



Market Operator Monthly Report

February 2016

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1. Executive Summary

This Single Electricity Market Operator's (SEMO) report covers the month of operation of February 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 February 2016, Settlements had two late publications as per the Trading and Settlement code.

184 general queries were received in February 2016. During the same period 178 general queries were resolved.

There were 10 defaults by Participants during February 2016. The largest of these was an Capacity Initial invoice for €10280.47 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	-	-
	Funds Transfer	10	-
	Credit Risk Management	-	-
SEMO	Pricing & Scheduling	-	1
	Settlement	-	1
	Funds Transfer	-	-
	Credit Risk Management	-	-
	Other	-	-
Total		10	2

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.

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Joining and Terminating Parties and Units

No parties joined the Market in February 2016.

There were no terminating parties in February 2016.

There were two new units effective in the Market in February 2016.

- PT_400171/ PT_400171_I_RIEWIC – Neas Energy A/S
- PT_500092/ PT_500092_I_NIMOYLE – Neas Energy A/S

There were no units which de-registered from the Market in February 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

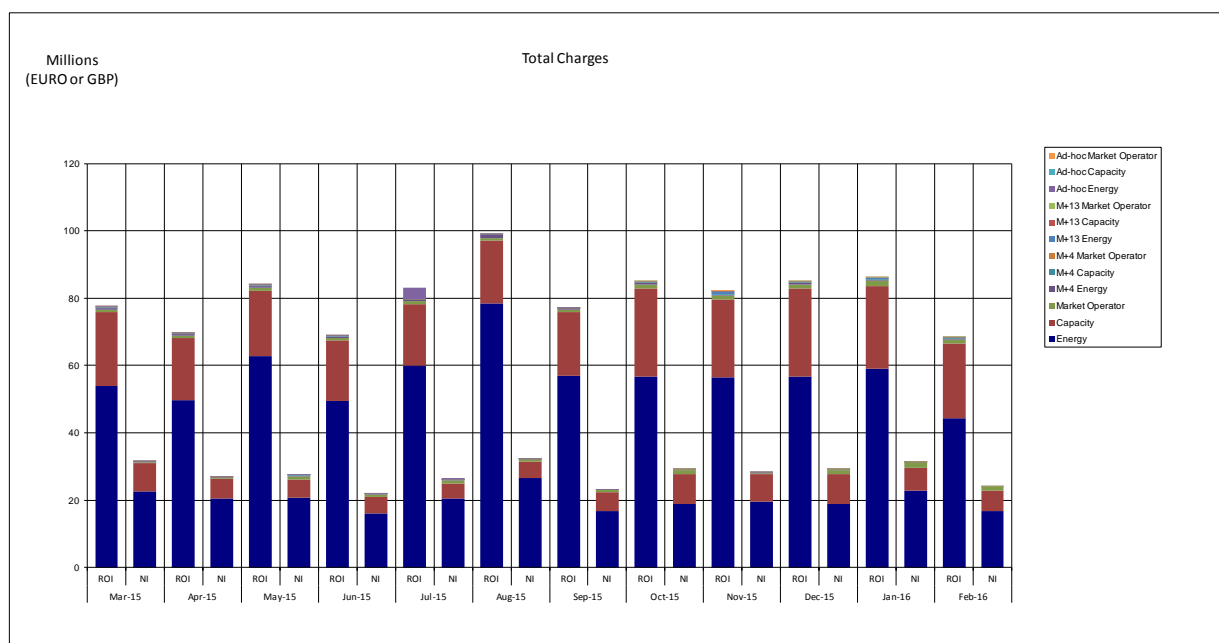


Figure 1 - Total Charges for Each Currency

Market	February 2016	
	ROI	NI
Energy	€44,227,778	£16,675,396
Capacity	€22,236,309	£6,086,547
Market Operator	€1,235,987	£1,187,220
M+4 Energy	€320,700	£53,341
M+4 Capacity	€111,579	£16,689
M+4 Market Operator	€2,310	£278
M+13 Energy	€168,671	£11,015
M+13 Capacity	€16,769	£3,949
M+13 Market Operator	€473	£76
Ad-hoc Energy	€0	£0
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
Total	€68,320,576	£24,034,510

Table 2 - Total Charges for Each Currency

Notes relating to Table 2 and 3:

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

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Total Payments for Each Currency

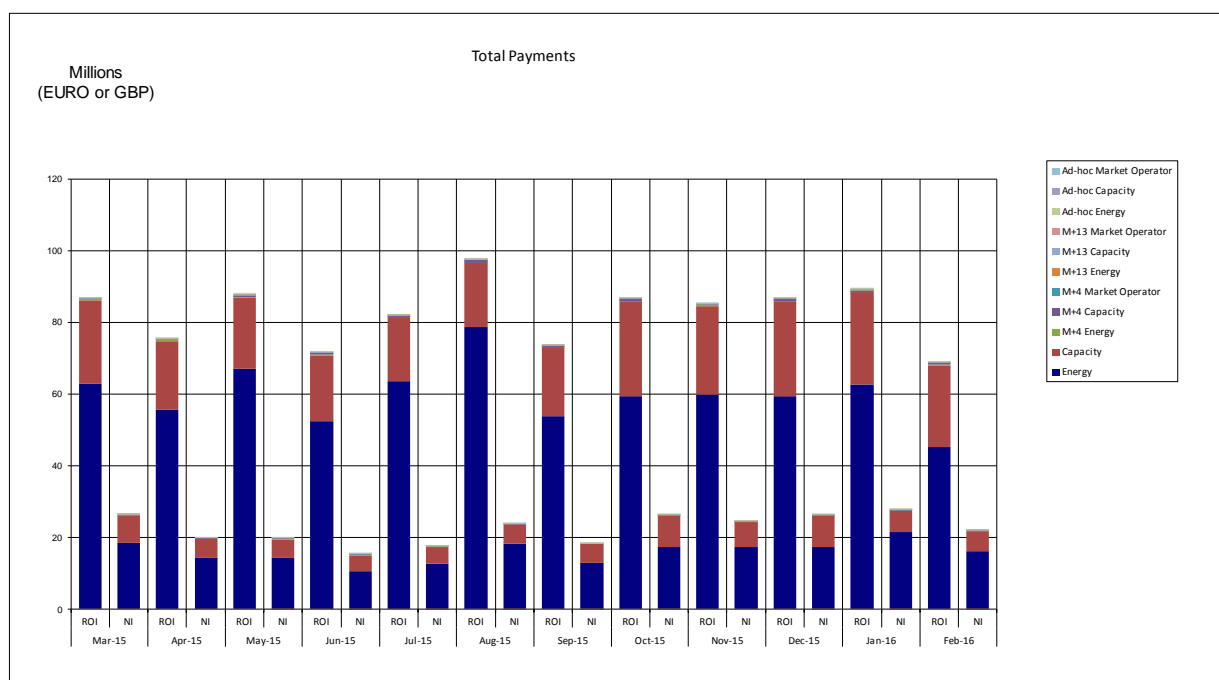


Figure 2 - Total Payments for Each Currency

Market	February 2016	
	ROI	NI
Energy	€45,263,558	£16,138,573
Capacity	€22,785,032	£5,672,215
M+4 Energy	€71,205	£22,437
M+4 Capacity	€469,505	£24,124
M+4 Market Operator	€120,827	£9,214
M+13 Energy	€2,299	-£276
M+13 Capacity	€168,671	£11,015
M+13 Market Operator	€17,162	£3,591
Ad-hoc Energy	€409	£59
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
Total	€68,898,667	€21,880,952

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:

February 2016	
Imbalance (Energy Only)	-€3,997,553.125

Table 4 - Balancing Costs for Energy Settlement

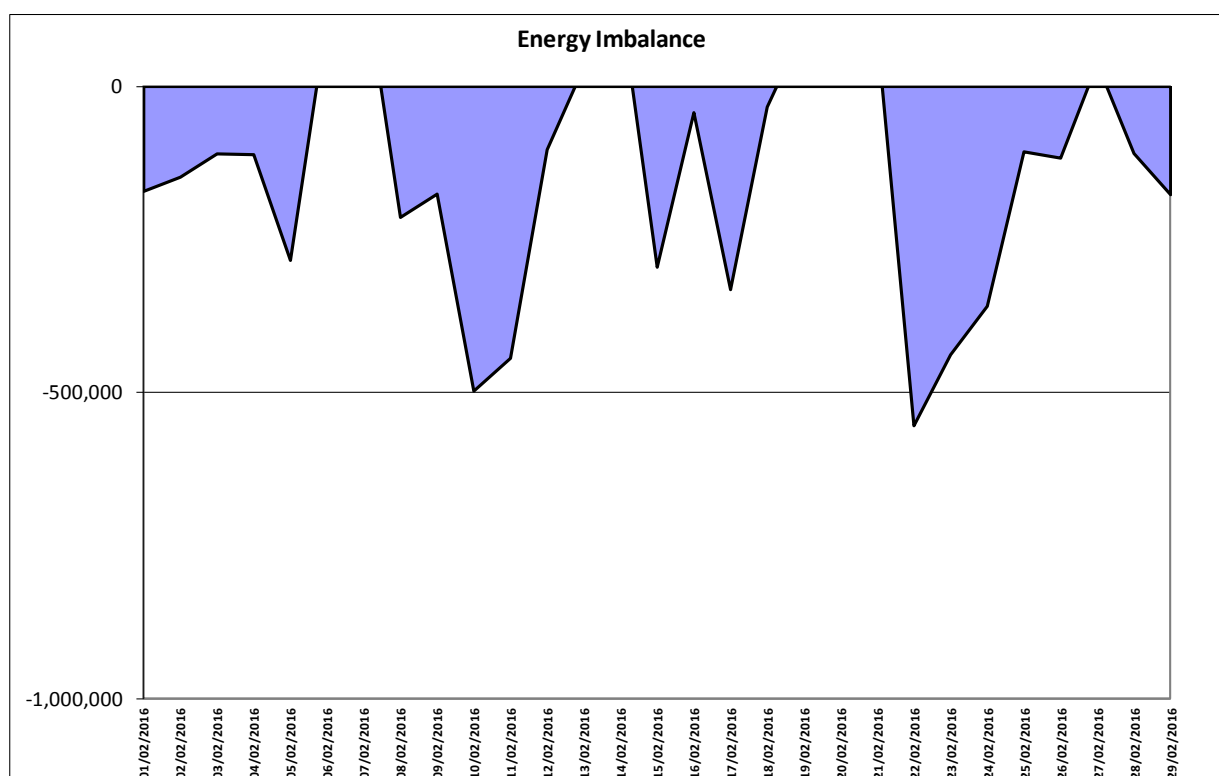


Figure 3 – Energy Imbalances

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

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

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

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In tables 5 and 6 below:

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

Date Of Invoice	Week No	SEM Balancing Costs	VAT Balancing Costs
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

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:

February 2016	
Capacity Charges	-€49,082,609.14
Capacity Payments	€49,082,284.56
Balancing Costs	-€324.58
VAT	€0

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)

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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
30/01/2016	05/02/2016	4	£18,853.64	£-	£18,853.64
06/02/2016	12/02/2016	5	-£23,182.66	£1,840.00	-£21,342.66
13/02/2016	19/02/2016	6	£38,171.11	£-	£38,171.11
20/02/2016	26/02/2016	7	£3,165.71	£12,000.00	£15,165.71

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 £38,171.11 and a cost of -£21,342.66. Whether Currency Costs are a cost or benefit to Participants is directly related to whether the currency is rising or falling between the billing period, invoice date and payment dates.

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

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

Date Of Invoice	Capacity Month	Currency Costs For Capacity Settlement
09/02/2016	Feb 2016	-£22,712.77

Table 8 - Total Currency Costs for Capacity Payments and Charges

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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
€79,405,485.83	-€2,205,062.04	€1,140,735.66	-€64,629,781.28

Table 9 – Cumulative Imperfections Costs Vs Budget

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

This is demonstrated in the figure below.

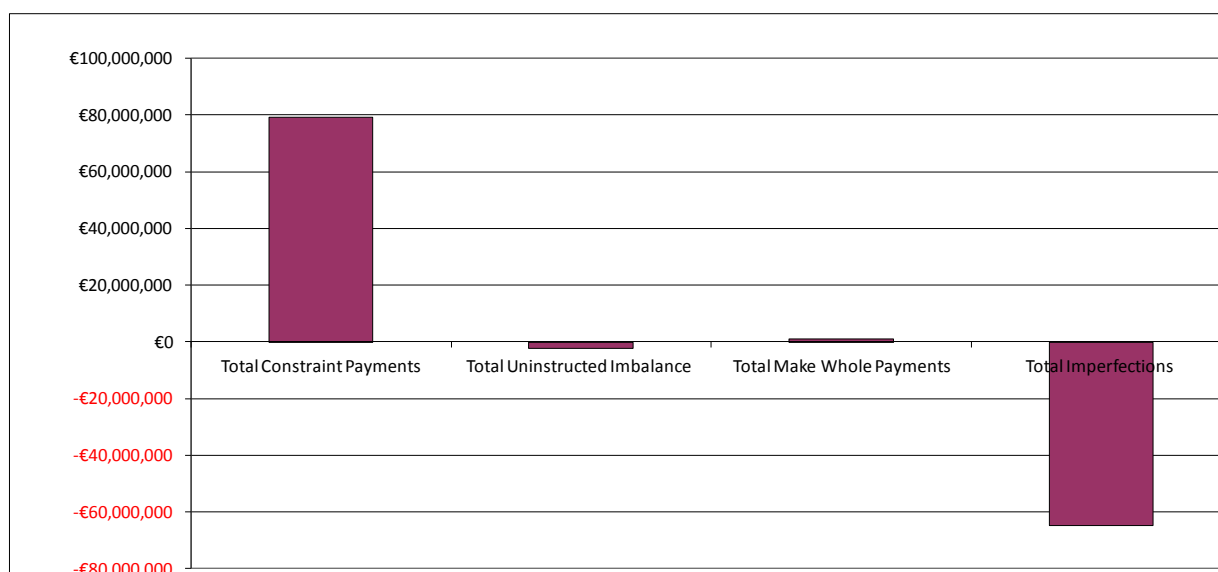


Figure 4 - Cumulative Imperfections Costs Vs Budget

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

Financial Changes between Initial Settlement and Subsequent Reruns

The following graphs provide a breakdown of resettlement amounts for the M+4 resettlement period of October 2015 and M+13 resettlement period of January 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

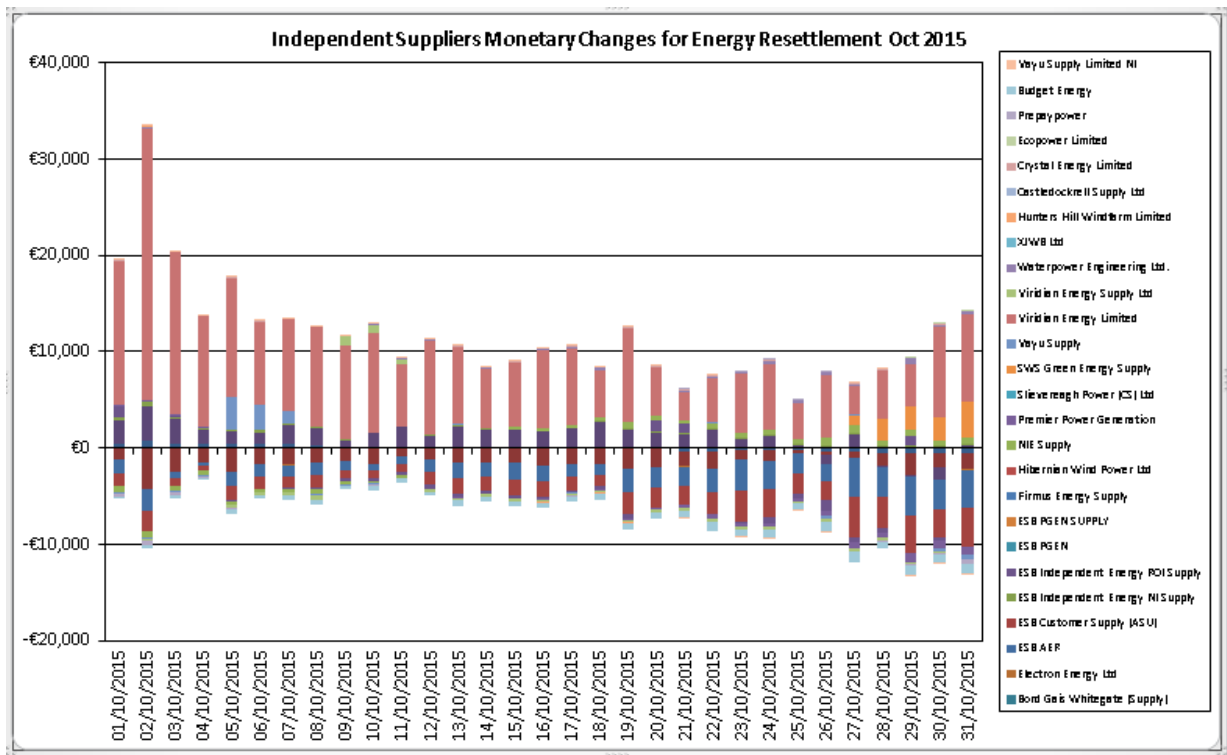


Figure 5 – Independent Suppliers Monetary Changes for Energy Resettlement – Oct 2015

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

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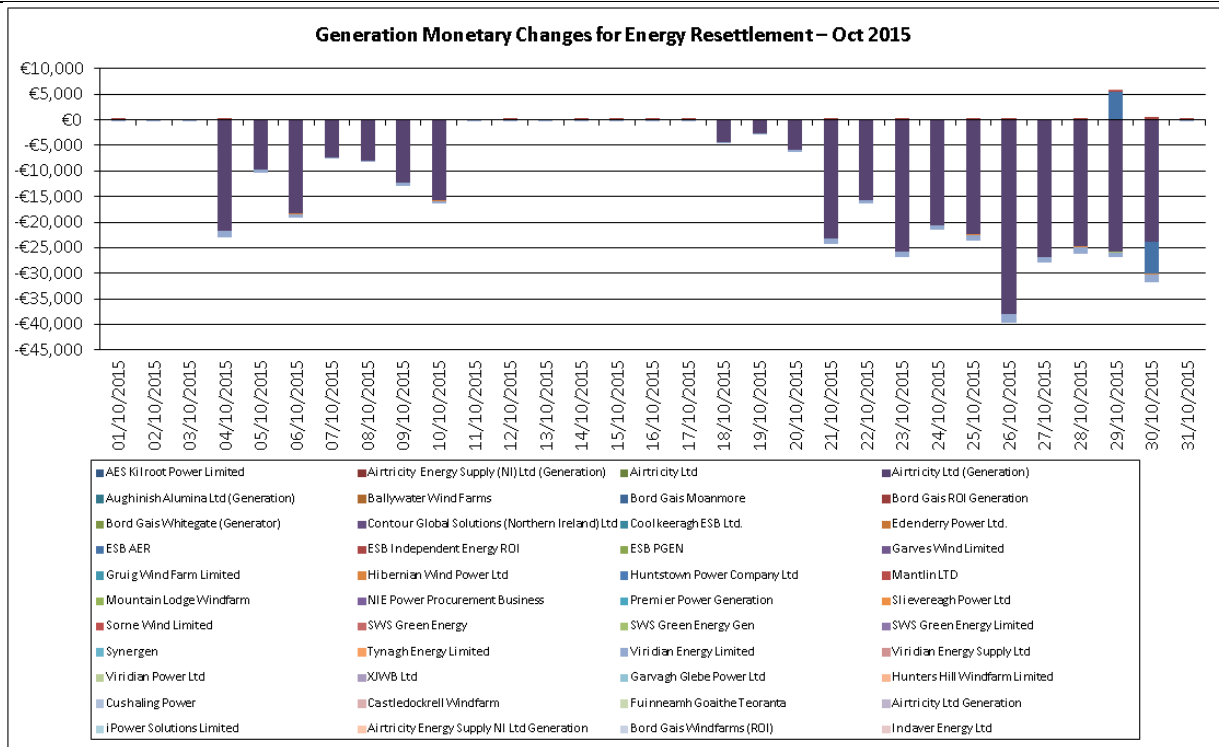


Figure 6 – Generation Monetary Changes for Energy Resettlement – Oct 2015

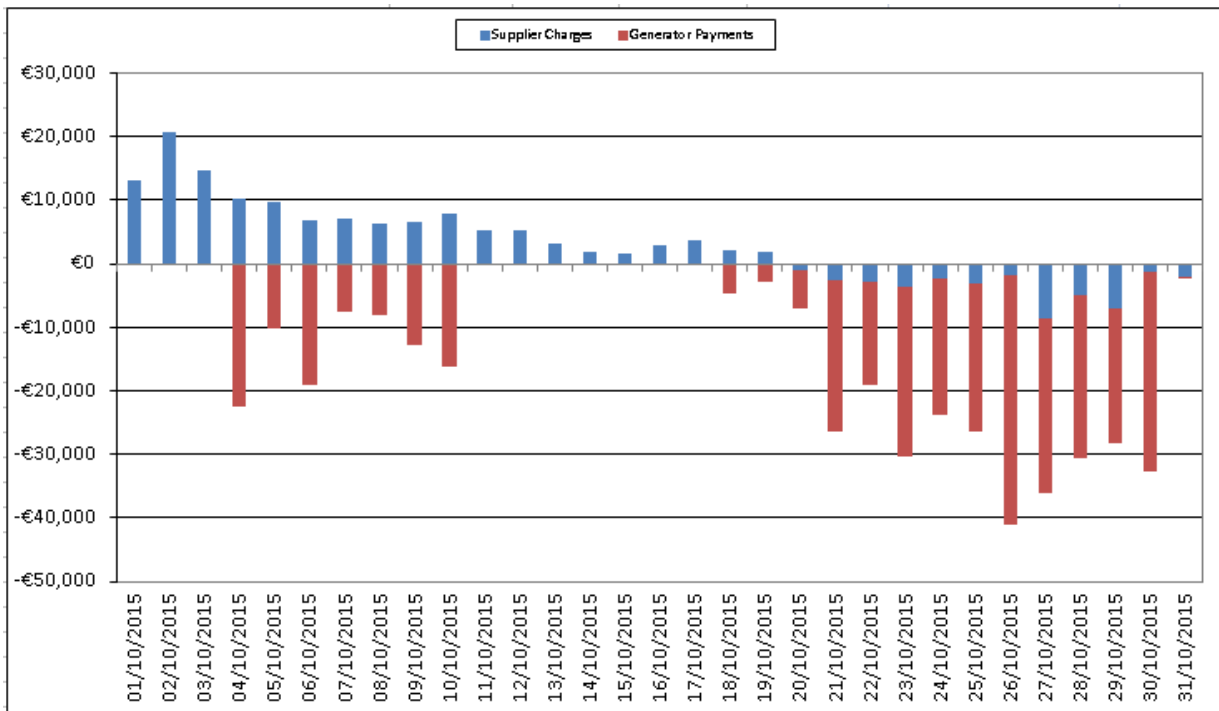


Figure 7 – Total Monetary Changes for Energy Resettlement – Oct 2015

M+13 Resettlement

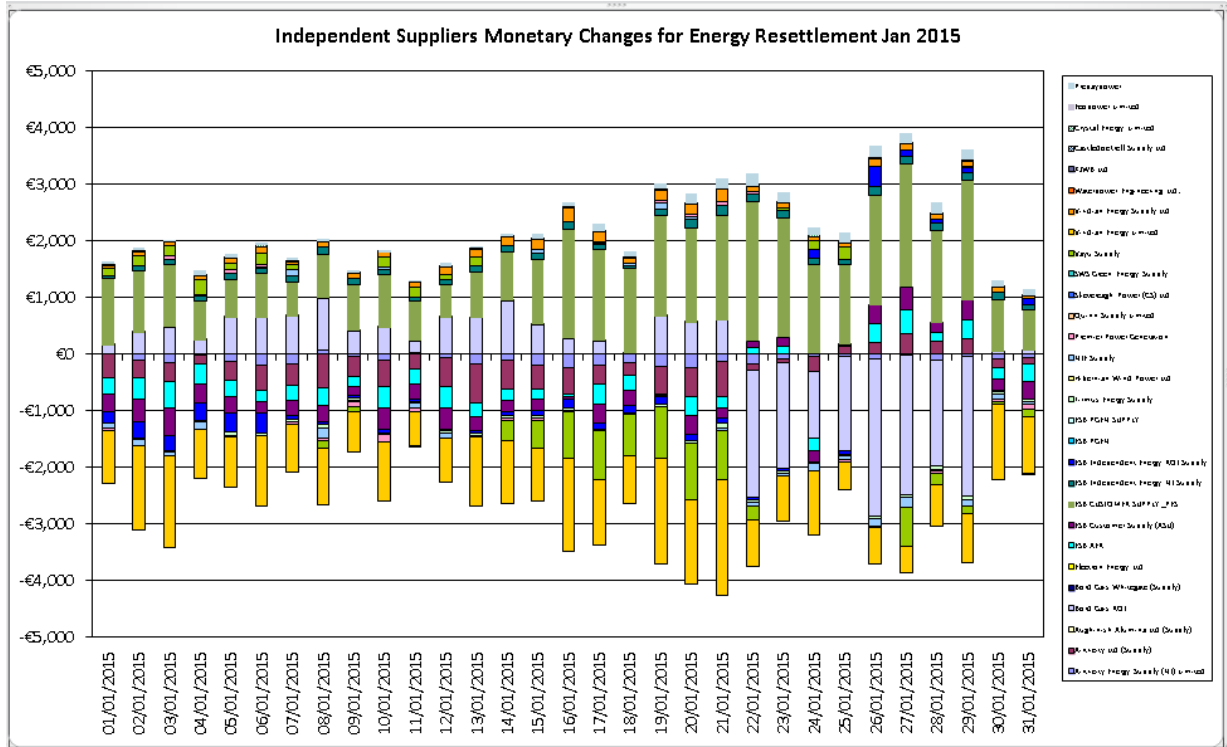


Figure 8 - Independent Suppliers Monetary Changes for Energy Resettlement – Jan 2015

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

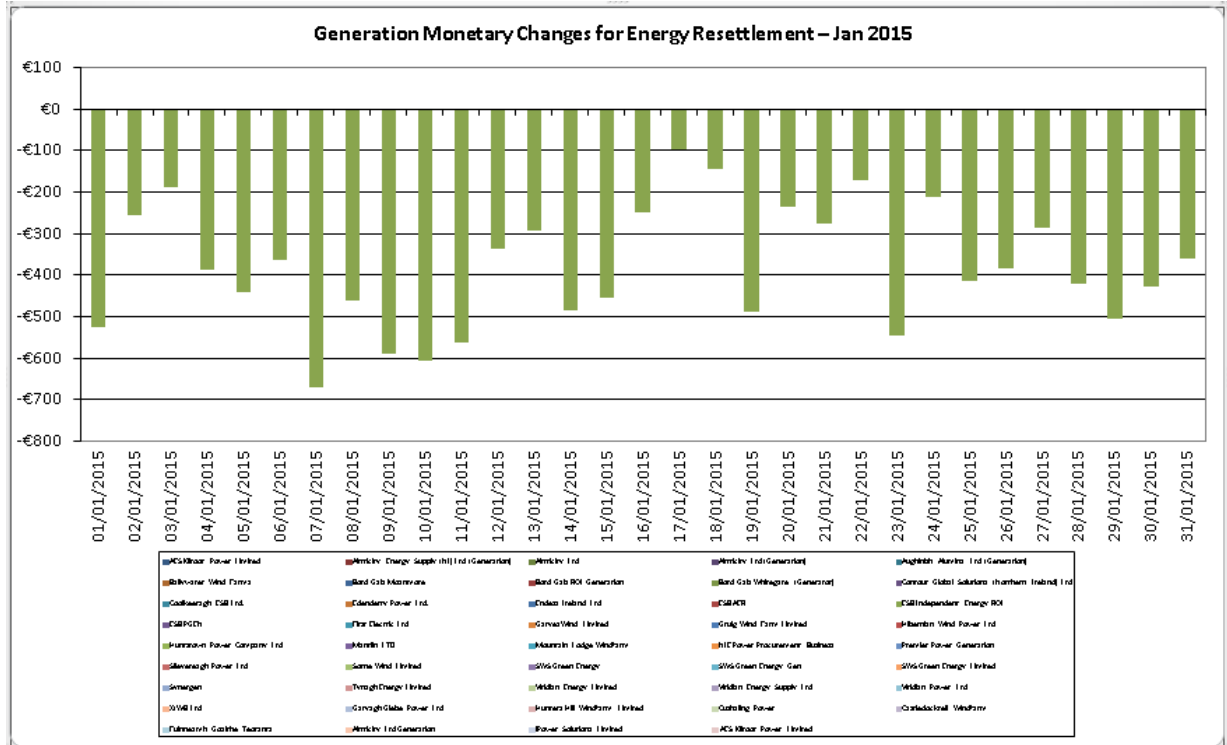


Figure 9 - Generation Monetary Changes for Energy Resettlement – Jan 2015

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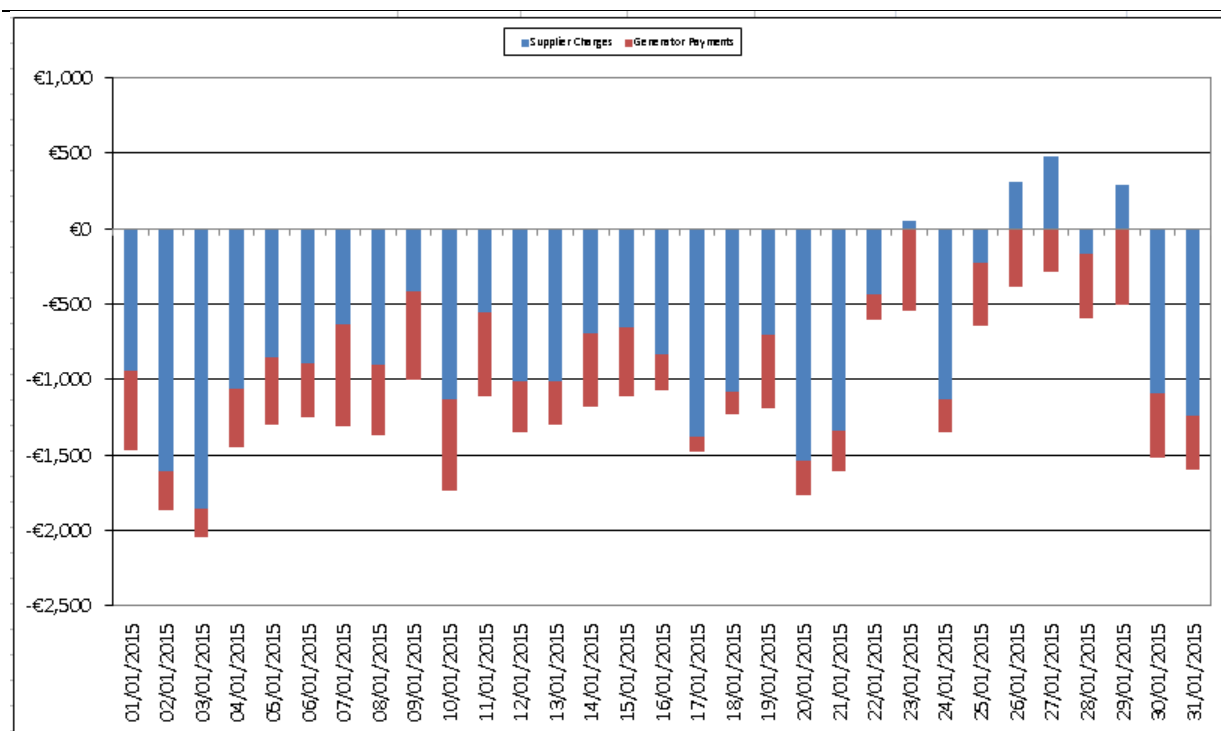


Figure 10 - Total Monetary Changes for Energy Resettlement – Jan 2015

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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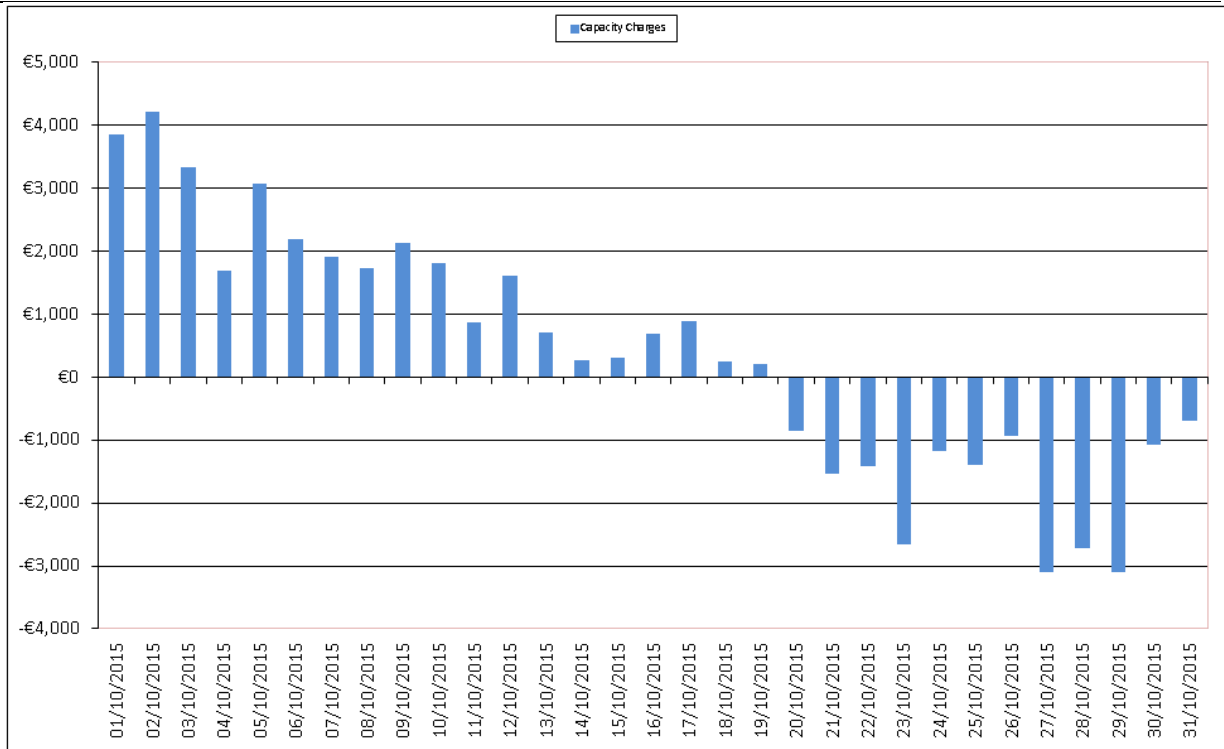


Figure 11 - Independent Suppliers Monetary Changes for Capacity Resettlement – Oct 2015

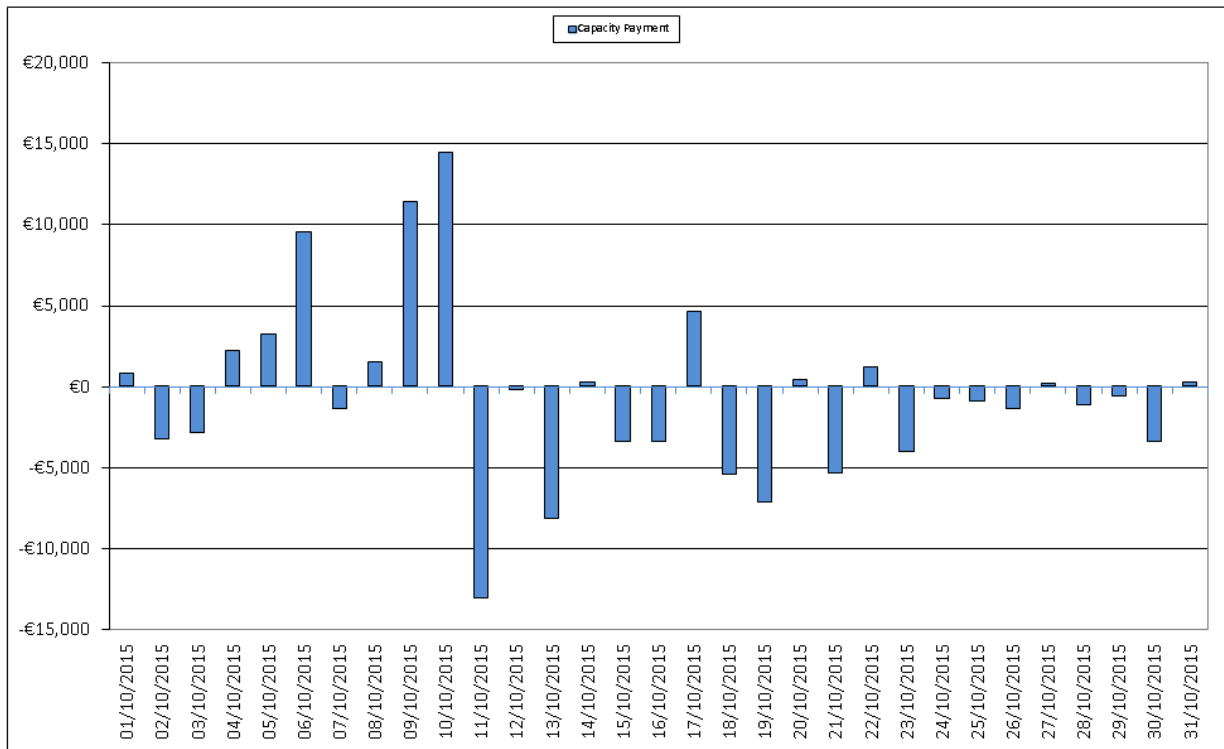


Figure 12 - All Generation Monetary Change for Capacity Resettlement – Oct 2015

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

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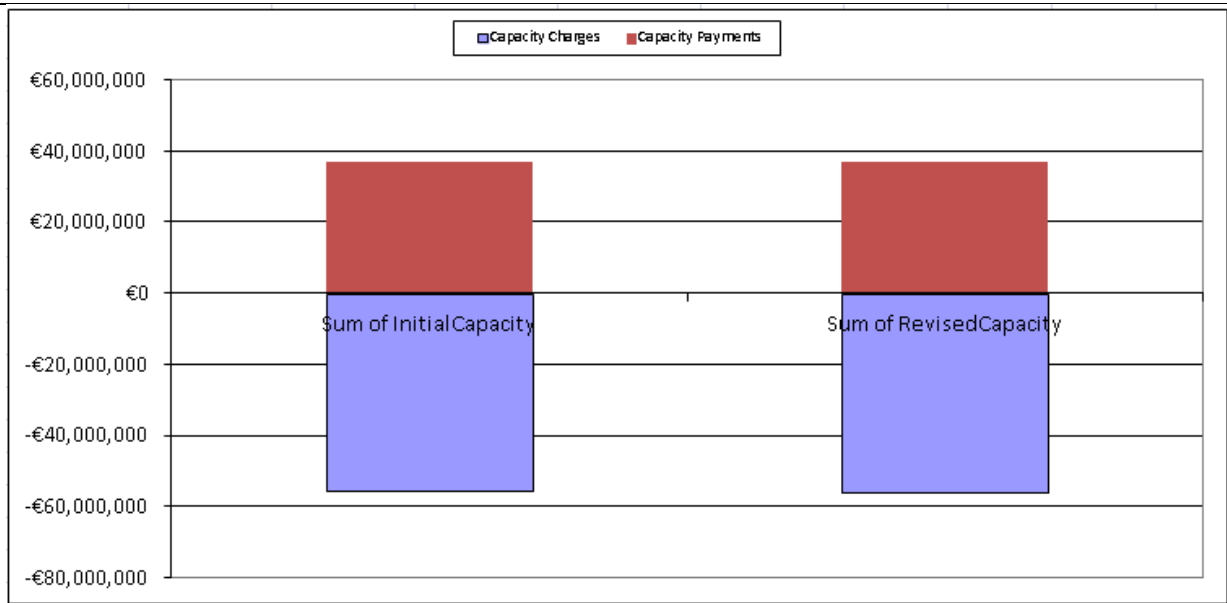


Figure 13 - Comparison of Distribution of Monetary Amounts between Capacity Initial and Resettlement Oct 2015

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

M+13 Resettlement

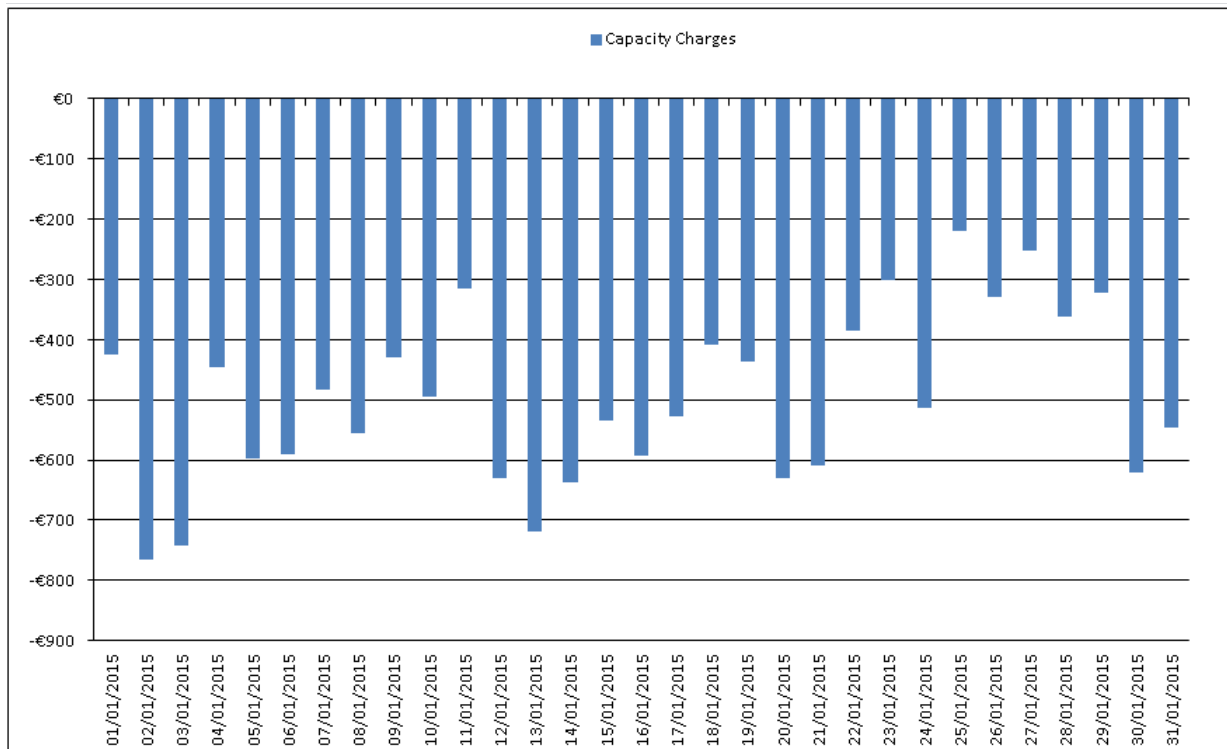


Figure 14 - Independent Suppliers Monetary Changes for Capacity Resettlement – Jan 2015

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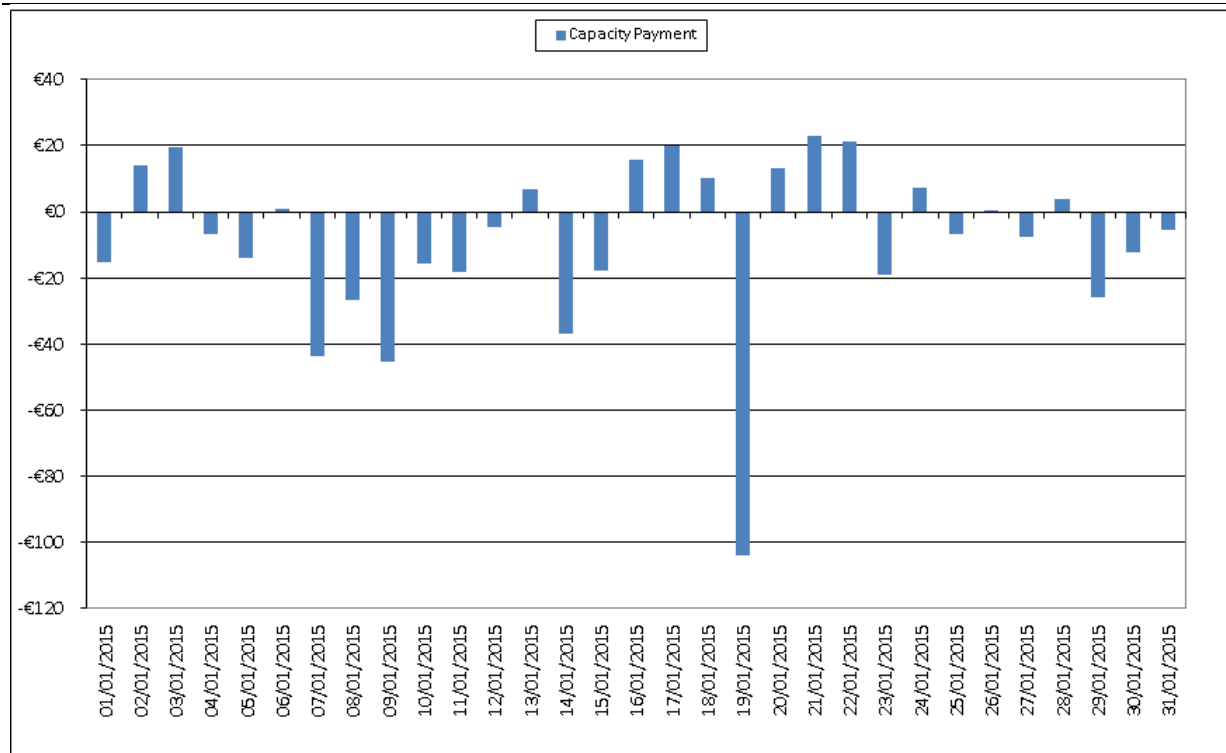


Figure 15 – All Generation Monetary Change for Capacity Resettlement – Jan 2015

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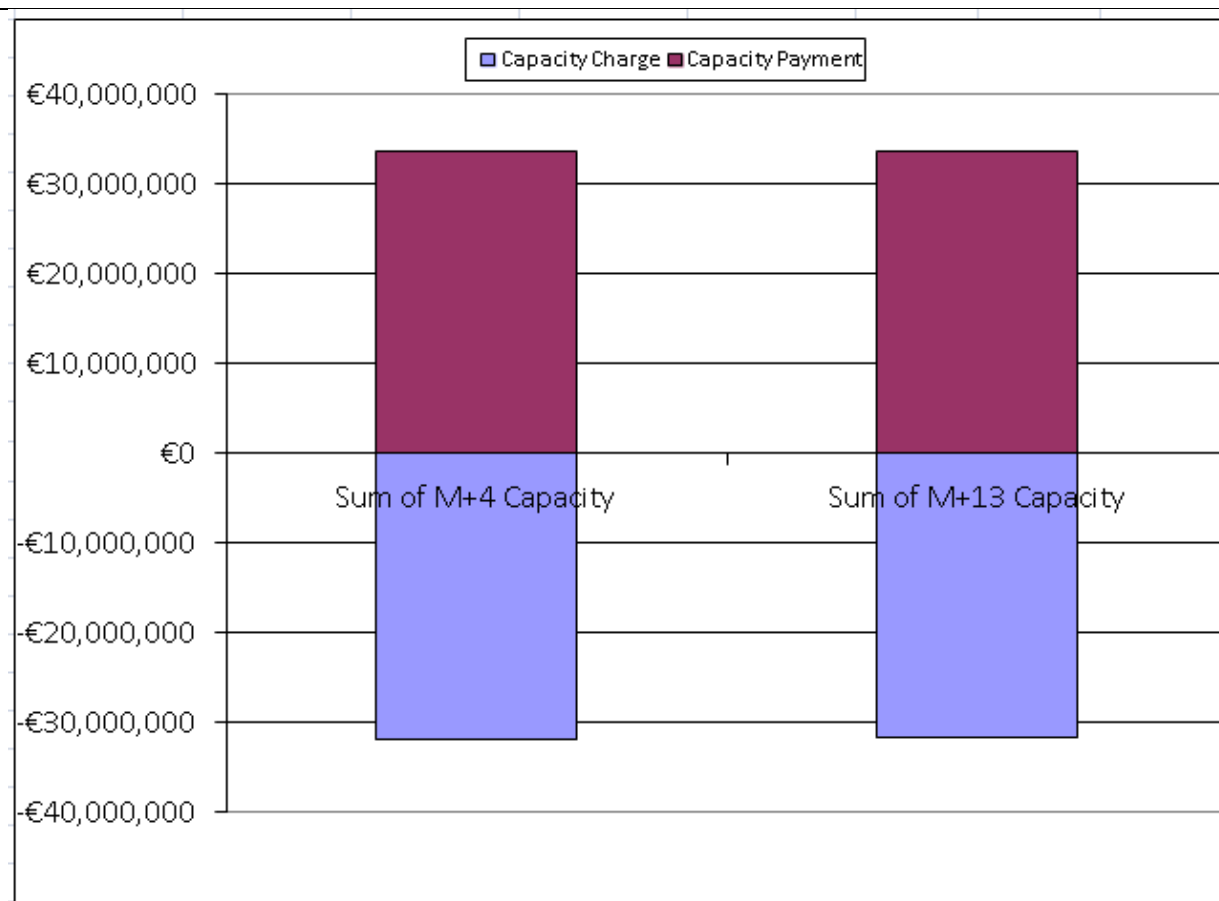


Figure 16 - Comparison of Distribution of Monetary Amounts between M+4 Capacity Resettlement and M+13 Capacity Resettlement – Jan 2015

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 February 2016.

Market Helpdesk Report: 01/02/16 to 29/02/16

	Received	Resolved within the period	Not Resolved	Resolved in the period	Resolution Time (Working Days)	Resolved On Time
Normal	173	154	19	178	1.23	168
Important	4	4	0	5	3.03	2
Urgent	1	1	0	1	0.33	1
Settlement	14	14	0	15	1.88	15
Credit	0	0	0	0	0.00	0
Dispute	1	0	1	0	0.00	0
Data	0	0	0	0	0.00	0
Total/Average	193	173	20	199	1.29	186

Table 10 – Helpdesk Statistics

Definitions:

- Resolved within the Period refers to queries raised and resolved within the calendar month of February 2016.
- Resolved in the Period refers to queries resolved within February 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 February 2016.
- Not Resolved refers to queries raised but not resolved within February 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 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 0.1 working days from 1.2 in January 2016 to 1.3 working days in February 2016. SEMO has a metric to resolve General Queries within 20 Working Days. These include queries received over the phone and e-mail. There were no queries logged in February 2016 that took over 20 working days to resolve.

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 February 2016 with regard to formal Settlement Queries.

5. Disputes and Queries

5.1.1 Disputes

There was one Dispute raised during the month of February 2016.

5.1.2 Data Queries

There were no formal Data Queries raised during the month of February 2016.

5.1.3 Settlement Queries

There were fourteen formal Settlement Queries raised in February 2016. Eleven of the queries were upheld and have all been resolved.

Topic	Number Of Queries
Dispatch Instructions	8
SO Trades	1
IT Issue	1
Actual Availabilities	1

Table 11 - Upheld Settlement Queries by topic

- Eight queries relating to Dispatch Instructions were raised. All queries were deemed to be of low materiality and will be corrected within M+4 Resettlement.
- One query relating to Actual Availabilities was raised. This query was deemed to be of low materiality and will be corrected within M+4 Resettlement.
- One query relating to SO Trades was raised. This was raised in advance of Initial Settlement. It was deemed to be of low materiality and will be corrected within Initial Settlement.
- One query relating to an IT Issue was raised. This query was deemed to be of high materiality and was corrected as part of an Ad hoc Resettlement.

Unresolved Queries

There are no unresolved data queries or settlement queries as of the 9th March 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, 69.76% of data used was submitted by Participants through the normal Bid-Offer process. 30.24% 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 System Errors and Failures

6.3.1 Re-Pricing and Resettlement Runs

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

There was one Re-Settlement run carried out in February 2016.

6.3.2 System Errors

There were no Market Application defects found in January/February 2016.

ABB2016-144117	Warning in EP2 sequence messages
ABB2016-144139	Dispatch Quantity Calculations in IP for VPTG units

Table 12 – System Errors

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

6.4 Operational Timings

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

There are five run types for MSP software,

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

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

6.4.1 MSP Postings January 2016

Process	On Time	< 1 hr late	> 1 hr late	Not done
Gate Close EA	29-29	0	0	0
Post EA1	29-29	0	0	0
Post EA2	29-29	0	0	0
Post WD1	29-29	0	0	0
Post EP1	29-29	0	0	0
Post EP2	29-29	0	0	0

Table 13 - Operational Timings

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

Table 14 - Operational Timings (% on time)

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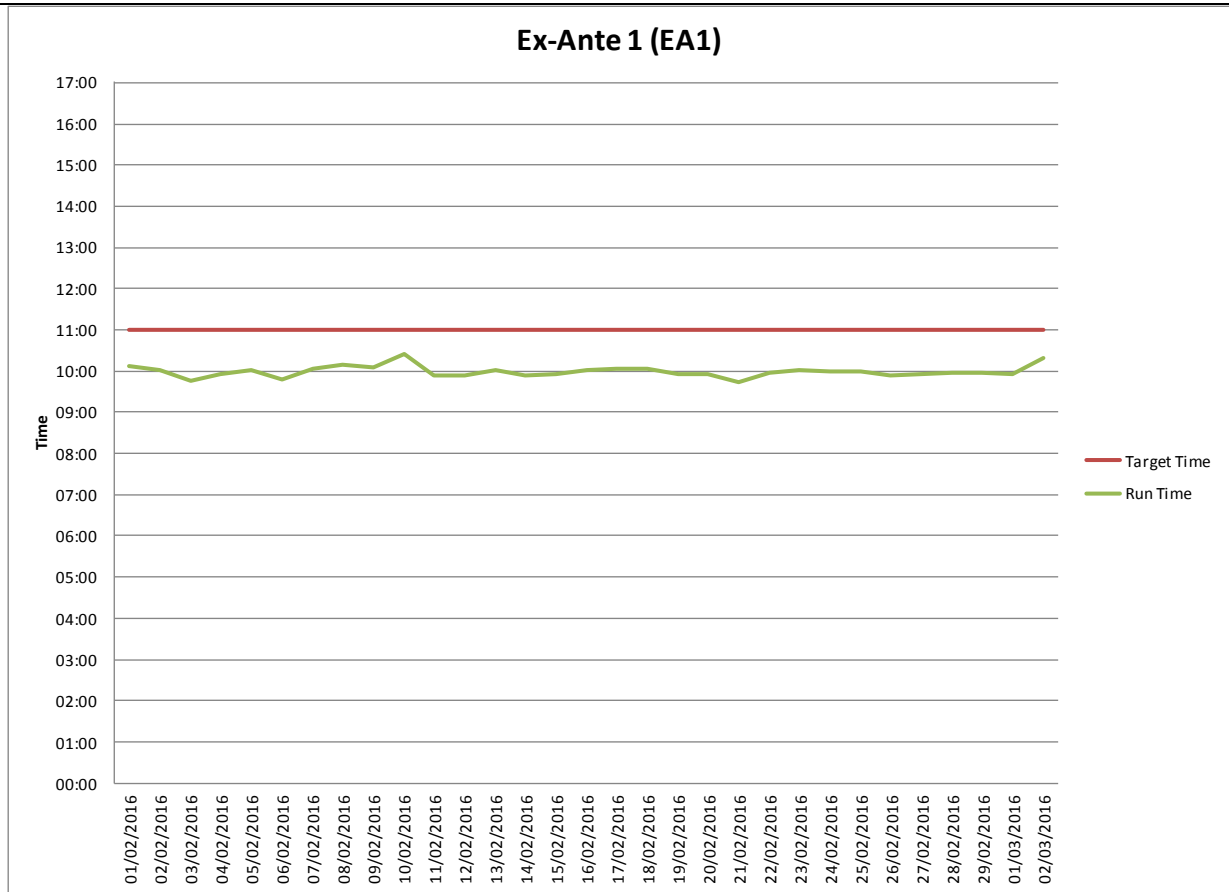


Figure 17 – Ex-Ante 1

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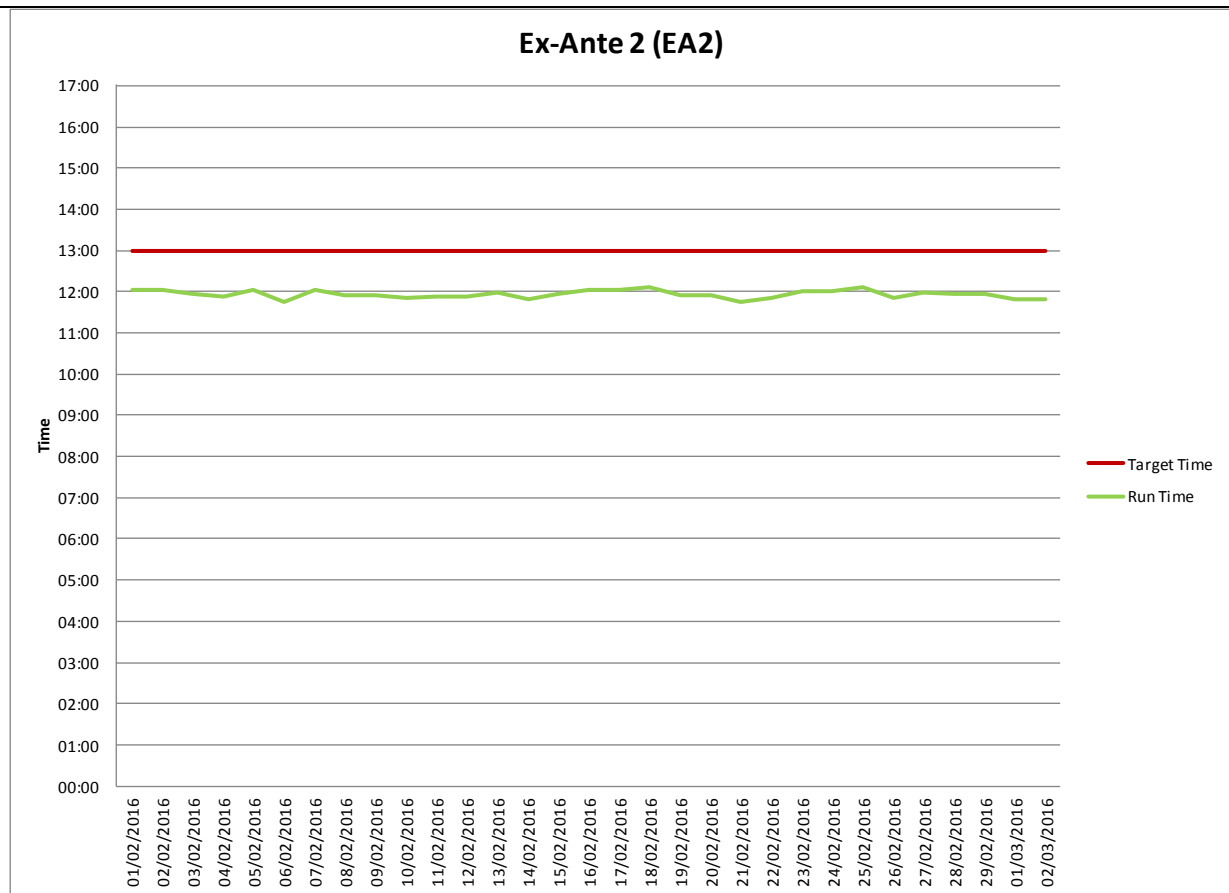


Figure 18 – Ex-Ante 2

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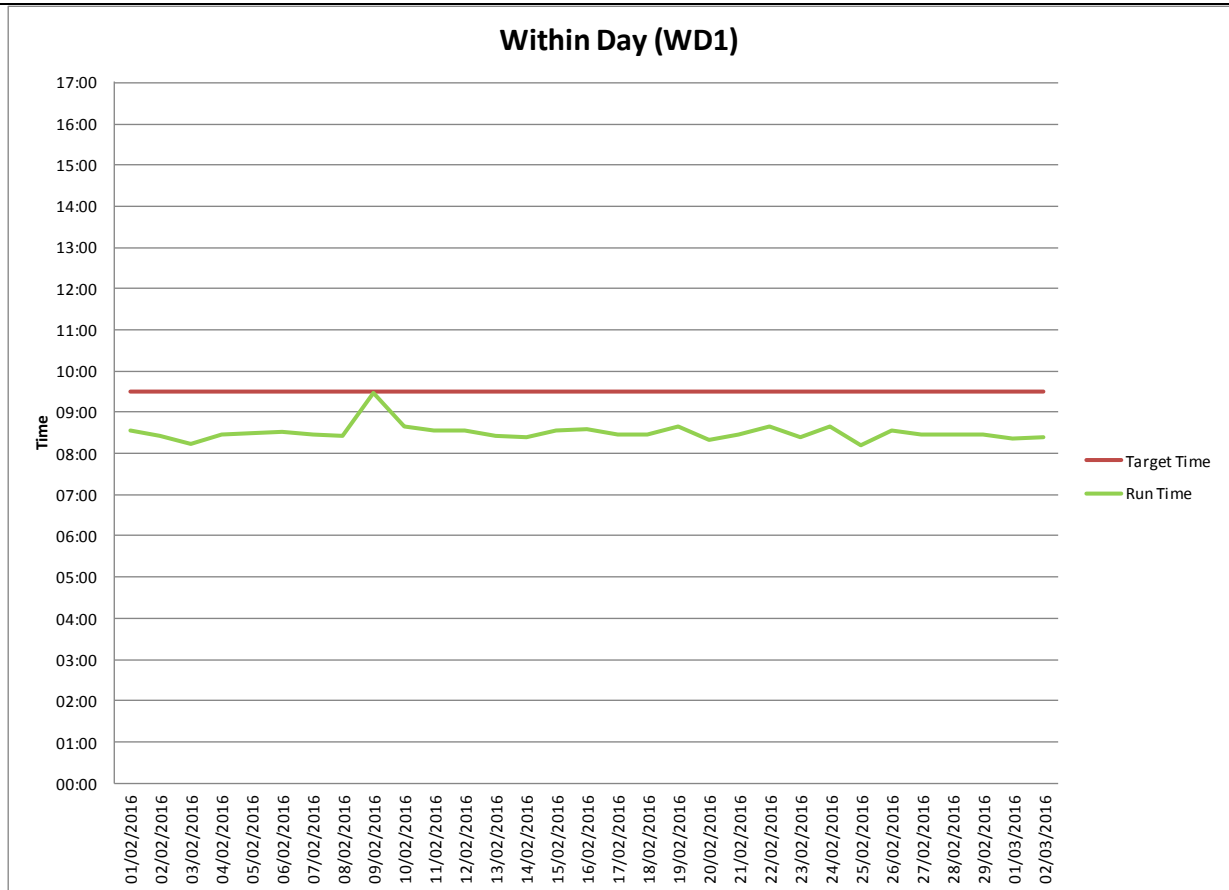


Figure 19 – Within Day 1

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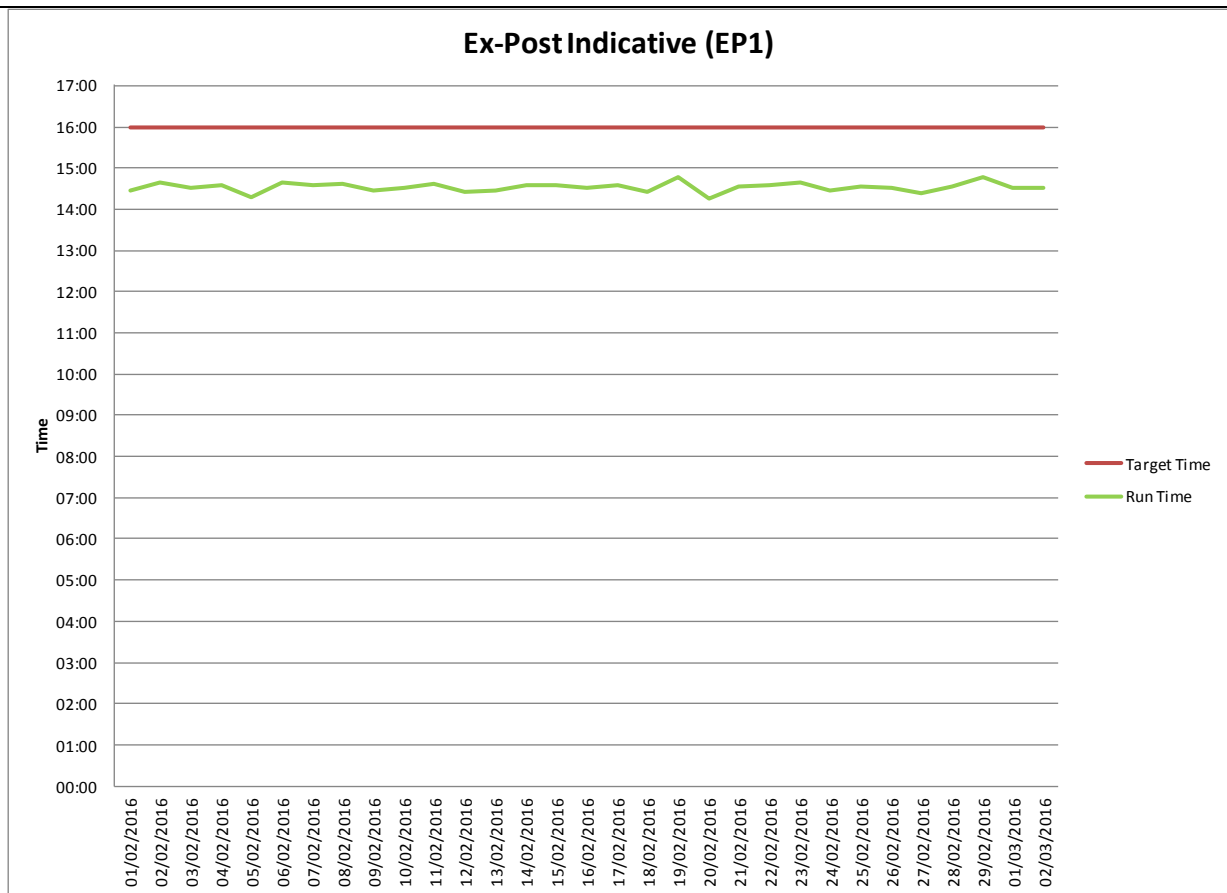


Figure 20 - Ex-Post Indicative

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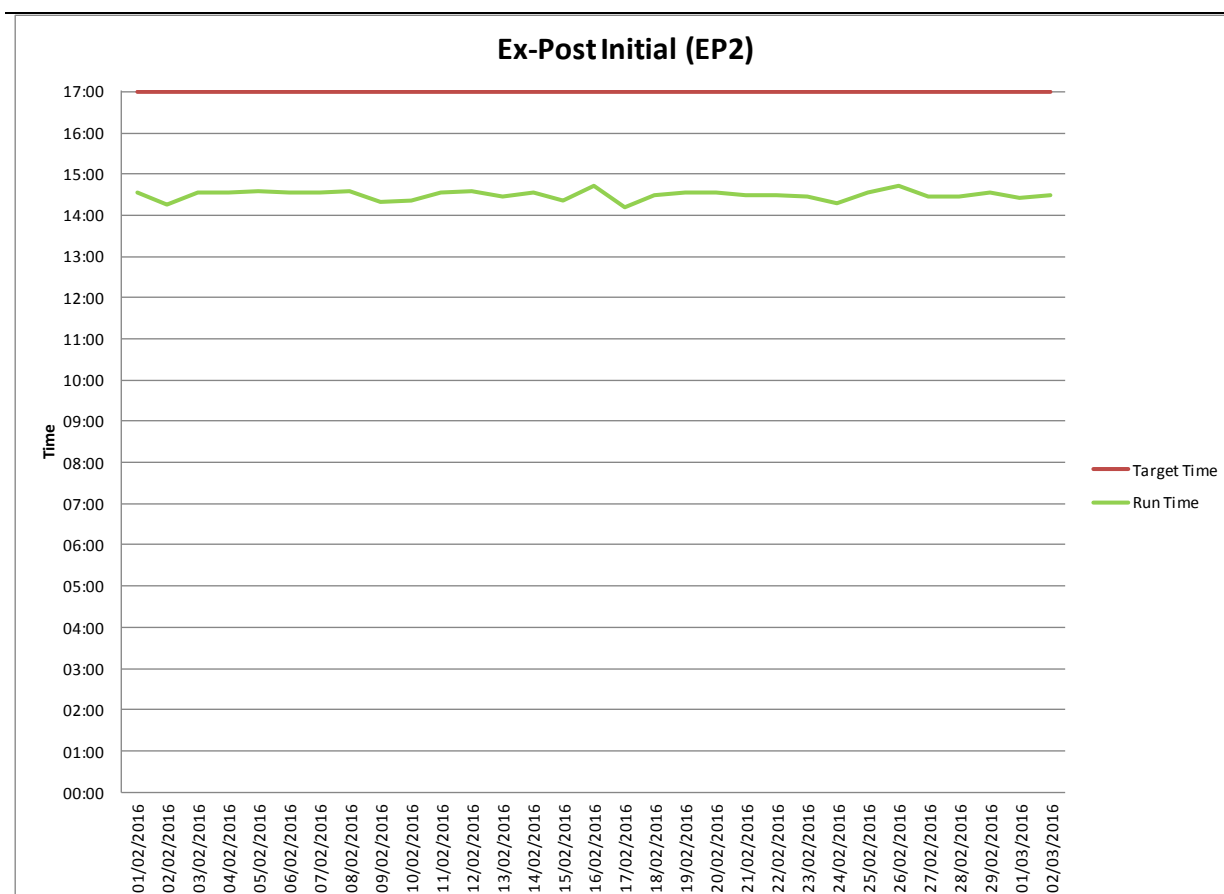


Figure 21 - Ex-Post Initial

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 February 2016, there was one 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](#).

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6.4.3 Settlement Postings February 2016

The publication timings for Settlement runs are provided below.

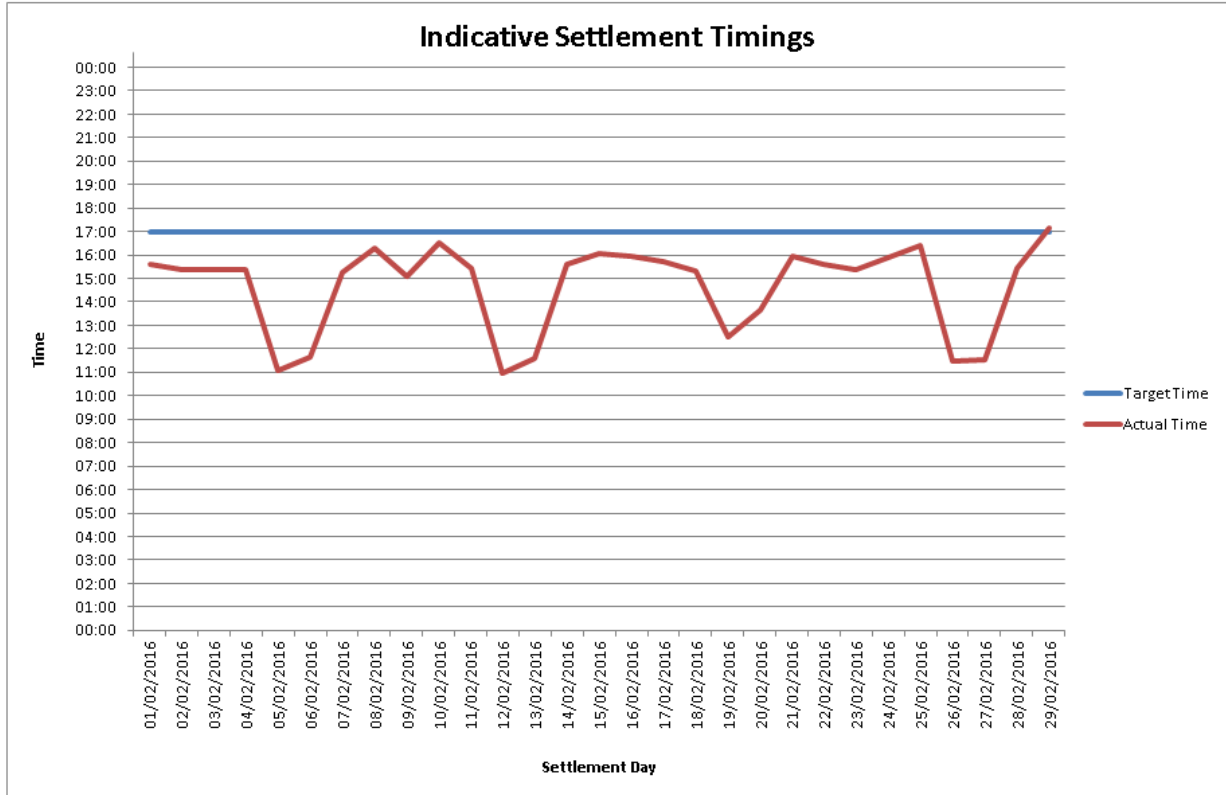


Figure 22 - Indicative Settlement Postings

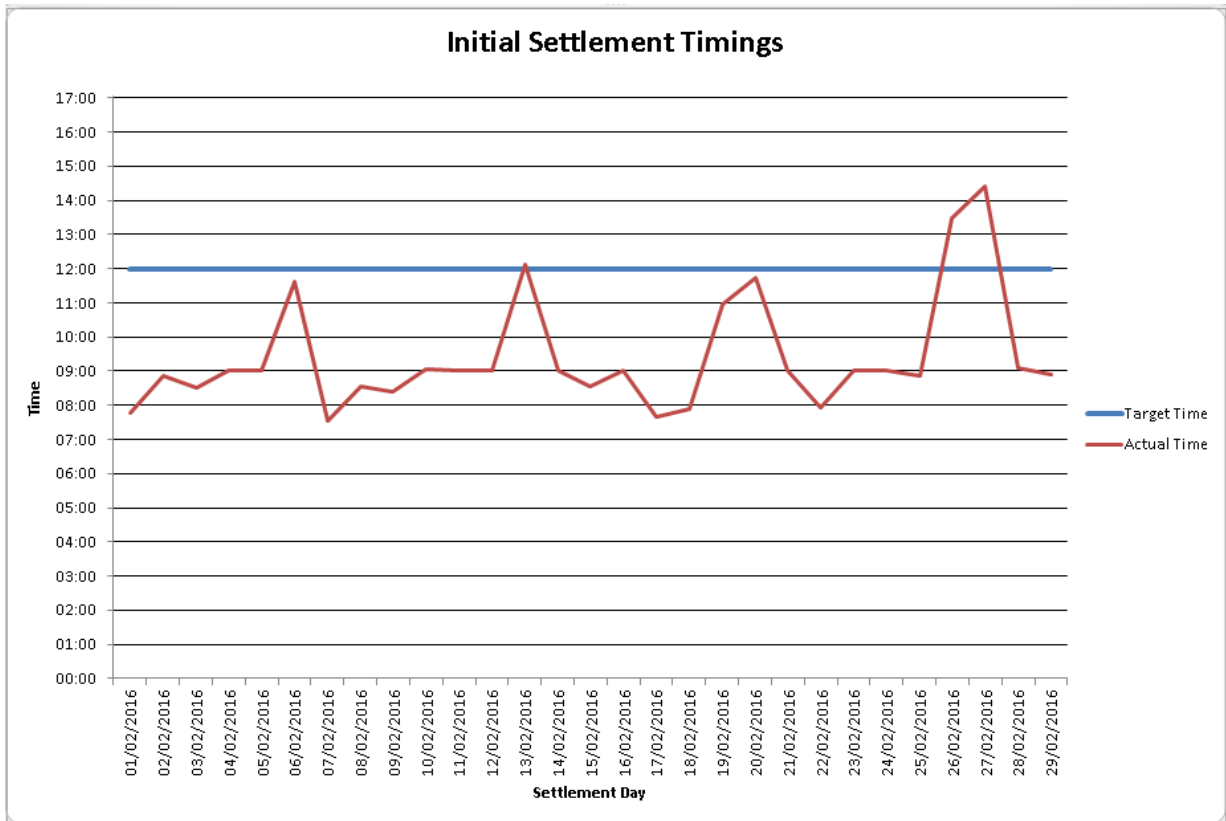


Figure 23 - Initial Settlement Postings

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

6.5.1 Release SEM R2.7.0 (Deployed: November 2nd 2015)

SEM R2.7.0 went live on Friday November 2nd with no issues

UUC 3.7.1 – (Deployed December 15th 2015)

UUC 3.7.1 was deployed on December 15th and the below defect fixes were applied.

ABB2015142976 – IP – IP heat state – Down Time

ABB2015143445 – DSP – Availability Profile (Dual Energy Unit)

6.5.2 Release SEM R2.8.0 (TBC May 2016)

SEM 2.8.0 cut-off date for participants was November 6th 2015:

So far one Change Request has been raised internally

- **CR351 Eligible Availability** - The PRE-ELIGIBLE-AVAIL and ELIGIBLE-AVAIL preprocessing modules in Pomax involve the calculation of a FACTOR value for each interval of the Trading Day. These values are then sorted in decreasing order for later use in the algorithms. The algorithm does not handle the scenario where the FACTOR calculation involves a division by zero. This change request requires that when this scenario occurs, the FACTOR value should be treated as a zero for the purposes of sorting.

Release scope was sent to RA and was approved on February 1st 2016.

A deployment date has yet to be decided.

7. Occasional Components

7.1 Disaster Recovery/Business Continuity Tests

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

7.3 Communications or Systems Failures

There were no communications or systems failures during February 2016.

7.4 Denial of Service Attacks

There was no Denial of Service Attacks during February 2016.

7.5 Submission of Parameters to RAs for Approval

There has been no requirement for submission of parameters in the month of February 2016.

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
03/02/2016	Money In	Timing	Participant	Payment Default	Arden Energy Limited (PT_400149) defaulted on a Week 39 2015 M+4 Energy Invoice.	Participant Error	A default letter was issued to the participant.	Major
03/02/2016	Money In	Timing	Participant	Payment Default	iPower Solutions Limited (PT_500053) defaulted on a December 2014 M+13 Capacity invoice.	Participant Error	A default letter was issued to the participant.	Major
03/02/2016	Money In	Timing	Participant	Payment Default	G.A.E.L Force Power Limited (PT_400069) defaulted on a Week 39 2015 M+4 Energy Invoice.	Participant Error	A default letter was issued to the participant.	Major
03/02/2016	Money In	Timing	Participant	Payment Default	G.A.E.L Force Power Limited (PT_400069) defaulted on a September 2015 M+4 Capacity Invoice.	Participant Error	A default letter was issued to the participant.	Major
12/02/2016	Money In	Timing	Participant	Payment Default	Captured Carbon Limited (PT_400168) defaulted on a January 2016 Initial Capacity Invoice	Participant Error	A default letter was issued to the participant.	Major
12/02/2016	Money In	Timing	Participant	Payment Default	Mantlin Limited (PT_500039) defaulted on a January 2016 Initial FMOC invoice.	Participant Error	A default letter was issued to the participant.	Major
12/02/2016	Money In	Timing	Participant	Payment Default	Castledockrell Supply Limited (PT_400079) defaulted on a January 2016 Initial Capacity Invoice	Participant Error	A default letter was issued to the participant.	Major
12/02/2016	Money In	Timing	Participant	Payment Default	Captured Carbon Limited (PT_400168) defaulted on a January 2016 Initial FMOC Invoice.	Participant Error	A default letter was issued to the participant.	Major
17/02/2016	Money In	Timing	Participant	Payment Default	Shell Energy Europe (PT_500087) defaulted on a Week 5 2016 Initial Energy invoice.	Participant Error	A default letter was issued to the participant.	Major
24/02/2016	Money In	Timing	Participant	Payment Default	Gaelectric Interconnector Limited (PT_400170) defaulted on a Week 6 2016 Initial Ennergy invoice.	Participant Error.	A default letter was issued to the participant.	Major

Table 15 – Trading and Settlement Code Breaches – Market Participants

Data Provider

There were no issues to report in February 2016

SEMO - Pricing and Scheduling

Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T and SC Breach
09/02/2016	WD1	Timing	SEMO	System	A revision was required for Within Day (EA1) Moyle and EWIC Modified Interconnector Unit Nominations (MIUNs) for Trading Day 09/02/2016. The publication of these MIUNs was delayed as a result of this revision.	The MIUN calculator produced an error and a revised file was required.	Moyle & EWIC MIUNs were revised to zero and published at 10:10 on 09/02/2016.	Minor

Table 16 – Trading and Settlement Code Breaches – Pricing and Scheduling

SEMO – Settlements

Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T and SC Breach
10/02/2016	SE1	Timing	SEMO	System	Indicative Statements and Participant Information Reports (PIRs) for Trading Day 09/02/2016 were published after the 17:00 deadline.	This was due to a system issue.	Indicative Statements and PIR's were published one day late at 15.03 on the 11/02/2016.	Minor

Table 17 – Trading and Settlement Code Breaches – Settlements

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SEMO - Funds Transfer

There were no issues to report in February 2016

SEMO - Credit Management

There were no issues to report in February 2016

SEMO – Other

There were no issues to report in February 2016

9. Appendix B: List of Queries by Type

Summary Title	Description	ID	Logged On	Date sent to MP	Type
SO-SO Trades	Issue with initial Statkraft Settlement sent in D+1 file. Period 4,2 (03.30-04.00), Statkraft volumes did not match DBE nominations. Statkraft amended nominations to match, cash value changed as result after D+3 sent.	TSO_SONI	2016-02-04	2016-02-05	Settlement
Meter Generation	Differences in Metered Generation for units GU_4000251 and GU_4000252 in M+13 settlement. Please explain why there are differences in the period; 21:30 and 22:00 at M+13 settlement compared to the previous settlement runs.	PT_400030	2016-02-04	2016-02-08	Settlement
Settlement Payments/ Charges	ENPEX and CPEX was calculated incorrectly for GU_400921 from 29/09/2015 to 30/10/2015	PT_400021	2016-02-05	2016-02-11	Settlement
Meter Generation	GU_400370 (WO4). On the 24th WO4 were dropping load for an STMO. Unit was due to desynch at 15:00hrs and a load profile was submitted. Our records show that we followed this load profile very closely. On the day WO4 spoke with NCC and the DI's matched the load profile which had been agreed. If you require backing documents please confirm email address to which I send the documents. As a result high uninstructed imbalances occurred from 11:30 to 15:30 - total value of ?4,061.	PT_400030	2016-02-08	2016-02-11	Settlement
Actual Availabilities	Incorrect Availability Declarations were sent to the SEM for GU_400300 (Marina CT) on the 17/11/2015, 18/11/2015 and 19/11/2015.	Eirgrid	2016-02-11	2016-02-12	Settlement
Dispatch Instructions	Incorrect Dispatch Instructions were sent to the SEM for GU_400300 (Marina CT) on the 17/11/2015.	Eirgrid	2016-02-11	2016-02-12	Settlement
Dispatch instructions	Incorrect Dispatch Instructions were sent to the SEM for GU_401770 (Knockacummer Windfarm Phase 1) on the 18/12/2015.	Eirgrid	2016-02-11	2016-02-12	Settlement
Dispatch Instructions	Incorrect Dispatch Instructions were sent to the SEM for GU_400252 (Liffey Unit 4) on the 21/12/2015.	Eirgrid	2016-02-11	2016-02-15	Settlement
Dispatch Instructions	Incorrect Dispatch Instructions were sent to the SEM for GU_400220 (Erne Unit 3) on the 22/12/2015.	Eirgrid	2016-02-11	2016-02-15	Settlement
Dispatch instructions	Incorrect Dispatch Instructions were sent to the SEM for GU_401770 (Knockacummer Windfarm Phase 1) on the 24/12/2015.	Eirgrid	2016-02-11	2016-02-16	Settlement
Dispatch Instructions	Incorrect Dispatch Instructions were sent to the SEM for GU_400323 (Poolbeg Combined) on the 26/12/2015.	Eirgrid	2016-02-16	2016-02-18	Settlement
Dispatch Instructions	Incorrect Dispatch Instructions were sent to the SEM for GU_401240 (Dromdeveen Windfarm) on the 28/12/2015.	Eirgrid	2016-02-16	2016-02-22	Settlement
Dispatch Instructions	Incorrect Dispatch Instructions were sent to the SEM for GU_400771 (Rhode Unit 2) on the 28/12/2015.	Eirgrid	2016-02-16	2016-02-17	Settlement
Settlement Payments/ Charges	We cannot reconcile the market CONPEX calculation for PT_40044 for the period 07/09/2015 - 09/09/2015. The issue seems to relate to the periods 18:30 - 06:00 between the 7th - 8th and 8th- 9th. Issue relates to GU_400540 and specifically the CONPEX calculation - we can't reconcile the market calculation.	PT_400044	2016-02-18	2016-02-19	Settlement

Table 18 - Formal Queries

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

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

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

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

There were 2 Market Application defects found in January/February 2016.

Issue No.	Description	Effect	Fixed from	Re-Pricing	Resettlement	Status
ABB2016-144117	Warning in EP2 sequence messages	Minor		No	No	Open
ABB2016-144139	Dispatch Quantity Calculations in IP for VPTG units	Medium		No	No	Open

Table 19 - List of System Errors and Failures

11. Appendix D: Details of Operational Timings

Market Schedule and Price Runs

Operational Day	EA1 Postings		EA2 Postings		WD1 Postings		EP1 Postings		EP2 Postings	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
01/02/2016	11:00	10:07	13:00	12:03	09:30	08:34	16:00	14:27	17:00	14:33
02/02/2016	11:00	10:01	13:00	12:03	09:30	08:26	16:00	14:38	17:00	14:15
03/02/2016	11:00	09:46	13:00	11:56	09:30	08:14	16:00	14:31	17:00	14:34
04/02/2016	11:00	09:56	13:00	11:53	09:30	08:27	16:00	14:35	17:00	14:33
05/02/2016	11:00	10:02	13:00	12:02	09:30	08:30	16:00	14:17	17:00	14:35
06/02/2016	11:00	09:48	13:00	11:45	09:30	08:32	16:00	14:38	17:00	14:33
07/02/2016	11:00	10:04	13:00	12:03	09:30	08:28	16:00	14:35	17:00	14:34
08/02/2016	11:00	10:10	13:00	11:55	09:30	08:25	16:00	14:37	17:00	14:35
09/02/2016	11:00	10:06	13:00	11:54	09:30	09:29	16:00	14:28	17:00	14:20
10/02/2016	11:00	10:25	13:00	11:51	09:30	08:40	16:00	14:32	17:00	14:22
11/02/2016	11:00	09:54	13:00	11:53	09:30	08:34	16:00	14:37	17:00	14:33
12/02/2016	11:00	09:53	13:00	11:53	09:30	08:33	16:00	14:25	17:00	14:35
13/02/2016	11:00	10:01	13:00	11:59	09:30	08:26	16:00	14:28	17:00	14:28
14/02/2016	11:00	09:53	13:00	11:48	09:30	08:24	16:00	14:35	17:00	14:33
15/02/2016	11:00	09:56	13:00	11:56	09:30	08:34	16:00	14:36	17:00	14:22
16/02/2016	11:00	10:02	13:00	12:02	09:30	08:35	16:00	14:32	17:00	14:43
17/02/2016	11:00	10:04	13:00	12:02	09:30	08:28	16:00	14:35	17:00	14:11
18/02/2016	11:00	10:04	13:00	12:06	09:30	08:28	16:00	14:25	17:00	14:30
19/02/2016	11:00	09:55	13:00	11:55	09:30	08:40	16:00	14:47	17:00	14:34
20/02/2016	11:00	09:56	13:00	11:54	09:30	08:20	16:00	14:15	17:00	14:34
21/02/2016	11:00	09:44	13:00	11:45	09:30	08:28	16:00	14:33	17:00	14:29
22/02/2016	11:00	09:58	13:00	11:50	09:30	08:39	16:00	14:36	17:00	14:29
23/02/2016	11:00	10:02	13:00	12:01	09:30	08:24	16:00	14:38	17:00	14:27
24/02/2016	11:00	10:00	13:00	12:01	09:30	08:40	16:00	14:28	17:00	14:18
25/02/2016	11:00	09:59	13:00	12:07	09:30	08:11	16:00	14:33	17:00	14:33
26/02/2016	11:00	09:54	13:00	11:50	09:30	08:33	16:00	14:31	17:00	14:43
27/02/2016	11:00	09:55	13:00	11:58	09:30	08:28	16:00	14:23	17:00	14:28
28/02/2016	11:00	09:58	13:00	11:57	09:30	08:28	16:00	14:34	17:00	14:27
29/02/2016	11:00	09:57	13:00	11:56	09:30	08:28	16:00	14:46	17:00	14:33
01/03/2016	11:00	09:55	13:00	11:49	09:30	08:21	16:00	14:31	17:00	14:26
02/03/2016	11:00	10:19	13:00	11:48	09:30	08:23	16:00	14:31	17:00	14:30

Table 20 – MSP Runs

Settlement Runs

Trading Day	INDICATIVE				INITIAL			
	Target Date	Actual Date	Target Time	Actual Time	Trading Day	Actual Date	Target Time	Actual Time
01/02/2016	02/02/2016	02/02/2016	17:00	15:36	01/02/2016	08/02/2016	12:00	07:46
02/02/2016	03/02/2016	03/02/2016	17:00	15:22	02/02/2016	09/02/2016	12:00	08:52
03/02/2016	04/02/2016	04/02/2016	17:00	15:22	03/02/2016	10/02/2016	12:00	08:30
04/02/2016	05/02/2016	05/02/2016	17:00	15:21	04/02/2016	11/02/2016	12:00	08:22
05/02/2016	06/02/2016	06/02/2016	17:00	11:03	05/02/2016	12/02/2016	12:00	10:53
06/02/2016	07/02/2016	07/02/2016	17:00	11:39	06/02/2016	13/02/2016	12:00	11:37
07/02/2016	08/02/2016	08/02/2016	17:00	15:16	07/02/2016	14/02/2016	12:00	07:33
08/02/2016	09/02/2016	09/02/2016	17:00	16:16	08/02/2016	15/02/2016	12:00	08:33
09/02/2016	10/02/2016	10/02/2016	17:00	15:05	09/02/2016	16/02/2016	12:00	08:23
10/02/2016	11/02/2016	11/02/2016	17:00	16:32	10/02/2016	17/02/2016	12:00	09:03
11/02/2016	12/02/2016	12/02/2016	17:00	15:27	11/02/2016	18/02/2016	12:00	08:19
12/02/2016	13/02/2016	13/02/2016	17:00	10:57	12/02/2016	19/02/2016	12:00	11:57
13/02/2016	14/02/2016	14/02/2016	17:00	11:34	13/02/2016	20/02/2016	12:00	12:07
14/02/2016	15/02/2016	15/02/2016	17:00	15:36	14/02/2016	21/02/2016	12:00	08:06
15/02/2016	16/02/2016	16/02/2016	17:00	16:03	15/02/2016	22/02/2016	12:00	08:32
16/02/2016	17/02/2016	17/02/2016	17:00	15:57	16/02/2016	23/02/2016	12:00	09:01
17/02/2016	18/02/2016	18/02/2016	17:00	15:44	17/02/2016	24/02/2016	12:00	07:39
18/02/2016	19/02/2016	19/02/2016	17:00	15:19	18/02/2016	25/02/2016	12:00	07:53
19/02/2016	20/02/2016	20/02/2016	17:00	12:30	19/02/2016	26/02/2016	12:00	10:58
20/02/2016	21/02/2016	21/02/2016	17:00	13:40	20/02/2016	27/02/2016	12:00	11:43
21/02/2016	22/02/2016	22/02/2016	17:00	15:58	21/02/2016	28/02/2016	12:00	07:52
22/02/2016	23/02/2016	23/02/2016	17:00	15:37	22/02/2016	29/02/2016	12:00	07:55
23/02/2016	24/02/2016	24/02/2016	17:00	15:24	23/02/2016	01/03/2016	12:00	07:58
24/02/2016	25/02/2016	25/02/2016	17:00	15:53	24/02/2016	02/03/2016	12:00	08:30
25/02/2016	26/02/2016	26/02/2016	17:00	16:25	25/02/2016	03/03/2016	12:00	08:51
26/02/2016	27/02/2016	27/02/2016	17:00	11:30	26/02/2016	04/03/2016	12:00	13:29
27/02/2016	28/02/2016	28/02/2016	17:00	11:31	27/02/2016	05/03/2016	12:00	14:24
28/02/2016	29/02/2016	29/02/2016	17:00	15:27	28/02/2016	06/03/2016	12:00	09:05
29/02/2016	01/03/2016	01/03/2016	17:00	17:10	29/02/2016	07/03/2016	12:00	08:53

Table 21 – Settlement Runs

12. Appendix E: Imperfections Charge

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

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

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

Date	Constraint Payments	Uninstructed Imbalance Payments	Imperfections Charges
01/10/2015	€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

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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

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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

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

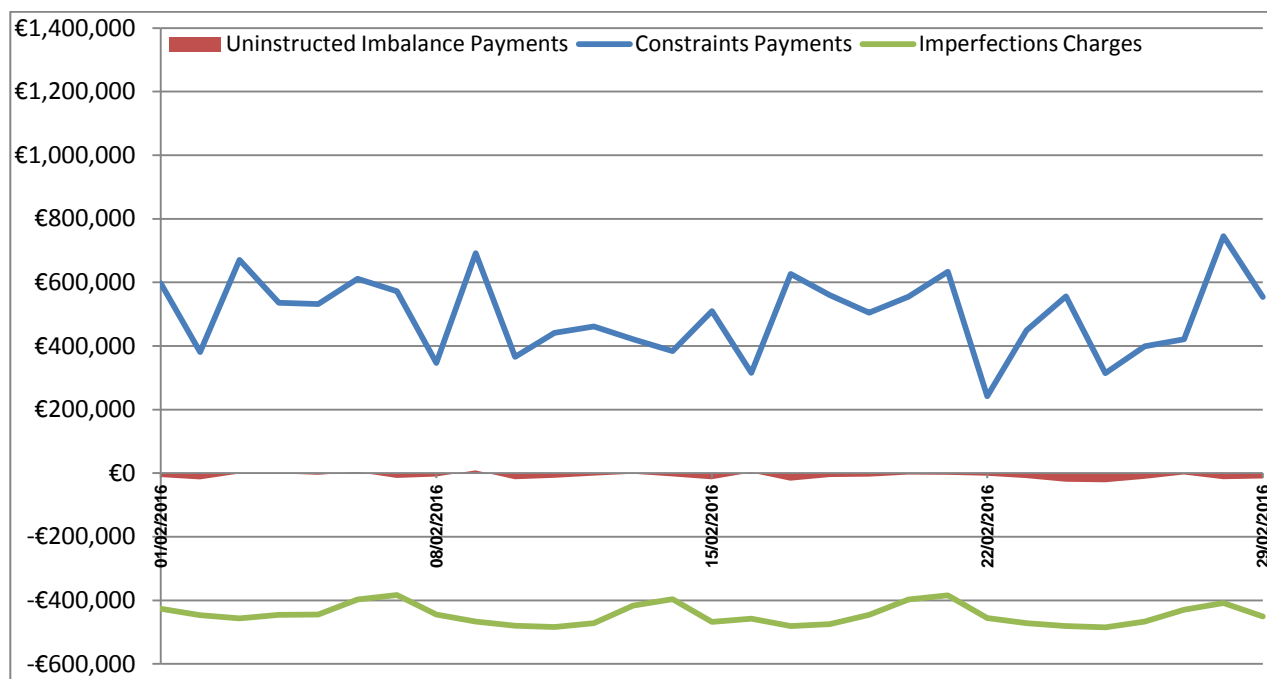


Figure 24 - Constraint Payments, Uninstructed Imbalance Payments, and Imperfections Charges

Week No	Make Whole Payments
38	€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	€44,834.21
5	€94,935.70
6	€71,991.91
7	€89,850.72

Table 23 - Make Whole Payments

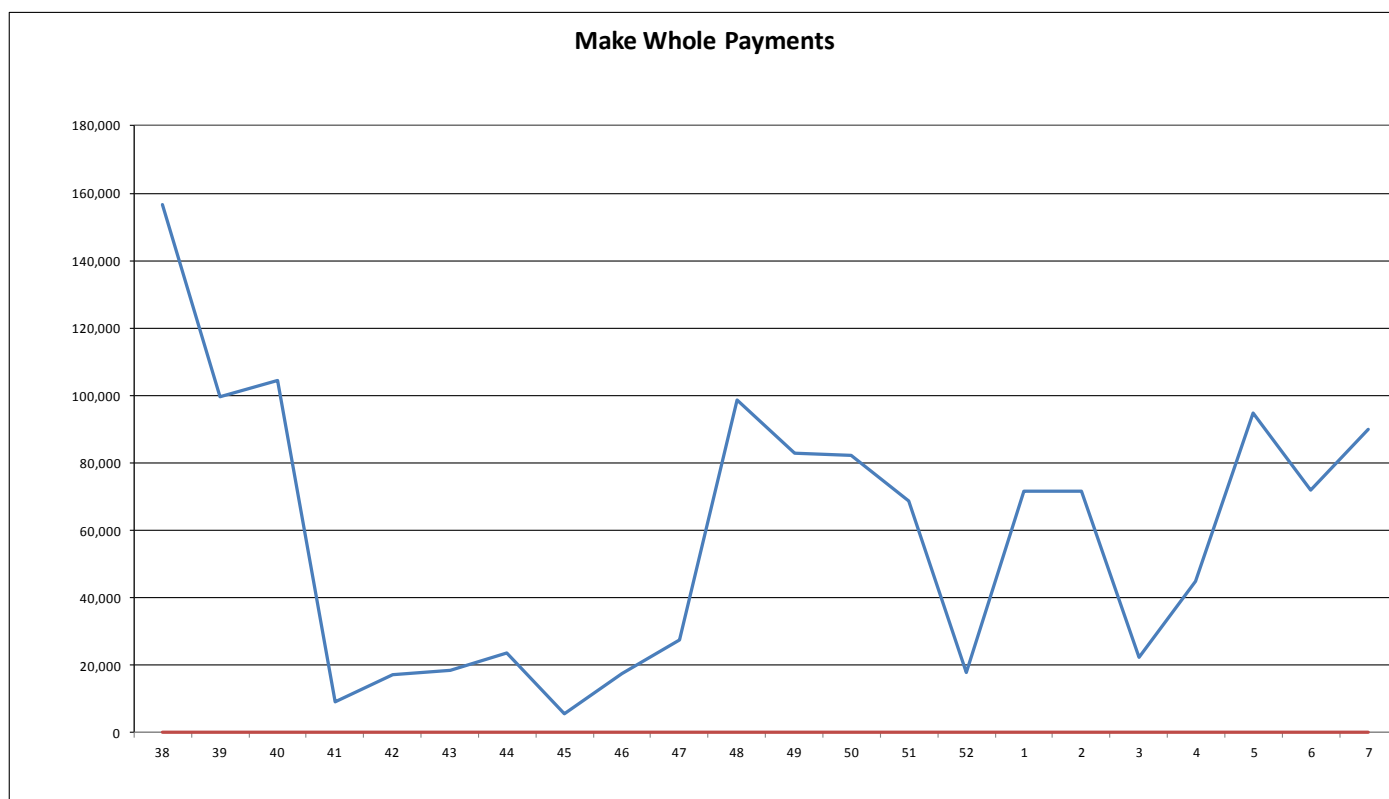


Figure 25 - Make Whole Payments

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	-€4,381.00
7	-€313.00

Table 24 - Testing Charges

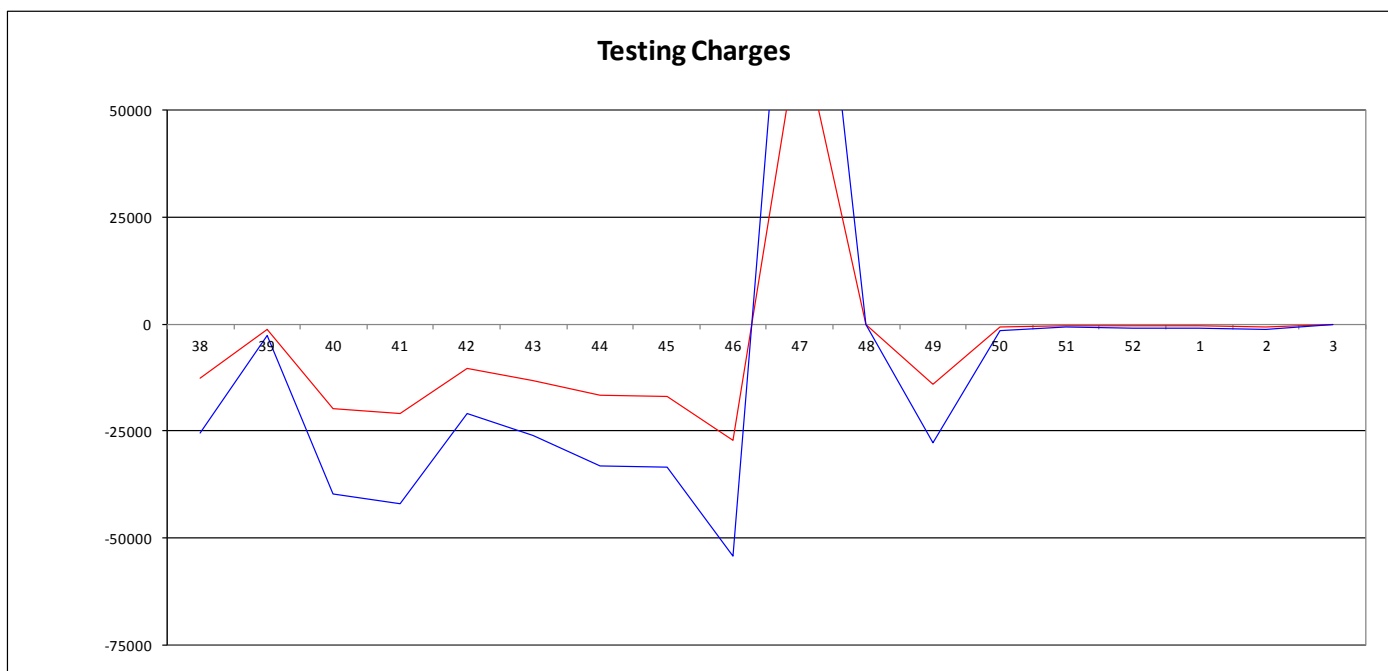


Figure 26 - Testing Charges

13. Appendix F: Default Commercial Offer Data Used

The table below lists for each unit the number of times in operations during February 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_400138	DSU_401590	29			29
PT_400090	DSU_401610	29			29
PT_400090	DSU_401620	29			29
PT_400116	DSU_401400	30			30
PT_500067	DSU_501380	26			26
PT_400090	DSU_401270	29			29
PT_400106	DSU_401330	33			33
PT_400111	DSU_401390	26			26
PT_400124	DSU_401490	29			29
PT_400024	GU_400120	29			29
PT_400024	GU_400121	29			29
PT_400030	GU_400180	36			36
PT_400030	GU_400181	36			36
PT_400030	GU_400182	36			36
PT_400030	GU_400183	36			36
PT_400030	GU_400200	31			31
PT_400030	GU_400201	31			31
PT_400030	GU_400202	32			32
PT_400030	GU_400203	31			31
PT_400030	GU_400210	31			31
PT_400030	GU_400211	31			31
PT_400030	GU_400220	31			31
PT_400030	GU_400221	31			31
PT_400030	GU_400240	31			31
PT_400030	GU_400250	31			31
PT_400030	GU_400251	31			31
PT_400030	GU_400252	31			31
PT_400030	GU_400260	31			31
PT_400030	GU_400270	35			35
PT_400030	GU_400271	37			37
PT_400030	GU_400272	38			38
PT_400030	GU_400280	31			31
PT_400030	GU_400281	31			31
PT_400030	GU_400290	31			31
PT_400030	GU_400300	36			36
PT_400030	GU_400311	36			36
PT_400030	GU_400323	36			36
PT_400030	GU_400360	31			31
PT_400030	GU_400361	31			31
PT_400030	GU_400362	31			31
PT_400030	GU_400363	31			31
PT_400030	GU_400370	30			30
PT_400030	GU_400850	36			36
PT_400032	GU_400430	29			29
PT_400034	GU_400940	29			29
PT_400034	GU_401090	29			29

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PT_400034	GU_401440	29		29
PT_400034	GU_401680	31		31
PT_400035	GU_400480	46		46
PT_400037	GU_400500	30		30
PT_400041	GU_400530	49		49
PT_400044	GU_400540	46		46
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	60		60
PT_400077	GU_400950	29		29
PT_400078	GU_401010	29		29
PT_400078	GU_401011	29		29
PT_400172	GU_401860	29		29
PT_500024	GU_500040	34		34
PT_500024	GU_500041	29		29
PT_500027	GU_500130	78		78
PT_500027	GU_500131	78		78
PT_500027	GU_500140	78		78
PT_500034	GU_501350	30		30
PT_500040	GU_500281	31		31
PT_500040	GU_500282	32		32
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	29		29
PT_500045	GU_500823	30		30
PT_500045	GU_500824	30		30
PT_500045	GU_500825	30		30
PT_500048	GU_500904	49		49
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	29		29
PT_500066	GU_501210	29		29
PT_500089	GU_501360	5		5
PT_500083	I_NIMOYLE	47		47
PT_400021	I_ROIEWIC	29		29
PT_500075	I_NIMOYLE	37		37
PT_500021	I_NIMOYLE	29		29
PT_500024	I_NIMOYLE	32		32
PT_500087	I_NIMOYLE	3		3
PT_400163	I_ROIEWIC	86		86
PT_400157	I_ROIEWIC	32		32

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PT_500069	I_NIMOYLE	87			87
PT_500058	I_NIMOYLE	26			26
PT_500031	I_NIMOYLE	29			29
PT_400096	I_ROIEWIC	87			87
PT_400113	I_ROIEWIC	28			28
PT_500037	I_NIMOYLE	29			29
PT_400168	I_ROIEWIC	74			74
PT_400136	I_ROIEWIC	57			57
PT_500081	I_NIMOYLE	30			30
PT_400037	I_ROIEWIC	3			3
PT_400115	I_ROIEWIC	29			29
PT_500070	I_NIMOYLE	67			67
PT_400108	I_ROIEWIC	68			68
PT_400170	I_ROIEWIC	8			8
PT_400171	I_ROIEWIC	3			3
PT_400099	I_ROIEWIC	45			45
PT_400030	I_ROIEWIC	29			29
PT_500088	I_NIMOYLE	17			17
PT_500092	I_NIMOYLE	4			4
PT_400144	DSU_401660			29	29
PT_500078	DSU_501330			29	29
PT_400111	DSU_401390			4	4
PT_500067	DSU_501380			4	4
PT_400133	DSU_401530			29	29
PT_400021	GU_400021			29	29
PT_400021	GU_400050			29	29
PT_400021	GU_400060			29	29
PT_400021	GU_400070			29	29
PT_400021	GU_400080			29	29
PT_400021	GU_400591			29	29
PT_400021	GU_400600			29	29
PT_400021	GU_400910			29	29
PT_400021	GU_400920			29	29
PT_400021	GU_401080			29	29
PT_400021	GU_401380			29	29
PT_400021	GU_401600			29	29
PT_400021	GU_401640			29	29
PT_400025	GU_400130			29	29
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_400038	GU_400550			29	29
PT_400050	GU_400650			29	29
PT_400050	GU_400660			29	29
PT_400050	GU_401000			29	29
PT_400050	GU_401060			29	29
PT_400050	GU_401150			29	29
PT_400050	GU_401240			29	29
PT_400050	GU_401250			29	29
PT_400050	GU_401280			29	29
PT_400050	GU_401290			29	29
PT_400050	GU_401360			29	29
PT_400050	GU_401790			29	29

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PT_400054	GU_400620			1	1
PT_400055	GU_400630			1	1
PT_400062	GU_400730			29	29
PT_400062	GU_400731			29	29
PT_400062	GU_400840			29	29
PT_400066	GU_401540			29	29
PT_400066	GU_401820			29	29
PT_400077	GU_400950			1	1
PT_400082	GU_401100			29	29
PT_400087	GU_401230			29	29
PT_400148	GU_401690			29	29
PT_400150	GU_401700			29	29
PT_400151	GU_401770			29	29
PT_400151	GU_401780			29	29
PT_400152	GU_401710			29	29
PT_400152	GU_401720			29	29
PT_400152	GU_401730			29	29
PT_400152	GU_401740			29	29
PT_400152	GU_401750			29	29
PT_400152	GU_401760			29	29
PT_500021	GU_500010			29	29
PT_500021	GU_500740			29	29
PT_500021	GU_501160			29	29
PT_500032	GU_500211			29	29
PT_500032	GU_501120			29	29
PT_500032	GU_501280			29	29
PT_500032	GU_501290			29	29
PT_500039	GU_500270			29	29
PT_500044	GU_500720			29	29
PT_500047	GU_500790			29	29
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			29	29
PT_500062	GU_501180			29	29
PT_500066	GU_501210			1	1
PT_500073	GU_501230			29	29
PT_500074	GU_501250			29	29
	Total	4061	0	1760	5821
	Percentage	69.76%	0.00%	30.24%	100.00%

Table 25 – Commercial Offer 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.

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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	94,084,955.13
	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	72,431,754.33
	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	28,871,395.53
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	73,064,976.21
	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	22,440,085.66
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	73,064,976.21
	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	22,440,085.66
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	93,053,099.07
	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	30,797,967.90
Oct-14	ROI	£24,219,443.57	£5,293,829.01	£290,759.61	£125,095.27	£15,188.14	£796.75	£32,076.91	£6,465.54	£355.27	£0.00	£0.00	£0.00	29,984,010.07
	NI	£73,931,567.89	£18,999,271.36	£1,111,306.76	£521,095.61	£105,483.15	£5,765.50	£89,815.40	£9,518.03	£802.55	£0.00	£0.00	£0.00	94,774,626.23
Nov-14	ROI	£57,386,075.03	£21,066,561.05	£829,482.91	£519,431.32	£147,151.65	£6,123.28	£79,434.93	£23,622.83	£721.00	£0.00	£0.00	£0.00	80,058,604.00
	NI	£21,159,632.98	£6,853,966.46	£220,983.06	£50,691.24	£27,250.12	£653.21	£26,795.35	£6,589.23	£253.47	£0.00	£0.00	£0.00	28,346,815.11
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	32,203,307.53
Jan-15	ROI	£66,217,285.22	£32,948,586.09	£1,048,029.61	£438,657.65	£106,047.92	£3,853.63	£150,902.14	£27,588.16	£819.15	£0.00	£2,703.81	£0.00	100,944,473.31
	NI	£27,989,159.87	£8,572,662.67	£280,425.53	£42,989.83	£9,581.57	£365.00	£37,526.70	£7,104.61	£229.56	£0.00	£1,338.36	£0.00	36,941,383.70
Feb-15	ROI	£65,650,453.03	£55,349,682.44	£856,456.83	£281,934.15	£56,929.88	£1,558.86	£451,006.63	£29,817.73	£839.90	£68,857.79	£0.00	£0.00	122,747,537.24
	NI	£25,773,047.64	£16,395,217.13	£213,118.58	£112,874.22	£37,025.56	£783.98	£25,242.43	£5,150.11	£140.40	£0.00	£0.00	£0.00	42,562,600.05
Mar-15	ROI	£53,956,274.88	£21,836,040.18	£861,676.05	£453,661.43	£115,779.65	£2,416.32	£355,096.34	£39,172.70	£877.23	£111,462.50	£0.00	£0.00	77,732,457.23
	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	69,714,060.43
	NI	£20,444,248.38	£5,917,010.08	£191,002.36	£178,167.11	£60,451.34	£1,059.11	£38,565.73	£8,077.48	£245.07	£24,964.25	£0.00	£0.00	26,863,790.93
May-15	ROI	£62,682,234.81	£19,502,808.85	£978,929.74	£496,789.41	£113,309.65	£113,309.65	£257,691.56	£37,913.64	£947.65	£105,628.08	£0.00	£0.00	84,178,921.74
	NI	£20,656,049.28	£5,471,708.22	£941,978.73	£284,714.17	£81,721.34	£1,530.01	£28,297.30	£5,740.95	£255.12	£458.23	£0.00	£0.00	27,472,453.33
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	68,999,011.56
	NI	£16,086,817.66	£4,881,262.27	£731,152.70	£190,327.69	£56,176.06	£1,108.32	£14,086.52	£3,263.83	£136.37	£4.82	£0.00	£0.00	21,964,336.24
Jul-15	ROI	£60,081,065.67	£18,106,345.49	£938,580.42	£392,863.94	£100,250.95	£2,281.34	£70,409.41	£14,571.40	£801.22	£3,383,812.96	£0.00	£0.00	83,090,982.80
	NI	£20,399,899.80	£4,559,620.30	£901,179.27	£122,425.31	£34,196.36	£798.99	£13,983.16	£3,041.83	£170.87	£560,424.72	£0.00	£0.00	26,595,740.63
Aug-15	ROI	£78,361,586.44	£18,780,406.68	£706,070.38	£980,269.55	£57,624.58	£1,113.70	£78,106.89	£15,466.63	£704.85	£100,608.41	£0.00	£0.00	99,081,958.11
	NI	£26,593,706.25	£4,803,877.25	£717,392.01	£96,278.24	£20,145.75	£293.79	£11,711.41	£2,659.00	£109.44	£1,579.59	£0.00	£0.00	32,247,752.73
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	77,155,655.93
	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	24,034,509.77
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	82,241,524.83
	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	28,236,040.36
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	86,123,892.27
	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	31,237,640.63
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	24,034,509.77

Table 26 - Total Charges by Month

Market Operator Monthly Report

Apr-14	ROI	€65,482,679.64	€21,981,963.17	€549,302.08	€147,627.43	€4,399.40	€259,726.57	€38,566.49	€1,783.33	€0.00	€0.00	€0.00	€88,466,048.11
	NI	€25,517,456.45	€8,979,409.88	€303,950.50	€73,719.22	€2,138.60	€56,294.66	€9,188.57	€381.08	€0.00	€0.00	€0.00	€34,942,538.96
May-14	ROI	€68,502,489.93	€22,405,052.21	€652,683.44	€210,307.65	€7,807.32	€249,029.58	€16,425.79	€1,110.17	€9,581.32	€0.00	€0.00	€92,054,487.41
	NI	€27,515,054.00	€7,036,489.15	€150,145.26	€37,452.65	€999.79	€81,713.52	€13,718.04	€468.77	€3.89	€0.00	€0.00	€34,836,045.07
Jun-14	ROI	€53,863,542.49	€16,268,861.66	€424,333.36	€121,415.36	€4,245.54	€106,227.35	€17,318.53	€1,014.63	€10,805.33	€0.00	€0.00	€70,817,764.25
	NI	€18,301,490.12	€7,464,864.99	€121,134.45	€40,186.30	€1,005.32	€50,770.87	€10,564.39	€415.66	€29.76	€0.00	€0.00	€25,990,461.86
Jul-14	ROI	€50,929,138.15	€21,772,067.06	€326,631.36	€82,858.43	€2,938.18	€123,130.56	€17,118.42	€1,016.51	€0.00	€0.00	€0.00	€73,254,898.67
	NI	€12,936,147.70	€6,035,816.09	€91,479.13	€29,875.87	€813.16	€67,310.27	€7,807.37	€427.29	€0.00	€0.00	€0.00	€19,169,676.88
Aug-14	ROI	€76,295,371.52	€16,503,906.00	€283,973.76	€42,797.07	€2,738.01	€125,676.42	€0.00	€1,327.83	€29.36	€0.00	€0.00	€93,255,819.97
	NI	€17,954,420.41	€5,911,052.65	€74,371.07	€15,553.63	€863.74	€54,424.97	€0.00	€488.54	€7.43	€0.00	€0.00	€24,011,182.44
Sep-14	ROI	€73,630,247.02	€17,405,067.16	€261,367.00	€62,924.88	€3,377.33	€73,033.72	€11,845.94	€728.13	€0.00	€0.00	€0.00	€91,448,591.18
	NI	€22,272,153.08	€5,742,482.51	€49,069.86	€14,962.35	€717.66	€41,404.59	€13,672.05	€509.28	€0.00	€0.00	€0.00	€28,134,971.38
Oct-14	ROI	€82,250,495.91	€18,220,219.93	€584,729.92	€104,687.01	€6,507.05	€125,335.38	€9,519.24	€1,313.25	€0.00	€0.00	€0.00	€101,302,807.69
	NI	€18,391,944.98	€5,868,972.09	€82,257.95	€15,709.16	€1,031.70	€42,677.16	€6,422.11	€498.29	€0.00	€0.00	€0.00	€24,409,513.44
Nov-14	ROI	€64,818,088.97	€20,480,936.98	€530,386.99	€157,754.12	€6,116.91	€78,674.36	€23,606.67	€1,289.81	€0.00	€0.00	€0.00	€86,096,854.81
	NI	€14,616,605.70	€7,312,194.38	€50,960.79	€18,897.71	€653.20	€37,498.77	€6,592.72	€254.29	€0.00	€0.00	€0.00	€22,043,657.56
Dec-14	ROI	€79,262,340.64	€30,252,803.13	€636,211.01	€143,171.30	€7,087.15	€116,495.94	€25,330.11	€995.97	€0.00	€0.00	€0.00	€110,444,435.25
	NI	€17,625,339.05	€7,511,303.13	€58,743.90	€14,475.87	€679.17	€34,724.44	€7,982.34	€296.61	€0.00	€0.00	€0.00	€25,253,544.51
Jan-15	ROI	€77,706,417.44	€34,394,754.66	€438,764.21	€107,475.98	€4,105.28	€98,914.59	€27,079.30	€830.89	€14,240.78	€3,537.75	€0.00	€112,796,120.88
	NI	€21,735,748.95	€7,476,289.80	€38,275.71	€8,505.48	€324.11	€25,331.16	€7,456.18	€248.46	€0.00	€691.42	€0.00	€29,292,871.27
Feb-15	ROI	€73,470,092.53	€55,924,536.86	€296,450.78	€68,641.91	€1,587.00	€108,844.27	€30,840.66	€843.06	€0.00	€0.00	€0.00	€129,901,837.07
	NI	€19,828,437.97	€15,954,828.70	€108,022.71	€28,545.69	€367.07	€16,957.65	€4,432.19	€141.23	€0.00	€0.00	€0.00	€35,941,733.21
Mar-15	ROI	€62,833,350.60	€23,162,278.12	€454,954.34	€115,622.74	€2,409.00	€95,140.99	€35,705.38	€876.34	€33.87	€0.00	€0.00	€86,700,371.38
	NI	€18,497,389.79	€7,572,263.19	€147,525.82	€46,556.55	€825.97	€19,215.14	€8,635.89	€182.86	€726.16	€0.00	€0.00	€26,293,321.37
Apr-15	ROI	€55,596,682.04	€19,228,984.53	€447,913.03	€132,018.11	€2,588.47	€93,342.92	€23,125.23	€794.27	€27,655.34	€0.00	€0.00	€75,553,103.94
	NI	€14,229,748.35	€5,312,669.68	€178,040.01	€5,667.89	€1,059.24	€28,971.47	€8,624.89	€241.56	€20,785.23	€0.00	€0.00	€19,840,808.32
May-15	ROI	€67,111,651.41	€19,797,771.76	€51,325.57	€496,344.48	€113,479.16	€2,634.87	€257,691.56	€32,517.87	€947.37	€0.00	€0.00	€87,864,364.05
	NI	€14,205,268.80	€5,300,854.82	€14,374.56	€284,573.32	€81,498.12	€-1,531.15	€28,297.30	€9,511.56	€255.00	€0.00	€0.00	€19,923,102.33
Jun-15	ROI	€52,399,988.22	€18,449,916.98	€50,329.66	€524,214.44	€125,353.28	€2,989.03	€83,564.13	€15,091.05	€633.94	€0.00	€0.00	€71,652,080.73
	NI	€10,536,540.86	€4,561,917.57	€13,069.46	€190,224.00	€56,986.34	€-1,109.52	€14,086.52	€3,197.29	€136.59	€0.00	€0.00	€15,375,049.11
Jul-15	ROI	€63,619,222.88	€17,795,388.83	€50,900.02	€368,804.77	€98,198.30	€2,207.87	€70,409.41	€14,587.16	€801.29	€0.00	€0.00	€82,020,520.53
	NI	€12,711,689.30	€4,703,936.76	€13,498.87	€121,756.24	€35,884.73	€-799.78	€13,983.16	€3,045.41	€170.96	€0.00	€0.00	€17,603,165.65
Aug-15	ROI	€78,593,341.57	€17,976,726.62	€1,941.74	€806,815.82	€62,841.79	€1,062.49	€78,106.89	€15,446.53	€704.90	€0.00	€0.00	€97,536,988.35
	NI	€18,174,076.35	€5,392,403.96	€13,263.37	€191,650.14	€15,985.64	€-294.74	€11,711.41	€2,643.17	€109.50	€0.00	€0.00	€23,801,548.80
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	€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	€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	€0.00	€68,898,667.43
	NI	€16,138,572.90	€5,672,214.93	€22,437.26	€24,123.83	€9,213.97	€-275.84	€11,014.82	€3,591.14	€59.13	€0.00	€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	€0.00	€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	€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	€244,831.00	€55,957.02	€455.17	€0.00	€0.00	€86,898,479.78
	NI	€17,357,006.06	€8,696,074.34	€21,111.70	€132,691.76	€37,359.60	€-907.89	€23,859.97	€6,608.19	€129.44	€0.00	€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	€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	€8,383.76	€72.48	€0.00	€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	€0.00	€68,898,667.43
	NI	€16,138,572.90	€5,672,214.93	€22,437.26	€24,123.83	€9,213.97	€-275.84	€11,014.82	€3,591.14	€59.13	€0.00	€0.00	€21,880,952.14

Table 27 - Total Payments by Month

15. Appendix H: Full Balancing Costs

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

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

Trading Market

Date Of Invoice	Week No	SEM Balancing Costs	VAT Balancing Costs
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
15/01/2016	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

Table 28 – Full Balancing Costs for Trading Charges and Payments

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

Capacity Market

Invoice Month	SEM Balancing Costs	VAT Balancing Costs
October 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

Table 29 - Balancing Costs for Capacity Settlement

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

16. Appendix I: MSP Algorithms

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

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

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

Month	Ex-Ante	Ex-Ante 2	Ex-Post Indicative	Ex-Post Initial	Within Day
<u>October 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>

Table 30 - MIP Algorithms

Market Operator Monthly Report

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

Table 31 - MIP Vs LR Peak Price Comparison