



# **Market Operator Monthly Report**

## **November 2018**

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### Executive Summary

This Single Electricity Market Operator's (SEMO) report covers the month of operation of November 2018 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 November 2018, there was no late Credit Report publication as per the Trading and Settlement Code timelines.

There were 3 defaults by Participants during November 2018. The largest of these was a Energy Week 37 2018 Ad Hoc invoice for £82,234.78 which was remedied on the same day.

There was 1 Credit Cover Increase default during November 2018 as per the Trading and Settlement code timelines.

87 general queries were received in November 2018. During the same period 91 general queries were resolved.

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

## 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	4	-
	Credit Risk Management	1	-
SEMO	Pricing & Scheduling	-	-
	Settlement	-	-
	Funds Transfer	-	-
	Credit Risk Management	-	-
	Other	-	-
<b>Total</b>		<b>5</b>	<b>-</b>

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

Further details of each of the Trading and Settlement code breaches noted above are set out in [Appendix A](#)

Key:

- Major Breach - late publishing of invoices, default notices issued for non-payment or similar.
- Minor Breach - deadlines not met, but no financial implication to Participants. This includes late posting of pricing and settlement runs.

Financial Statistics

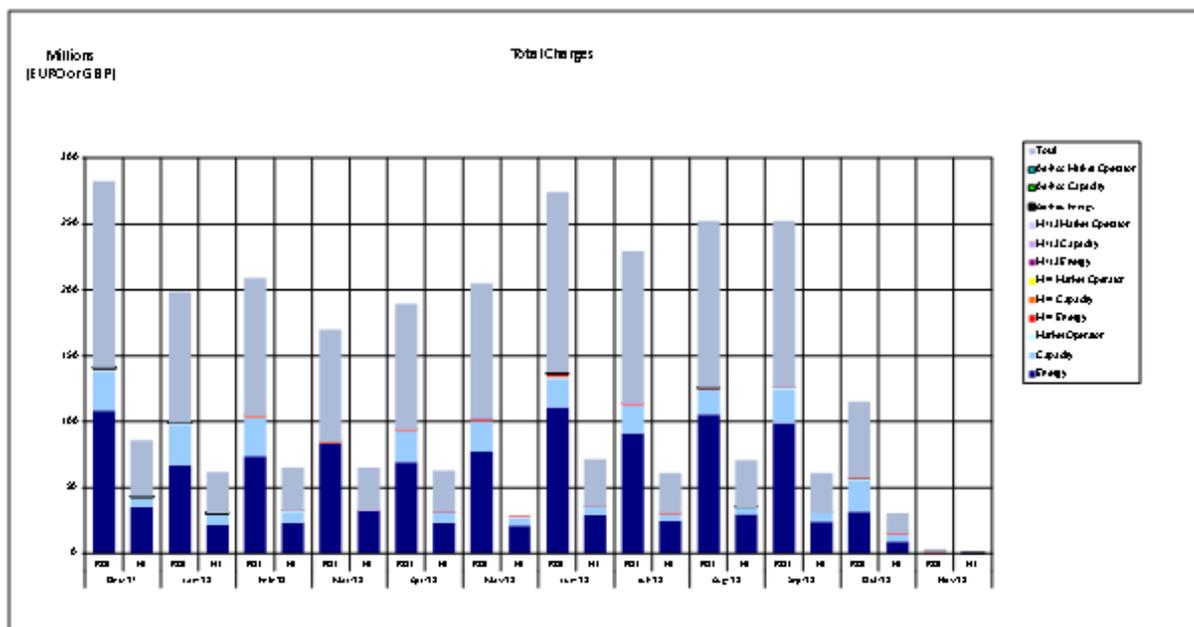


Figure 1 - Total Charges for Each Currency

Market	Nov-18	
	ROI	NI
Energy	€0	£0
Capacity	€0	£0
Market Operator	€0	£0
M+4 Energy	€1,160,011	£333,889
M+4 Capacity	€185,595	£67,914
M+4 Market Operator	€6,269	£1,675
M+13 Energy	€312,981	£86,421
M+13 Capacity	€78,711	£34,554
M+13 Market Operator	€1,598	£589
Ad-hoc Energy	€31	£82,261
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€0	£0
<b>Total</b>	<b>€1,745,196</b>	<b>£607,304</b>

Table 2 - Total Charges for Each Currency

Notes relating to Table 2 and 3:

## Market Operator Monthly Report

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

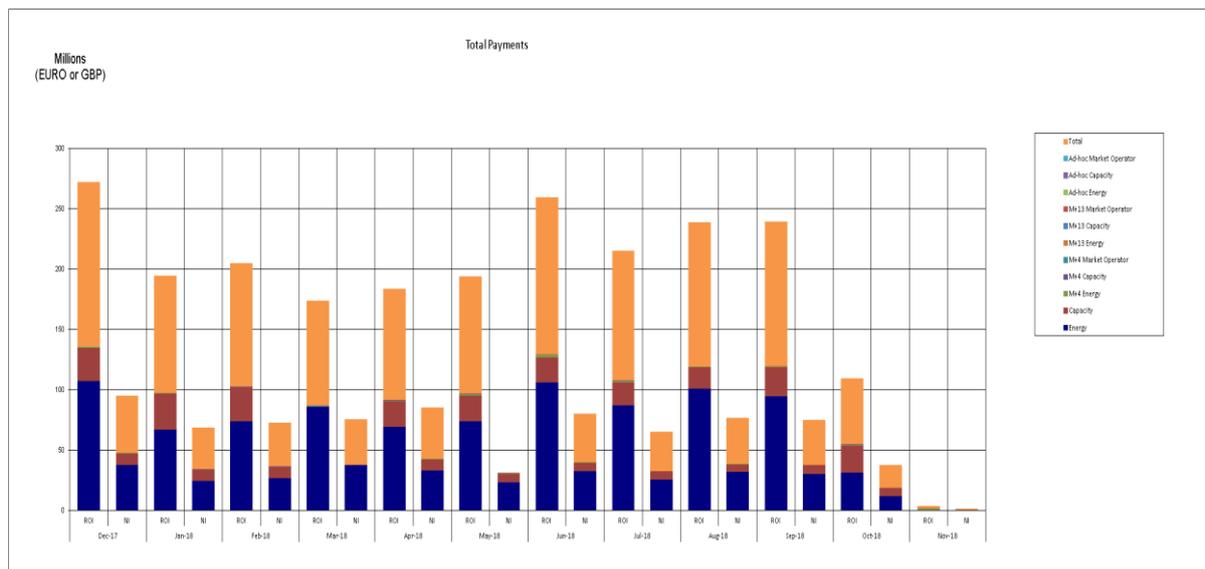


Figure 2 - Total Payments for Each Currency

Market	Nov-18	
	ROI	NI
Energy	€0	£0
Capacity	€0	£0
M+4 Energy	€1,157,683	£333,518
M+4 Capacity	€185,071	£67,787
M+4 Market Operator	€6,166	£1,659
M+13 Energy	€320,379	£86,279
M+13 Capacity	€79,187	£34,163
M+13 Market Operator	€2,118	£589
Ad-hoc Energy	€2,649	£38,925
Ad-hoc Capacity	€0	£0
Ad-hoc Market Operator	€8	£155
<b>Total</b>	<b>€1,753,261</b>	<b>£563,074</b>

Table 3 - Total Payments for Each Currency

## Total Currency Costs

Currency Costs are now longer calculated in the SEM since Week 39 2018.

### Financial Changes between Initial Settlement and Subsequent Reruns

The following graphs provide a breakdown of resettlement amounts for the M+4 resettlement period of July 2018 and the M+13 period of October 2017 for Energy and Capacity.

#### 3.1.1 Energy Market

Note: - For Figure 4, 6, 7, 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 5 & 8

#### M+4 Resettlement

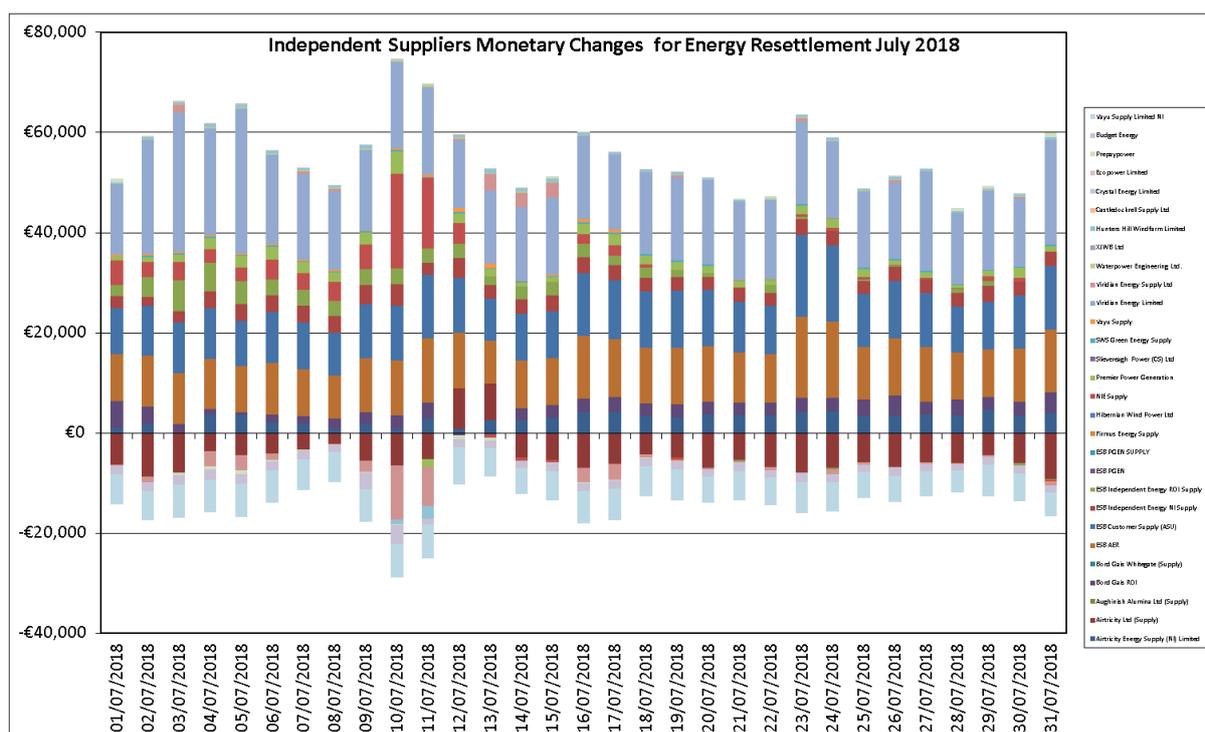


Figure 3 – Independent Suppliers Monetary Changes for Energy Resettlement – July 2018

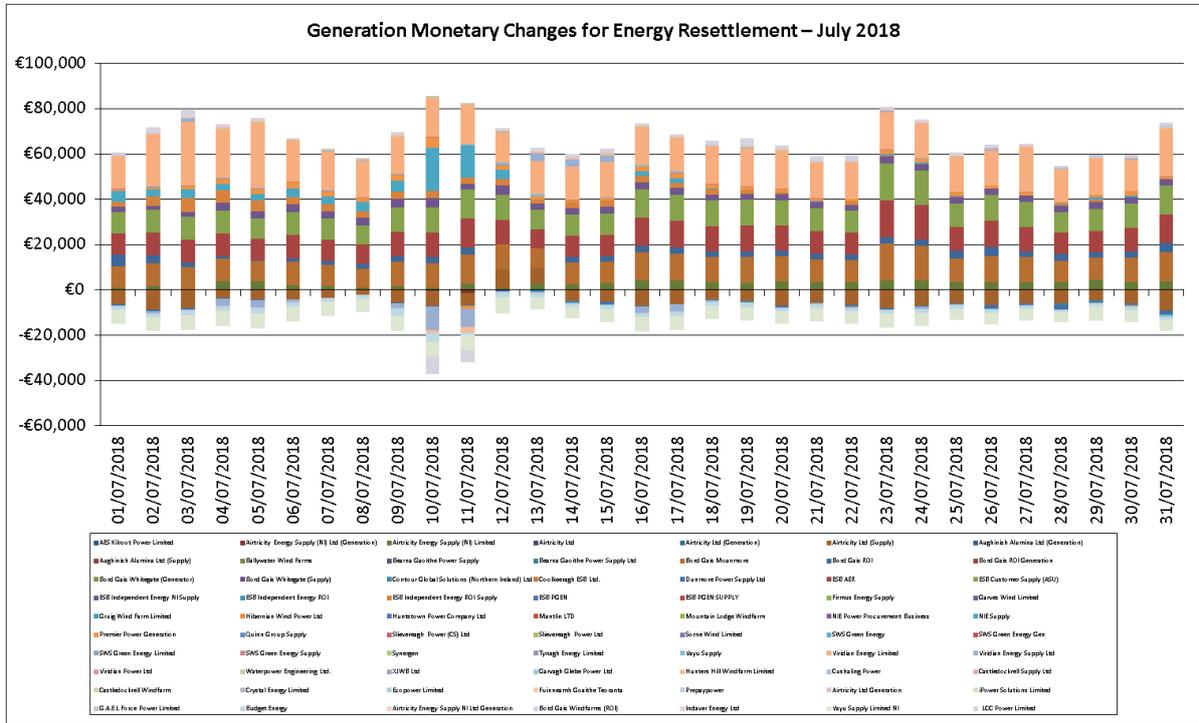


Figure 4 – Generation Monetary Changes for Energy Resettlement – July 2018

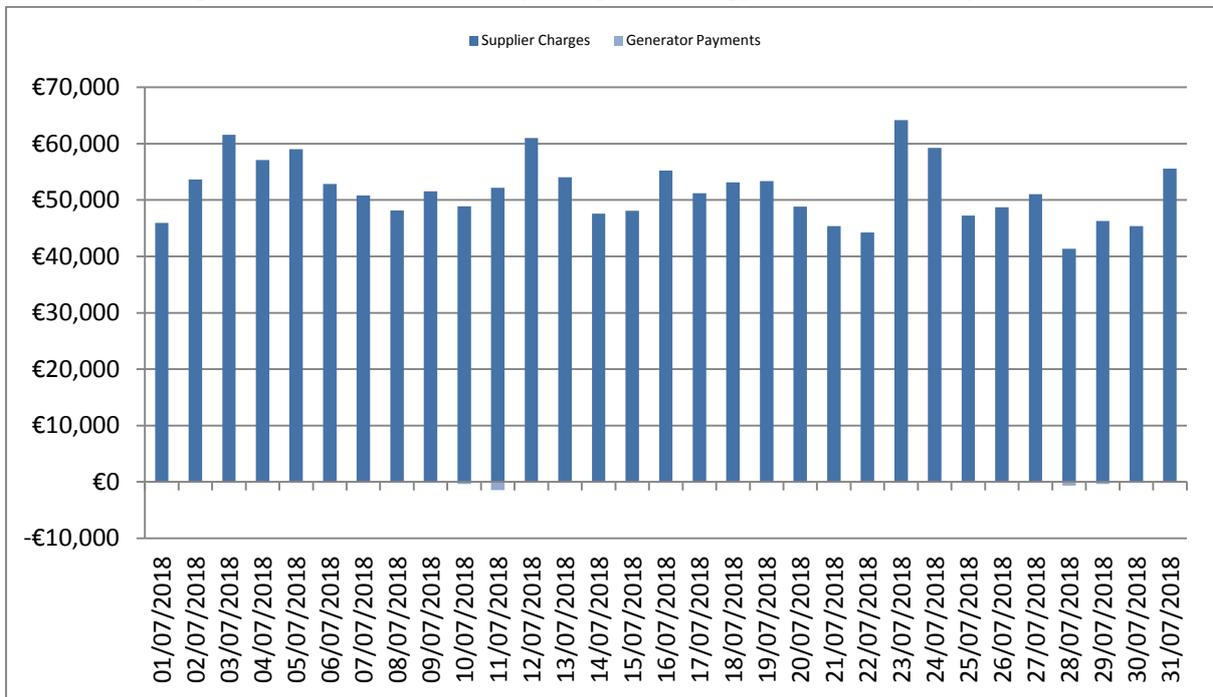


Figure 5 – Total Monetary Changes for Energy Resettlement – July 2018

# Market Operator Monthly Report

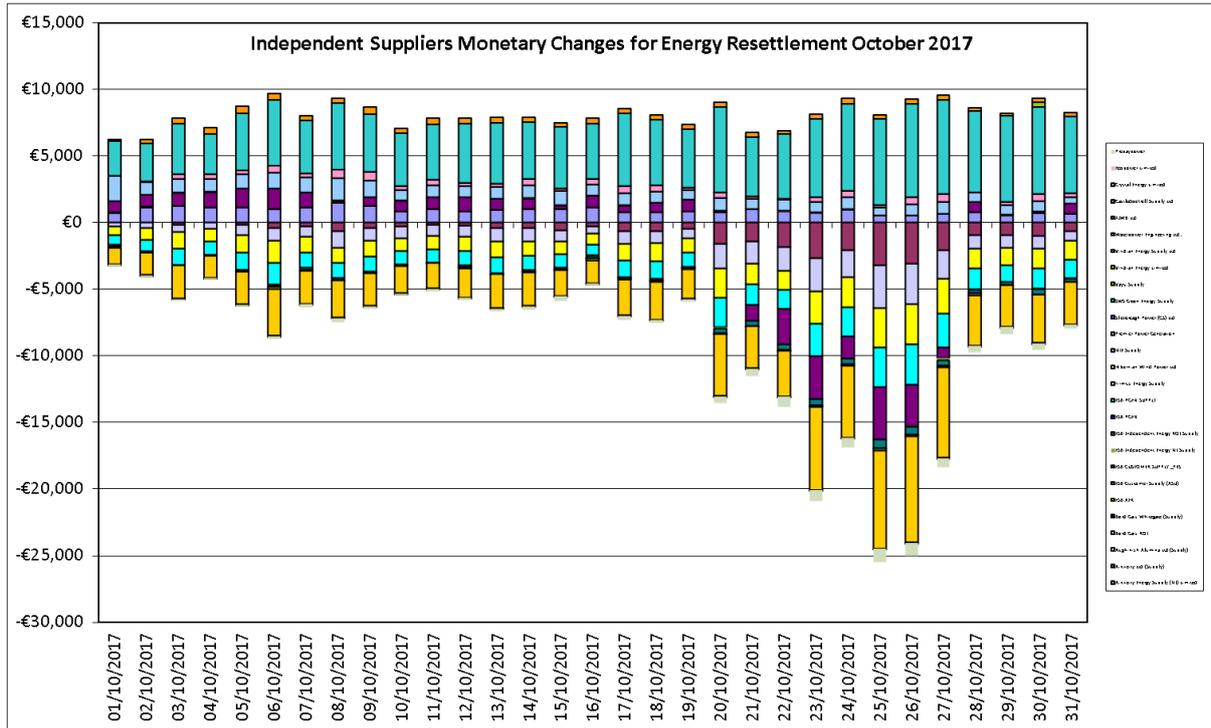


Figure 6 - Independent Suppliers Monetary Changes for Energy Resettlement – Oct 2017

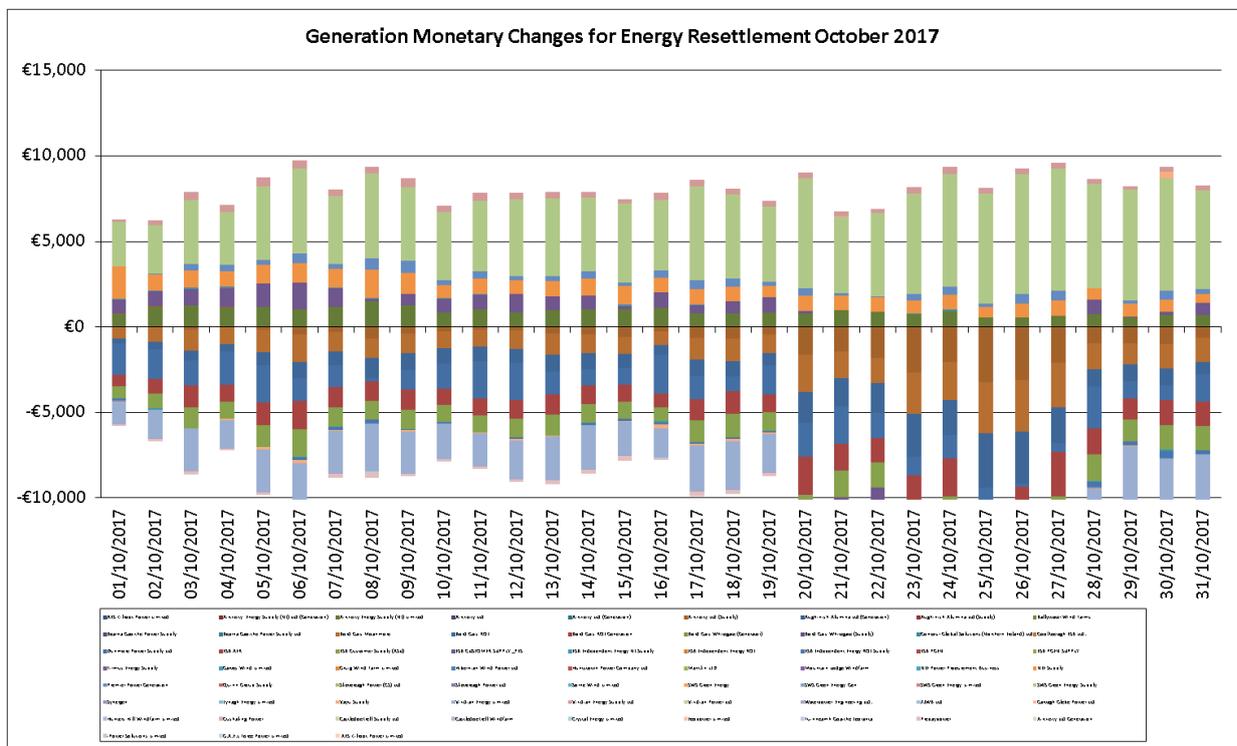


Figure 7 - Generation Monetary Changes for Energy Resettlement – Oct 2017

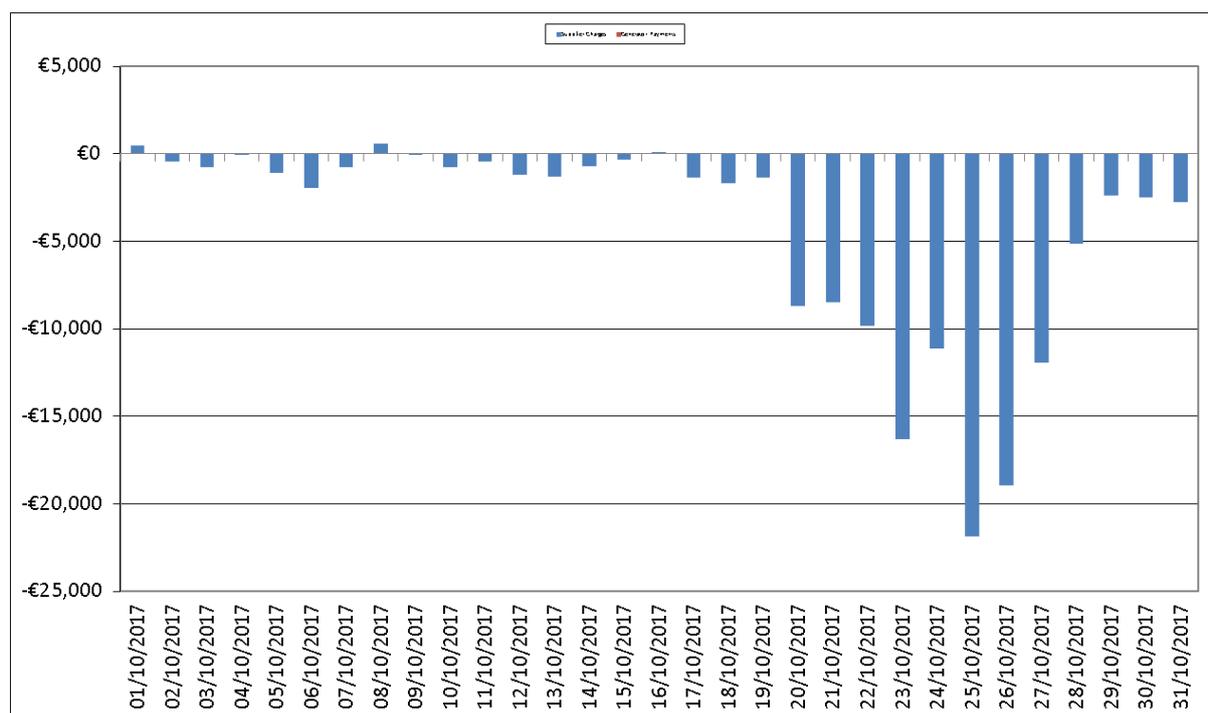


Figure 8 - Total Monetary Changes for Energy Resettlement – Oct 2017

### 3.1.2 Capacity Market

Note: - For Figure 10, 11 & 14 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 12.

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

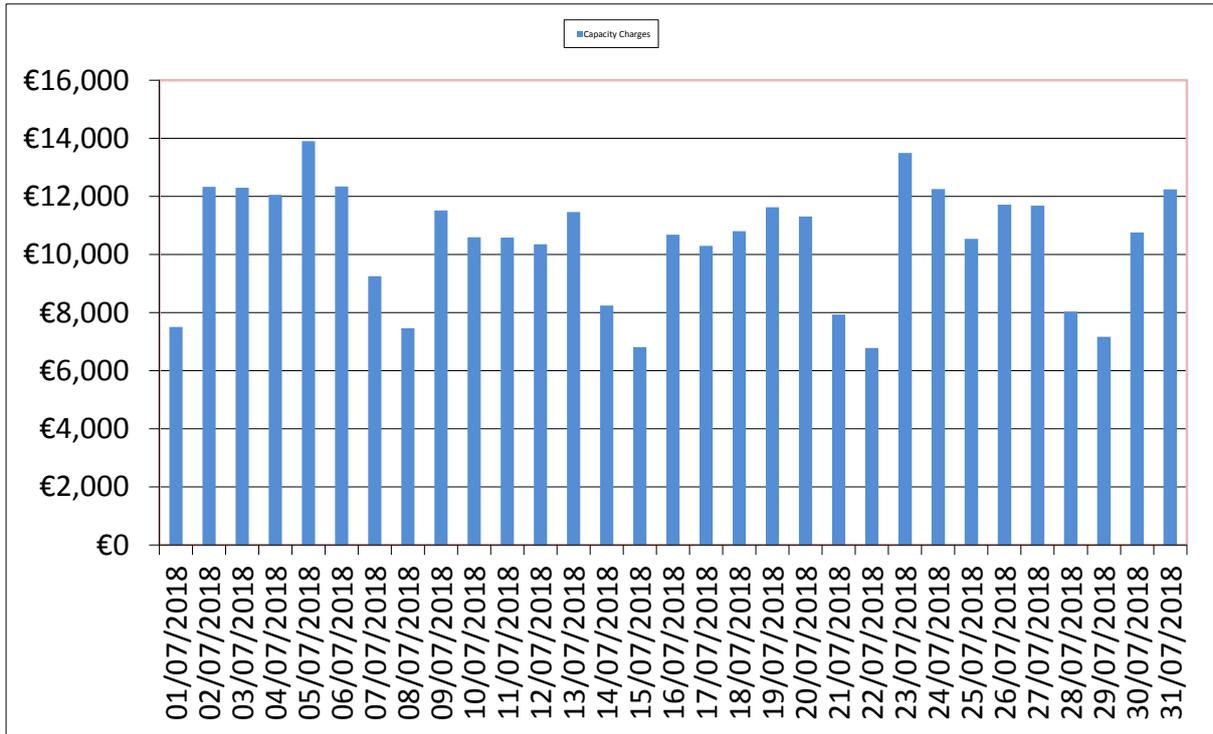


Figure 9 - Independent Suppliers Monetary Changes for Capacity Resettlement – July 2018

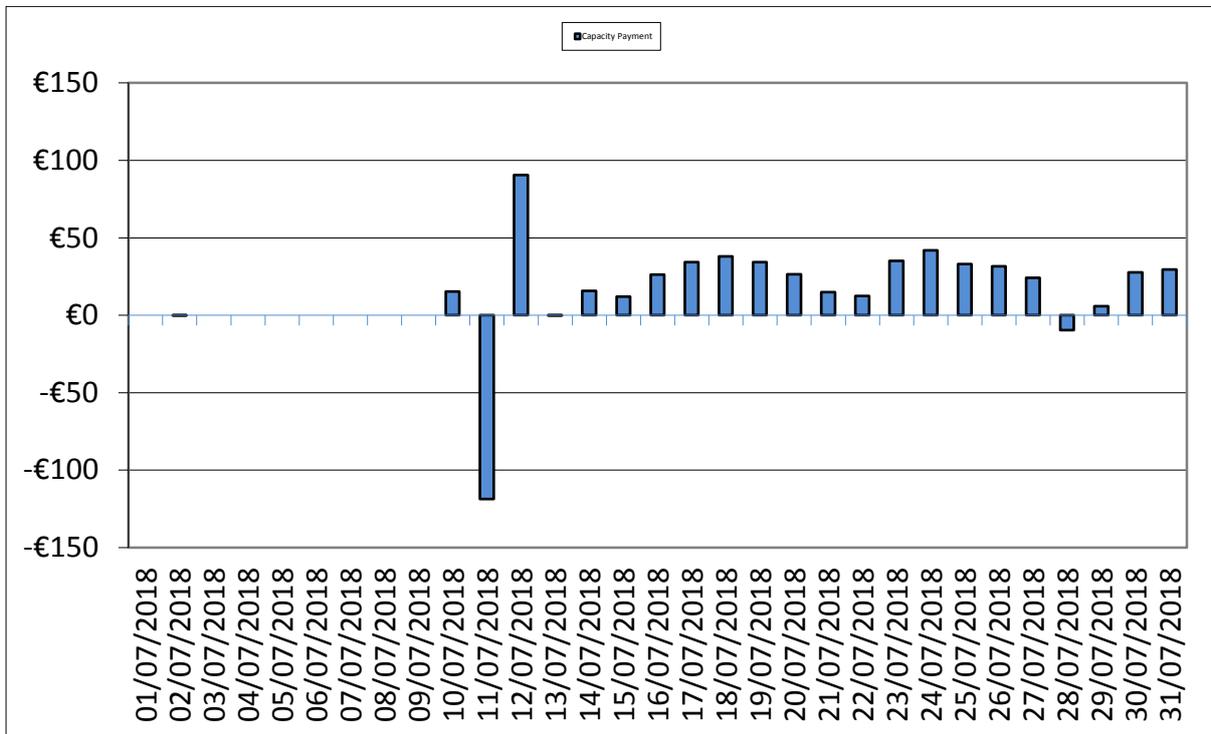


Figure 10 - All Generation Monetary Change for Capacity Resettlement – July 2018

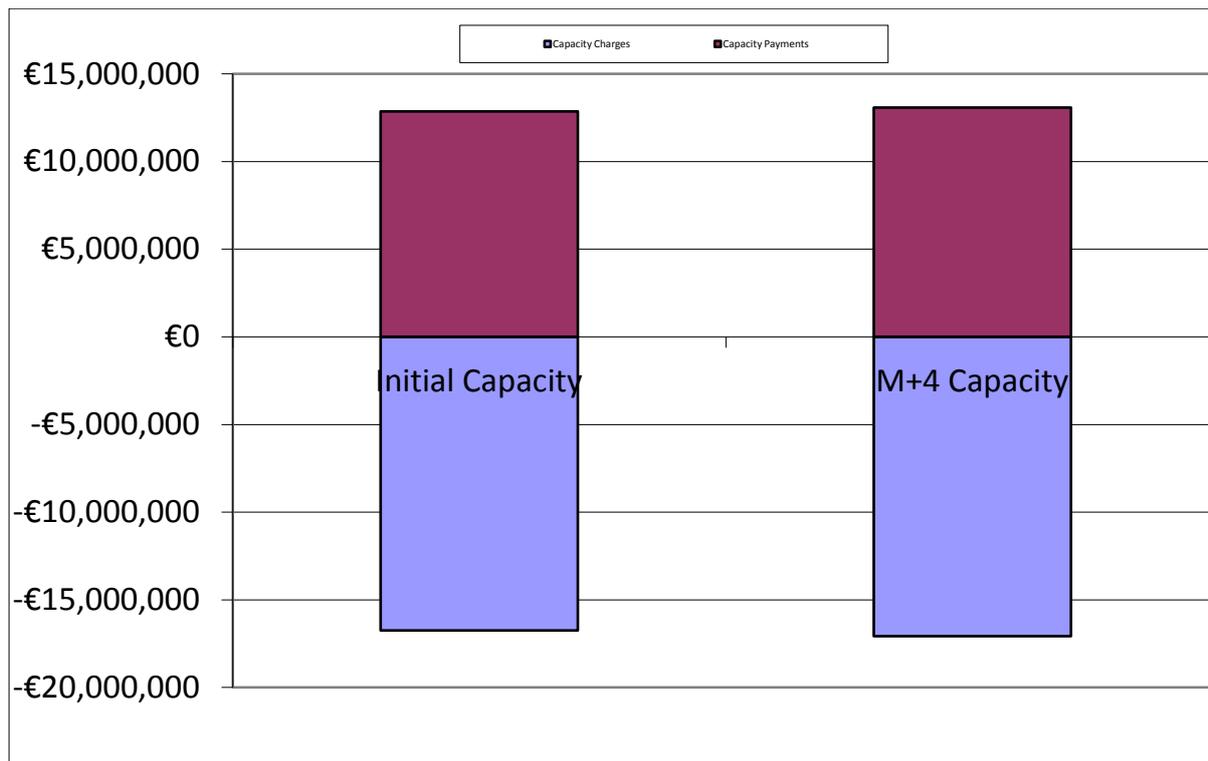


Figure 11 - Comparison of Distribution of Monetary Amounts between Capacity Initial and Resettlement July 2018.

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

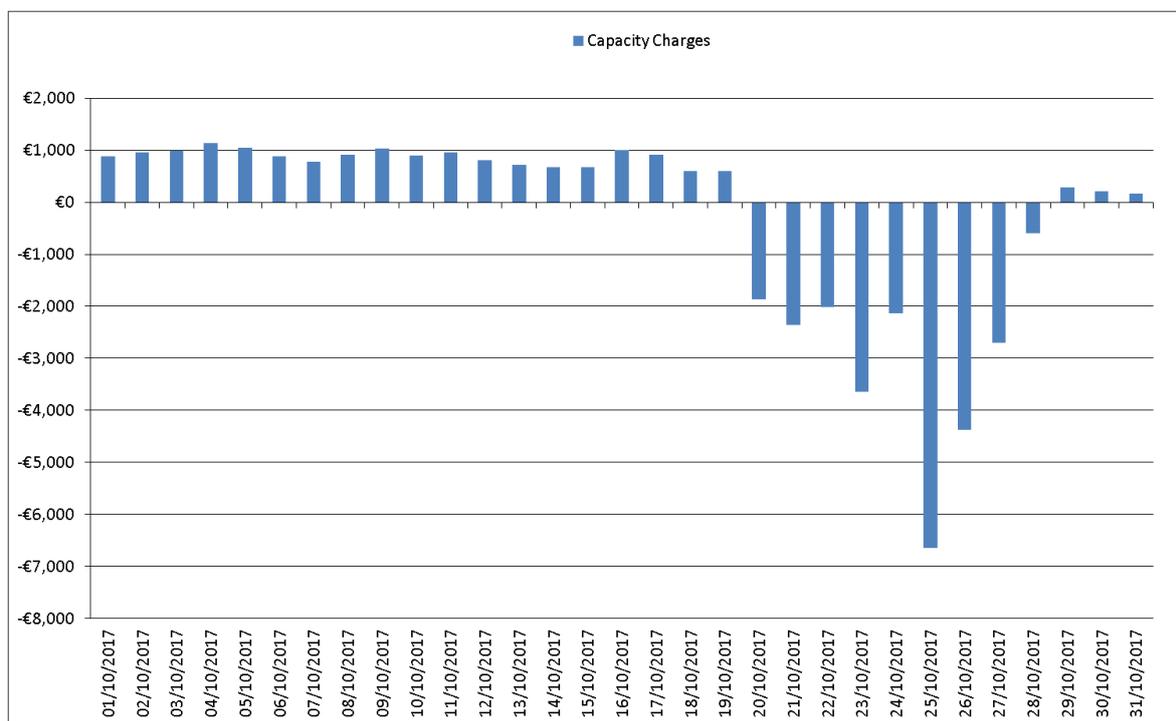


Figure 12 - Independent Suppliers Monetary Changes for Capacity Resettlement – Oct 2017

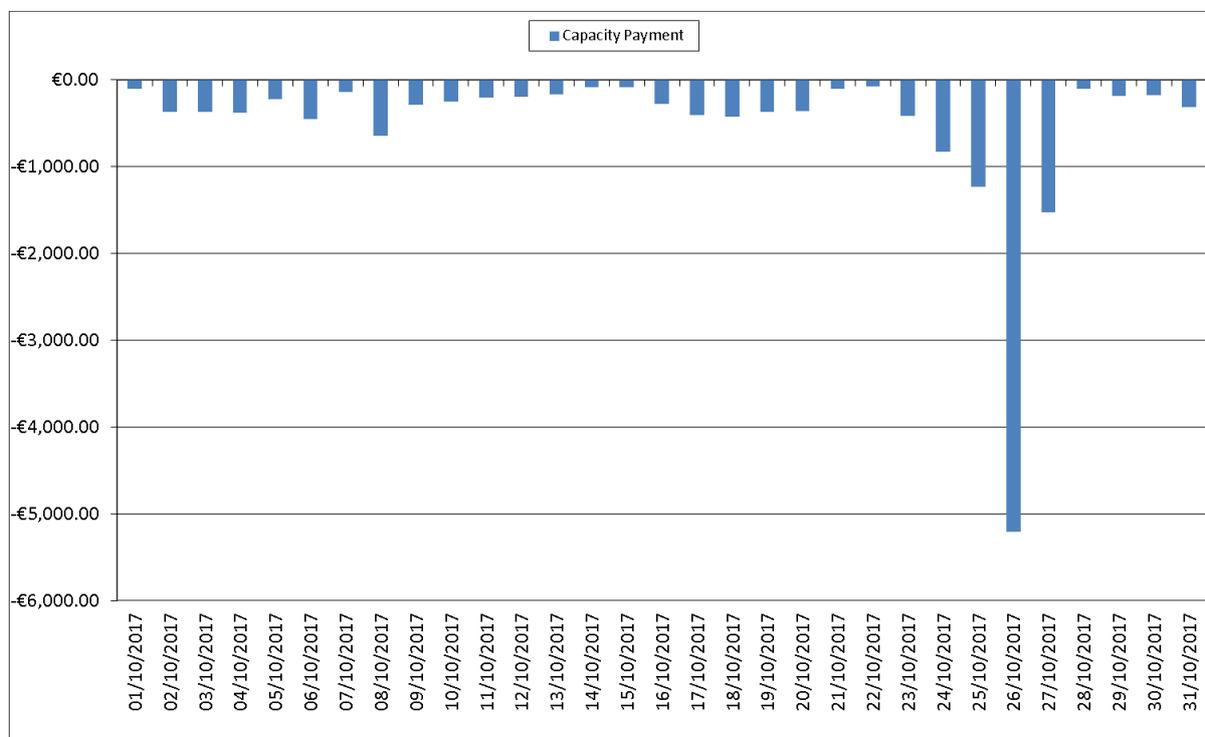


Figure 13 – All Generation Monetary Change for Capacity Resettlement – Oct 2017

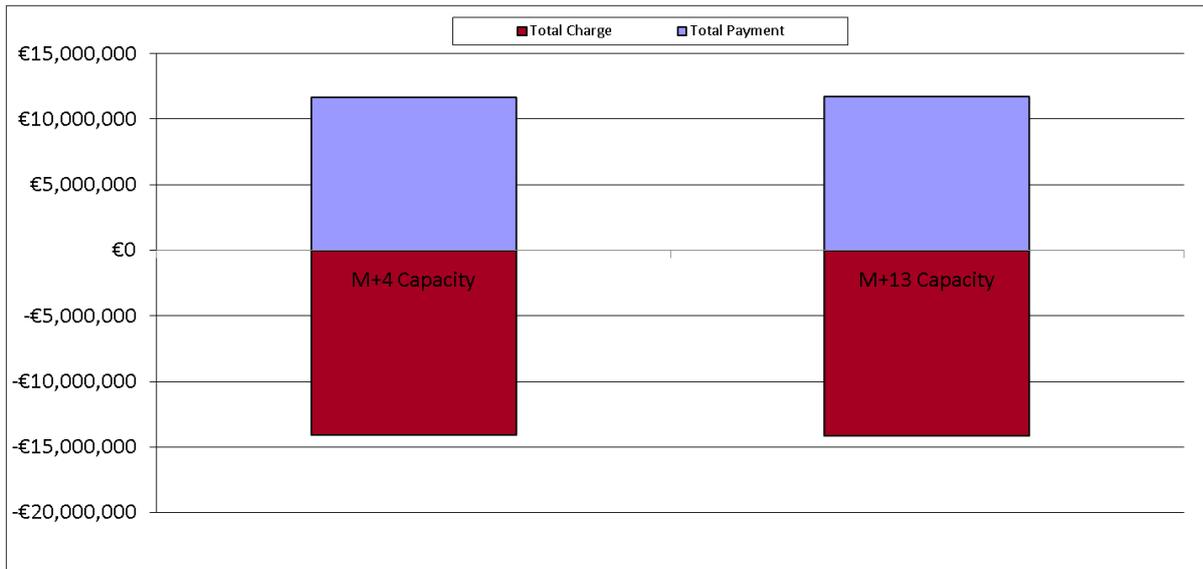


Figure 14 - Comparison of Distribution of Monetary Amounts between M+4 Capacity Resettlement and M+13 Capacity Resettlement – Oct 2017.

### Helpdesk Call Statistics

The statistics presented in Table 8 - Helpdesk Call Statistics covers the month of November 2018

#### Market Helpdesk Report: 01/11/18 to 30/11/18

	Received	Resolved within the period	Not Resolved	Resolved in the period	Resolution Time (Working Days)	Resolved On Time
Normal	87	79	8	91	1.35	86
Important	0	0	0	0	0.00	0
Urgent	0	0	0	0	0.00	0
Settlement	1	0	1	4	9.20	4
Credit	0	0	0	0	0.00	0
Dispute	0	0	0	0	0.00	0
Data	0	0	0	0	0.00	0
Total/Average	88	79	9	95	2.11	90

**Table 8 – Helpdesk Statistics**

Definitions:

- Resolved within the Period refers to queries raised and resolved within the calendar month of November 2018.
- Resolved in the Period refers to queries resolved within November 2018, 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 November 2018.
- Not Resolved refers to queries raised but not resolved within November 2018.
- Urgent are general queries which may have an impact on market operations. SEMO has an internal objective to resolve these within 3 working days; however, this is not a mandated service level under the Trading and Settlement Code.
- Disputes are where a dispute has been raised over the outcome of a data or settlement query.

The average resolution time for General Queries has decreased by 0.09 working days from 1.44 in October 2018 to 1.35 in November 2018. SEMO has a metric to resolve General Queries within 20 Working Days. These include queries received over the phone and e-mail.

Data and Settlement Queries generally continue to be responded to within the timelines required by the Trading and Settlement Code, i.e. one calendar month. No Formal Query timeline extensions were required during November 2018 with regard to formal Settlement Queries.

### Disputes and Queries

#### 5.1.1 Disputes

No Disputes were raised during the month of November 2018.

Topic	Number Of Queries

Table 9– Upheld Dispute Queries by Topic

#### 5.1.2 Data Queries (SEM)

There were no formal data queries received during the month of November 2018.

Topic	Number Of Queries

Table 10– Upheld Data Queries by Topic

#### 5.1.3 Settlement Queries

There were thirty-two formal Settlement queries raised in November 2018 and twenty-four were upheld (3 not upheld, 1 rejected and 4 investigation pending).

Topic	Number Of Queries
Difference Charges	2
Fixed Cost Payment	3
Discount Component Payment	11
Premium Component Payment	1
Capacity Payments	1
Capacity Exchange Rate	6

Table 11 – Upheld Settlement Queries by Topic

- One query was raised relating to the Ad-hoc Methodology (date range included in statement), investigation is pending.
- Six queries were raised on Capacity Payments Exchange rate application. All were upheld and deemed to be of low materiality.
- Two queries were raised on Capacity Payments. One was upheld and deemed to be of low materiality
- Three queries relating to Difference Charges were raised; two were upheld and were deemed to be of low materiality. One investigation is ongoing.

- Twelve queries relating to Discount Components were raised and eleven were upheld (one investigation ongoing). One was deemed to be of high materiality and ten of low materiality.
- Two queries relating to Premium Components were raised and one was upheld and deemed to be of high materiality (one investigation ongoing).
- Three queries relating to Fixed Costs were raised, all were upheld. Two were deemed to be of high materiality and one of low materiality.
- One query on Meter Data was not upheld.
- One query on Price was not upheld.
- One query on Underpayment was rejected.

- **Unresolved Queries**

There are fourteen unresolved I-SEM Settlement Queries as of the 17<sup>th</sup> December 2018.

A full list of all the Settlement formal queries raised in November 2018 is contained in [Appendix B](#).

### **SEM**

There were two formal Settlement queries raised in November 2018. One was not upheld and one was later withdrawn by participant.

- **Unresolved Queries**

There are no unresolved SEM Settlement Queries as of the 17<sup>th</sup> December 2018.

### Central Systems

#### *6.1 List of System Errors and Re-runs*

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

##### **6.1.1 Re-Pricing / Resettlement Runs**

There was 1 Ad hoc Re-Settlement run carried out in November 2018.

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

There were no Market Application defects found in November 2018.

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

## **Occasional Components**

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

There were no scheduled Business Continuity tests performed during November 2018.

### ***7.2 Communications or Systems Failures***

There were no communication failures during November 2018.

### ***7.3 Denial of Service Attacks***

There was no Denial of Service Attacks during November 2018.

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

### Data Provider

There were no breaches to report in November 2018.

### Market Participant

Ops Date Identified	Run Type	Quality or Timing	Party	Issue Type	Description	Cause	Resolution	T and SC Breach
07/11/2018	Money In	Timing	Participant	Payment Default	Just Energy (Ireland) Limited (PT_400088) defaulted on an Energy Week 26 M+4 2018 invoice.	Participant Error	A default letter was issued to the Participant.	Major
13/11/2018	CRM	Timing	Participant	Credit	iPower Solutions (CP_500053) defaulted on a CCIN issued on 09/11/2018	CCIN was not resolved within the T&SC timeframes	iPower Solutions (CP_500053) paid outstanding invoices on the 14/11/2018 which closed the CCIN.	Major
14/11/2018	Money In	Timing	Participant	Payment Default	Just Energy (Ireland) Limited (PT_400211) defaulted on an Energy Week 27 2018 M+4 invoice.	Participant Error	A default letter was issued to the Participant.	Major
14/11/2018	Money In	Timing	Participant	Payment Default	iPower Solutions Limited (PT_500053) defaulted on an Energy Week 37 2018 AdHoc invoice.	Participant Error	A default letter was issued to the Participant.	Major
28/11/2018	Money In	Timing	Participant	Payment Default	Arden Energy Limited (PT_400149) defaulted on an Energy Week 29 2018 M+4 invoice.	Participant Error	A default letter was issued to the Participant.	Major

**Table 13 – Trading and Settlement Code Breaches – Market Participants**

### SEMO – Settlements

There were no breaches to report in November 2018.

**Table 14 – Trading and Settlement Code Breaches – SEMO**

### SEMO - Pricing and Scheduling

There were no breaches to report in November 2018.

### SEMO - Funds Transfer

There were no breaches to report in November 2018.

### SEMO - Credit Management

There were no breaches to report in November 2018.

### SEMO – Other

There were no breaches to report in November 2018.

**Appendix B: List of Queries by Type**

RAISED	TOPIC	Query Ref No.
01/11	CDISCOUNT	F0081624
02/11	FIXED COSTS AND ENERGY	F0081650
05/11	CDIFF	F0081664
05/11	FIXED COSTS	F0081668
06/11	FIXED COSTS	F0081696
06/11	CAPACITY PAYMENTS	F0081706
07/11	CDISCOUNT	F0081724
07/11	CAPACITY EXCHANGE RATE	F0081728
07/11	CAPACITY EXCHANGE RATE	F0081740
09/11	CDISCOUNT	F0081757
09/11	CDIFF	F0081779
09/11	CAPACITY EXCHANGE RATE	F0081781
12/11	CAPACITY EXCHANGE RATE	F0081794
12/11	CPREMIUM	F0081799
12/11	CDISCOUNT	F0081809
13/11	METER DATA	F0081822
13/11	CDISCOUNT	F0081824
15/11	CDISCOUNT	F0081864
15/11	CDISCOUNT	F0081867
16/11	CDISCOUNT	F0081884
20/11	CDISCOUNT	F0081916
21/11	CDISCOUNT	F0081942
21/11	PRICE	F0081943
21/11	CAPACITY PAYMENTS	F0081948
22/11	CDISCOUNT	F0081959
23/11	UNDERPAYMENT	F0081977
23/11	CDISCOUNT	F0081985
26/11	CAPACITY EXCHANGE RATE	F0082004
30/11	CPREMIUM	F0082077
30/11	QDIFFTRACK	F0082078
30/11	CAPACITY EXCHANGE RATE	F0082092
30/11	AD HOC METHODOLOGY	F0082093

Table 15- Formal Queries

### Appendix C: List of All System Errors and Failures

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

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

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

There were no Market Application defects found in November 2018.

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

Table 16 - List of System Errors and Failures

## **Appendix D: Details of Operational Timings**

No longer required as part of legacy SEM wind down.

## Appendix E: Imperfections Charge

No longer required as part of legacy SEM wind down.

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

No longer required as part of legacy SEM wind down.

## 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.

**Table 17 – Total Charges by Month**

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
Jun-17	ROI	£50,996,714.24	£18,508,982.13	£841,895.70	£869,713.90	£198,750.84	£4,934.88	£65,063.85	£16,276.93	£866.44	£0.00	£0.00	£0.00	71,503,198.91
	NI	£18,134,740.54	£5,385,407.39	£213,872.53	£138,837.43	£30,982.10	£823.10	£148,093.71	£42,384.03	£1,836.46	£0.00	£0.00	£0.00	24,096,977.29
Jul-17	ROI	£53,839,556.76	£18,469,543.17	£689,850.17	£859,675.25	£105,231.46	£1,843.13	£47,200.17	£31,615.25	£600.31	£0.00	£0.00	£0.00	74,045,115.67
	NI	£16,871,524.38	£4,970,215.26	£169,319.17	£206,699.63	£26,416.99	£609.40	£122,939.50	£47,342.00	£1,369.62	£0.00	£0.00	£0.00	22,416,435.95
Aug-17	ROI	£49,715,868.99	£16,597,661.81	£670,887.89	£169,567.77	£49,405.94	£1,189.91	£131,434.13	£36,135.62	£1,706.37	£1.41	£0.00	£0.00	67,393,859.84
	NI	£15,604,259.43	£4,539,253.85	£174,636.65	£71,879.64	£24,102.39	£515.19	£11,674.35	£2,799.04	£123.94	£52.50	£0.00	£0.00	20,429,296.98
Sep-17	ROI	£74,262,007.43	£18,246,287.18	£871,978.12	£297,529.91	£58,164.04	£2,322.12	£47,978.01	£13,495.87	£504.35	£163,227.43	£0.00	£0.00	93,963,494.46
	NI	£26,213,019.19	£5,128,326.58	£230,350.58	£81,360.23	£23,139.40	£499.97	£13,331.20	£6,511.87	£297.83	£140,679.45	£0.00	£0.00	31,837,516.30
Oct-17	ROI	£64,383,218.39	£18,184,490.56	£721,054.00	£289,078.01	£109,973.68	£2,586.90	£32,785.64	£11,166.82	£447.56	£0.00	£0.00	£0.00	83,734,801.56
	NI	£18,177,387.18	£5,365,068.45	£188,849.52	£78,539.81	£23,503.63	£650.99	£10,931.60	£2,877.72	£134.29	£0.00	£0.00	£0.00	23,847,943.19
Nov-17	ROI	£83,791,449	£24,787,352	£781,890	£413,698	£113,547	£3,295	£122,794	£33,971	£718	£458,369	£6,145	£6,145	£110,519,371
	NI	£22,118,497	£6,651,371	£204,783	£141,841	£56,639	£1,085	£61,621	£21,195	£400	£705	£2,550	£2,550	£29,263,237
Dec-17	ROI	£108,724,596.96	£30,213,314.37	£1,032,089.87	£386,043.20	£61,761.35	£2,747.14	£91,579.26	£20,859.90	£558.92	£354,184.96	£196,828.99	£196,828.99	141,281,393.91
	NI	£35,009,530.01	£7,435,318.60	£270,080.16	£180,156.15	£72,189.79	£1,323.93	£45,368.58	£11,660.54	£288.42	£58,353.41	£11,091.72	£11,091.72	43,106,453.03
Jan-18	ROI	£66,824,387.64	£31,236,649.01	£796,356.35	£272,646.34	£136,640.90	£1,965.48	£56,253.29	£18,996.49	£347.05	£320.44	£2,955.28	£2,955.28	99,350,473.55
	NI	£21,801,403.00	£8,153,351.60	£211,139.18	£105,764.72	£76,139.37	£734.71	£22,938.26	£7,983.39	£150.76	£275,137.08	£85,908.52	£85,908.52	30,826,559.11
Feb-18	ROI	£73,894,145.46	£29,049,213.63	£821,611.24	£239,608.70	£442,118.67	£1,727.82	£34,763.85	£73,083.63	£225.56	£0.00	£0.00	£0.00	104,556,498.56
	NI	£23,559,299.88	£8,534,268.31	£214,366.57	£214,152.33	£80,930.26	£1,369.32	£27,935.49	£69,821.89	£160.29	£0.00	£0.00	£0.00	32,702,304.34
Mar-18	ROI	£83,664,309	£0	£194,992	£674,215	£284,390	£3,439	£95,181	£158,339	£583	£0	£0	£0	£85,075,447
	NI	£32,334,060	£0	£50,052	£163,160	£102,559	£899	£50,645	£71,098	£380	£0	£0	£0	£32,772,854
Apr-18	ROI	£69,317,323	£23,231,814	£783,294	£970,456	£256,503	£5,627	£71,337	£267,758	£516	£0	£0	£0	£94,904,628
	NI	£23,659,859	£7,429,700	£190,874	£151,575	£33,802	£816	£72,822	£115,446	£533	£0	£0	£0	£31,655,427
May-18	ROI	£77,304,833	£22,485,464	£739,608	£1,395,991	£384,788	£8,896	£89,490	£221,592	£645	£0	£0	£0	£102,631,308
	NI	£21,411,034	£6,005,961	£181,189	£109,484	£23,056	£674	£114,249	£62,751	£823	£0	£0	£0	£27,909,222
Jun-18	ROI	£110,729,885	£22,412,350	£892,166	£2,294,801	£444,742	£12,880	£101,002	£74,247	£805	£417,974	£0	£0	£137,380,852
	NI	£29,772,183	£5,362,582	£213,124	£111,573	£27,385	£607	£183,273	£95,348	£1,350	£16	£0	£0	£35,767,439
Jul-18	ROI	£91,566,909	£20,553,253	£732,984	£1,335,293	£324,878	£6,367	£47,651	£89,704	£431	£0	£0	£0	£114,657,469
	NI	£24,824,845	£5,305,704	£169,676	£164,048	£26,544	£654	£124,634	£100,028	£1,063	£0	£0	£0	£30,717,196
Aug-18	ROI	£105,558,500	£18,695,229	£882,539	£559,068	£165,878	£3,317	£48,971	£87,850	£370	£206,636	£0	£0	£126,208,357
	NI	£29,846,140	£5,022,974	£217,086	£248,040	£37,238	£1,329	£10,253	£31,064	£85	£5,825	£0	£0	£35,420,033
Sep-18	ROI	£99,146,293	£25,829,272	£731,194	£468,008	£88,260	£2,304	£34,658	£89,979	£269	£0	£0	£0	£126,390,237
	NI	£24,452,280	£5,983,336	£181,019	£68,235	£13,992	£365	£6,470	£18,637	£53	£0	£0	£0	£30,724,387
Oct-18	ROI	£31,530,401	£24,300,026	£595,030	£865,326	£183,408	£4,241	£148,617	£39,733	£1,136	£0	£0	£0	£57,667,916
	NI	£9,455,756	£5,693,202	£150,691	£108,258	£35,783	£1,126	£8,612	£2,164	£108	£0	£0	£0	£15,455,699
Nov-18	ROI	£0	£0	£0	£1,160,011	£185,595	£6,269	£312,981	£78,711	£1,598	£31	£0	£0	£1,745,196
	NI	£0	£0	£0	£333,889	£67,914	£1,675	£86,421	£34,554	£589	£82,261	£0	£0	£607,304

# Market Operator Monthly Report

Market		Energy	Capacity	M+4 Energy	M+4 Capacity	M+4 Market Operator	M+13 Energy	M+13 Capacity	M+13 Market Operator	Ad-hoc Energy	Ad-hoc Capacity	Ad-hoc Market Operator	Total
Jun-17	ROI	£52,758,496.23	£17,355,294.13	£882,852.53	£191,441.91	£3,661.42	£65,347.10	£16,420.10	£869.48	£0.00	£0.00	£0.00	£71,274,382.90
	NI	£20,252,622.96	£6,380,475.07	£138,076.17	£37,695.41	£816.77	£148,166.13	£42,425.33	£1,836.50	£0.00	£0.00	£0.00	£27,002,114.34
Jul-17	ROI	£54,277,998.32	£17,477,373.72	£846,835.48	£102,146.67	£1,651.30	£47,723.87	£34,509.09	£601.00	£0.00	£0.00	£0.00	£72,788,839.45
	NI	£18,773,354.99	£5,850,870.07	£230,926.67	£29,088.46	£609.37	£122,267.41	£44,738.41	£1,404.46	£0.00	£0.00	£0.00	£25,053,259.84
Aug-17	ROI	£50,562,528.38	£15,345,661.50	£190,289.53	£50,188.86	£1,330.67	£130,457.46	£35,704.06	£1,694.02	£2.00	£0.00	£0.00	£66,317,856.48
	NI	£18,103,577.29	£5,650,171.54	£71,815.23	£23,380.11	£512.28	£11,510.00	£3,159.55	£146.77	£45.51	£0.00	£0.00	£23,864,318.28
Sep-17	ROI	£77,198,039.75	£16,935,824.39	£297,316.08	£58,064.10	£2,315.75	£36,227.08	£14,579.25	£480.13	£329,748.86	£0.00	£736.80	£94,873,332.19
	NI	£29,090,989.44	£6,342,522.98	£81,307.50	£23,116.39	£615.25	£24,625.76	£5,539.12	£177.97	£254,051.02	£0.00	£4.28	£35,822,949.71
Oct-17	ROI	£66,627,076.69	£17,573,435.30	£379,168.29	£109,325.13	£2,586.81	£31,769.76	£11,103.25	£435.24	£0.00	£0.00	£0.00	£84,734,900.47
	NI	£22,549,009.87	£5,897,549.80	£79,103.03	£24,197.26	£648.45	£10,935.82	£2,957.83	£134.12	£0.00	£0.00	£0.00	£28,564,536.18
Nov-17	ROI	£83,230,541	£23,930,421	£473,719	£114,595	£3,363	£122,843	£33,951	£718	£645,100	£4,985	£800	£108,561,035
	NI	£25,746,600	£7,365,655	£145,319	£55,530	£1,080	£61,622	£21,196	£399	£274	£3,545	£0	£33,401,221
Dec-17	ROI	£106,835,064.33	£27,957,453.42	£397,100.73	£98,040.58	£2,984.78	£91,151.49	£20,818.71	£556.31	£336,745.88	£173,793.95	£644.35	£135,914,354.53
	NI	£37,790,994.99	£9,466,911.04	£181,354.27	£40,293.46	£1,305.84	£45,734.51	£11,769.44	£290.16	£57,624.89	£31,404.66	£288.16	£47,627,971.42
Jan-18	ROI	£66,556,846.79	£30,184,516.90	£264,692.47	£140,421.82	£600.74	£56,245.08	£18,749.58	£346.74	£37.23	£16,333.45	£0.00	£97,238,790.80
	NI	£24,598,645.75	£9,075,819.96	£105,487.86	£72,782.55	£685.44	£22,940.69	£8,209.56	£150.74	£270,100.11	£74,414.80	£1,311.93	£34,230,549.39
Feb-18	ROI	£73,649,373.32	£28,234,770.33	£241,672.56	£232,622.38	£1,496.49	£33,903.63	£90,769.95	£220.04	£0.00	£0.00	£0.00	£102,484,828.70
	NI	£26,522,258.99	£9,276,145.07	£211,340.35	£267,052.17	£1,368.55	£28,772.37	£54,122.68	£164.70	£0.00	£0.00	£0.00	£36,361,224.88
Mar-18	ROI	£85,513,434	£0	£691,820	£303,976	£3,238	£94,253	£188,330	£578	£0	£0	£0	£86,795,628
	NI	£37,437,280	£0	£170,090	£85,702	£898	£51,265	£45,028	£384	£0	£0	£0	£37,790,647
Apr-18	ROI	£69,267,924	£20,860,692	£945,469	£237,063	£3,887	£193,101	£310,897	£516	£0	£0	£0	£91,819,549
	NI	£32,845,010	£9,450,019	£150,560	£50,635	£818	£72,832	£77,370	£533	£0	£0	£0	£42,647,777
May-18	ROI	£73,986,199	£21,003,133	£1,333,265	£344,914	£4,639	£89,323	£138,550	£645	£0	£0	£0	£96,900,668
	NI	£23,049,174	£7,260,826	£111,164	£58,347	£686	£114,206	£136,262	£823	£0	£0	£0	£30,731,488
Jun-18	ROI	£106,186,794	£20,271,690	£2,266,420	£404,741	£6,062	£101,282	£80,377	£791	£394,961	£0	£884	£129,714,001
	NI	£32,258,574	£7,261,868	£115,238	£62,628	£627	£183,374	£89,625	£1,350	£852	£0	£2	£39,974,138
Jul-18	ROI	£86,768,139	£19,045,125	£1,383,691	£307,142	£4,724	£47,761	£123,685	£431	£0	£0	£0	£107,680,698
	NI	£25,508,813	£6,579,825	£161,500	£42,347	£738	£124,667	£69,402	£1,063	£0	£0	£0	£32,488,356
Aug-18	ROI	£101,015,744	£17,337,990	£549,108	£161,828	£2,583	£49,204	£91,882	£311	£145,525	£0	£0	£119,354,176
	NI	£31,815,843	£6,244,149	£243,991	£41,050	£1,252	£10,283	£27,631	£85	£7,589	£0	£0	£38,391,874
Sep-18	ROI	£94,348,675	£24,483,726	£469,838	£87,398	£2,373	£34,655	£85,446	£269	£0	£0	£0	£119,512,381
	NI	£30,233,883	£7,164,947	£67,373	£14,752	£295	£6,469	£22,731	£53	£0	£0	£0	£37,510,502
Oct-18	ROI	£30,964,136	£22,562,931	£878,875	£189,837	£5,160	£148,618	£39,721	£1,133	£0	£0	£0	£54,790,411
	NI	£11,418,621	£7,231,162	£107,709	£30,084	£1,123	£8,612	£2,161	£110	£0	£0	£0	£18,799,581
Nov-18	ROI	£0	£0	£1,157,683	£185,071	£6,166	£320,379	£79,187	£2,118	£2,649	£0	£8	£1,753,261
	NI	£0	£0	£333,518	£67,787	£1,659	£86,279	£34,163	£589	£38,925	£0	£155	£563,074

Table 18 - Total Payments by Month

## **Appendix H: Full Balancing Costs**

No longer required as part of legacy SEM wind down.

**Appendix I: MSP Algorithms**

No longer required as part of legacy SEM wind down.