Market Operator User Group

Belfast, 23 October 2019



Item	Presenter
Welcome	Anne Fitzgerald
Known Issues and Release Program	Michael Cleary
Market Development Roadmap	Michael Cleary
Ex-Ante Market	Liam McAllister, Michael Atcheson
Brexit Update	Michael Atcheson
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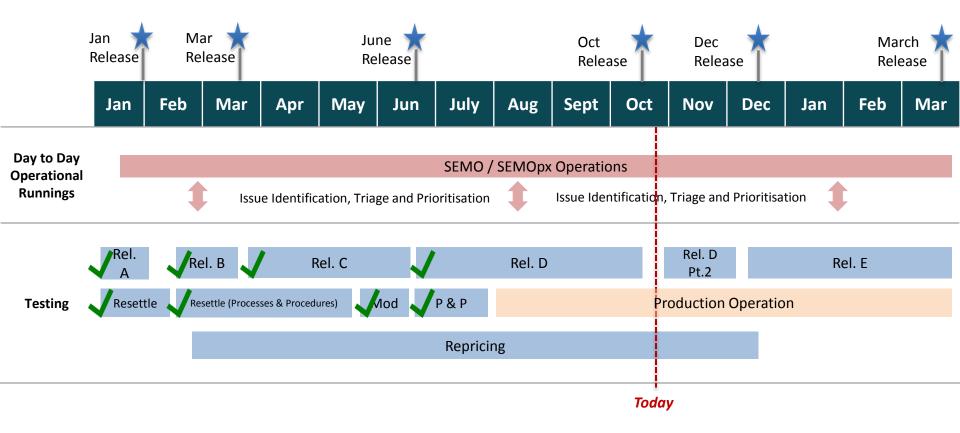


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I-SEM Day 1+, High-Level Indicative Release Timeline

- ABB release A deployed to production Tuesday 29th January
- ABB release B (MA 26 / CSB 1.2.2) deployed to production on 26th of March 2019
- ABB release C (MMS 1.1.8.1 / CSB 1.2.4) deployed to production 11th of June 2019
- ABB release D (MMS 1.1.9.1 / CSB 1.3.2) deployed to production 15th of October 2019
- ABB release D 'part 2' is currently in vendor FAT, target to production end of November / early Dec.
- ABB release E is in vendor build, target to production circa end of March 2020



Known Issues Update – Summary (1 of 2)

- Known Issues continue to be analysed and prioritised as and when they occur.
- Once a defect has been raised, the issue will be assessed in the wider defect pool and assigned to a code drop in line with its severity and priority.
- Drop dates to test have been agreed with our vendor, with release to production plans provided based on successful test closure.
- The table below presents a breakdown of the upcoming releases, Known Issues coverage and expected benefit.

Release Bundle	Status	Known Issues Coverage	Expected Benefit
Release A	Deployed to production on the 29 th of January 2019	14 Issues	 Resolution to a number of settlement issues including Fixed Cost complex bid resolution, Interconnection charges, and Autoproducers difference payments and charges fix Report 44 incorrect values for QCOB and QCNET Report 102 publication issue Internal operational improvements Improved resettlement and repricing functionality
Release B	Deployed to Production on the 26 th of March 2019	4 Issues	 Improvements to QBOA function including resolution to units being skipped Improved resettlement and repricing functionality Hotfixes were deployed to address difference charges for Interconnectors and supplier units Bill case optimisation
Hotfixes	Ad Hoc deployments to Release B	2 issues	 Multiple unit PN submissions with units under test M+4 optimisation hotfix QBOA Optimisation Hotfix 30 Minute imbalance price not being produced (in test

Known Issues Update – Summary (2 of 2)

- Known Issues continue to be analysed and prioritised as and when they occur.
- Once a defect has been raised, the issue will be assessed in the wider defect pool and assigned to a code drop in line with its severity and priority.
- Drop dates to test have been agreed with our vendor, with release to production plans provided based on successful test closure.
- The table below presents a breakdown of the upcoming releases, Known Issues coverage and expected benefit.

Release Bundle	Status	Known Issues Coverage	Expected Benefit
Release C	Deployed to Production 11 th of June 2019	26 Issues	 Fixes for Reports highlighted as priorities from participants Incorrect MW QTY values in REPT_078/079 CFC improvements Improvements to the QBOA function Consolidation of hotfixes
Release D	Deployed to Production 15 th of October	14 Issues	 Improvement to CFC Brexit functionality Access to participant Balancing Market reports before registration start date Report 048, 066 and 068 errors fixed
Release D part 2	In Vendor FAT	1 issue & further internal fixes	 System Separation enhancement (Brexit required change) Repricing fixes Units not being flagged on upward slope of reserve curve, despite reserve constraint binding
Release E	In Vendor Build	15 issues	 Application of DMAT in Imbalance Pricing FX rate for northern units QBOA improvements Incorrect application of LOCL/CRLO instructions REPT_082 publishing data for de registered units

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What was the type of feedback to the <u>June Roadmap</u>?



All Projects

- Want more info about status of projects...
 - Key items are risks, assumptions, vendor status
 - How projects impact each other
 - Highlight the scale of each project more

Ex-ante

- Concerned about liquidity in continuous...
 - Key items are EU Coupled Intraday Continuous and Auctions
 - Considerations: Link Block Orders/All or Nothing order types

Capacity

- Timing of changes questioned...
 - Secondary Trading important





What was the feedback to the <u>June Roadmap</u>?



Balancing Market

- Move on from stability to additional functionality...
 - Automation of registration

Settlements

- No consensus...
 - Some prefer single clean settlement runs in the new year

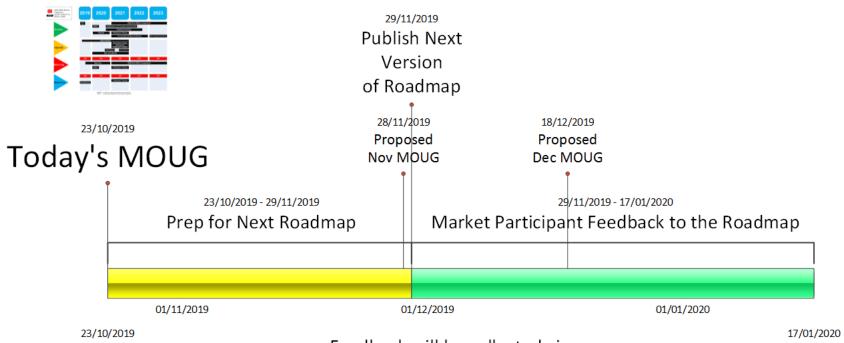
In General

- Communications
- MPs Role in Testing





Next steps....



Feedback will be collected via info@sem-o.com using subject: Market Development Roadmap

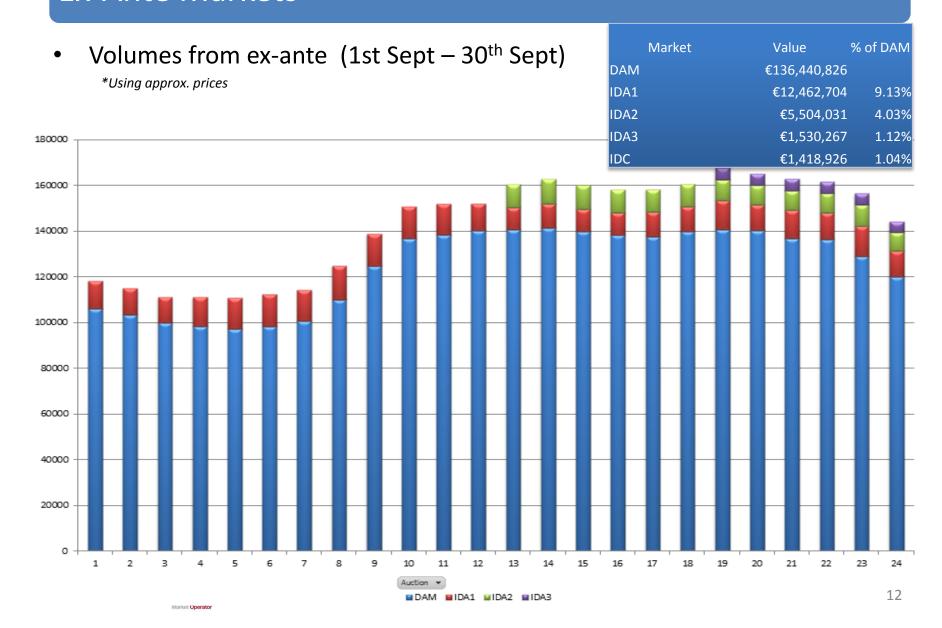




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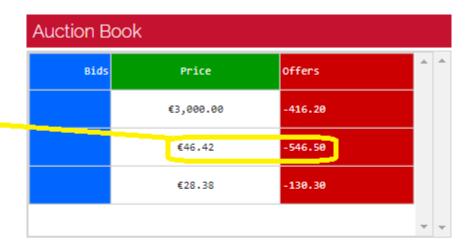


Ex-Ante Markets



Ex-Ante – Identify Who is Setting the Price - DAM? ...





Auction Participant	S							
↑ DeliveryDate	<pre>auction</pre>	<pre>Participant</pre>	DeliveryHour	<pre>DeliveryInterval</pre>	↓ unitid ↑	ExecutedVol	area_sub_from	<u> </u>
filter data					eq "GU_			
2019-09-19	DAM		1	1	GU_	-288.5	ROI-EIRGRID-DA	



Ex-Ante – Identify Who is Setting the Price - IDA1? ...





Auction Participan	ts						
↑ DeliveryDate	auction auction	↑ Participant	DeliveryHour	DeliveryInterval	unitid ↑ Exe	ecutedVol area_sub_f	from 🔺
filter data					eq "GU_		
2019-09-19	IDA1		1	1	GU_	-14.3 ROI-EIRGRID-	IDA1



Ex-Ante – Monitoring

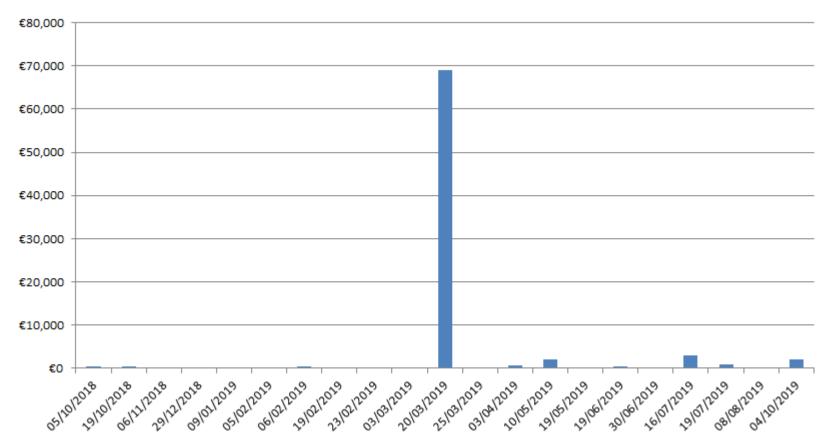
> IDC Unit to Unit Trading

- Same participant, same unit, un-intentional self-trades observed
- Not considered an issue to date but it is monitored
- If abused, would skew WAP in our IDC markets (IT'S NOT!!)



Ex-Ante – Monitoring

Self Unit to Unit Trade Value €







Ex-Ante Market Analysis

In Summary

- ✓ We are vigilant regarding our markets
- ✓ Processes are working!



Ex-Ante Market Change Control

Change Requests	Status of Delivery
[Auction] Complex orders for 30 min in IDAs	Expected Delivery Q2 2020
[Auction] MRC Block Orders	*On Hold
[Continuous] AON Block for Continuous	*On Hold
[AUCT/CONT] ACER: Certain EIC-W codes of units to be reported within the transaction data.	Cannot be delivered until after ETS 3.3.2
[Continuous] RFC from SEMOpx - M7 Transfer of Units	Still in Assessment
[AUCT/CONT] RFC from SEMOpx for setting start and end date of an Unit (per delivery date)	27/11/2019 ETS V3.3.2 M7 still in Assessment
Variable NTC for Auctions	In review with vendors



ETS Maintenance

Date & time	Impact	Reason	Communication
12/11/2019*	ETS not accessible	Monthly Maintenance	ETS chat message (1 hour before the maintainance) + OMM message (email sent a week in advance and on the same morning)
10/12/2019	ETS not accessible	Monthly Maintenance	ETS chat message (1 hour before the maintainance) + OMM message (email sent a week in advance and on the same morning)

*may be combined with ETS 3.3.2 ON 26/11



M7 Maintenance

Date & time	Impact	Reason	Communication
12/11/2019	M7 not accessible	Monthly Maintenance	M7 chat message (1 hour before the maintainance) + OMM message (email sent a week in advance and on the same morning)
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Central Scenario for "No Deal" Brexit

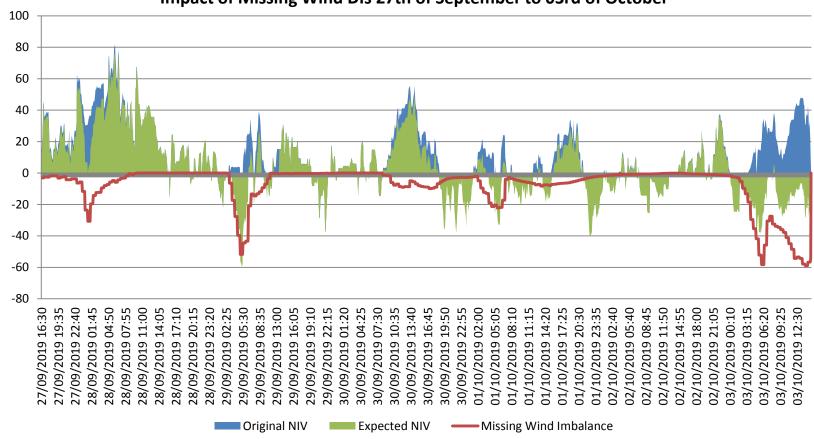
- The SEM will continue to operate as an all-island market in the event of a 'no deal' Brexit.
- In a 'no-deal' Brexit scenario the implications for the day ahead and intraday cross border markets are:
 - Day ahead market :
 - An all-island local day ahead market will continue
 - There will no longer be day ahead cross border trade
 - Intraday market:
 - Will continue as is, including cross border trade
- SEMOpx will work with relevant parties to implement new cross border arrangements, should they be needed, but this will not be available on day 1 post a 'no deal' Brexit.
- On day 1 post a 'no deal' Brexit the key difference will be the removal of the cross border day ahead auction but all other elements of the trading arrangements will remain the same.
- Further details on intended trading arrangements for the SEM under a 'no-deal' Brexit are provided in communications by the SEM Committee (the decision making authority for SEM matters) in a <u>notice to industry</u> and the Northern Ireland Utility Regulator in an <u>information note</u>. The Department for Business, Energy and Industrial Strategy has also published a <u>Technical Notice</u> to stakeholders in preparation for Brexit.



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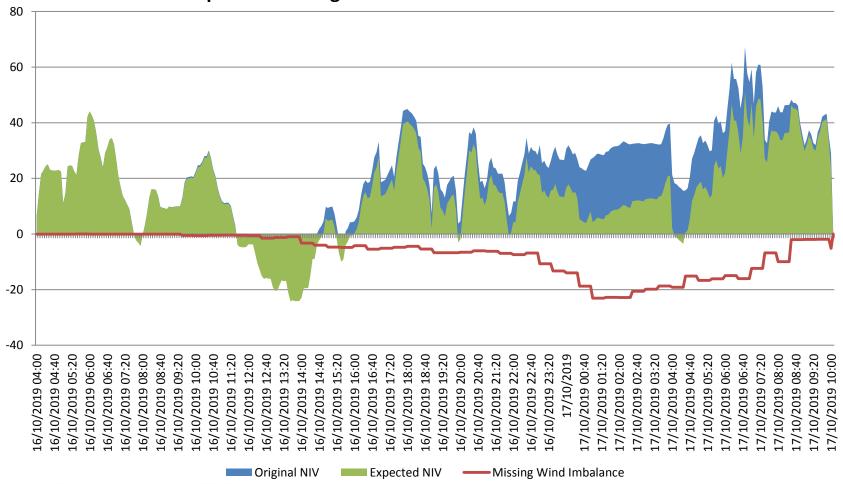






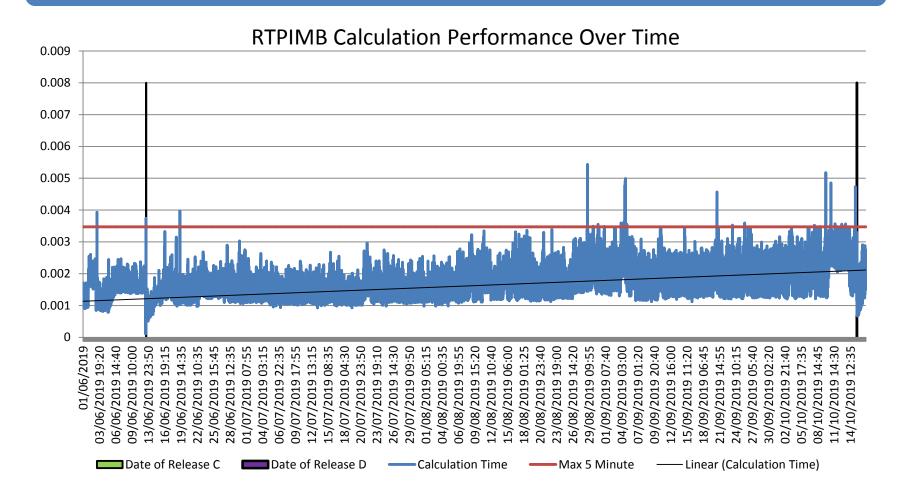


Impact of Missing Wind DIs 16th to 17th of October

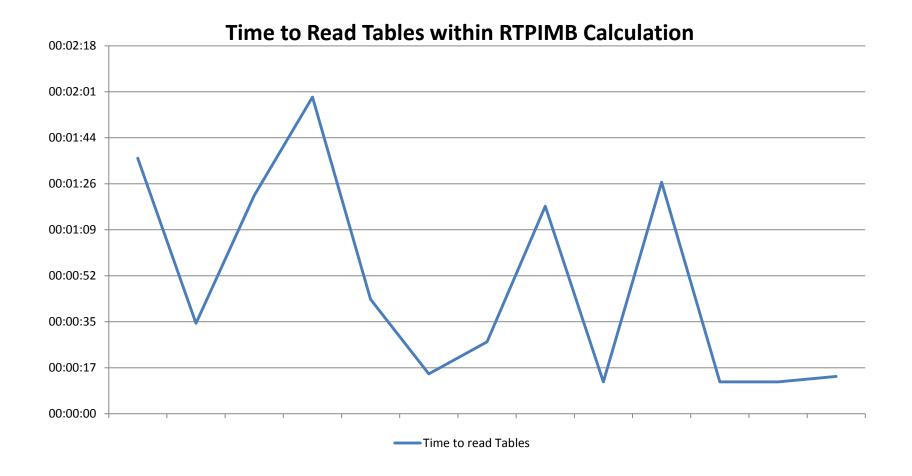














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Disputes/Manifest Errors

ID	Manifest Errors	Impacted Trading Days
6105	Unit is not being flagged despite Reserve Constraint being binding	 12th September 2019 20th to 26th September 2019 8th October 2019 9th October 2019 13th to 16th October 2019 18th October 2019
Rpc4	Wind Dispatch Instruction Datafeed Error	 27th September – 3rd October 2019 16th & 17th October 2019
6104	Calculation of QAO/QAB during Min On Time of a unit	• 17 th October 2019
6076	PNs reverted to 'null' for one 5 Minute Period	• 8 th October 2019
6021	Incorrect application of LOCL/CRLO Instruction	• 21 st September 2019
ТВС	Incorrect Calculation of QBOA	• 8 th October 2019



Repricing

Status Update

- The Repricing solution was delivered in Release D but failed test due to a number of defects;
- We are prioritising the resolution of the outstanding defects with our vendor;
 - Release D 'part 2'
- Further retesting of the system will be required on deployment of the updated code. This includes two to three weeks of analysis (in test) post deployment.
- Two main components that determine when repricing will commence:
 - Successful testing and deployment of the Repricing solution;
 - Outcome of the "Repricing and Price Materiality Threshold Parameter Consultation"



SEMO review of options posed based on current work-plan.

Proposal	Status
1. Apply 5% PMT	SEMO do not currently have a repricing solution capable of applying a 5% PMT. To implement this solution would mean repricing would not commence until at least Q4 2020.
2. Apply 0% PMT until an I.T Solution is available.	Status update discussed on the previous slide.
3. Urgent Modification to amend Section E.3.8 on a temporary basis with the intention of not carrying out (or suspend) repricing from 1 October 2018 to 11 June 2019.	SEMO would turn attention to implementing a solution that can apply a 5% PMT for future periods requiring repricing.
4. Urgent Modification on an enduring basis in order to require any repricing to be completed by the 13 th month after the trading date at the latest.	If a 0% PMT was applied, the plan for option 2 would apply, albeit a number of months would not be repriced as they would fall outside of M+13 timelines. If however the intention was to apply a 5% PMT, SEMO would not have a solution in place by M + 13 for any periods requiring repricing, and therefore would be unable to reprice 1 st October 2018 to 11 th June 2019.



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Settlements: Sep 2019 data process updates

Settlement Dates	Run Category	Run Type	Runs to complete	On Time	Delayed – Same Day publication	Delayed > 1 Day
1 st – 30 th	Settlements	Indicative	30	10	9	11
1 st – 30 th	Settlements	Initial	30	17	6	7
Dec 2 nd 2018 – Dec 29 th 2018	M+4 Resettlement	Weekly	28	28	-	-
1 st – 30 th	Credit Reports	Daily	66	66	-	-
1 st – 30 th	Payments In	Weekly	4	4	-	-
1 st – 30 th	Payments Out	Weekly	4	4	-	-
Aug 25 th – Sep 21 st	Settlement Documents	Weekly	4	1	2	1



Settlements: Oct 2019 data process updates

Settlement Dates	Run Category	Run Type	Runs to complete	On Time	Delayed – Same Day publication	Delayed > 1 Day
1 st - 17 th	Settlements	Indicative	17	9	1	7
1 st - 14 th	Settlements	Initial	13	13	1	-
Dec 20 th 2018 – Jan 26 th 2019	M+4 Resettlement	Weekly	28	28	-	-
1 st - 21 st	Credit Reports	Daily	45	44	-	-
1 st - 18 th	Payments In	Weekly	3	3	-	-
1 st – 18 th	Payments Out	Weekly	3	3	-	-
Sep 22 nd – Oct 12 th	Settlement Documents	Weekly	3	3	-	-

Key points for Sep/Oct 2019:

- Additional delays & catch-up days in Sep and Oct mainly due to delays and corrections required with MDP data, Instruction profiling processing issues and additional processing re-runs required . Sequential nature of processing requirements also has an impact.
- The above issues also had a knock on impact to Settlement Document Delays in September



Issues impacting SD publication timelines

Date (s)	Issue	Impact to schedule timelines	Issue Status
Friday 6 th September	 KIR ID 5443 (to be published in KIR Sep 13th) BMCRM SD calculation fails for same start or end day of Billing Period for BALIMB and CRM 	Settlement Documents for the Billing period of the delayed publication within same day on Sep 6 th due to internal workaround process to be implemented	Fix applied as part of Release D. Workaround was in place for Sep 6 th publications.
Friday 20 th September	 Initials for the 13th & 14th of September had to be "un-published" due to issue with MDP data for NI TSO 	 Settlement Documents for the Billing period were delayed. Publication within same day on Sep 20th. Payments In & Out dates were adjusted 	MDP corrected the root cause of the data issue within file to prevent future occurrences.
Friday 27 th September	 Incorrect DI (Dispatch Instruction) effective dates received within MDP data. Files had to be re- submitted and re- processed. 	 Settlement Documents for the Billing period were delayed .Publication moved by one business day to Sep 30th. Payments In & Out dates were adjusted 	MDP data corrected and resubmitted to SEMO.



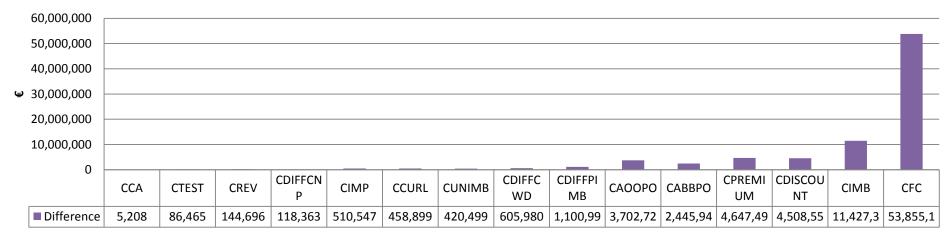
Settlement Processing: Other updates

- KIR ID 6148 Settlement Document Creation is limited to four Billing Periods (Oct 11th impact)
- MO invoices rate issue since Oct 1st 2019 now resolved
- M13 resettlement update Oct 25th publication update
- M+4 resettlement update



M4 Resettlement Cashflow

Adjusted Amount by Component



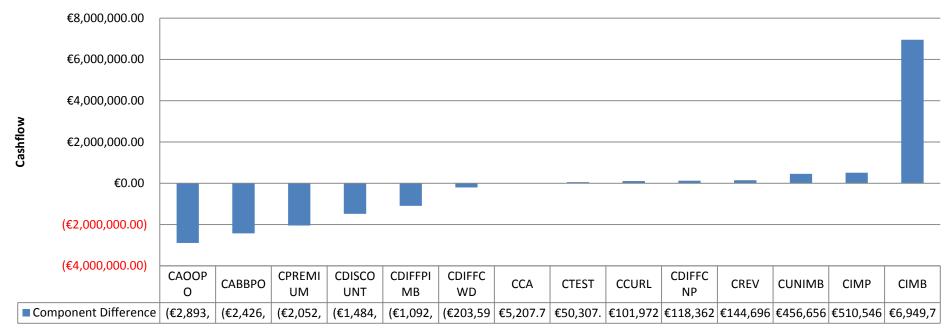
€84 Million is the Absolute Weekly M4 Cashflow up to Week 3 for BALIMB.

Total SEM Payment Amount	€84,038,898
BALIMB Payments IN	€15,999,644
BALIMB Payments OUT	€67,981,535



M4 Resettlement Cashflow

Sum of DIFFERENCE exclude CFC



Charge Component	Ad Hoc	M4	Diff
ccc	-82,906,386.47	-82,125,047.10	781339.37
ССР	81,340,901.38	81,477,125.14	136223.76
CSOCDIFFP	-1,906,847.06	-1,888,879.65	17,967.42
Grand Total	-3,472,332.15	-2,536,801.61	935,530.55

Charge Component	Initial	M4	Diff
CMOAU	-224,426.12	-224,288.13	137.99
CMOAV	-5,866.21	-5,864.82	1.39
CVMO	-4,432,749.38	-4,396,608.30	36,141.09
Grand Total	-4,663,041.71	-4,626,761.25	36,280.47

€2.5Billion Ex-Ante Cashflow vs €500M Initial Balancing to date (CRM €700M)



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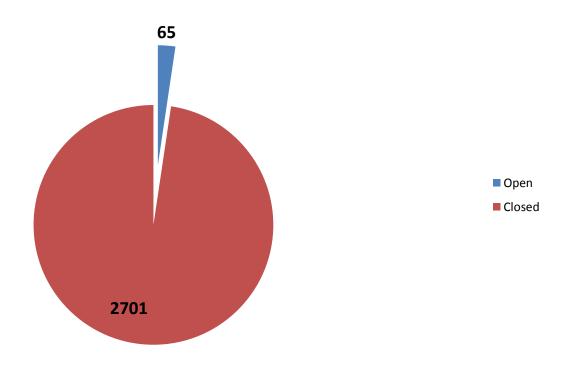
Timeline of Key Dates T-2 Prov. Results Approval & Publication of PQRs Issued T-1 Auction TSOs Publish T-2 Auction Issued T-1 & T-2 Final to Participants **FAIP & FQRs** Run Start Run Start to Participants Auction Results 26/11/19 05/09/19 08/11/19 05/12/19 10/12/19 30/01/20 T-1 Prov. October T-1 Prov. Review/Dispute T-2 Prov. **SEM-C Meeting** Results Results Issued **Processes Complete** Results Delivery of 31/10/19 to Participants Published 21/10/19 Published **Awarded Capacity** 28/11/19 05/12/19 17/12/19 T-1 Oct 2020 T-2 Oct 2021 PQR= Provisional Qualification Results FQR= Final Qualification Results FAIP= Final Auction Information Pack, containing capacity requirements and all other auction parameters FQRs & FAIPs are submitted for approval at October SEM-C meeting



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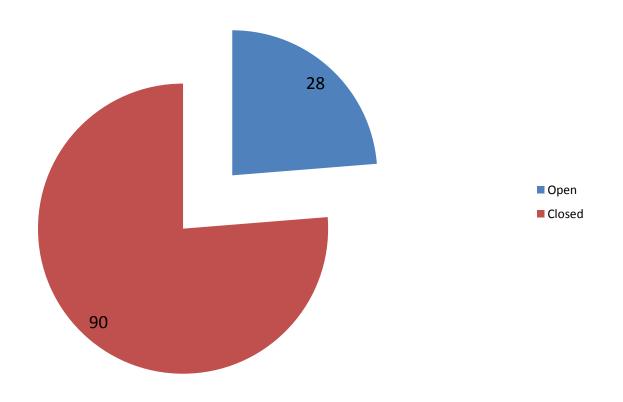
General Query Overview – 1/10/18 – 30/09/19



An average of 53 Queries per week



General Queries Since 1st Oct 19 – 22nd Oct 19





Formal Queries and Disputes – Oct 18 – May 19

Formal Settlement Queries:

Completed: 292

In progress: 21

Rejected: 1

Withdrawn by the Participant: 1

In total: 315

Disputes:

Completed: 97

In progress: 1

Rejected: 2

In total: 100



Upcoming MOUG Dates

2019

- 28th November Dublin
- 18th December Conference Call *Proposed*
- 2020
 - 16th January Dublin
 - 27th February Belfast



December Registration Freeze

- There will be a registration freeze in the Balancing Market during the period 17:00 Wednesday to 18th December 2019 until 09:00 Monday 6th January 2020. No units (generator, supplier and assetless) can be set effective during this time.
- The last available effective date prior to the freeze is Wednesday 18th December, and the first available effective date after the freeze will be Wednesday 8th January.
- The registration team remain available for Participants that have queries regarding their ongoing registrations: <u>balancingmarketregistration@sem-o.com</u>



Close

- > SEMO Website: http://www.sem-o.com/
- > Semopx Website: http://www.semopx.com/
- Queries: <u>Info@sem-o.com</u>; <u>Info@semopx.com</u>

Thank you for your attendance.

