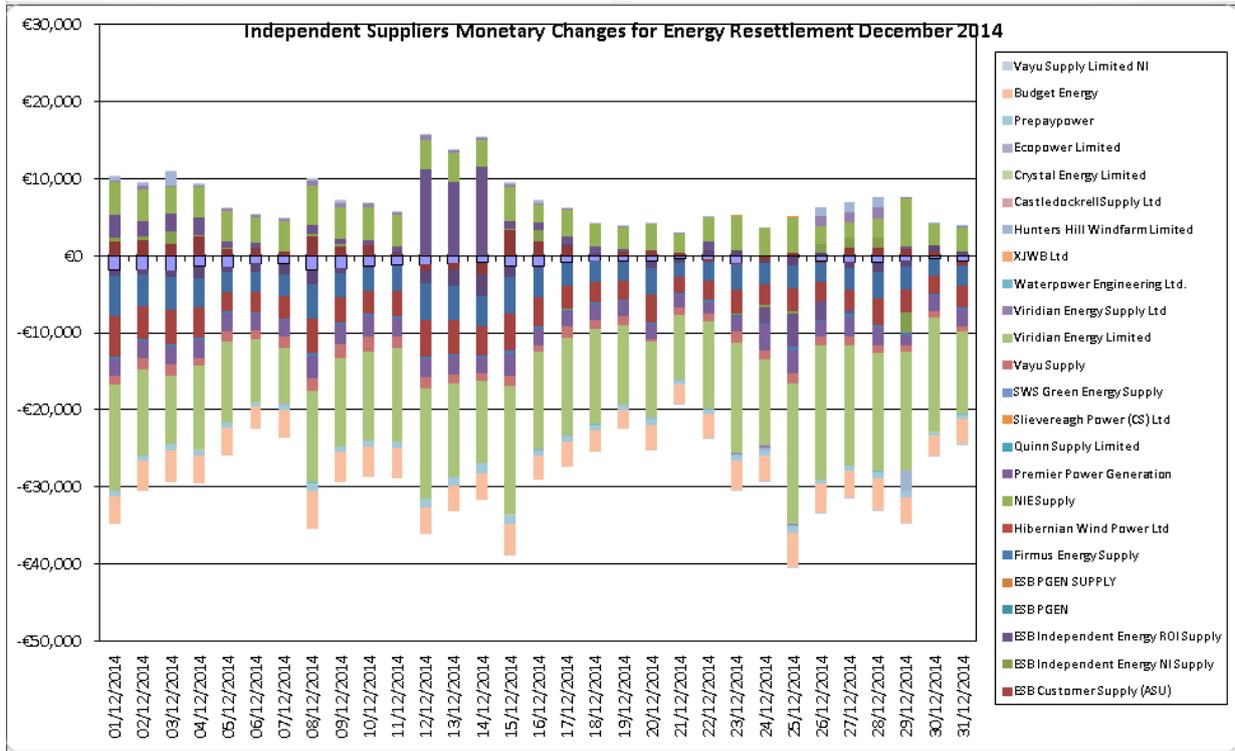


Figure 5 – Independent Suppliers Monetary Changes for Energy Resettlement – December 2014

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

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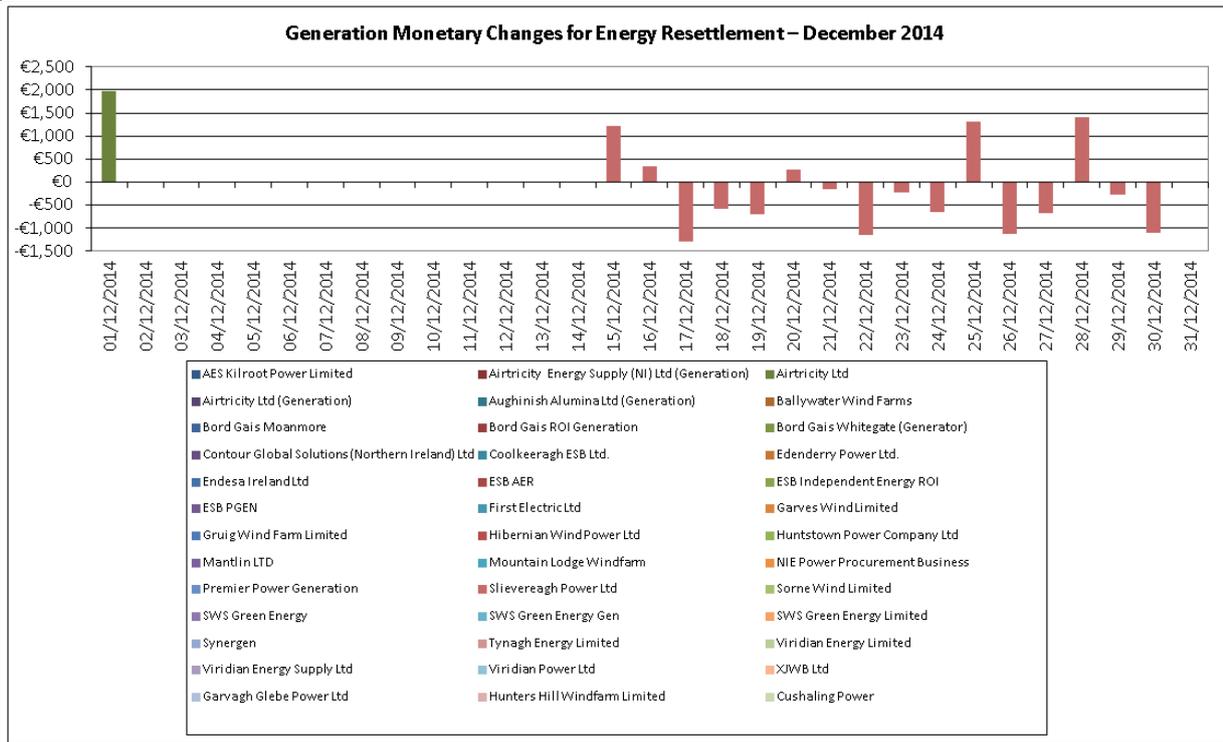


Figure 6 – Generation Monetary Changes for Energy Resettlement – December 2014

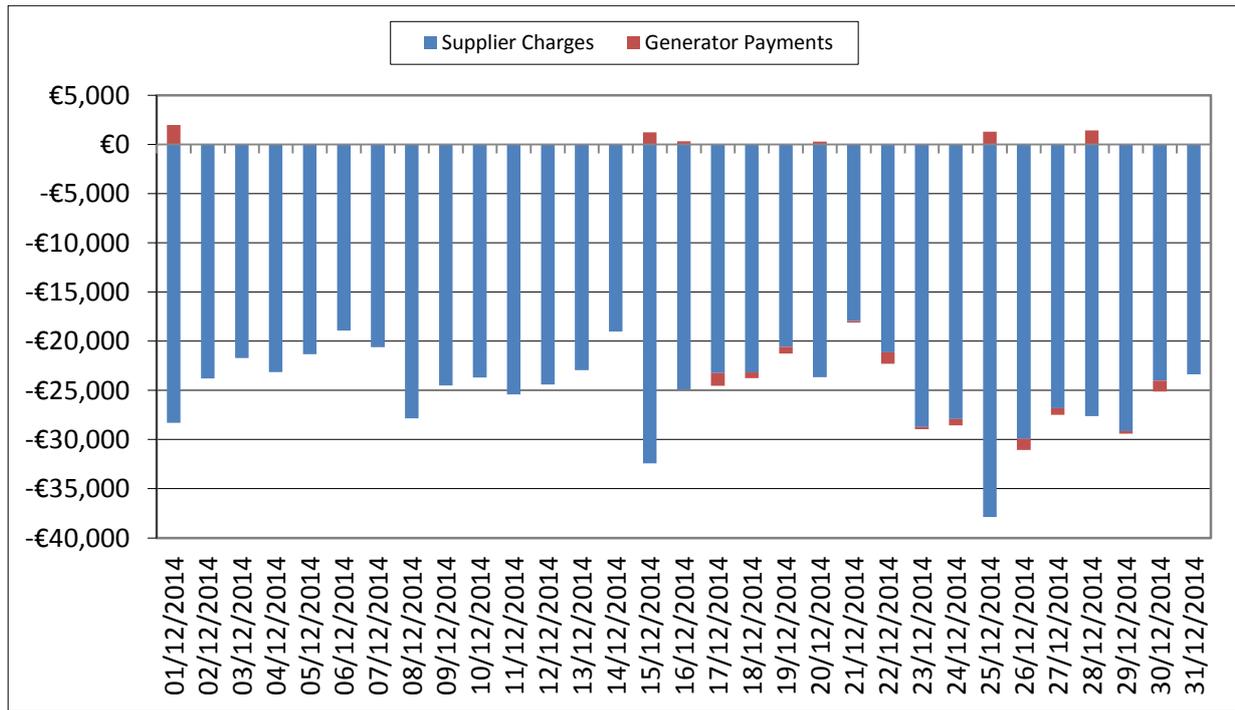


Figure 7 – Total Monetary Changes for Energy Resettlement – December 2014

M+13 Resettlement

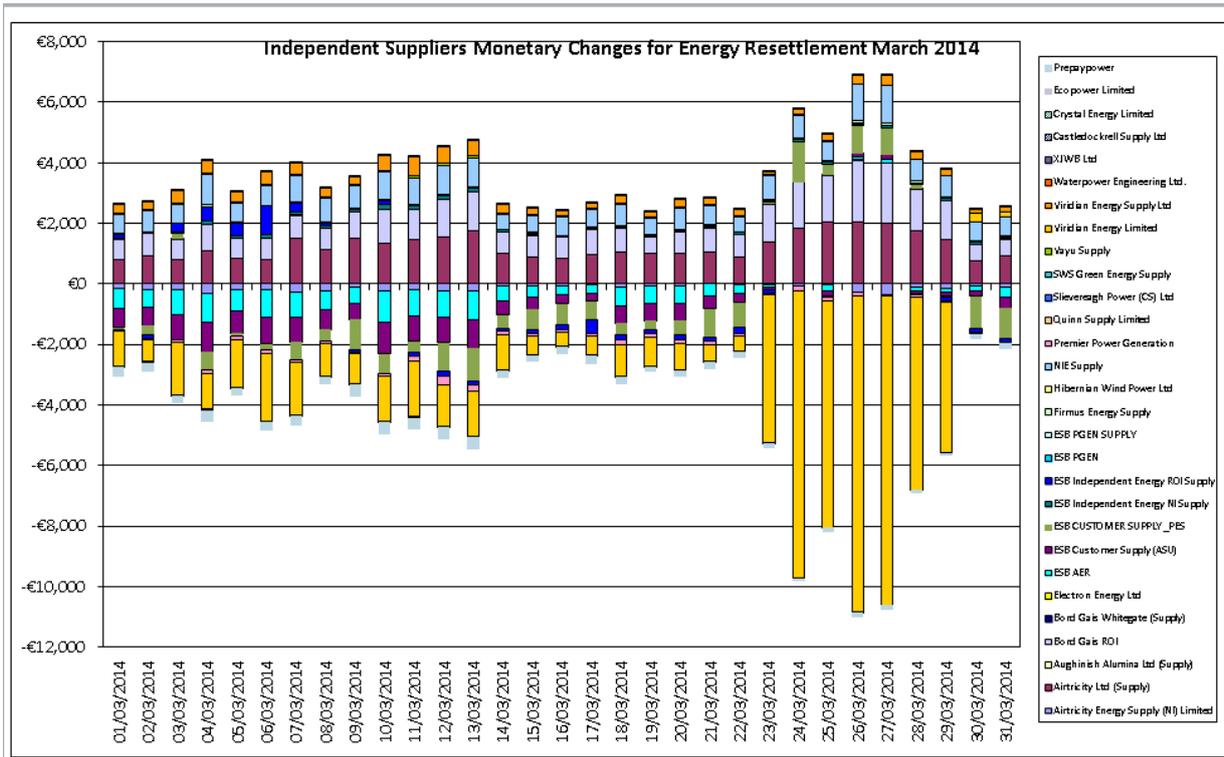


Figure 8 - Independent Suppliers Monetary Changes for Energy Resettlement - March 2014

The above variances relates purely to rounding for Participants between M+4 and M+13 Resettlement.

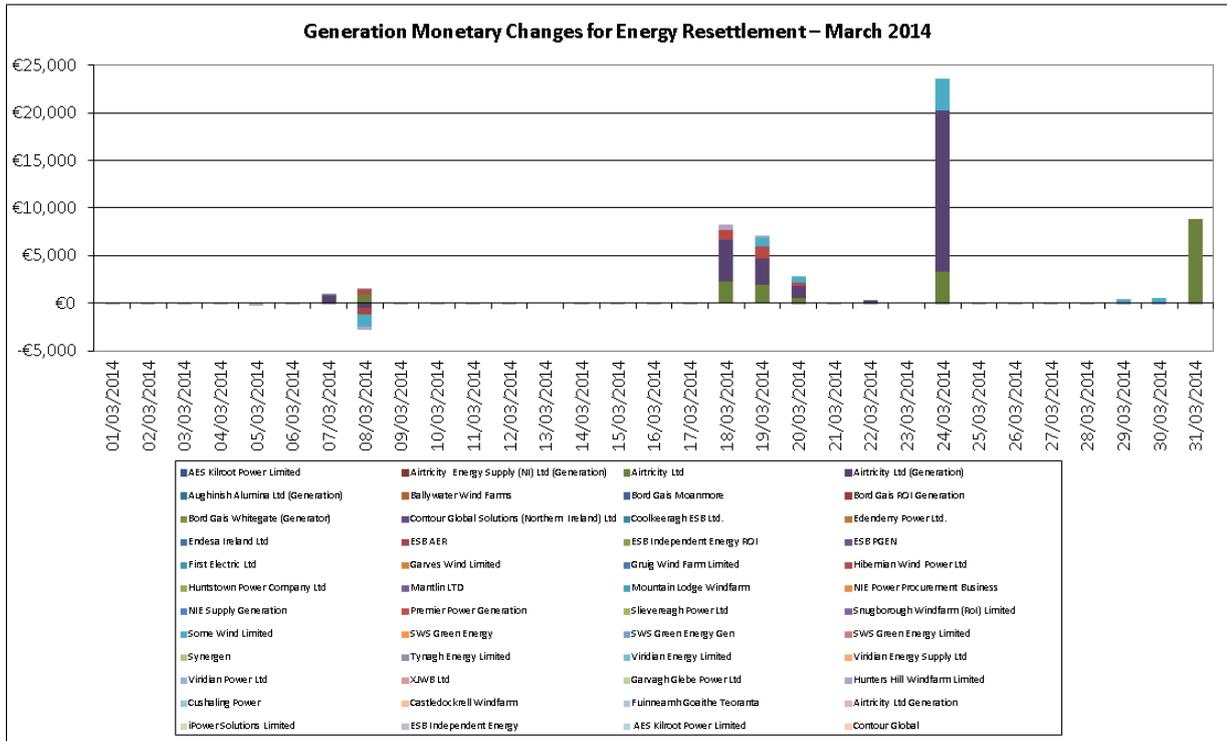


Figure 9 - Generation Monetary Changes for Energy Resettlement - March 2014

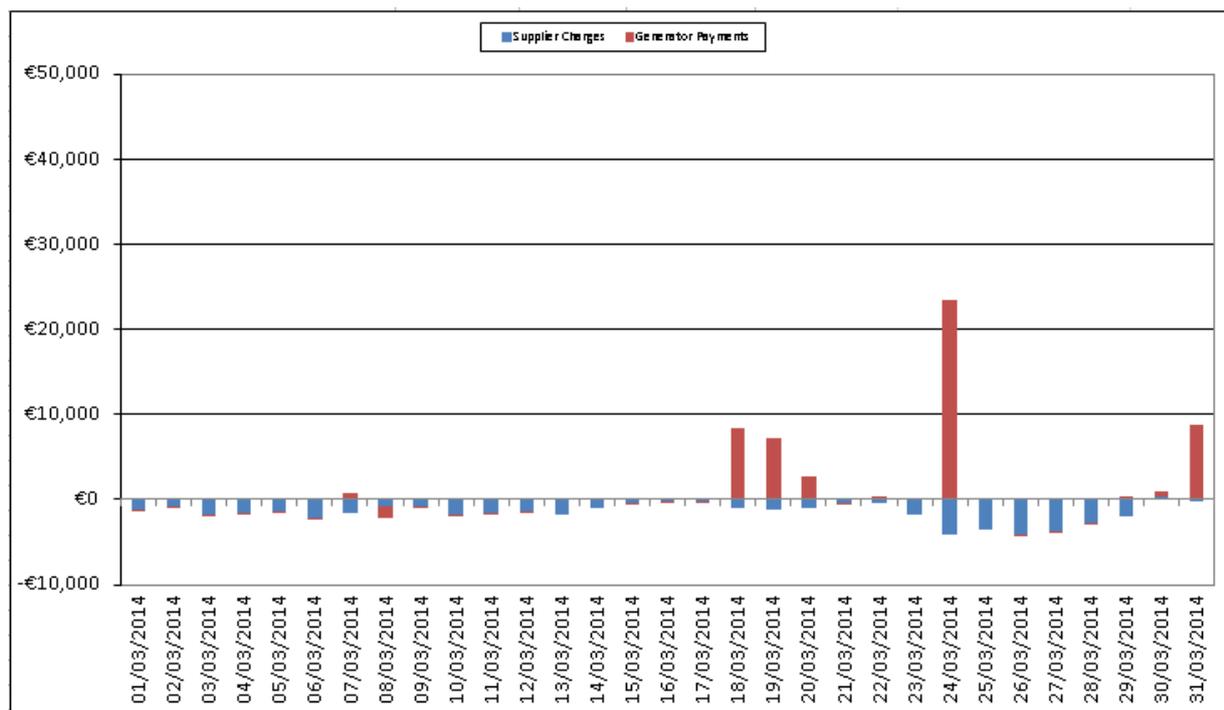


Figure 10 - Total Monetary Changes for Energy Resettlement – March 2014

### 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.

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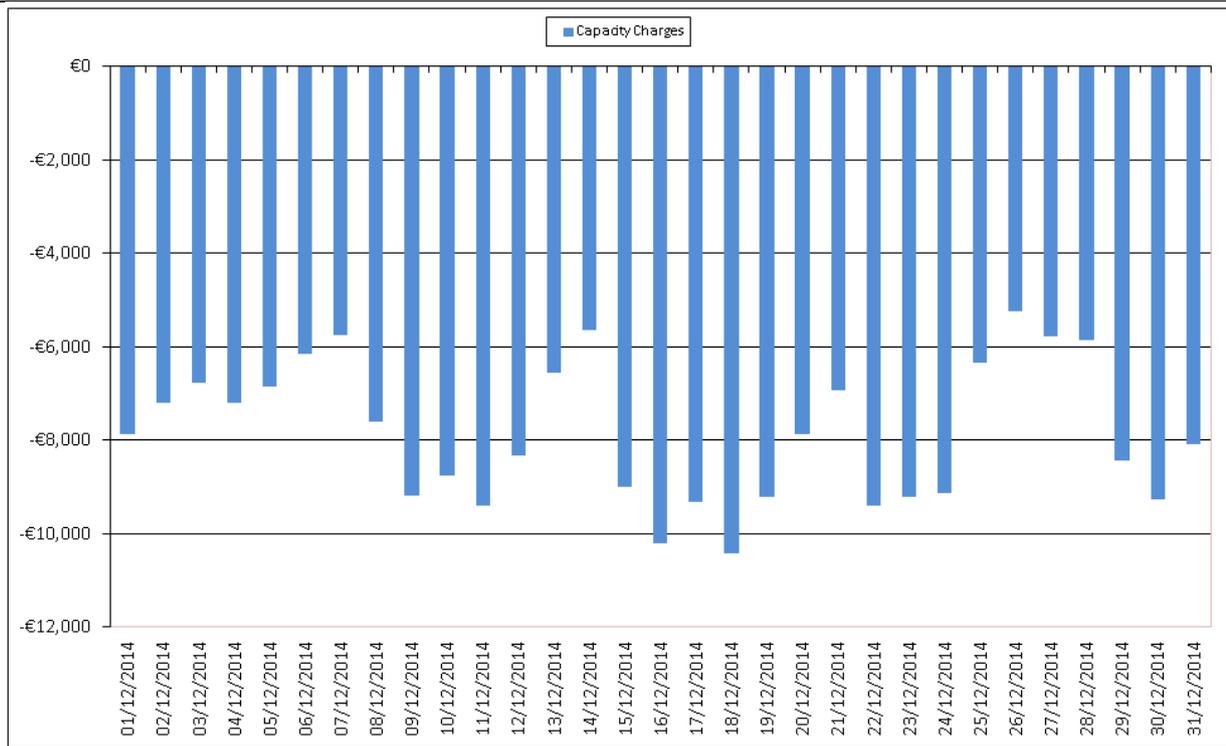


Figure 11 - Independent Suppliers Monetary Changes for Capacity Resettlement – December 2014

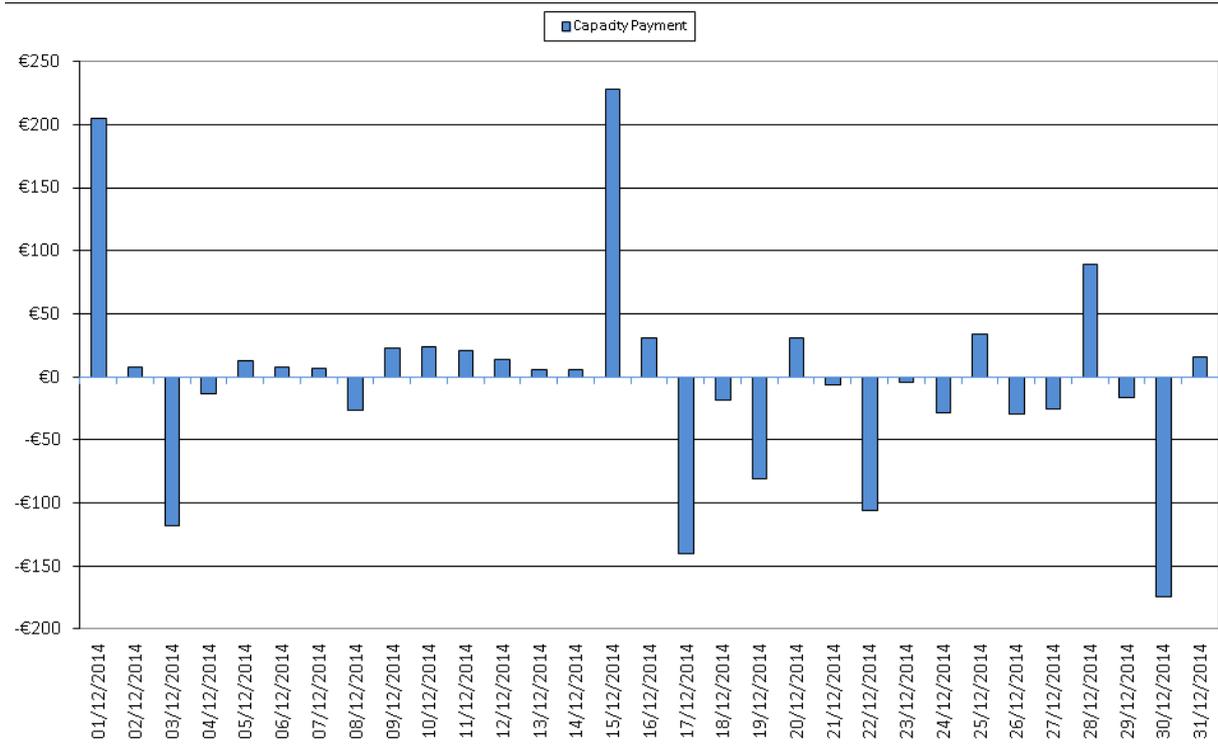
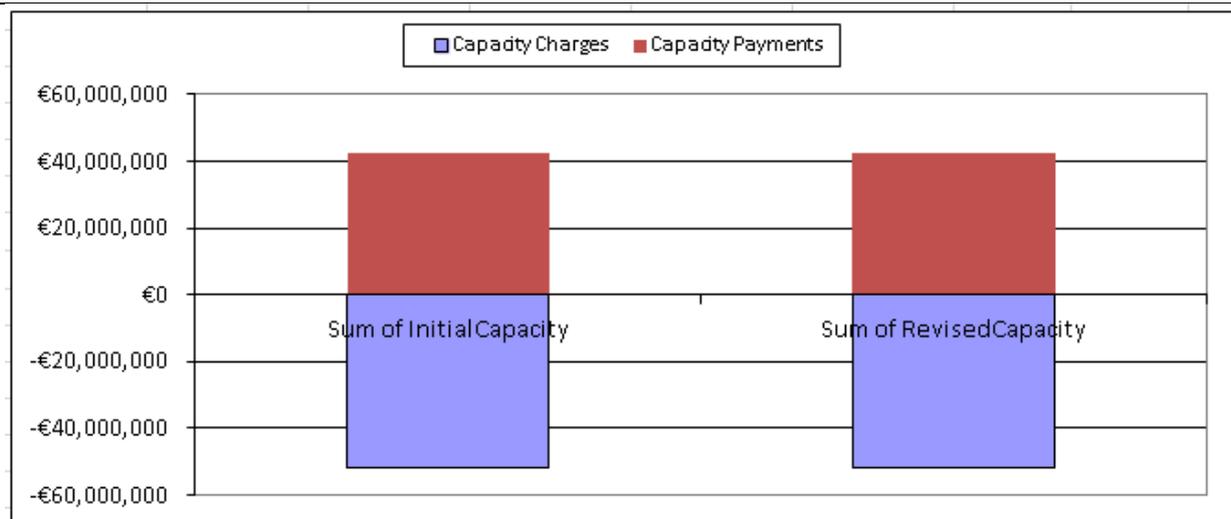


Figure 12 - All Generation Monetary Change for Capacity Resettlement – December 2014

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

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

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

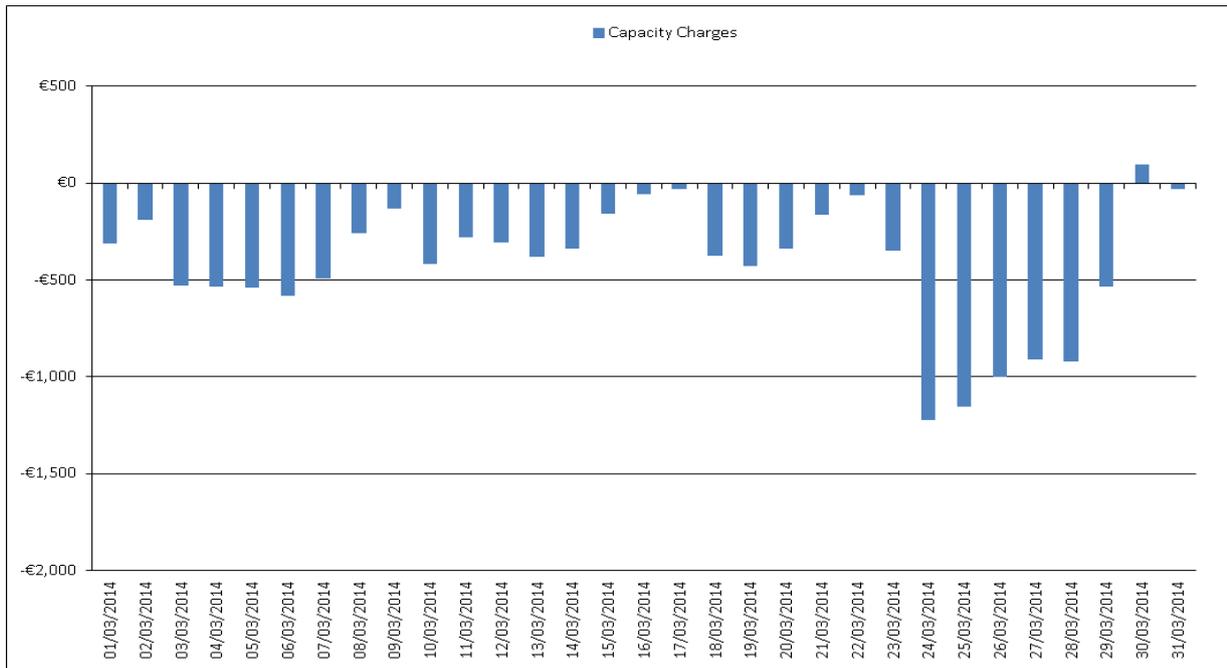


Figure 14 - Independent Suppliers Monetary Changes for Capacity Resettlement – March 2014

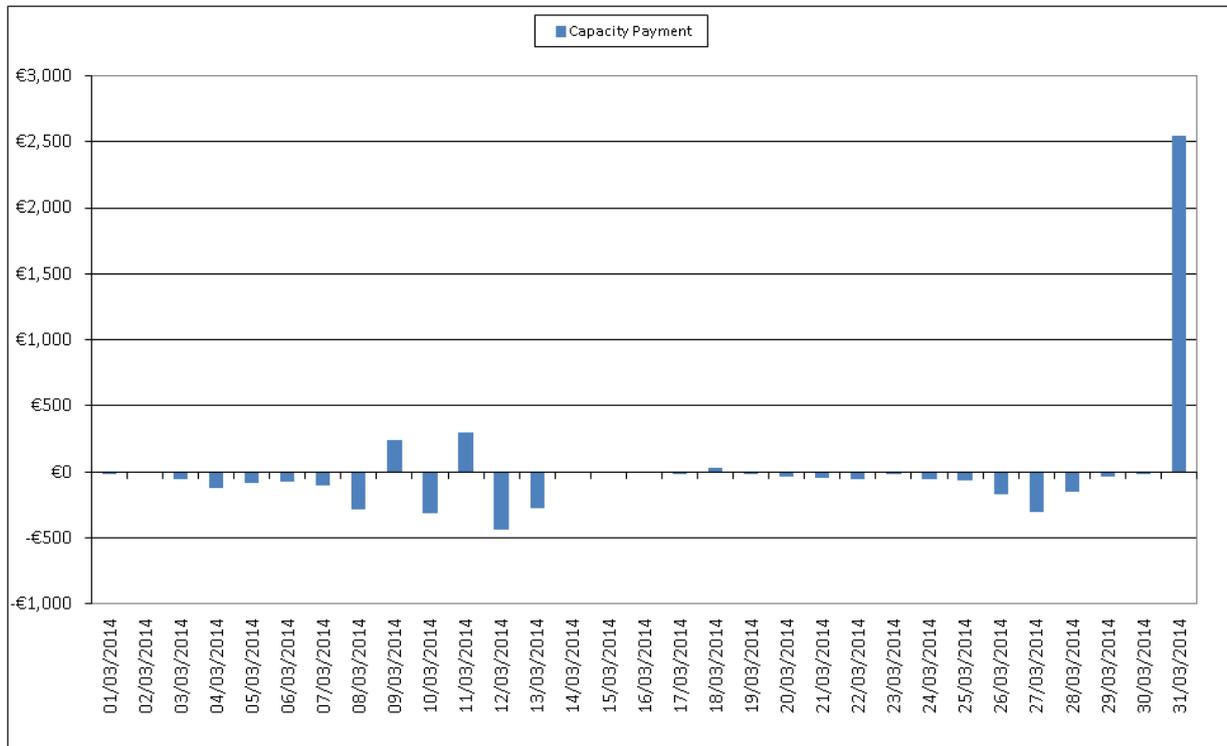
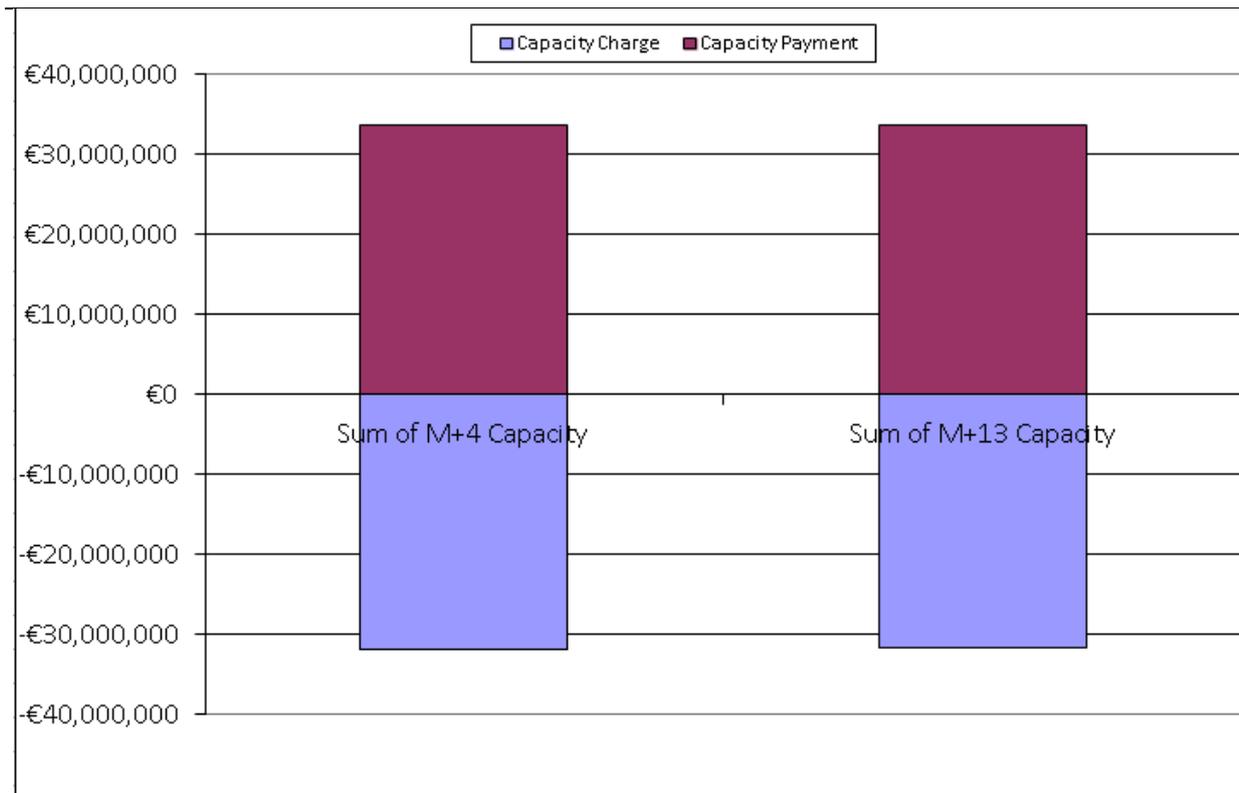


Figure 15 – All Generation Monetary Change for Capacity Resettlement – March 2014

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**Figure 16 - Comparison of Distribution of Monetary Amounts between M+4 Capacity Resettlement and M+13 Capacity Resettlement – March 2014**

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 April 2015.

<b>Market Helpdesk Report: 01/04/15 to 30/04/15</b>						
	Received	Resolved within the period	Not Resolved	Resolved in the period	Resolution Time (Working Days)	Resolved On Time
Normal	162	143	19	157	1.97	142
Important	3	3	0	3	0.22	3
Urgent	4	4	0	4	0.47	4
Settlement	6	4	2	4	3.75	4
Credit	0	0	0	0	0.00	0
Dispute	0	0	0	0	0.00	0
Data	1	1	0	1	2.22	1
<b>Total/Average</b>	<b>176</b>	<b>155</b>	<b>21</b>	<b>169</b>	<b>1.73</b>	<b>154</b>

**Table 10 – Helpdesk Statistics**

#### Definitions:

- *Resolved within the Period* refers to queries raised and resolved within the calendar month of April 2015.
- *Resolved in the Period* refers to queries resolved within April 2015, 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 April 2015.
- *Not Resolved* refers to queries raised but not resolved within April 2015.
- *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 0.99 working days in April 2015 to 1.97 from 0.98 working days in March 2015. 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 April 2015 that took over 20 working days to resolve.

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 April 2015 with regard to formal Settlement Queries.

### 5. Disputes and Queries

#### 5.1.1 Disputes

There were no Disputes raised during the month of April 2015 and there are no outstanding Disputes.

#### 5.1.2 Data Queries

There was one formal Data Query raised during the month of April 2015.

Topic	Number Of Queries
Availability	1

**Table 11 - Upheld Data Queries by topic**

#### 5.1.3 Settlement Queries

There were six formal settlement Queries raised in April 2015. Three of these were upheld and have since been resolved.

Topic	Number Of Queries
Dispatch Instructions	1
Eligible Availability	2

**Table 12 - Upheld Settlement Queries by topic**

- One query relating to a Dispatch Instructions was raised, this was deemed to be of low Materiality and will be corrected in M+4 Re-settlement
- Two queries relating to Eligible Availability were raised.
  - One was due to a publication error and has since been resolved
  - One was withdrawn due to a re-submission of a further settlement query.

#### ***Unresolved Queries***

There are three unresolved data queries and four unresolved settlement queries as at the 13<sup>th</sup> May, 2015

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, 71.47% of data used was submitted by Participants through the normal Bid-Offer process. 28.53% of the data used was based on Standing Commercial Offer Data. 0.0% 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 no Re-Price runs carried out in April 2015.

There were eight Resettlement runs carried out in April 2015.

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

There were four defects found in April 2015. One in the Market Interface (MI) and three in the Market Application (MA).

1. Defect 138907
2. Defect 138908
3. Defect 139204
4. Defect 139207

These have all been raised as defects and we will aim to have them fixed for the SEM 2.7.0 Release or for the wash up release.

Details are provided in 10 Appendix C: List of All System Errors and Failures.

### 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 March 2015.

#### 6.2.1 MSP Postings April 2015

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

**Table 13 - Operational Timings**

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

**Table 14 - Operational Timings (% on time)**

# Market Operator Monthly Report

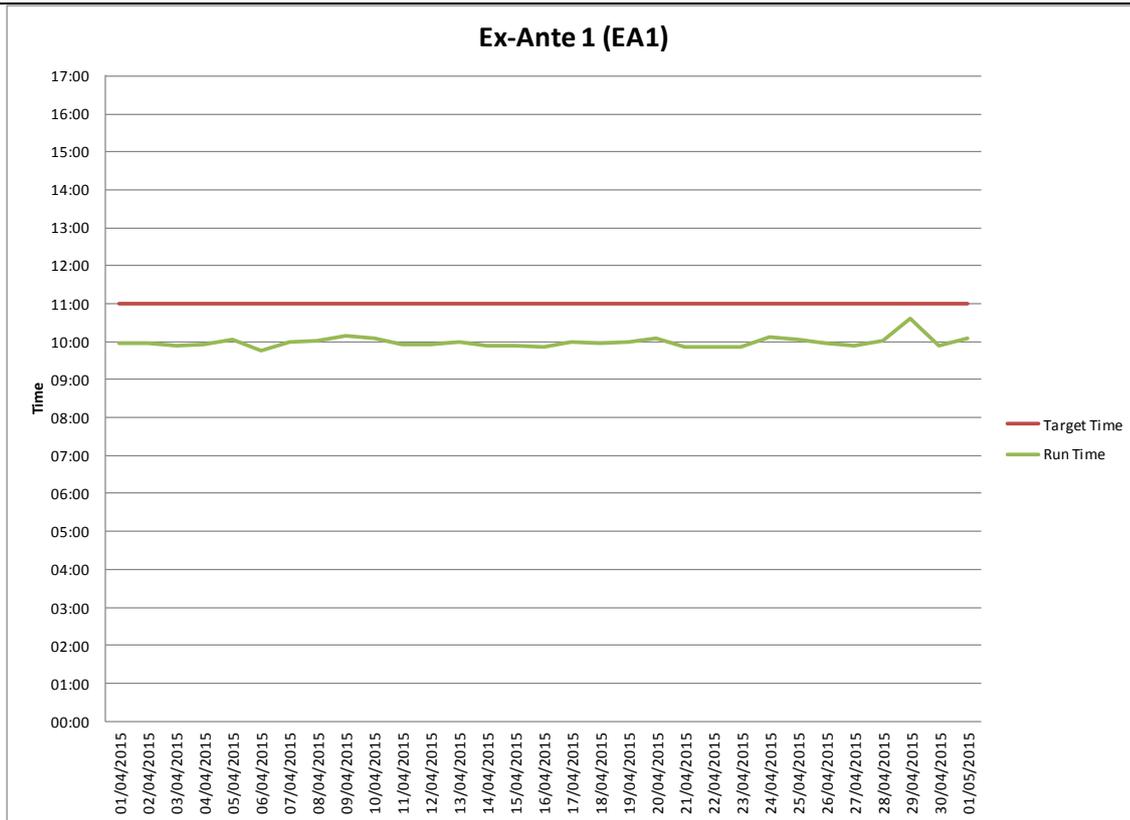


Figure 17 – Ex-Ante 1

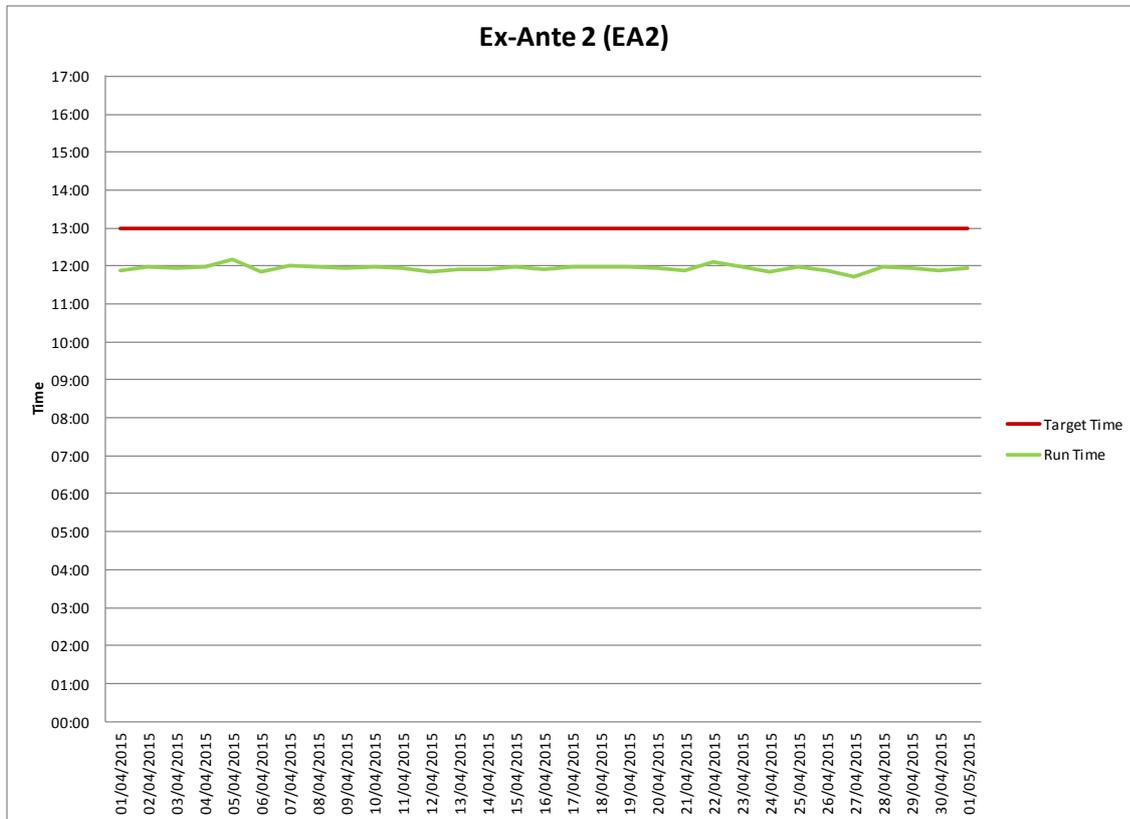


Figure 18 – Ex-Ante 2

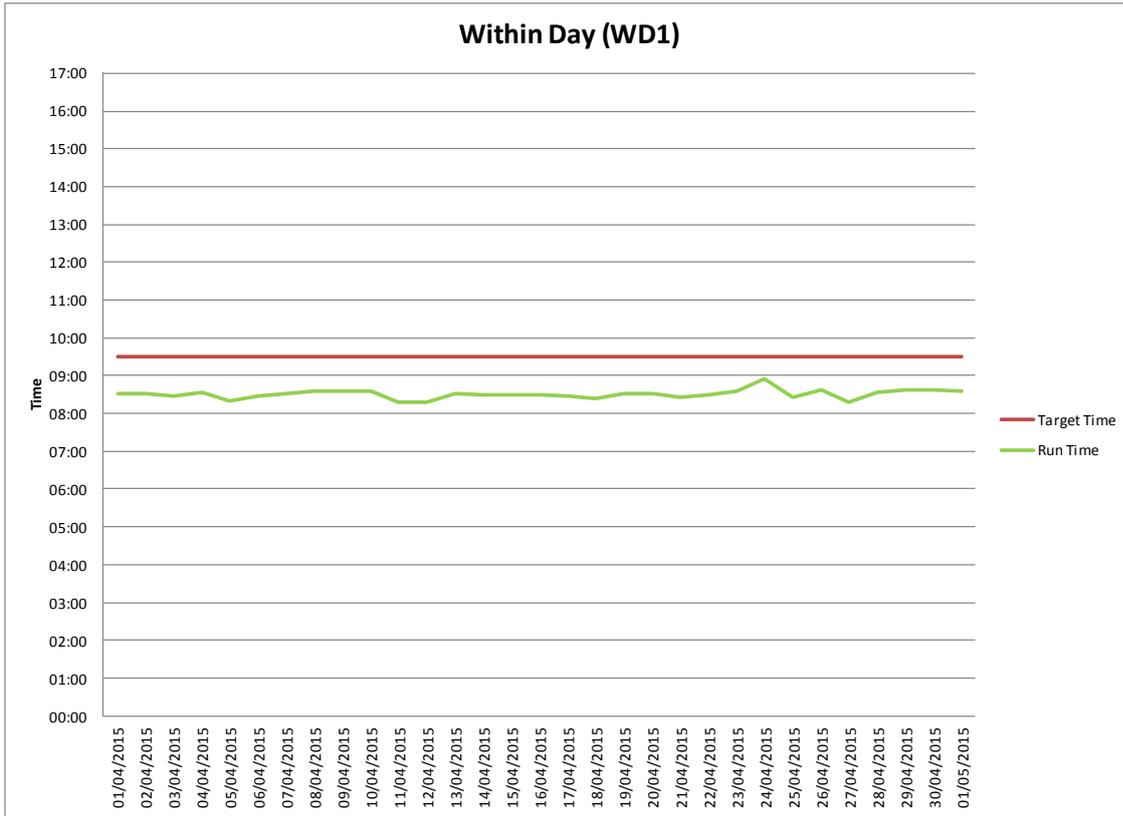


Figure 19 – Within Day 1

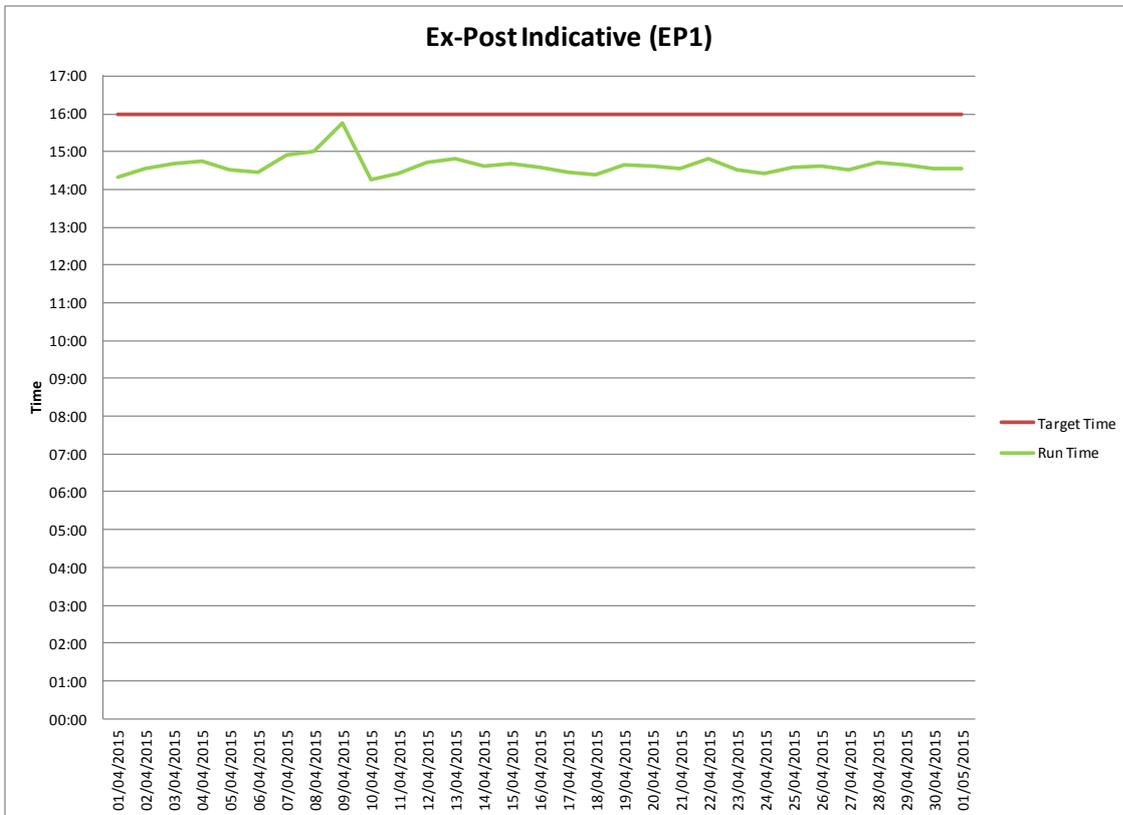


Figure 20 - Ex-Post Indicative

## Market Operator Monthly Report

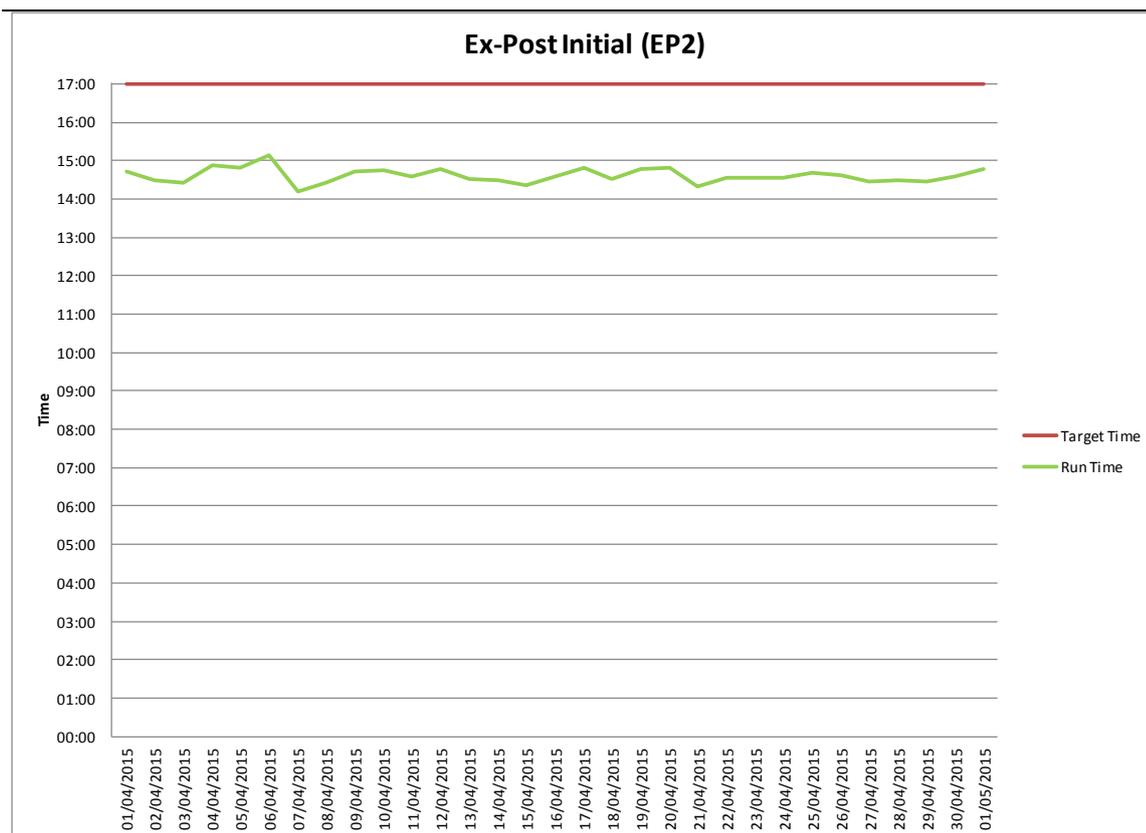


Figure 21 - Ex-Post Initial

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

### 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 April 2015, there were three instances of publishing with the MIP solver.

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

# Market Operator Monthly Report

## 6.2.3 Settlement Postings April 2015

The publication timings for Settlement runs are provided below.

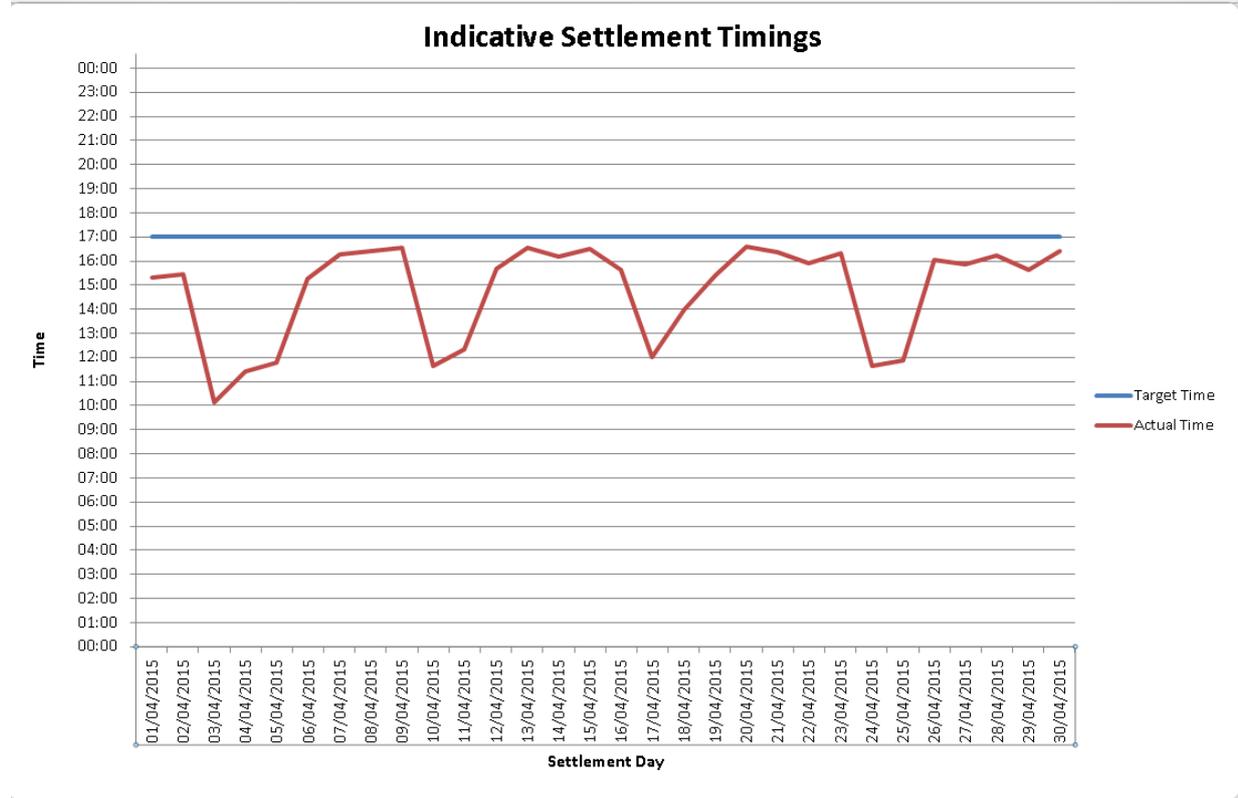


Figure 22 - Indicative Settlement Postings

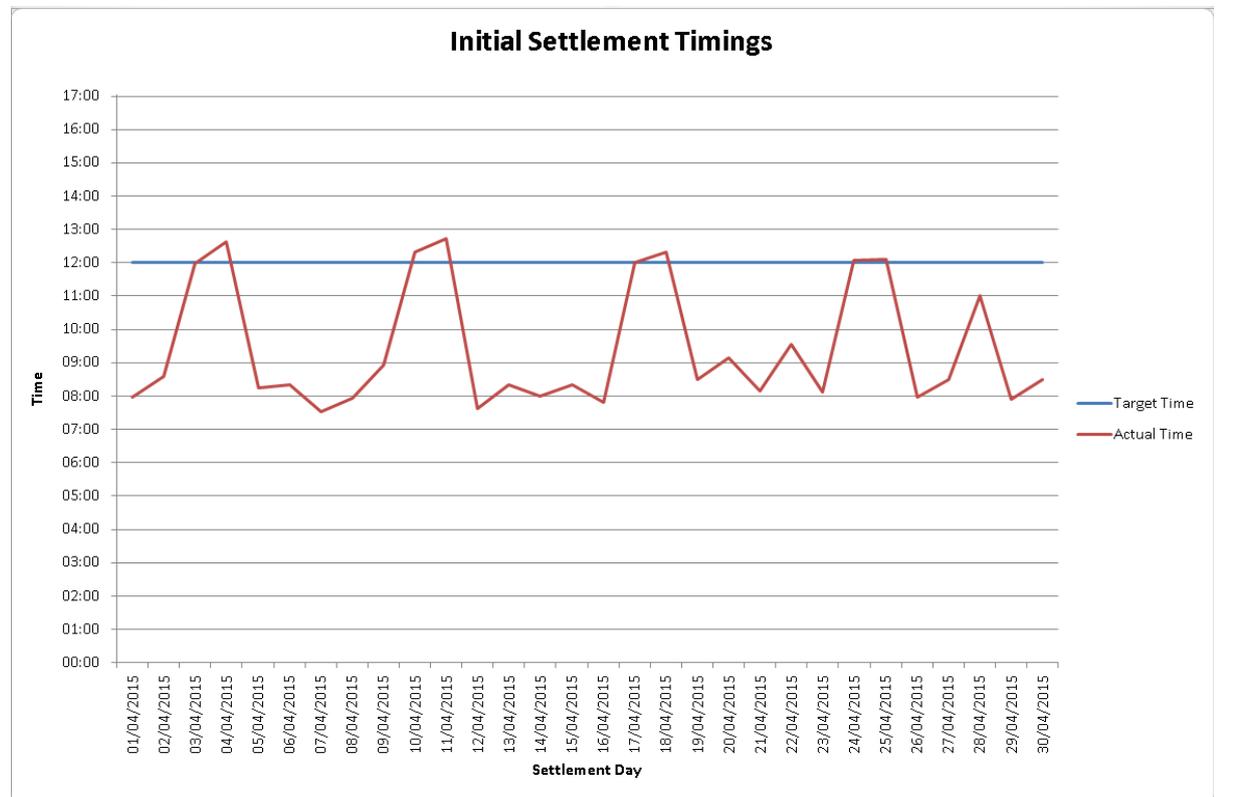


Figure 23 - Initial Settlement Postings

## Market Operator Monthly Report

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Further details of any delays noted above are provided in [Appendix A](#)

### 6.5 Market System Releases

#### 6.5.1 Release SEM R2.6.0 (Proposed Deployment: May 15<sup>th</sup> 2015)

The approved scope for the SEM R2.6.0 release is as follows:

CR Ref	Mod Ref	Description
SEM_PC_CR341	n/a	Oracle Upgrade to 11.2.0.4
SEM_PC_CR342	n/a	AIX TL 9 Upgrade
SEM_PC_CR343	n/a	Smart FTP 6 upgrade

Factory Test completed to schedule on March 27<sup>th</sup>, 2015 and the software was delivered to schedule on March 31<sup>st</sup>.

Market Test completed successfully on May 1<sup>st</sup> and the release is on schedule for a Production deployment on May 15<sup>th</sup>.

#### 6.5.2 Release SEM R2.7.0 (Proposed Deployment: October 2015)

The release cut-off date for the SEM R2.7.0 release to the Central Market Systems was Friday, March 6<sup>th</sup>, 2015. There were no approved Modification Proposals or new SDS sourced Change Requests as at the release cut-off date and, as a result, a Change Control Forum (CCF) meeting was not required.

However, SEMO will submit a proposed scope to the Regulatory Authorities for approval in early May. In summary the proposal will plan to deliver in the SEM R2.7.0 release:

- Data collection and reporting under REMIT, the EU Regulation on wholesale energy market integrity and transparency;
- Mod\_09\_14 (Amendment to Make Whole Payments for Interconnector Units) which was approved at Extraordinary Mods Meeting 60; and
- A number of technical changes to ensure the Central Market Systems remain aligned with supported third-party products.

On receipt of Regulatory approval SEMO will publish the approved scope to the industry.

### 7 Occasional Components

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

There were no Business Continuity tests performed during April 2015.

#### ***7.3 Communications or Systems Failures***

There were 2 System issues during April 2015;

On April 3rd, Market Operations reported that they could not log into SEM systems via the Citrix Web Interface. The issue was a result of a hardware failure on a SEMO file share. This was addressed immediately; contingency machines were available in the interim period for business continuity purposes. Following restoration of service the defective hardware component was replaced.

On April 23rd, SmartFTP caused a minor interruption of the transfer of the MIUN run files to the MIUN software. The issue was resolved by restarting the SmartFTP queue.

There was also a TSO impacting issue reported during April 2015;

On the afternoon of April 1st, Market Operations reported that connections for some staff in Dublin were being dropped. The issue did not affect Belfast staff. Further investigation highlighted a group policy update pushed to the TSO machines in Dublin, affecting access for some SEMO users. This was resolved the following morning by TSO support staff. During this issue, the Central Market Systems remained fully available at all times.

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

There was no Denial of Service Attacks during April 2015.

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

No parameters were submitted to the Regulatory Authorities during April 2015.

## 8 Appendix A: Detail of Code Breaches

### Market Participant

01/04/2015	Money In	Timing	Participant	Payment Default	Ecopower Supply Limited (PT_400068) defaulted on a Week 11 2015 Initial Energy invoice	Participant Error	Default letter was issued	Major
07/04/2015	Money In	Timing	Participant	Payment Default	LCC Power Limited defaulted on a Week 11 2015 Initial VMOC invoice	Participant Error	Default letter was issued	Major
07/04/2015	Money In	Timing	Participant	Payment Default	LCC Power Limited defaulted on a Week 47 2014 M+4 VMOC invoice	Participant Error	Default letter was issued	Major
14/04/2015	Money In	Timing	Participant	Payment Default	Electricity Exchange Limited (PT_400116) defaulted on a March 2015 FMOC invoice	Participant Error	A default letter was issued	Major
14/04/2015	Money In	Timing	Participant	Payment Default	Electricity Exchange Limited (PT_400117) defaulted on a March 2015 FMOC invoice	Participant Error	A default letter was issued	Major
14/04/2015	Money In	Timing	Participant	Payment Default	BRI Green Energy Limited (PT_400153) defaulted on a March 2015 FMOC invoice	Participant Error	A default letter was issued	Major
14/04/2015	Money In	Timing	Participant	Payment Default	Contour Global Solutions (PT_500048) defaulted on a March 2015 FMOC invoice	Participant Error	A default letter was issued	Major
15/04/2015	Money In	Timing	Participant	Payment Default	Castledockrell Wind Group Ltd (PT_400082) defaulted on a Week 44 2012 Ad Hoc Energy invoice	Participant Error	A default letter was issued	Major
22/04/2015	Money In	Timing	Participant	Payment Default	G.A.E.L Force Power Ltd (PT_400069) defaulted on a Week 50 2014 M+4 Energy invoice	Participant Error	A default letter was issued	Major
22/04/2015	Money In	Timing	Participant	Payment Default	Tynagh Energy Limited (PT_400041) defaulted on a Week 46 2012 Ad Hoc Energy invoice	Participant Error	A default letter was issued	Major
24/04/2015	Money In	Timing	Participant	Payment Default	Firmus Energy (PT_500046) defaulted on a Week 14 2015 Initial VMOC invoice	Participant error	A default letter was issued	Major
29/04/2015	Money In	Timing	Participant	Payment Default	Crystal Energy Limited (PT_400081) defaulted on a March M+13 Capacity invoice	Participant error	A default letter was issued	Major
29/04/2015	Money In	Timing	Participant	Payment Default	Electricity Exchange Limited (PT_400116) defaulted on a December 2014 M+4 Capacity invoice	Participant error	A default letter was issued	Major
29/04/2015	Money In	Timing	Participant	Payment Default	Snugborough Windfarm ROI Limited (PT_500029) defaulted on a Week 12 2014 M+13 Energy invoice	Participant error	A default letter was issued	Major

Table 15 - Code Breaches – Market Participants

### Data Provider

01/04/2015	EP1	Timing	SONI MDP	File Submission	The SONI D+1 Meter Data files were not received by their deadline of 14:00 for Trade Date 31/03/2015.	A manual workaround was required by SONI which caused a delay to the file submission.	A contingency file was used and successfully uploaded at 14:49 on the 01/04/2015.	Minor
08/04/2015	EP1	Timing	EirGrid TSO	File Submission	The Eirgrid System Frequency data feed for Trade Date 07/04/2015 was not received by the Ex Post Indicative (EP1) gate window closure at 14:00.	The Eirgrid System Frequency file was not received on time for Trade Date 07/04/2015 due to an ongoing internal Eirgrid TSO system error.	The System Frequency File was resent by Eirgrid and successfully received at 14:37.	Minor

Table 16 - Code Breaches – Data Providers

### SEMO - Pricing and Scheduling

07/04/2015	EA1	Quality	SEMO	System	A revision was required for Ex-Ante 1 (EA1) EWIC MIUNs for Trade Date 08/04/2015.	The MIUN calculator produced an error and a revised file was required.	Revised EWIC MIUNs were published by 11:23.	Minor
12/04/2015	EA1	Quality	SEMO	System	A revision was required for Ex-Ante 1 (EA1) EWIC MIUNs for Trade Date 13/04/2015.	The MIUN calculator produced an error and a revised file was required.	Revised EWIC MIUNs were published by 10:43	Minor
15/04/2015	EA1	Quality	SEMO	System	A revision was required for Ex-Ante 1 (EA1) EWIC MIUNs for Trade Date 16/04/2015.	The MIUN calculator produced an error and a revised file was required.	Revised EWIC MIUNs were published by 11:07.	Minor
22/04/2015	EA1	Quality	SEMO	System	A revision was required for Ex-Ante 1 (EA1) EWIC MIUNs for Trade Date 23/04/2015.	The MIUN calculator produced an error and a revised file was required.	Revised EWIC MIUNs were published by 11:15.	Minor
22/04/2015	EA1	Quality	SEMO	System	A revision was required for Ex-Ante 1 (EA1) EWIC MIUNs for Trade Date 23/04/2015.	The MIUN calculator produced an error and a revised file was required.	Revised EWIC MIUNs were published by 11:11.	Minor
23/04/2015	EA1	Quality	SEMO	System	A revision was required for Ex-Ante 1 (EA1) EWIC MIUNs for Trade Date 24/04/2015.	The MIUN calculator produced an error and a revised file was required.	Revised EWIC MIUNs were published by 11:16.	Minor
30/04/2015	EA1	Quality	SEMO	System	A revision was required for Ex-Ante 1 (EA1) EWIC MIUNs for Trade Date 01/05/2015.	The MIUN calculator produced an error and a revised file was required.	Revised EWIC MIUNs were published by 11:30.	Minor

Table 17 - Code Breaches – Pricing and Scheduling

## Market Operator Monthly Report

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### ***SEMO – Settlements***

There were no issues to report in April 2015

There are no items to show in this view of the "Issues Log" list. To create a new item, click "New" above.

**Table 18 - Code Breaches – Settlements**

### ***SEMO - Funds Transfer***

There were no issues to report in April 2015

There are no items to show in this view of the "Issues Log" list. To create a new item, click "New" above.

**Table 19 - Code Breaches – Funds Transfer**

### ***SEMO - Credit Management***

There were no issues to report in April 2015

There are no items to show in this view of the "Issues Log" list. To create a new item, click "New" above.

**Table 20 - Code Breaches – Credit Risk Management**

### ***SEMO – Other***

There were no issues to report in April 2015

Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T and SC Breach
There are no items to show in this view of the "Issues Log" list. To create a new item, click "New" above.								

**Table 21 - Code Breaches – Other**

9 Appendix B: List of Queries by Type

Data Queries

Summary Title	Description	ID	Logged On	Date sent to MP	Type
Availability	There were multiple errors in the ACTA D+3 file for the 31/03/2015. Problems occurred with records at midnight and 00:30. The contingency file that was sent in place of the ACTA D+3 file for the 31/03/2015 needs to be corrected	Eigrd	2015-04-08	2015-04-10	DATA
Availability	Incorrect Availability Declarations were sent to the SEM for GU_400362 (Turlough Hill Unit 3) on the 01/05/2015.	GU_400360	2015-05-05		DATA
Dispatch Instructions	Incorrect Dispatch Instructions were sent to the SEM for GU_400362 (Turlough Hill Unit 3) on the 01/05/2015.	GU_400362	2015-05-05		DATA
Dispatch Instructions	This query has been raised due to the missing Dispatch Instructions for some wind generating units on trade date 7.5.15. Please note that the submission of this missing data will not cause any resettlement. The query has been raised to ensure the market system contains the correct DI data for completeness purposes.	SONI	2015-05-12		DATA

Table 22 - Data Queries

## Market Operator Monthly Report

### SETTLEMENT QUERIES

Summary Title	Description	ID	Logged On	Date sent to MP	Type
Payment Calculation	Unit GU_400311 (NW5). Unit received a sync instruction at 16:13 and then declared a Trip at 16:16. Market Operator paid this start in this settlement run but not in previous settlement runs. Another Sync issued at 16:59 which Market Operator paid and agrees with our calculations. Difference of ?9,809	PT_400030	2015-04-20	2015-04-23	SETTLEMENT
Payment Calculation	Unit GU_400311 (NW5). Unit received a sync instruction at 16:13 and then declared a Trip at 16:16. Market Operator paid this start in this settlement run but not in previous settlement runs. Another Sync issued at 16:59 which Market Operator paid and agrees with our calculations. Difference of ?9,809	PT_400030	2015-04-20	2015-04-23	SETTLEMENT
Payment Calculation	While validating the ENPIUGEX charges we noted that where PT_400021 and PT_50021 Ewic and Moyle were flowing to EB at specific time periods (for example 06:30) on specific dates the calculation applied was ENPuh=TPD x (MSQ/TLAF) according to the TSC this should be ENPuh = TPD xMSQxTLAF can you please investigate this apparant discrepancy in the applied methodology	PT_400021 and PT_500021	2015-04-23	2015-04-23	SETTLEMENT
Payment Calculation	Units GU_400360 (TH1) GU_400361 (TH2). Both of these units have incurred high Uninstructed Imbalances as a result of incorrect effective times in EDIL.  Units GU_400360 (TH1) GU_400361 (TH2). I would like to query U.I.'s for above units at 09:30 i.e. ?4,807 & ?4,832 respectively. There was an under frequency event at 09:48 on the 10th and the units responded accordingly from 5mw to 73mw. Eirgrid did send updated dispatch instructions via EDIL, however, the effective time was 10:03 and not 09:48. As a consequence both units incurred high U.I.'s for this half hour totalling ?9,640.20.	PT_400030	2015-04-16	2015-04-28	SETTLEMENT
Payment Calculation	No EA values were provided for this unit for the 12th and 13th March. CPP values have been calculated for this unit. Could you forward the EA values used in the settlement calculations.	PT_400030	2015-04-29	2015-05-05	SETTLEMENT
Payment Calculation	query re ea values for unit gu400211 for 11th December 2014 on month +4 statement.  Unit gu400211 was on test on 11th December 2014. On the r11 statement no EA values were provided in SEM data although CPP values have been calculated. This data was provided in relation to the initial run. Could you forward the EA figures used in the December resettlement calculations.	PT_400030	2015-04-28		SETTLEMENT
Payment Calculation	Uninstructed imbalance charges on 31.3.15	PT_400148	2015-05-08		SETTLEMENT
Payment Calculation	Unit ID - GU_501820 under PT_500032 has an issue with the capacity income calculated on 28th and 29th March 2015. For 4 periods in total this unit received no capacity income, even though it had an EA>0	Viridian Energy Ltd	2015-05-12		SETTLEMENT
Dispach Instructions	This query has been raised due to the missing Dispatch Instructions for some wind generating units on trade date 7.5.15. The query has been raised to ensure the market systems contain the correct DI data for completeness purposes.	SONI	2015-05-12		SETTLEMENT

Table 23 - 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 month's 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
ABB2015-138907	Scheduling issue	-	-	N	N	-
ABB2015-138908	Offered Exposure for cancelled runs enduring indefinitely	-	-	N	N	-
ABB2015-139204	Unusual scheduling issue - see 138278	-	-	N	N	-
ABB2015-139207	MA RERUN System Load Issues	-	-	N	N	-

**Table 24 - List of System Errors and Failures**

## 11 Appendix D: Details of Operational Timings

### Market Schedule and Price Runs

Operational Day	EA1 Postings		EA2 Postings		WD1 Postings		EP1 Postings		EP2 Postings	
	Target	Actual								
01/04/2015	11:00	09:58	13:00	11:53	09:30	08:31	16:00	14:20	17:00	14:42
02/04/2015	11:00	09:57	13:00	11:58	09:30	08:32	16:00	14:34	17:00	14:29
03/04/2015	11:00	09:53	13:00	11:57	09:30	08:28	16:00	14:41	17:00	14:25
04/04/2015	11:00	09:56	13:00	11:59	09:30	08:34	16:00	14:45	17:00	14:52
05/04/2015	11:00	10:03	13:00	12:10	09:30	08:20	16:00	14:32	17:00	14:48
06/04/2015	11:00	09:45	13:00	11:51	09:30	08:27	16:00	14:27	17:00	15:08
07/04/2015	11:00	09:59	13:00	12:01	09:30	08:31	16:00	14:54	17:00	14:11
08/04/2015	11:00	10:01	13:00	11:58	09:30	08:35	16:00	15:01	17:00	14:26
09/04/2015	11:00	10:09	13:00	11:57	09:30	08:35	16:00	15:46	17:00	14:42
10/04/2015	11:00	10:05	13:00	11:58	09:30	08:36	16:00	14:15	17:00	14:45
11/04/2015	11:00	09:56	13:00	11:57	09:30	08:18	16:00	14:25	17:00	14:36
12/04/2015	11:00	09:56	13:00	11:50	09:30	08:18	16:00	14:43	17:00	14:47
13/04/2015	11:00	10:00	13:00	11:54	09:30	08:31	16:00	14:48	17:00	14:32
14/04/2015	11:00	09:53	13:00	11:54	09:30	08:29	16:00	14:37	17:00	14:29
15/04/2015	11:00	09:53	13:00	11:58	09:30	08:30	16:00	14:40	17:00	14:21
16/04/2015	11:00	09:52	13:00	11:55	09:30	08:29	16:00	14:36	17:00	14:35
17/04/2015	11:00	09:59	13:00	11:58	09:30	08:28	16:00	14:28	17:00	14:48
18/04/2015	11:00	09:57	13:00	11:59	09:30	08:24	16:00	14:24	17:00	14:32
19/04/2015	11:00	09:59	13:00	11:58	09:30	08:31	16:00	14:38	17:00	14:47
20/04/2015	11:00	10:06	13:00	11:56	09:30	08:31	16:00	14:37	17:00	14:49
21/04/2015	11:00	09:51	13:00	11:52	09:30	08:25	16:00	14:34	17:00	14:20
22/04/2015	11:00	09:51	13:00	12:07	09:30	08:30	16:00	14:49	17:00	14:33
23/04/2015	11:00	09:52	13:00	11:59	09:30	08:35	16:00	14:32	17:00	14:34
24/04/2015	11:00	10:08	13:00	11:51	09:30	08:55	16:00	14:26	17:00	14:33
25/04/2015	11:00	10:03	13:00	11:59	09:30	08:26	16:00	14:36	17:00	14:41
26/04/2015	11:00	09:58	13:00	11:52	09:30	08:38	16:00	14:37	17:00	14:37
27/04/2015	11:00	09:53	13:00	11:44	09:30	08:18	16:00	14:32	17:00	14:28
28/04/2015	11:00	10:01	13:00	11:58	09:30	08:34	16:00	14:42	17:00	14:30
29/04/2015	11:00	10:36	13:00	11:56	09:30	08:38	16:00	14:39	17:00	14:27
30/04/2015	11:00	09:54	13:00	11:53	09:30	08:38	16:00	14:33	17:00	14:36
01/05/2015	11:00	10:05	13:00	11:56	09:30	08:36	16:00	14:33	17:00	14:47

Table 25 – 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
01/04/2015	02/04/2015	02/04/2015	17:00	16:26	01/04/2015	06/04/2015	12:00	07:58
02/04/2015	03/04/2015	03/04/2015	17:00	16:13	02/04/2015	07/04/2015	12:00	08:35
03/04/2015	04/04/2015	04/04/2015	17:00	16:39	03/04/2015	08/04/2015	12:00	11:58
04/04/2015	05/04/2015	05/04/2015	17:00	16:17	04/04/2015	09/04/2015	12:00	12:38
05/04/2015	06/04/2015	06/04/2015	17:00	15:31	05/04/2015	10/04/2015	12:00	08:14
06/04/2015	07/04/2015	07/04/2015	17:00	12:21	06/04/2015	11/04/2015	12:00	08:20
07/04/2015	08/04/2015	08/04/2015	17:00	13:00	07/04/2015	12/04/2015	12:00	07:32
08/04/2015	09/04/2015	09/04/2015	17:00	16:37	08/04/2015	13/04/2015	12:00	07:56
09/04/2015	10/04/2015	10/04/2015	17:00	15:34	09/04/2015	14/04/2015	12:00	08:55
10/04/2015	11/04/2015	11/04/2015	17:00	15:57	10/04/2015	15/04/2015	12:00	12:20
11/04/2015	12/04/2015	12/04/2015	17:00	16:08	11/04/2015	16/04/2015	12:00	12:43
12/04/2015	13/04/2015	13/04/2015	17:00	15:40	12/04/2015	17/04/2015	12:00	07:37
13/04/2015	14/04/2015	14/04/2015	17:00	11:35	13/04/2015	18/04/2015	12:00	08:21
14/04/2015	15/04/2015	15/04/2015	17:00	12:17	14/04/2015	19/04/2015	12:00	08:00
15/04/2015	16/04/2015	16/04/2015	17:00	15:55	15/04/2015	20/04/2015	12:00	08:20
16/04/2015	17/04/2015	17/04/2015	17:00	12:56	16/04/2015	21/04/2015	12:00	07:49
17/04/2015	18/04/2015	18/04/2015	17:00	15:59	17/04/2015	22/04/2015	12:00	12:01
18/04/2015	19/04/2015	19/04/2015	17:00	16:04	18/04/2015	23/04/2015	12:00	12:19
19/04/2015	20/04/2015	20/04/2015	17:00	16:19	19/04/2015	24/04/2015	12:00	08:29
20/04/2015	21/04/2015	21/04/2015	17:00	13:25	20/04/2015	25/04/2015	12:00	09:09
21/04/2015	22/04/2015	22/04/2015	17:00	13:34	21/04/2015	26/04/2015	12:00	08:09
22/04/2015	23/04/2015	23/04/2015	17:00	15:16	22/04/2015	27/04/2015	12:00	09:34
23/04/2015	24/04/2015	24/04/2015	17:00	15:45	23/04/2015	28/04/2015	12:00	08:07
24/04/2015	25/04/2015	25/04/2015	17:00	15:38	24/04/2015	29/04/2015	12:00	12:05
25/04/2015	26/04/2015	26/04/2015	17:00	16:07	25/04/2015	30/04/2015	12:00	12:07
26/04/2015	27/04/2015	27/04/2015	17:00	10:23	26/04/2015	01/05/2015	12:00	07:58
27/04/2015	28/04/2015	28/04/2015	17:00	11:57	27/04/2015	02/05/2015	12:00	08:29
28/04/2015	29/04/2015	29/04/2015	17:00	13:27	28/04/2015	03/05/2015	12:00	11:00
29/04/2015	30/04/2015	30/04/2015	17:00	15:54	29/04/2015	04/05/2015	12:00	07:55
30/04/2015	01/05/2015	01/05/2015	17:00	15:29	30/04/2015	05/05/2015	12:00	08:29

Table 26 - 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
01/10/2014	€227,003.16	€4,663.19	-€497,010.43
02/10/2014	€735,796.33	-€19,882.49	-€485,485.43
03/10/2014	€614,655.29	€10,871.94	-€504,078.89
04/10/2014	€431,006.78	-€7,434.77	-€448,528.17
05/10/2014	€824,385.72	€10,977.87	-€414,125.03
06/10/2014	€656,891.36	-€20,536.24	-€496,825.27
07/10/2014	€271,569.15	€7,652.10	-€515,909.62
08/10/2014	€317,802.51	-€36,024.01	-€520,694.36
09/10/2014	€271,129.06	-€14,582.31	-€525,428.89
10/10/2014	€442,983.70	-€26,317.26	-€517,313.97
11/10/2014	€311,801.03	€11,849.83	-€473,083.86
12/10/2014	€401,470.02	-€7,407.00	-€451,034.95
13/10/2014	€353,395.99	-€24,498.55	-€513,674.01
14/10/2014	€358,013.74	-€19,066.88	-€523,546.32
15/10/2014	€428,117.82	-€853.11	-€511,064.60
16/10/2014	€310,763.65	-€12,618.38	-€513,456.78
17/10/2014	€483,353.64	-€5,253.97	-€495,989.17
18/10/2014	€1,079,153.36	€23,841.90	-€428,037.24
19/10/2014	€506,373.44	-€2,840.01	-€416,208.56
20/10/2014	€565,796.01	-€13,121.95	-€490,614.73
21/10/2014	€722,480.43	€17,262.53	-€491,996.93
22/10/2014	€622,659.96	-€35,249.53	-€515,127.40
23/10/2014	€299,585.53	€2,462.07	-€513,013.48
24/10/2014	€505,499.46	-€8,503.06	-€505,991.61
25/10/2014	€899,840.05	€24,936.45	-€439,804.29
26/10/2014	€867,189.29	-€8,010.50	-€428,234.85
27/10/2014	€739,332.30	€6,690.55	-€444,796.70
28/10/2014	€553,302.80	-€61,012.80	-€519,037.78
29/10/2014	€754,919.24	-€6,314.82	-€530,046.54
30/10/2014	€636,202.61	-€3,395.44	-€513,730.14
31/10/2014	€508,522.20	-€17,778.71	-€506,014.82
01/11/2014	€546,540.25	-€6,912.86	-€457,086.94
02/11/2014	€318,890.98	-€12,990.39	-€443,511.55
03/11/2014	€569,073.38	-€4,244.85	-€532,442.41
04/11/2014	€669,098.98	-€16,550.06	-€528,960.67
05/11/2014	€546,197.90	-€18,613.60	-€550,138.29
06/11/2014	€637,275.88	-€14,424.86	-€537,063.83
07/11/2014	€382,071.17	-€11,250.48	-€531,305.30
08/11/2014	€416,600.72	-€18,592.20	-€500,732.00
09/11/2014	€324,554.00	-€6,024.57	-€481,392.83

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10/11/2014	€506,959.62	-€12,756.86	-€540,675.17
11/11/2014	€305,371.45	-€44,629.39	-€565,550.06
12/11/2014	€532,498.02	-€28,281.20	-€554,600.49
13/11/2014	€345,990.75	-€17,901.27	-€553,923.16
14/11/2014	€343,466.61	-€1,320.38	-€534,716.18
15/11/2014	€494,457.91	€3,019.64	-€499,765.88
16/11/2014	€360,376.17	€7,373.68	-€482,898.42
17/11/2014	€553,003.49	-€24,556.35	-€545,895.52
18/11/2014	€415,247.34	€4,362.82	-€543,481.42
19/11/2014	€534,047.47	-€12,653.01	-€548,548.06
20/11/2014	€548,216.05	-€26,506.42	-€571,397.50
21/11/2014	€351,743.55	-€34,277.81	-€542,644.18
22/11/2014	€402,367.39	-€15,880.02	-€504,134.67
23/11/2014	€543,674.52	-€9,757.73	-€492,515.83
24/11/2014	€436,153.86	-€3,275.68	-€568,242.69
25/11/2014	€252,433.54	-€17,224.01	-€582,837.38
26/11/2014	€268,639.50	-€6,672.97	-€590,843.52
27/11/2014	€477,133.30	-€17,221.50	-€571,833.74
28/11/2014	€514,059.40	-€24,958.57	-€548,216.58
29/11/2014	€466,095.46	-€17,684.09	-€518,324.65
30/11/2014	€426,493.00	€228.22	-€497,681.99
01/12/2014	€425,729.84	-€17,667.29	-€564,559.17
02/12/2014	€608,884.75	-€9,337.96	-€580,266.39
03/12/2014	€506,617.59	-€48,599.53	-€604,794.55
04/12/2014	€524,348.76	-€26,701.42	-€598,118.36
05/12/2014	€461,085.09	-€25,561.67	-€572,477.87
06/12/2014	€568,753.24	-€12,613.70	-€516,202.71
07/12/2014	€484,127.53	€2,302.13	-€486,982.31
08/12/2014	€885,938.85	-€37,551.38	-€584,787.94
09/12/2014	€718,257.00	-€19,795.27	-€567,508.60
10/12/2014	€694,745.69	-€28,671.71	-€573,652.69
11/12/2014	€523,434.14	-€5,545.19	-€588,404.70
12/12/2014	€674,997.85	-€30,954.05	-€590,328.30
13/12/2014	€574,892.66	-€14,185.39	-€545,225.54
14/12/2014	€628,744.88	-€7,460.18	-€494,683.75
15/12/2014	€586,494.13	-€52,410.95	-€589,165.45
16/12/2014	€596,239.45	-€17,823.19	-€593,950.92
17/12/2014	€709,290.15	-€19,551.47	-€567,440.23
18/12/2014	€896,816.00	€2,905.28	-€554,081.45
19/12/2014	€995,932.96	€4,662.09	-€543,943.87
20/12/2014	€505,276.32	€4,952.12	-€510,278.41
21/12/2014	€1,032,186.15	€3,856.82	-€470,790.42
22/12/2014	€783,718.05	€19,779.93	-€528,728.17
23/12/2014	€580,782.79	€13,315.83	-€531,858.69
24/12/2014	€522,323.53	-€1,231.24	-€497,446.95
25/12/2014	€365,691.72	€1,963.64	-€464,366.17
26/12/2014	€540,788.12	-€8,172.04	-€457,472.59
27/12/2014	€646,748.39	€14,909.59	-€472,798.28
28/12/2014	€607,407.31	€7,022.19	-€497,727.79
29/12/2014	€555,367.66	€7,365.97	-€524,246.05
30/12/2014	€640,363.39	€14,384.93	-€505,239.86
31/12/2014	€603,204.62	€25,349.47	-€482,895.60
01/01/2015	€1,183,313.74	€22,302.55	-€432,637.80

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02/01/2015	€719,060.46	€7,180.94	-€488,863.06
03/01/2015	€347,426.55	€22,383.30	-€509,883.65
04/01/2015	€368,525.85	€17,445.50	-€492,762.63
05/01/2015	€858,552.99	-€57,810.06	-€547,249.34
06/01/2015	€846,901.18	€24,062.40	-€565,026.70
07/01/2015	€754,789.55	€18,197.44	-€553,124.60
08/01/2015	€738,052.46	€5,912.21	-€560,161.59
09/01/2015	€799,401.56	€25,467.67	-€544,123.83
10/01/2015	€471,870.80	€23,541.24	-€489,886.95
11/01/2015	€804,037.00	€7,957.03	-€475,707.54
12/01/2015	€532,334.91	-€28,660.44	-€547,621.88
13/01/2015	€657,677.89	€13,214.17	-€585,068.72
14/01/2015	€769,303.38	-€3,725.21	-€591,675.05
15/01/2015	€571,780.65	€11,193.51	-€586,646.16
16/01/2015	€716,352.94	-€13,748.94	-€590,495.78
17/01/2015	€377,678.95	€8,181.35	-€550,070.38
18/01/2015	€166,250.30	-€3,020.40	-€514,226.93
19/01/2015	€698,080.04	-€37,908.42	-€609,509.53
20/01/2015	€437,319.37	-€40,386.17	-€614,164.65
21/01/2015	€667,403.57	-€48,191.01	-€614,449.45
22/01/2015	€542,321.93	-€24,334.20	-€614,473.92
23/01/2015	€461,543.80	-€1,291.99	-€571,701.09
24/01/2015	€375,088.02	€3,285.01	-€529,114.19
25/01/2015	€370,985.65	-€4,188.67	-€488,904.88
26/01/2015	€761,148.58	-€5,809.04	-€566,069.74
27/01/2015	€496,305.71	€3,197.27	-€578,227.32
28/01/2015	€679,942.31	-€5,819.24	-€567,278.15
29/01/2015	€842,221.29	-€19,380.22	-€582,068.03
30/01/2015	€498,670.69	-€9,939.77	-€568,791.17
31/01/2015	€621,711.25	€5,481.92	-€512,025.64
01/02/2015	€465,811.18	-€7,159.85	-€522,488.66
02/02/2015	€600,896.72	-€25,058.44	-€612,427.31
03/02/2015	€622,108.61	-€646.83	-€612,448.65
04/02/2015	€680,810.77	€3,948.07	-€619,315.92
05/02/2015	€524,358.46	-€557.07	-€614,409.37
06/02/2015	€507,125.10	-€3,973.79	-€600,953.78
07/02/2015	€552,603.96	-€3,844.92	-€533,253.15
08/02/2015	€513,181.80	-€8,706.01	-€526,790.04
09/02/2015	€721,677.70	-€75,869.33	-€603,738.54
10/02/2015	€612,792.69	-€54,689.56	-€615,533.69
11/02/2015	€397,523.20	-€49,206.80	-€612,372.90
12/02/2015	€584,234.54	-€9,961.83	-€589,104.96
13/02/2015	€581,694.45	-€18,426.02	-€571,753.77
14/02/2015	€519,304.93	-€11,018.35	-€524,311.37
15/02/2015	€402,543.48	€350.55	-€482,429.93
16/02/2015	€539,037.68	-€34,021.35	-€564,140.28
17/02/2015	€542,064.44	-€575.68	-€567,853.68
18/02/2015	€602,625.88	-€7,288.26	-€546,880.62
19/02/2015	€512,519.51	€18,470.83	-€556,672.04
20/02/2015	€592,720.94	-€10,749.31	-€567,934.87
21/02/2015	€632,840.91	€17,014.71	-€511,712.83
22/02/2015	€870,894.49	€1,282.86	-€484,230.97
23/02/2015	€674,860.17	-€5,480.97	-€557,984.41
24/02/2015	€512,106.06	-€7,870.22	-€569,013.81

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25/02/2015	€642,952.47	-€31,481.05	-€567,195.52
26/02/2015	€488,203.62	-€68,355.71	-€541,080.48
27/02/2015	€702,055.03	-€278,358.30	-€551,568.91
28/02/2015	€763,470.11	-€156,795.83	-€490,683.19
01/03/2015	€521,607.45	-€1,843.99	-€477,581.24
02/03/2015	€574,380.29	€2,997.71	-€557,667.72
03/03/2015	€465,527.51	-€2,048.31	-€573,855.61
04/03/2015	€672,189.01	€6,050.68	-€574,853.34
05/03/2015	€652,850.86	€16,461.89	-€552,313.54
06/03/2015	€1,016,583.70	€12,741.03	-€526,556.29
07/03/2015	€1,025,731.02	€13,689.73	-€474,408.71
08/03/2015	€522,444.74	-€3,358.29	-€467,929.55
09/03/2015	€788,584.21	€13,340.73	-€530,097.21
10/03/2015	€719,928.31	€40,709.75	-€553,987.99
11/03/2015	€585,235.02	€5,483.05	-€544,302.02
12/03/2015	€621,873.73	-€7,818.95	-€556,429.84
13/03/2015	€658,937.97	-€12,692.12	-€565,741.37
14/03/2015	€513,997.92	€7,537.57	-€517,626.10
15/03/2015	€311,076.74	-€262.33	-€488,699.49
16/03/2015	€490,729.57	€17,637.03	-€560,146.36
17/03/2015	€550,876.37	€8,938.80	-€511,875.67
18/03/2015	€692,759.79	-€4,300.73	-€570,055.70
19/03/2015	€453,060.58	-€5,904.10	-€570,613.33
20/03/2015	€462,873.92	-€11,030.72	-€552,391.25
21/03/2015	€365,859.05	-€10,426.20	-€500,588.32
22/03/2015	€495,861.85	-€3,545.94	-€464,195.55
23/03/2015	€294,666.60	€24,633.51	-€526,351.50
24/03/2015	€532,310.91	€7,538.93	-€541,752.72
25/03/2015	€608,060.75	-€12,063.88	-€555,691.03
26/03/2015	€683,010.24	€2,898.03	-€534,954.70
27/03/2015	€516,305.02	€9,377.91	-€548,088.10
28/03/2015	€907,722.70	€14,362.92	-€460,979.15
29/03/2015	€899,801.32	€13,302.90	-€428,717.12
30/03/2015	€640,827.85	-€22,435.70	-€531,755.11
31/03/2015	€859,838.48	-€27,058.43	-€528,117.64
01/04/2015	€353,637.82	-€12,755.18	-€547,054.68
02/04/2015	€192,564.04	€26,214.78	-€557,637.09
03/04/2015	€553,060.03	€10,436.03	-€500,000.76
04/04/2015	€188,464.90	-€5,482.97	-€488,079.61
05/04/2015	€376,683.46	€379.94	-€449,913.28
06/04/2015	€202,881.78	€2,293.71	-€448,845.81
07/04/2015	€308,271.01	€18,476.58	-€502,814.72
08/04/2015	€302,925.86	€13,910.21	-€508,761.17
09/04/2015	€388,531.87	-€28,047.02	-€507,515.49
10/04/2015	€335,602.84	€3,276.78	-€492,195.74
11/04/2015	€409,832.29	€5,238.81	-€442,683.63
12/04/2015	€190,518.56	-€12,820.94	-€448,514.54
13/04/2015	€447,662.36	-€23,674.74	-€508,077.79
14/04/2015	€251,250.57	-€10,941.74	-€507,702.32
15/04/2015	€474,602.23	-€25,636.21	-€530,083.82
16/04/2015	€403,876.45	-€24,892.87	-€525,533.02
17/04/2015	€374,249.83	-€13,527.90	-€511,462.70
18/04/2015	€597,380.44	€9,054.50	-€444,810.59
19/04/2015	€387,461.71	€17,416.77	-€440,742.77

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20/04/2015	€442,459.81	-€12,755.47	-€508,182.03
21/04/2015	€493,310.34	-€5,008.63	-€510,643.59
22/04/2015	€557,304.39	€2,298.79	-€506,655.91
23/04/2015	€409,459.95	-€8,601.93	-€509,587.22
24/04/2015	€506,069.75	-€1,035.74	-€507,855.55
25/04/2015	€334,715.22	€13,997.02	-€453,162.94
26/04/2015	€479,230.14	€5,427.75	-€444,641.14
27/04/2015	€405,033.18	-€2,812.88	-€504,278.12
28/04/2015	€384,277.88	€2,065.56	-€518,165.93
29/04/2015	€604,102.38	-€3,220.00	-€519,247.75
30/04/2015	€556,531.80	-€9,801.76	-€524,181.83

Table 27 - Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges

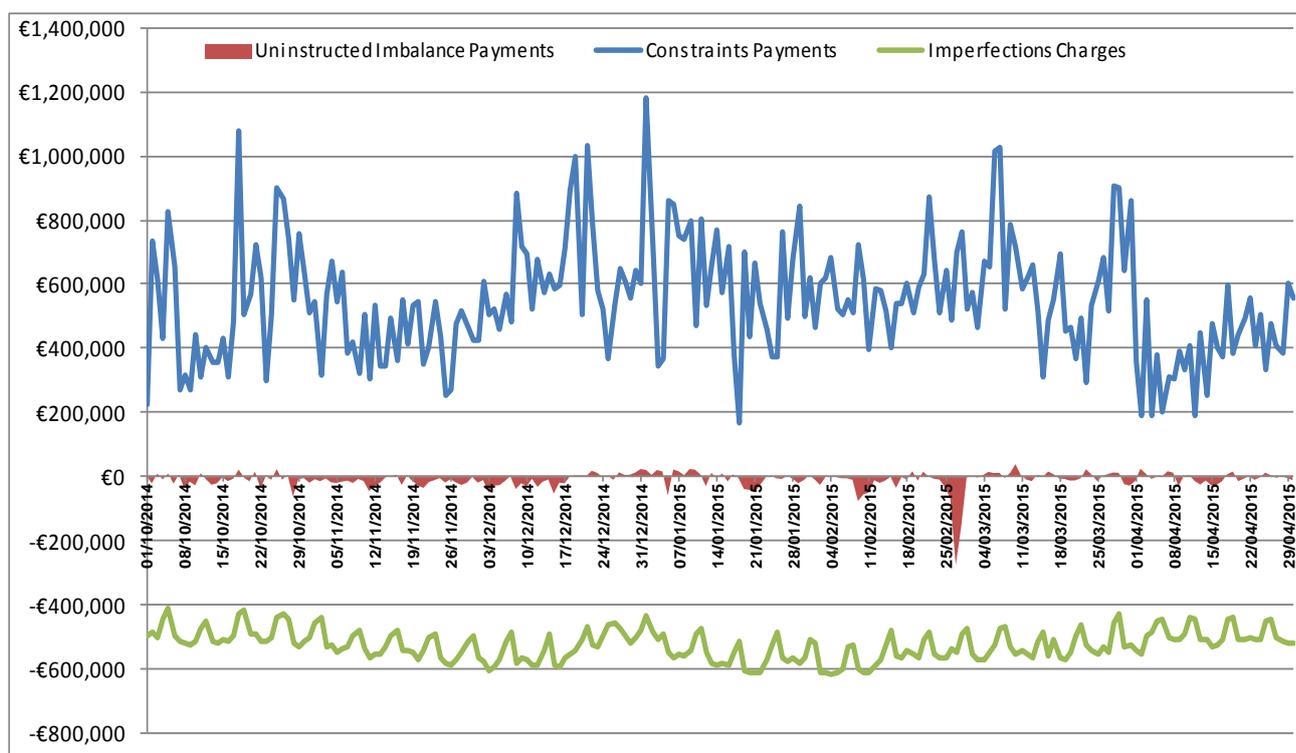


Figure 24 - Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges

Week No	Make Whole Payments
38	€202,188.33
39	€225,015.64
40	€280,671.13
41	€186,568.53
42	€159,900.73
43	€172,804.93
44	€117,287.97
45	€69,322.58
46	€151,346.18
47	€116,593.30
48	€89,395.20
49	€75,360.41

50	€169,324.41
51	€121,591.48
52	€55,670.15
1	€80,155.98
2	€72,635.72
3	€117,670.85
4	€162,664.95
5	€78,694.34
6	€58,735.16
7	€160,187.55
8	€132,758.27
9	€44,275.22
10	€38,818.26
11	€92,533.35
12	€117,780.87
13	€92,533.35
14	€117,780.87
15	€148,719.02
16	€83,282.89

Table 28 - Make Whole Payments

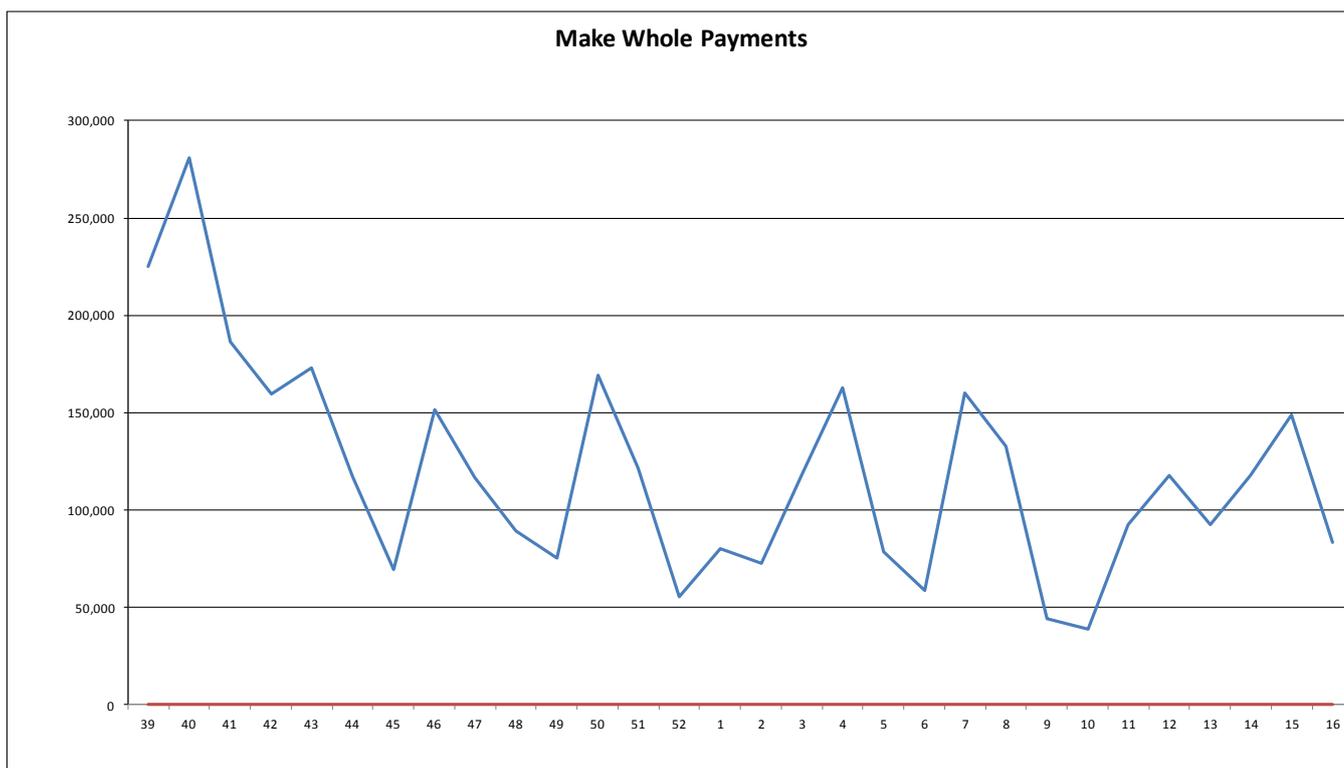


Figure 25 - Make Whole Payments

Week No	Testing Charges
39	-€64,349.25
40	-€23,212.88
41	-€8,173.18
42	-€106,220.13
43	-€106,488.24
44	-€74,217.72
45	-€13,149.01

46	€31,147.27
47	-€34,993.39
48	-€8,926.09
49	-€31,711.41
50	-€91,587.25
51	-€43,797.04
52	€0.00
1	-€69,863.70
2	€0
3	€0
4	€0
5	-€116,570.26
6	-€15,192.63
7	-€9,394.34
8	-€56,342.39
9	-€76,534.54
10	-€86,286.41
11	-€75,941.02
12	€0.00
13	-€75,941.02
14	€0.00
15	€0.00
16	€0.00

Table 29 - Testing Charges

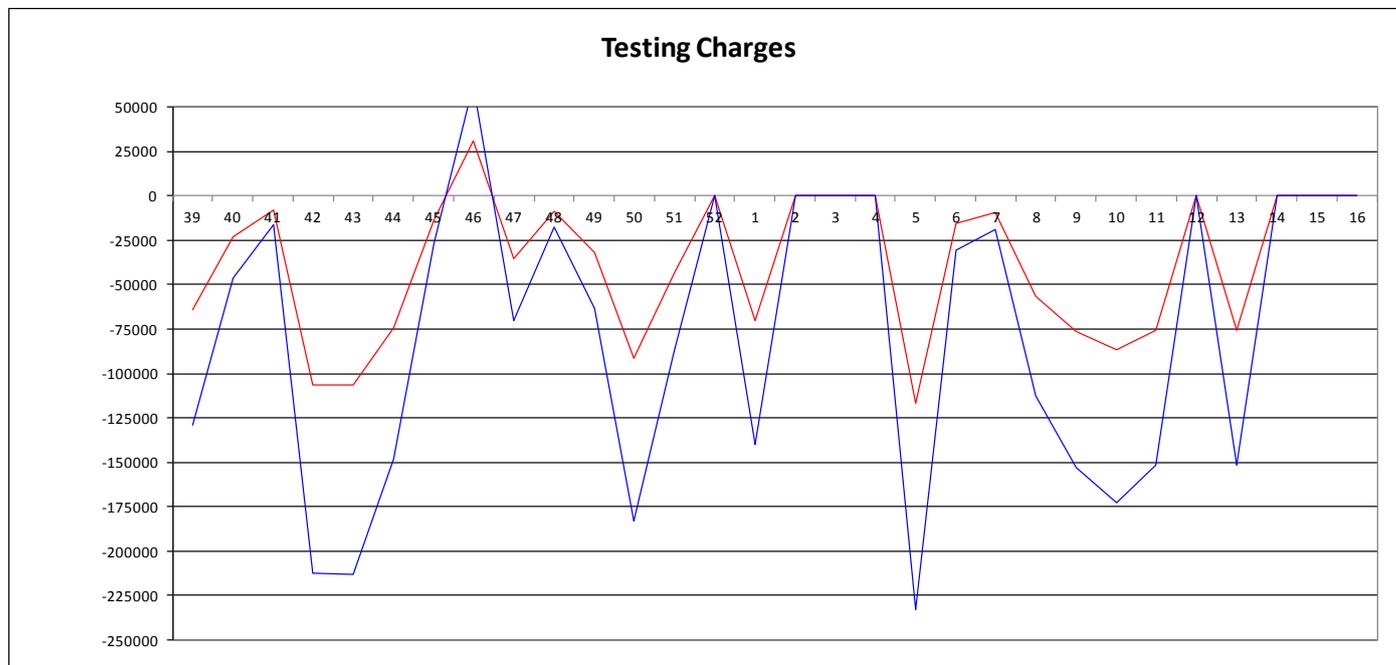


Figure 26 - Testing Charges

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

The table below lists for each unit the number of times in operations during February 2015 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_400090	DSU_401620			30	30
PT_400138	DSU_401590	30			30
PT_400090	DSU_401610	1			1
PT_400090	DSU_401610			29	29
PT_400116	DSU_401400	30			30
PT_400111	DSU_401390			14	14
PT_400106	DSU_401330	42			42
PT_400090	DSU_401270	30			30
PT_400111	DSU_401390	16			16
PT_400133	DSU_401530			30	30
PT_400124	DSU_401490	30			30
PT_400024	GU_400120	30			30
PT_400024	GU_400121	30			30
PT_400026	GU_400140	30			30
PT_400030	GU_400180	45			45
PT_400030	GU_400181	46			46
PT_400030	GU_400182	46			46
PT_400030	GU_400183	42			42
PT_400030	GU_400200	42			42
PT_400030	GU_400201	44			44
PT_400030	GU_400202	43			43
PT_400030	GU_400203	45			45
PT_400030	GU_400210	41			41
PT_400030	GU_400211	42			42
PT_400030	GU_400220	41			41
PT_400030	GU_400221	41			41
PT_400030	GU_400240	41			41
PT_400030	GU_400250	41			41
PT_400030	GU_400251	41			41
PT_400030	GU_400252	41			41
PT_400030	GU_400260	41			41
PT_400030	GU_400270	42			42
PT_400030	GU_400271	43			43
PT_400030	GU_400272	45			45
PT_400030	GU_400280	41			41
PT_400030	GU_400281	41			41
PT_400030	GU_400290	41			41
PT_400030	GU_400300	46			46
PT_400030	GU_400311	46			46
PT_400030	GU_400323	46			46
PT_400030	GU_400360	41			41
PT_400030	GU_400361	41			41
PT_400030	GU_400362	41			41
PT_400030	GU_400363	41			41
PT_400030	GU_400370	41			41
PT_400030	GU_400850	46			46

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PT_400032	GU_400430	30		30
PT_400034	GU_400940	30		30
PT_400034	GU_401090	30		30
PT_400034	GU_401440	30		30
PT_400035	GU_400480	49		49
PT_400037	GU_400500	30		30
PT_400041	GU_400530	52		52
PT_400044	GU_400540	49		49
PT_400050	GU_401280	17		17
PT_400054	GU_400620	30		30
PT_400055	GU_400630	30		30
PT_400064	GU_400750	30		30
PT_400064	GU_400751	30		30
PT_400064	GU_400752	30		30
PT_400064	GU_400753	30		30
PT_400064	GU_400754	21		21
PT_400064	GU_400760	21		21
PT_400064	GU_400761	29		29
PT_400064	GU_400762	26		26
PT_400064	GU_400770	30		30
PT_400064	GU_400771	30		30
PT_400064	GU_400780	30		30
PT_400064	GU_400781	30		30
PT_400075	GU_400930	78		78
PT_400077	GU_400950	30		30
PT_400078	GU_401010	30		30
PT_400078	GU_401011	30		30
PT_400087	GU_401230	12		12
PT_400150	GU_401700	8		8
PT_400151	GU_401780	3		3
PT_500024	GU_500040	46		46
PT_500024	GU_500041	30		30
PT_500027	GU_500130	81		81
PT_500027	GU_500131	81		81
PT_500027	GU_500140	81		81
PT_500032	GU_501280	22		22
PT_500040	GU_500280	30		30
PT_500040	GU_500281	30		30
PT_500040	GU_500282	30		30
PT_500040	GU_500283	30		30
PT_500040	GU_500284	30		30
PT_500045	GU_500820	30		30
PT_500045	GU_500821	30		30
PT_500045	GU_500822	30		30
PT_500045	GU_500823	30		30
PT_500045	GU_500824	30		30
PT_500045	GU_500825	30		30
PT_500048	GU_500904	50		50
PT_500050	GU_501040	30		30
PT_500050	GU_501050	30		30
PT_500050	GU_501150	30		30
PT_500050	GU_501190	30		30
PT_500053	GU_501130	30		30
PT_500066	GU_501210	30		30

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PT_400021	GU_400021			30	30
PT_400021	GU_400050			30	30
PT_400021	GU_400060			30	30
PT_400021	GU_400070			30	30
PT_400021	GU_400080			30	30
PT_400021	GU_400591			30	30
PT_400021	GU_400600			30	30
PT_400021	GU_400910			30	30
PT_400021	GU_400920			30	30
PT_400021	GU_401080			30	30
PT_400021	GU_401380			30	30
PT_400021	GU_401600			30	30
PT_400021	GU_401640			30	30
PT_400025	GU_400130			30	30
PT_400030	GU_400310			30	30
PT_400038	GU_400550			30	30
PT_400050	GU_400650			30	30
PT_400050	GU_400660			30	30
PT_400050	GU_401000			30	30
PT_400050	GU_401060			30	30
PT_400050	GU_401150			30	30
PT_400050	GU_401240			30	30
PT_400050	GU_401250			30	30
PT_400050	GU_401290			30	30
PT_400050	GU_401360			30	30
PT_400062	GU_400730			30	30
PT_400062	GU_400731			30	30
PT_400062	GU_400840			30	30
PT_400064	GU_400754			10	10
PT_400064	GU_400760			10	10
PT_400064	GU_400761			1	1
PT_400064	GU_400762			4	4
PT_400082	GU_401100			30	30
PT_400087	GU_401230			19	19
PT_400148	GU_401690			30	30
PT_400150	GU_401700			23	23
PT_400151	GU_401770			30	30
PT_400152	GU_401710			30	30
PT_400152	GU_401720			30	30
PT_400152	GU_401730			30	30
PT_400152	GU_401740			30	30
PT_400152	GU_401750			30	30
PT_400152	GU_401760			30	30
PT_500021	GU_500010			30	30
PT_500021	GU_500740			30	30
PT_500021	GU_501160			30	30
PT_500032	GU_500211			30	30
PT_500032	GU_501120			30	30
PT_500032	GU_501280			9	9
PT_500032	GU_501290			30	30
PT_500039	GU_500270			30	30
PT_500044	GU_500720			30	30
PT_500047	GU_500790			30	30
PT_500061	GU_501170			30	30

## Market Operator Monthly Report

PT_500062	GU_501180			30	30
PT_500073	GU_501230			30	30
PT_500074	GU_501250			30	30
PT_400021	I_ROIEWIC	30			30
PT_500075	I_NIMOYLE	73			73
PT_500024	I_NIMOYLE	37			37
PT_500021	I_NIMOYLE	30			30
PT_500031	I_NIMOYLE	30			30
PT_500069	I_NIMOYLE	89			89
PT_500058	I_NIMOYLE	30			30
PT_400096	I_ROIEWIC	88			88
PT_500037	I_NIMOYLE	30			30
PT_400113	I_ROIEWIC	30			30
PT_400115	I_ROIEWIC	30			30
PT_400136	I_ROIEWIC	66			66
PT_500070	I_NIMOYLE	68			68
PT_400108	I_ROIEWIC	65			65
PT_400099	I_ROIEWIC	30			30
PT_400030	I_ROIEWIC	40			40
	<b>Total</b>	<b>4206</b>	<b>0</b>	<b>1679</b>	<b>5885</b>
	<b>Percentage</b>	<b>71.47%</b>	<b>0.00%</b>	<b>28.53%</b>	<b>100.00%</b>

Table 30 – 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
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
Jun-14	ROI	£52,841,750.77	£17,596,854.80	£1,312,068.35	£423,771.26	£115,750.72	£4,162.65	£89,169.46	£18,685.28	£1,014.73	£28,526.30	£0.00	£0.00	72,431,754.32
	NI	£21,944,762.06	£6,361,219.34	£345,120.63	£120,971.43	£44,784.33	£1,003.03	£41,125.48	£9,461.42	£415.67	£2,532.18	£0.00	£0.00	28,871,395.57
Jul-14	ROI	£48,255,770.91	£22,988,780.17	£1,292,701.68	£332,606.61	£88,357.34	£2,943.28	£85,242.72	£17,526.18	£1,047.39	£0.00	£0.00	£0.00	73,064,976.28
	NI	£16,832,807.07	£5,122,118.14	£325,108.62	£91,338.63	£25,719.39	£870.76	£34,166.04	£7,520.83	£436.14	£0.00	£0.00	£0.00	22,440,085.62
Aug-14	ROI	£49,671,449.35	£18,463,469.38	£767,415.15	£442,875.61	£132,859.46	£2,617.91	£174,481.42	£24,018.61	£806.67	£34,066.85	£0.00	£0.00	69,714,060.41
	NI	£20,444,248.38	£5,917,010.08	£191,002.36	£178,167.11	£60,451.34	£1,059.11	£38,565.73	£8,077.48	£245.07	£24,964.25	£0.00	£0.00	26,863,790.91
Sep-14	ROI	£73,166,499.86	£17,774,079.00	£1,638,145.68	£285,506.09	£62,431.70	£3,367.28	£92,320.83	£30,020.38	£728.19	£0.00	£0.00	£0.00	93,053,099.01
	NI	£24,828,028.32	£5,414,449.74	£421,681.34	£62,719.19	£15,276.27	£566.66	£41,391.12	£13,194.54	£660.78	£0.00	£0.00	£0.00	30,797,967.96
Oct-14	ROI	£24,219,443.57	£5,293,829.01	£290,759.61	£125,095.27	£15,188.14	£796.75	£32,076.91	£6,465.54	£355.27	£0.00	£0.00	£0.00	29,984,010.07
	NI	£73,931,567.89	£18,999,271.36	£1,111,306.76	£521,095.61	£105,483.15	£5,765.50	£89,815.40	£9,518.03	£802.55	£0.00	£0.00	£0.00	94,774,626.25
Nov-14	ROI	£57,386,075.03	£21,066,561.05	£829,482.91	£519,431.32	£147,151.65	£6,123.28	£79,434.93	£23,622.83	£721.00	£0.00	£0.00	£0.00	80,058,604.00
	NI	£21,159,632.98	£6,853,966.46	£220,983.06	£50,691.24	£27,250.12	£653.21	£26,795.35	£6,589.23	£253.47	£0.00	£0.00	£0.00	28,346,815.12
Dec-14	ROI	£70,930,088.87	£29,867,271.70	£888,221.25	£635,976.36	£143,088.63	£7,086.94	£116,364.21	£26,279.71	£995.87	£0.00	£0.00	£0.00	102,615,373.54
	NI	£24,123,259.48	£7,725,422.06	£238,369.94	£58,794.95	£14,543.55	£696.33	£34,690.50	£7,234.36	£296.35	£0.00	£0.00	£0.00	32,203,307.52
Jan-15	ROI	£66,217,285.22	£32,948,586.09	£1,048,029.61	£438,657.65	£106,047.92	£3,853.63	£150,902.14	£27,588.16	£819.15	£0.00	£2,703.81	£0.00	100,944,473.38
	NI	£27,989,159.87	£8,572,662.67	£280,425.53	£42,989.83	£9,581.57	£365.00	£37,526.70	£7,104.61	£229.56	£0.00	£1,338.36	£0.00	36,941,383.70
Feb-15	ROI	£65,650,453.03	£55,349,682.44	£856,456.83	£281,934.15	£56,929.88	£1,558.86	£451,006.63	£29,817.73	£839.90	£68,857.79	£0.00	£0.00	122,747,537.24
	NI	£25,773,047.64	£16,395,217.13	£213,118.58	£112,874.22	£37,025.56	£783.98	£25,242.43	£5,150.11	£140.40	£0.00	£0.00	£0.00	42,562,600.05
Mar-15	ROI	£53,956,274.88	£21,836,040.18	£861,676.05	£453,661.43	£115,779.65	£2,416.32	£355,096.34	£39,172.70	£877.23	£111,462.50	£0.00	£0.00	77,732,457.28
	NI	£22,615,725.41	£8,408,410.93	£207,225.41	£147,466.81	£46,471.14	£825.82	£39,513.02	£6,098.32	£183.02	£282.78	£0.00	£0.00	£31,472,202.66
Apr-15	ROI	£49,671,449.35	£18,463,469.38	£767,415.15	£442,875.61	£132,859.46	£2,617.91	£174,481.42	£24,018.61	£806.67	£34,066.85	£0.00	£0.00	£69,714,060.41
	NI	£20,444,248.38	£5,917,010.08	£191,002.36	£178,167.11	£60,451.34	£1,059.11	£38,565.73	£8,077.48	£245.07	£24,964.25	£0.00	£0.00	£26,863,790.91

Table 31 - 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
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
Jun-14	ROI	€53,863,542.49	€16,268,861.66	€424,333.36	€121,415.36	€4,245.54	€106,227.35	€17,318.53	€1,014.63	€10,805.33	€0.00	€0.00	€70,817,764.25
	NI	€18,301,490.12	€7,464,864.99	€121,134.45	€40,186.30	€1,005.32	€50,770.87	€10,564.39	€415.66	€29.76	€0.00	€0.00	€25,990,461.86
Jul-14	ROI	€50,929,138.15	€21,772,067.06	€326,631.36	€82,858.43	€2,938.18	€123,130.56	€17,118.42	€1,016.51	€0.00	€0.00	€0.00	€73,254,898.67
	NI	€12,936,147.70	€6,035,816.09	€91,479.13	€29,875.87	€813.16	€67,310.27	€7,807.37	€427.29	€0.00	€0.00	€0.00	€19,169,676.88
Aug-14	ROI	€76,295,371.52	€16,503,906.00	€283,973.76	€42,797.07	€2,738.01	€125,676.42	€0.00	€1,327.83	€29.36	€0.00	€0.00	€93,255,819.97
	NI	€14,229,748.35	€5,312,669.68	€178,040.01	€60,667.89	€1,059.24	€28,971.47	€8,624.89	€241.56	€20,785.23	€0.00	€0.00	€19,840,808.32
Sep-14	ROI	€73,630,247.02	€17,405,067.16	€261,367.00	€62,924.88	€3,377.33	€73,033.72	€11,845.94	€728.13	€0.00	€0.00	€0.00	€91,448,591.18
	NI	€22,272,153.08	€5,742,482.51	€49,069.86	€14,962.35	€717.66	€41,404.59	€13,672.05	€509.28	€0.00	€0.00	€0.00	€28,134,971.38
Oct-14	ROI	€14,229,748.35	€5,312,669.68	€178,040.01	€60,667.89	€1,059.24	€28,971.47	€8,624.89	€241.56	€20,785.23	€0.00	€0.00	€19,840,808.32
	NI	€18,391,944.98	€5,868,972.09	€82,257.95	€15,709.16	€1,031.70	€42,677.16	€6,422.11	€498.29	€0.00	€0.00	€0.00	€24,409,513.44
Nov-14	ROI	€64,818,088.97	€20,480,936.98	€530,386.99	€157,754.12	€6,116.91	€78,674.36	€23,606.67	€1,289.81	€0.00	€0.00	€0.00	€86,096,854.81
	NI	€14,616,605.70	€7,312,194.38	€50,960.79	€18,897.71	€653.20	€37,498.77	€6,592.72	€254.29	€0.00	€0.00	€0.00	€22,043,657.56
Dec-14	ROI	€79,262,340.64	€30,252,803.13	€636,211.01	€143,171.30	€7,087.15	€116,495.94	€25,330.11	€995.97	€0.00	€0.00	€0.00	€110,444,435.25
	NI	€17,625,339.05	€7,511,303.13	€58,743.90	€14,475.87	€679.17	€34,724.44	€7,982.34	€296.61	€0.00	€0.00	€0.00	€25,253,544.51
Jan-15	ROI	€77,706,417.44	€34,394,754.66	€438,764.21	€107,475.98	€4,105.28	€98,914.59	€27,079.30	€830.89	€14,240.78	€3,537.75	€0.00	€112,796,120.88
	NI	€21,735,748.95	€7,476,289.80	€38,275.71	€8,505.48	€324.11	€25,331.16	€7,456.18	€248.46	€0.00	€691.42	€0.00	€29,292,871.27
Feb-15	ROI	€73,470,092.53	€55,924,536.86	€296,450.78	€68,641.91	€1,587.00	€108,844.27	€30,840.66	€843.06	€0.00	€0.00	€0.00	€129,901,837.07
	NI	€19,828,437.97	€15,954,828.70	€108,022.71	€28,545.69	€367.07	€16,957.65	€4,432.19	€141.23	€0.00	€0.00	€0.00	€35,941,733.21
Mar-15	ROI	€62,833,350.60	€23,162,278.12	€454,954.34	€115,622.74	€2,409.00	€95,140.99	€35,705.38	€876.34	€33.87	€0.00	€0.00	€86,700,371.38
	NI	€18,497,389.79	€7,572,263.19	€147,525.82	€46,556.55	€825.97	€19,215.14	€8,635.89	€182.86	€726.16	€0.00	€0.00	€26,293,321.37
Apr-15	ROI	€55,596,682.04	€19,228,984.53	€447,913.03	€132,018.11	€2,588.47	€93,342.92	€23,125.23	€794.27	€27,655.34	€0.00	€0.00	€75,553,103.94
	NI	€14,229,748.35	€5,312,669.68	€178,040.01	€60,667.89	€1,059.24	€28,971.47	€8,624.89	€241.56	€20,785.23	€0.00	€0.00	€19,840,808.32

Table 32 - 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
03/10/2014	38	-€115,563.34	-€ 12,716.83
10/10/2014	39	€103,327.94	€49,084.94
17/10/2014	40	-€315,014.02	-€ 48,688.42
24/10/2014	41	€234,738.53	€13,856.57
31/10/2014	42	€833,278.35	-€228,026.23
07/11/2014	43	€1,209,277.49	€172,019.41
14/11/2014	44	-€89,236.37	-€18,016.46
21/11/2014	45	-€726,843.59	-€105,801.85
28/11/2014	46	-€504,700.82	-€60,211.13
05/12/2014	47	-€783,945.26	-€105,665.85
12/12/2014	48	-€481,481.35	-€72,270.22
19/12/2014	49	€485,102.80	€53,433.64
31/12/2014	50	€980,523.50	€ 148,117.94
06/01/2015	51	€1,093,199.99	-€115,434.63
09/01/2015	52	€1,320,639.28	-€ 84,567.47
16/01/2015	1	€1,142,575.16	-€178,714.26
23/01/2015	2	€496,291.68	-€87,488.46
30/01/2015	3	-€871,479.91	€86,389.82
06/02/2015	4	€371,162.79	-€86,251.15
13/02/2015	5	-€198,874.86	€21,560.90
20/02/2015	6	-€341,073.88	€60,600.73
27/02/2015	7	€9,930.09	-€86,398.49
03/03/2015	8	€345,725.42	-€150,752.30
10/03/2015	9	€1,239,682.13	-€129,512.35
17/03/2015	10	€718,089.57	-€101,950.03
24/03/2015	11	-€432,482.35	€14,085.31
31/03/2015	12	€449,126.81	-€64,651.98
7/04/2015	13	€89,053.88	-€38,664.98
14/04/2015	14	-€1,012,471.70	€128,936.18
21/04/2015	15	-€839,084.24	€128,786.90

**Table 33 – 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

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Invoice Month	SEM Balancing Costs	VAT Balancing Costs
October 2014	-€361.28	-€ 968.24
November 2014	-€348.12	-€0.03
December 2014	-€393.11	€0.00
January 2015	-€416.65	€0.04
February 2015	-€364.18	€0.02
March 2015	-€382.43	-€0.03
April 2015	-€265.40	-€0.08

**Table 34 - 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
<u>October 2014</u>	<u>10/10/2014</u>	<u>03/10/2014</u> <u>15/10/2014</u> <u>28/10/2014</u>	<u>06/10/2014</u> <u>13/10/2014</u> <u>29/10/2014</u>	<u>06/10/2014</u> <u>13/10/2014</u> <u>27/10/2014</u>	<u>19/10/2014</u>
<u>November 2014</u>	-	<u>02/11/2014</u> <u>11/11/2014</u> <u>15/11/2014</u> <u>25/11/2014</u>	<u>20/11/2014</u> <u>24/11/2014</u> <u>26/11/2014</u>	<u>12/11/2014</u> <u>20/11/2014</u> <u>26/11/2014</u>	-
<u>December 2014</u>	<u>14/12/2014</u>	<u>04/12/2014</u> <u>14/12/2014</u> <u>25/12/2014</u>	<u>01/12/2014</u>	<u>04/12/2014</u>	-
<u>January 2015</u>	<u>06/01/2015</u>	<u>12/01/2015</u> <u>15/01/2015</u> <u>21/01/2015</u> <u>23/01/2015</u>	<u>03/01/2015</u>	<u>28/01/2015</u>	<u>16/01/2015</u>
<u>February 2015</u>	-	<u>06/02/2015</u> <u>07/02/2015</u> <u>09/02/2015</u> <u>13/02/2015</u> <u>18/02/2015</u> <u>23/02/2015</u>	<u>24/02/2015</u>	<u>28/02/2015</u>	<u>05/02/2015</u> <u>10/02/2015</u>
<u>March 2015</u>	-	-	-	<u>15/03/2015</u>	<u>24/03/2015</u>
<u>April 2015</u>	-	-	<u>20/04/2015</u>	<u>20/04/2015</u>	<u>25/04/2015</u>

Table 35 - MIP Algorithms

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Operational Date	Trade Date	Run Type	LR Peak SMP	MIP Peak SMP	Published
02/10/2014	03/10/2014	EA2	€1000	€298.79	MIP
07/10/2014	06/10/2014	EP1	€1000	€287.16	MIP
10/10/2014	06/10/2014	EP2	€1000	€288.65	MIP
09/10/2014	10/10/2014	EA1	€1000	€338.11	MIP
14/10/2014	13/10/2014	EP1	€1000	€141.67	MIP
17/10/2014	13/10/2014	EP2	€1,000	€269.41	MIP
14/10/2014	15/10/2014	EA2	€1,000	€219.27	MIP
19/10/2014	19/10/2014	WD1	€1,000	€117.07	MIP
31/10/2014	27/10/2014	EP2	€567.43	€452.53	MIP
27/10/2014	28/10/2014	EA2	€1000	€255.85	MIP
30/10/2014	29/10/2014	EP1	€1000	€436.71	MIP
01/11/2014	02/11/2014	EA2	€1000	€215.23	MIP
10/11/2014	11/11/2014	EA2	€1000	€229.26	MIP
14/11/2014	15/11/2014	EA2	€1000	€369.02	MIP
24/11/2014	25/11/2014	EA2	€572.13	€424.16	MIP
21/11/2014	20/11/2014	EP1	€1000	€228.86	MIP
27/11/2014	26/11/2014	EP1	€1000	€380.87	MIP
25/11/2014	24/11/2014	EP1	€630.52	€560.63	MIP
16/11/2014	12/11/2014	EP2	€1000	€357.67	MIP
24/11/2014	20/11/2014	EP2	€1000	€228.14	MIP
30/11/2014	26/11/2014	EP2	€1,000	€455.21	MIP
01/12/2014	30/11/2014	EP1	€554.66	€841.81	MIP
04/12/2014	05/12/2014	EA2	€1000	€271.08	MIP
04/12/2014	30/11/2014	EP2	€554.65	€439.23	MIP
14/12/2014	15/12/2014	EA1	€585.68	€241.97	MIP
14/12/2014	15/12/2014	EA2	€585.68	€242.87	MIP
25/12/2014	26/12/2014	EA2	€584.33	€71.42	MIP
03/01/2015	02/01/2015	EP1	€560.46	€244.25	MIP
06/01/2015	07/01/2015	EA1	€550.32	€230.74	MIP
12/01/2015	13/01/2015	EA2	€1000	€162.06	MIP
15/01/2015	16/01/2015	EA2	€1000	€210.05	MIP
16/01/2015	16/01/2015	WD1	€557.82	€176.01	MIP
21/01/2015	22/01/2015	EA2	€554.69	€183.59	MIP
23/01/2015	24/01/2015	EA2	€1000	€361.30	MIP
28/01/2015	24/01/2015	EP2	€1000	€358.00	MIP
05/02/2015	05/02/2015	WD1	€583.65	€461.14	MIP
06/02/2015	07/02/2015	EA2	€1000	€201.17	MIP
07/02/2015	08/02/2015	EA2	€1000	€238.69	MIP
09/02/2015	10/02/2015	EA2	€1000	€211.44	MIP
10/02/2015	10/02/2015	WD1	€1000	€206.00	MIP
13/02/2015	14/02/2015	EA2	€1000	€920.77	MIP
18/02/2015	19/02/2015	EA2	€1000	€475.15	MIP
23/02/2015	24/02/2015	EA2	€1000	€239.26	MIP
24/02/2015	23/02/2015	EP1	€1000	€206.00	MIP
28/02/2015	24/02/2015	EP2	€1000	€418.22	MIP
15/03/2015	11/03/2015	EP2	€1000	€740.26	MIP
24/03/2015	24/03/2015	WD1	€586.24	€195.68	MIP
21/04/2015	20/04/2015	EP1	€589.68	€79.45	MIP
25/04/2015	24/04/2015	WD1	€1,000	€162.18	MIP

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24/04/2015	20/04/2015	EP2	€589.68	€80.11	MIP
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**Table 36 - MIP Vs LR Peak Price Comparison**