Market Operator Monthly Report

October 2014

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1   Executive Summary

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

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

227 general queries were received in October 2014. During the same period 236 general queries were resolved.

There were eight defaults by Participants during October 2014. The largest of these was an Energy Initial invoice for 28,723.87 which was remedied on the same day.

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

2 Monthly Statistics

Code Breaches

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

Code Breaches		Major	Minor
Area		**Major**	**Minor**
Data Providers		-	3
Market Participants	Pricing & Scheduling	-	-
	Settlement	-	-
	Funds Transfer	8	-
	Credit Risk Management	1	-
SEMO	Pricing & Scheduling	-	6
	Settlement	-	-
	Funds Transfer	-	-
	Credit Risk Management	-	-
	Other	-	-
Total		**9**	**9**

Table 1 - Code Breaches

Further details of each of the code breaches noted above are set out in Appendix A

Key:

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

Joining and Terminating Parties and Units

One party joined the Market in October 2014

- Arden Energy Limited – PY_000133

There were no terminating parties in October 2014.

Four new units became effective in the Market in October 2014

- Dunbeg Wind Farm – APTG – (PT_500032 / GU_501280)
- Thornog Wind Farm – APTG – (PT_500032 / GU_501290)
- Dalkia Alternative Energy – DSU – (PT_400124 / DSU_401490)
- Dalkia Alternative Energy – TSSU – (PT_400125 / SU_400166)

Two units de-registered from the Market in October 2014
- Fingleton White & Co. – DSU – (PT_400101/DSU_401300)
- Fingleton White & Co. – TSSU – (PT_400102 / SU_400154)

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
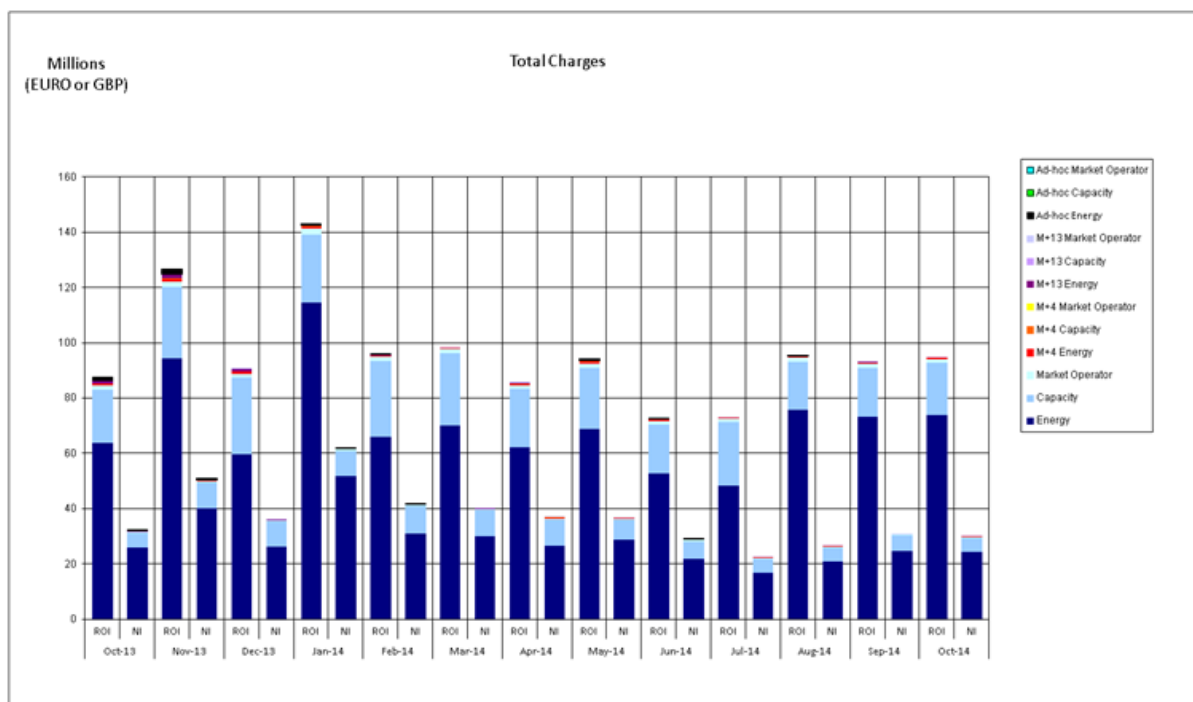
Figure 1 - Total Charges for Each Currency

Market	October 2014	
	ROI	**NI**
Energy	€73,931,568	£24,219,444
Capacity	€18,999,271	£5,293,829
Market Operator	€1,111,307	£290,760
M+4 Energy	€521,096	£125,095
M+4 Capacity	€105,483	£15,188
M+4 Market Operator	€5,766	£797
M+13 Energy	€89,815	£32,077
M+13 Capacity	€9,518	£6,466
M+13 Market Operator	€803	£355
Ad-hoc Energy	€0	£0
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
Total	**€94,774,626**	**£29,984,010**

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
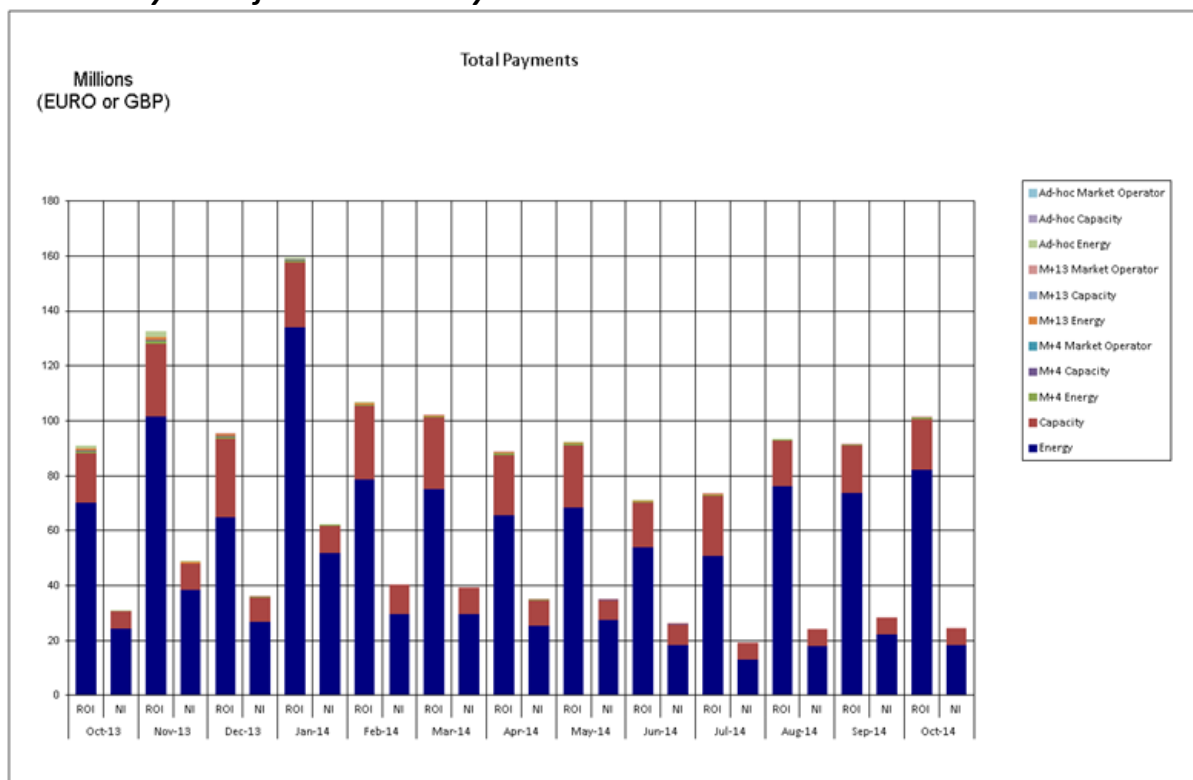
Figure 2 - Total Payments for Each Currency

Market	October 2014	
	ROI	**NI**
Energy	€82,250,496	£18,391,945
Capacity	€18,220,220	£5,868,972
M+4 Energy	€584,730	£82,258
M+4 Capacity	€104,687	£15,709
M+4 Market Operator	€6,507	£1,032
M+13 Energy	€125,335	£42,677
M+13 Capacity	€9,519	£6,422
M+13 Market Operator	€1,313	£498
Ad-hoc Energy	€0	£0
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
Total	**€101,302,808**	**£24,409,513**

Table 3 - Total Payments for Each Currency

Total Balancing Costs

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

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

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

October 2014	
Imbalance (Energy Only)	**-€22,199,072.41**

Table 4 - Balancing Costs for Energy Settlement
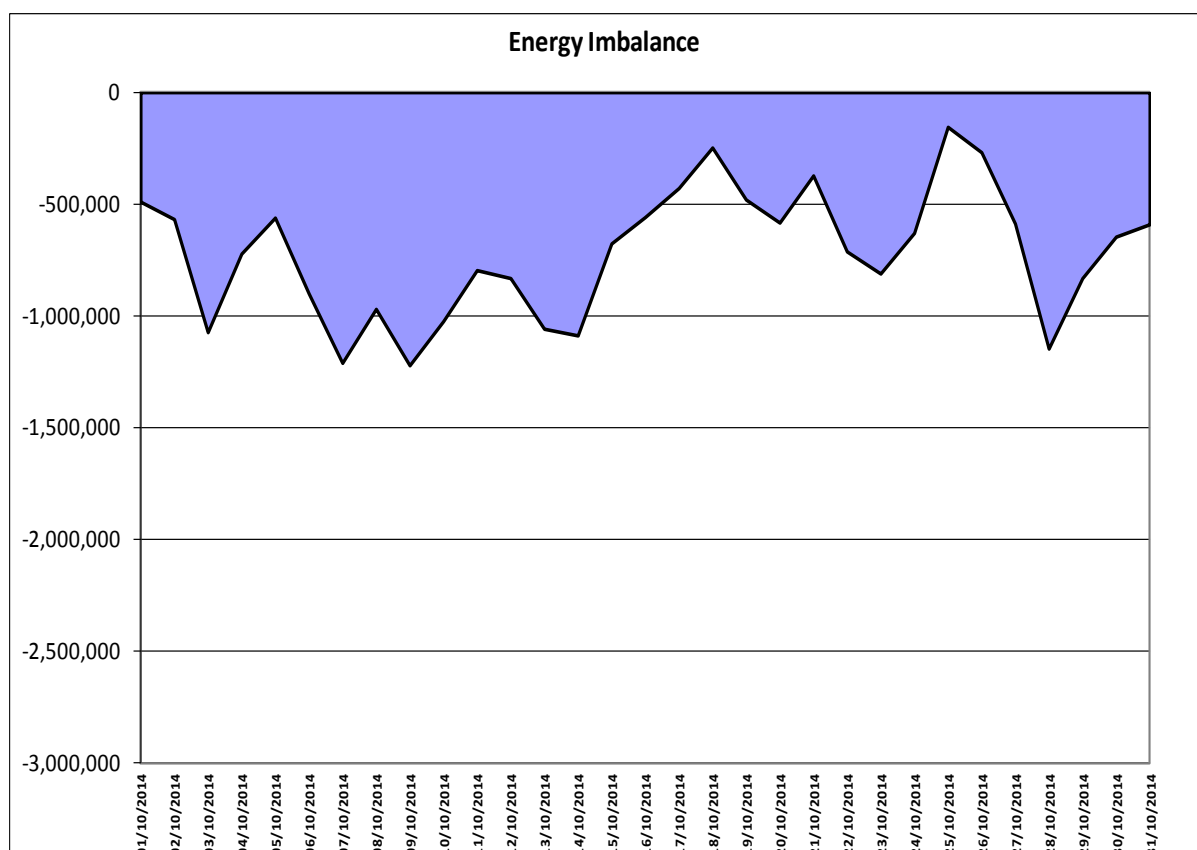
Figure 3 – Energy Imbalances

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 .

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
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

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:

October 2014	
Capacity Charges	-€51,309,729.67
Capacity Payments	€51,309,368.39
Balancing Costs	-€361.28
VAT	-€968.24

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.

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
27/09/2014	03/10/2014	38	-£27,190.04	£ -	-£27,190.04
04/10/2014	10/10/2014	39	-£14,010.56	-£14,928.91	-£28,939.47
11/10/2014	17/10/2014	40	£30,434.00	-£24,500.19	£5,933.81
18/11/2014	24/10/2014	41	-£13,785.87	-£4,624.46	-£18,410.33
25/11/2014	31/10/2014	42	-£1,048.99	£ 4,808.30	£3,759.30

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 £5,933.81 and a cost of -£28,939.47. 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
11/11/2014	October	-£27,150.99

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 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
€17,454,230.32	-€229,493.37	€852,156.04	-€15,149,904.81

Table 9 – Cumulative Imperfections Costs Vs Budget

This is demonstrated in the figure below.
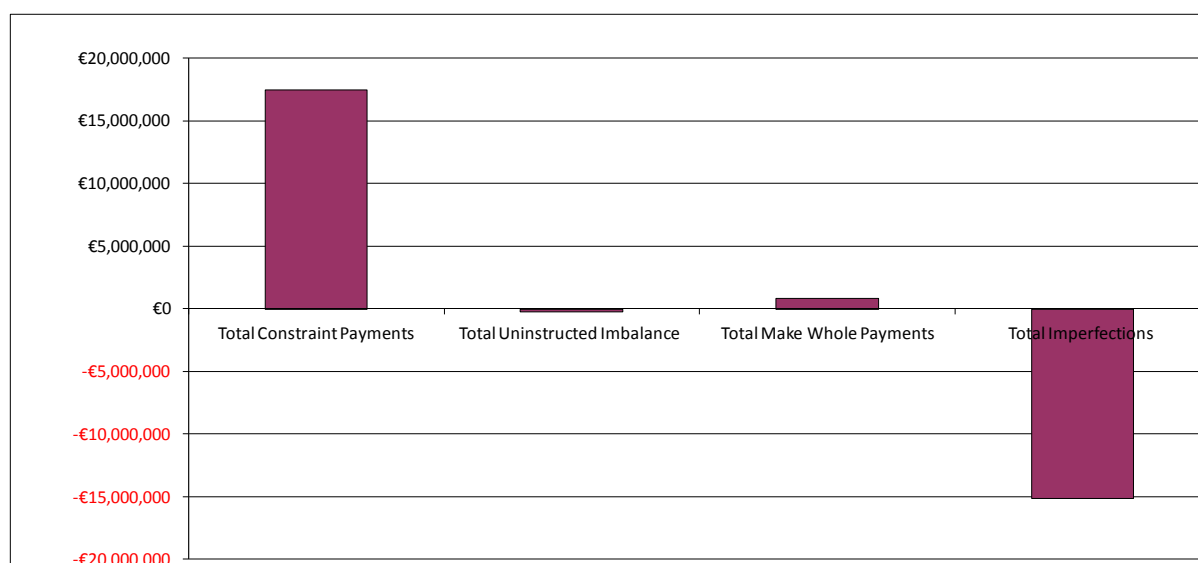
Figure 4 - Cumulative Imperfections Costs Vs Budget

The daily and weekly data that comprised these values is shown in <u>Appendix E</u>.

Financial Changes between Initial Settlement and Subsequent Reruns

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

3.1.1 Energy Market

Note: - For Figure 6, 8, 9, net values are shown.
- Positive amounts indicate net additional payments <u>by</u> Participants (Charges).
- Negative amounts indicate net additional payment to be made <u>to</u> Participants (Payments).

The reverse is true for Figure 7 & 10.
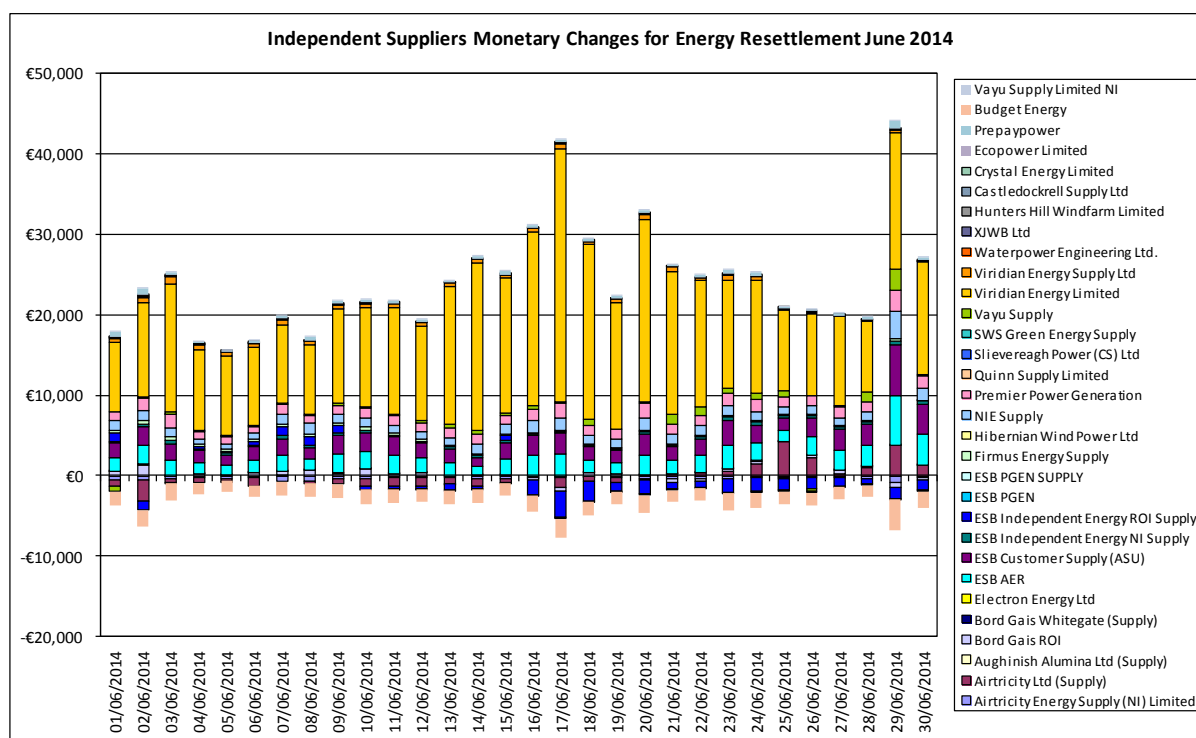
Figure 5 – Independent Suppliers Monetary Changes for Energy Resettlement – June 2014

The above variances relates purely to rounding for Participants between Initial and M+4 Resettlement.
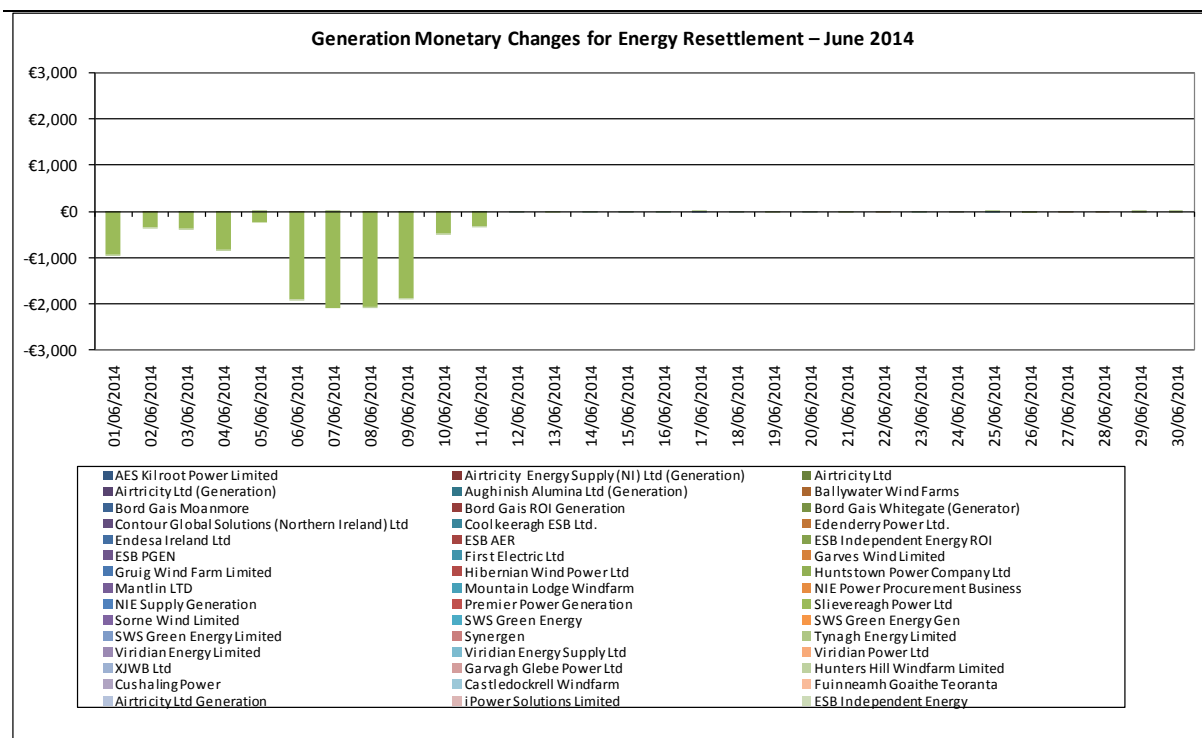
Figure 6 – Generation Monetary Changes for Energy Resettlement – June 2014

Changes noted above are driven by updates to Meter Data.
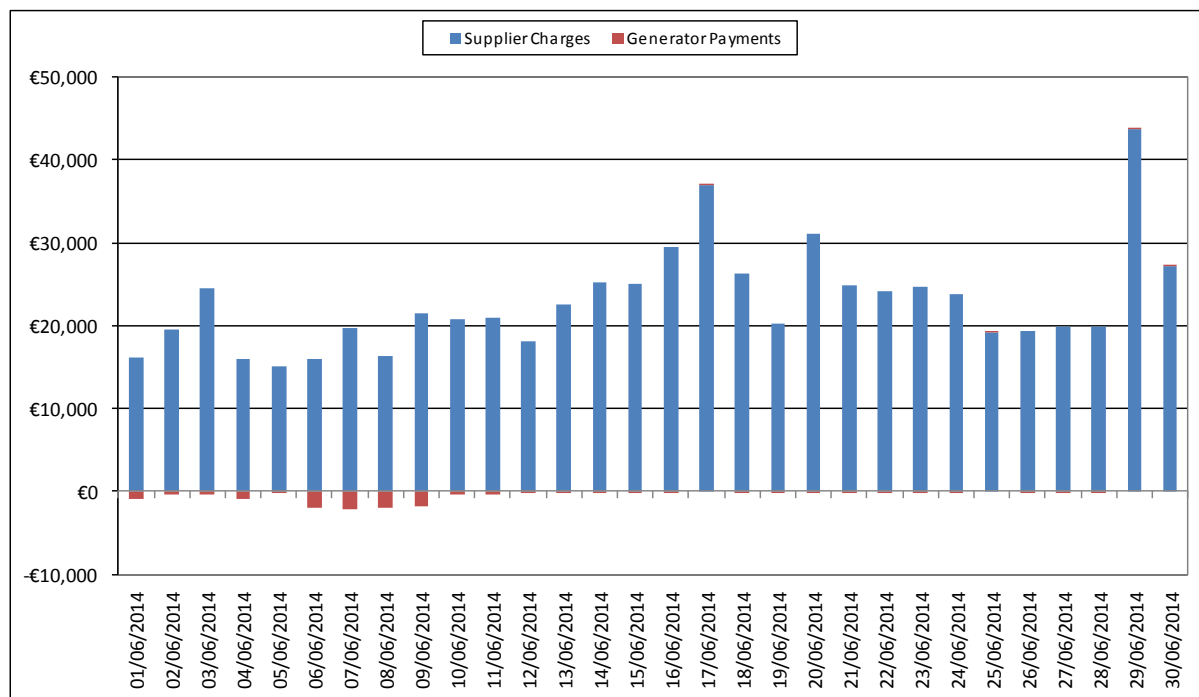
Figure 7 – Total Monetary Changes for Energy Resettlement – June 2014

M+13 Resettlement
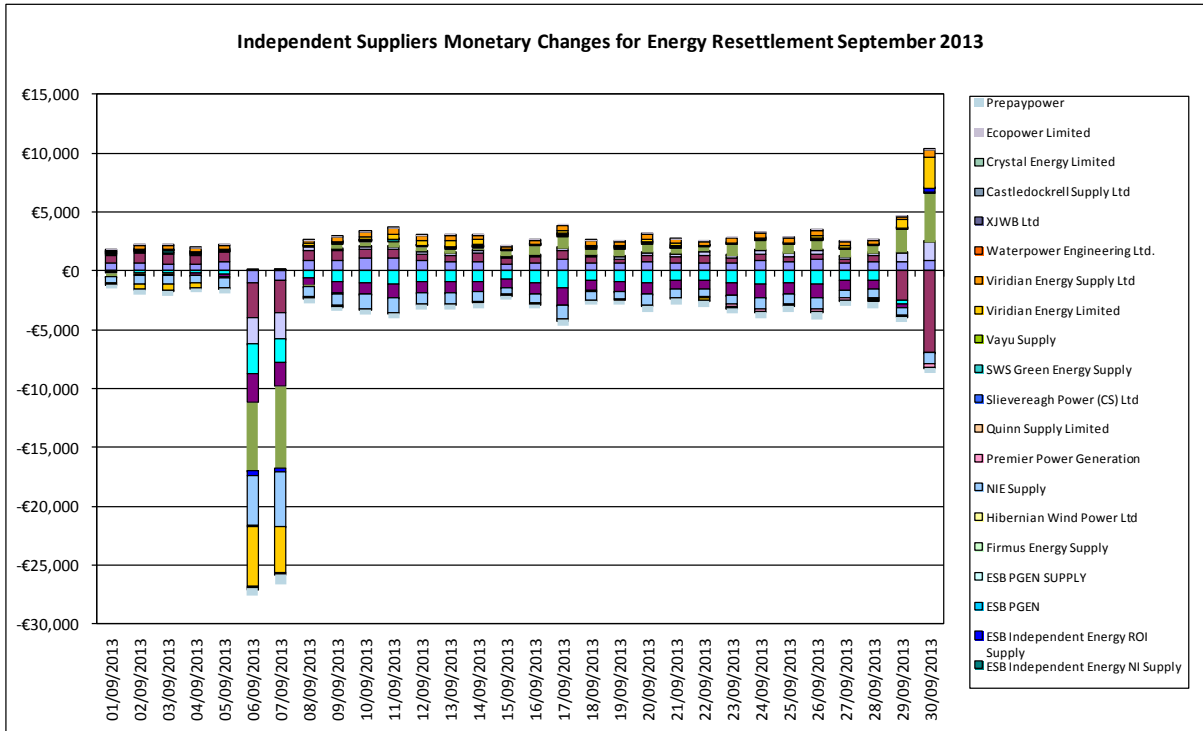
Figure 8 - Independent Suppliers Monetary Changes for Energy Resettlement – September 2013

The above variances relates purely to rounding for Participants between M+4 and M+13 Resettlement.
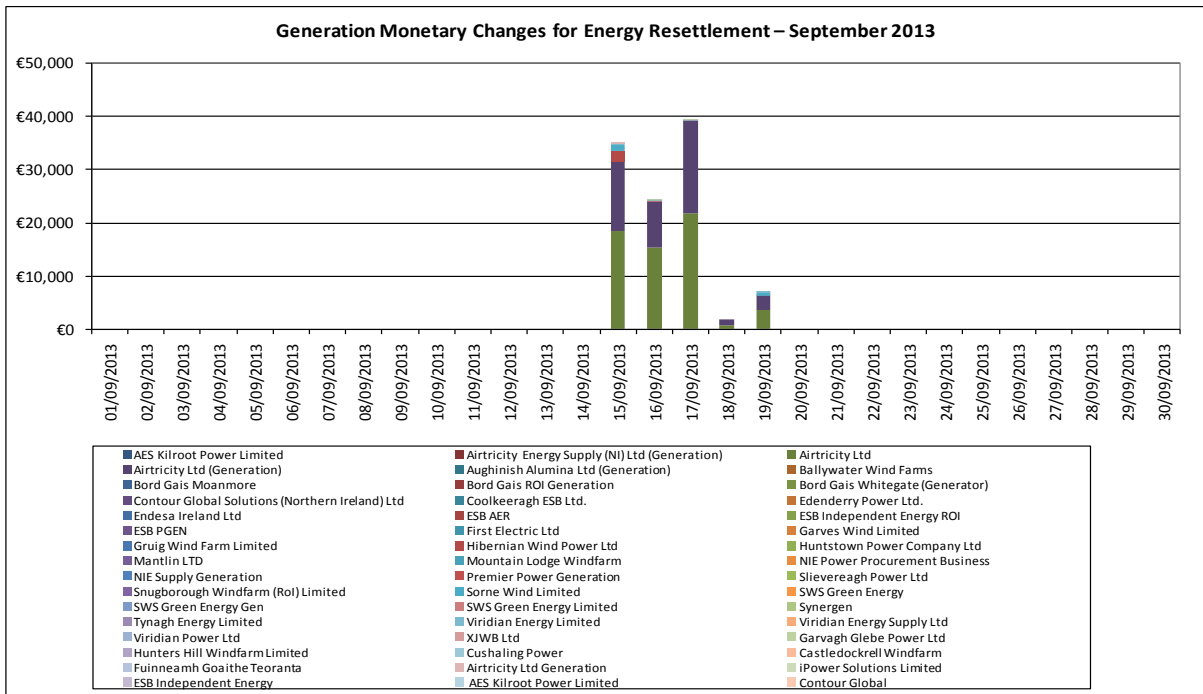
Figure 9 - Generation Monetary Changes for Energy Resettlement – September 2013

Changes noted above are due to updated Meter Data, Loss Factors and Dispatch Quantities.
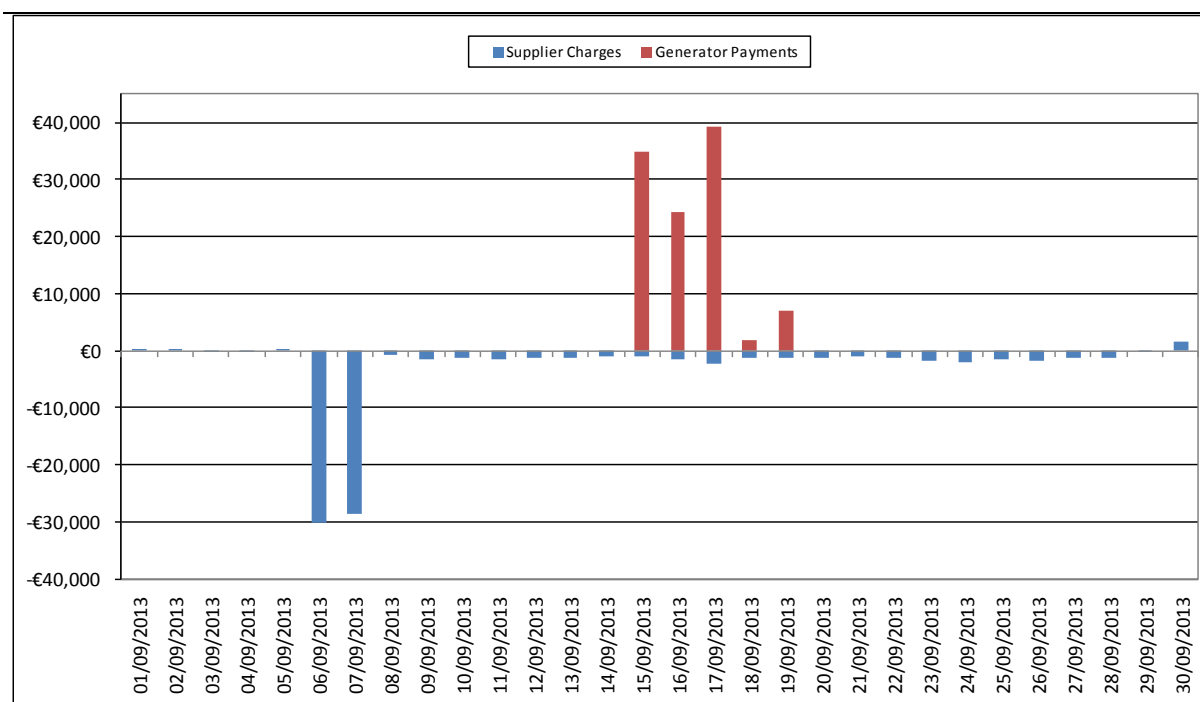
Figure 10 - Total Monetary Changes for Energy Resettlement – September 2013

3.1.2 Capacity Market

Note: - For Figure 12, 13 & 16 net values are shown.
- Positive amounts indicate net additional payments <u>by</u> Participants (Charges).
- Negative amounts indicate net additional payment to be made <u>to</u> Participants (Payments)

The reverse is true for Figure 14 & 22.

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

M+4 Resettlement

Under resettlement, charges originally attributed to the Jurisdictional Error Supplier Units, have now been redistributed among Market Participants.
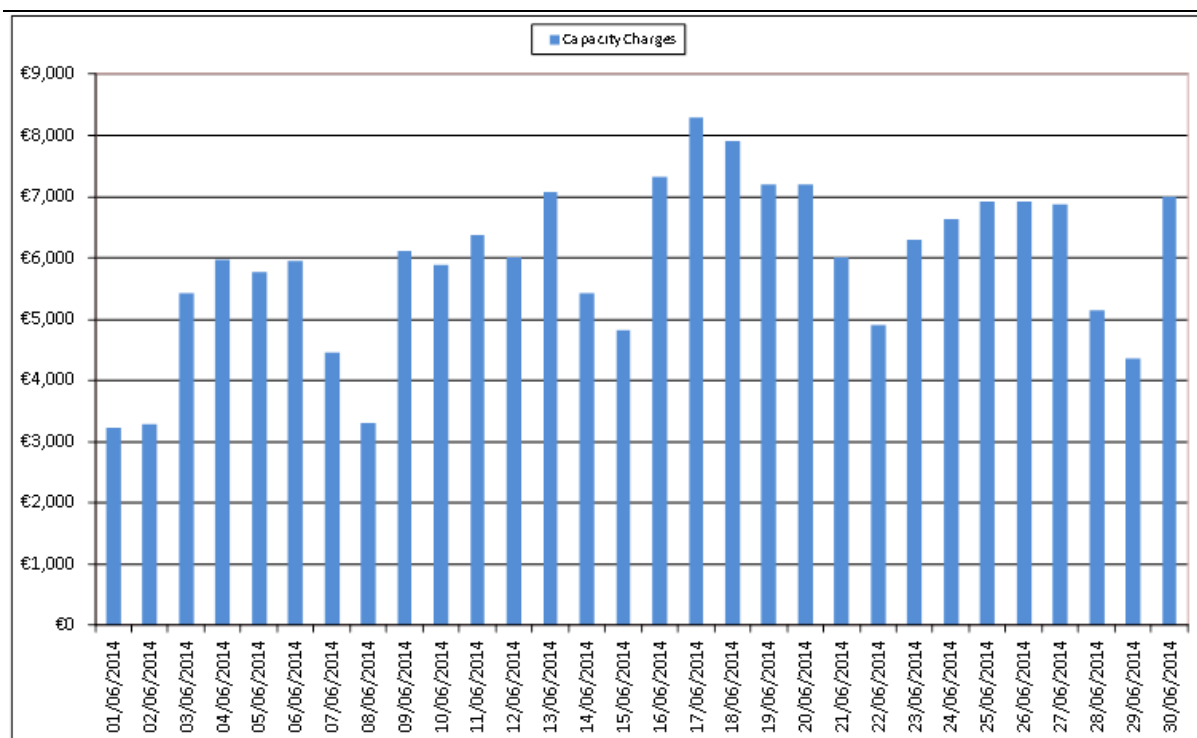
Figure 11 - Independent Suppliers Monetary Changes for Capacity Resettlement – June 2014
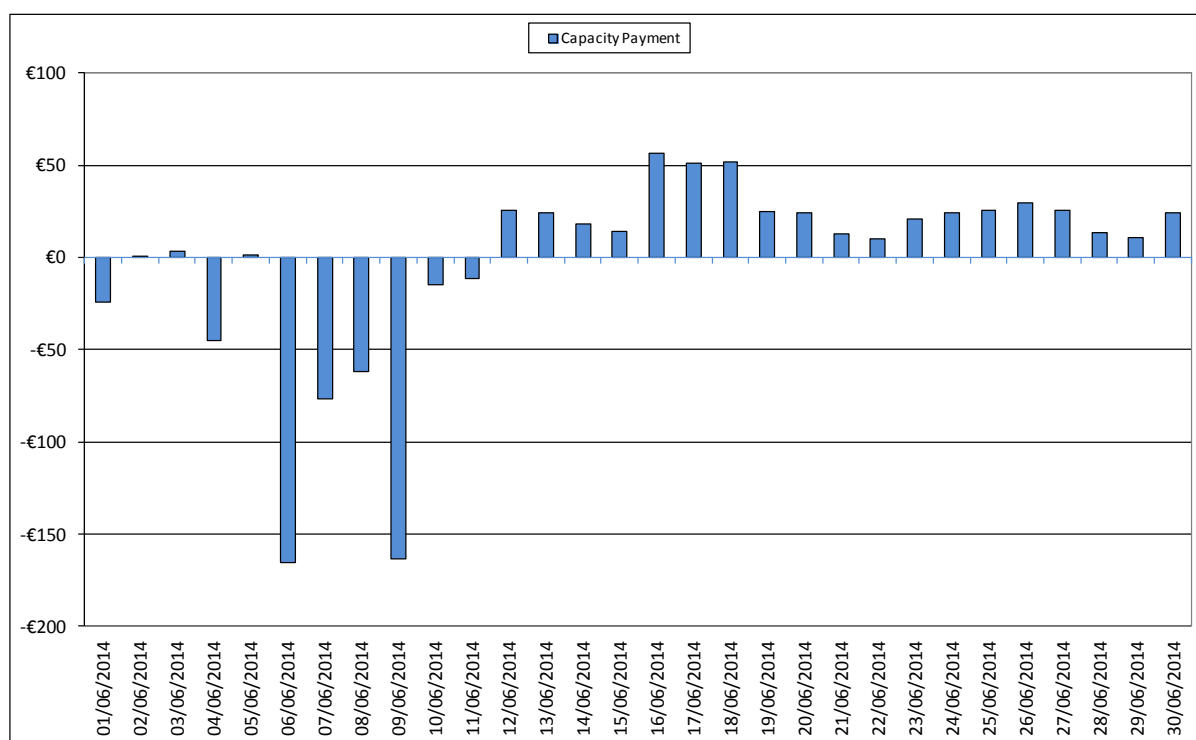
Figure 12 - All Generation Monetary Change for Capacity Resettlement – June 2014

The changes above are driven by updated meter data for Autonomous Price Taker Generators.
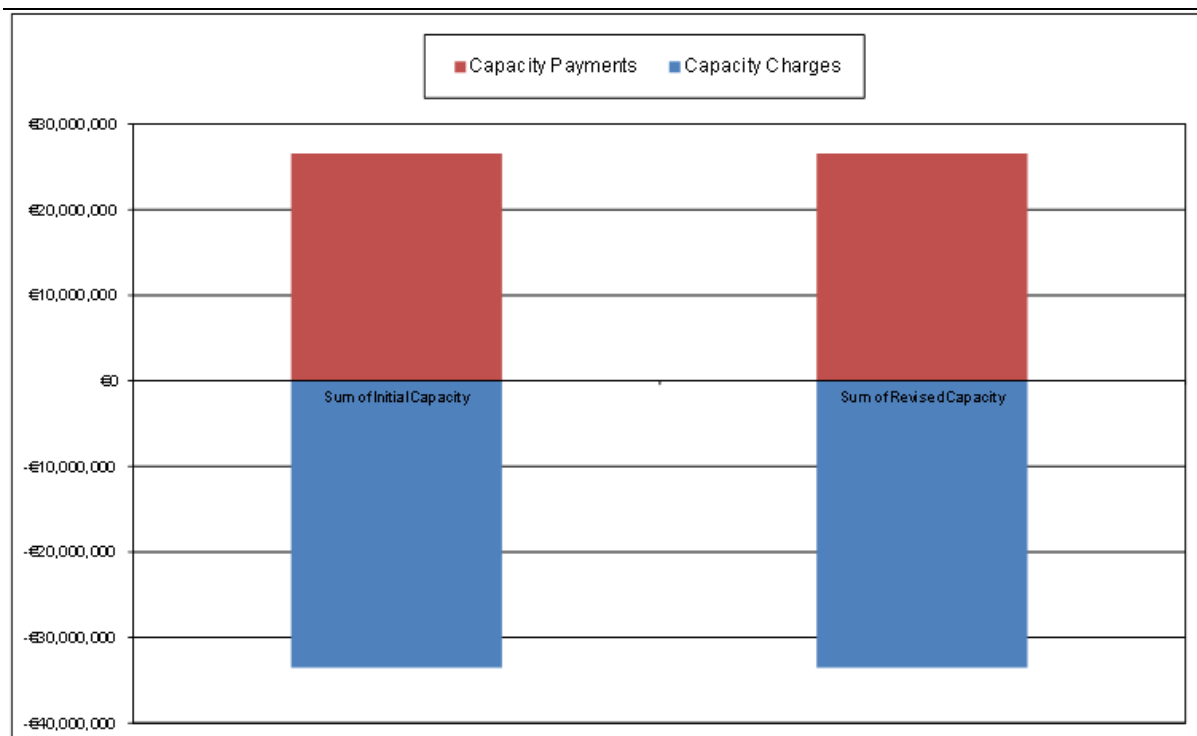
Figure 13 - Comparison of Distribution of Monetary Amounts between Capacity Initial and Resettlement June 2014

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

M+13 Resettlement
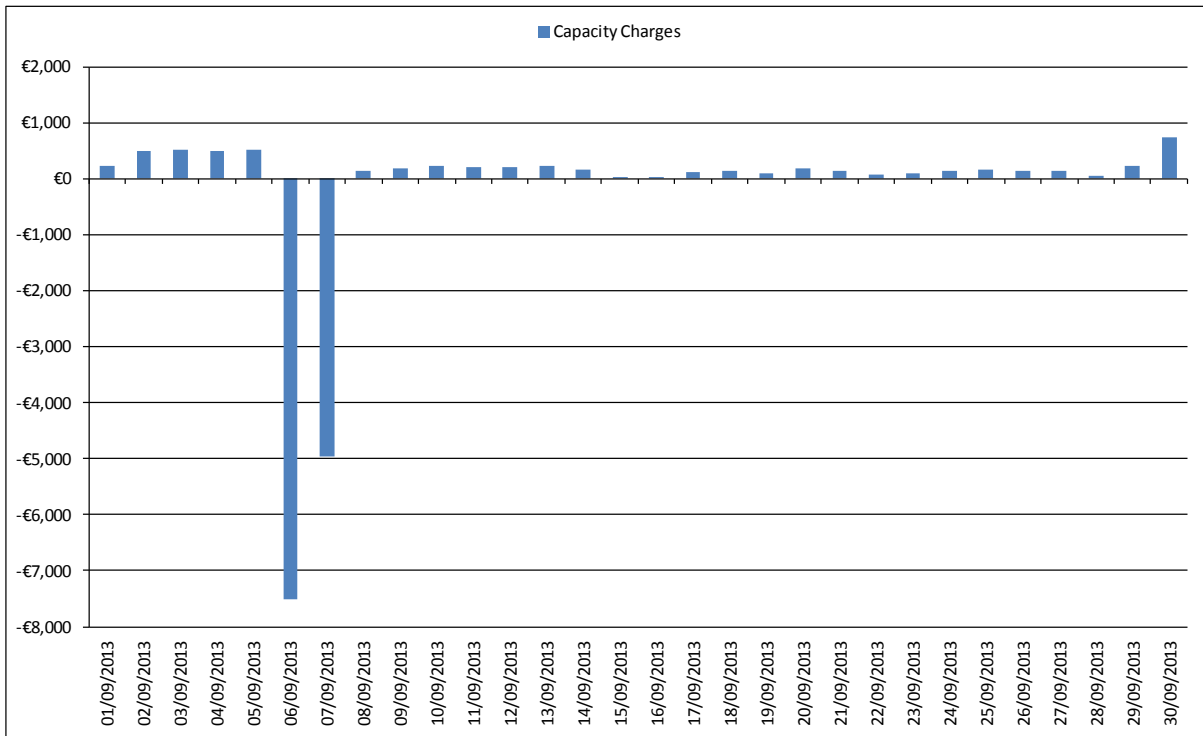
Figure 14 - Independent Suppliers Monetary Changes for Capacity Resettlement – September 2013

The changes above are driven by updated Meter Data for Supplier units
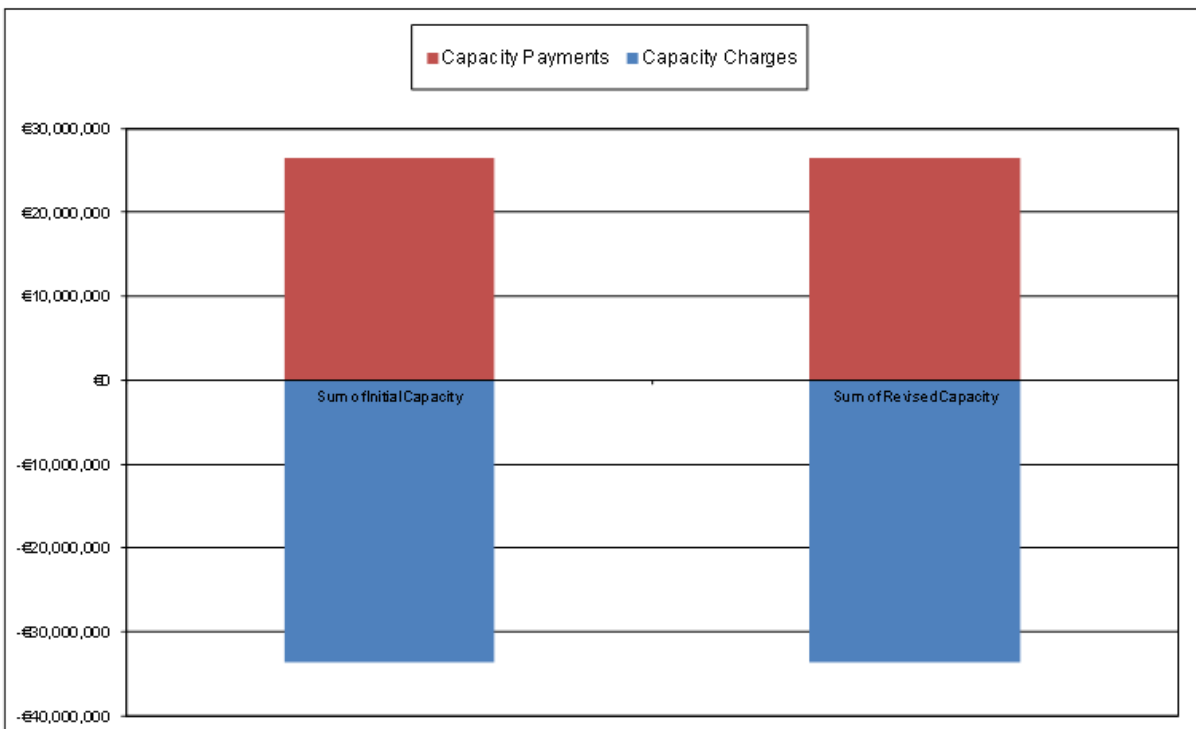
Figure 16 - Comparison of Distribution of Monetary Amounts between M+4 Capacity Resettlement and M+13 Capacity Resettlement – September 2013

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

4 Helpdesk Call Statistics

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

	Received	Resolved within the period	Not Resolved	Resolved in the period	Resolution Time (Working Days)	Resolved On Time
Normal	221	205	16	230	3.60	197
Important	3	3	0	3	0.65	3
Urgent	3	3	0	3	0.13	3
Settlement	6	4	2	6	9.44	6
Credit	0	0	0	0	0.00	0
Dispute	0	0	0	0	0.00	0
Data	2	0	2	0	0.00	0
Total/Average	**235**	**215**	**20**	**242**	**2.76**	**209**

Table 10 – Helpdesk Statistics

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

The average resolution time for General Queries has increased by 0.6 working days in October to 3.51 from 2.91 working days in September. SEMO has a metric to resolve General Queries within 20 Working Days. These include queries received over the phone and e-mail. On the 28th of October, call reference F0053389 was resolved. This call was resolved after approximately 291 working days, therefore impacting on the Average Resolution time for the month of October.

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 October 2014 with regard to formal Settlement Queries.

5. Disputes and Queries

List of Disputes by Topic

As of the 6th October there is one outstanding Dispute.

Dispute	Raised	Resolved
F0060396	2014-09-25	Open

Table 11 – List of Disputes

List of Queries by Topic

5.1.1 Data Queries

There were two formal Data Queries raised during the month of October 2014.

Topic	Number Of Queries
MIUN Issue	1
Availability	1

Table 12 – Upheld Data Queries by topic

5.1.2 Settlement Queries

There were six Settlement Queries raised in October 2014. Of the six, five were upheld, one query was withdrawn.

Topic	Number Of Queries
SO – SO Trades	3
Dispatch Instructions	1
Loss Factors	1

Table 13 – Upheld Settlement Queries by topic

- Three queries relating to SO – SO Trades were raised. These queries were deemed to be of low Materiality and will be settled in M+4.

- One query relating to Loss Factors was raised. This query was deemed to be of low Materiality and will be settled in M+4.

- One query relating to Dispatch Instructions was raised. This query was deemed to be of low Materiality and will be settled in M+4.

- One query relating to an SO – SO Trades was withdrawn.

Unresolved Queries

There is one unresolved Data Query as at 18th November, 2014.

A full list of all the Data and Settlement queries raised is contained in Appendix B.

6. Central Systems

Proportion of Default Data Used

On review of the Commercial Offer Data used in the MSP runs, 74.93% of data used was submitted by Participants through the normal Bid-Offer process. 25.03% of the data used was based on Standing Commercial Offer Data. 0.03% of the data used was based on adjusted offer data. None of the data used was based on Default Commercial Offer Data (Default differs from Standing in that it is based on the initial Default data submitted during registration process and not on more recent Standing Data submitted by the Participant through the Market Participant Interface). Details by unit are provided in Appendix F.

Proportion of Estimated Meter Data used in Initial Settlement and Resettlement

This is not calculable presently.

List of System Errors and Re-runs

6.1.1 Re-Pricing and Resettlement Runs

There were no Re-Price runs carried out in October 2014.

There were no Resettlement runs carried out in October 2014.

6.1.2 System Errors

There were no defects identified in October 2014 that required Resettlement. There were no system defects identified in October 2014 that required re-pricing.

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

6.2 Operational Timings

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

There are five run types for MSP software,

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

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

6.2.1 MSP Postings October 2014

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

Table 14 - Operational Timings

Process	On Time	< 1 hr late	> 1 hr late	Not done
Gate Close	97%	3%	0%	0%
Post EA1	100%	0%	0%	0%
Post EA2	100%	0%	0%	0%
Post WD1	100%	0%	0%	0%
Post EP1	97%	3%	0%	0%
Post EP2	100%	0%	0%	0%

Table 15 - Operational Timings (% on time)
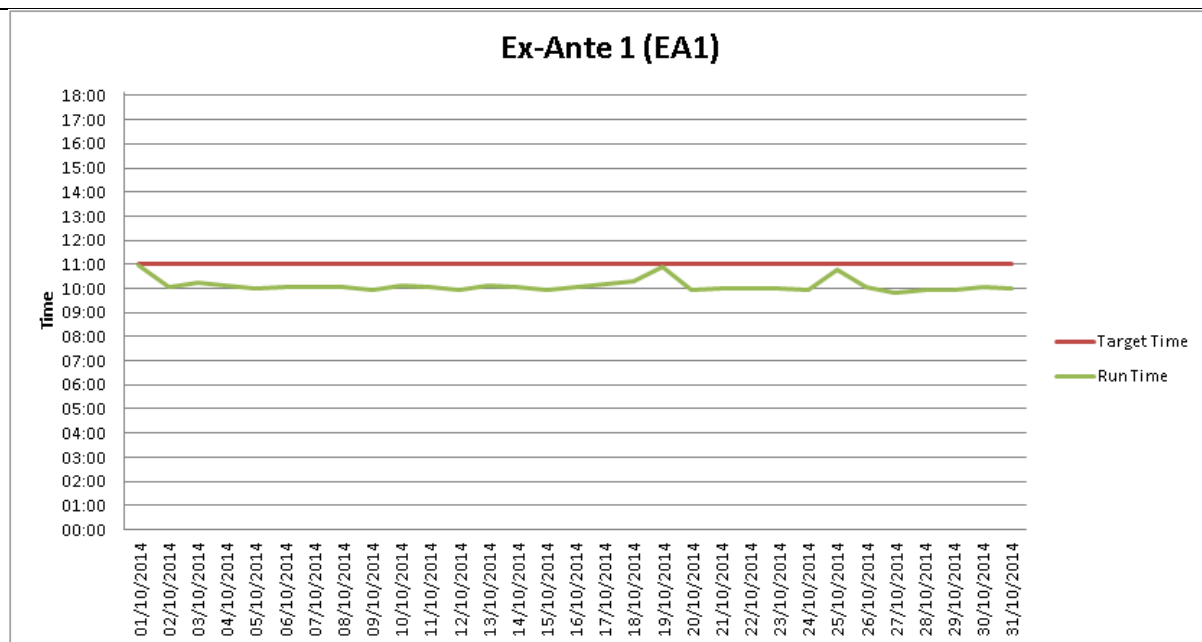
Figure 17 – Ex-Ante 1
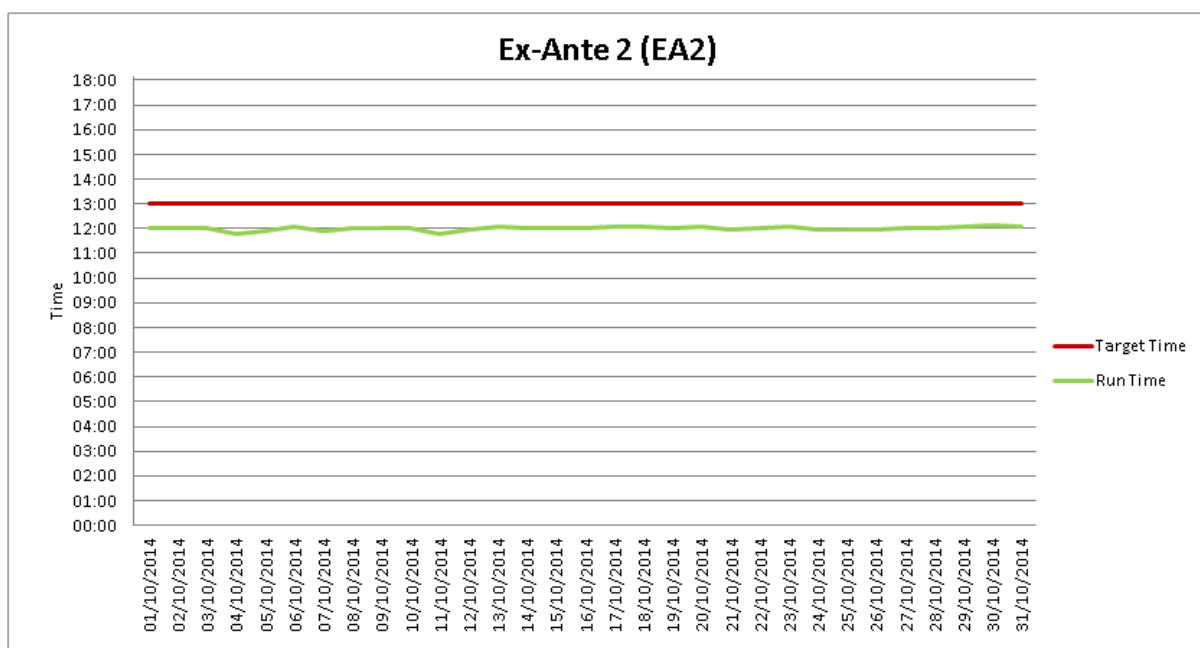
Figure 18 – Ex-Ante 2
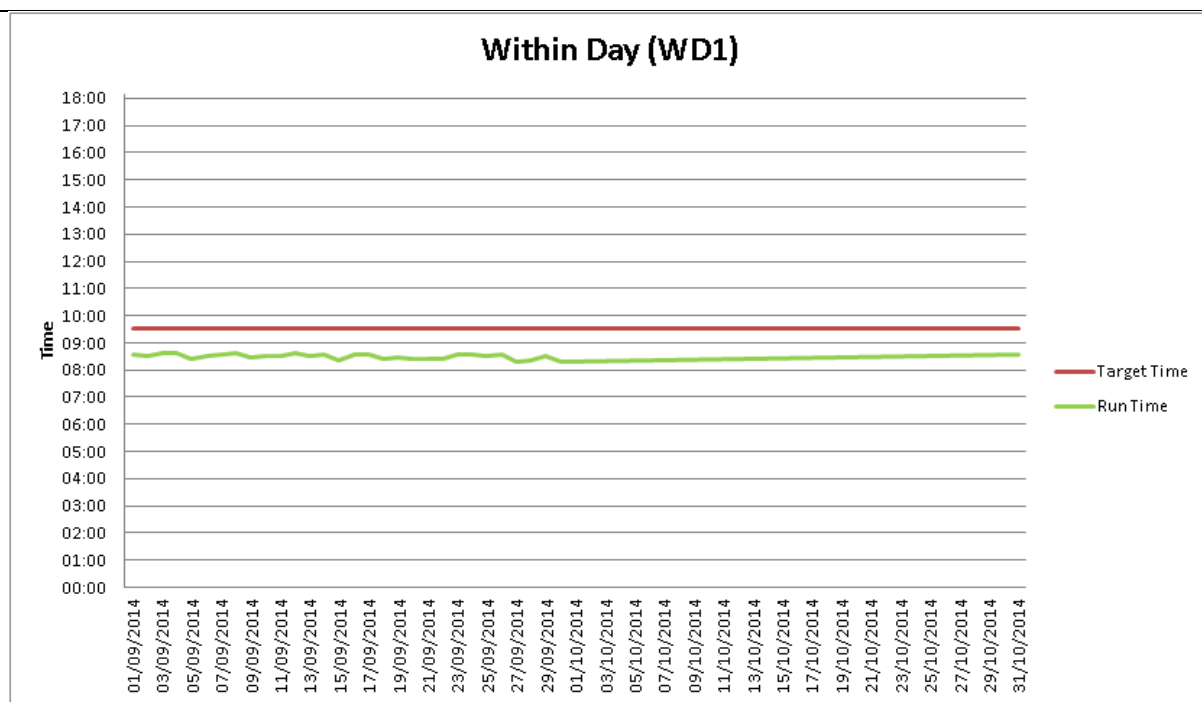
Figure 19 – Within Day 1
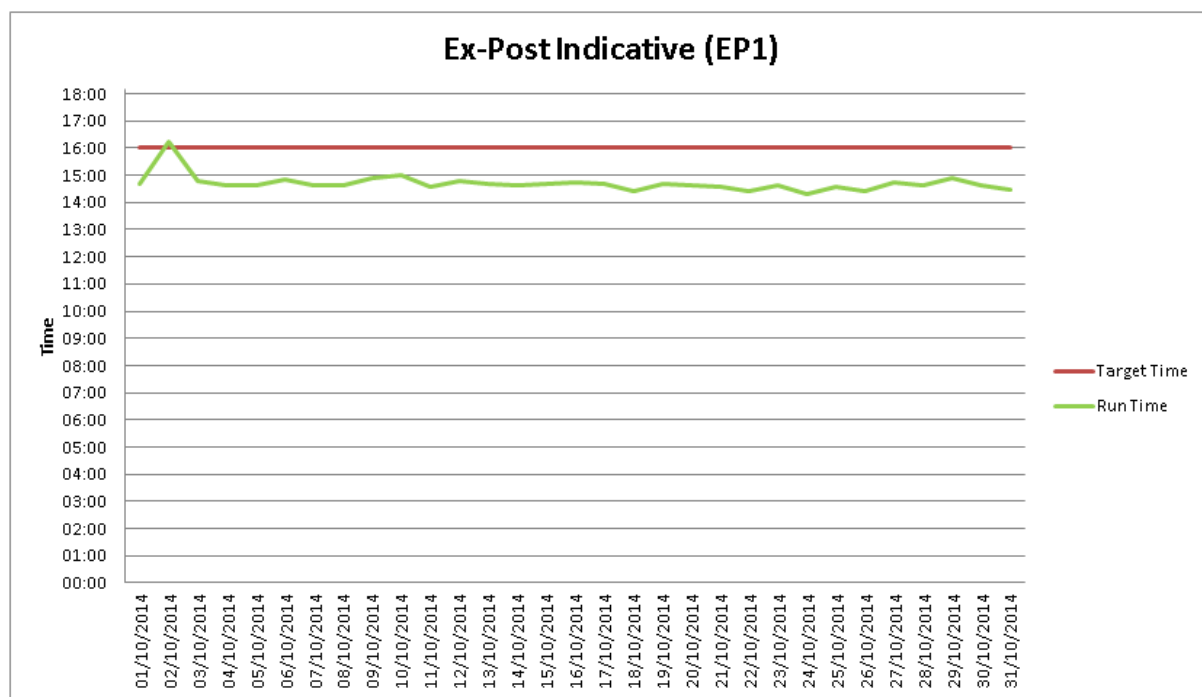
Figure 20 - Ex-Post Indicative
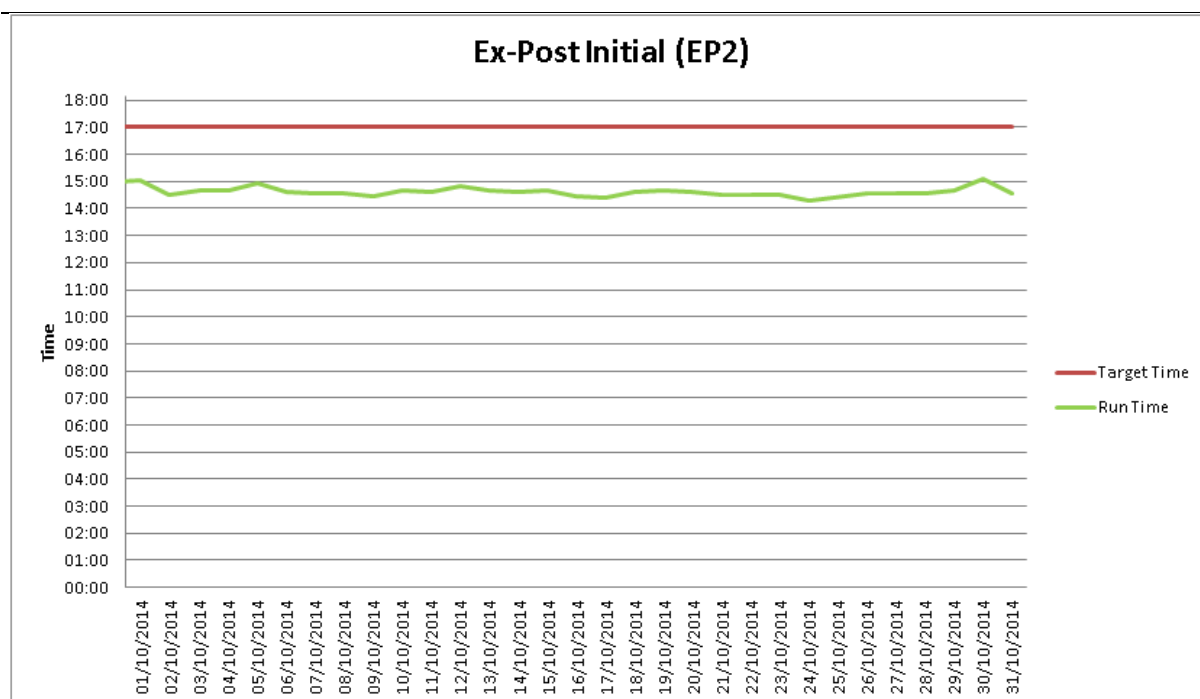
Figure 21 - Ex-Post Initial

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

6.2.2 MSP Algorithms

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

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

In October 2014, there were eleven 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.

6.2.3 Settlement Postings October 2014

The publication timings for Settlement runs are provided below.
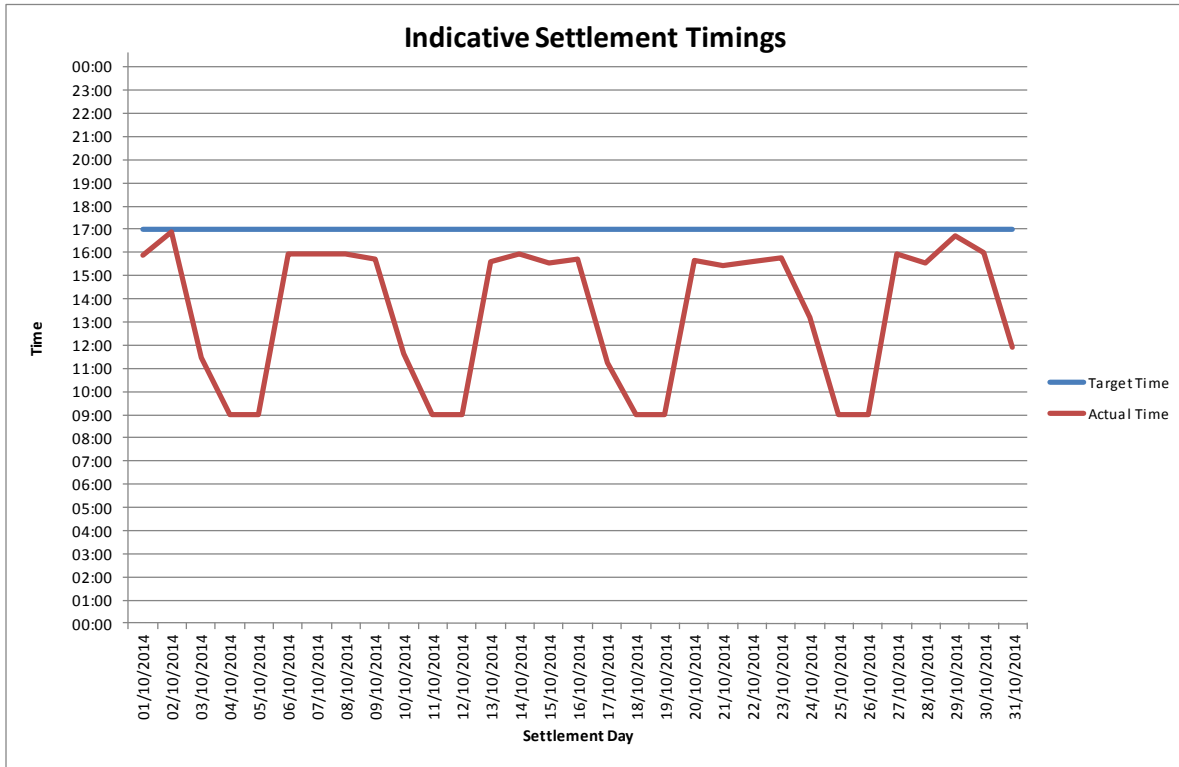
Figure 22 - Indicative Settlement Postings
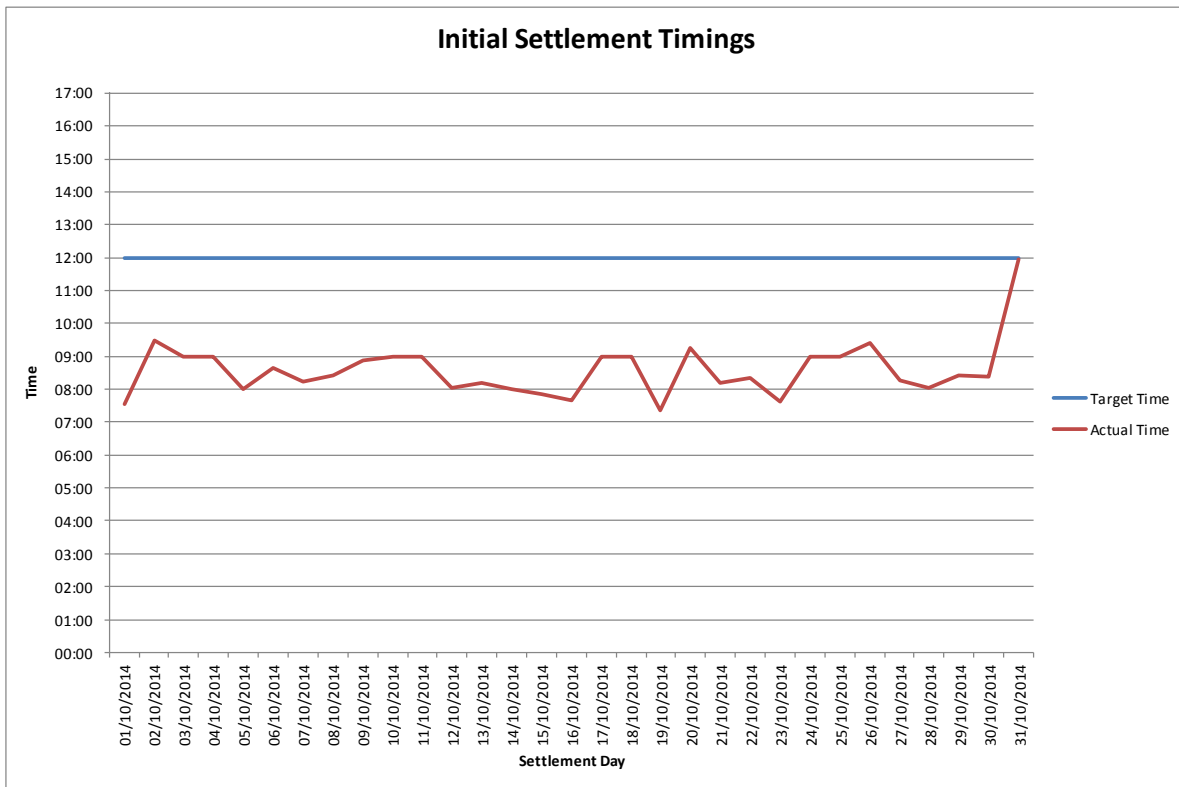
Figure 23 - Initial Settlement Postings

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

6.5 Market System Releases

6.5.1 Release SEM R2.5.0 (Proposed Deployment: November 14th, 2014)

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

The approved scope for this release is as follows:

CR Ref.	System	Description
SEM_PC_CR322	STL	Eligible Availability for Energy Limited Units Under Test
SEM_PC_CR327	MI	Event Queuing
SEM_PC_CR333	STL	Functionality to apply PUGDOG, TTariff on a Trading Day basis
SEM_PC_CR332	STL	Issue Zero Invoices
SEM_PC_CR330	MI	Changes to IART Report
SEM_PC_CR336	STL	HMRC VAT Change
SEM_PC_CR340	MA	DSI-Processing of Bids
SEM_PC_CR344	MA	SPOT ATC to override ATC Interval file in UUC

The software was delivered by our vendors on July 31st.

During June we were advised that HMRC were introducing new rules with respect to the application of VAT to supplies of wholesale electricity in the domestic UK market. As a result CR336 – HMRC VAT Change was added to the release scope. Information in relation to this was published to the industry on June 25th. In addition the following two Change Requests (CR340 and CR344) were added to scope in September:
- SEM_PC_CR340 to ensure optimisation data is handled correctly in DSI and
- SEM_PC_CR344 to ensure interval ATC data is utilized in UUC when required (e.g. when an Interconnector Trips).

The software was delivered by our vendors on July 31st.

System Integration test commenced to schedule and runs from August 5th to October 31st. This test phase is now complete and a SIT exit report was circulated on Friday, November 14th 2014.

A brief Market Test phase took place between October 13th and October 24th. There were no issues or defects raised during Market Test.

The software was deployed to our Production systems on Friday, November 14th 2014.

6.5.2 Release SEM R2.6.0 (Proposed Deployment: April 2015)

The release cut-off date for the SEM R2.6.0 release was Friday September 5th, 2014.

As at the Cut-Off Date there were no:
- Approved Modification Proposals or
- New Change Requests submitted to the SDS

As there are no functional changes being proposed, a Change Control Forum (CCF) meeting will not be required. Three technical changes have been proposed by SEMO IT and these are currently being assessed by our vendors. Once assessments are complete SEMO will issue a scope proposal to the Regulatory Authorities and if approved, this will be published to the industry.

7 Occasional Components

7.1 Disaster Recovery/Business Continuity Tests

There was no Business Continuity Tests performed during October 2014.

7.2 Administered Settlement

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

7.3 Communications or Systems Failures

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

An ATC file (IA_INTCON_ATC) was not received for Moyle in the CMS. After investigation, the issue was confirmed to be related to the updating of a Security Certificate in AMP, and the correct permissions being assigned to it. These have now been corrected by Unicorn (3rd party vendors for AMP).

There was aan issue with MA GUI 07/10/2014 - a restart of the related service resolved the issue.

There was aan error encountered when running EP2 in MA ("Table RPLM is full") on the 19/10/2014.The issue turned out to be a physical limitation on a table in MA. A call was logged with ABB (3rd party vendors). A fix was supplied, tested and implemented to production on the 20/10/2014.

On the 24/10/2014, there was a potential LCF identified for the EA1 run. Upon investigation by MS IT, it was proved in the logs that nothing was technically wrong.The issue was at the participants end, their submitted bids were invalid (proved from the submissions evident in the logs).

Also on the 24/10/2014, there was an issue identified with a unit under test. A script from ABB was required to fix the issue.

There was a JBOSS issue noticed in RCUC during the morning checks on the standby app server on the 27/10/2014. This did not have any operational impact on RCUC, and was restarted without issue (scheduled with the RCUC co-ordinator).

7.4 Denial of Service Attacks

There was no Denial of Service Attacks during October 2014.

7.5 Submission of Parameters to RAs for Approval

No parameters were submitted to the Regulatory Authorities during October 2014.

8 Appendix A: Detail of Code Breaches

Market Participant

Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T and SC Breach
10/10/2014	Money In	Timing	Participant	Payment Default	LCC Power Ltd PT_500057 defaulted on Week 38 2014 Initial, Sept 2014 Initial, Week 22 2014 M+4 and Week 35 2013 M+13 FMOC and VMOC invoices.	Payment Default	A default notice was issued	Major
10/10/2014	Money In	Timing	Participant	Payment Default	Endesa Generacion SA PT_500071 defaulted on a September 2014 Initial FMOC invoice.	Payment Default	A default notice was issued	Major
10/10/2014	Money In	Timing	Participant	Payment Default	Quinn Wind Farm Ltd PT_400049 defaulted on a September 2014 Initial FMOC invoice.	Payment Default	A default notice was issued	Major
10/10/2014	Money In	Timing	Participant	Payment	Contour Global Solutions (Northern Ireland) Ltd PT_500048 have defaulted on September 2014 FMOC Invoices.	Payment Default	Late payment received at 17:25 on the 10/10/2014 and default notice issued.	Major
14/10/2014	Money In	Timing	Participant	Payment Default	Eco Power Supply Ltd PT_400068 defaulted on a September 2014 Initial Capacity Invoice.	Payment Default	A Default notice was issued.	Major
14/10/2014	Money In	Timing	Participant	Payment Default	Crystal Energy Ltd PT_400081 Defaulted on a September 2014 Initial Capacity Invoice.	Payment Default	A Default notice was issued.	Major
22/10/2014	Money In	Timing	Participant	Payment Default	Electron Energy Ltd PT_400074 Defaulted on a Week 40 2014 Initial Energy Invoice.	Payment Default	A Default notice was issued.	Major
30/10/2014	Money In	Timing	Participant	Payment Default	Ecopower Supply Limited PT_400068 Defaulted on a Week 41 2014 Initial Invoice, Week 38 2013 M+13 Invoice, Week 25 2014 M+4 Invoice.	Payment Default	A Default notice was issued.	Major

Table 16 - Code Breaches – Market Participants

Data Provider

Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T and SC Breach
01/10/2014	SE1	Timing	EirGrid TSO	File Submission	Loss Adjustment Factors for tariff year October 2014 - September 2015 were not recieved by SEMO within the timelines set out in the Trading and Settlement Code.	There was a technical issue with loading CLAFs from 01/01/2015 onwards.	EirGrid submitted the Loss Adjustment Factors for tariff on 08/10/2014.	Minor
01/10/2014	SE1	Timing	SONI TSO	Operational	Loss Adjustment Factors for tariff year October 2014 - September 2015 were not recieved by SEMO within the timelines set out in the Trading and Settlement Code.	SONI were unable to submit the Loss Adjustment Factors within the timelines set out in the Trading and Settlement Code	SONI submitted the Loss Adjustment Factors for tariff year on 14/10/2014	Minor
03/10/2014	EP1	Timing	SONI MDP	File Submission	The SONI Actual Availability file for Trading Day 02/10/2014 was not received by the 14:00 deadline.	SONI encountered issues creating the Actual Availability file.	SONI submitted the Actual Availability file at 16:03.	Minor

Table 17 - Code Breaches – Data Providers

SEMO - Pricing and Scheduling

Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T and SC Breach
02/10/2014	WD1	Quality	SEMO	Operational	EWIC and MOYLE MIUN's for WD1 TD 02/10/2014 were revised and set to zero.	MIUN's were unable to be processed due to the failure of the calculator to find a feasible solution.	A zero file was submitted and published at 09:32	Minor
03/10/2014	EP1	Timing	SEMO	Operational	The Ex-Post Indicative Market Schedule for Trading Day 02/10/2014 was delayed.	The schedule could not be initiated as the SONI Actual Avaialability file had not been received.	The Actual Availabiltity file was received at 16:03 and the Schedule was published at 16:10.	Minor
16/10/2014	WD1	Timing	SEMO	Operational	Within Day EWIC MIUN's were incorrect for Trading Day 16/10/2014.	The MIUN Calculator produced incorrect MIUN's for EWIC.	Zero EWIC MIUN's were published after the 09:30 deadline at 09:58.	Minor
17/10/2014	EA2	Quality	SEMO	Operational	EA2 for Trading Day 18/10/2014 was cancelled under Scenario 4 EA2 MSP Software Run cannot be initiated at 12:00	EA2 cancelled due to delay in publication of EWIC MIUNs	EA2 cancelled as per SEMO run cancellation policy.	Minor
17/10/2014	EA1	Timing	SEMO	Operational	There was a delay to the publication of EA1 MIUN's for Trading Day 18/10/2014.	The MIUN calculator did not return MIUNs for EWIC.	EWIC MIUN's were revised and published at 13:00	Minor
18/10/2014	WD1	Timing	SEMO	Operational	Delay in the publication of MIUN's for the MOYLE interconnector TD18/10/2014.	The MIUN calculator did not return correct MIUNs for MOYLE.	IT provided a revised MIUN file. This was uploaded to the CMS and MIUN's were published at 14:55. This was communicated to Participants	Minor

Table 18 - Code Breaches – Pricing and Scheduling

SEMO – Settlements

There were no issues to report in October 2014

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

Table 19 - Code Breaches – Settlements

SEMO - Funds Transfer

There were no issues to report in October 2014

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

Table 20 - Code Breaches – Funds Transfer

SEMO - Credit Management

Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T and SC Breach
31/10/2014	CRM	Timing	Participant	Credit	LCC Power Limited (CP_500057) defaulted on a CCIN issued on 31/10/2014	CCIN was not resolved within the T&SC timeframes	LCC Power Limited (CP_500057) paid outstanding invoices on the 05/11/2014 which closed the CCIN	Major

Table 21 - Code Breaches – Credit Risk Management

SEMO – Other

There were no issues to report in October 2014

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

Table 22 - Code Breaches – Other

9 Appendix B: List of Queries by Type

Data Queries

Summary Title	Description	ID	Logged On	Date sent to MP
MIUN issue	Querying the MGEU_IA_ROIEWIC_I_ROIEWIC	Interconnector Administrator	2014-10-29	2014-11-12
Availabilities	The availability declarations for all SONI Windfarms did not include values for the additional hour for the long day.	SONI	2014-10-31	

Table 23 - Data Queries

Settlement Queries

Summary Title	Description	ID	Logged On	Date sent to MP
SO-SO Trade	Incorrect costs were provided to SEMO for a Moyle SO Trade for 02.10.2014. Trade costs which were submitted to SEMO at D+3 were incorrect. The amended costs per trade date are included with this query. The values in the Error report in AMP are different to the PIR for this settlement date.	Interconnector Administrator	08/10/2014	28/10/2014
SO-SO Trade	Incorrect volumes and costs provided to SEMO for a EWIC SO trade for 02.10.14. Trade costs which were submitted to SEMO at D+3 were incorrect. The amended costs per trade are included with this query.	Interconnector Administrator	15/10/2014	22/10/2014
Dispatch instructions	Ballylumford Power Station had an issue reaching the 243MW (Generated) dispatch instruction issued by CHCC. At 19:17 08/10/2014 a call took place between CHCC & BPS to discuss. At 19:36, BPS declared B31 & B32 (GU_500130 & GU_500131) availabilities down to 237MW (generated) via EDIL, CHCC accepted this availability declaration via EDIL. Paperwork was issued by BPS to PBB, but was not sent to CHCC,stating the correct availability declaration time of 19:17. Availability declarations down to 237MW (generated) at 19:36 need to be moved to 19:17 and corresponding dispatch instructions to the new maximum declared availability for each unit also need to be changed in the market systems. Can you please advise how you would like this data resent? E.G via spreadsheet or interface?	SONI	21/10/2014	30/10/2014

Loss Adjustment Factors	This unit went through the deregistration/re-registration process. The generating unit (lendrums bridge) was re-registered as GU_501310 on 25/09/2014. An error was made by SEMO registration, when inputting the MDP for this new unit. To correct this error SONI became the MDP for this unit. The combined loss adjustment factors have been calculated to reflect MDP change and the new values were submitted to the market systems on the 16/10/2014.	SONI	21/10/2014	06/11/2014
SO-SO Trade	We would like to raise a settlement query in relation to an EWIC SO Trade volume for the 17/10/2014 which was recently submitted to SEMO. The D+3 volume for one period was incorrect. Please find attached a completed query form and spreadsheet with the new amended data.	Interconnector Administrator	2014-10-22	2014-11-05

Table 24 - Settlement Queries

10 Appendix C: List of All System Errors and Failures

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

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

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

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

Table 25 - 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		EP1Postings		EP2 Postings	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
01/10/2014	11:00	10:56:00	13:00	12:02	09:30	08:34	16:00	14:41	17:00	15:02
02/10/2014	11:00	10:04:00	13:00	12:02	09:30	08:32	16:00	16:15	17:00	14:31
03/10/2014	11:00	10:13:00	13:00	12:00	09:30	08:37	16:00	14:49	17:00	14:40
04/10/2014	11:00	10:06:00	13:00	11:46	09:30	08:38	16:00	14:37	17:00	14:40
05/10/2014	11:00	10:01:00	13:00	11:53	09:30	08:25	16:00	14:39	17:00	14:56
06/10/2014	11:00	10:03:00	13:00	12:04	09:30	08:31	16:00	14:51	17:00	14:36
07/10/2014	11:00	10:03:00	13:00	11:55	09:30	08:34	16:00	14:37	17:00	14:34
08/10/2014	11:00	10:02:00	13:00	12:02	09:30	08:36	16:00	14:39	17:00	14:35
09/10/2014	11:00	09:57:00	13:00	12:02	09:30	08:29	16:00	14:54	17:00	14:27
10/10/2014	11:00	10:08:00	13:00	12:02	09:30	08:32	16:00	14:59	17:00	14:40
11/10/2014	11:00	10:02:00	13:00	11:48	09:30	08:32	16:00	14:35	17:00	14:37
12/10/2014	11:00	09:57:00	13:00	11:57	09:30	08:36	16:00	14:47	17:00	14:50
13/10/2014	11:00	10:06:00	13:00	12:03	09:30	08:31	16:00	14:41	17:00	14:41
14/10/2014	11:00	10:05:00	13:00	12:02	09:30	08:34	16:00	14:38	17:00	14:38
15/10/2014	11:00	09:56:00	13:00	12:02	09:30	08:22	16:00	14:40	17:00	14:41
16/10/2014	11:00	10:02:00	13:00	12:02	09:30	08:35	16:00	14:45	17:00	14:28
17/10/2014	11:00	10:10:00	13:00	12:03	09:30	08:34	16:00	14:41	17:00	14:24
18/10/2014	11:00	10:19:00	13:00	12:06	09:30	08:24	16:00	14:24	17:00	14:37
19/10/2014	11:00	10:53:00	13:00	12:01	09:30	08:29	16:00	14:40	17:00	14:41
20/10/2014	11:00	09:58:00	13:00	12:04	09:30	08:23	16:00	14:38	17:00	14:36
21/10/2014	11:00	09:59:00	13:00	11:56	09:30	08:26	16:00	14:36	17:00	14:32
22/10/2014	11:00	10:00:00	13:00	12:02	09:30	08:25	16:00	14:26	17:00	14:31
23/10/2014	11:00	10:00:00	13:00	12:03	09:30	08:35	16:00	14:38	17:00	14:31
24/10/2014	11:00	09:55:00	13:00	11:57	09:30	08:35	16:00	14:20	17:00	14:18
25/10/2014	11:00	10:45:00	13:00	11:57	09:30	08:32	16:00	14:34	17:00	14:40
26/10/2014	11:00	10:02:00	13:00	11:57	09:30	08:34	16:00	14:25	17:00	14:33
27/10/2014	11:00	09:50:00	13:00	12:02	09:30	08:17	16:00	14:44	17:00	14:35
28/10/2014	11:00	09:57:00	13:00	12:00	09:30	08:22	16:00	14:37	17:00	14:34
29/10/2014	11:00	09:57:00	13:00	12:04	09:30	08:31	16:00	14:54	17:00	14:41
30/10/2014	11:00	10:02:00	13:00	12:07	09:30	08:18	16:00	14:39	17:00	15:06
31/10/2014	12:00	10:00:00	14:00	12:03	10:30	08:33	17:00	14:28	18:00	14:33

Table 26 – MSP Runs

Settlement Runs

	INDICATIVE				INITIAL			
Trading Day	**Target Date**	**Actual Date**	**Target Time**	**Actual Time**	**Trading Day**	**Actual Date**	**Target Time**	**Actual Time**
01/10/2014	02/10/2014	02/10/2014	17:00	15:54	01/10/2014	08/10/2014	12:00	07:33
02/10/2014	03/10/2014	03/10/2014	17:00	16:53	02/10/2014	09/10/2014	12:00	09:29
03/10/2014	06/10/2014	06/10/2014	17:00	11:27	03/10/2014	10/10/2014	12:00	11:11
04/10/2014	06/10/2014	06/10/2014	17:00	13:13	04/10/2014	10/10/2014	12:00	12:05
05/10/2014	06/10/2014	06/10/2014	17:00	15:53	05/10/2014	10/10/2014	12:00	07:59
06/10/2014	07/10/2014	07/10/2014	17:00	15:56	06/10/2014	13/10/2014	12:00	08:38
07/10/2014	08/10/2014	08/10/2014	17:00	15:55	07/10/2014	14/10/2014	12:00	08:14
08/10/2014	09/10/2014	09/10/2014	17:00	15:56	08/10/2014	15/10/2014	12:00	08:26
09/10/2014	10/10/2014	10/10/2014	17:00	15:43	09/10/2014	16/10/2014	12:00	08:53
10/10/2014	13/10/2014	13/10/2014	17:00	11:38	10/10/2014	17/10/2014	12:00	12:06
11/10/2014	13/10/2014	13/10/2014	17:00	13:09	11/10/2014	17/10/2014	12:00	13:28
12/10/2014	13/10/2014	13/10/2014	17:00	15:45	12/10/2014	17/10/2014	12:00	08:02
13/10/2014	14/10/2014	14/10/2014	17:00	15:36	13/10/2014	20/10/2014	12:00	08:11
14/10/2014	15/10/2014	15/10/2014	17:00	15:56	14/10/2014	21/10/2014	12:00	08:00
15/10/2014	16/10/2014	16/10/2014	17:00	15:31	15/10/2014	22/10/2014	12:00	07:50
16/10/2014	17/10/2014	17/10/2014	17:00	15:42	16/10/2014	23/10/2014	12:00	07:40
17/10/2014	20/10/2014	20/10/2014	17:00	11:14	17/10/2014	24/10/2014	12:00	11:37
18/10/2014	20/10/2014	20/10/2014	17:00	12:05	18/10/2014	24/10/2014	12:00	12:56
19/10/2014	20/10/2014	20/10/2014	17:00	15:58	19/10/2014	24/10/2014	12:00	07:21
20/10/2014	21/10/2014	21/10/2014	17:00	15:39	20/10/2014	27/10/2014	12:00	09:15
21/10/2014	22/10/2014	22/10/2014	17:00	15:27	21/10/2014	28/10/2014	12:00	08:11
22/10/2014	23/10/2014	23/10/2014	17:00	15:37	22/10/2014	29/10/2014	12:00	08:20
23/10/2014	24/10/2014	24/10/2014	17:00	15:47	23/10/2014	30/10/2014	12:00	07:37
24/10/2014	27/10/2014	27/10/2014	17:00	13:13	24/10/2014	31/10/2014	12:00	16:39
25/10/2014	27/10/2014	27/10/2014	17:00	13:21	25/10/2014	31/10/2014	12:00	17:29
26/10/2014	27/10/2014	27/10/2014	17:00	15:33	26/10/2014	31/10/2014	12:00	09:24
27/10/2014	28/10/2014	28/10/2014	17:00	15:55	27/10/2014	03/11/2014	12:00	08:17
28/10/2014	29/10/2014	29/10/2014	17:00	15:32	28/10/2014	04/11/2014	12:00	08:02
29/10/2014	30/10/2014	30/10/2014	17:00	16:44	29/10/2014	05/11/2014	12:00	08:25
30/10/2014	31/10/2014	31/10/2014	17:00	15:59	30/10/2014	06/11/2014	12:00	08:23
31/10/2014	03/11/2014	03/11/2014	17:00	11:54	31/10/2014	07/11/2014	12:00	11:57

Table 27 - Settlement Runs

12 Appendix E: Imperfections Charge

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

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

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

Date	Constraints Payments	Uninstructed Imbalances Payments	Imperfections Charges
01/10/2014	€255,218.76	01/10/2014	€255,218.76
02/10/2014	€741,941.62	02/10/2014	€741,941.62
03/10/2014	€645,961.44	03/10/2014	€645,961.44
04/10/2014	€485,051.92	04/10/2014	€485,051.92
05/10/2014	€828,638.88	05/10/2014	€828,638.88
06/10/2014	€676,333.62	06/10/2014	€676,333.62
07/10/2014	€285,565.00	07/10/2014	€285,565.00
08/10/2014	€313,745.13	08/10/2014	€313,745.13
09/10/2014	€296,920.57	09/10/2014	€296,920.57
10/10/2014	€445,959.21	10/10/2014	€445,959.21
11/10/2014	€368,184.59	11/10/2014	€368,184.59
12/10/2014	€474,905.89	12/10/2014	€474,905.89
13/10/2014	€396,776.55	13/10/2014	€396,776.55
14/10/2014	€440,295.93	14/10/2014	€440,295.93
15/10/2014	€452,825.91	15/10/2014	€452,825.91
16/10/2014	€364,665.45	16/10/2014	€364,665.45
17/10/2014	€511,329.46	17/10/2014	€511,329.46
18/10/2014	€1,076,598.39	18/10/2014	€1,076,598.39
19/10/2014	€525,822.16	19/10/2014	€525,822.16
20/10/2014	€566,846.26	20/10/2014	€566,846.26
21/10/2014	€718,297.80	21/10/2014	€718,297.80
22/10/2014	€658,161.51	22/10/2014	€658,161.51
23/10/2014	€295,391.18	23/10/2014	€295,391.18
24/10/2014	€530,067.10	24/10/2014	€530,067.10
25/10/2014	€926,502.85	25/10/2014	€926,502.85
26/10/2014	€855,273.14	26/10/2014	€855,273.14
27/10/2014	€743,116.03	27/10/2014	€743,116.03
28/10/2014	€557,378.46	28/10/2014	€557,378.46
29/10/2014	€810,167.40	29/10/2014	€810,167.40
30/10/2014	€687,785.71	30/10/2014	€687,785.71
31/10/2014	€518,502.39	31/10/2014	€518,502.39

Table 28 - Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges
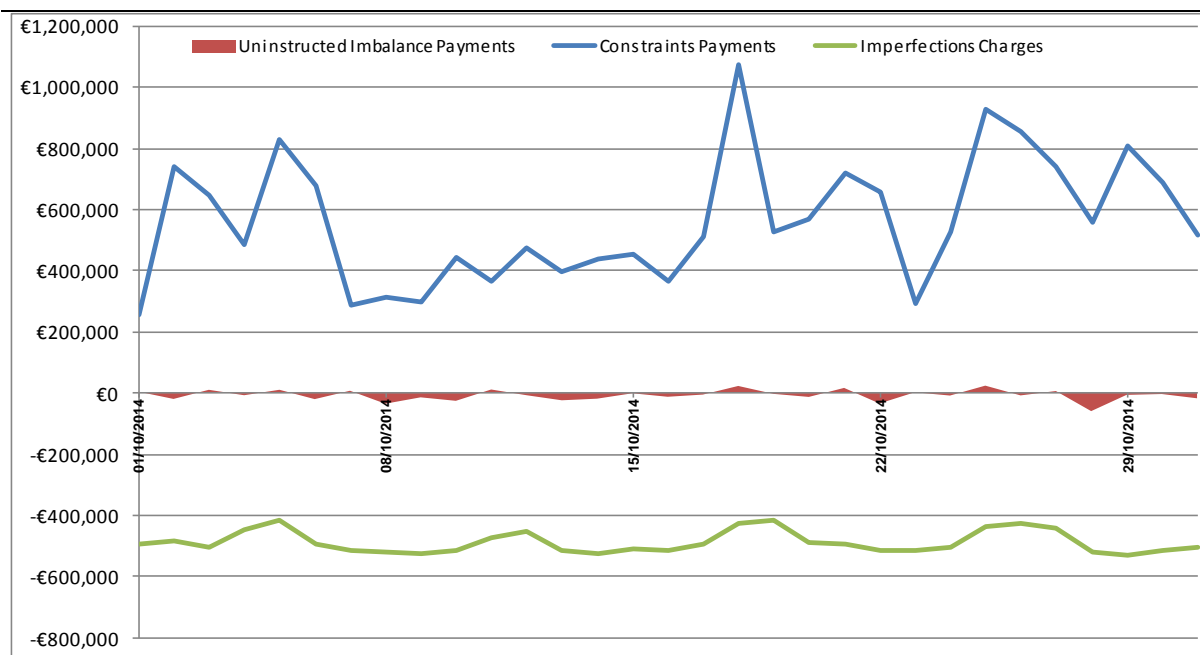
Figure 24 - Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges

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

Table 29 - Make Whole Payments
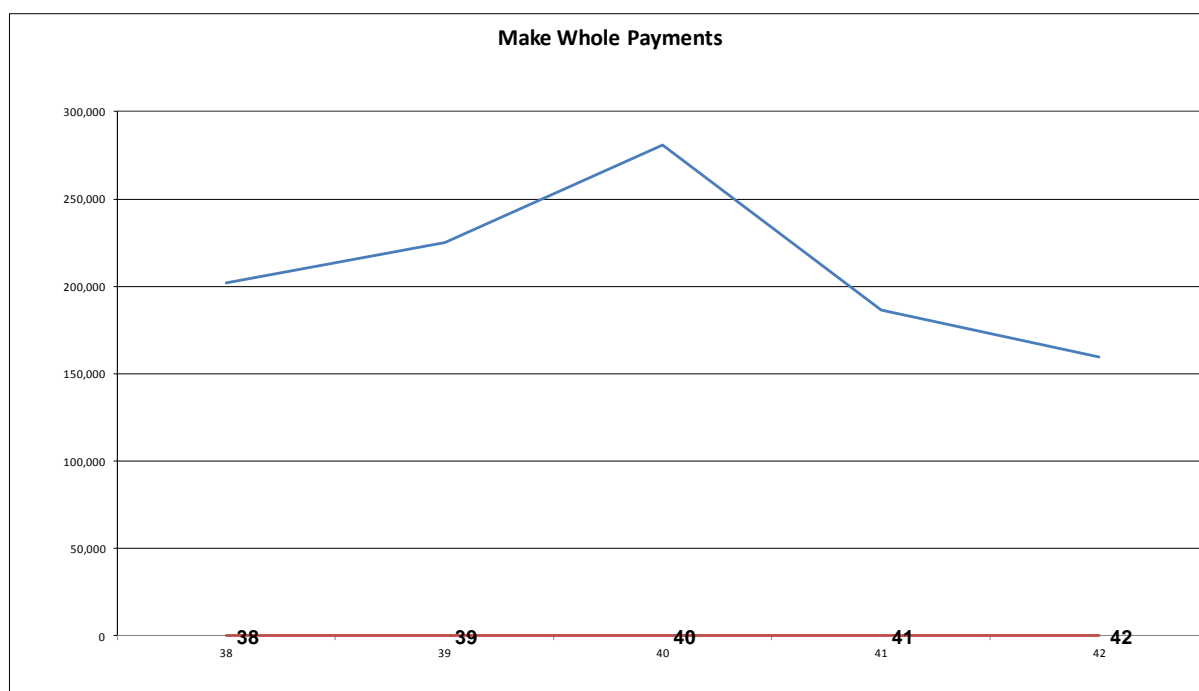
Figure 25 - Make Whole Payments

Week No	Testing Charges
39	-€64,349.25
40	-€23,212.88
41	-€8,173.18
42	-€106,220.13

Table 25 - Testing Charges
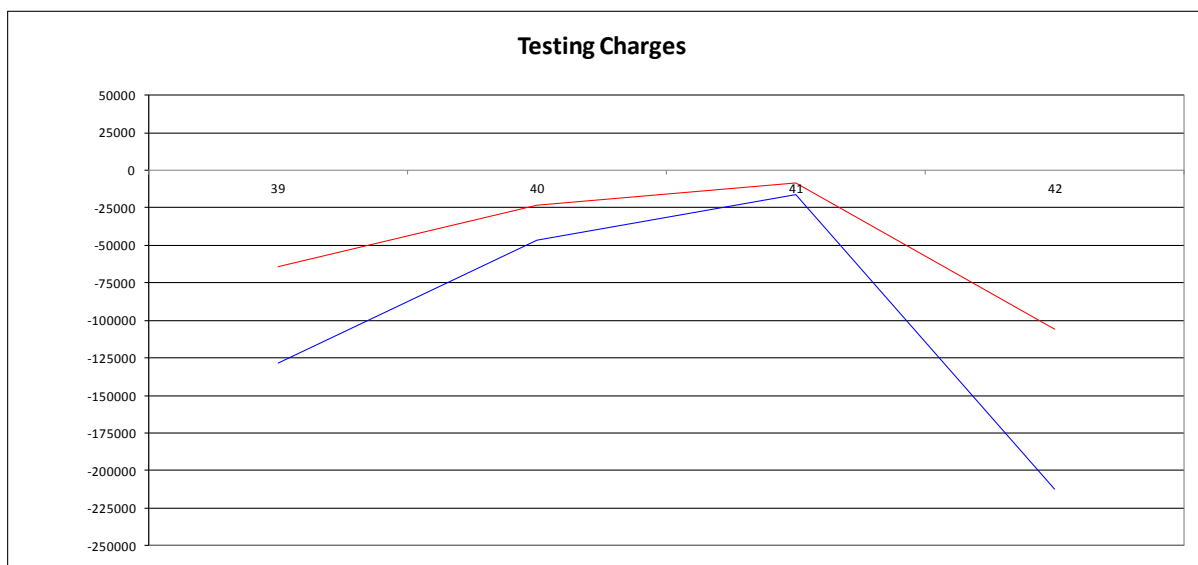
Figure 26 - Testing Charges

13 Appendix F: Default Commercial Offer Data Used

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

| PNAME	RNAME	Manual	Adjusted	Standing	COUNT
PT_400090	DSU_401270	34			34
PT_400101	DSU_401300			9	9
PT_400101	DSU_401300	22			22
PT_400106	DSU_401330	38			38
PT_400116	DSU_401400	31			31
PT_400124	DSU_401490	18			18
PT_400133	DSU_401530			31	31
PT_400090	DSU_401610	32			32
PT_400090	DSU_401620			1	1
PT_400090	DSU_401620	30			30
PT_400021	GU_400021			31	31
PT_400021	GU_400050			31	31
PT_400021	GU_400060			31	31
PT_400021	GU_400070			31	31
PT_400021	GU_400080			31	31
PT_400024	GU_400120	31			31
PT_400024	GU_400121	31			31
PT_400025	GU_400130			31	31
PT_400026	GU_400140	31			31
PT_400030	GU_400180	50			50
PT_400030	GU_400181	45			45
PT_400030	GU_400182	50			50
PT_400030	GU_400183	50			50
PT_400030	GU_400200	40			40
PT_400030	GU_400201	41			41
PT_400030	GU_400202	43			43
PT_400030	GU_400203	41			41
PT_400030	GU_400210	40			40
PT_400030	GU_400211	40			40
PT_400030	GU_400220	40			40
PT_400030	GU_400221	40			40
PT_400030	GU_400240	41			41
PT_400030	GU_400250	41			41
PT_400030	GU_400251	41			41
PT_400030	GU_400252	41			41
PT_400030	GU_400260	41			41
PT_400030	GU_400270	45			45
PT_400030	GU_400271	40			40
PT_400030	GU_400272	41			41
PT_400030	GU_400280	40			40
PT_400030	GU_400281	40			40
PT_400030	GU_400290	40			40
PT_400030	GU_400300	50			50
PT_400030	GU_400310			31	31

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PT_400030	GU_400311	50				50
PT_400030	GU_400323	52				52
PT_400030	GU_400360	40				40
PT_400030	GU_400361	40				40
PT_400030	GU_400362	40				40
PT_400030	GU_400363	40				40
PT_400030	GU_400370	40				40
PT_400032	GU_400430	31				31
PT_400035	GU_400480	55				55
PT_400037	GU_400500	31				31
PT_400041	GU_400530	55				55
PT_400044	GU_400540	55				55
PT_400038	GU_400550				31	31
PT_400021	GU_400591				31	31
PT_400021	GU_400600				31	31
PT_400054	GU_400620	31				31
PT_400055	GU_400630	31				31
PT_400050	GU_400650				31	31
PT_400050	GU_400660				31	31
PT_400062	GU_400730				31	31
PT_400064	GU_400750	31				31
PT_400064	GU_400751	31				31
PT_400064	GU_400752	31				31
PT_400064	GU_400753	31				31
PT_400064	GU_400754	31				31
PT_400064	GU_400760	31				31
PT_400064	GU_400761	31				31
PT_400064	GU_400762	31				31
PT_400064	GU_400770	31				31
PT_400064	GU_400771	31				31
PT_400064	GU_400780	31				31
PT_400064	GU_400781	31				31
PT_400062	GU_400840				31	31
PT_400030	GU_400850	50				50
PT_400021	GU_400910				31	31
PT_400021	GU_400920				31	31
PT_400075	GU_400930	75				75
PT_400034	GU_400940	31				31
PT_400077	GU_400950	31				31
PT_400050	GU_401000				31	31
PT_400078	GU_401011	31				31
PT_400050	GU_401060				31	31
PT_400021	GU_401080				31	31
PT_400034	GU_401090	31				31
PT_400082	GU_401100				31	31
PT_400050	GU_401150				31	31
PT_400087	GU_401230				31	31
PT_400050	GU_401240				31	31
PT_400050	GU_401250				31	31
PT_400050	GU_401290				31	31
PT_400062	GU_401310				31	31
PT_400021	GU_401380				31	31

PT_400034	GU_401440	31			31
PT_400062	GU_401550			31	31
PT_400062	GU_401551			31	31
PT_400062	GU_401560			31	31
PT_400062	GU_401570			31	31
PT_400062	GU_401580			31	31
PT_400021	GU_401600			31	31
PT_400021	GU_401640			31	31
PT_500021	GU_500010			31	31
PT_500024	GU_500040	37			37
PT_500024	GU_500041	31			31
PT_500027	GU_500130	87			87
PT_500027	GU_500131	87			87
PT_500027	GU_500140	87			87
PT_500032	GU_500211			31	31
PT_500039	GU_500270			31	31
PT_500040	GU_500280	31			31
PT_500040	GU_500281	31			31
PT_500040	GU_500282	31			31
PT_500040	GU_500283	32			32
PT_500040	GU_500284	31			31
PT_500044	GU_500720			31	31
PT_500021	GU_500740			31	31
PT_500047	GU_500790			31	31
PT_500045	GU_500820	31			31
PT_500045	GU_500821	31			31
PT_500045	GU_500822	31			31
PT_500045	GU_500823	31			31
PT_500045	GU_500824	31			31
PT_500045	GU_500825	31			31
PT_500050	GU_501040	31			31
PT_500050	GU_501050	31			31
PT_500032	GU_501120			31	31
PT_500053	GU_501130	31			31
PT_500050	GU_501150	31			31
PT_500021	GU_501160			31	31
PT_500061	GU_501170			31	31
PT_500062	GU_501180			31	31
PT_500050	GU_501190	31			31
PT_500066	GU_501210	31			31
PT_500073	GU_501230	30			30
PT_500073	GU_501230			2	2
PT_500074	GU_501250			31	31
PT_500024	I_NIMOYLE	67			67
PT_500075	I_NIMOYLE	72			72
PT_500021	I_NIMOYLE	34			34
PT_500069	I_NIMOYLE		1		1
PT_500058	I_NIMOYLE	44			44
PT_500069	I_NIMOYLE	90			90
PT_500031	I_NIMOYLE	31			31
PT_500037	I_NIMOYLE	31			31
PT_500070	I_NIMOYLE	66			66

PT_400021	I_ROIEWIC	31			31
PT_400114	I_ROIEWIC	31			31
PT_400113	I_ROIEWIC	43			43
PT_400096	I_ROIEWIC	89			89
PT_400136	I_ROIEWIC	40			40
PT_400115	I_ROIEWIC	31			31
PT_400108	I_ROIEWIC	67			67
PT_400096	I_ROIEWIC		1		1
PT_400099	I_ROIEWIC	31			31
PT_400030	I_ROIEWIC	66			66
	Total	**4397**	**2**	**1469**	**5868**
	Percentage	**74.93%**	**0.03%**	**25.03%**	**100%**

Table 30 - Default Commercial Data Used

14 Appendix G: Total Charges and Payments Data

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

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

Market		Energy	Capacity	Market Operator	M+4 Energy	M+4 Capacity	M+4 Market Operator	M+13 Energy	M+13 Capacity	M+13 Market Operator	Ad-hoc Energy	Ad-hoc Capacity	Ad-hoc Market Operator	Total
Jul-13	ROI	£62,352,631.32	£18,204,333.81	£1,583,236.61	£975,631.58	£172,502.45	£7,848.20	£63,562.31	£16,373.37	£690.66	£904,389.43	£100,791.99	£0.00	84,381,991.73
	NI	£23,916,092.51	£6,533,901.21	£432,681.38	£92,026.95	£16,773.81	£694.39	£14,400.35	£3,081.82	£130.14	£204,040.13	£152.19	£0.00	31,213,974.88
Aug-13	ROI	£56,496,937.96	£18,035,531.87	£1,912,592.26	£627,109.44	£97,756.86	£9,727.88	£15,214,588.11	£12,273.00	£808.64	£0.00	£0.00	£0.00	92,407,326.02
	NI	£27,126,182.07	£5,775,203.97	£544,995.28	£40,928.60	£52,444.19	£3,674.11	£6,235,909.64	£5,483.53	£223.46	£0.00	£0.00	£0.00	39,785,044.85
Sep-13	ROI	£55,820,919.05	£17,453,995.09	£1,590,840.77	£871,046.03	£104,726.26	£5,239.42	£999,727.04	£165,703.71	£11,019.16	£0.00	£324,142.04	£0.00	77,347,358.57
	NI	£24,090,106.60	£5,421,565.87	£449,859.41	£232,772.49	£25,268.64	£1,265.21	£119,141.06	£13,356.37	£112.60	£0.00	£78,558.74	£0.00	30,432,006.99
Oct-13	ROI	£63,823,874.40	£19,230,805.66	£1,459,680.53	£665,669.95	£112,389.91	£4,962.50	£1,056,400.80	£25,936.14	£883.81	£1,141,610.70	£0.00	£0.00	87,522,214.40
	NI	£25,790,053.14	£5,439,039.21	£415,013.56	£77,362.24	£11,759.56	£437.51	£286,637.75	£5,978.86	£356.54	£375,245.80	£0.00	£0.00	32,401,884.17
Nov-13	ROI	£94,237,410.27	£26,111,830.04	£1,768,924.89	£1,095,479.88	£186,255.41	£10,667.03	£1,203,541.15	£58,436.00	£1,881.53	£2,162,845.35	£0.00	£0.00	126,837,271.55
	NI	£40,120,956.32	£9,383,627.04	£512,345.05	£79,171.25	£13,455.28	£753.82	£304,333.70	£18,778.73	£614.32	£591,913.98	£0.00	£0.00	51,025,949.49
Dec-13	ROI	£59,731,699.86	£27,864,400.43	£1,135,385.04	£777,997.00	£175,711.33	£8,515.85	£874,795.89	£44,746.05	£1,825.43	£0.00	£0.00	£0.00	90,615,076.88
	NI	£26,108,999.75	£9,220,782.35	£325,646.22	£58,193.58	£77,917.35	£571.58	£137,253.25	£14,599.87	£487.47	£0.00	£0.00	£0.00	35,944,451.42
Jan-14	ROI	£114,421,340.65	£24,793,160.86	£2,129,762.27	£798,055.27	£127,352.61	£7,984.34	£204,139.96	£36,418.59	£1,561.86	£473,584.35	£0.00	£0.00	142,993,360.76
	NI	£51,824,850.54	£9,142,377.84	£617,870.56	£62,006.75	£10,003.11	£595.49	£67,335.86	£14,491.45	£574.85	£141,821.26	£0.00	£0.00	61,881,927.71
Feb-14	ROI	£66,102,607.16	£27,393,747.26	£1,496,376.58	£305,733.65	£76,911.71	£2,819.89	£479,013.35	£22,451.87	£9,128.65	£381,194.91	£0.00	£0.00	96,269,985.03
	NI	£31,130,342.59	£9,846,758.26	£422,869.99	£25,720.60	£3,900.39	£240.37	£187,918.65	£15,303.03	£942.92	£235.51	£0.00	£0.00	41,634,232.31
Mar-14	ROI	£70,041,213.49	£26,285,336.21	£1,449,159.95	£261,906.17	£61,216.38	£2,226.19	£92,283.95	£30,407.22	£960.16	£0.00	£0.00	£0.00	98,224,709.72
	NI	£30,175,818.70	£9,293,564.48	£406,620.40	£46,940.79	£7,639.04	£408.77	£52,408.32	£11,933.67	£470.83	£0.00	£0.00	£0.00	39,995,805.00
Apr-14	ROI	£62,098,778.40	£21,155,742.39	£1,388,175.41	£528,104.58	£142,466.39	£4,901.73	£242,053.48	£38,030.86	£1,783.00	£0.00	£0.00	£0.00	85,600,036.24
	NI	£26,448,426.91	£9,644,850.74	£386,840.18	£307,948.88	£77,962.26	£2,649.15	£53,805.05	£9,613.13	£381.03	£0.00	£0.00	£0.00	36,932,477.33
May-14	ROI	£68,945,192.38	£22,029,381.87	£1,615,436.17	£629,905.18	£213,410.99	£7,659.07	£192,421.65	£21,030.53	£1,110.05	£429,407.30	£0.00	£0.00	94,084,955.19
	NI	£28,649,957.73	£7,313,397.03	£439,831.96	£149,812.37	£34,908.87	£997.82	£58,386.93	£9,959.93	£468.77	£0.03	£0.00	£0.00	36,657,721.44
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	£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
	NI	£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
Sep-14	ROI	£73,166,499.86	£17,774,079.00	£1,638,145.68	£285,506.09	£62,431.70	£3,367.28	£92,320.83	£30,020.38	£728.19	£0.00	£0.00	£0.00	93,053,099.01
	ROI	£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	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
	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

Table 31 - Total Charges by Month

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

Table 32 - Total Payments by Month

15 Appendix H: Full Balancing Costs

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

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

Trading Market

Date Of Invoice	Week No	SEM Balancing Costs	VAT Balancing Costs
03/10/2014	38	-€115,563.34	-€ 12,716.83
10/10/2014	39	€103,327.94	€49,084.94
17/10/2014	40	-€315,014.02	-€ 48,688.42
24/10/2014	41	€234,738.53	€13,856.57
31/10/2014	42	€833,278.35	-€228,026.23

Table 33 – Full Balancing Costs for Trading Charges and Payments

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

Capacity Market

Invoice Month	SEM Balancing Costs	VAT Balancing Costs
October 2014	-€361.28	-€ 968.24

Table 34 - Balancing Costs for Capacity Settlement

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

16 Appendix I: MSP Algorithms

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

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

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

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

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Month	Ex-Ante	Ex-Ante 2	Ex-Post Indicative	Ex-Post Initial	Within Day
January 2014	07/01/2014	-	05/01/2014 19/01/2014	04/01/2014 19/01/2014 21/01/2014	-
February 2014	26/02/2014	-	-	-	-
March 2014	-	26/03/2014 27/03/2014	15/03/2014 27/03/2014	22/03/2014	13/03/2014
April 2014	-	11/04/2014	-	07/04/2014	
May 2014	-	-	-	-	26/05/2014
June 2014	17/06/2014	-	18/06/2014 29/06/2014	-	25/06/2014 26/06/2014
July 2014	-	-	-	02/07/2014 03/07/2014 11/07/2014	-
August 2014	-	13/08/2014 14/08/2014 22/08/2014	14/08/2014	27/08/2014	11/08/2014 13/08/2014
September 2014	-	03/09/2014	16/09/2014 24/09/2014	01/09/2014	-
October 2014	10/10/2014	03/10/2014 15/10/2014 28/10/2014	06/10/2014 13/10/2014 29/10/2014	06/10/2014 13/10/2014 27/10/2014	19/10/2014

Table 35 - MIP Algorithms

Operational Date	Trade Date	Run Type	LR Peak SMP	MIP Peak SMP	Published
04/03/2013	05/03/2013	EA1	€586.55	€301.78	MIP
11/03/2013	11/03/2013	WD1	€629.46	€333.37	MIP
11/03/2013	12/03/2013	EA2	€561.28	€221.27	MIP
12/03/2013	11/03/2013	EP1	€1,350.64	€699.49	MIP

15/03/2013	11/03/2013	EP2	€1,350.64	€699.49	MIP
17/03/2013	18/03/2013	EA1	€576.04	€346.00	MIP
18/03/2013	19/03/2013	EA2	€682.41	€346.00	MIP
19/03/2013	18/03/2013	EP1	€576.04	€372.23	MIP
20/03/2013	24/03/2013	EP2	€625.32	€168.48	MIP
21/03/2013	21/03/2013	WD1	€596.97	€259.45	MIP
27/03/2013	26/03/2013	EP1	€508.83	€265.65	MIP
30/03/2013	30/03/2013	WD1	€556.86	€396.00	MIP
30/03/2013	29/03/2013	EP1	€732.81	€414.64	MIP
30/03/2013	26/03/2013	EP2	€509.19	€265.65	MIP
09/04/2013	09/04/2013	WD1	€710.75	€123.59	MIP
29/04/2013	29/04/2013	WD1	€1000.00	€168.92	MIP
17/06/2013	18/06/2013	EA2	€576.24	€84.08	MIP
16/07/2013	16/07/2013	WD1	583.17	48.11	MIP
29/07/2013	25/07/2013	EP2	€591.29	€97.59	MIP
05/08/2013	05/08/2013	WD1	€1,000	€47.02	MIP
12/08/2013	13/08/2013	EA2	€591.14	€91.37	MIP
15/08/2013	14/08/2013	EP1	€590.51	€79.91	MIP
03/09/2013	03/09/2013	WD1	€591.42	€96.56	MIP
06/09/2013	05/09/2013	EP1	€598.70	€116.29	MIP
16/09/2013	12/09/2013	EP2	€1000.00	€313.90	MIP
23/09/2013	24/09/2013	EA2	€609.58	€98.56	MIP
30/09/2013	30/09/2013	WD1	-€100.00	€31.47	MIP
11/10/2013	07/10/2013	EP2	€1000.00	€77.71	MIP
28/10/2013	24/10/2013	EP2	€517.40	€517.40	MIP
31/10/2013	30/10/2013	EP1	€596.88	€363.43	MIP
03/11/2013	30/10/2013	EP2	€596.88	€363.43	MIP
15/11/2013	14/11/2013	EP1	€555.85	€511.00	MIP
18/11/2013	14/11/2013	EP2	€679.09	€511.00	MIP
17/11/2013	17/11/2013	WD1	€638.64	€572.75	MIP
21/11/2013	20/11/2013	EP1	€ -100.00	€268.28	MIP
30/11/2013	30/11/2013	WD1	€568.78	€283.21	MIP
01/12/2013	02/12/2013	EA1	€569.78	€264.13	MIP
01/12/2013	02/12/2013	EA2	€569.78	€265.85	MIP
02/12/2013	02/12/2013	WD1	€651.62	€243.25	MIP
02/12/2013	03/12/2013	EA1	€1000.00	€311.25	MIP
21/12/2013	21/12/2013	WD1	€637.14	€308.15	MIP
23/12/2013	19/12/2013	EP2	€633.99	€371.89	MIP
08/01/2014	04/01/2014	EP2	€683.07	€550.00	MIP
06/01/2014	05/01/2014	EP1	€683.07	€550.86	MIP
06/01/2014	07/01/2014	EA1	€609.67	€238.04	MIP
20/01/2014	19/01/2014	EP1	€678.86	€592.00	MIP
23/01/2014	19/01/2014	EP2	€678.86	€592.00	MIP
25/01/2014	21/01/2014	EP2	€683.13	€405.24	MIP
26/02/2014	27/02/2014	EA1	€567.34	€172.40	MIP
13/03/2014	09/03/2014	EP2	€1000.00	€359.19	MIP
15/03/2014	15/03/2014	WD1	€1166.98	€101.84	MIP
22/03/2014	21/03/2014	EP1	€583.98	€337.87	MIP
26/03/2014	27/03/2014	EA2	€1000.00	€337.87	MIP
27/03/2014	27/03/2014	WD1	€1000.00	€486.54	MIP
27/03/2014	28/03/2014	EA2	€1000.00	€179.49	MIP
10/04/2014	11/04/2014	EA2	€539.67	€143.88	MIP
03/04/2014	07/04/2014	EP2	€573.67	€670.25	MIP
26/05/2014	26/05/2014	WD1	€578.28	€301.71	MIP

16/06/2014	17/06/2014	EA1	€562.05	€534.28	MIP
19/06/2014	18/06/2014	EP1	€551.50	€526.61	MIP
30/06/2014	29/06/2014	EP1	€1,000	€956.83	MIP
25/06/2014	25/06/2014	WD1	€930.72	€57.32	MIP
26/06/2014	26/06/2014	WD1	€1,000	€69.50	MIP
02/07/2014	28/06/2014	EP2	€1,000	€338.00	MIP
03/07/2014	29/06/2014	EP2	€1,000	€955.38	MIP
11/07/2014	07/07/2014	EP2	€1,000	€288.48	MIP
11/08/2014	11/08/2014	WD1	€1,000	€68.49	MIP
12/08/2014	13/08/2014	EA2	€1,000	€56.21	MIP
13/08/2014	13/08/2014	WD1	€1,000	€114.89	MIP
13/08/2014	14/08/2014	EA2	€1,000	€377.59	MIP
15/08/2014	14/08/2014	EP1	€1,000	€113.79	MIP
21/08/2014	22/08/2014	EA2	€1,000	€114.35	MIP
31/08/2014	27/08/2014	EP2	-€100	€52.30	MIP
02/09/2014	03/09/2014	EA2	€1,000	€330.00	MIP
17/09/2014	16/09/2014	EP1	€1,000	€188.70	MIP
25/09/2014	24/09/2014	EP1	€1,000	€87.77	MIP
05/09/2014	01/09/2014	EP2	€1,000	€492.00	MIP
02/10/2014	03/10/2014	EA2	€1,000	€298.79	MIP
07/10/2014	06/10/2014	EP1	€1,000	€287.16	MIP
10/10/2014	06/10/2014	EP2	€1,000	€288.65	MIP
09/10/2014	10/10/2014	EA1	€1,000	€338.11	MIP
14/10/2014	13/10/2014	EP1	€1,000	€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	€1,000	€255.85	MIP
30/10/2014	29/10/2014	EP1	€1,000	€436.71	MIP

Table 36 - MIP Vs LR Peak Price Comparison