



# **Market Operator Monthly Report**

## **August 2015**

---

## Table of Contents

1. EXECUTIVE SUMMARY .....	4
2. MONTHLY STATISTICS .....	5
CODE BREACHES.....	5
JOINING AND TERMINATING PARTIES AND UNITS .....	6
SUSPENSION OF PARTICIPANTS .....	6
3. FINANCIAL STATISTICS.....	7
TOTAL CHARGES FOR EACH CURRENCY .....	7
TOTAL PAYMENTS FOR EACH CURRENCY.....	8
TOTAL BALANCING COSTS .....	8
TOTAL CURRENCY COSTS .....	10
CUMULATIVE IMPERFECTIONS COSTS VS BUDGET.....	11
FINANCIAL CHANGES BETWEEN INITIAL SETTLEMENT AND SUBSEQUENT RERUNS .....	12
3.1.1 Energy Market.....	12
3.1.2 Capacity Market.....	16
4. HELPDESK CALL STATISTICS .....	21
5. DISPUTES AND QUERIES .....	22
5.1.2 Data Queries.....	22
5.1.3 Settlement Queries .....	22
6. CENTRAL SYSTEMS .....	23
6.1 PROPORTION OF DEFAULT DATA USED.....	23
6.2 PROPORTION OF ESTIMATED METER DATA USED IN INITIAL SETTLEMENT AND RESETTLEMENT.....	23
6.3 LIST OF SYSTEM ERRORS AND RE-RUNS .....	23
6.3.1 Re-Pricing and Resettlement Runs .....	23
6.3.2 System Errors .....	23
6.4 OPERATIONAL TIMINGS .....	23
6.4.1 MSP Postings August 2015.....	24
6.4.2 MSP Algorithms .....	27
6.4.3 Settlement Postings August 2015 .....	28
6.5.1 Release SEM R2.6.0 (Proposed Deployment: May 15 <sup>th</sup> 2015) .....	29
6.5.2 Release SEM R2.7.0 (To be deployed 2 <sup>nd</sup> October 2015) .....	29
7. OCCASIONAL COMPONENTS .....	30
7.1 DISASTER RECOVERY/BUSINESS CONTINUITY TESTS.....	30
7.3 COMMUNICATIONS OR SYSTEMS FAILURES.....	30
7.4 DENIAL OF SERVICE ATTACKS .....	30
7.5 SUBMISSION OF PARAMETERS TO RAS FOR APPROVAL .....	30
8. APPENDIX A: DETAIL OF CODE BREACHES .....	31
MARKET PARTICIPANT .....	31
DATA PROVIDER .....	31
SEMO - PRICING AND SCHEDULING.....	32
SEMO – SETTLEMENTS .....	32
SEMO - FUNDS TRANSFER .....	32
SEMO - CREDIT MANAGEMENT .....	32
SEMO – OTHER .....	32
9. APPENDIX B: LIST OF QUERIES BY TYPE .....	33
10. APPENDIX C: LIST OF ALL SYSTEM ERRORS AND FAILURES .....	34
11. APPENDIX D: DETAILS OF OPERATIONAL TIMINGS .....	35
MARKET SCHEDULE AND PRICE RUNS .....	35
SETTLEMENT RUNS.....	36

## Market Operator Monthly Report

---

12. APPENDIX E: IMPERFECTIONS CHARGE .....	37
13. APPENDIX F: DEFAULT COMMERCIAL OFFER DATA USED .....	47
14. APPENDIX G: TOTAL CHARGES AND PAYMENTS DATA .....	51
15. APPENDIX H: FULL BALANCING COSTS.....	54
TRADING MARKET .....	54
CAPACITY MARKET .....	55
16. APPENDIX I: MSP ALGORITHMS .....	56

### 1. Executive Summary

This Single Electricity Market Operator's (SEMO) report covers the month of operation of August 2015 and is published in accordance with the Single Electricity Market (SEM) Committee decision and Clause 2.144 of the Trading and Settlement Code.

During the month of August 2015, Settlements had no late publications as per the Trading and Settlement code.

146 general queries were received in August 2015. During the same period 144 general queries were resolved.

There were 11 defaults by Participants during August 2015. The largest of these was an Energy Initial invoice for €105, 954.16 which was remedied 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	10	-
	Credit Risk Management	-	-
SEMO	Pricing & Scheduling	-	2
	Settlement	-	-
	Funds Transfer	-	-
	Credit Risk Management	-	-
	Other	-	-
<b>Total</b>		<b>10</b>	<b>4</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 no financial implication to Participants. This includes late posting of pricing and settlement runs.

## Market Operator Monthly Report

---

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

No new Parties joined the Market in August 2015.

There were no terminating parties in August 2015.

There was one new unit effective in the Market in August 2015.

- PT\_400168 – Captured Carbon - EWIC Interconnector Unit

There was one unit which de-registered from the Market in August 2015.

- PT\_400030/GU\_400310 – North Wall 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

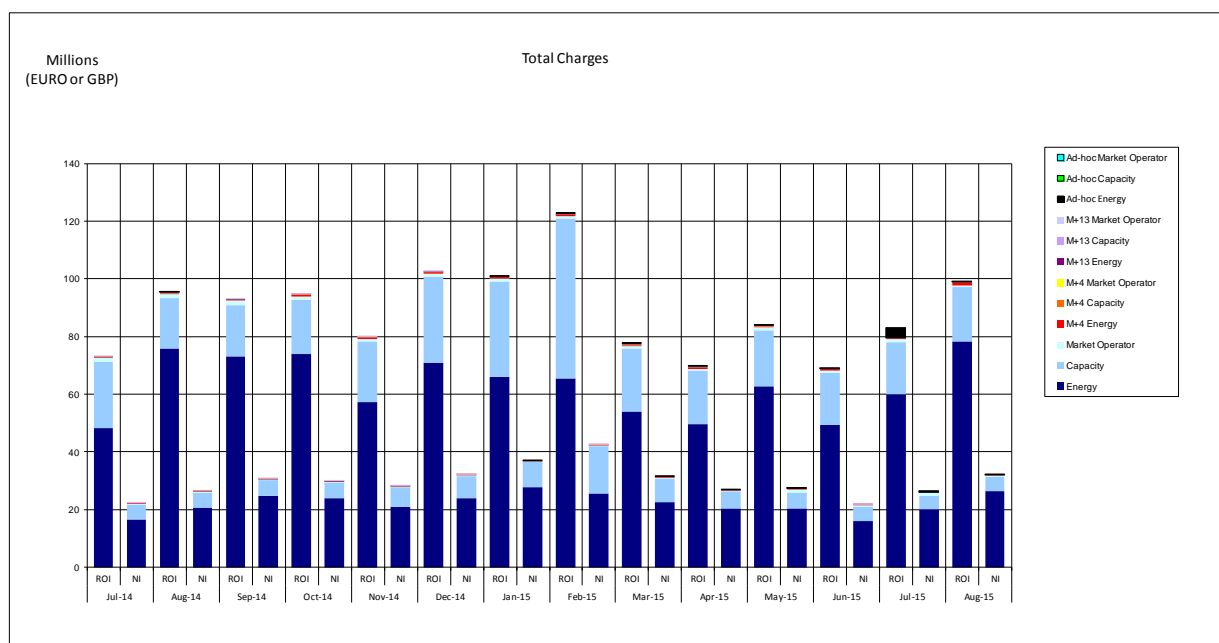


Figure 1 - Total Charges for Each Currency

Market	August 2015	
	ROI	NI
Energy	€78,361,586	£26,593,706
Capacity	€18,780,407	£4,803,877
Market Operator	€706,070	£717,392
M+4 Energy	€980,270	£96,278
M+4 Capacity	€57,625	£20,146
M+4 Market Operator	€1,114	£294
M+13 Energy	€78,107	£11,711
M+13 Capacity	€15,467	£2,659
M+13 Market Operator	€705	£109
Ad-hoc Energy	€100,608	£1,580
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
<b>Total</b>	<b>€99,081,958</b>	<b>£32,247,753</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](#).

# Market Operator Monthly Report

## Total Payments for Each Currency

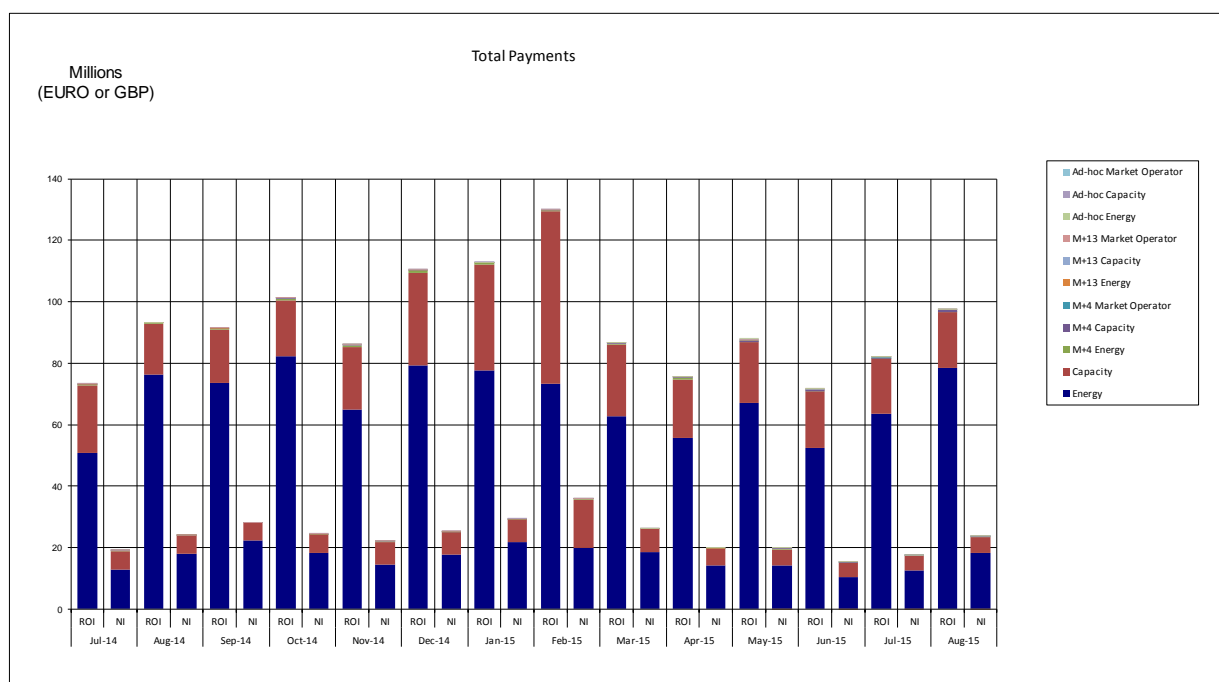


Figure 2 - Total Payments for Each Currency

Market	August 2015	
	ROI	NI
Energy	€78,593,342	£18,174,076
Capacity	€17,976,727	£5,392,404
M+4 Energy	€1,942	£13,263
M+4 Capacity	€806,816	£191,650
M+4 Market Operator	€62,842	£15,986
M+13 Energy	€1,062	-£295
M+13 Capacity	€78,107	£11,711
M+13 Market Operator	€15,447	£2,643
Ad-hoc Energy	€705	£110
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
<b>Total</b>	<b>€97,536,988</b>	<b>€23,801,549</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.



## Market Operator Monthly Report

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:

August 2015	
Imbalance (Energy Only)	-€5,470,705.33

Table 4 - Balancing Costs for Energy Settlement

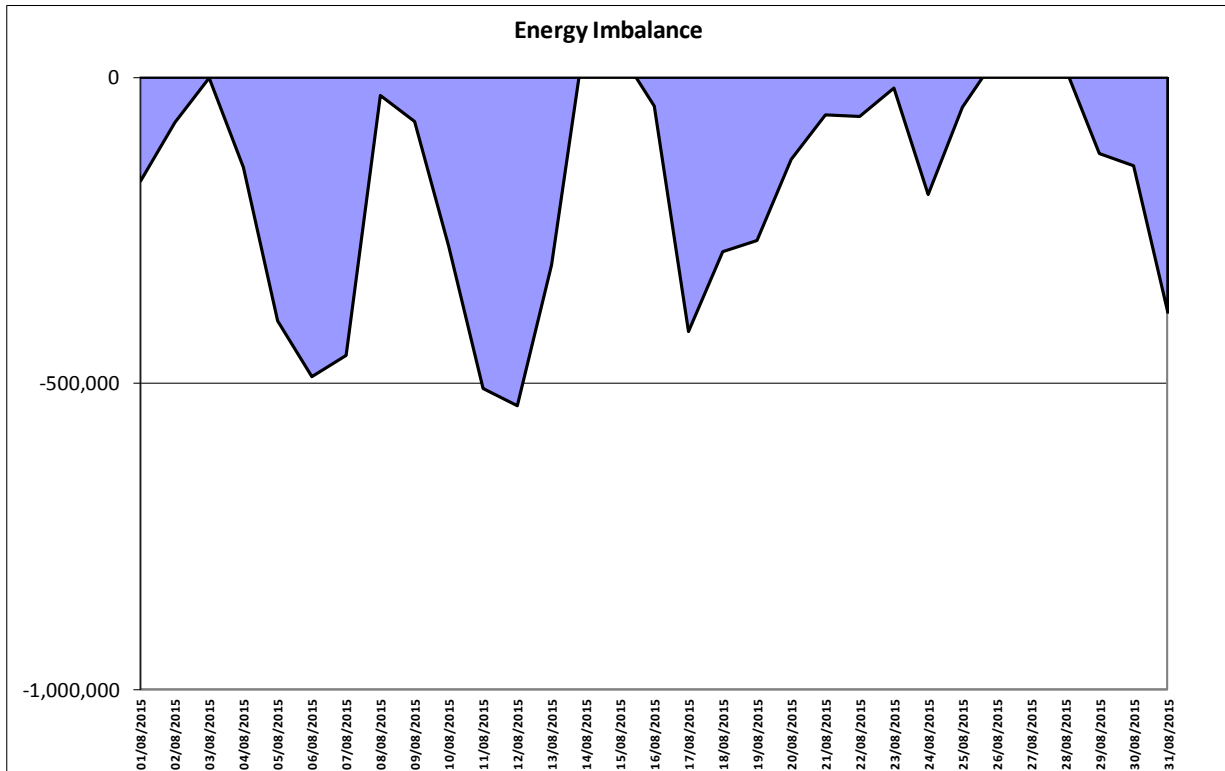


Figure 3 – Energy Imbalances

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.

## Market Operator Monthly Report

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
07/08/2015	30	-€671,249.86	€93,842.84
14/08/2015	31	€203,990.07	€52,391.21
21/08/2015	32	-€1,689,320.99	€200,605.60
28/08/2015	33	-€1,328,918.96	€198,118.33

**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:

August 2015	
Capacity Charges	-€37,942,112.60
Capacity Payments	37,941,835.45
Balancing Costs	-€277.15
VAT	-€7,300.66

**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) and the Exchange Rate on the Date of Invoice (being the date of issue of the Invoice) for Trading Payments and Charges.

## Market Operator Monthly Report

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
01/08/2015	07/08/2015	30	£9,383.59	£14,995.05	£24,378.63
08/08/2015	14/08/2015	31	-£28,410.60	-£18,406.48	-£46,817.08
15/08/2015	21/08/2015	32	-£30,588.68	£326.19	-£30,262.49
22/08/2015	28/08/2015	33	-£24,659.45	-£33,114.07	-£57,773.52

**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 £24,378.63 and a cost of £57,773.52. 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
09/09/2015	Aug 2015	-£50,152.42

**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

## Market Operator Monthly Report

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.

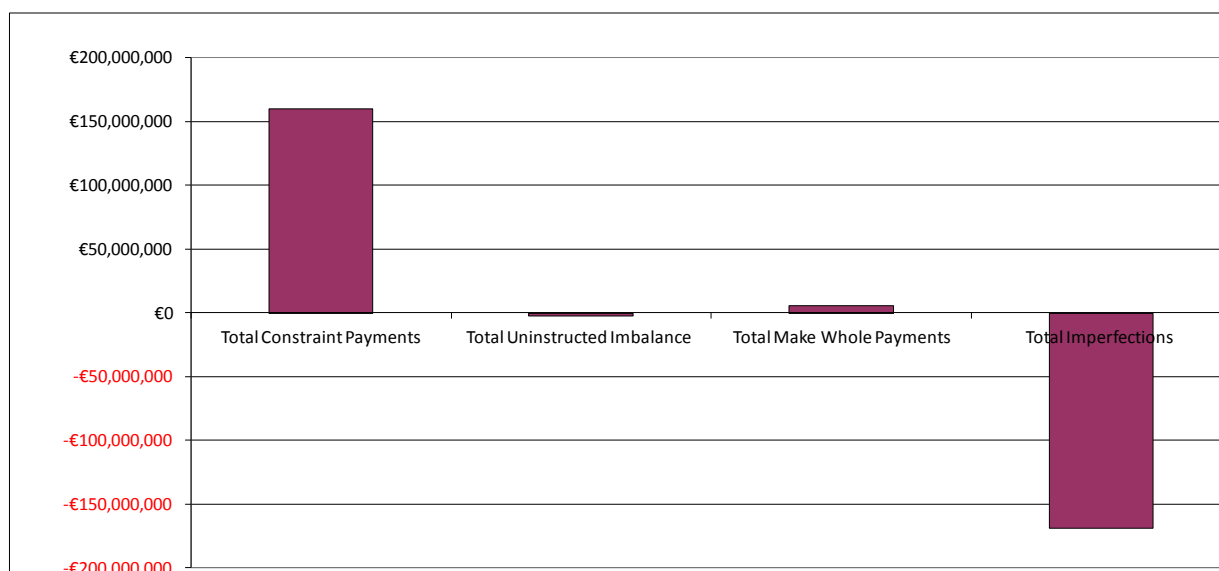
This table makes use of the values taken from the Initial Settlement Run of Trading payments and charges.

Total Constraint Payments	Total Uninstructed Imbalance	Total Make Whole Payments	Total Imperfections
€159,826,737.06	-€2,258,116.57	€5,625,681.24	-€169,103,907.98

**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 April 2015 and M+13 resettlement period of July 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).

# Market Operator Monthly Report

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

The reverse is true for Figure 7 & 10

## M+4 Resettlement

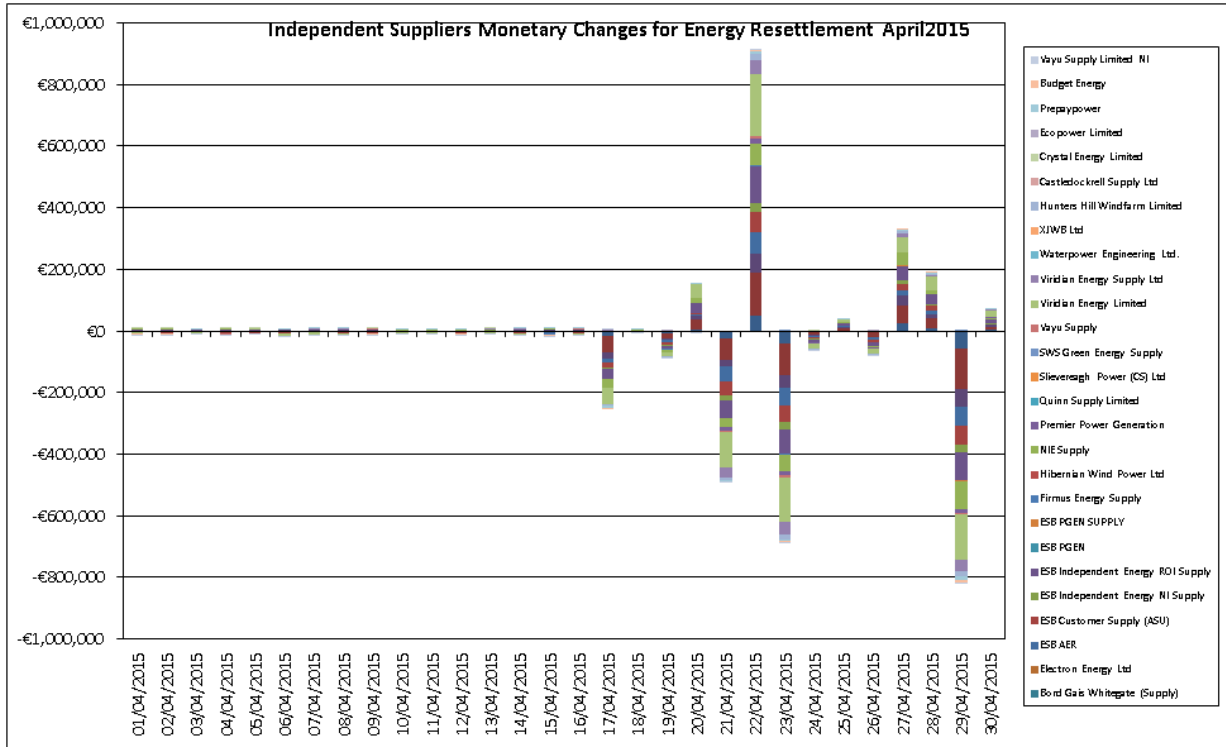


Figure 5 – Independent Suppliers Monetary Changes for Energy Resettlement – April 2015

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

# Market Operator Monthly Report

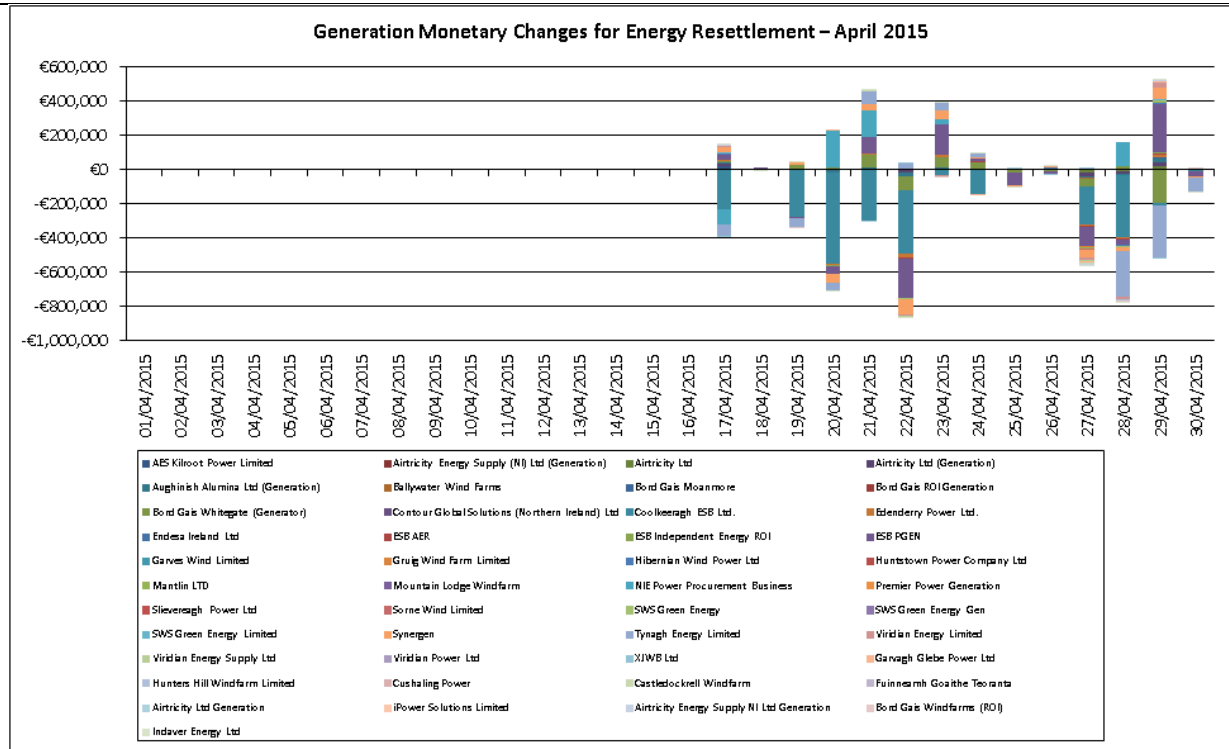


Figure 6 – Generation Monetary Changes for Energy Resettlement – April 2015

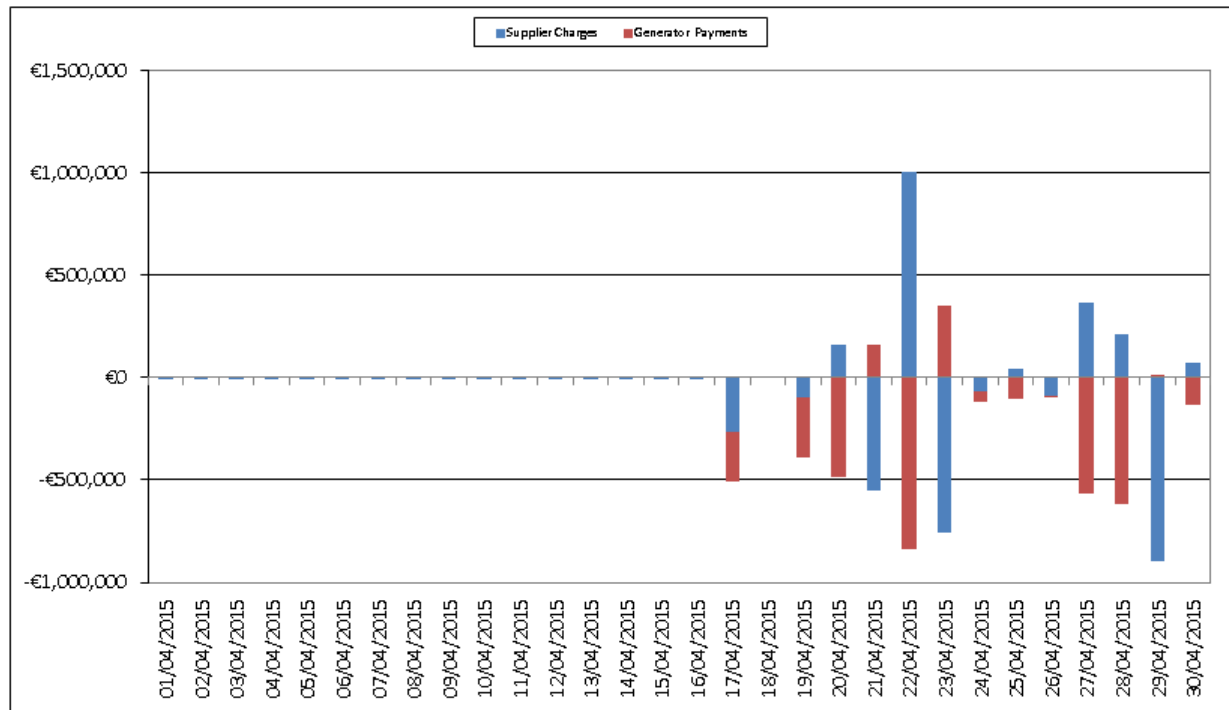


Figure 7 – Total Monetary Changes for Energy Resettlement – April 2015

M+13 Resettlement

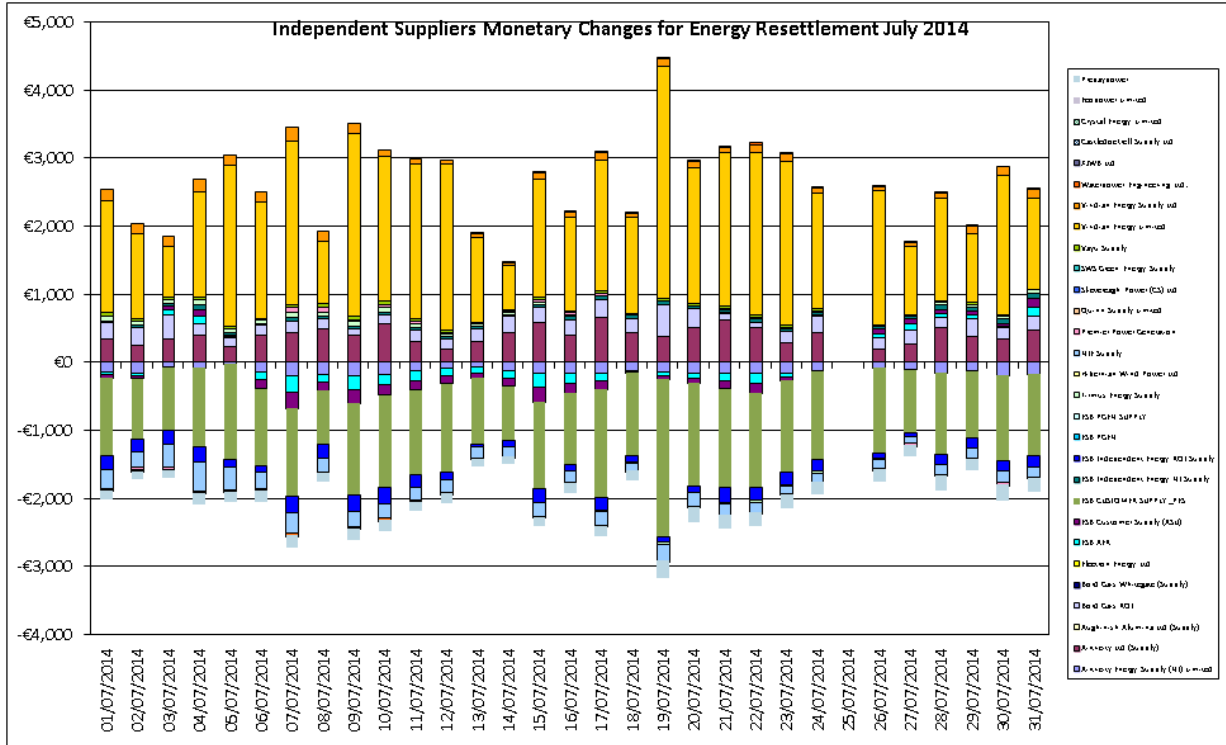


Figure 8 - Independent Suppliers Monetary Changes for Energy Resettlement – July 2014

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

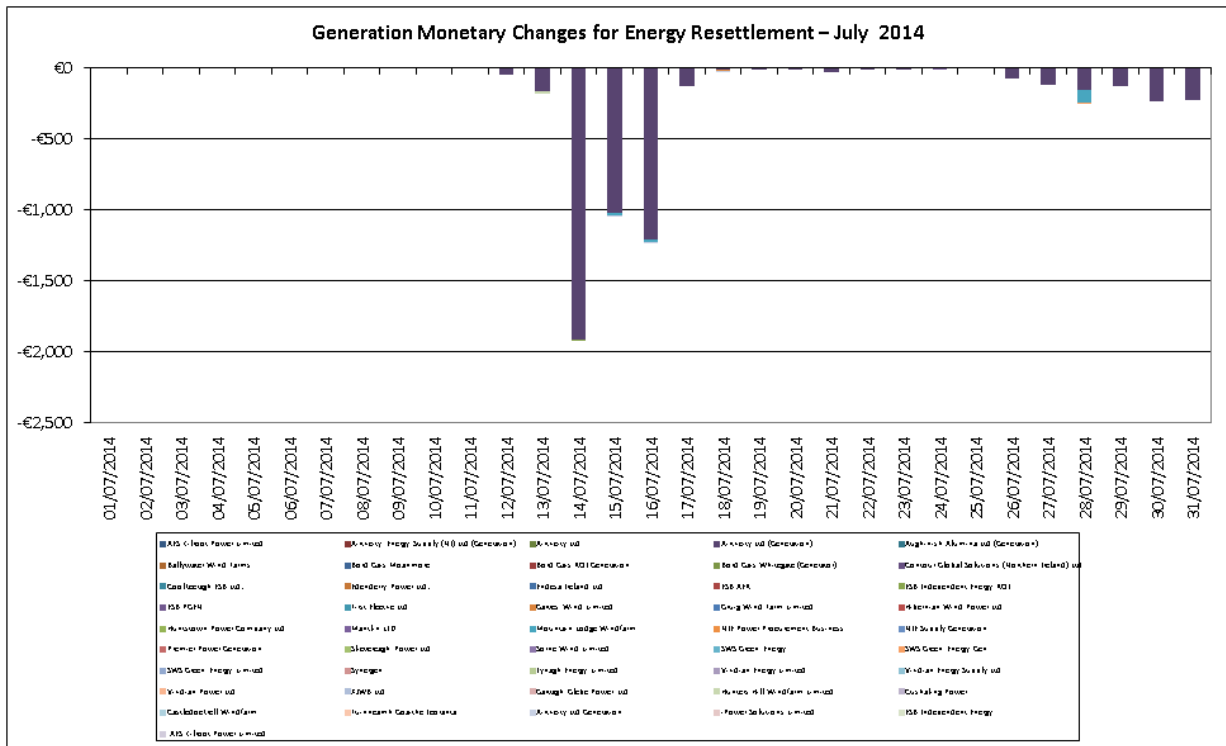


Figure 9 - Generation Monetary Changes for Energy Resettlement – July 2014

## Market Operator Monthly Report

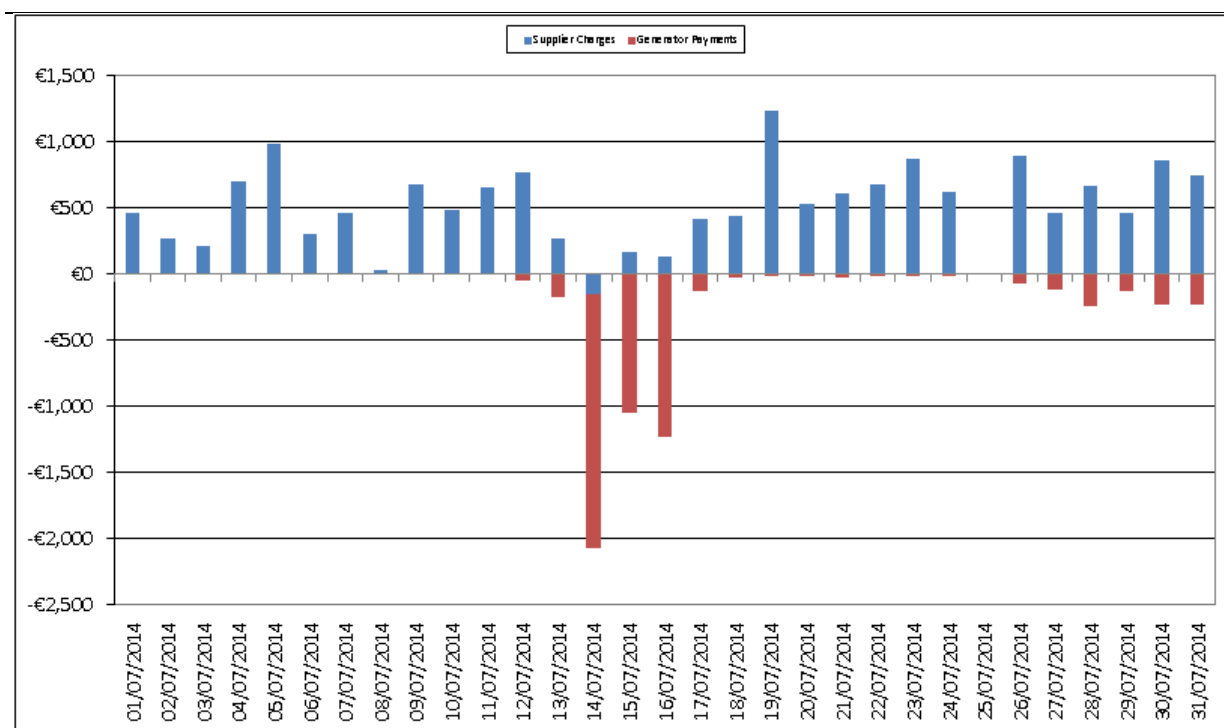


Figure 10 - Total Monetary Changes for Energy Resettlement – July 2014

### 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.

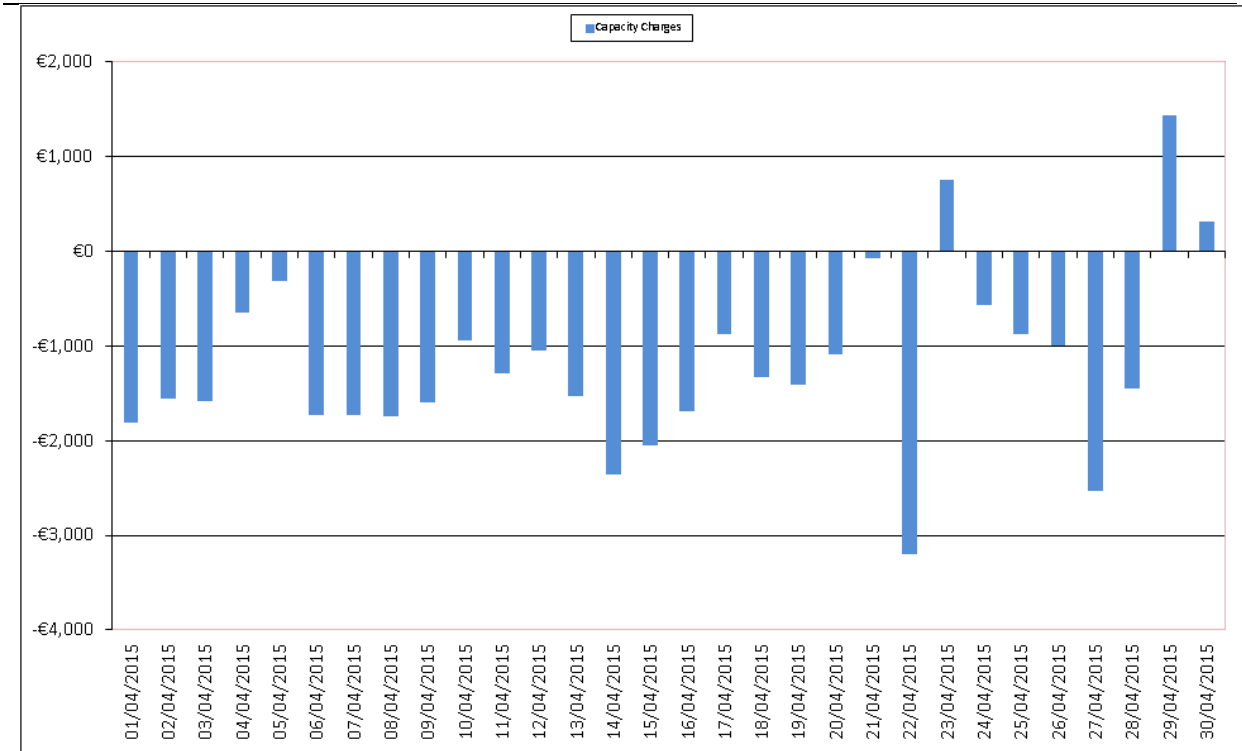
The changes in Capacity are graphed below showing the variance in monetary terms as opposed to percentage terms. As the Jurisdictional Error Supply Units can be significantly affected by resettlement, this is more reflective of the monetary redistribution in M+4 and M+13. Please also note that as of 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

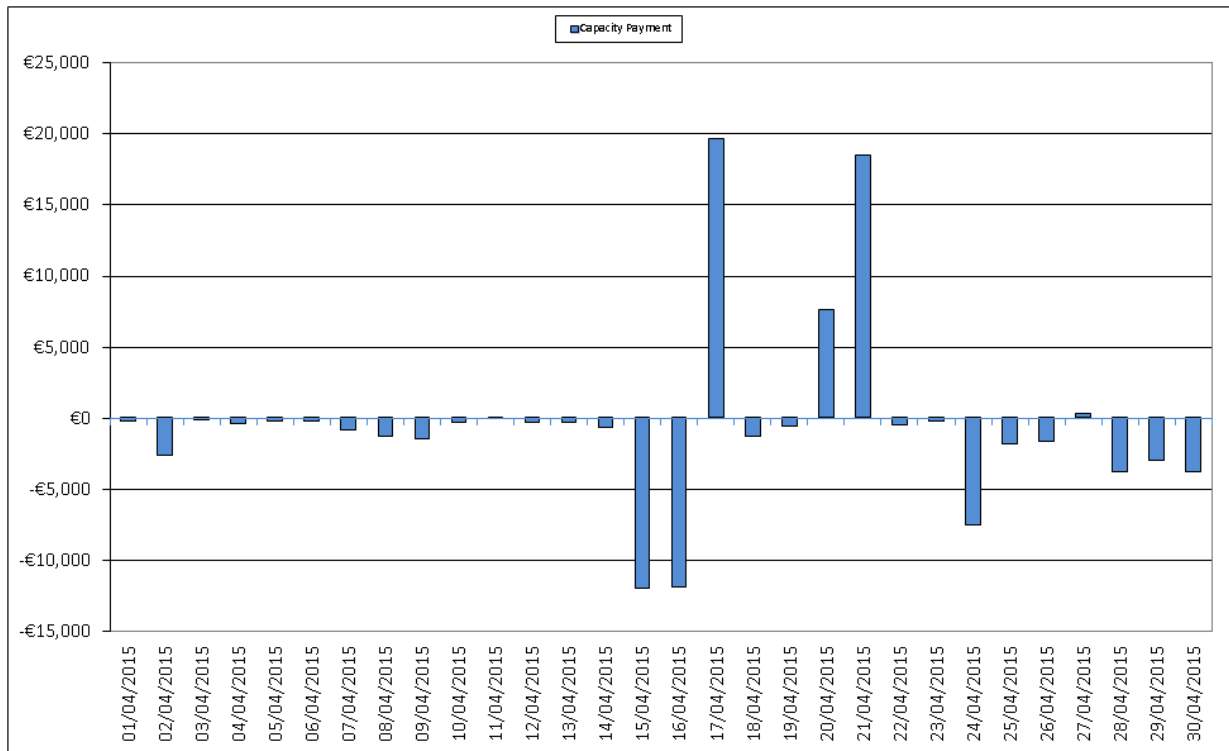
Under resettlement, charges originally attributed to the Jurisdictional Error Supplier Units, have now been redistributed among Market Participants.



# Market Operator Monthly Report



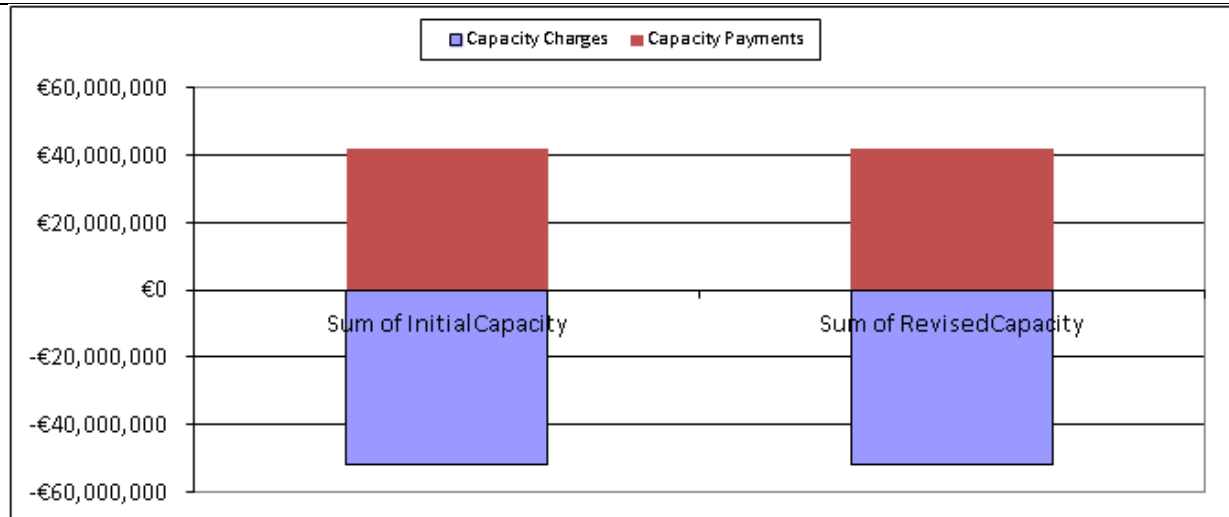
**Figure 11 - Independent Suppliers Monetary Changes for Capacity Resettlement – April 2015**



**Figure 12 - All Generation Monetary Change for Capacity Resettlement – April 2015**

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

## Market Operator Monthly Report



**Figure 13 - Comparison of Distribution of Monetary Amounts between Capacity Initial and Resettlement April 2015**

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

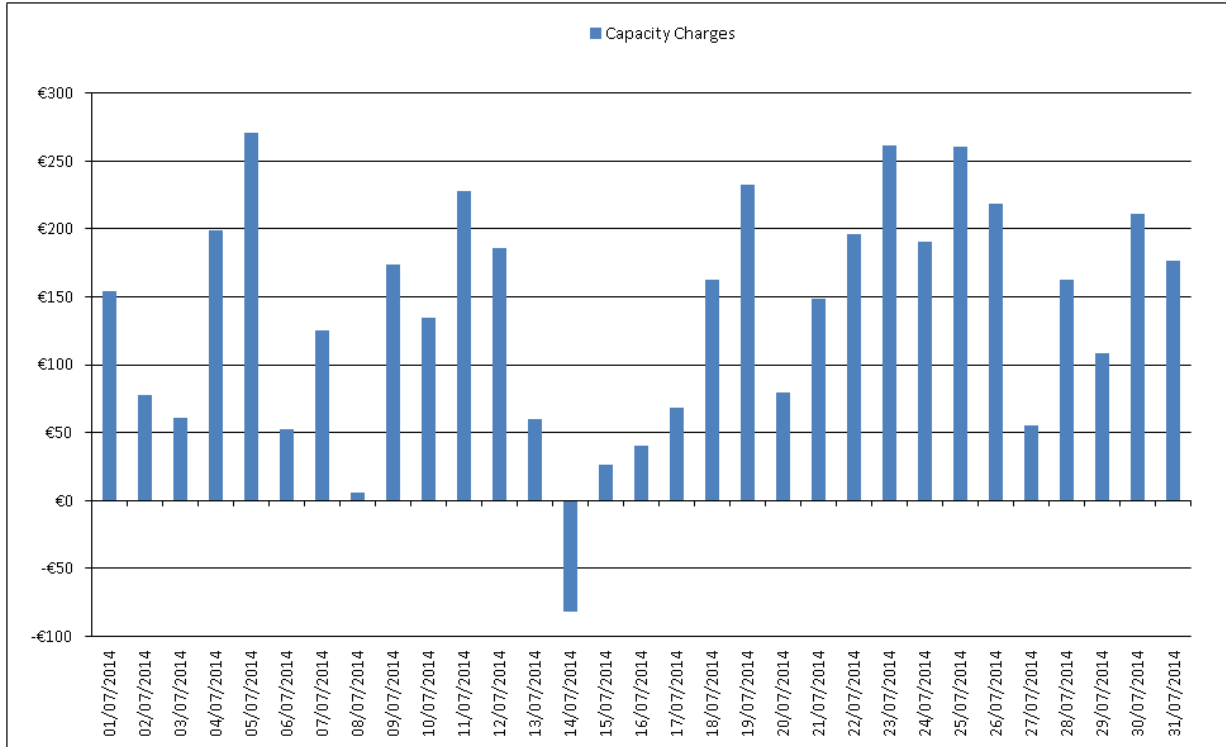


Figure 14 - Independent Suppliers Monetary Changes for Capacity Resettlement – July 2014

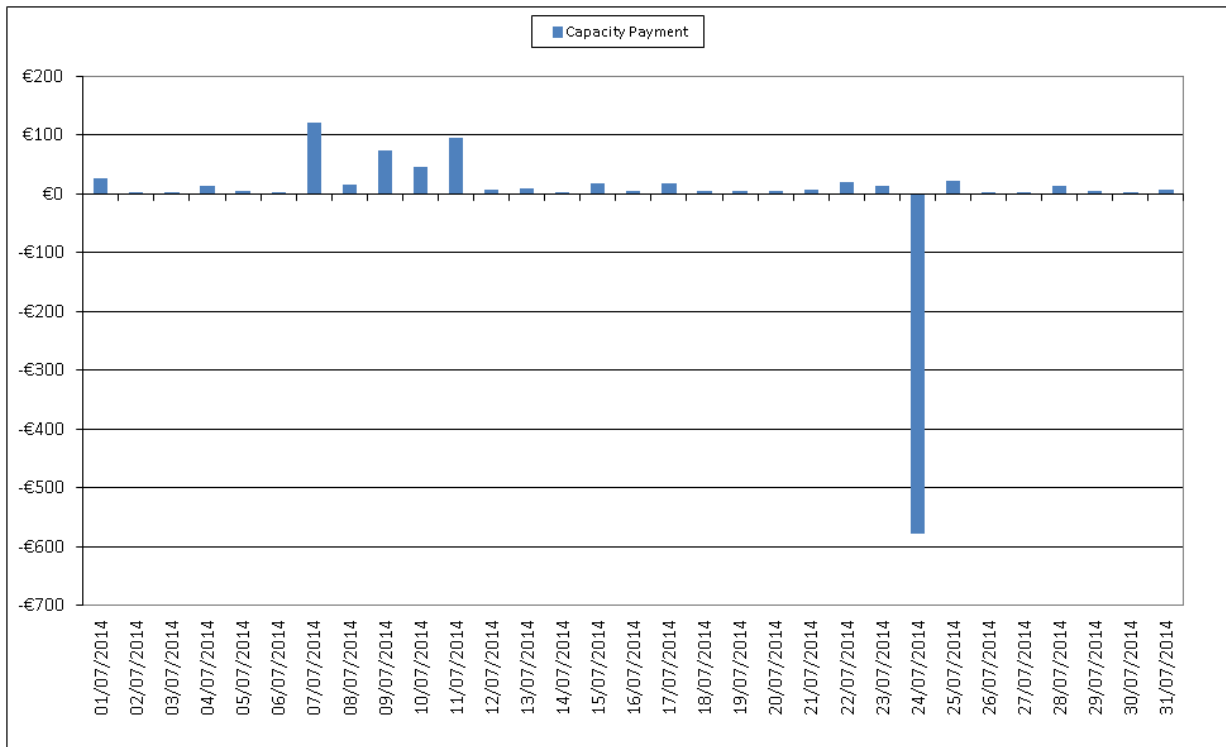
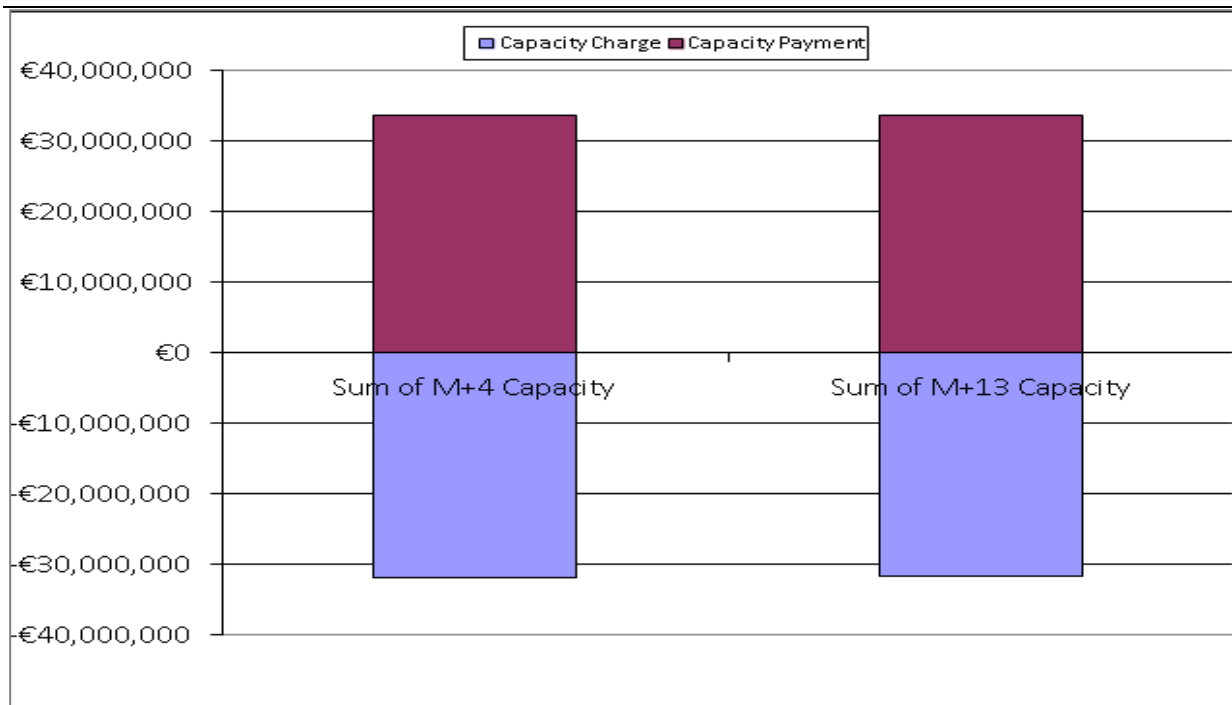


Figure 15 – All Generation Monetary Change for Capacity Resettlement – July 2014

## Market Operator Monthly Report



**Figure 16 - Comparison of Distribution of Monetary Amounts between M+4 Capacity Resettlement and M+13 Capacity Resettlement – July 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 August 2015.

#### Market Helpdesk Report: 01/08/15 to 31/08/15

	Received	Resolved within the period	Not Resolved	Resolved in the period	Resolution Time (Working Days)	Resolved On Time
Normal	144	132	12	142	0.92	140
Important	2	2	0	2	0.90	2
Urgent	0	0	0	0	0.00	0
Settlement	2	1	1	1	3.13	1
Credit	0	0	0	0	0.00	0
Dispute	1	0	1	0	0.00	0
Data	1	1	0	1	2.00	1
<b>Total/Average</b>	<b>150</b>	<b>136</b>	<b>14</b>	<b>146</b>	<b>1.39</b>	<b>144</b>

Table 10 – Helpdesk Statistics

Definitions:

- *Resolved within the Period* refers to queries raised and resolved within the calendar month of August 2015.
- *Resolved in the Period* refers to queries resolved within August 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 August 2015.
- *Not Resolved* refers to queries raised but not resolved within August 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 decreased slightly by 0.02 working days in August 2015 to 0.93 from 0.95 working days in May 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 August 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 August 2015 with regard to formal Settlement Queries.

### 5. Disputes and Queries

#### 5.1.1 Disputes

There was one Dispute raised during the month of August 2015.

#### 5.1.2 Data Queries

There was one formal Data Queries raised during the month of August 2015.

#### 5.1.3 Settlement Queries

There were two formal Settlement Queries raised in August 2015. Of the two, one was upheld and have all been resolved.

Topic	Number Of Queries
Cost Recovery	1
Settlement values for Under Generation	1

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

- One query relating to cost recovery was raised, this query was not upheld.
- One query relating to settlement values for Under Generation was raised and this was deemed to be of Low Materiality. This will be corrected within M+4 re-settlement.

#### Unresolved Queries

There are no unresolved data queries and no unresolved settlement queries as at the 10<sup>th</sup> September 2015.

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

### 6. Central Systems

#### 6.1 Proportion of Default Data Used

On review of the Commercial Offer Data used in the MSP runs, 67.68% of data used was submitted by Participants through the normal Bid-Offer process. 32.32% 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](#).

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

This is not calculable presently.

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

##### 6.3.1 Re-Pricing and Resettlement Runs

There were no Re-Price runs carried out in August 2015.

There were seven Resettlement runs carried out in August 2015.

##### 6.3.2 System Errors

There were 2 Settlement Market Application defects found in August 2015.

SET-SEMO148	DSU-FLG import not working correctly for TS_500034
ABB2015-141154	Install of Oracle Client 11.2.0.4 is missing sqlldr.exe program, required for automated export of displays

Table 12 – System Errors

Details are provided in [Appendix C: List of All System Errors and Failures](#)

#### 6.4 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.

## Market Operator Monthly Report

The following tables and graphs provide details for the postings of the MSP for August 2015.

### 6.4.1 MSP Postings August 2015

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

Table 13 - Operational Timings

Process	On Time	< 1 hr late	> 1 hr late	Not done
Gate Close	100%	0%	0%	0%
Post EA1	99%	1%	0%	0%
Post EA2	99%	0%	0%	1%
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

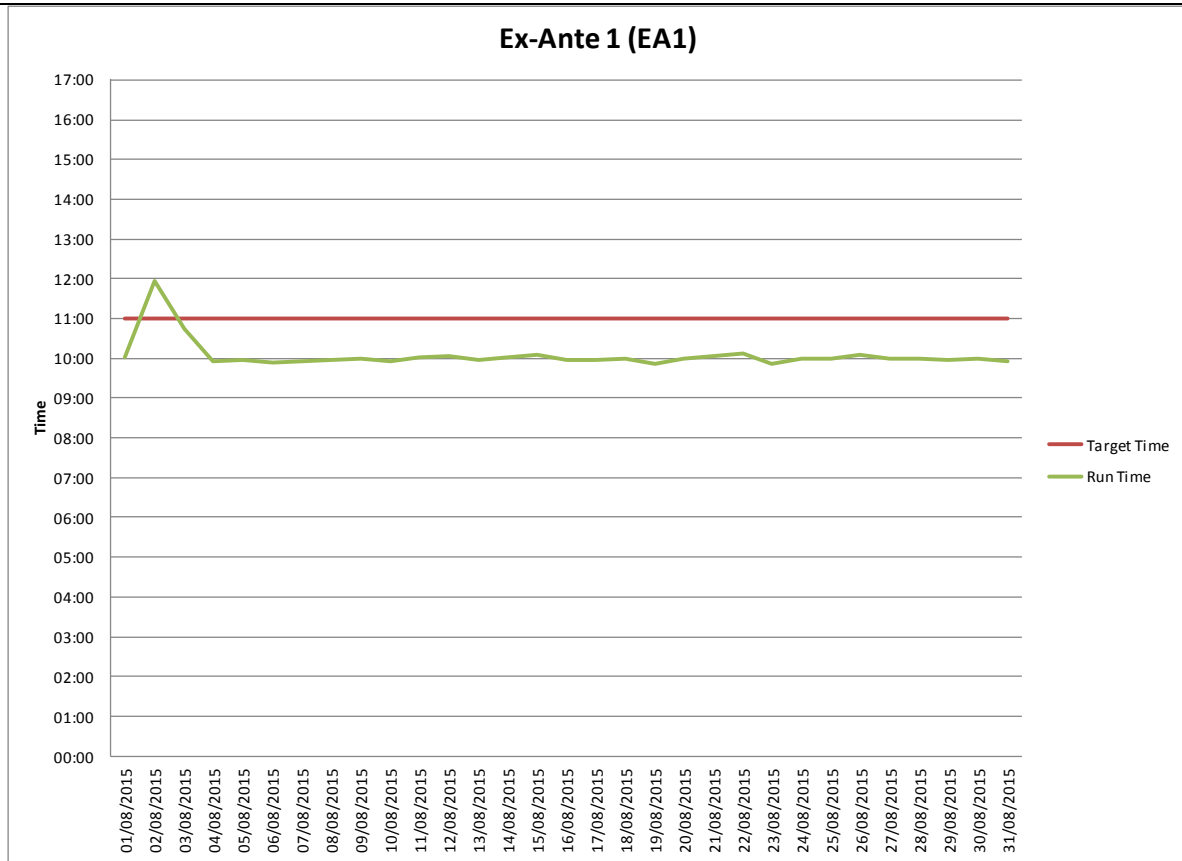


Figure 17 – Ex-Ante 1

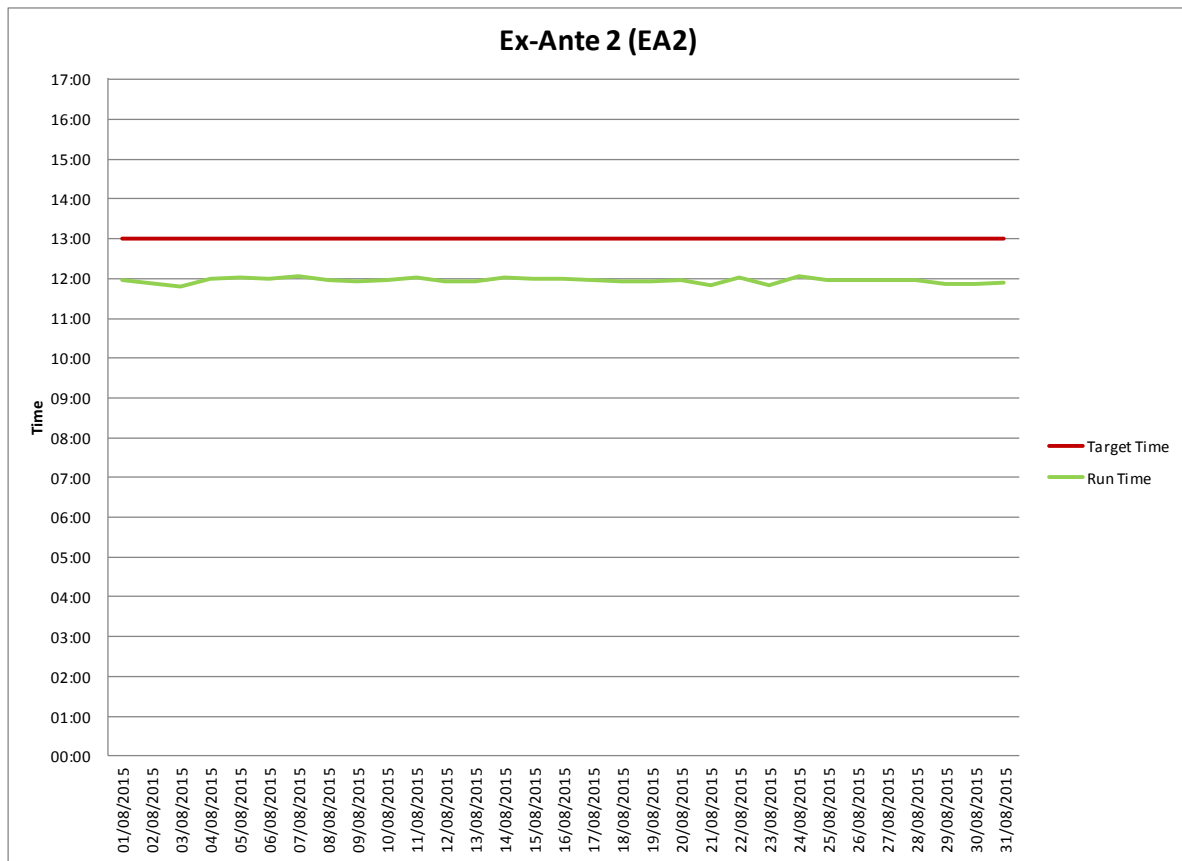


Figure 18 – Ex-Ante 2

# Market Operator Monthly Report

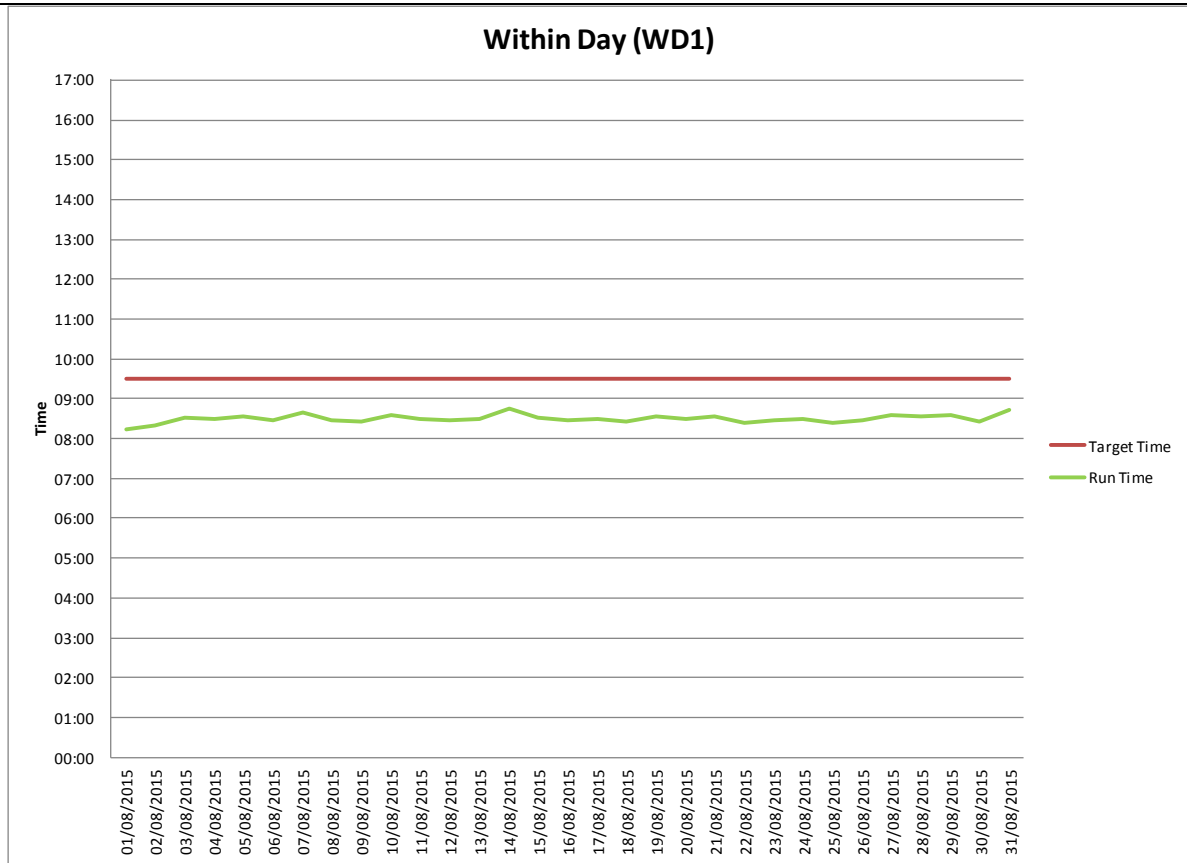


Figure 19 – Within Day 1

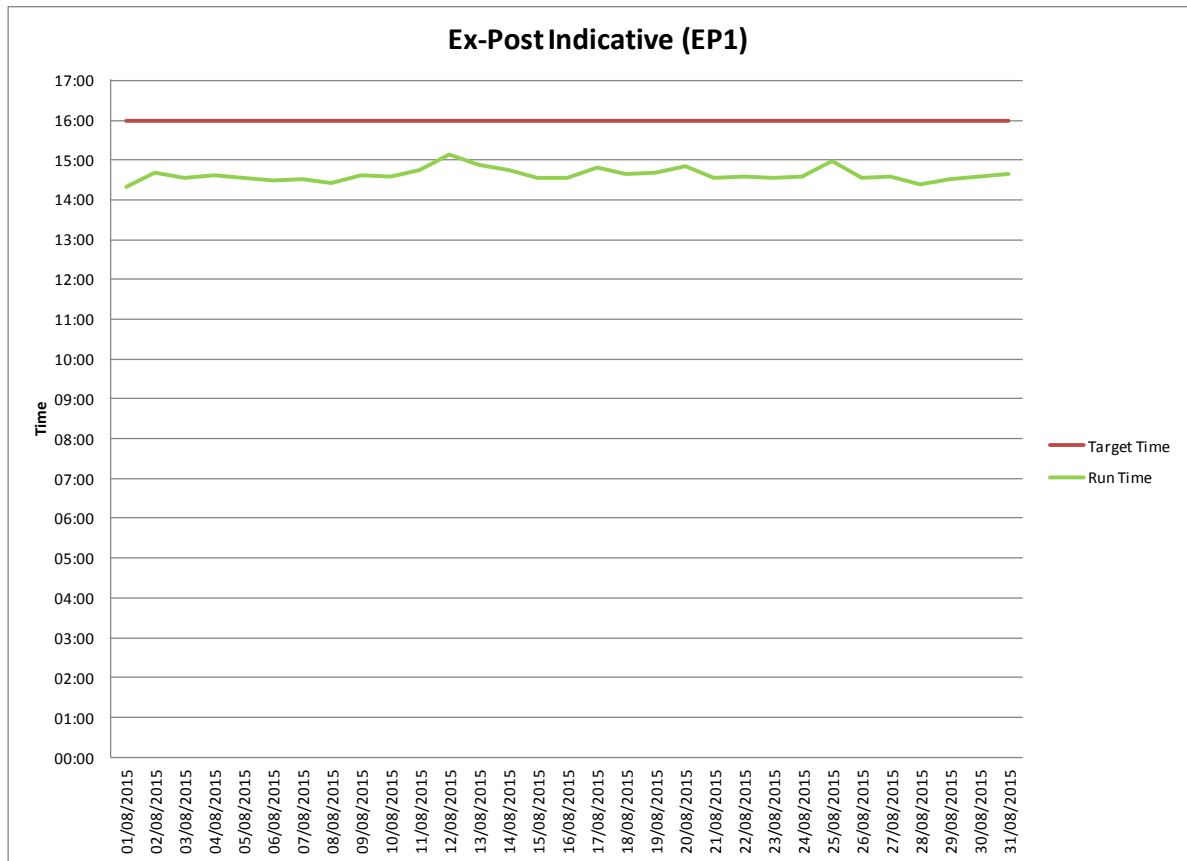


Figure 20 - Ex-Post Indicative

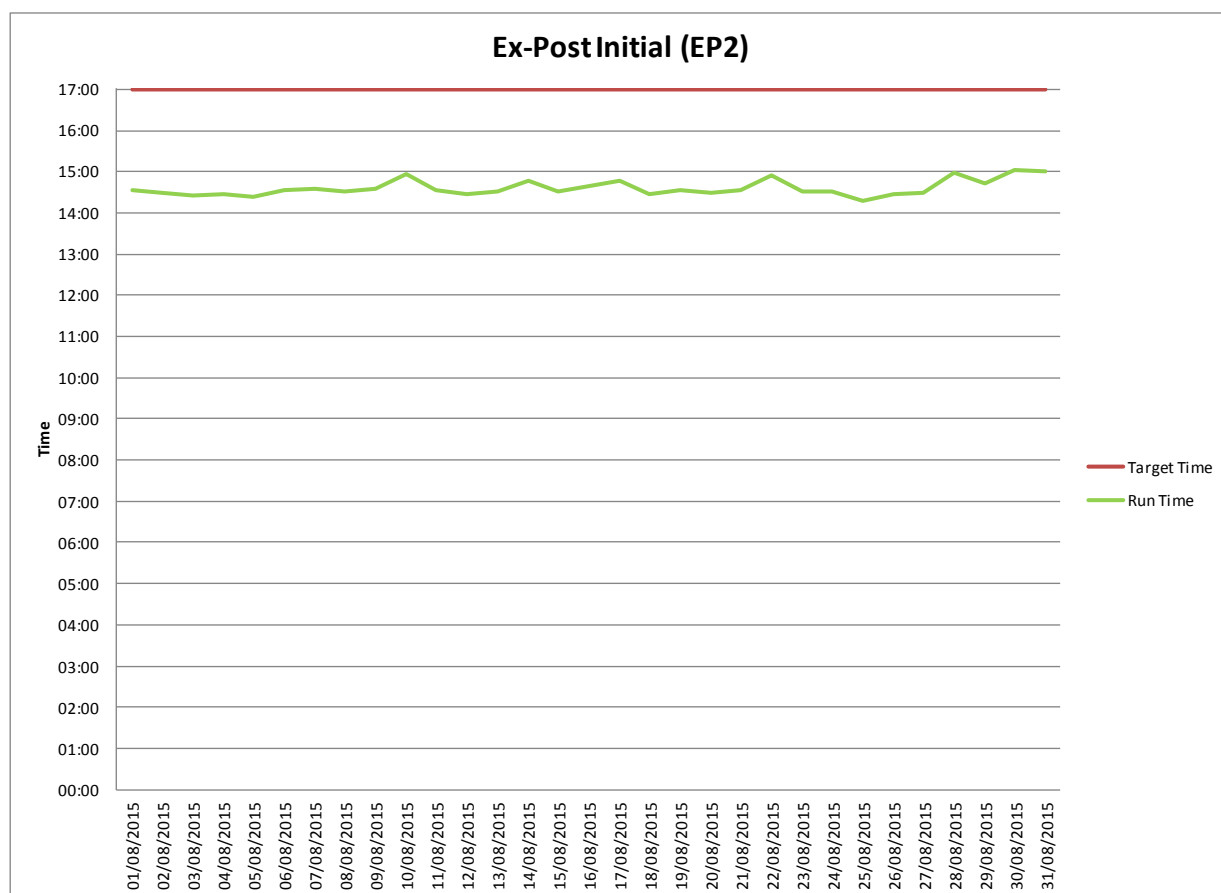


Figure 21 - Ex-Post Initial

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

### 6.4.2 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 August 2015, there were four 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](#).

6.4.3 Settlement Postings August 2015

The publication timings for Settlement runs are provided below.

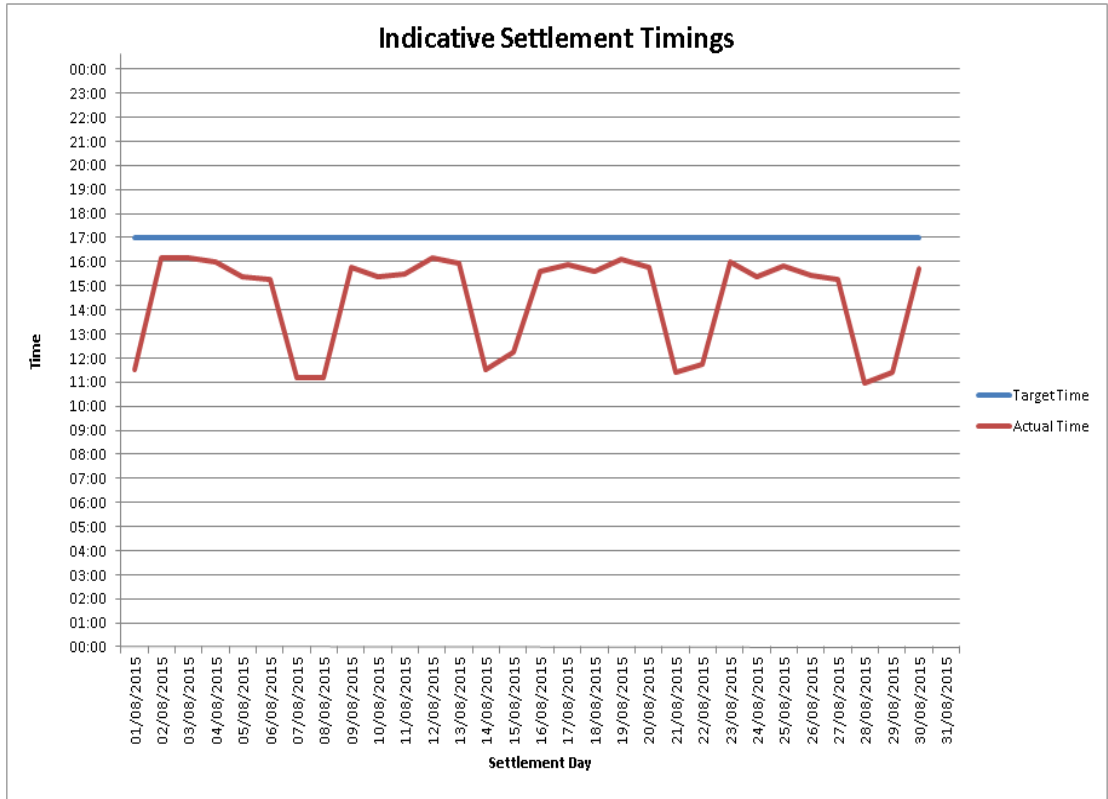


Figure 22 - Indicative Settlement Postings

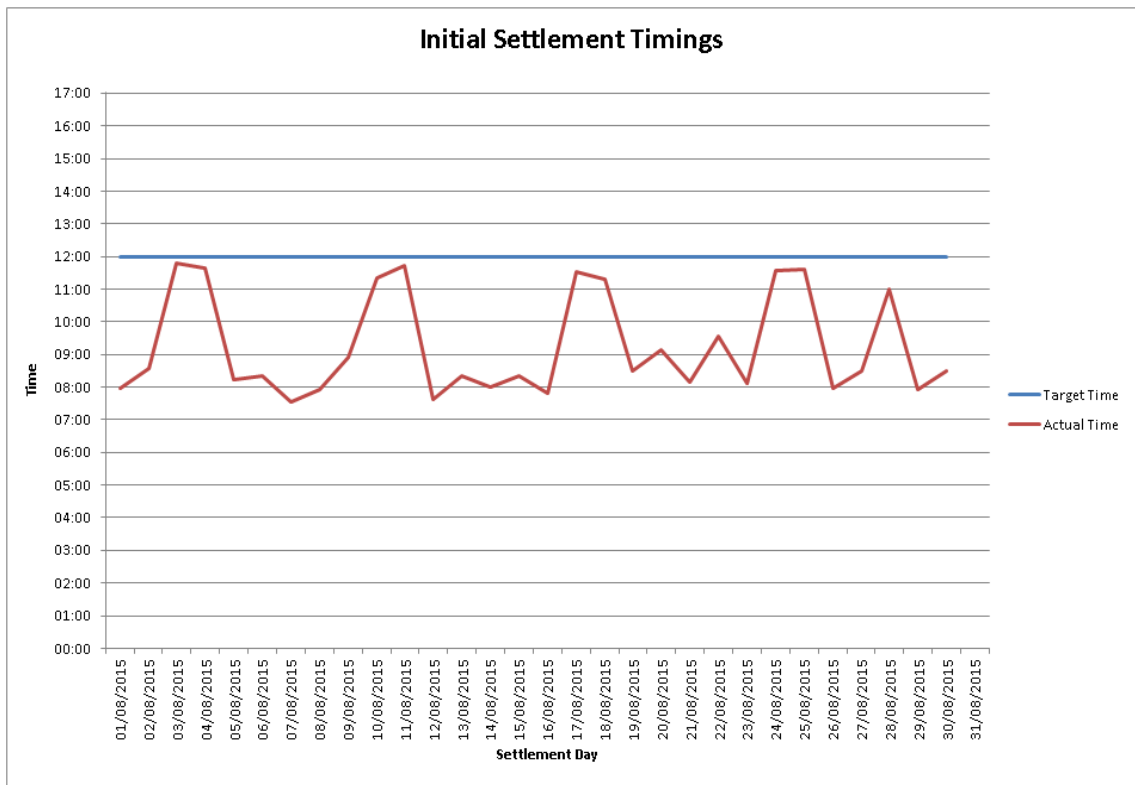


Figure 23 - Initial Settlement Postings

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

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

SEM R2.6.0 went live on Friday May 15th with no issues

### **6.5.2 Release SEM R2.7.0 (To be deployed 2<sup>nd</sup> October 2015)**

SEM 2.7.0 release will contain the following:

- 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.

### **7. Occasional Components**

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

There were no scheduled Business Continuity tests performed during August 2015.

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

There were no system issues during August 2015.

One issue was reported with respect to TSO meter feeds: -

On August 16<sup>th</sup>, it was reported that the SONI meters feed had not been received in SEM systems. SEM systems were verified and all was working fine. SONI IS confirmed that there had been an issue with the meter data and that it would be re-sent once corrected.

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

There was no Denial of Service Attacks during August 2015.

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

The following yearly reports were submitted to the Regulatory Authorities in line with SEMO's obligations under the T&SC:

1. MSP Software Penalty Parameters Report 2016
2. Credit Cover Parameters Report 2016

## 8. Appendix A: Detail of Code Breaches

### Market Participant

10/08/2015	Money In	Timing	Participant	Payment Default	G.A.E.L Force Power Limited (PT_400069) defaulted on a Week 13 2015 M+4 VMOC invoice	Participant error	A default letter was issued	Major
12/08/2015	Money In	Timing	Participant	Payment Default	Crystal Energy Ltd PT_400081 defaulted on a Week 14 2015 M+4 Energy Invoice	Participant Error	A default Letter was issued	Major
12/08/2015	Money In	Timing	Participant	Payment Default	Dan Twomey Waterpower Engineering Ltd. PT_400045 defaulted on a Week 30 2015 Initial & Week 14 2015 M+4	Participant Error	A default letter was issued	Major
14/08/2015	Money In	Timing	Participant	Payment Default	Powerhouse Generation Ltd defaulted on a July 2015 FMOC invoice	Participant Error	A default letter was issued	Major
17/08/2015	Money In	Timing	Participant	Payment Default	Arden Energy Limited PT_400149 defaulted on a July 2015 Initial Capacity Invoice.	Participant Error	A default letter was issued	Major
17/08/2015	Money In	Timing	Participant	Payment Default	Aughrim Power Supply Limited PT_400119 defaulted on a July 2015 Initial Capacity Invoice.	Participant Error	A default letter was issued.	Major
17/08/2015	Money In	Timing	Participant	Payment Default	Bruckana Wind Farm PT_400132 defaluted on july 2015 initial capacity invoice.	Participant Error	A default letter was issued.	Major
17/08/2015	Money In	Timing	Participant	Payment Default	Mount Lucas Supply Ltd PT_400135 defaulted on a july 2015 initial capacity invoice.	Participant Error	A default letter was issued.	Major
19/08/2015	Money In	Timing	Participant	Payment Default	Dunmore Power Supply Ltd PT_400071 defaulted on Week 15 2015 M+4 Energy Invoice	Participant Error	A default letter was issued	Major
19/08/2015	Money In	Timing	Participant	Payment Default	Budget Energy Ltd PT_500056 defaulted on a Week 28 2014 M+13 Energy Invoice	Participant Error	A default letter was issued	Major

**Table 15 - Code Breaches – Market Participants**

### Data Provider

01/08/2015	EA1	Timing	EirGrid MDP	File Submission	The Ex Ante1 (EA1) Market Schedule, for Trade Date 02/08/2015, was not published by the publication deadline of 11:00.	The Ex-Ante1 (EA1) Market Schedule, for Trade Date 02/08/2015, could not be generated. This was due to the non-receipt of the EirGrid Wind Forecast file which was required for the ExAnte 1 (EA1) run type.	The EirGrid Wind Forecast was received at 11:53, on Operational Date 01/08/2015, enabling the publication of the Ex Ante 1 (EA1) Market Schedule, for Trade Date 02/08/2015, at 11:55.	Minor
01/08/2015	EA1	Timing	EirGrid TSO	File Submission	The Eirgrid Wind Forecast file for Trade Date 02/08/2015 was not recieved by the required time of 09:30.	The Eirgrid Wind Forecast file was not received due to an ongoing internal Eirgrid TSO system error.	The Eirgrid Wind Forecast file was received at 11:53.	Minor

**Table 16 - Code Breaches – Data Providers**

## Market Operator Monthly Report

### **SEMO - Pricing and Scheduling**

02/08/2015	WD1	Quality	SEMO	System	A revision was required to set Within Day (WD1) EWIC MIUNs to zero for Trade Date 02/08/2015.	The MIUN calculator produced an error and a revised file was required.	Revised EWIC MIUNs were published at 10:40.	Minor
05/08/2015	EA1	Quality	SEMO	System	A revision was required for Ex-Ante 1 (EA1) EWIC MIUNs for Trade Date 06/08/2015.	The MIUN calculator produced an error and a revised file was required.	Revised EWIC MIUNs were published by 10:50.	Minor

**Table 17 - Code Breaches – Pricing and Scheduling**

### **SEMO – Settlements**

There were no issues to report in August 2015

### **SEMO - Funds Transfer**

There were no issues to report in August 2015

### **SEMO - Credit Management**

There were no issues to report in August 2015

### **SEMO – Other**

There were no issues to report in August 2015



9. Appendix B: List of Queries by Type

Summary Title	Description	ID	Logged On	Date sent to MP	Type
Settlement Payments/ Charges	We would like to query the settlement on 1st March 2015. PPB believe that we should have received a payment for the difference between SMP and bid price (SMP-bid*total MSQ) for one of our generator units (GU500131) period ending 18:00 to period ending 20:00. Please can you double check the settlement was correct on this	PY_000034 (NIE Energy)	2015-08-04	2015-08-07	Settlement
Capacity	The indicative Capacity PIR data for 01/07/2015 for obth of our Sus PT_500026 and PT_500036 appears to contain either a formula or publication error throughout the day. The NDA values for all intervals cannot be	PY_000035 (Power nl)	2015-08-05	2015-08-07	Data
PUGDOG	GU_401780 and GU_401770 (PT_400151) did not have any proce under generation or price over generation values for the impacted date range	PY_000068 (BRI Green Energy Limited)	2015-08-31	2015-09-02	Settlement

Table 18 - Formal 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
SET-SEMO148	DSU-FLG import not working correctly for TS_500034	-	-	N	N	-
ABB2015-141154	Install of Oracle Client 11.2.0.4 is missing sqlldr.exe program, required for automated export of displays			N	N	

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

Table 20 – MSP Runs

**Settlement Runs**

Trading Day	INDICATIVE				INITIAL			
	Target Date	Actual Date	Target Time	Actual Time	Trading Day	Actual Date	Target Time	Actual Time
01/08/2015	02/08/2015	03/08/2015	17:00	11:30	01/08/2015	06/08/2015	12:00	12:05
02/08/2015	03/08/2015	04/08/2015	17:00	16:09	02/08/2015	07/08/2015	12:00	09:28
03/08/2015	04/08/2015	05/08/2015	17:00	16:08	03/08/2015	08/08/2015	12:00	08:28
04/08/2015	05/08/2015	06/08/2015	17:00	15:59	04/08/2015	09/08/2015	12:00	08:37
05/08/2015	06/08/2015	07/08/2015	17:00	15:21	05/08/2015	10/08/2015	12:00	08:51
06/08/2015	07/08/2015	08/08/2015	17:00	15:16	06/08/2015	11/08/2015	12:00	08:19
07/08/2015	08/08/2015	09/08/2015	17:00	11:11	07/08/2015	12/08/2015	12:00	11:30
08/08/2015	09/08/2015	10/08/2015	17:00	11:12	08/08/2015	13/08/2015	12:00	11:39
09/08/2015	10/08/2015	11/08/2015	17:00	15:45	09/08/2015	14/08/2015	12:00	08:04
10/08/2015	11/08/2015	12/08/2015	17:00	15:24	10/08/2015	15/08/2015	12:00	08:07
11/08/2015	12/08/2015	13/08/2015	17:00	15:30	11/08/2015	16/08/2015	12:00	08:04
12/08/2015	13/08/2015	14/08/2015	17:00	16:08	12/08/2015	17/08/2015	12:00	07:52
13/08/2015	14/08/2015	15/08/2015	17:00	15:55	13/08/2015	18/08/2015	12:00	07:46
14/08/2015	15/08/2015	16/08/2015	17:00	11:31	14/08/2015	19/08/2015	12:00	12:36
15/08/2015	16/08/2015	17/08/2015	17:00	12:14	15/08/2015	20/08/2015	12:00	12:44
16/08/2015	17/08/2015	18/08/2015	17:00	15:36	16/08/2015	21/08/2015	12:00	08:18
17/08/2015	18/08/2015	19/08/2015	17:00	15:54	17/08/2015	22/08/2015	12:00	08:08
18/08/2015	19/08/2015	20/08/2015	17:00	15:35	18/08/2015	23/08/2015	12:00	08:18
19/08/2015	20/08/2015	21/08/2015	17:00	16:07	19/08/2015	24/08/2015	12:00	09:07
20/08/2015	21/08/2015	22/08/2015	17:00	15:46	20/08/2015	25/08/2015	12:00	08:42
21/08/2015	22/08/2015	23/08/2015	17:00	11:26	21/08/2015	26/08/2015	12:00	11:17
22/08/2015	23/08/2015	24/08/2015	17:00	11:43	22/08/2015	27/08/2015	12:00	11:46
23/08/2015	24/08/2015	25/08/2015	17:00	16:00	23/08/2015	28/08/2015	12:00	07:52
24/08/2015	25/08/2015	26/08/2015	17:00	15:22	24/08/2015	29/08/2015	12:00	09:05
25/08/2015	26/08/2015	27/08/2015	17:00	15:51	25/08/2015	30/08/2015	12:00	07:52
26/08/2015	27/08/2015	28/08/2015	17:00	15:25	26/08/2015	31/08/2015	12:00	08:28
27/08/2015	28/08/2015	29/08/2015	17:00	15:15	27/08/2015	01/09/2015	12:00	08:41
28/08/2015	29/08/2015	30/08/2015	17:00	10:56	28/08/2015	02/09/2015	12:00	11:56
29/08/2015	30/08/2015	31/08/2015	17:00	11:26	29/08/2015	03/09/2015	12:00	12:05
30/08/2015	31/08/2015	01/09/2015	17:00	15:42	30/08/2015	04/09/2015	12:00	08:33
31/08/2015	01/09/2015	02/09/2015	17:00	16:04	31/08/2015	05/09/2015	12:00	08:45

**Table 21 – 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	Constraint Payments	Uninstructed Imbalance 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
10/11/2014	€506,959.62	-€12,756.86	-€540,675.17
11/11/2014	€305,371.45	-€44,629.39	-€565,550.06

## Market Operator Monthly Report

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
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

## Market Operator Monthly Report

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
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

## Market Operator Monthly Report

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
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



## Market Operator Monthly Report

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
01/05/2015	€481,056.45	€14,256.54	-€506,269.58
02/05/2015	€459,045.41	€969.91	-€460,134.78
03/05/2015	€385,827.96	€3,504.75	-€437,509.01
04/05/2015	€328,172.19	€1,749.49	-€433,467.59
05/05/2015	€490,272.15	-€14,555.23	-€507,273.77
06/05/2015	€298,647.42	€4,735.81	-€506,162.49
07/05/2015	€261,995.15	€12,217.90	-€529,138.93
08/05/2015	€519,824.39	-€46,342.80	-€529,331.82
09/05/2015	€398,072.55	€2,899.03	-€470,310.55
10/05/2015	€712,118.71	-€1,357.23	-€416,297.12
11/05/2015	€846,733.77	€4,545.48	-€465,910.40
12/05/2015	€210,609.57	-€3,956.63	-€491,547.73
13/05/2015	€457,670.09	-€1,496.75	-€510,924.30
14/05/2015	€232,238.95	-€8,374.10	-€500,940.75
15/05/2015	€446,672.92	-€38,149.99	-€500,906.52
16/05/2015	€584,364.58	€3,138.79	-€431,219.09
17/05/2015	€509,347.00	€8,657.31	-€422,799.73
18/05/2015	€510,890.21	-€3,158.96	-€483,590.87
19/05/2015	€438,287.72	-€12,950.64	-€487,900.79
20/05/2015	€320,302.80	-€48,000.36	-€509,103.25
21/05/2015	€368,276.73	€8,879.24	-€513,657.93
22/05/2015	€228,566.54	-€15,259.46	-€502,528.10
23/05/2015	€354,957.10	-€19,310.70	-€456,898.21
24/05/2015	€552,078.42	€8,110.94	-€419,257.50
25/05/2015	€180,744.22	-€33,577.18	-€490,878.14
26/05/2015	€284,412.73	-€3,046.42	-€499,993.65
27/05/2015	€365,880.58	-€23,900.75	-€499,128.31
28/05/2015	€311,952.87	€7,341.90	-€488,790.58
29/05/2015	€528,545.53	€6,357.53	-€482,950.81
30/05/2015	€563,213.22	-€2,268.16	-€446,780.31
31/05/2015	€498,594.49	€1,093.74	-€399,769.50
01/06/2015	€903,037.05	-€372.60	-€430,963.73
02/06/2015	€225,558.98	-€9,102.27	-€481,644.89
03/06/2015	€163,230.43	€15,407.21	-€506,857.57
04/06/2015	€258,492.55	-€1,419.41	-€502,536.80
05/06/2015	€561,484.29	-€4,219.30	-€466,612.95
06/06/2015	€476,969.41	-€4,158.39	-€420,172.46
07/06/2015	€221,952.59	-€12,964.68	-€428,162.71
08/06/2015	€417,820.22	-€8,108.21	-€490,599.26
09/06/2015	€99,349.26	-€20,427.00	-€502,037.06
10/06/2015	€362,947.70	-€8,565.70	-€497,822.35
11/06/2015	€368,034.49	-€8,598.44	-€496,067.65
12/06/2015	€344,759.44	-€2,316.77	-€490,098.72
13/06/2015	€293,330.88	€9,421.81	-€432,822.16
14/06/2015	€243,977.92	€4,826.00	-€416,471.54
15/06/2015	€146,788.10	-€16,508.90	-€489,169.93

## Market Operator Monthly Report

16/06/2015	€355,793.59	€8,987.44	-€491,232.75
17/06/2015	€350,471.59	€819.68	-€487,101.21
18/06/2015	€526,343.78	-€5,323.88	-€477,763.32
19/06/2015	€241,052.93	€7,739.33	-€486,582.07
20/06/2015	€397,112.32	-€4,839.02	-€433,410.02
21/06/2015	€383,030.12	€10,111.36	-€401,553.37
22/06/2015	€311,691.23	-€13,245.52	-€478,363.90
23/06/2015	€201,144.41	-€4,762.89	-€498,388.85
24/06/2015	€308,129.06	€4,185.85	-€501,724.92
25/06/2015	€467,910.15	€1,370.27	-€491,764.74
26/06/2015	€611,400.32	€5,841.53	-€473,888.59
27/06/2015	€567,227.30	€4,476.00	-€425,354.30
28/06/2015	€383,903.78	€5,553.99	-€394,717.39
29/06/2015	€524,586.93	-€9,068.11	-€472,168.43
30/06/2015	€230,790.65	€20,373.51	-€481,923.33
01/07/2015	€211,388.80	-€20,146.09	-€510,326.45
02/07/2015	€339,805.38	€889.95	-€496,404.89
03/07/2015	€325,431.49	-€3,650.04	-€468,381.26
04/07/2015	€443,596.50	-€17,205.37	-€416,941.95
05/07/2015	€73,501.54	€11,552.57	-€416,906.61
06/07/2015	€352,681.32	-€2,050.12	-€471,180.34
07/07/2015	€448,168.25	-€10,962.23	-€474,938.89
08/07/2015	€379,486.52	€3,189.07	-€473,290.48
09/07/2015	€208,276.81	-€11,951.60	-€492,201.22
10/07/2015	€299,675.21	-€623.08	-€466,671.41
11/07/2015	€287,017.04	€9,741.89	-€412,913.18
12/07/2015	€320,596.70	€4,162.99	-€411,987.47
13/07/2015	€519,992.38	-€2,325.68	-€463,482.63
14/07/2015	€134,256.13	-€20,002.97	-€481,013.97
15/07/2015	€259,314.93	-€19,184.61	-€486,278.97
16/07/2015	€484,087.19	-€2,749.84	-€471,316.81
17/07/2015	€695,851.98	€6,697.92	-€438,904.75
18/07/2015	€168,216.10	-€6,493.15	-€413,889.48
19/07/2015	€207,034.48	€19,571.53	-€410,064.13
20/07/2015	€467,803.18	-€1,436.06	-€456,540.63
21/07/2015	€200,767.21	-€1,704.54	-€482,416.59
22/07/2015	€342,605.34	-€7,223.70	-€481,851.45
23/07/2015	€136,249.23	-€3,552.45	-€482,732.48
24/07/2015	€192,104.33	-€4,457.57	-€474,900.40
25/07/2015	€278,390.39	-€2,466.13	-€427,488.34
26/07/2015	€328,451.20	€5,898.94	-€396,016.62
27/07/2015	€551,809.44	€7,891.24	-€463,308.21
28/07/2015	€483,135.01	-€19,097.17	-€466,890.40
29/07/2015	€296,168.81	€2,006.11	-€466,804.69
30/07/2015	€126,495.13	-€2,156.66	-€483,664.70
31/07/2015	€224,653.33	-€77.43	-€462,031.29
01/08/2015	€490,441.17	-€7,456.25	-€420,696.84
02/08/2015	€788,800.78	-€829.41	-€389,063.38
03/08/2015	€953,062.07	€9,474.22	-€395,296.33
04/08/2015	€193,415.10	-€7,620.28	-€443,036.32
05/08/2015	€606,845.84	€4,986.04	-€481,650.52
06/08/2015	€88,182.48	-€6,318.96	-€483,541.76
07/08/2015	€248,470.53	-€2,690.38	-€477,257.43
08/08/2015	€423,193.78	-€7,958.11	-€417,177.90

## Market Operator Monthly Report

09/08/2015	€302,900.53	-€2,791.64	-€404,070.92
10/08/2015	€55,658.59	€3,217.73	-€466,858.34
11/08/2015	€331,509.19	-€7,625.32	-€494,735.23
12/08/2015	€52,083.69	-€24,637.97	-€497,827.84
13/08/2015	€199,147.86	-€1,372.00	-€494,513.30
14/08/2015	€338,953.92	€26,369.65	-€480,188.50
15/08/2015	€326,475.49	-€13,725.28	-€437,291.28
16/08/2015	€349,075.44	€4,050.47	-€423,824.78
17/08/2015	€331,092.39	-€18,684.75	-€492,508.72
18/08/2015	€452,458.98	-€13,463.69	-€502,438.57
19/08/2015	€254,252.28	-€4,645.57	-€497,513.21
20/08/2015	€243,058.58	-€7,456.50	-€487,239.62
21/08/2015	€401,054.66	-€16,372.37	-€478,735.84
22/08/2015	€28,488.71	€349.50	-€449,916.34
23/08/2015	€311,603.54	-€23,984.35	-€428,987.11
24/08/2015	€390,127.25	-€12,373.83	-€474,575.29
25/08/2015	€165,318.33	-€669.01	-€493,844.04
26/08/2015	€208,590.36	-€6,626.99	-€494,604.90
27/08/2015	€404,622.90	€11,709.12	-€482,937.48
28/08/2015	€195,088.67	€5,261.50	-€471,903.87
29/08/2015	€164,998.45	-€14,180.67	-€438,449.17
30/08/2015	€368,373.41	-€10,275.96	-€432,463.91
31/08/2015	€139,232.30	-€9,138.38	-€490,331.19

Table 22 - Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges

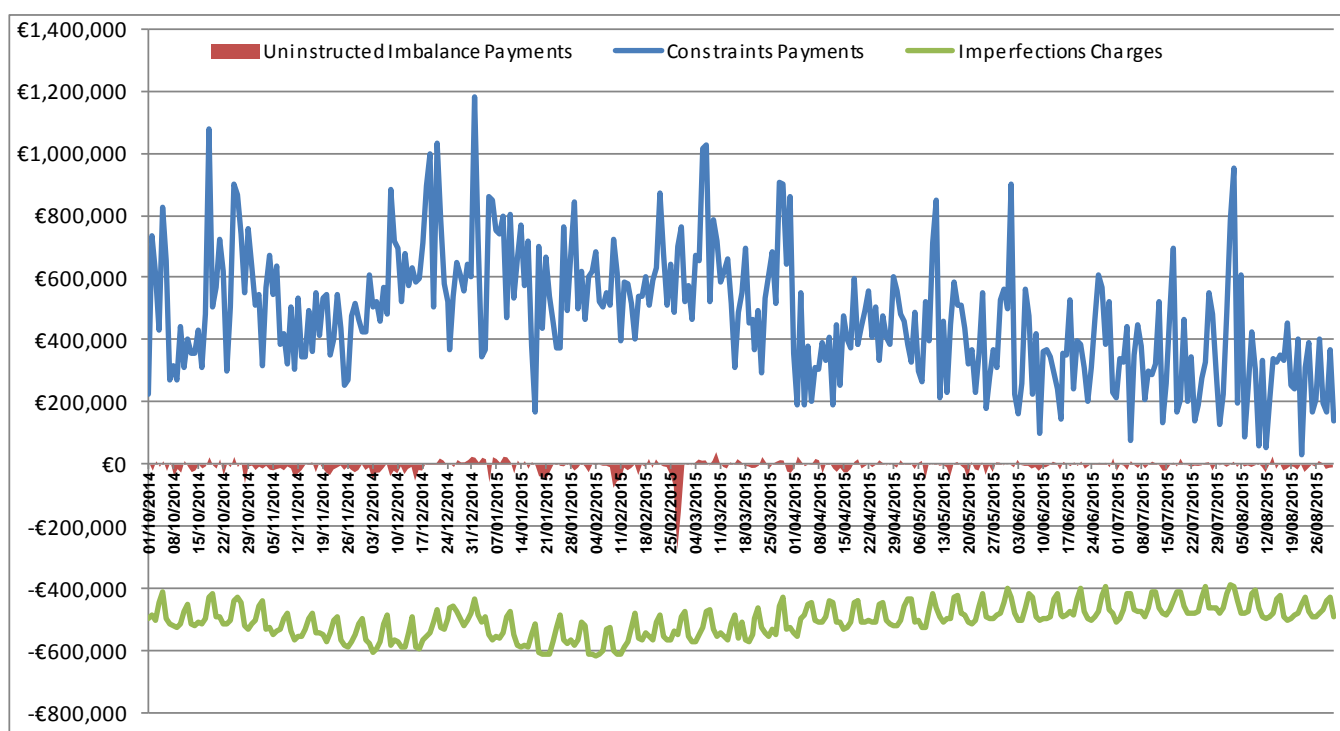


Figure 24 - Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges

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
17	126855.95
18	38218.98
19	15114.03
20	172476.22
21	€111,559.70
22	€135,469.70
23	€236,977.70
24	€127,221.90
25	€236,977.70
26	€127,221.90
27	€25,408.91
28	€107,131.31
29	€50,813.07
30	€75,404.96
31	€36,982.64
32	€90,947.26
33	€184,843.50

Table 23 - Make Whole Payments

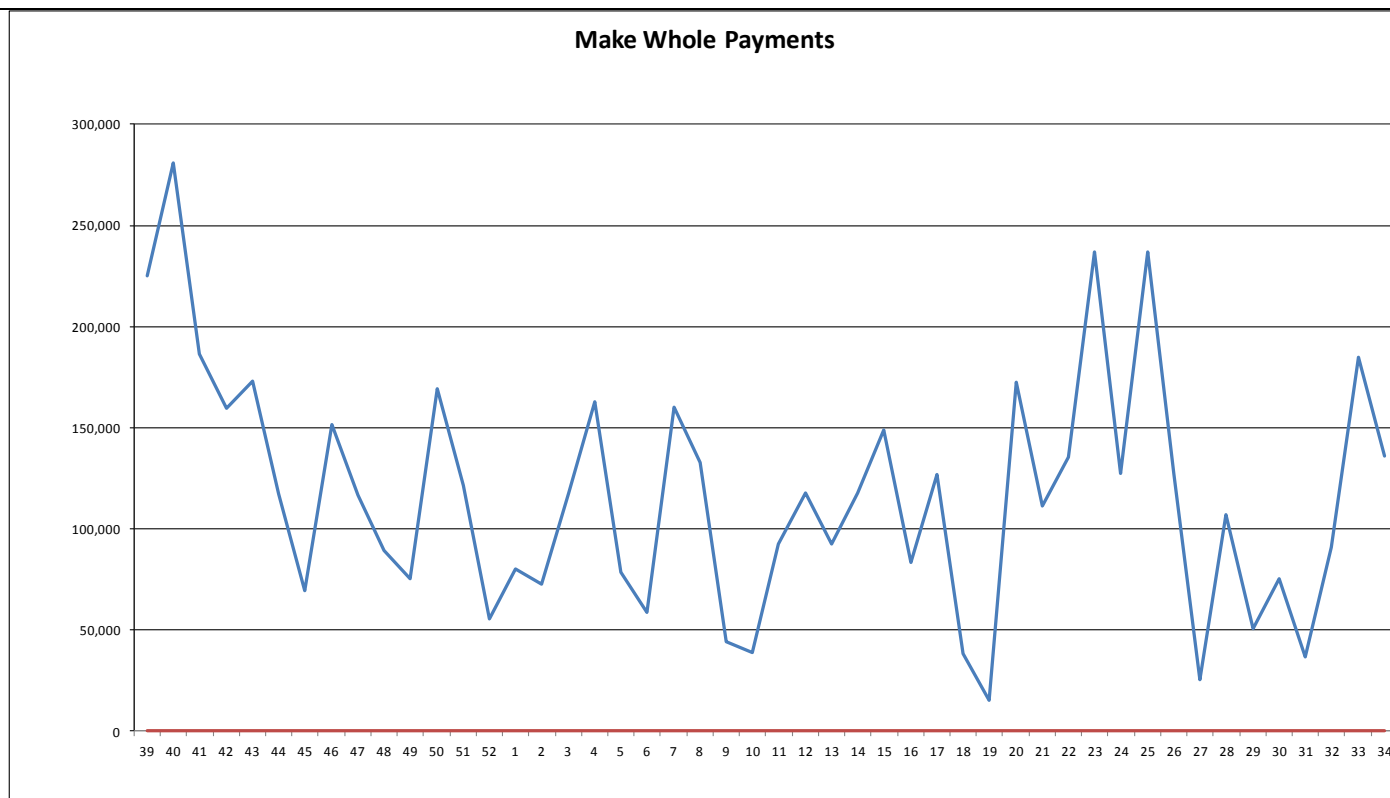


Figure 25 - Make Whole Payments

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
17	€0.00
18	€0.00
19	€0.00
20	€0.00
21	€0.00
22	€0.00
23	-€39,276.80
24	€0.00
25	€0.00
26	€0.00
27	€0.00
28	€0.00
29	-€349.99
30	-€8,090.56
31	-€2,475.91
32	-€6,695.09
33	-€11,664.32

Table 24 - Testing Charges

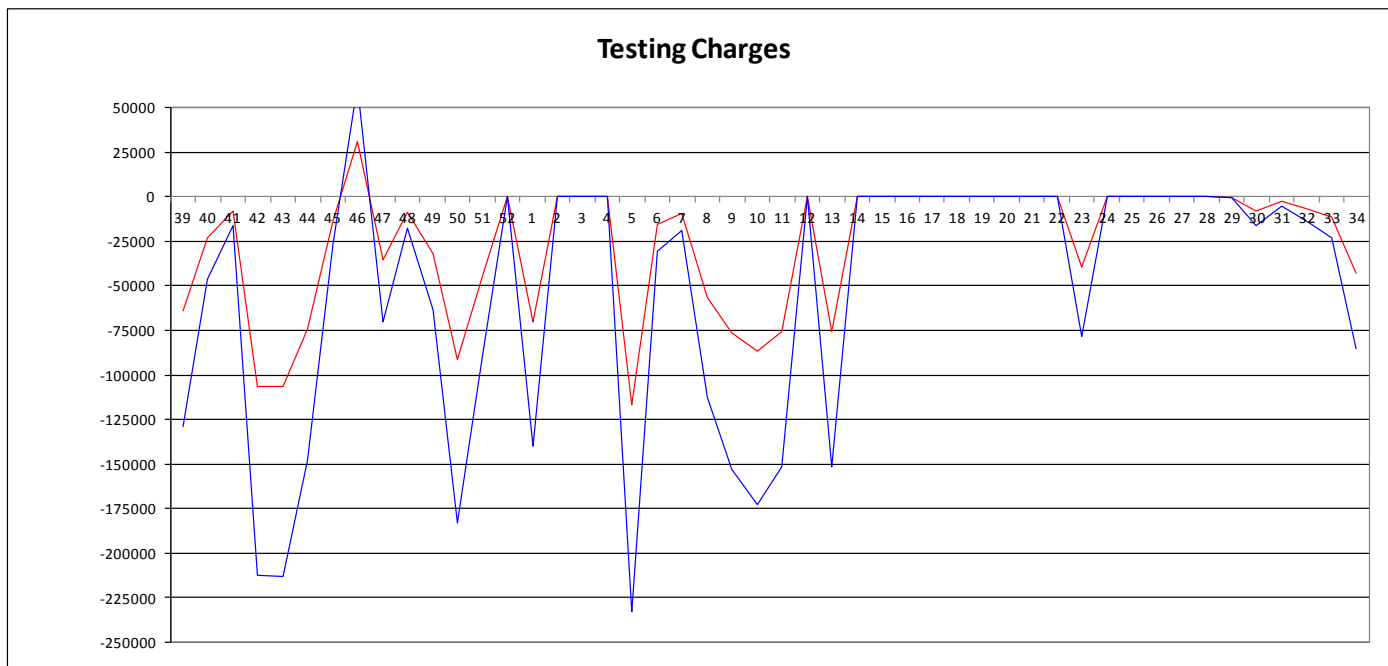


Figure 26 - Testing Charges

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

The table below lists for each unit the number of times in operations during August 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_400138	DSU_401590	31			31
PT_400116	DSU_401400	31			31
PT_400106	DSU_401330	31			31
PT_400090	DSU_401270	31			31
PT_400133	DSU_401530	26			26
PT_400124	DSU_401490	31			31
PT_400024	GU_400120	31			31
PT_400024	GU_400121	31			31
PT_400026	GU_400140	32			32
PT_400030	GU_400180	40			40
PT_400030	GU_400181	40			40
PT_400030	GU_400182	34			34
PT_400030	GU_400183	40			40
PT_400030	GU_400200	35			35
PT_400030	GU_400201	35			35
PT_400030	GU_400202	35			35
PT_400030	GU_400203	35			35
PT_400030	GU_400210	34			34
PT_400030	GU_400211	34			34
PT_400030	GU_400220	34			34
PT_400030	GU_400221	34			34
PT_400030	GU_400240	34			34
PT_400030	GU_400250	34			34
PT_400030	GU_400251	34			34
PT_400030	GU_400251	34			34
PT_400030	GU_400252	34			34
PT_400030	GU_400260	34			34
PT_400030	GU_400270	37			37
PT_400030	GU_400271	34			34
PT_400030	GU_400280	34			34
PT_400030	GU_400281	34			34
PT_400030	GU_400290	34			34
PT_400030	GU_400300	41			41
PT_400030	GU_400311	40			40
PT_400030	GU_400323	42			42
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	34			34
PT_400030	GU_400850	40			40
PT_400032	GU_400430	29			29
PT_400034	GU_400940	29			29
PT_400034	GU_401090	29			29
PT_400034	GU_401440	29			29
PT_400035	GU_400480	52			52

## Market Operator Monthly Report

PT_400037	GU_400500	32		32
PT_400041	GU_400530	52		52
PT_400044	GU_400540	51		51
PT_400050	GU_401790	6		6
PT_400054	GU_400620	29		29
PT_400055	GU_400630	29		29
PT_400064	GU_400750	31		31
PT_400064	GU_400751	31		31
PT_400064	GU_400752	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	62		62
PT_400077	GU_400950	29		29
PT_400078	GU_401010	32		32
PT_400078	GU_401011	32		32
PT_500024	GU_500040	31		31
PT_500024	GU_500041	31		31
PT_500027	GU_500131	85		85
PT_500027	GU_500140	85		85
PT_500034	GU_501350	31		31
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_500823	31		31
PT_500045	GU_500824	31		31
PT_500045	GU_500825	31		31
PT_500048	GU_500904	51		51
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
PT_500083	I_NIMOYLE	26		26
PT_400021	I_ROIEWIC	31		31
PT_500024	I_NIMOYLE	31		31
PT_500075	I_NIMOYLE	34		34
PT_500021	I_NIMOYLE	31		31
PT_400163	I_ROIEWIC	63		63
PT_500069	I_NIMOYLE	92		92
PT_500058	I_NIMOYLE	31		31
PT_500031	I_NIMOYLE	31		31
PT_400096	I_ROIEWIC	92		92
PT_400113	I_ROIEWIC	31		31
PT_500037	I_NIMOYLE	31		31
PT_400136	I_ROIEWIC	40		40
PT_400115	I_ROIEWIC	31		31
PT_400108	I_ROIEWIC	76		76



## Market Operator Monthly Report

PT_500070	I_NIMOYLE	76			76
PT_400030	I_ROIEWIC	31			31
PT_400099	I_ROIEWIC	31			31
PT_400090	DSU_401620			31	31
PT_400144	DSU_401660			31	31
PT_400090	DSU_401610			31	31
PT_400111	DSU_401390			31	31
PT_400133	DSU_401530			7	7
PT_400021	GU_400021			31	31
PT_400021	GU_400050			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			31	31
PT_400021	GU_401640			31	31
PT_400025	GU_400130			31	31
PT_400030	GU_400310			31	31
PT_400032	GU_400430			2	2
PT_400034	GU_400940			2	2
PT_400034	GU_401090			2	2
PT_400034	GU_401440			2	2
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_400050	GU_401280			31	31
PT_400050	GU_401290			31	31
PT_400050	GU_401360			31	31
PT_400050	GU_401790			26	26
PT_400054	GU_400620			2	2
PT_400055	GU_400630			2	2
PT_400062	GU_400730			31	31
PT_400062	GU_400731			31	31
PT_400062	GU_400840			31	31
PT_400077	GU_400950			2	2
PT_400082	GU_401100			31	31
PT_400087	GU_401230			31	31
PT_400148	GU_401690			31	31
PT_400150	GU_401700			31	31
PT_400151	GU_401770			31	31
PT_400151	GU_401780			31	31
PT_400152	GU_401710			31	31
PT_400152	GU_401720			31	31
PT_400152	GU_401730			31	31
PT_400152	GU_401740			31	31

## Market Operator Monthly Report

PT_400152	GU_401750			31	31
PT_400152	GU_401760			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_500032	GU_501280			31	31
PT_500032	GU_501290			31	31
PT_500039	GU_500270			31	31
PT_500044	GU_500720			31	31
PT_500047	GU_500790			31	31
PT_500050	GU_501040			2	2
PT_500050	GU_501050			2	2
PT_500050	GU_501150			2	2
PT_500050	GU_501190			2	2
PT_500061	GU_501170			31	31
PT_500062	GU_501180			31	31
PT_500066	GU_501210			2	2
PT_500073	GU_501230			31	31
PT_500074	GU_501250			31	31
	<b>Total</b>	<b>3949</b>	<b>0</b>	<b>1886</b>	<b>5835</b>
	<b>Percentage</b>	<b>67.68%</b>	<b>0.00%</b>	<b>32.32%</b>	<b>100.00%</b>

Table 25 – 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 Operator Monthly Report

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	£2,226.19	£61,216.38	£2,226.19	£192,283.95	£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	£75,858,678.54	£17,424,467.63	£1,576,396.05	£255,748.90	£41,217.98	£1,835.23	£112,980.92	£0.00	£1,327.55	£123,147.19	£0.00	£0.00	73,064,976.28
	NI	£20,792,697.59	£5,164,101.59	£404,571.34	£73,223.02	£16,729.14	£695.03	£40,446.87	£0.00	£491.99	£10.52	£0.00	£0.00	22,440,085.62
Sep-14	ROI	£73,166,499.86	£17,774,079.00	£1,638,436.68	£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
May-15	ROI	£62,682,234.81	£19,502,808.85	£978,929.74	£496,789.41	£113,309.65	£2,668.35	£257,691.56	£37,913.64	£947.65	£105,628.08	£0.00	£0.00	84,178,921.74
	NI	£20,656,049.28	£5,471,708.22	£941,978.73	£284,714.17	£81,721.34	£1,530.01	£28,297.30	£5,740.95	£255.12	£458.23	£0.00	£0.00	27,472,453.35
Jun-15	ROI	£49,441,454.53	£18,011,748.07	£768,412.90	£525,988.89	£125,343.18	£3,068.91	£83,564.13	£14,743.93	£639.06	£24,047.90	£0.00	£0.00	68,999,011.50
	NI	£16,086,817.66	£4,881,262.27	£731,152.70	£190,327.69	£56,176.06	£1,108.32	£14,086.52	£3,263.83	£136.37	£4.82	£0.00	£0.00	21,964,336.24
Jul-15	ROI	£60,081,065.67	£18,106,345.49	£938,580.42	£392,863.94	£100,250.95	£2,281.34	£70,409.41	£14,571.40	£801.22	£3,383,812.96	£0.00	£0.00	83,090,982.80
	NI	£20,399,899.80	£4,559,620.30	£901,179.27	£122,425.31	£34,196.36	£798.99	£13,983.16	£3,041.83	£170.87	£560,424.72	£0.00	£0.00	26,595,740.61
Aug-15	ROI	£78,361,586.44	£18,780,406.68	£706,070.38	£980,269.55	£57,624.58	£1,113.70	£78,106.89	£15,466.63	£704.85	£100,608.41	£0.00	£0.00	99,081,958.11
	NI	£26,593,706.25	£4,803,877.25	£717,392.01	£96,278.24	£20,145.75	£293.79	£11,711.41	£2,659.00	£109.44	£1,579.59	£0.00	£0.00	32,247,752.73

Table 26 - 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	€17,954,420.41	€5,911,052.65	€74,371.07	€15,553.63	€863.74	€54,424.97	€0.00	€488.54	€7.43	€0.00	€0.00	€24,011,182.44
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	€82,250,495.91	€18,220,219.93	€584,729.92	€104,687.01	€6,507.05	€125,335.38	€9,519.24	€1,313.25	€0.00	€0.00	€0.00	€101,302,807.69
	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
May-15	ROI	€67,111,651.41	€19,797,771.76	€51,325.57	€496,344.48	€113,479.16	€2,634.87	€257,691.56	€32,517.87	€947.37	€0.00	€0.00	€87,864,364.05
	NI	€14,205,268.80	€5,300,854.82	€14,374.56	€284,573.32	€81,498.12	€-1,531.15	€28,297.30	€9,511.56	€255.00	€0.00	€0.00	€19,923,102.33
Jun-15	ROI	€52,399,988.22	€18,449,916.98	€50,329.66	€524,214.44	€125,353.28	€2,989.03	€83,564.13	€15,091.05	€633.94	€0.00	€0.00	€71,652,080.73
	NI	€10,536,540.86	€4,561,917.57	€13,069.46	€190,224.00	€56,986.34	€-1,109.52	€14,086.52	€3,197.29	€136.59	€0.00	€0.00	€15,375,049.11
Jul-15	ROI	€63,619,222.88	€17,795,388.83	€50,900.02	€368,804.77	€98,198.30	€2,207.87	€70,409.41	€14,587.16	€801.29	€0.00	€0.00	€82,020,520.53
	NI	€12,711,689.30	€4,703,936.76	€13,498.87	€121,756.24	€35,884.73	€-799.78	€13,983.16	€3,045.41	€170.96	€0.00	€0.00	€17,603,165.65
Aug-15	ROI	€78,593,341.57	€17,976,726.62	€1,941.74	€806,815.82	€62,841.79	€1,062.49	€78,106.89	€15,446.53	€704.90	€0.00	€0.00	€97,536,988.35
	NI	€18,174,076.35	€5,392,403.96	€13,263.37	€191,650.14	€15,985.64	€-294.74	€11,711.41	€2,643.17	€109.50	€0.00	€0.00	€23,801,548.80

Table 27 - 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
07/04/2015	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
01/05/2015	16	-€299,738.05	€144,199.78
08/05/2015	17	-€100,756.77	€94,697.22
15/05/2015	18	-€766,173.39	€143,672.76
22/05/2015	19	€127,012.27	€24,101.25
29/05/2015	20	-€726,994.34	€139,338.43
05/06/2015	21	-€581,933.86	€93,736.74
12/06/2015	22	€52,638.56	€34,490.35
19/06/2015	23	-€130,069.47	€150,507.27
26/06/2015	24	-€41,136.73	€180,820.70
03/07/2015	25	€146,348.99	€155,182.53

## Market Operator Monthly Report

Date Of Invoice	Week No	SEM Balancing Costs	VAT Balancing Costs
10/07/2015	26	-€804,612.35	-€337,082.05
17/07/2015	27	-€1,160,398.93	€145,979.53
24/07/2015	28	-€624,454.00	€143,384.39
31/07/2015	29	-€1,392,308.77	€183,753.05
07/08/2015	30	-€671,249.86	€93,842.84
14/08/2015	31	€203,990.07	€52,391.21
21/08/2015	32	-€1,689,320.99	€200,605.60
28/08/2015	33	-€1,328,918.96	€198,118.33

**Table 28 – 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 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
May 2015	-€291.90	€801.20
June 2015	-€232.42	€5324.64
July 2015	-€246.76	-€2,177.31
August 2015	-€277.15	-€50,152.42

**Table 29 - 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>



## Market Operator Monthly Report

Month	Ex-Ante	Ex-Ante 2	Ex-Post Indicative	Ex-Post Initial	Within Day
<u>May 2015</u>	-	<u>13/05/2015</u>	<u>03/05/2015</u>	-	-
<u>June 2015</u>	-	<u>01/07/2015</u>	<u>22/06/2015</u>	<u>26/06/2015</u>	<u>11/06/2015</u>
<u>August 2015</u>	-	-	<u>23/07/2015</u>	-	-
<u>August 2015</u>	-	-	<u>11/08/2015</u>	<u>11/08/2015</u>	<u>07/08/2015</u> <u>31/08/2015</u>

Table 30 - MIP Algorithms

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

## Market Operator Monthly Report

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
24/04/2015	20/04/2015	EP2	€589.68	€80.11	MIP
12/05/2015	13/05/2015	EA2	€590.61	€221.99	MIP
04/05/2015	03/05/2015	EP1	€574.30	€313.07	MIP
11/06/2015	11/06/2015	WD1	€576.50	€206.00	MIP
23/06/2015	22/06/2015	EP1	€579.41	€76.14	MIP
30/06/2015	26/06/2015	EP2	€578.16	€285.24	MIP
30/06/2015	01/07/2015	EA2	€574.22	€110.58	MIP
23/07/2015	22/07/2015	EP1	€1,000	€86.14	MIP
07/08/2015	07/08/2015	WD1	€579.12	€71.44	MIP
12/08/2015	11/08/2015	EP1	€567.94	€76.52	MIP
15/08/2015	11/08/2015	EP2	€576.94	€76.52	MIP
31/08/2015	31/08/2015	WD1	€1,000	€66.29	MIP

Table 31 - MIP Vs LR Peak Price Comparison