



# **Market Operator Monthly Report**

## **September 2016**

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### 1. Executive Summary

This Single Electricity Market Operator's (SEMO) report covers the month of operation of September 2016 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 September 2016, Settlements had no late publications as per the Trading and Settlement code.

153 general queries were received in September 2016. During the same period 159 general queries were resolved.

There were 7 defaults by Participants during September 2016. The largest of these was an Energy Initial invoice for €44,294.65 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

### *Trading and Settlement Code Breaches*

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

Trading and Settlement Code Breaches			
Area		Major	Minor
Data Providers		-	-
Market Participants	Pricing & Scheduling	-	-
	Settlement	-	2
	Funds Transfer	7	-
	Credit Risk Management	-	-
SEMO	Pricing & Scheduling	-	-
	Settlement	-	-
	Funds Transfer	-	-
	Credit Risk Management	-	-
	Other	-	-
<b>Total</b>		<b>7</b>	<b>2</b>

**Table 1 – Trading and Settlement Code Breaches**

Further details of each of the Trading and Settlement 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.

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

No parties joined the Market in September 2016

There were no terminating parties in September 2016

The following units went effective in the Market in September 2016:

- PT\_400050/GU\_401920 Meenadreen South 2 Windfarm
- PT\_400050/GU\_401930 Mulreavy Windfarm
- PT\_400055/GU\_401940 Raheenleagh 1 Windfarm

No units de-registered from the Market in September 2016.

### ***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

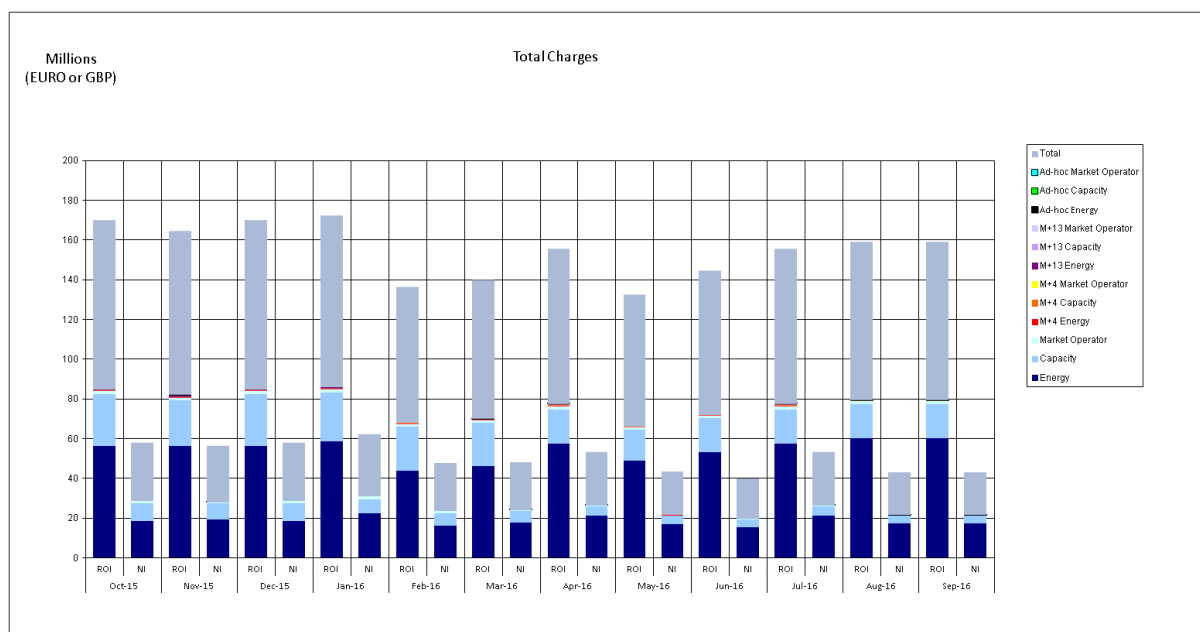


Figure 1 - Total Charges for Each Currency

Market	Sept 2016	
	ROI	NI
Energy	€60,365,809	£17,693,944
Capacity	€17,305,691	£3,676,030
Market Operator	€1,381,850	£349,567
M+4 Energy	€313,754	£32,667
M+4 Capacity	€83,238	£7,720
M+4 Market Operator	€3,817	£413
M+13 Energy	€47,911	£4,847
M+13 Capacity	€8,969	£1,188
M+13 Market Operator	€355	£34
Ad-hoc Energy	€0	£0
Ad-hoc Capacity	€2,861	£532
Ad-hoc Market Operator	€0	£0
<b>Total</b>	<b>€79,514,255</b>	<b>£21,766,942</b>

Table 2 - Total Charges for Each Currency

Notes relating to Table 2 and 3:

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

## Total Payments for Each Currency

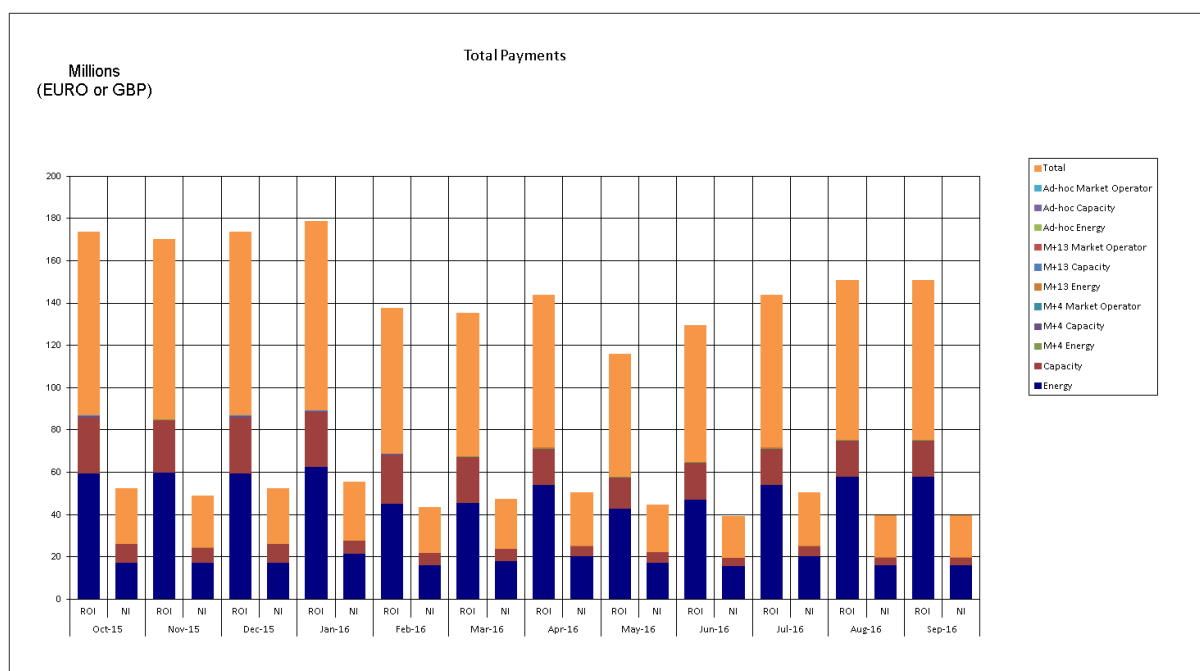


Figure 2 - Total Payments for Each Currency

Market	Sept 2016	
	ROI	NI
Energy	€57,725,047	£15,918,158
Capacity	€17,191,336	£3,784,287
M+4 Energy	€316,785	£32,790
M+4 Capacity	€82,963	£7,928
M+4 Market Operator	€4,207	£417
M+13 Energy	€47,914	£4,848
M+13 Capacity	€8,957	£1,185
M+13 Market Operator	€354	£33
Ad-hoc Energy	€0	£0
Ad-hoc Capacity	€296	£2,875
Ad-hoc Market Operator	€0	£0
<b>Total</b>	<b>€75,377,858</b>	<b>£19,752,521</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:

September 2016	
Imbalance (Energy Only)	€1,982,458.41

Table 4 - Balancing Costs for Energy Settlement

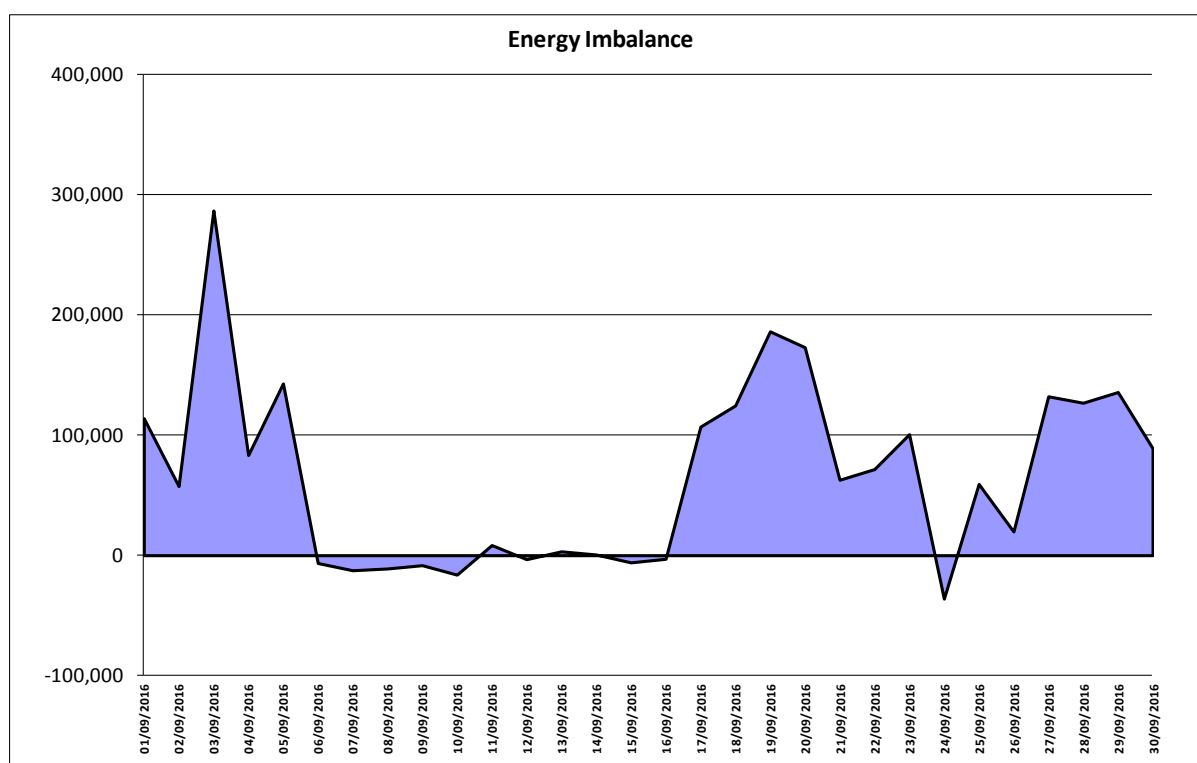


Figure 3 – Energy Imbalances

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

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

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

In tables 5 and 6 below:

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

Date Of Invoice	Week No	SEM Balancing Costs	VAT Balancing Costs
02/09/2016	34	-€945,476.51	-€0
09/09/2016	35	-€544,556.24	-€0
16/09/2016	36	-€636,434.36	-€0
23/09/2016	37	-€1,029,609.73	-€0
30/09/2016	38	€15,000.54	-€0

**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 Trading and Settlement Code.

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

September 2016	
Capacity Charges	-€41,234,658.98
Capacity Payments	€41,234,395.51
Balancing Costs	-€263.46
VAT	€0

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

## Market Operator Monthly Report

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

### **Total Currency Costs**

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

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

Although the Trading and Settlement 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
27/08/2016	02/09/2016	34	-£7,734.34	£0	-£7,734.34
03/09/2016	09/09/2016	35	-£13,072.39	-£11,190.00	-£24,262.39
10/09/2016	16/09/2016	36	-£14,625.07	£0	-£14,625.07
17/09/2016	23/09/2016	37	£3,593.72	£0	£3,593.72
24/09/2016	30/09/2016	38	£19,385.96	£5,050.00	£24,435.96

**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 £24,435.96 and a cost of -£24,262.39. 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
11/10/2016	September 2016	-£111,722.82

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

***Cumulative Imperfections Costs Vs Budget***

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

These values have been collected across the months since the start of the new financial year, 1st October 2015. The values expressed in Euros are as follows.

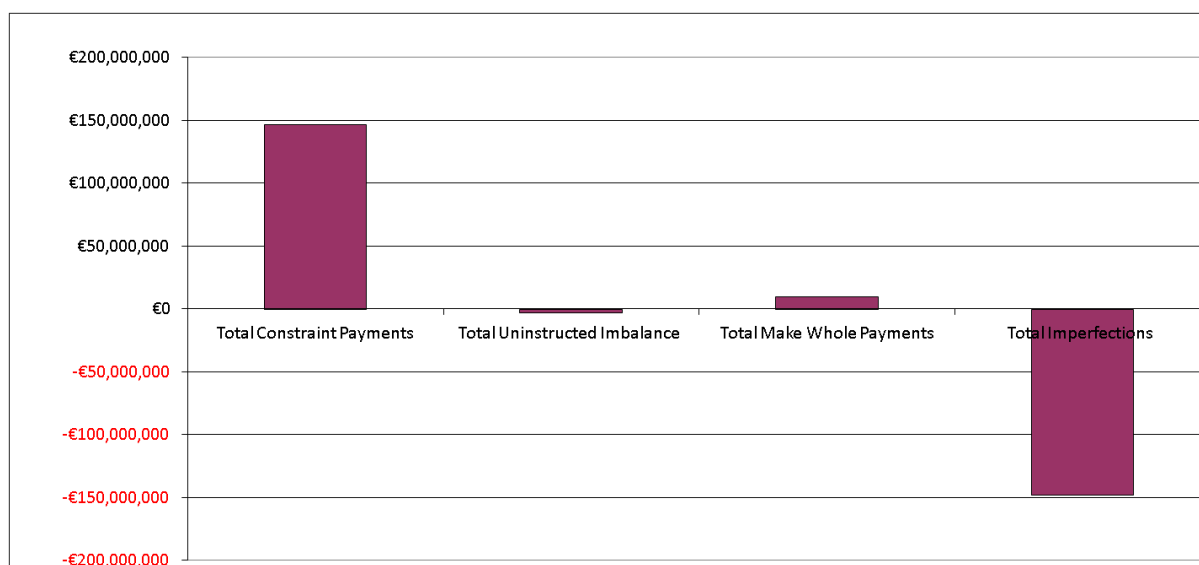
This table makes use of the values taken from the Initial Settlement Run of Trading payments and charges.

Total Constraint Payments	Total Uninstructed Imbalance	Total Make Whole Payments	Total Imperfections
€146,549,678.55	-€2,937,389.14	€9,809,485.45	-€148,152,201.44

**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**

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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 May 2016 and M+13 resettlement period of August 2015 for Energy and Capacity.

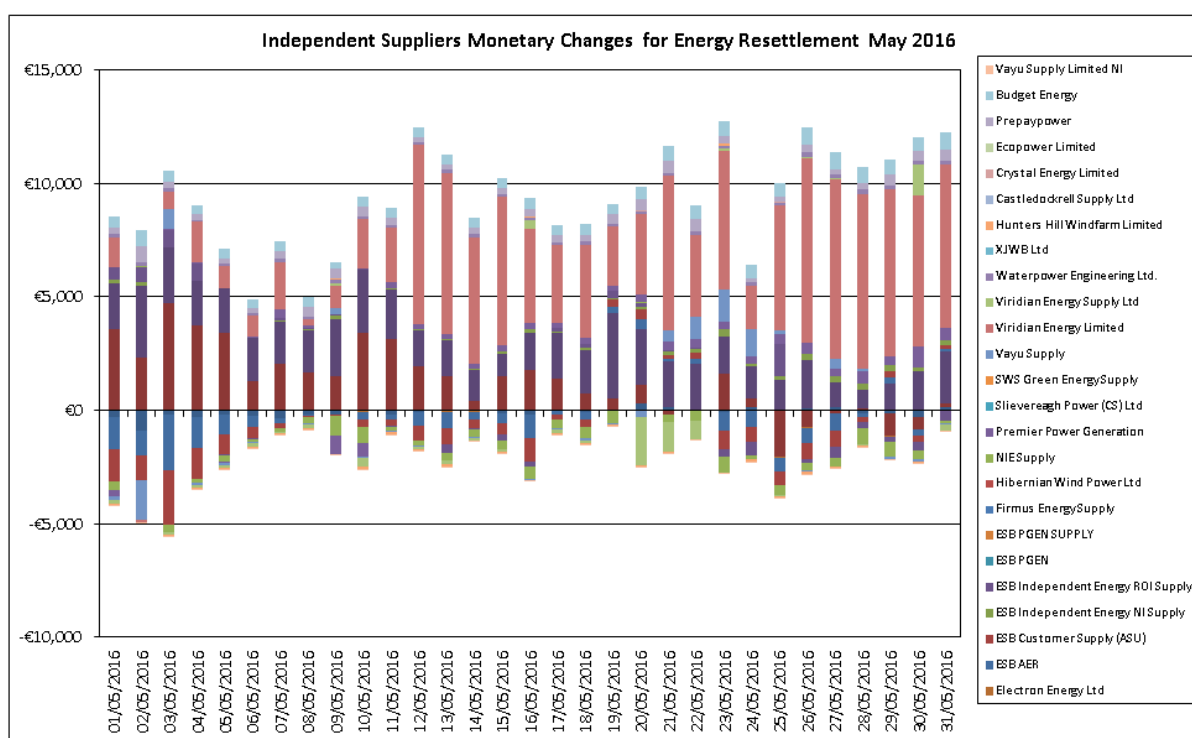
#### **3.1.1 Energy Market**

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

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

The reverse is true for Figure 7 & 10

#### **M+4 Resettlement**



**Figure 5 – Independent Suppliers Monetary Changes for Energy Resettlement – May 2016**

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

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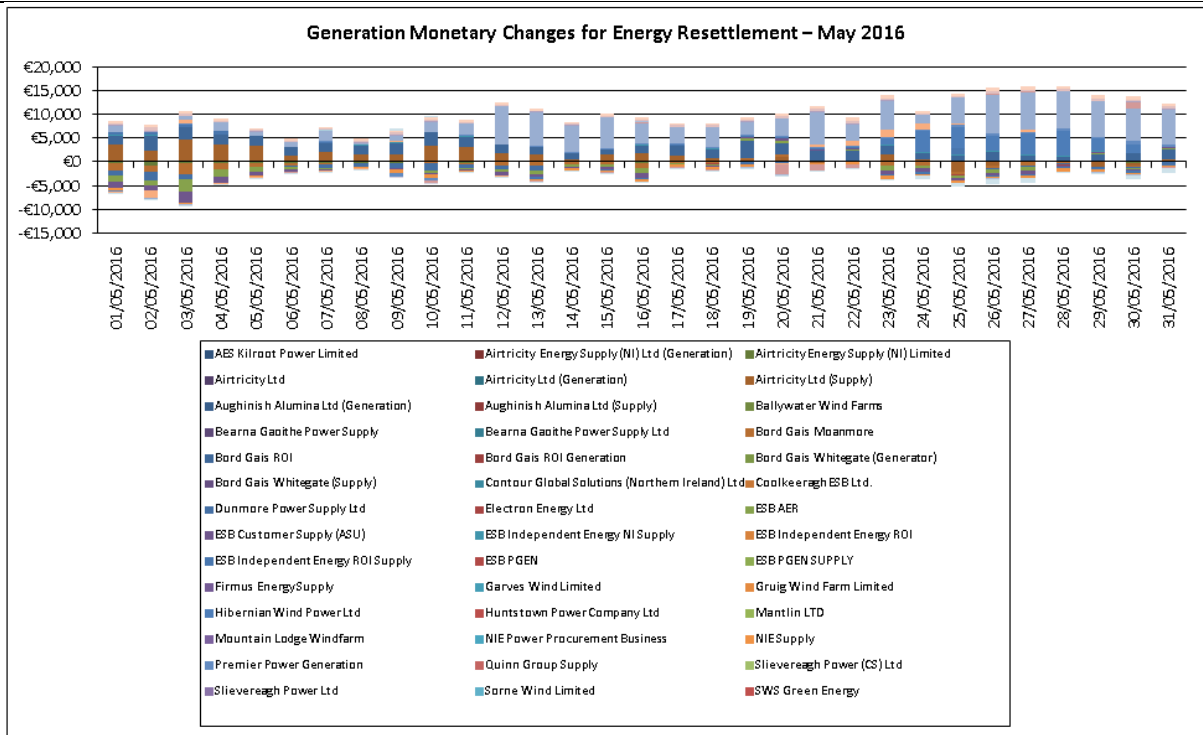


Figure 6 – Generation Monetary Changes for Energy Resettlement – May 2016

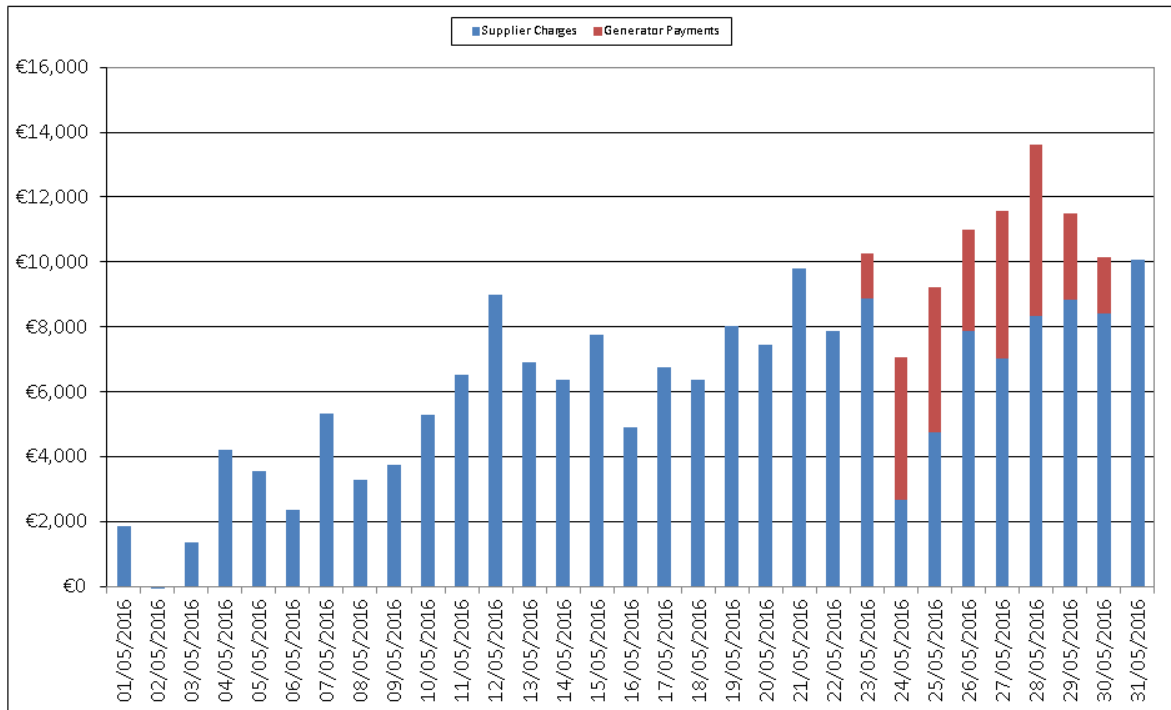


Figure 7 – Total Monetary Changes for Energy Resettlement – May 2016

M+13 Resettlement

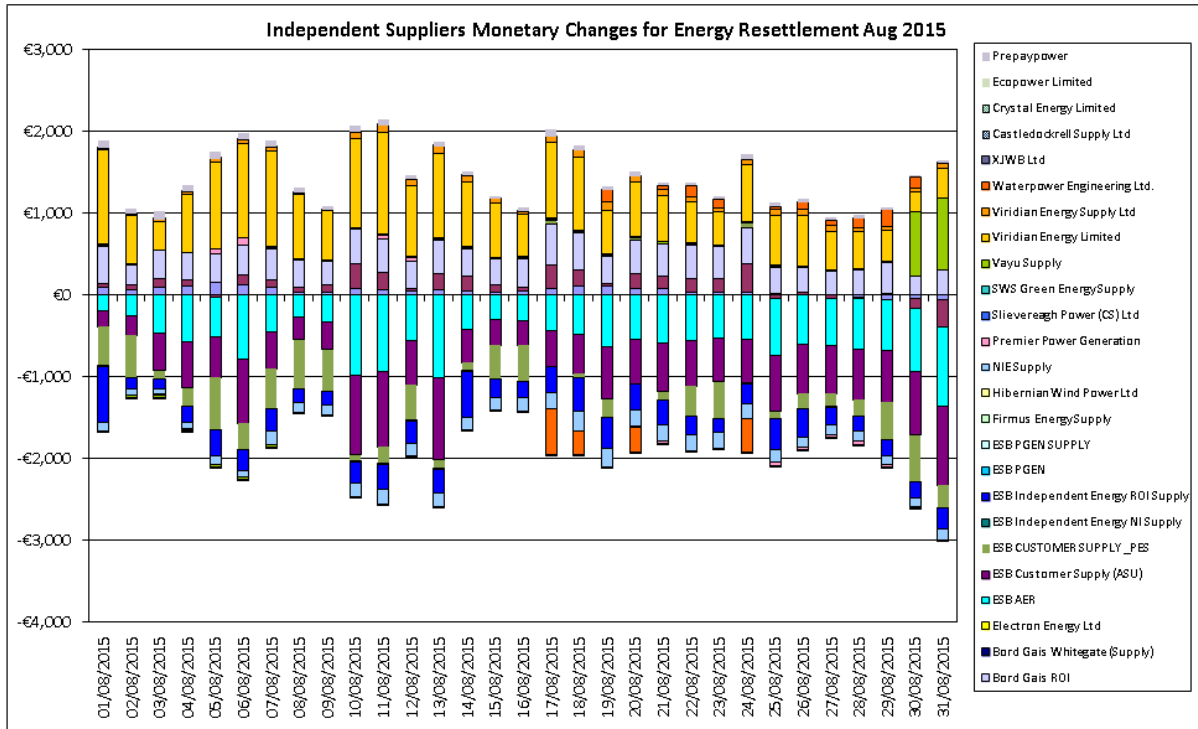


Figure 8 - Independent Suppliers Monetary Changes for Energy Resettlement – Aug 2015

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

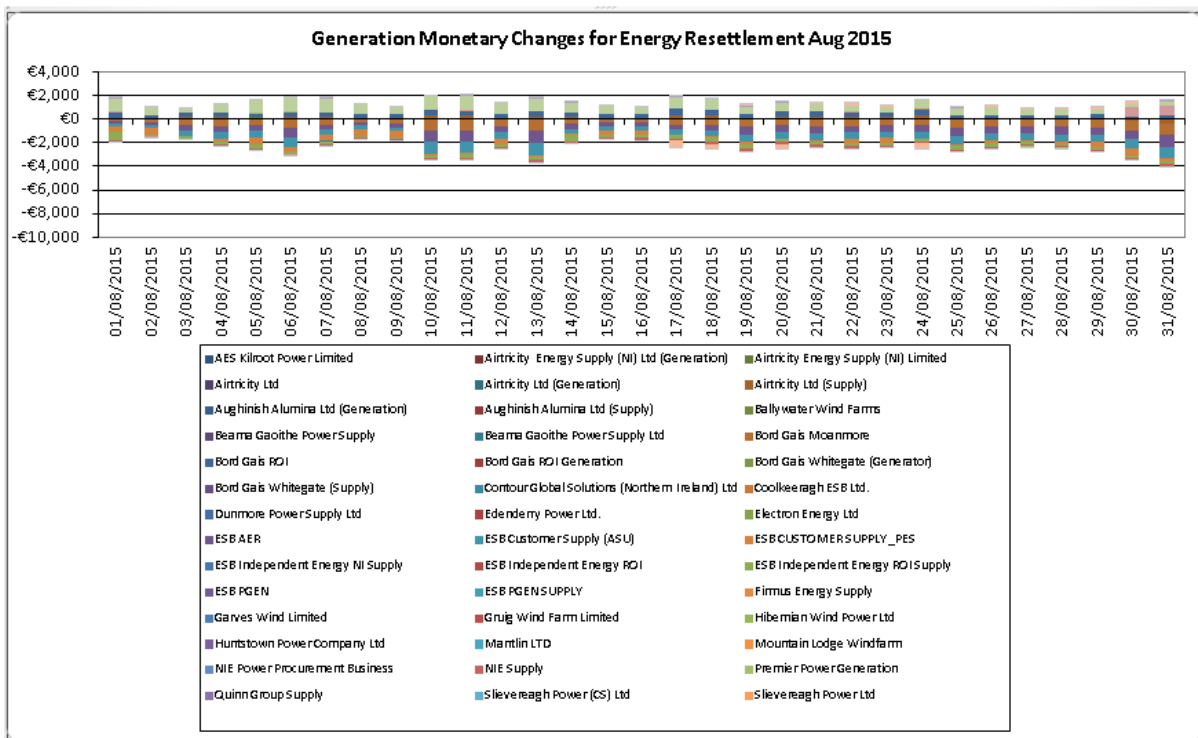


Figure 9 - Generation Monetary Changes for Energy Resettlement – Aug 2015

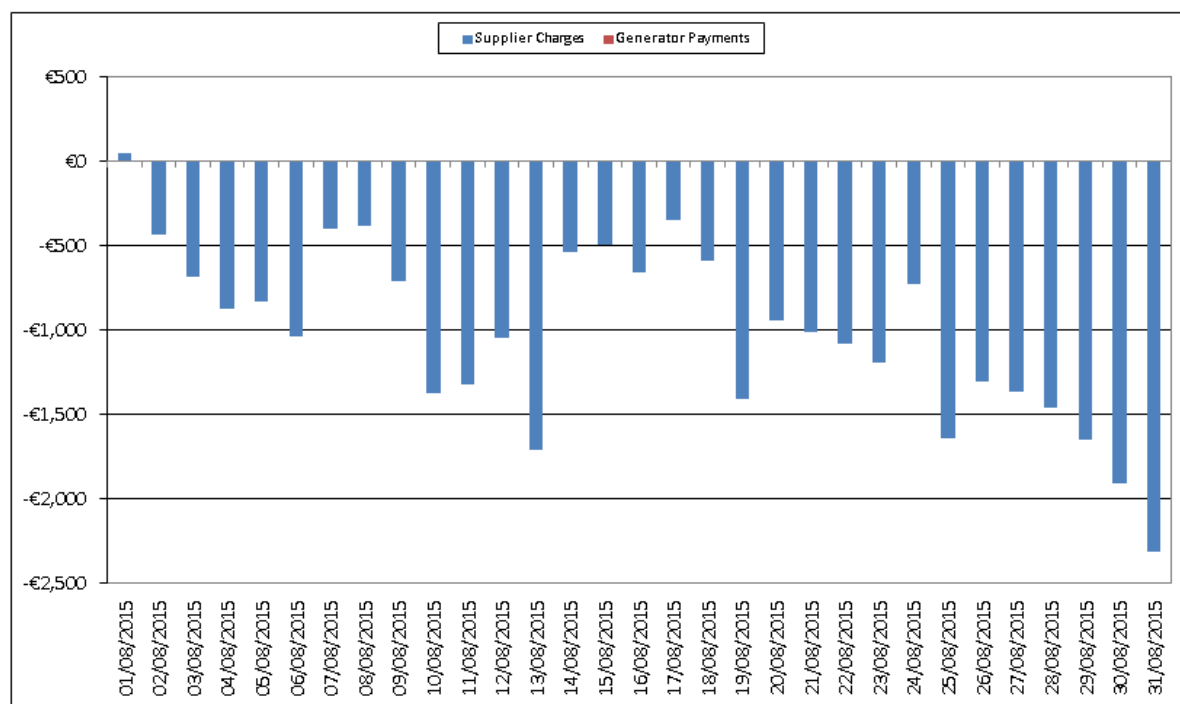


Figure 10 - Total Monetary Changes for Energy Resettlement – Aug 2015

### 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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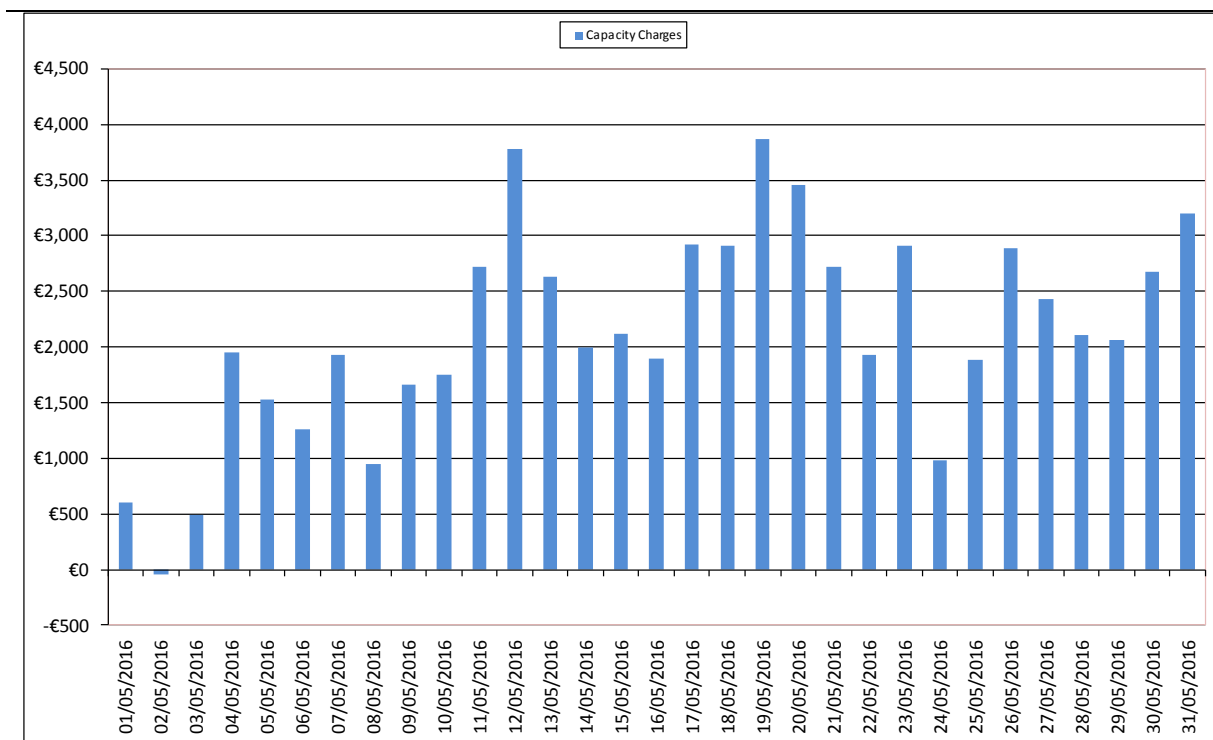


Figure 11 - Independent Suppliers Monetary Changes for Capacity Resettlement – May 2016

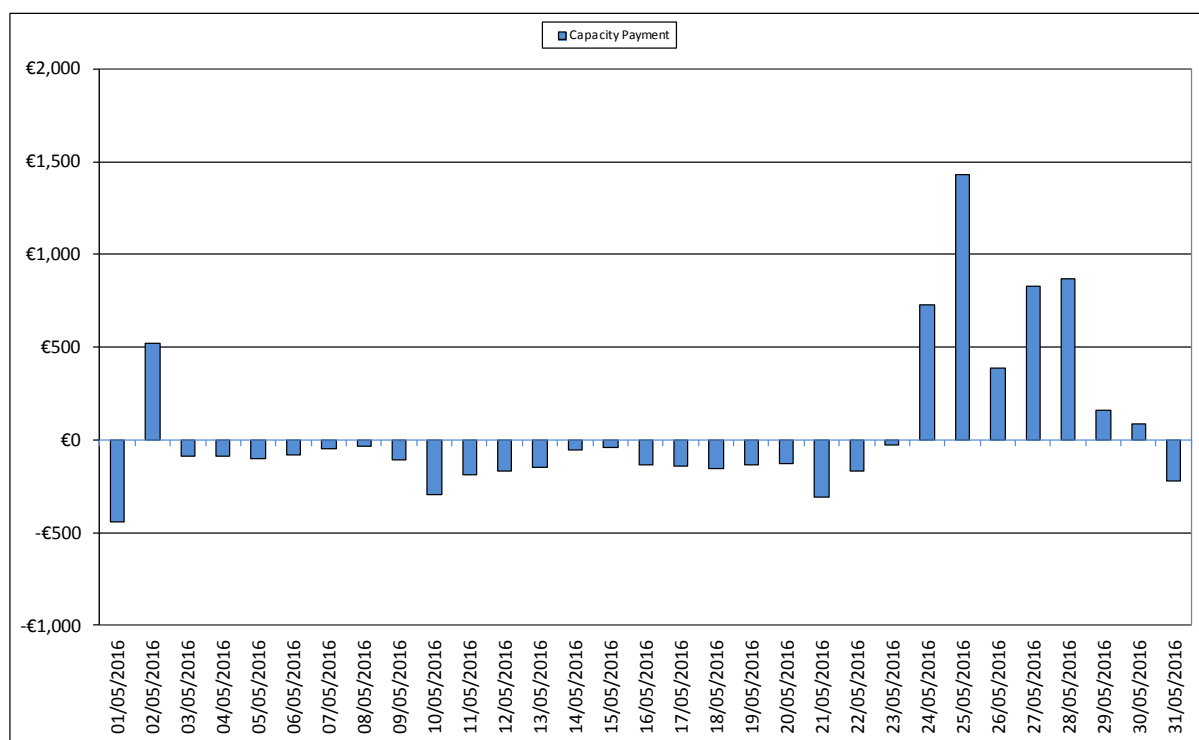
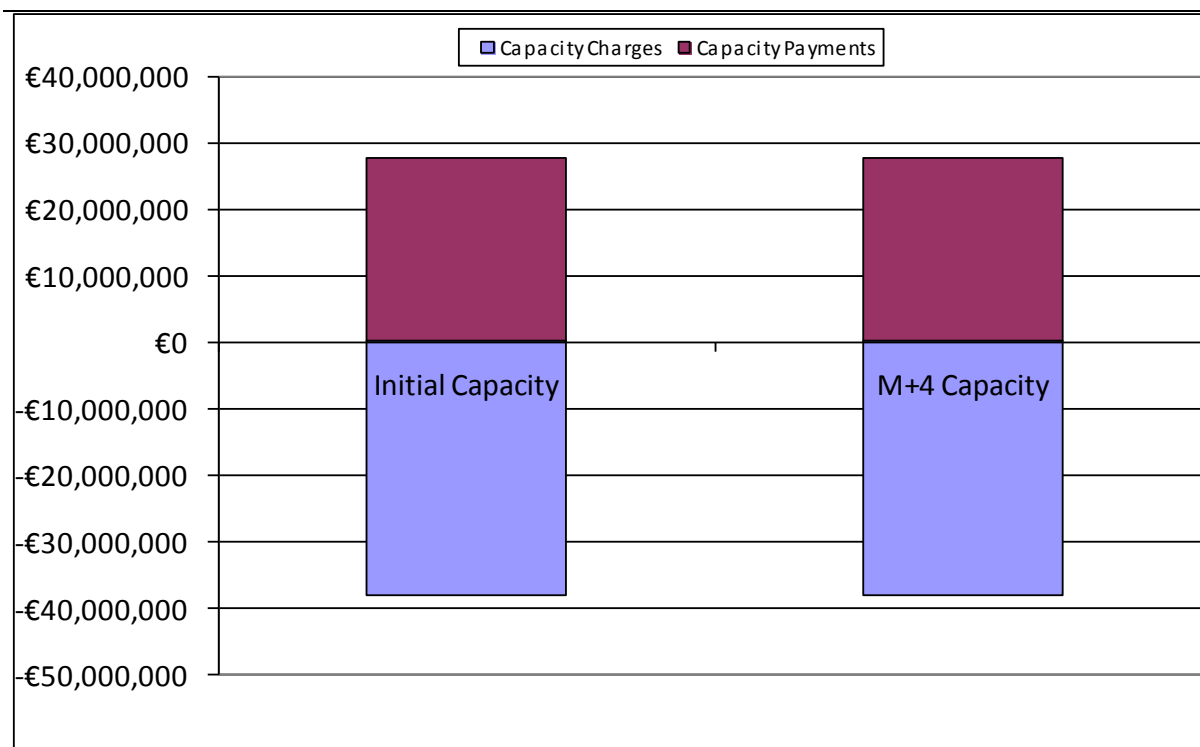


Figure 12 - All Generation Monetary Change for Capacity Resettlement – May 2016

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  
May 2016**

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

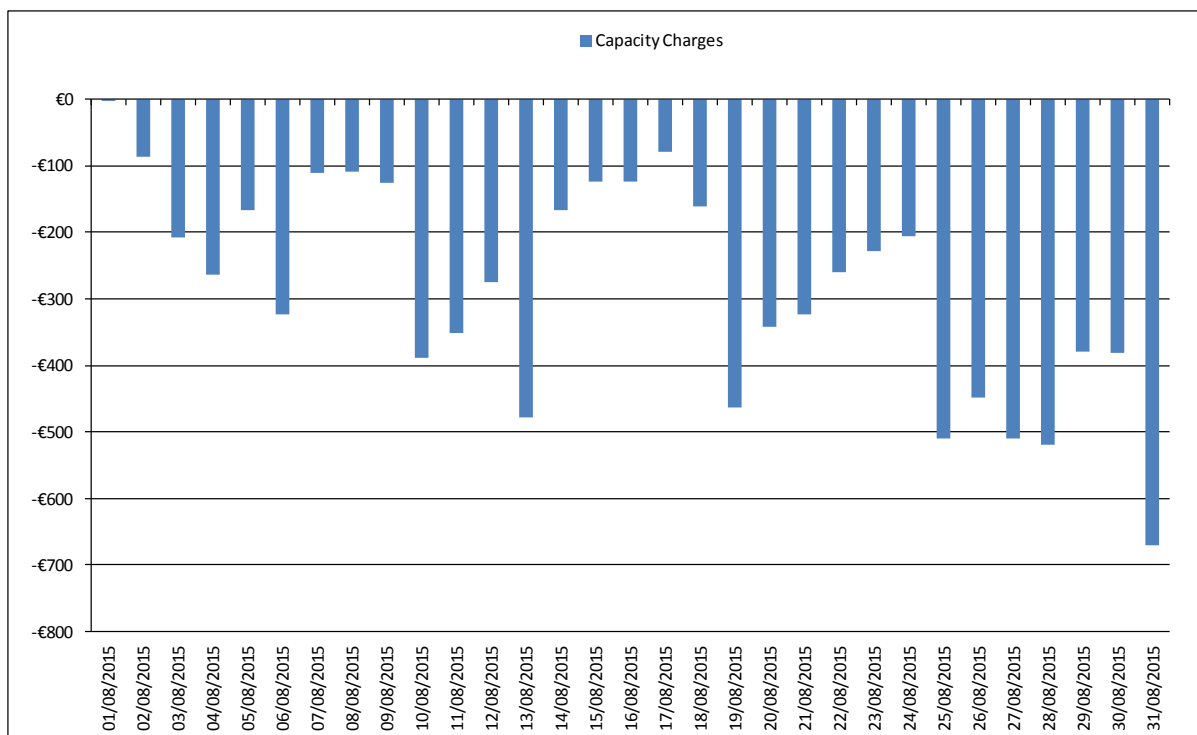


Figure 14 - Independent Suppliers Monetary Changes for Capacity Resettlement – Aug 2015

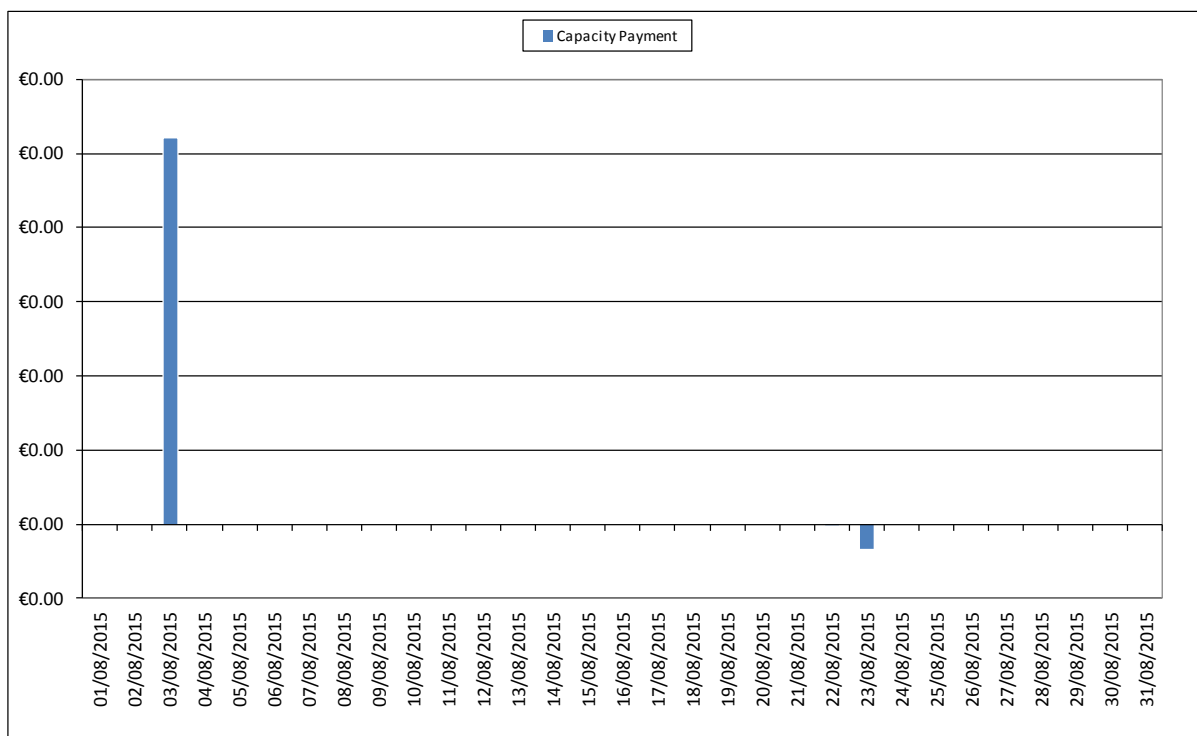


Figure 15 - There were no significant changes for all Generation Monetary payments for Capacity Resettlement between M+4 and M+13

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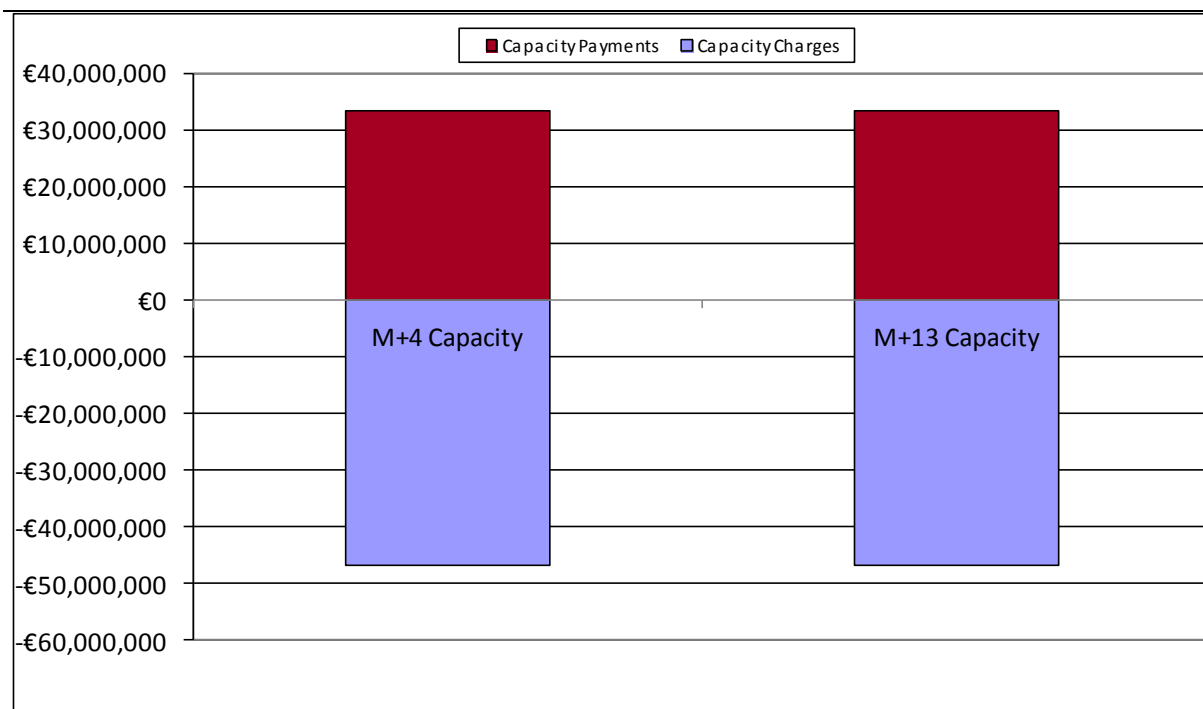


Figure 16 - Comparison of Distribution of Monetary Amounts between M+4 Capacity Resettlement and M+13 Capacity Resettlement – Aug 2015

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 September 2016.

**Market Helpdesk Report: 01/09/16 to 30/09/16**

	Received	Resolved within the period	Not Resolved	Resolved in the period	Resolution Time (Working Days)	Resolved On Time
Normal	153	137	16	159	1.44	151
Important	0	0	0	0	0.00	0
Urgent	0	0	0	0	0.00	0
Settlement	6	6	0	12	2.57	12
Credit	0	0	0	0	0.00	0
Dispute	0	0	0	0	0.00	0
Data	0	0	0	0	0.00	0
<b>Total/Average</b>	<b>159</b>	<b>143</b>	<b>16</b>	<b>171</b>	<b>0.80</b>	<b>163</b>

**Table 10 – Helpdesk Statistics**

**Definitions:**

- Resolved within the Period refers to queries raised and resolved within the calendar month of September 2016.
- Resolved in the Period refers to queries resolved within September 2016, 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 September 2016.
- Not Resolved refers to queries raised but not resolved within September 2016.
- 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 a mandated service level under the Trading and 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 0.66 working days from 0.78 in August 2016 to 1.44 working days in September 2016. SEMO has a metric to resolve General Queries within 20 Working Days. These include queries received over the phone and e-mail.

Data and Settlement Queries generally continue to be responded to within the timelines required by the Trading and Settlement Code, i.e. one calendar month. No Formal Query timeline extensions were required during September 2016 with regard to formal Settlement Queries.

### 5. Disputes and Queries

#### 5.1.1 Disputes

No Disputes were raised during the month of September 2016.

#### 5.1.2 Data Queries

There were no formal data queries raised during the month of September 2016.

#### 5.1.3 Settlement Queries

There were six formal Settlement Queries raised in September 2016. Five of the six queries were upheld and have since been resolved.

Topic	Number Of Queries
SO Trade	1
Meter Generation	2
Dispatch Instructions	2

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

- Two queries relating to incorrect Dispatch Instructions were raised. These queries were deemed to be of low materiality and will be corrected within M+4 resettlement.
- Two queries relating to incorrect Metered Generation were raised. These were deemed to be of low materiality and will be corrected within M+4 & M+13 resettlement.
- One query relating to incorrect SO Trade Payments was raised. This was deemed to be of low materiality and will be corrected within M+4 resettlement.

#### Unresolved Queries

There are no unresolved settlement query as of the 14<sup>th</sup> October 2016.

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, 64.92% of data used was submitted by Participants through the normal Bid-Offer process. 35.08% 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***

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

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

There were no Re-Price runs carried out in September 2016.

There was one Ad hoc Re-Settlement run carried out in September 2016.

##### **6.3.2 System Errors**

There were no Market Application defects found in September 2016.

Details are provided in Appendix C : List of All Systems 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.

The following tables and graphs provide details for the postings of the MSP for September 2016.

**6.4.1 MSP Postings September 2016**

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

**Table 12 - 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 13 - Operational Timings (% on time)**



# Market Operator Monthly Report

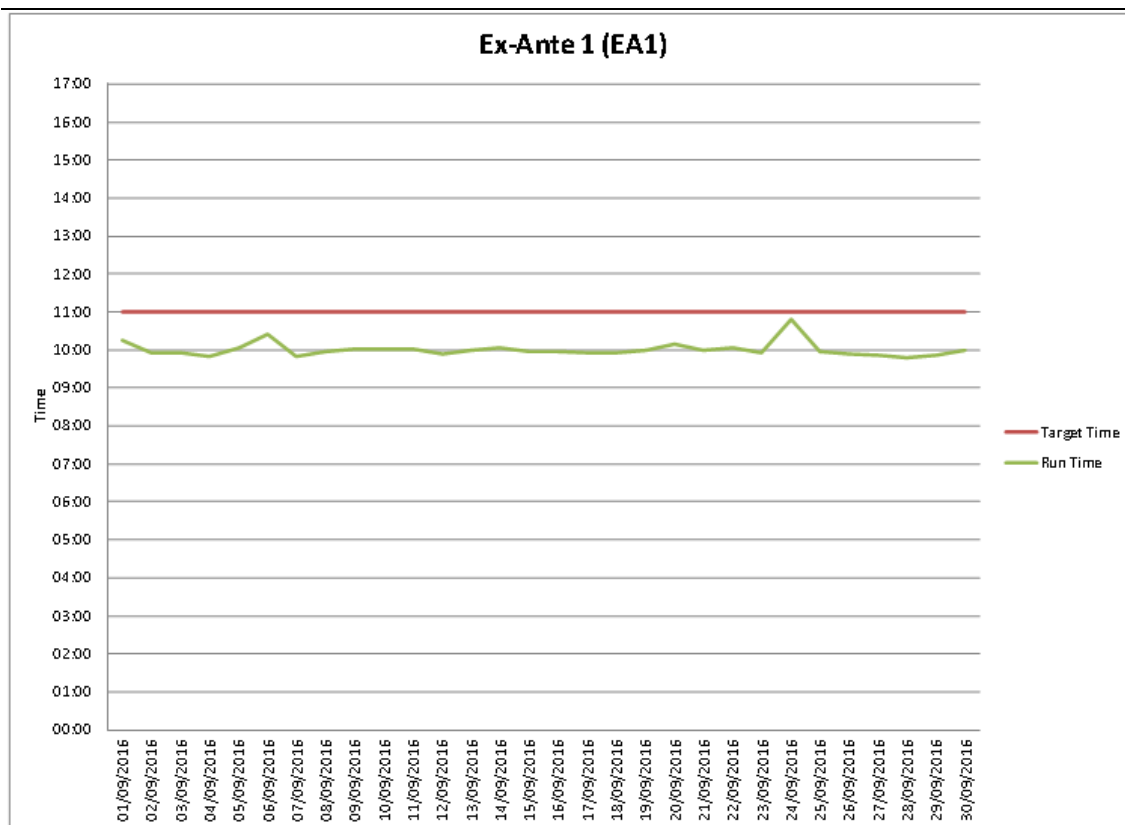


Figure 17 – Ex-Ante 1

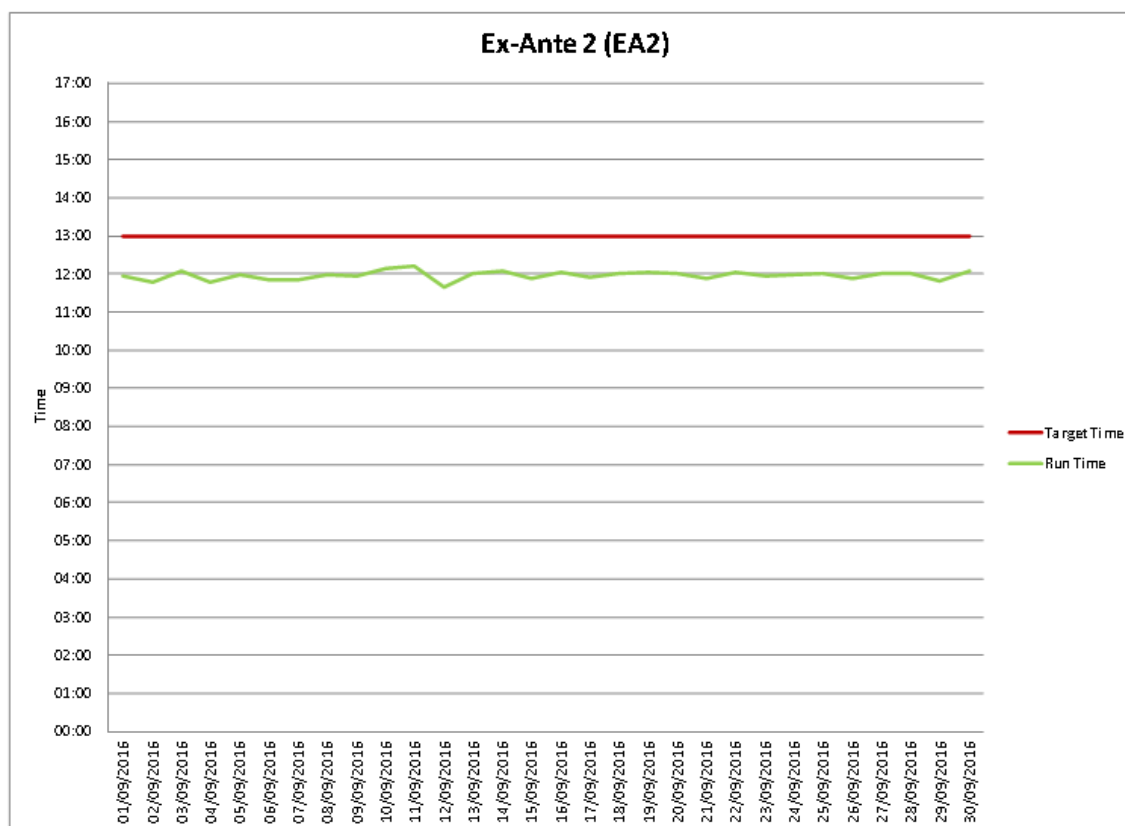


Figure 18 – Ex-Ante 2

# Market Operator Monthly Report

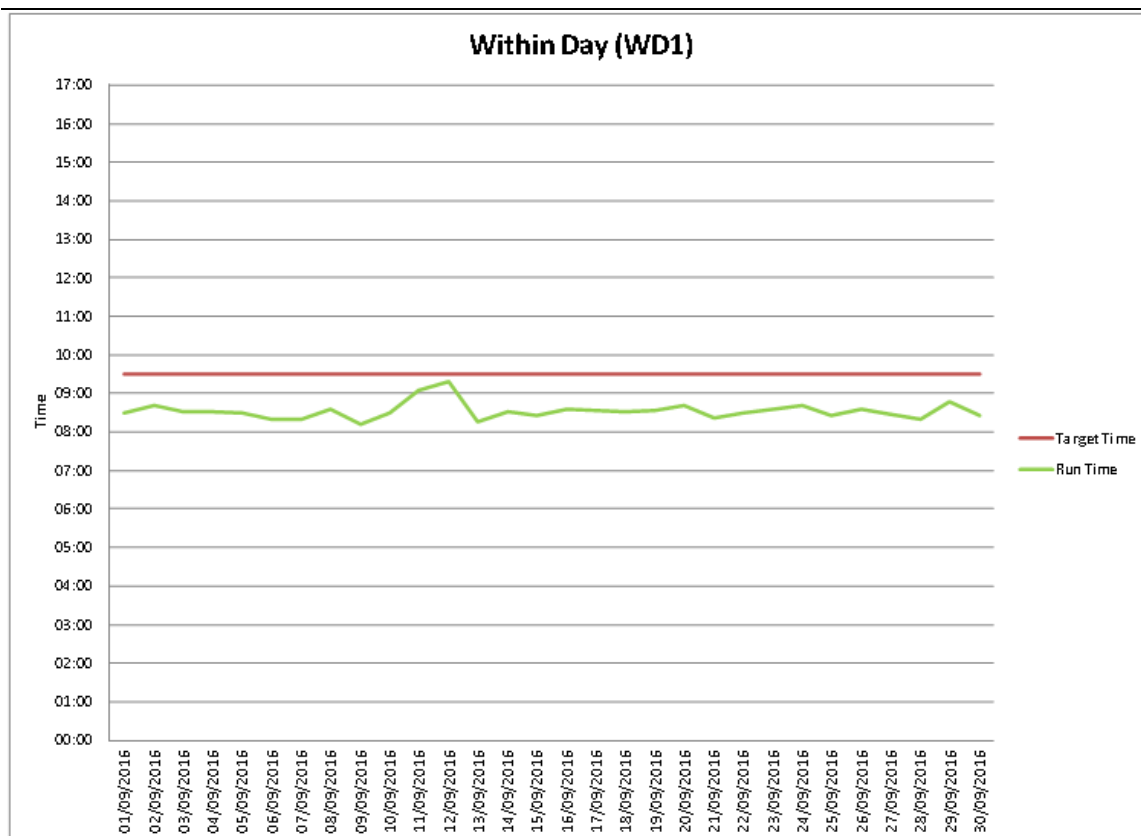


Figure 19 – Within Day 1

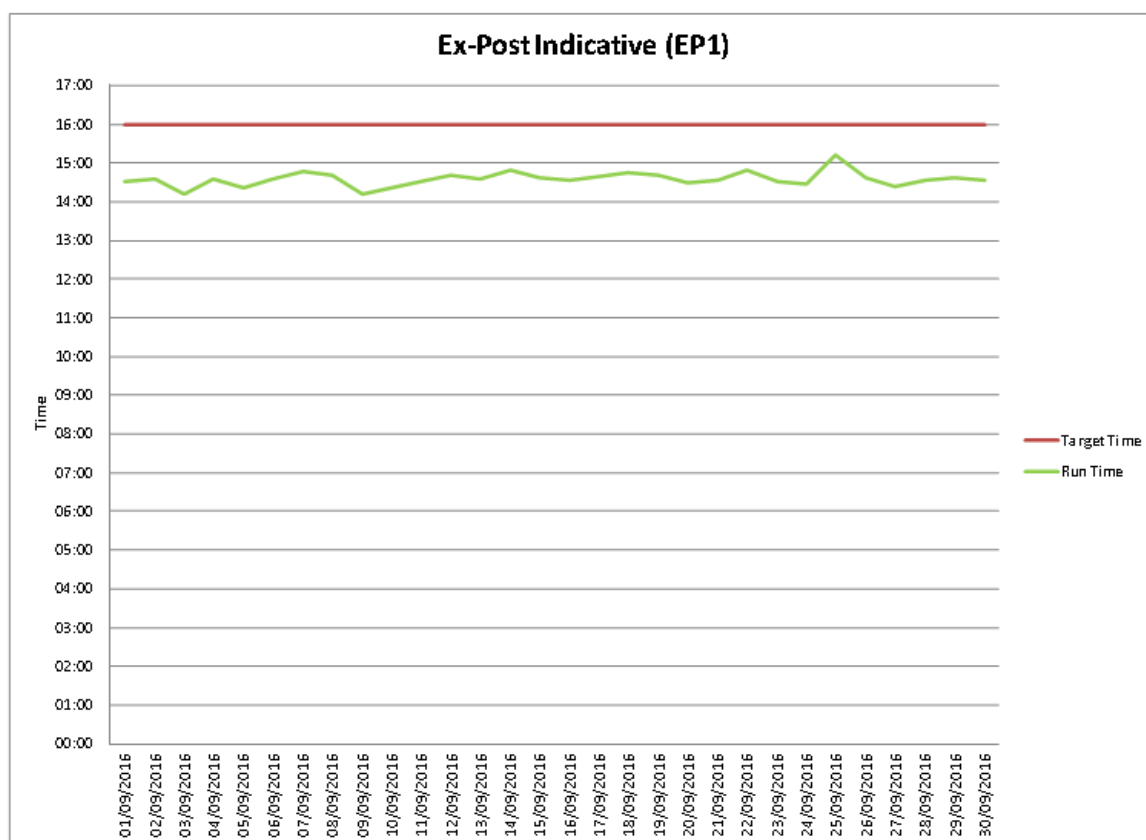


Figure 20 - Ex-Post Indicative

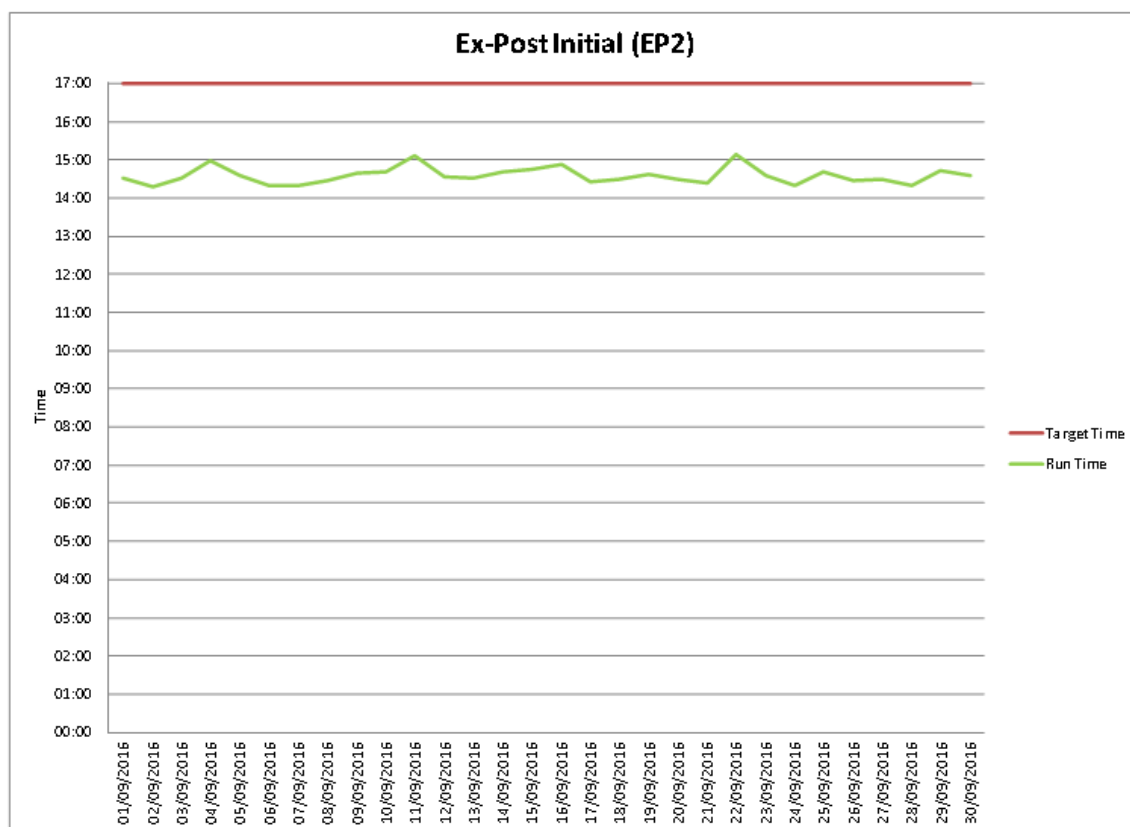


Figure 21 - Ex-Post Initial

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 September 2016, there were seven instance 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](#).

6.4.2 Settlement Postings September 2016

The publication timings for Settlement runs are provided below.

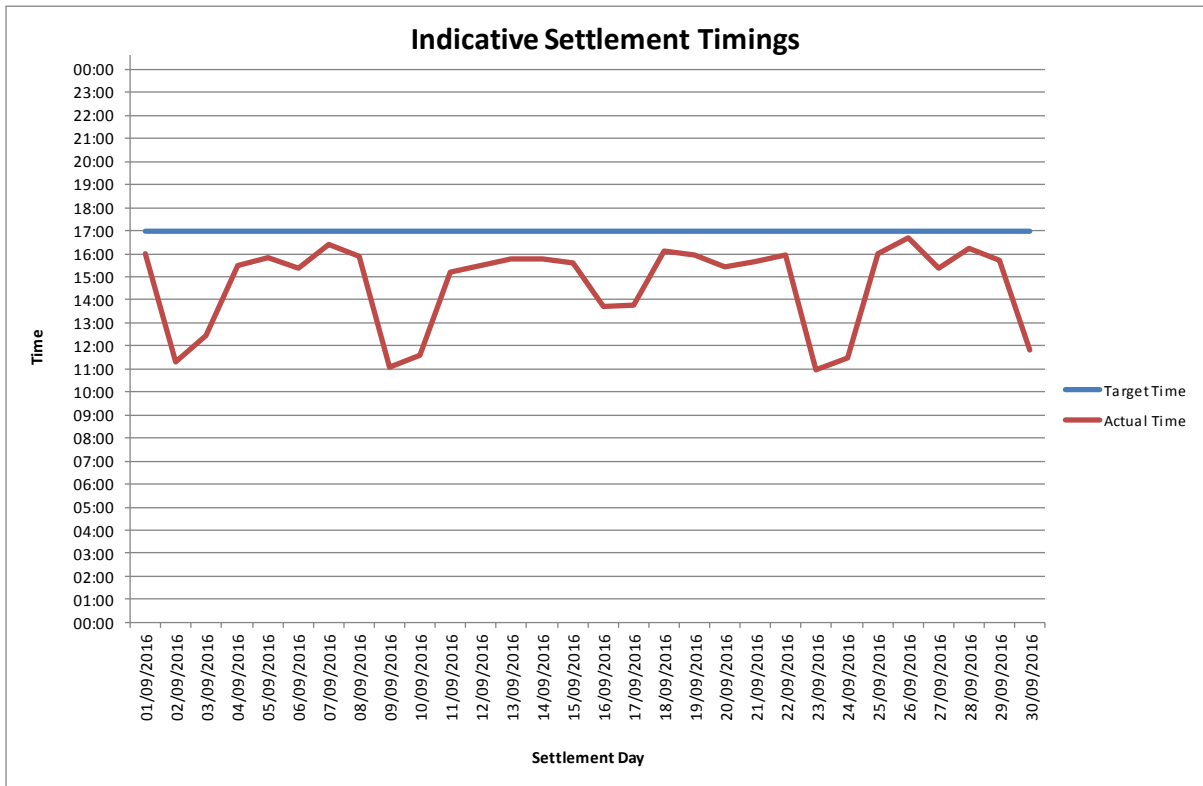


Figure 22 - Indicative Settlement Postings

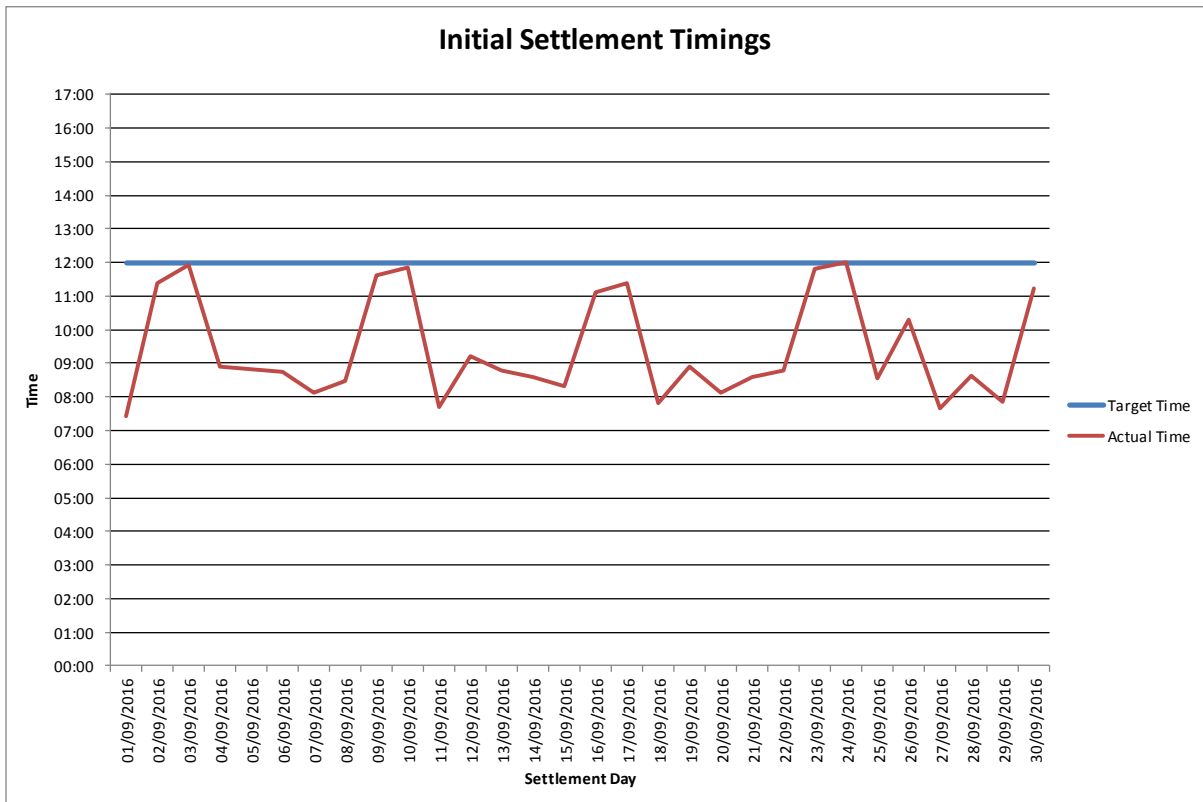


Figure 23 - Initial Settlement Postings

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

### **6.5.1 - UUC 3.7.2 – (Deployed September 6<sup>th</sup> 2016)**

UUC 3.7.2 was deployed on September 6<sup>th</sup> 2016 and the following defect fixes were applied.

- ABB2016144177 – Warning in EP2 sequence messages
- ABB2016144139 – Dispatch Quantity Calculations in IP for VPTG units

## **7. Occasional Components**

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

There were no scheduled Business Continuity tests performed during September 2016.

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

There were no Communications Failures in September 2016

There was one system issue on Monday 5<sup>th</sup> September with MI not responding. This was resolved by IS with no impact to the market or KPIs

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

There was no Denial of Service Attacks during September 2016.

### ***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 2017
2. Credit Cover Parameters Report 2017

## 8. Appendix A: Detail of Trading and Settlement Code Breaches

### Market Participant

Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T and SC Breach
01/09/2016	Money In	Timing	Participant	Payment Default	Electricity Exchange Limited (PT_400116) defaulted on an April 2016 M+4 and a July 2015 M+13 Capacity Invoice.	Participant Error	A default letter was issued to the Participant.	Major
07/09/2016	Money In	Timing	Participant	Payment Default	Electricity Exchange Limited (PT_400116) defaulted on a June 2015 Ad Hoc Capacity Invoice.	Participant Error	A default letter was issued to the Participant.	Major
07/09/2016	Money In	Timing	Participant	Payment Default	Axpo Energy Trading AG (PT_400164) defaulted on a Week 34 2016 Initial Energy Invoice.	Participant Error	A default letter was issued to the Participant.	Major
09/09/2016	Money In	Timing	Participant	Payment Default	Dalkia Alternative Energy DSU (PT_400124) defaulted on an August 2016 Initial FMOC invoice.	Participant Error	A default letter was issued to the Participant.	Major
09/09/2016	Money In	Timing	Participant	Payment Default	Dalkia Alternative Energy TSSU (PT_400125) defaulted on an August 2016 Initial FMOC invoice.	Participant Error	A default letter was issued to the Participant.	Major
09/09/2016	Money In	Timing	Participant	Payment Default	New Measured Power Limited TA Pinergy (PT_400173) defaulted on an August 2016 Initial FMOC invoice.	Participant Error	A default letter was issued to the Participant.	Major
28/09/2016	Money In	Timing	Participant	Payment Default	Arden Energy Limited (PT_400149) defaulted on a Week 37 2016 Initial Energy Invoice.	Participant Error	A default letter was issued to the Participant.	Major

**Table 14 – Trading and Settlement Code Breaches – Market Participants**

### SEMO - Pricing and Scheduling

There were no issues to report in September 2016.

### SEMO – Settlements

Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T and SC Breach
25/09/2016	Indicative Statements and PIRs	Timing	EirGrid MDP	File Submission	EirGrid TSO submitted Combined Loss Adjustment Factors (CLAFs) to the Single Electricity Market Operator (SEMO) outside the timeframe that is specified in the Trading & Settlement Code (T&SC).	SEMO did not receive CLAFs at least two months prior to the start of the Tariff Year, or within five Working Days of its receipt from the Regulatory Authorities.	CLAFs were submitted through to SEMO on 22/09/2016.	Minor
25/09/2016	Indicative Statements and PIRs	Timing	SONI MDP	File Submission	SONI TSO submitted Combined Loss Adjustment Factors (CLAFs) to the Single Electricity Market Operator (SEMO) outside the timeframe that is specified in the Trading & Settlement Code (T&SC).	SEMO did not receive CLAFs at least two months prior to the start of the Tariff Year, or within five Working Days of its receipt from the Regulatory Authorities.	CLAFs were submitted through to SEMO on 21/09/2016	Minor

**Table 15 – Trading and Settlement Code Breaches – Settlements**

### SEMO - Funds Transfer

There were no issues to report in September 2016.

### SEMO - Credit Management

There were no issues to report in September 2016.

### SEMO – Other

There were no issues to report in September 2016.

## Appendix B: List of Queries by Type

Summary Title	Description	ID	Logged On	Date sent to MP	Type
Dispatch Instructions / System Frequency	Unit GU_400850 (AD2). The unit was dispatched to 400MW throughout the period but frequency was low and it free governed accordingly. Unit should not incur high UI's during a frequency event. Time period e.g. 02:30 to 08:30.	PT_400030	2016-09-01	2016-09-09	Settlement
Dispatch Instructions	GU_400251 (LI2). There is a dispatch instruction missing at 19:30 to desync the unit resulting in high UI's.	PT_400030	2016-09-02	2016-09-09	Settlement
Dispatch Instructions	A CRLO Dispatch instruction at 04:40 on 20/06/2016 for unit GU_501150 was missing due to an WDT / EDIL issue in SONI systems. An MWCF to 15MW was submitted on its own for this effective time/date. The next CURL instruction sent to SEMO was at 01:08 on 02/07/2016. I have reentered the DI into EDIL and can resubmit on request. The DIs will need to be resent for calendar day 20/06/2016 and settlement	PT_50050	2016-09-13	2016-09-15	Settlement
IRCU Invoice	Formula used on spreadsheet to create June 2016 Invoice was missing out the first line of data on the spreadsheet – this means that the total did not include 3,454.51 The Spreadsheet is attached to this query for your reference.	IA_ROIEWMC	2016-09-20	2016-09-20	Settlement
Meter Generation	SCADA and Backstop were sent to the SEM on D+1 and D+3 for GU_400630, Knockawarriga Windfarm Phase 1, for the period from 02/06/16 to 10/06/16 inclusive as the meters were not contactable due to a transmission system outage. The delta between the initially published values and the actual metering has been assessed and the data for the following dates exceeds the +/- 1MWh tolerance set out in section 2.1 of Agreed Procedure 16: 02/06/16, 03/06/16, 07/06/16, 08/06/16, 09/06/16, 10/06/16.	TSO_EIRGRID	2016-09-28	2016-09-29	Settlement
Meter Generation	SCADA and Backstop were sent to the SEM on D+1 and D+3 for GU_401820, Spaddan Wind Farm Phase 1, for the period from 11/07/16 to 26/07/16 inclusive as the meters were not contactable due to a transmission system outage. The delta between the initially published values and the actual metering has been assessed and the data for the following date exceeds the +/- 1MWh tolerance set out in section 2.1 of Agreed Procedure 16: 11/07/16	TSO_EIRGRID	2016-09-28	2016-09-30	Settlement

**Table 16 - Formal Queries**



### 9. 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.

There were no Market Application defect found in September 2016.

Issue No.	Description	Effect	Fixed from	Re-Pricing	Resettlement	Status
-	-	-	-	-	-	-

**Table 17 - List of System Errors and Failures**

## 9. Appendix D: Details of Operational Timings

### Market Schedule and Price Runs

Trading Day	EA1 Postings		EA2 Postings		WD1 Postings		EP1P Postings		EP 2 Postings	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
01/09/2016	11:00	10:15	13:00	11:57	09:30	08:29	16:00	14:31	17:00	14:31
02/09/2016	11:00	09:56	13:00	11:47	09:30	08:42	16:00	14:36	17:00	14:17
03/09/2016	11:00	09:55	13:00	12:05	09:30	08:32	16:00	14:12	17:00	14:32
04/09/2016	11:00	09:49	13:00	11:47	09:30	08:31	16:00	14:35	17:00	14:58
05/09/2016	11:00	10:04	13:00	11:58	09:30	08:30	16:00	14:21	17:00	14:36
06/09/2016	11:00	10:24	13:00	11:51	09:30	08:20	16:00	14:36	17:00	14:19
07/09/2016	11:00	09:50	13:00	11:51	09:30	08:20	16:00	14:46	17:00	14:19
08/09/2016	11:00	09:57	13:00	11:58	09:30	08:36	16:00	14:40	17:00	14:27
09/09/2016	11:00	10:01	13:00	11:56	09:30	08:12	16:00	14:12	17:00	14:38
10/09/2016	11:00	10:02	13:00	12:09	09:30	08:30	16:00	14:22	17:00	14:41
11/09/2016	11:00	10:01	13:00	12:13	09:30	09:05	16:00	14:32	17:00	15:07
12/09/2016	11:00	09:54	13:00	11:39	09:30	09:19	16:00	14:41	17:00	14:33
13/09/2016	11:00	09:59	13:00	12:00	09:30	08:16	16:00	14:35	17:00	14:31
14/09/2016	11:00	10:03	13:00	12:05	09:30	08:32	16:00	14:48	17:00	14:41
15/09/2016	11:00	09:58	13:00	11:53	09:30	08:26	16:00	14:37	17:00	14:45
16/09/2016	11:00	09:57	13:00	12:03	09:30	08:35	16:00	14:34	17:00	14:53
17/09/2016	11:00	09:56	13:00	11:54	09:30	08:33	16:00	14:38	17:00	14:25
18/09/2016	11:00	09:56	13:00	12:01	09:30	08:32	16:00	14:45	17:00	14:29
19/09/2016	11:00	10:00	13:00	12:02	09:30	08:34	16:00	14:41	17:00	14:37
20/09/2016	11:00	10:10	13:00	12:00	09:30	08:41	16:00	14:30	17:00	14:29
21/09/2016	11:00	10:00	13:00	11:52	09:30	08:21	16:00	14:34	17:00	14:24
22/09/2016	11:00	10:03	13:00	12:02	09:30	08:29	16:00	14:49	17:00	15:08
23/09/2016	11:00	09:56	13:00	11:56	09:30	08:36	16:00	14:31	17:00	14:35
24/09/2016	11:00	10:48	13:00	11:58	09:30	08:42	16:00	14:28	17:00	14:19
25/09/2016	11:00	09:57	13:00	12:01	09:30	08:26	16:00	15:12	17:00	14:40
26/09/2016	11:00	09:54	13:00	11:53	09:30	08:35	16:00	14:37	17:00	14:28
27/09/2016	11:00	09:52	13:00	12:01	09:30	08:27	16:00	14:24	17:00	14:29
28/09/2016	11:00	09:47	13:00	12:00	09:30	08:19	16:00	14:33	17:00	14:20
29/09/2016	11:00	09:51	13:00	11:49	09:30	08:47	16:00	14:37	17:00	14:43
30/09/2016	11:00	10:00	13:00	12:05	09:30	08:26	16:00	14:33	17:00	14:36

Table 18 – MSP Runs

## Market Operator Monthly Report

### Settlement Runs

Indicative				Initial			
Trading Day	Actual Date	Target Time	Actual Time	Trading Day	Actual Date	Target Time	Actual Time
01/09/2016	05/09/2016	17:00	15:59	01/09/2016	08/09/2016	12:00	07:25
02/09/2016	05/09/2016	17:00	11:17	02/09/2016	09/09/2016	12:00	11:22
03/09/2016	05/09/2016	17:00	12:28	03/09/2016	09/09/2016	12:00	11:56
04/09/2016	06/09/2016	17:00	15:29	04/09/2016	09/09/2016	12:00	08:55
05/09/2016	07/09/2016	17:00	15:51	05/09/2016	12/09/2016	12:00	08:49
06/09/2016	08/09/2016	17:00	15:22	06/09/2016	13/09/2016	12:00	08:44
07/09/2016	09/09/2016	17:00	16:24	07/09/2016	14/09/2016	12:00	08:08
08/09/2016	12/09/2016	17:00	15:55	08/09/2016	15/09/2016	12:00	08:29
09/09/2016	12/09/2016	17:00	11:04	09/09/2016	16/09/2016	12:00	11:36
10/09/2016	12/09/2016	17:00	11:35	10/09/2016	16/09/2016	12:00	11:50
11/09/2016	13/09/2016	17:00	15:13	11/09/2016	16/09/2016	12:00	07:42
12/09/2016	14/09/2016	17:00	15:29	12/09/2016	19/09/2016	12:00	09:12
13/09/2016	15/09/2016	17:00	15:45	13/09/2016	20/09/2016	12:00	08:46
14/09/2016	16/09/2016	17:00	15:45	14/09/2016	21/09/2016	12:00	08:36
15/09/2016	19/09/2016	17:00	15:35	15/09/2016	22/09/2016	12:00	08:18
16/09/2016	19/09/2016	17:00	13:44	16/09/2016	23/09/2016	12:00	11:06
17/09/2016	19/09/2016	17:00	13:45	17/09/2016	23/09/2016	12:00	11:22
18/09/2016	20/09/2016	17:00	16:06	18/09/2016	23/09/2016	12:00	07:50
19/09/2016	21/09/2016	17:00	15:57	19/09/2016	26/09/2016	12:00	08:53
20/09/2016	22/09/2016	17:00	15:26	20/09/2016	27/09/2016	12:00	08:08
21/09/2016	23/09/2016	17:00	15:38	21/09/2016	28/09/2016	12:00	08:35
22/09/2016	26/09/2016	17:00	15:58	22/09/2016	29/09/2016	12:00	08:46
23/09/2016	26/09/2016	17:00	10:59	23/09/2016	30/09/2016	12:00	11:48
24/09/2016	26/09/2016	17:00	11:29	24/09/2016	30/09/2016	12:00	12:00
25/09/2016	27/09/2016	17:00	16:01	25/09/2016	30/09/2016	12:00	08:32
26/09/2016	28/09/2016	17:00	16:40	26/09/2016	03/10/2016	12:00	10:18
27/09/2016	29/09/2016	17:00	15:22	27/09/2016	04/10/2016	12:00	07:40
28/09/2016	30/09/2016	17:00	16:13	28/09/2016	05/10/2016	12:00	08:37
29/09/2016	03/10/2016	17:00	15:44	29/09/2016	06/10/2016	12:00	07:52
30/09/2016	03/10/2016	17:00	11:48	30/09/2016	07/10/2016	12:00	11:14

Table 19 – Settlement Runs

## 10. 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
01/10/2015	€184,048.17	-€2,821.59	-€417,294.17
02/10/2015	€236,003.67	-€8,758.78	-€418,385.31
03/10/2015	€447,568.14	-€8,429.85	-€381,381.79
04/10/2015	€355,210.41	-€24,773.87	-€349,405.45
05/10/2015	€403,998.22	-€16,845.94	-€406,685.67
06/10/2015	€408,090.09	-€11,370.17	-€409,451.55
07/10/2015	€396,852.65	-€1,016.51	-€416,499.23
08/10/2015	€833,027.77	-€21,031.97	-€419,217.67
09/10/2015	€571,135.00	-€23,911.84	-€409,985.99
10/10/2015	€426,624.39	-€275.88	-€376,563.72
11/10/2015	€590,507.33	-€216.51	-€366,642.39
12/10/2015	€615,907.40	-€2,922.19	-€408,081.59
13/10/2015	€488,323.11	-€17,640.65	-€428,288.19
14/10/2015	€323,841.39	-€15,630.17	-€430,023.84
15/10/2015	€570,171.09	-€34,678.33	-€435,691.74
16/10/2015	€504,000.21	€18,400.98	-€429,027.80
17/10/2015	€539,706.96	-€10,829.35	-€390,086.25
18/10/2015	€266,275.31	-€19,394.40	-€378,763.32
19/10/2015	€691,729.65	-€1,637.61	-€431,384.59
20/10/2015	€416,398.00	-€16,742.61	-€431,705.80
21/10/2015	€432,672.89	€2,922.97	-€414,059.84
22/10/2015	€641,039.51	-€16,128.91	-€417,064.06
23/10/2015	€459,729.27	-€2,884.82	-€406,407.83
24/10/2015	€402,573.36	-€210.62	-€371,022.63
25/10/2015	€555,628.53	-€9,138.35	-€360,591.55
26/10/2015	€564,608.59	-€10,138.06	-€363,999.10
27/10/2015	€330,626.10	-€5,378.00	-€424,726.29
28/10/2015	€336,368.51	€2,317.42	-€421,130.98
29/10/2015	€695,460.11	-€15,712.74	-€418,305.21
30/10/2015	€614,928.96	-€7,082.05	-€407,138.37
31/10/2015	€291,199.69	-€8,191.01	-€379,817.58
01/11/2015	€219,117.61	-€16,496.48	-€370,314.93
02/11/2015	€418,967.95	-€965.50	-€422,957.41
03/11/2015	€375,447.29	-€8,157.08	-€443,867.51
04/11/2015	€401,223.42	-€20,165.19	-€446,024.38
05/11/2015	€326,445.86	-€1,493.30	-€443,483.97
06/11/2015	€461,976.61	-€30,206.25	-€413,708.71
07/11/2015	€776,346.02	-€22,596.69	-€388,100.95
08/11/2015	€351,184.98	-€7,740.85	-€356,069.06
09/11/2015	€637,710.42	-€15,306.58	-€410,651.49

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10/11/2015	€346,932.55	€18,683.61	-€423,279.30
11/11/2015	€413,412.33	-€1,064.81	-€424,401.75
12/11/2015	€529,981.98	-€242.98	-€418,872.75
13/11/2015	€569,259.07	-€8,771.45	-€422,080.80
14/11/2015	€774,203.83	€7,975.32	-€400,612.57
15/11/2015	€652,155.86	-€1,432.95	-€362,387.34
16/11/2015	€393,453.63	-€59.62	-€426,655.42
17/11/2015	€722,783.23	-€4,356.33	-€445,955.61
18/11/2015	€656,773.28	-€14,208.65	-€430,119.19
19/11/2015	€574,200.46	€5,810.96	-€443,090.07
20/11/2015	€502,887.86	-€13,637.60	-€434,712.02
21/11/2015	€329,836.85	-€38,020.15	-€414,867.81
22/11/2015	€409,044.29	-€33,132.32	-€401,644.24
23/11/2015	€544,326.53	-€41,817.18	-€458,997.21
24/11/2015	€672,152.53	-€33,178.27	-€447,378.21
25/11/2015	€499,335.30	-€28,725.98	-€443,985.11
26/11/2015	€513,763.56	-€25,251.46	-€450,711.04
27/11/2015	€517,347.42	€5,245.16	-€433,116.49
28/11/2015	€528,876.77	-€26,426.01	-€399,484.36
29/11/2015	€778,321.27	-€1,046.20	-€383,956.46
30/11/2015	€479,044.79	-€9,894.47	-€463,918.12
01/12/2015	€688,673.73	-€26,887.62	-€438,251.29
02/12/2015	€317,798.49	-€52,895.68	-€456,989.27
03/12/2015	€405,603.50	-€5,897.64	-€476,134.19
04/12/2015	€774,967.27	-€15,545.28	-€438,397.60
05/12/2015	€640,701.45	-€13,804.14	-€404,055.15
06/12/2015	€366,403.91	-€12,707.39	-€396,607.78
07/12/2015	€733,517.52	-€25,280.71	-€433,440.19
08/12/2015	€432,398.54	-€17,081.48	-€445,634.75
09/12/2015	€542,863.04	-€14,765.85	-€444,156.73
10/12/2015	€335,601.49	-€40,789.27	-€457,423.12
11/12/2015	€426,928.12	-€51,155.51	-€457,168.99
12/12/2015	€558,417.52	-€21,084.89	-€437,241.40
13/12/2015	€546,224.69	-€43,154.55	-€414,260.41
14/12/2015	€686,747.66	-€34,497.65	-€460,059.67
15/12/2015	€625,379.03	-€6,605.71	-€453,446.82
16/12/2015	€674,889.78	-€18,367.78	-€449,690.27
17/12/2015	€534,573.55	-€35,533.70	-€433,385.22
18/12/2015	€561,845.35	-€6,582.15	-€425,519.13
19/12/2015	€423,888.14	-€5,214.50	-€388,770.80
20/12/2015	€458,505.06	-€21,975.88	-€375,498.89
21/12/2015	€605,543.76	€16,466.74	-€428,588.77
22/12/2015	€548,907.53	-€12,058.23	-€427,504.11
23/12/2015	€472,007.50	-€19,683.94	-€413,722.07
24/12/2015	€507,025.65	-€5,808.78	-€397,502.21
25/12/2015	€466,531.15	-€19,958.55	-€378,631.22
26/12/2015	€672,569.18	-€36,627.88	-€371,370.00
27/12/2015	€577,471.28	-€14,743.88	-€363,828.00
28/12/2015	€541,909.71	-€15,443.22	-€370,868.50
29/12/2015	€562,888.56	-€24,503.42	-€390,443.22
30/12/2015	€549,349.10	-€30,384.77	-€406,360.94
31/12/2015	€531,182.78	-€18,802.40	-€401,563.71
01/01/2016	€689,760.94	-€850.06	-€365,263.12
02/01/2016	€492,831.57	-€16,808.75	-€390,938.01

## Market Operator Monthly Report

03/01/2016	€669,891.66	-€16,141.80	-€375,443.72
04/01/2016	€573,233.57	-€34,326.56	-€450,226.02
05/01/2016	€435,278.99	-€25,445.82	-€460,068.79
06/01/2016	€585,769.51	-€22,376.47	-€460,608.31
07/01/2016	€564,412.70	-€26,102.04	-€457,172.75
08/01/2016	€641,220.35	-€42,045.33	-€471,327.45
09/01/2016	€465,563.07	-€46,512.09	-€432,525.47
10/01/2016	€374,477.07	-€17,958.10	-€398,740.15
11/01/2016	€730,610.46	-€22,706.28	-€462,407.83
12/01/2016	€893,675.22	-€25,526.60	-€461,905.69
13/01/2016	€609,072.41	-€16,239.00	-€490,044.13
14/01/2016	€614,891.06	-€3,271.45	-€481,120.21
15/01/2016	€806,386.69	-€13,038.69	-€478,851.54
16/01/2016	€589,940.36	-€24,198.25	-€449,493.17
17/01/2016	€656,975.06	-€19,835.70	-€405,187.70
18/01/2016	€591,258.57	-€22,988.96	-€471,911.07
19/01/2016	€587,424.24	-€18,363.37	-€485,999.85
20/01/2016	€1,130,986.02	-€21,465.95	-€462,957.59
21/01/2016	€353,313.73	-€13,537.96	-€450,018.68
22/01/2016	€611,509.08	-€17,971.52	-€426,380.74
23/01/2016	€460,904.51	-€2,280.58	-€398,950.24
24/01/2016	€550,240.84	-€14,040.81	-€368,837.06
25/01/2016	€548,029.04	-€20,439.75	-€421,148.52
26/01/2016	€568,891.68	-€11,807.40	-€438,987.16
27/01/2016	€471,646.80	-€12,605.30	-€447,546.40
28/01/2016	€450,308.88	-€17,111.09	-€442,561.56
29/01/2016	€549,778.85	-€4,890.00	-€428,252.99
30/01/2016	€410,857.34	-€10,070.58	-€406,925.84
31/01/2016	€585,912.71	-€17,459.55	-€386,206.91
01/02/2016	€597,150.16	-€12,412.60	-€426,860.33
02/02/2016	€380,507.04	-€19,759.58	-€446,374.43
03/02/2016	€671,315.54	-€1,166.20	-€456,336.81
04/02/2016	€535,464.92	-€655.11	-€446,131.01
05/02/2016	€532,123.12	-€5,234.49	-€445,145.43
06/02/2016	€611,816.37	€3,469.28	-€397,155.42
07/02/2016	€572,044.92	-€15,082.20	-€383,519.56
08/02/2016	€346,687.44	-€10,745.66	-€444,677.22
09/02/2016	€692,018.61	€8,717.03	-€466,634.24
10/02/2016	€365,519.47	-€19,256.45	-€479,732.00
11/02/2016	€440,884.72	-€14,699.34	-€484,418.79
12/02/2016	€461,892.87	-€7,890.12	-€471,801.73
13/02/2016	€421,162.35	-€1,749.04	-€416,553.79
14/02/2016	€384,321.37	-€10,278.02	-€396,826.45
15/02/2016	€510,101.40	-€19,364.23	-€467,693.28
16/02/2016	€315,785.88	€2,093.47	-€457,602.33
17/02/2016	€626,657.48	-€23,789.13	-€480,813.42
18/02/2016	€560,025.64	-€12,342.48	-€475,118.65
19/02/2016	€504,377.27	-€10,985.27	-€446,158.68
20/02/2016	€554,774.66	-€4,450.23	-€397,610.37
21/02/2016	€633,946.93	-€5,175.90	-€383,845.09
22/02/2016	€241,660.16	-€8,119.39	-€455,503.59
23/02/2016	€448,946.36	-€15,627.46	-€471,687.19
24/02/2016	€555,735.22	-€27,144.18	-€480,968.29
25/02/2016	€314,829.66	-€28,796.52	-€485,404.36

## Market Operator Monthly Report

26/02/2016	€398,677.03	-€17,958.54	-€466,615.98
27/02/2016	€421,234.85	-€4,172.24	-€429,974.96
28/02/2016	€745,089.34	-€19,065.57	-€408,933.48
29/02/2016	€553,599.98	-€16,799.69	-€450,927.54
01/03/2016	€465,209.57	-€12,894.41	-€439,436.86
02/03/2016	€341,005.28	€541.45	-€448,860.52
03/03/2016	€361,296.67	-€15,248.88	-€465,450.15
04/03/2016	€411,689.77	€2,635.53	-€450,744.99
05/03/2016	€504,505.73	€10,268.92	-€411,349.56
06/03/2016	€641,724.36	-€24,579.57	-€412,739.09
07/03/2016	€403,341.26	-€10,007.64	-€461,004.43
08/03/2016	€589,645.13	-€13,978.70	-€465,389.27
09/03/2016	€478,538.59	-€293.85	-€446,891.78
10/03/2016	€388,856.94	-€7,146.47	-€465,087.27
11/03/2016	€363,139.51	-€9,999.06	-€441,184.02
12/03/2016	€287,695.75	-€12,213.87	-€395,809.38
13/03/2016	€466,962.47	€1,463.46	-€384,948.98
14/03/2016	€602,953.47	€8,906.38	-€424,191.54
15/03/2016	€313,185.11	-€6,753.87	-€437,129.27
16/03/2016	€418,796.29	-€4,701.62	-€446,050.65
17/03/2016	€520,302.53	€7,998.09	-€395,444.27
18/03/2016	€488,526.91	-€14,066.07	-€435,207.31
19/03/2016	€651,409.40	€6,794.28	-€406,828.63
20/03/2016	€351,398.79	-€7,362.25	-€386,959.22
21/03/2016	€446,639.37	-€1,914.21	-€453,380.77
22/03/2016	€321,933.32	€931.08	-€461,357.85
23/03/2016	€401,613.29	-€15,495.07	-€447,516.93
24/03/2016	€358,356.98	-€17,265.89	-€432,664.12
25/03/2016	€429,281.20	€17,848.84	-€399,082.47
26/03/2016	€626,651.71	€9,317.35	-€375,996.87
27/03/2016	€422,089.59	€26,639.00	-€337,269.15
28/03/2016	€605,126.59	-€22,540.76	-€367,547.69
29/03/2016	€584,436.80	-€8,770.30	-€415,656.12
30/03/2016	€317,248.55	-€16,355.46	-€434,642.74
31/03/2016	€352,454.55	-€924.03	-€429,872.19
01/04/2016	€254,665.77	€19,410.52	-€418,172.85
02/04/2016	€273,567.32	-€1,407.33	-€404,833.08
03/04/2016	€160,794.82	-€2,047.92	-€385,435.83
04/04/2016	€416,599.77	-€9,183.59	-€439,040.73
05/04/2016	€250,111.93	-€5,506.80	-€433,512.72
06/04/2016	€336,670.55	€8,880.44	-€416,429.62
07/04/2016	€113,656.31	-€3,252.93	-€421,102.48
08/04/2016	€216,288.56	€3,619.93	-€434,709.43
09/04/2016	€120,423.37	€23,055.64	-€406,334.92
10/04/2016	€451,165.73	-€4,904.32	-€365,342.88
11/04/2016	€27,294.04	€5,442.30	-€433,170.38
12/04/2016	€381,420.09	-€13,852.41	-€448,891.24
13/04/2016	€285,398.63	-€11,332.70	-€445,360.38
14/04/2016	€355,975.07	-€54,196.75	-€437,602.19
15/04/2016	€386,518.01	€8,502.73	-€420,352.20
16/04/2016	€61,034.21	-€17,147.75	-€388,830.50
17/04/2016	€302,335.18	-€10,404.64	-€377,211.48
18/04/2016	€280,732.73	€1,419.88	-€421,534.12
19/04/2016	€270,332.02	€3,286.06	-€436,536.55

## Market Operator Monthly Report

20/04/2016	€379,578.06	€1,507.75	-€419,156.47
21/04/2016	€537,074.46	€363.23	-€412,975.33
22/04/2016	€361,054.67	-€4,791.35	-€408,510.66
23/04/2016	€413,344.04	-€5,088.23	-€371,723.42
24/04/2016	€402,453.12	-€3,480.08	-€361,118.12
25/04/2016	€610,006.03	-€10,075.78	-€395,294.97
26/04/2016	€188,667.49	€6,807.41	-€407,028.35
27/04/2016	€543,611.51	€20,939.30	-€427,790.26
28/04/2016	€444,164.57	€2,513.65	-€425,418.50
29/04/2016	€467,497.39	-€643.14	-€415,553.12
30/04/2016	€367,553.26	€345.39	-€382,757.45
01/05/2016	€318,711.36	€46.79	-€348,183.04
02/05/2016	€265,639.36	€2,900.27	-€337,474.54
03/05/2016	€307,546.49	-€1,227.25	-€402,880.19
04/05/2016	€275,948.48	€5,228.96	-€398,811.00
05/05/2016	€224,908.34	€1,823.53	-€409,437.33
06/05/2016	€196,488.60	-€3,953.30	-€405,348.39
07/05/2016	€215,106.42	€13,786.76	-€372,905.56
08/05/2016	€338,654.44	-€5,241.44	-€343,553.41
09/05/2016	€376,377.42	€103.57	-€388,079.13
10/05/2016	€232,089.24	€1,162.31	-€410,277.96
11/05/2016	€94,819.65	-€9,693.39	-€407,183.40
12/05/2016	€207,182.84	-€5,530.62	-€399,631.40
13/05/2016	€268,281.83	€1,281.93	-€397,583.66
14/05/2016	€172,657.73	€2,100.06	-€358,479.25
15/05/2016	€270,385.84	€612.81	-€346,488.38
16/05/2016	€74,167.82	€5,878.68	-€400,481.38
17/05/2016	€206,529.16	€9,917.38	-€403,878.41
18/05/2016	€261,963.29	-€5,773.72	-€402,077.89
19/05/2016	€213,366.04	€6,115.62	-€393,020.28
20/05/2016	€406,247.83	-€5,794.20	-€390,136.77
21/05/2016	€415,353.52	-€1,181.85	-€357,519.37
22/05/2016	€416,802.08	€8,358.08	-€344,927.61
23/05/2016	€184,660.48	-€991.20	-€398,423.86
24/05/2016	€242,141.63	-€6,731.50	-€397,480.27
25/05/2016	€88,752.89	-€2,675.89	-€401,265.47
26/05/2016	€100,636.02	€12,891.89	-€418,400.89
27/05/2016	€296,388.97	-€15,542.96	-€405,625.74
28/05/2016	€173,729.31	€8,352.72	-€365,500.02
29/05/2016	€172,856.92	-€6,512.65	-€343,084.06
30/05/2016	€199,477.51	-€8,374.61	-€386,891.37
31/05/2016	€323,036.70	-€6,178.45	-€391,492.34
01/06/2016	€4,689.24	€21,790.77	-€395,637.98
02/06/2016	€170,104.82	-€5,399.31	-€392,535.51
03/06/2016	€203,007.45	€367.05	-€389,642.80
04/06/2016	€240,011.38	-€17,200.48	-€354,718.32
05/06/2016	€653,304.41	€2,066.37	-€333,219.66
06/06/2016	€425,126.49	€309.62	-€355,867.53
07/06/2016	€238,463.12	-€40,280.37	-€404,272.33
08/06/2016	€185,076.23	-€901.65	-€408,563.94
09/06/2016	€425,615.76	-€13,803.37	-€404,962.01
10/06/2016	€148,642.27	-€4,413.70	-€404,552.11
11/06/2016	€329,156.32	-€7,913.95	-€363,225.22
12/06/2016	€379,065.18	-€14,349.51	-€343,260.70



## Market Operator Monthly Report

13/06/2016	€357,133.86	-€8,460.70	-€390,988.55
14/06/2016	€309,349.55	€2,481.91	-€396,200.68
15/06/2016	€214,221.50	-€7,224.12	-€390,391.93
16/06/2016	€295,339.25	-€871.57	-€384,521.87
17/06/2016	€241,160.11	-€1,546.15	-€373,856.93
18/06/2016	€117,814.56	€14,733.17	-€355,069.54
19/06/2016	€313,865.27	€2,866.81	-€331,565.47
20/06/2016	€291,348.26	€17,197.78	-€382,656.28
21/06/2016	€169,732.87	-€10,338.96	-€384,559.73
22/06/2016	€307,400.61	-€1,798.92	-€391,664.95
23/06/2016	€337,079.60	-€16,077.12	-€393,012.28
24/06/2016	€207,996.90	-€5,839.77	-€387,550.79
25/06/2016	€135,149.18	-€2,997.88	-€350,475.20
26/06/2016	€176,935.50	-€14,385.45	-€336,272.59
27/06/2016	€185,811.69	-€4,131.91	-€375,028.62
28/06/2016	€279,569.02	-€20,336.99	-€392,693.12
29/06/2016	€244,715.70	-€8,202.56	-€391,472.97
30/06/2016	€236,573.72	€707.67	-€390,718.11
01/07/2016	€263,258.14	-€5,365.54	-€373,468.31
02/07/2016	€340,595.24	€8,692.11	-€335,966.68
03/07/2016	€167,228.70	-€7,783.05	-€334,171.13
04/07/2016	€375,130.93	€11,589.89	-€385,944.30
05/07/2016	€92,747.57	€1,163.57	-€395,620.05
06/07/2016	€147,984.21	-€7,034.34	-€393,269.82
07/07/2016	€208,150.96	-€9,043.00	-€393,924.73
08/07/2016	€182,031.00	€13,276.10	-€379,568.72
09/07/2016	€379,953.41	€6,389.29	-€338,738.21
10/07/2016	€267,955.27	€227.24	-€322,179.36
11/07/2016	€141,886.59	€9,321.03	-€367,480.28
12/07/2016	€175,437.17	-€4,765.49	-€374,422.76
13/07/2016	€202,877.29	-€2,241.22	-€372,836.44
14/07/2016	€264,274.44	-€31,708.60	-€387,219.85
15/07/2016	€307,503.36	-€4,836.76	-€377,360.15
16/07/2016	€364,565.90	-€4,161.24	-€344,322.05
17/07/2016	€368,399.47	€5,116.09	-€330,568.36
18/07/2016	€355,505.26	-€7,068.38	-€395,231.09
19/07/2016	€411,112.41	-€5,131.01	-€402,752.76
20/07/2016	€300,071.19	-€2,619.84	-€400,350.02
21/07/2016	€257,030.71	-€9,300.19	-€393,946.54
22/07/2016	€254,718.41	-€9,619.42	-€392,681.20
23/07/2016	€357,003.52	-€12,401.34	-€355,221.88
24/07/2016	€338,443.20	-€10,498.34	-€333,466.63
25/07/2016	€385,234.24	€31,122.75	-€378,988.53
26/07/2016	€359,576.47	-€38,951.01	-€396,460.31
27/07/2016	€294,689.50	-€7,006.67	-€391,034.59
28/07/2016	€465,150.53	€1,066.59	-€393,061.01
29/07/2016	€328,667.28	-€7,586.59	-€382,316.19
30/07/2016	€301,028.00	-€2,388.87	-€349,806.58
31/07/2016	€331,573.26	€1,303.61	-€332,304.13
01/08/2016	€399,223.89	€16,483.76	-€347,367.21
02/08/2016	€624,360.98	-€21,253.96	-€381,282.40
03/08/2016	€263,317.40	-€4,625.88	-€366,522.98
04/08/2016	€192,287.43	€17,739.00	-€384,638.04
05/08/2016	€372,889.91	-€3,010.51	-€388,414.94

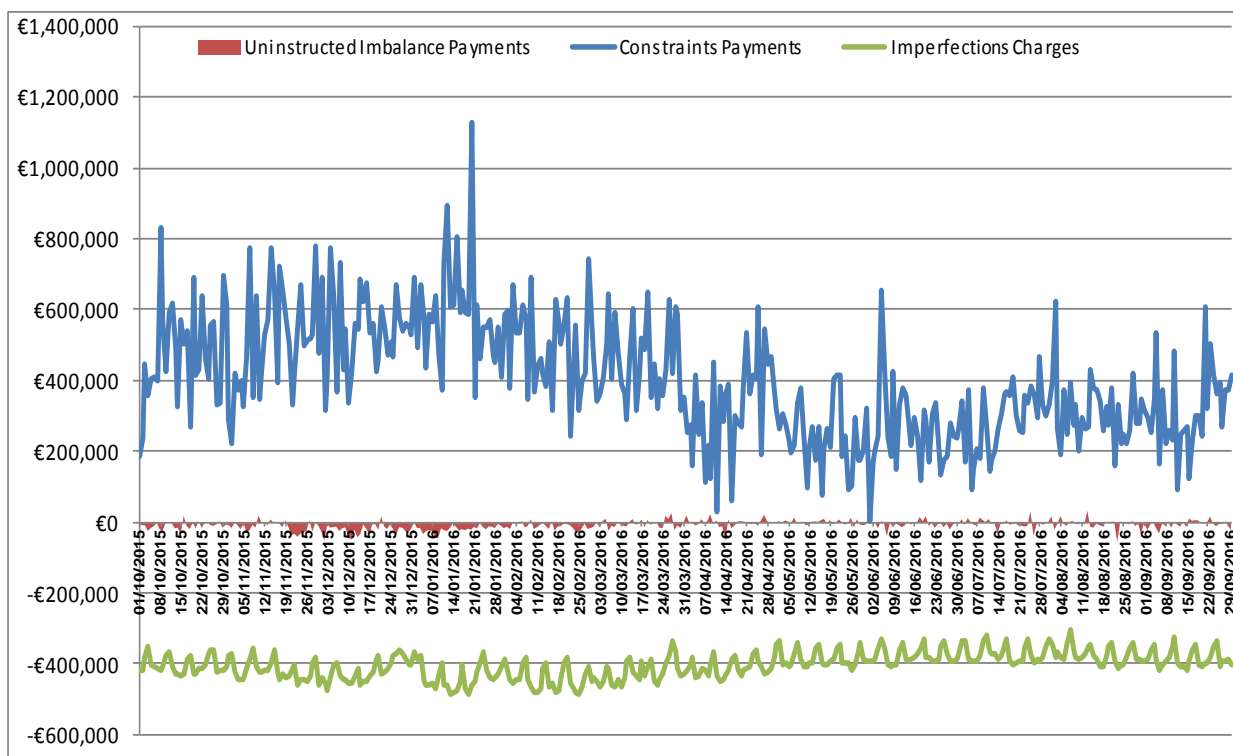
## Market Operator Monthly Report

06/08/2016	€246,123.42	-€10,662.09	-€342,649.64
07/08/2016	€391,567.29	€641.79	-€306,872.47
08/08/2016	€273,069.63	€3,407.73	-€363,284.20
09/08/2016	€330,370.89	-€3,197.14	-€381,487.63
10/08/2016	€200,168.91	-€6,308.95	-€389,680.64
11/08/2016	€292,688.05	€407.89	-€384,301.81
12/08/2016	€260,829.53	-€7,344.98	-€371,309.90
13/08/2016	€268,974.76	€32,773.27	-€352,806.11
14/08/2016	€431,542.64	-€13,323.61	-€349,024.05
15/08/2016	€378,628.14	-€15,530.77	-€380,419.59
16/08/2016	€372,006.79	-€4,470.19	-€388,154.52
17/08/2016	€340,339.32	-€8,000.69	-€410,218.27
18/08/2016	€257,096.17	-€11,876.52	-€409,825.51
19/08/2016	€326,748.71	€1,035.96	-€377,986.51
20/08/2016	€272,438.94	€34.05	-€349,892.92
21/08/2016	€379,308.45	€1,220.19	-€339,768.93
22/08/2016	€159,044.33	€1,578.27	-€393,387.08
23/08/2016	€333,525.54	-€57,181.11	-€415,831.20
24/08/2016	€220,320.68	€1,137.80	-€405,709.92
25/08/2016	€246,249.39	-€2,976.10	-€404,052.59
26/08/2016	€223,636.33	-€2,555.42	-€384,663.02
27/08/2016	€259,333.99	-€6,394.97	-€358,311.14
28/08/2016	€419,327.21	€3,809.93	-€341,441.34
29/08/2016	€277,848.83	-€10,980.65	-€389,632.95
30/08/2016	€279,448.64	-€4,703.15	-€389,797.08
31/08/2016	€348,860.02	-€35,514.19	-€394,911.57
01/09/2016	€317,024.35	€2,053.27	-€393,216.19
02/09/2016	€293,758.35	-€22,896.02	-€387,565.15
03/09/2016	€251,480.16	-€6,880.08	-€360,628.64
04/09/2016	€345,508.77	€1,433.91	-€348,317.54
05/09/2016	€535,406.85	-€17,457.75	-€390,428.01
06/09/2016	€164,318.72	-€31,943.27	-€418,157.87
07/09/2016	€372,701.03	-€3,562.62	-€406,335.85
08/09/2016	€219,540.20	-€9,712.11	-€393,063.75
09/09/2016	€260,472.42	€1,526.25	-€381,934.40
10/09/2016	€232,308.89	-€15,430.07	-€353,308.17
11/09/2016	€484,951.67	€912.21	-€324,611.49
12/09/2016	€92,203.85	-€6,710.36	-€399,424.72
13/09/2016	€247,679.68	-€12,647.37	-€406,848.76
14/09/2016	€258,946.68	€1,623.23	-€407,802.45
15/09/2016	€267,170.87	-€13,524.41	-€419,520.13
16/09/2016	€124,045.37	€10,946.68	-€391,153.99
17/09/2016	€224,617.05	€3,838.66	-€364,301.99
18/09/2016	€299,818.49	€6,151.21	-€347,679.44
19/09/2016	€302,107.77	€4,884.95	-€405,070.49
20/09/2016	€243,157.95	-€2,354.38	-€407,425.62
21/09/2016	€608,134.58	-€3,411.92	-€400,985.25
22/09/2016	€318,488.03	-€1,050.41	-€398,463.56
23/09/2016	€503,295.94	€16,237.12	-€383,253.41
24/09/2016	€416,862.15	-€3,153.81	-€351,289.37
25/09/2016	€363,801.66	-€11,530.19	-€335,435.91
26/09/2016	€393,544.95	-€5,011.63	-€406,942.37
27/09/2016	€267,472.06	-€5,051.31	-€391,403.24
28/09/2016	€373,992.41	€1,489.20	-€394,801.91

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29/09/2016	€374,972.48	-€8,580.92	-€386,798.06
30/09/2016	€414,677.25	-€23,447.22	-€404,819.20

**Table 20 - Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges**



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

Week No	Make Whole Payments
38	€156,663.13
39	€99,549.05
40	€104,371.05
41	€9,305.58
42	€17,237.57
43	€18,614.74
44	€23,589.25
45	€5,513.20
46	€17,624.74
47	€27,403.03
48	€98,619.60
49	€82,787.86
50	€82,380.81
51	€68,751.08
52	€17,797.93
1	€71,533.60
2	€71,588.15
3	€22,455.89
4	€73,659.85
5	€44,834.21
6	€94,935.70
7	€71,991.91

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8	€89,850.72
9	€187.41
10	€57,226.62
11	€24,353.24
12	€17,519.03
13	€18,413.95
14	€99,351.71
15	€67,571.67
16	€51,800.46
17	€44,459.11
18	€90,358.30
19	€18,448.89
20	€6,824.56
21	€131,010.25
22	€102,162.37
23	€125,869.44
24	€84,547.01
25	€111,163.70
26	€93,228.84
27	€120,087.37
28	€111,064.38
29	€87,089.42
30	€120,954.18
31	€48,552.68
32	€83,561.36
33	€100,430.47
34	€314,113.57
35	€45,208.88
36	€60,068.39
37	€9,584.60
38	€13,717.29

**Table 21 - Make Whole Payments**

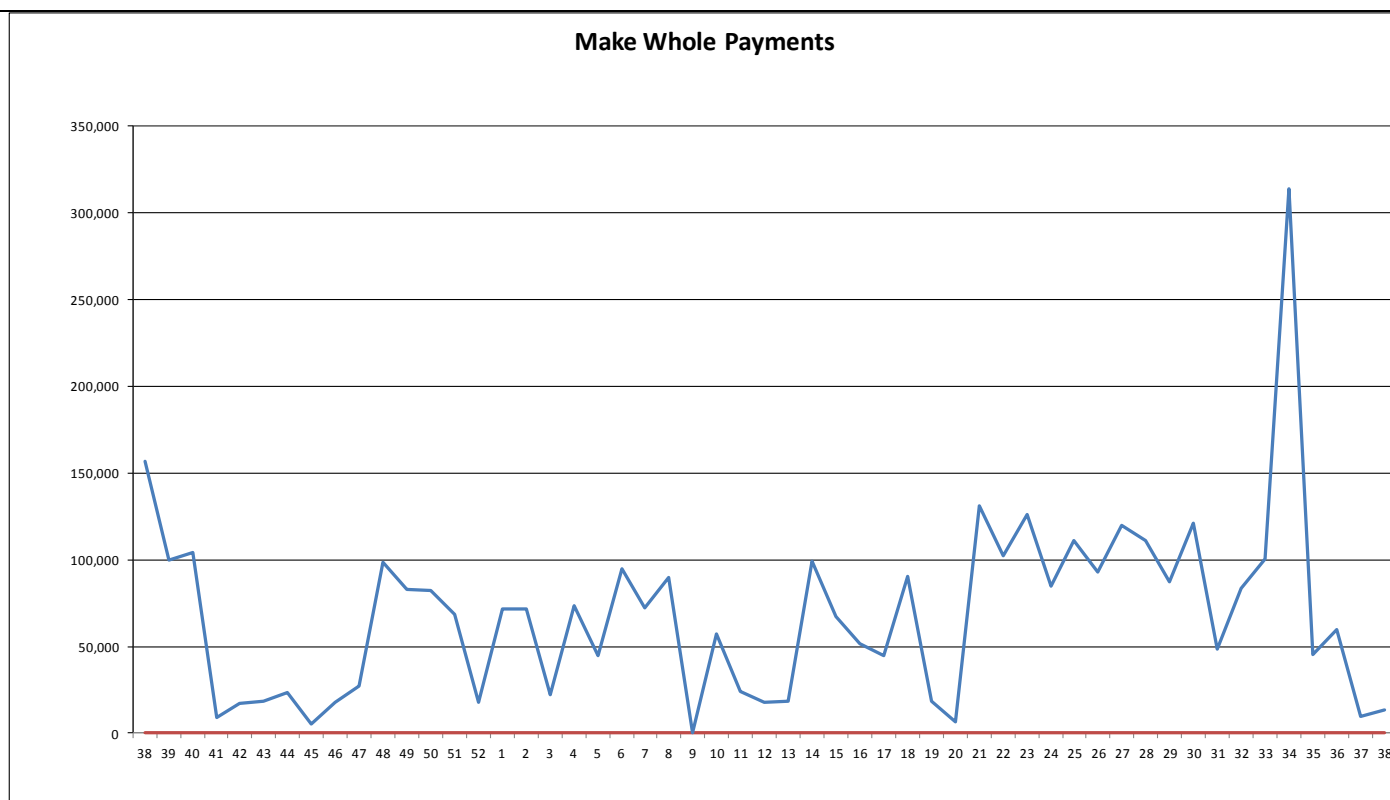


Figure 25 - Make Whole Payments

Week No	Testing Charges
38	-€12,688.71
39	-€1,257.57
40	-€19,812.53
41	-€21,021.55
42	-€10,419.94
43	-€13,069.61
44	-€16,635.14
45	-€16,770.11
46	-€27,151.66
47	€69,699.23
48	€0.00
49	-€13,909.92
50	-€740.68
51	-€353.00
52	-€456.00
1	-€470.00
2	-€582.00
3	€0.00
4	€0.00
5	€0.00
6	€0.00
7	-€4,381.00
8	-€313.00
9	€0.00
10	-€85,485.01
11	-€187,782.43
12	-€5,476.37

13	€0.00
14	-€904.60
15	-€95,270.20
16	€0.00
17	-€16,655.87
18	€0.00
19	€0.00
20	-€843.00
21	€0.00
22	€0.00
23	-€10,166.13
24	€0.00
25	€17,762.06
26	€0.00
27	-€789.58
28	-€134,653.05
29	-€87,783.63
30	-€175,504.34
31	-€2,364.71
32	€0.00
33	-€59,190.05
34	€0.00
35	€0.00
36	-€5,559.69
37	-€65,398.63
38	€0.00

Table 22 - Testing Charges

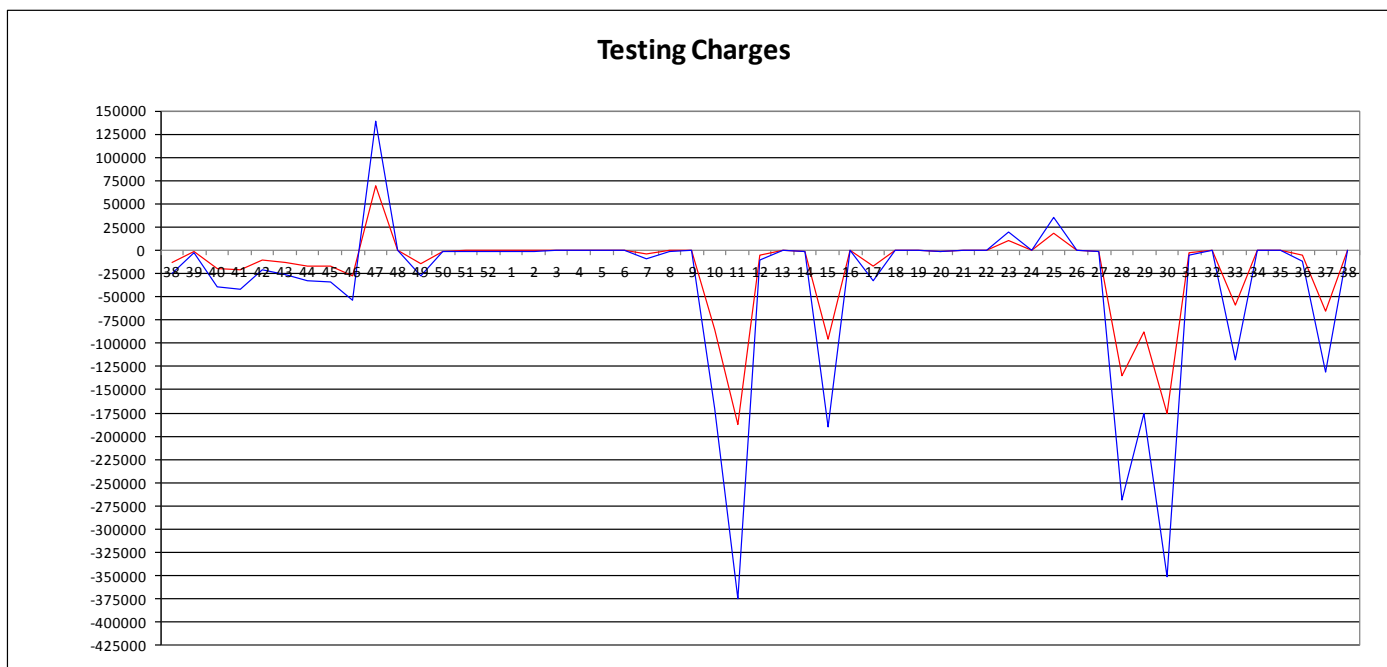


Figure 26 - Testing Charges

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

The table below lists for each unit the number of times in operations during September 2016 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_400021	I_ROIEWIC	25			25
PT_400024	GU_400120	30			30
PT_400024	GU_400121	30			30
PT_400030	GU_400180	39			39
PT_400030	GU_400181	40			40
PT_400030	GU_400182	40			40
PT_400030	GU_400183	40			40
PT_400030	GU_400200	34			34
PT_400030	GU_400201	37			37
PT_400030	GU_400202	40			40
PT_400030	GU_400203	34			34
PT_400030	GU_400210	33			33
PT_400030	GU_400211	33			33
PT_400030	GU_400220	33			33
PT_400030	GU_400221	33			33
PT_400030	GU_400240	33			33
PT_400030	GU_400250	35			35
PT_400030	GU_400251	35			35
PT_400030	GU_400252	33			33
PT_400030	GU_400260	33			33
PT_400030	GU_400270	33			33
PT_400030	GU_400271	37			37
PT_400030	GU_400272	35			35
PT_400030	GU_400280	33			33
PT_400030	GU_400281	33			33
PT_400030	GU_400290	34			34
PT_400030	GU_400300	38			38
PT_400030	GU_400311	39			39
PT_400030	GU_400324	39			39
PT_400030	GU_400325	39			39
PT_400030	GU_400360	33			33
PT_400030	GU_400361	33			33
PT_400030	GU_400362	33			33
PT_400030	GU_400363	33			33
PT_400030	GU_400370	33			33
PT_400030	GU_400850	39			39
PT_400030	I_ROIEWIC	30			30
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_400034	GU_401680	29			29
PT_400035	GU_400480	60			60
PT_400037	GU_400500	31			31
PT_400037	I_ROIEWIC	11			11
PT_400041	GU_400530	53			53

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PT_400044	GU_400540	60		60
PT_400054	GU_400620	29		29
PT_400055	GU_400630	29		29
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_400762	30		30
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	62		62
PT_400077	GU_400950	29		29
PT_400078	GU_401010	30		30
PT_400078	GU_401011	30		30
PT_400087	GU_401230	2		2
PT_400090	DSU_401610	30		30
PT_400090	DSU_401620	30		30
PT_400090	DSU_401270	30		30
PT_400096	I_ROIEWIC	26		26
PT_400099	I_ROIEWIC	12		12
PT_400106	DSU_401330	30		30
PT_400108	I_ROIEWIC	12		12
PT_400115	I_ROIEWIC	30		30
PT_400116	DSU_401400	30		30
PT_400116	DSU_401870	30		30
PT_400124	DSU_401880	29		29
PT_400124	DSU_401490	31		31
PT_400138	DSU_401590	30		30
PT_400157	I_ROIEWIC	7		7
PT_400163	I_ROIEWIC	20		20
PT_400164	I_ROIEWIC	5		5
PT_400168	I_ROIEWIC	16		16
PT_400170	I_ROIEWIC	9		9
PT_400172	GU_401860	30		30
PT_500021	I_NIMOYLE	28		28
PT_500024	GU_500040	30		30
PT_500024	GU_500041	30		30
PT_500024	I_NIMOYLE	18		18
PT_500027	GU_500130	84		84
PT_500027	GU_500131	84		84
PT_500027	GU_500140	84		84
PT_500031	I_NIMOYLE	30		30
PT_500032	GU_501400	23		23
PT_500034	GU_501350	32		32
PT_500037	I_NIMOYLE	24		24
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



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PT_500045	GU_500823	30			30
PT_500045	GU_500824	30			30
PT_500045	GU_500825	30			30
PT_500048	GU_500904	52			52
PT_500050	GU_501040	29			29
PT_500050	GU_501050	29			29
PT_500050	GU_501150	29			29
PT_500050	GU_501190	29			29
PT_500053	GU_501130	31			31
PT_500066	GU_501210	29			29
PT_500069	I_NIMOYLE	38			38
PT_500070	I_NIMOYLE	29			29
PT_500073	GU_501230	1			1
PT_500075	I_NIMOYLE	38			38
PT_500081	I_NIMOYLE	11			11
PT_500083	I_NIMOYLE	39			39
PT_500085	I_NIMOYLE	2			2
PT_500088	I_NIMOYLE	22			22
PT_500092	I_NIMOYLE	13			13
PT_500098	DSU_501450	18			18
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_400032	GU_400430			1	1
PT_400034	GU_400940			1	1
PT_400034	GU_401090			1	1
PT_400034	GU_401440			1	1
PT_400034	GU_401680			1	1
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_401280			30	30
PT_400050	GU_401290			30	30
PT_400050	GU_401360			30	30
PT_400050	GU_401790			30	30
PT_400054	GU_400620			1	1
PT_400055	GU_400630			1	1
PT_400062	GU_400730			30	30

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PT_400062	GU_400731			30	30
PT_400062	GU_400840			30	30
PT_400066	GU_401540			30	30
PT_400066	GU_401820			30	30
PT_400077	GU_400950			1	1
PT_400082	GU_401100			30	30
PT_400087	GU_401230			29	29
PT_400148	GU_401690			30	30
PT_400150	GU_401700			30	30
PT_400151	GU_401770			30	30
PT_400151	GU_401780			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_400162	GU_401830			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			30	30
PT_500032	GU_501290			30	30
PT_500032	GU_501300			30	30
PT_500039	GU_500270			30	30
PT_500044	GU_500720			30	30
PT_500047	GU_500790			30	30
PT_500050	GU_501040			1	1
PT_500050	GU_501050			1	1
PT_500050	GU_501150			1	1
PT_500050	GU_501190			1	1
PT_500061	GU_501170			30	30
PT_500062	GU_501180			30	30
PT_500066	GU_501210			1	1
PT_500073	GU_501230			29	29
PT_500074	GU_501250			30	30
PT_500089	GU_501360			30	30
PT_400144	DSU_401660			30	30
PT_500078	DSU_501330			30	30
PT_400090	DSU_401850			30	30
PT_400090	DSU_401800			30	30
PT_400111	DSU_401390			30	30
PT_500067	DSU_501380			30	30
PT_400133	DSU_401530			30	30
PT_500098	DSU_501450			13	13
PT_400124	DSU_401880			2	2

Table 23 – Commercial Offer Data Used

## **12. 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.

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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
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	£96.16	£0.00	£0.00	£0.00	98,224,709.72
	NI	£62,098,818.70	£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	£21,030.59	£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	28,071,395.57
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	£73,166,489.86	£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	£105,489.15	£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	£1,062,482.91	£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	£2,703.01	£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	£35,349,682.44	£856,456.83	£281,944.15	£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	£53,596,274.88	£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	£191,002.96	£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	£2,668.25	£257,691.56	£37,913.64	£947.65	£105,628.08	£0.00	£0.00	84,170,921.74
	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	£9,041.83	£170.87	£560,424.72	£0.00	£0.00	26,595,740.61
Aug-15	ROI	£78,361,586.44	£18,780,406.68	£980,269.55	£57,624.58	£11,113.70	£78,106.89	£15,466.63	£704.85	£100,608.41	£0.00	£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
Sep-15	ROI	£56,880,935.07	£19,007,006.26	£785,990.22	£310,026.85	£107,852.47	£1,796.61	£36,597.16	£9,587.72	£443.17	£15,420.42	£0.00	£0.00	77,155,655.95
	NI	£16,638,373.40	£5,599,036.84	£750,313.33	£28,072.71	£9,405.58	£194.47	£6,674.12	£1,949.58	£89.21	£1,839.74	£0.00	£0.00	23,035,948.98
Oct-15	ROI	£44,227,777.74	£22,236,309.33	£1,235,987.38	£320,699.87	£111,578.50	£2,310.47	£168,670.97	£16,768.91	£473.10	£0.00	£0.00	£0.00	68,320,576.27
	NI	£16,675,395.96	£6,086,547.11	£1,187,219.91	£53,340.80	£16,688.72	£277.65	£11,014.82	£3,948.74	£76.07	£0.00	£0.00	£0.00	24,034,509.78
Nov-15	ROI	£56,463,736.52	£23,128,442.30	£1,100,826.75	£429,995.20	£99,296.34	£2,542.49	£702,840.25	£20,038.40	£309.43	£293,116.81	£0.00	£380.36	82,241,524.85
	NI	£19,619,287.90	£8,142,113.54	£256,488.48	£118,896.22	£40,962.87	£778.31	£24,801.93	£11,150.14	£150.06	£21,408.98	£0.00	£1.87	28,236,040.30
Dec-15	ROI	£56,771,584.52	£26,115,101.51	£1,227,682.68	£528,056.78	£108,604.95	£3,426.94	£244,831.00	£43,714.70	£499.00	£0.00	£0.00	£0.00	85,043,502.00
	NI	£18,807,275.81	£8,947,272.84	£1,177,606.04	£132,697.73	£37,389.03	£908.11	£23,859.97	£15,486.06	£141.18	£0.00	£0.00	£0.00	29,142,636.77
Jan-16	ROI	£58,962,181.52	£24,712,649.02	£1,489,145.25	£360,735.59	£112,295.73	£2,766.96	£446,172.64	£37,483.70	£461.80	£0.00	£0.00	£0.00	86,123,892.21
	NI	£22,884,292.07	£6,792,946.67	£1,439,182.95	£61,720.87	£33,725.86	£439.13	£13,953.72	£11,288.27	£91.07	£0.00	£0.00	£0.00	31,237,640.61
Feb-16	ROI	£44,227,777.74	£22,236,309.33	£1,235,987.38	£320,699.87	£111,578.50	£2,310.47	£168,670.97	£16,768.91	£473.10	£0.00	£0.00	£0.00	68,320,576.27
	NI	£16,675,395.96	£6,086,547.11	£1,187,219.91	£53,340.80	£16,688.72	£277.65	£11,014.82	£3,948.74	£76.07	£0.00	£0.00	£0.00	24,034,509.78
Mar-16	ROI	£46,479,736.23	£21,810,284.94	£1,247,077.11	£218,253.91	£0.00	£2,241.73	£325,512.38	£0.00	£184.01	£10,658.28	£0.00	£0.00	70,093,948.59
	NI	£18,169,780.86	£5,723,642.36	£307,019.09	£92,518.83	£0.00	£1,042.35	£18,464.14	£0.00	£90.30	£35.07	£0.00	£0.00	24,312,593.00
Apr-16	ROI	£95,184,916.98	£15,501,521.21	£1,127,381.20	£270,121.81	£39,679.82	£3,486.64	£68,851.15	£18,608.43	£470.47	£0.00	£0.00	£0.00	66,271,037.71
	NI	£17,362,464.69	£4,104,501.10	£265,764.31	£105,262.33	£39,607.51	£1,261.76	£60,590.82	£22,415.09	£387.37	£0.00	£0.00	£0.00	21,962,254.98
May-16	ROI	£49,184,916.98	£15,501,521.21	£1,12										

# 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
Feb-14	ROI	€78,679,881.12	€26,819,095.96	€304,687.52	€76,805.50	€2,536.46	€531,739.65	€29,948.21	€10,349.43	€443,421.38	€0.00	€106,897,859.63
	NI	€29,747,186.59	€10,347,544.45	€37,918.21	€4,082.15	€214.26	€179,315.25	€9,737.45	€350.80	€3.55	€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	€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	€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	€1,789.33	€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	€34,942,538.96
May-14	ROI	€68,502,489.93	€22,405,052.21	€652,683.44	€210,307.52	€7,807.32	€249,029.58	€16,425.79	€1,110.17	€9,581.32	€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	€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	€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	€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	€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	€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	€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	€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	€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	€28,134,971.38
Oct-14	ROI	€82,250,495.91	€18,220,219.93	€584,729.32	€104,687.01	€6,507.05	€125,335.38	€9,519.24	€3,313.25	€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	€24,409,513.44
Nov-14	ROI	€64,818,088.97	€20,480,936.98	€530,386.99	€157,754.12	€6,116.91	€67,310.27	€23,606.67	€1,289.81	€0.00	€0.00	€86,096,854.81
	NI	€14,616,605.70	€7,312,194.98	€50,960.79	€18,897.71	€653.20	€37,498.77	€6,592.72	€254.29	€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	€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	€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	€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	€691.42	€0.00	€29,292,871.27
Feb-15	ROI	€73,470,092.53	€25,924,536.86	€296,450.78	€68,641.91	€1,587.00	€108,844.27	€30,840.66	€843.06	€0.00	€0.00	€129,901,837.07
	NI	€19,828,437.97	€15,954,828.70	€108,022.71	€25,545.69	€367.07	€16,957.65	€4,432.19	€141.23	€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	€39.87	€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	€6,635.89	€182.86	€726.16	€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	€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	€19,840,808.32
May-15	ROI	€67,111,651.41	€19,797,771.76	€51,325.57	€496,344.48	€113,479.16	€263,647.87	€257,691.56	€32,517.87	€947.37	€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	€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	€15,091.95	€639.94	€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	€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	€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	€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	€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	€21,801,548.80
Sep-15	ROI	€53,901,821.24	€19,234,943.47	€48,776.08	€306,959.54	€78,980.31	€1,722.88	€36,597.16	€9,593.94	€440.27	€0.00	€73,619,834.89
	NI	€12,814,817.71	€5,453,049.86	€13,099.19	€28,119.15	€30,434.20	€-195.13	€6,674.12	€1,961.83	€89.22	€0.00	€18,348,050.15
Oct-15	ROI	€45,263,558.04	€22,785,032.30	€71,204.73	€469,504.52	€120,827.10	€2,298.60	€168,670.97	€17,161.82	€409.35	€0.00	€68,898,667.43
	NI	€16,138,572.90	€5,672,214.93	€22,437.26	€24,123.83	€9,213.97	€-6275.84	€11,014.82	€3,591.14	€59.13	€0.00	€21,880,952.14
Nov-15	ROI	€59,724,442.55	€24,802,345.08	€433,219.82	€100,606.78	€2,695.40	€76,939.05	€22,197.47	€318.32	€37,920.24	€372.94	€85,201,057.65
	NI	€17,210,572.00	€7,020,973.74	€117,530.15	€40,056.46	€765.32	€30,378.43	€9,648.77	€169.03	€1,973.04	€0.00	€24,432,066.94
Dec-15	ROI	€59,375,497.41	€26,508,955.84	€71,188.34	€529,556.57	€108,617.22	€3,421.21	€244,891.00	€55,957.02	€455.17	€0.00	€86,898,479.78
	NI	€17,357,006.06	€6,696,074.34	€21,111.70	€132,691.76	€37,359.60	€-907.89	€23,859.97	€6,608.19	€129.44	€0.00	€26,273,933.17
Jan-16	ROI	€62,703,601.66	€25,688,393.77	€71,195.77	€374,077.81	€121,834.36	€2,764.99	€446,172.64	€41,361.35	€392.53	€0.00	€89,449,794.88
	NI	€21,387,445.48	€6,172,081.95	€21,233.47	€63,300.69	€26,884.30	€-439.62	€13,953.72	€8,389.76	€72.48	€0.00	€27,692,916.23
Feb-16	ROI	€45,263,558.04	€22,785,032.30	€71,204.73	€469,504.52	€120,827.10	€2,298.60	€168,670.97	€17,161.82	€409.35	€0.00	€68,898,667.43
	NI	€16,138,572.90	€5,672,214.93	€22,437.26	€24,123.83	€9,213.97	€-6275.84	€11,014.82	€3,591.14	€59.13	€0.00	€21,880,952.14
Mar-16	ROI	€45,576,733.11	€21,729,626.52	€256,964.95	€0.00	€2,213.11	€34,217.09	€0.00	€140.55	€104,929.14	€0.00	€69.37
	NI	€17,860,759.81	€5,776,150.05	€92,747.29	€0.00	€556.70	€16,666.86	€0.00	€79.45	€2.26	€20.36	€23,746,982.78
Apr-16	ROI	€42,783,609.22	€14,666,602.66	€270,868.61	€35,779.49	€3,486.64	€70,280.71	€18,875.44	€440.06	€0.00	€0.00	€57,909,942.83
	NI	€17,390,686.96	€4,751,740.09	€105,176.58	€39,633.85	€1,261.80	€59,561.31	€22,324.84	€380.36	€0.00	€0.00	€22,370,765.79
May-16	ROI	€42,783,609.22	€14,666,602.66	€270,868.61	€35,779.49	€3,486.64	€70,280.71	€18,875.44	€440.06	€0.00	€0.00	€57,909,942.83
	NI	€17,390,686.96	€4,751,740.09	€105,176.58	€39,633.85	€1,261.80	€59,561.31	€22,324.84	€380.36	€0.00	€0.00	€22,370,765.79
Jun-16	ROI	€57,725,046.88	€17,191,335.52	€316,785.33	€82,962.59	€4,207.29	€47,913.59	€8,957.12	€354.44	€0.00	€295.52	€75,377,858.28
	NI	€15,918,157.70	€3,784,287.20	€32,790.23	€7,927.66	€416.78	€4,847.59	€1,185.01	€33.38	€2,875.40	€0.00	€19,752,520.95
Jul-16	ROI	€53,840,170.28	€17,104,842.75	€415,112.37	€247,294.27	€5,027.94	€81,626.06	€27,799.39	€410.18	€208,424.28	€0.00	€71,930,707.52
	NI	€20,282,958.20	€4,658,773.71	€111,871.11	€72,753.11	€1,297.25	€52,180.96	€20,969.56	€283.82	€27,450.94	€0.00	€25,228,538.66
Aug-16	ROI	€57,725,046.88	€17,191,335.52	€316,785.33	€82,962.59	€4,207.29	€47,913.59	€8,957.12	€354.44	€0.00	€295.52	€75,377,858.28
	NI	€15,918,157.70	€3,784,287.20	€32,790.23	€7,927.66	€416.78	€4,847.59	€1,185.01	€33.38	€2,875.40	€0.00	€19

### 13. 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
02/10/2015	38	-€1,655,942.38	€ 162,994.80
09/10/2015	39	-€1,135,216.68	€177,381.90
16/10/2015	40	€507,903.08	€106,382.04
23/10/2015	41	€681,099.48	€131,096.53
30/10/2015	42	€405,933.93	-€25,867.40
06/11/2015	43	€559,788.60	€38,427.78
13/11/2015	44	-€49,013.58	€13,013.70
20/11/2015	45	€760,249.70	€98,639.75
27/11/2015	46	€808,399.38	€71,687.58
04/12/2015	47	€466,243.69	-€300,749.94
11/12/2015	48	€897,437.38	-€534,740.45
18/12/2015	49	€141,592.08	-€388,379.01
30/12/2015	50	€878,459.85	-€160,949.17
05/01/2016	51	€838,626.05	-€0
08/01/2016	52	€1,134,591.97	-€0
03/01/2016	1	€615,047.23	-€0
22/01/2016	2	€1,273,552.21	-€0
29/01/2016	3	€1,174,521.30	-€0
05/02/2016	4	€504,528.98	-€0
12/02/2016	5	€856,861.27	-€0
19/02/2016	6	€92,167.26	-€0
26/02/2016	7	€255,104.63	-€0
04/03/2016	8	-€265,963.47	-€0
11/03/2016	9	€256,130.58	-€0
21/03/2016	10	-€13,382.85	-€0
25/03/2016	11	€531,976.18	-€0
01/04/2016	12	-€35,023.74	-€0
08/04/2016	13	-€2,353.02	-€0
15/04/2016	14	-€1,306,455.65	-€0
22/04/2016	15	-€1,078,232.88	-€0
29/04/2016	16	-€316,904.19	-€0
06/05/2016	17	€225,399.35	-€0
13/05/2016	18	-€852,085.24	-€0
20/05/2016	19	-€1,030,542.65	-€0
27/05/2016	20	-€835,814.27	-€0
03/06/2016	21	-€1,224,851.34	-€0
10/06/2016	22	-€1,362,326.06	-€0
17/06/2016	23	-€334,215.24	-€0
24/06/2016	24	-€735,443.16	-€0
01/07/2016	25	-€875,900.06	-€0
08/07/2016	26	-€911,184.06	-€0
15/07/2016	27	-€1,059,451.72	-€0

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Date Of Invoice	Week No	SEM Balancing Costs	VAT Balancing Costs
22/07/2016	28	-€859,485.92	-€0
29/07/2016	29	-€407,934.96	-€0
05/08/2016	30	-€186,586.75	-€0
12/08/2016	31	-€117,429.10	-€0
19/08/2016	32	-€511,694.11	-€0
26/08/2016	33	-€338,852.43	-€0
02/09/2016	34	-€945,476.51	-€0
09/09/2016	35	-€544,556.24	-€0
16/09/2016	36	-€636,434.36	-€0
23/09/2016	37	-€1,029,609.73	-€0
30/09/2016	38	€15,000.54	-€0

**Table 26 – 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 2015	-€340.35	-€ 7,800.91
November 2015	-€386.53	€20,938.81
December 2015	-€421.62	€0
January 2016	-€365.96	€0
February 2016	-€324.58	€0
March 2016	-€349.99	€0
April 2016	-€246.89	€0
May 2016	-€232.99	€0
June 2016	-€251.6	€0
July 2016	-€202.38	€0
August 2016	-€250.61	€0
September 2016	-€263.46	€0

**Table 27 - 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.

## 14. 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 2015</u>	-	-	-	-	<u>04/10/2015</u>
<u>November 2015</u>	<u>16/11/2015</u>	<u>30/11/2015</u>	<u>26/11/2015</u>	-	-
<u>December 2015</u>	-	<u>08/12/2015</u> <u>17/12/2015</u> <u>21/12/2015</u>	<u>08/12/2015</u> <u>10/12/2015</u> <u>11/12/2015</u> <u>14/12/2015</u>	<u>14/12/2015</u> <u>17/12/2015</u>	-
<u>January 2016</u>	-	<u>05/02/2016</u> <u>13/01/2016</u>	<u>07/01/2016</u> <u>08/01/2016</u>	<u>08/02/2016</u> <u>26/01/2016</u>	-
<u>February 2016</u>	-	-	-	-	<u>10/02/2016</u>
<u>March 2016</u>	-	<u>28/03/2016</u>	<u>10/03/2016</u>	<u>10/03/2016</u>	-
<u>April 2016</u>	-	-	-	-	-
<u>May 2016</u>	-	-	-	-	-



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Month	Ex-Ante	Ex-Ante 2	Ex-Post Indicative	Ex-Post Initial	Within Day
<u>June</u>	-	-	-	<u>15/06/2016</u>	-
<u>July</u>	-	-	-	-	-
<u>Aug</u>	-	-	-	<u>16/08/2016</u>	-
<u>Sept</u>	-	<u>10/09/2016</u> <u>11/09/2016</u> <u>14/09/2016</u>	-	<u>04/09/2016</u> <u>11/09/2016</u>	<u>11/09/2016</u> <u>24/09/2016</u>

Table 28 - MIP Algorithms

Operational Date	Trade Date	Run Type	LR Peak SMP	MIP Peak SMP	Published
08/10/2015	04/10/2015	EP2	€1000	€71.89	MIP
15/11/2015	16/11/2015	EA1	€524.42	€207.35	MIP
27/11/2015	26/11/2015	EP1	€1,000	€219.39	MIP
29/11/2015	30/11/2015	EA2	€1,000	€169.45	MIP
07/12/2015	08/12/2015	EA2	€1,000	€279.06	MIP
09/12/2015	08/12/2015	EP1	€1,000	€238.81	MIP
11/12/2015	10/12/2015	EP1	€1,000	€279.06	MIP
12/12/2015	11/12/2015	EP1	€1,000	€255.40	MIP
15/12/2015	14/12/2015	EP1	€1,000	€279.06	MIP
16/12/2015	17/12/2015	EA2	€1,000	€203.01	MIP
18/12/2015	14/12/2015	EP2	€1,000	€435.61	MIP
20/12/2015	21/12/2015	EA2	€1,000	€151.53	MIP
21/12/2015	17/12/2015	EP2	€513.81	€412.60	MIP
04/01/2016	05/01/2016	EA2	€1,000	€1,000	MIP
08/01/2016	07/01/2016	EP1	€1,000	€207.75	MIP
09/01/2016	08/01/2016	EP1	€1,000	€279.06	MIP
12/01/2016	13/01/2016	EA2	€1,000	€170.51	MIP
12/01/2016	08/01/2016	EP2	€1,000	€279.06	MIP
30/01/2016	26/01/2016	EP2	€1,000	€207.85	MIP
10/02/2016	10/02/2016	WD1	€1,000	€176.75	MIP
11/03/2016	10/03/2016	EP1	€1000	€179.85	MIP
14/03/2016	10/03/2016	EP2	€1000	€179.38	MIP
27/03/2016	28/03/2016	EA2	€1000	€114.04	MIP
19/06/2016	15/06/2016	EP2	€1000	€279.06	MIP
20/08/2016	16/08/2016	EP2	€1000	€97.16	MIP

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08/09/2016	04/09/2016	EP2	-€100	€37.82	MIP
09/09/2016	10/09/2016	EA2	€548.34	€1000.00	MIP
10/09/2016	11/09/2016	EA2	-€100	€28.68	MIP
11/09/2016	11/09/2016	WD1	-€100	€67.67	MIP
13/09/2016	14/09/2016	EA2	€1000	€46.98	MIP
15/09/2016	11/09/2016	EP2	-€100	€189.67	MIP
24/09/2016	24/09/2016	WD1	-€100	€79.61	MIP

**Table 29 - MIP Vs LR Peak Price Comparison**