Market Operator User Group

Belfast, 25 October 2018



Agenda

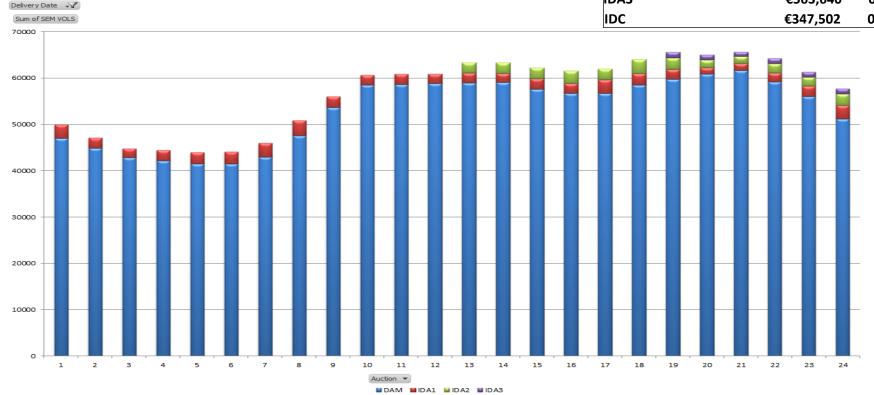
Item	Presenter
Welcome	Anne Fitzgerald
Ex-Ante Market	Liam McAllister
Balancing Market	Aodhagan Downey, Tom McCartan
Settlements & Funds Transfer	Sean O'Rourke, John O'Dea
Disputes	Brendan O'Sullivan, David Carrol
Special Focus: 9 October Amber Alert Event	Tom McCartan, Aodhagan Downey
IT & Market System Development	Michael Harrington, David Lee
Query Management	Claire Breslin
Q&A	



Ex-Ante Markets

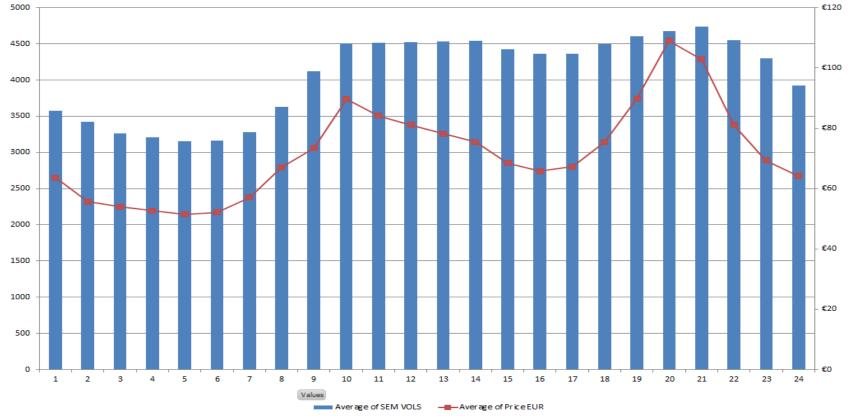
- Volumes from ex-ante auctions (9th Oct 21st Oct)
 - DAM still dominant

*Using Average Prices		
AUCTION	Total Value	% of DAM
DAM	€93,842,453	3
IDA1	€3,717,704	3.96%
IDA2	€2,066,869	2.20%
IDA3	€563,640	0.60%
IDC	€347,502	0.37%



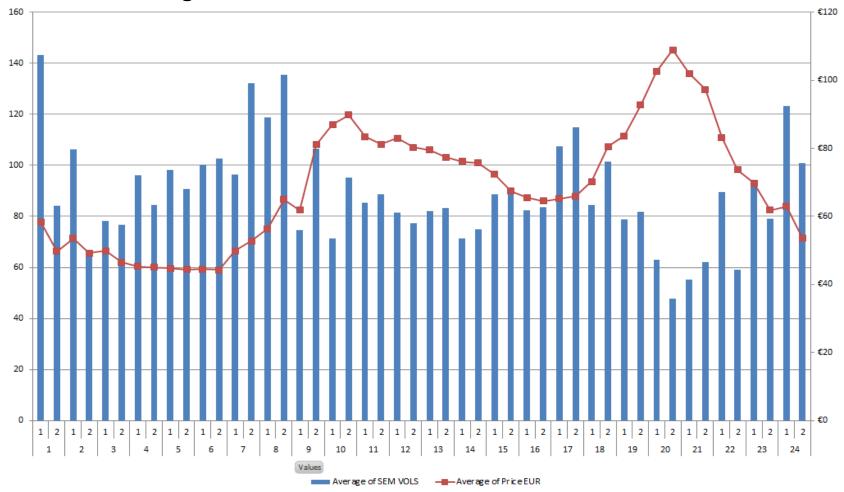


- DAM average clearing price and volumes (9th Oct 21st Oct)
 - Prices in DAM continue to follow the profile of the load cleared
 - Suppliers clearing 98% of their volume with average DAM price of €71.79



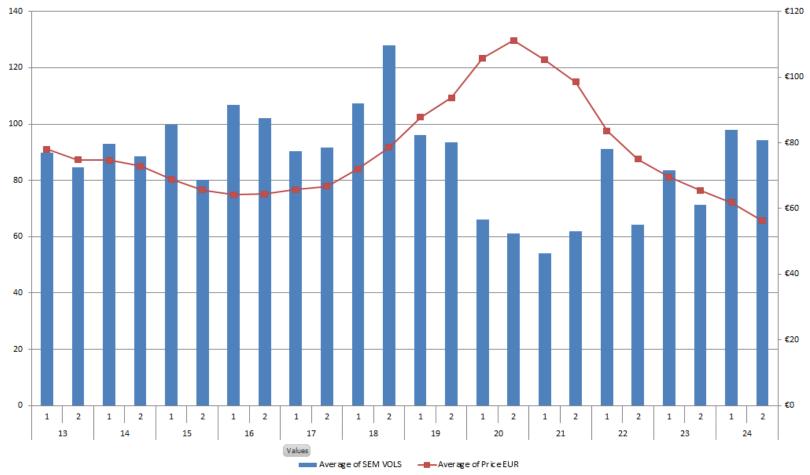


• IDA1 – Average Price **€68.75**



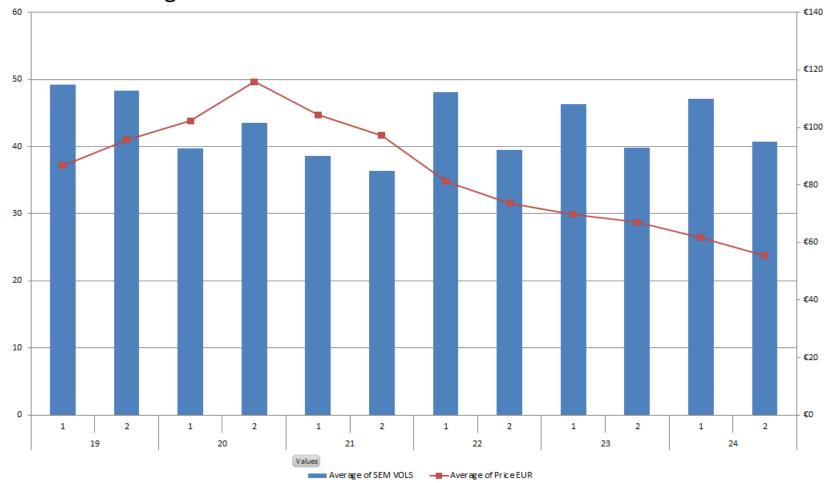


• IDA2 – Average Price **€77.55**



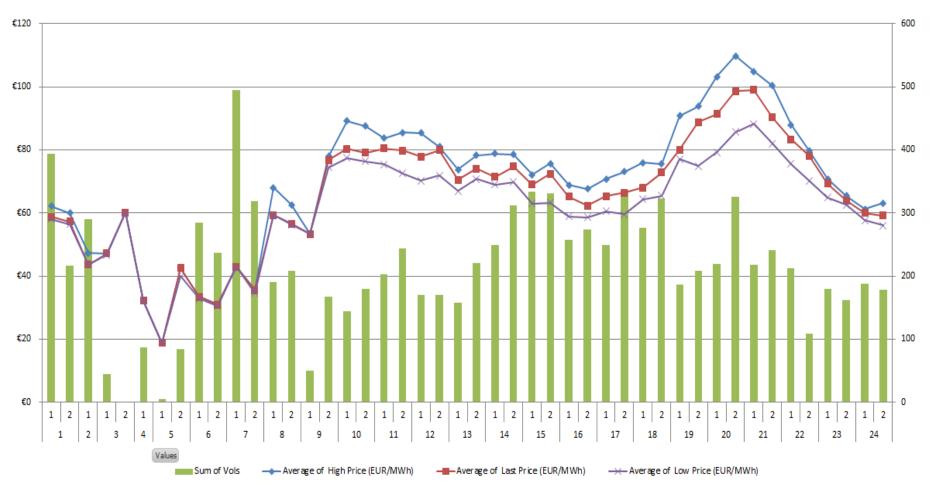


• IDA3 - Average Price **€84.26**



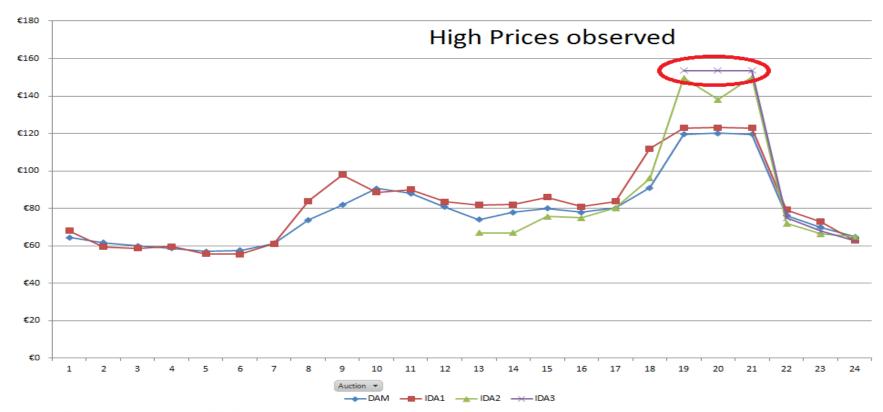


• IDC - Average Price **€84.26**. High Price **€147.50**, Low Price **€0.00**



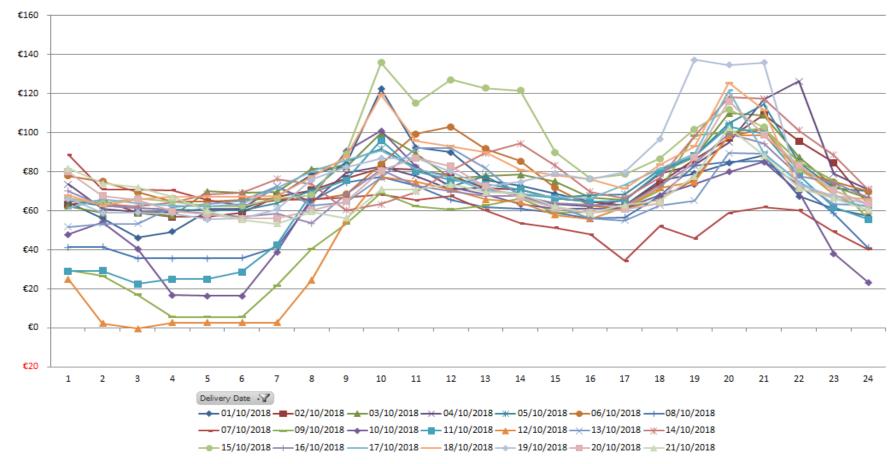


- Low price of €-8.00 set in IDA1 on the 12th October.
- High €153.66 price set in IDA3 on the 19th October (see below).



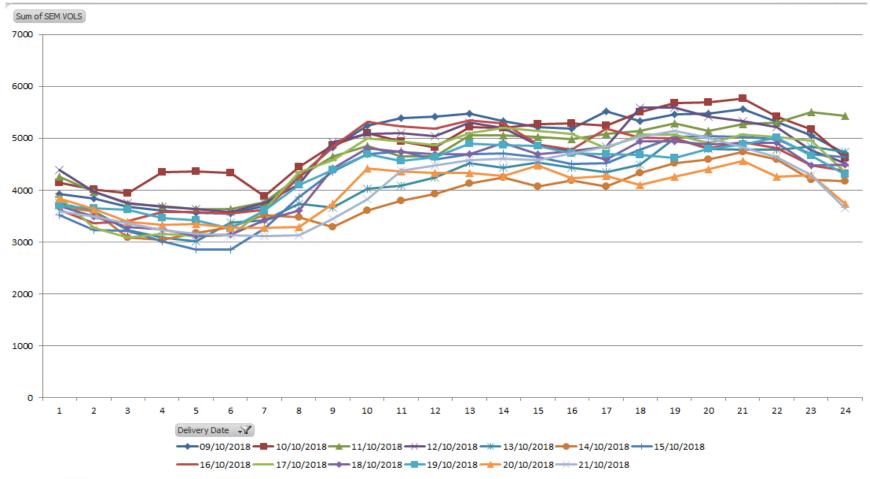


Prices continuing in a similar range during the first 21 days





Traded volumes (aggregate across markets)





Agenda

Item	Presenter
Welcome	Anne Fitzgerald
Ex-Ante Market	Liam McAllister
Balancing Market	Aodhagan Downey, Tom McCartan
Settlements & Funds Transfer	Sean O'Rourke, John O'Dea
Disputes	Brendan O'Sullivan, David Carrol
Special Focus: 9 October Amber Alert Event	Tom McCartan, Aodhagan Downey
IT & Market System Development	Michael Harrington, David Lee
Query Management	Claire Breslin
Q&A	

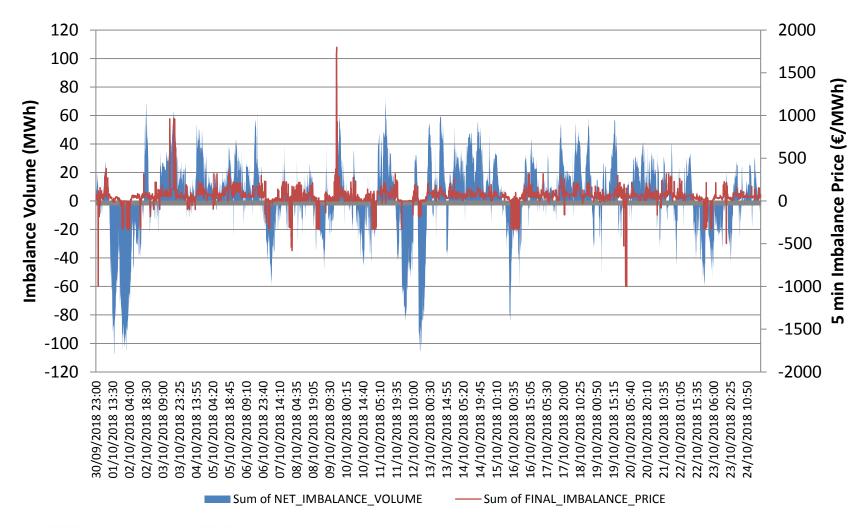


Recap on Imbalance Pricing

- Based on actions taken by TSOs (QBOAs)
- Flags based on most recent RTD schedule
 - SO Flag (System Constraint binding on unit)
 - Non-Marginal Flag (Unit Level Constraint binding)
- Price of the Marginal Energy Action
 - Most expensive unflagged QBOA
 - Replacement price
- NIV & PAR Tagging
 - Ensure Sum (untagged actions) = QNIV
 - Most expensive PAR (10) MWh
- Imbalance Price
 - Weighted average price of untagged actions

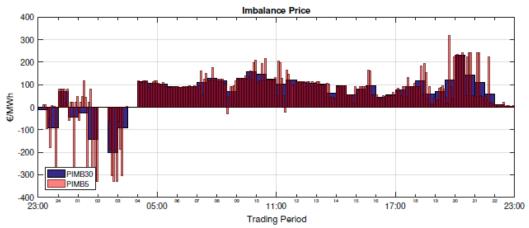


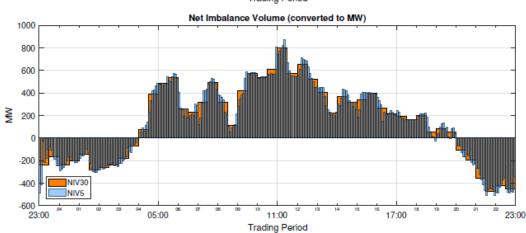
Imbalance Prices to date



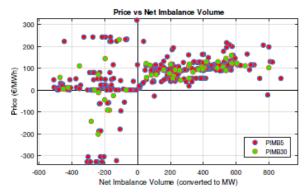


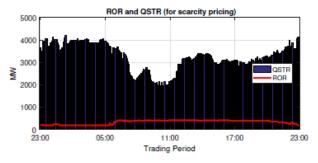
Imbalance Price Summary for: 11-Oct-2018





	PIMB5 (€/MWh)	PIMB30 (€/MWh)	NIV5 (MWh)	NIV30 (MWh)
Min:	-329.70	-202.51	-42.36	-39.22
Mean:	65.68	65.68	12.45	12.45
Max:	319.50	230.64	72.79	66.68
StDev:	100.11	79.90	27.88	27.71

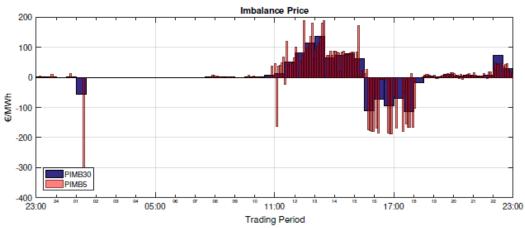




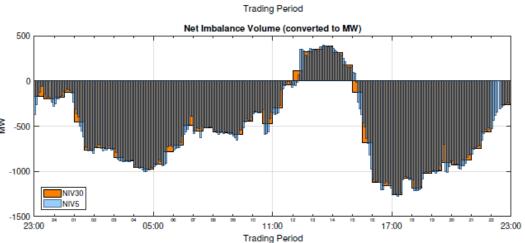


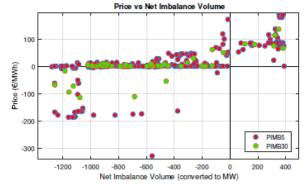


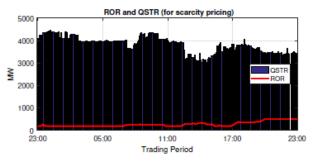
Imbalance Price Summary for: 12-Oct-2018



	PIMB5 (€/MWh)	PIMB30 (€/MWh)	NIV5 (MWh)	NIV30 (MWh)
Min:	-329.17	-114.81	-106.44	-104.60
Mean:	5.50	6.29	-45.18	-45.39
Max:	187.98	135.74	32.59	31.98
StDev:	61.39	49.10	36.68	36.87





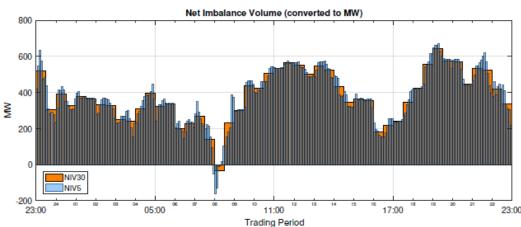




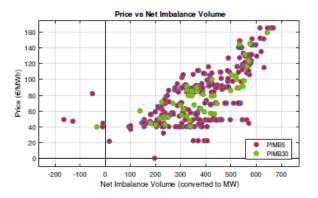


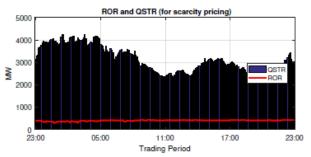
Imbalance Price Summary for: 14-Oct-2018





	PIMB5 (€/MWh)	PIMB30 (€/MWh)	NIV5 (MWh)	NIV30 (MWh)
Min:	0.00	39.69	-13.59	-2.63
Mean:	78.90	78.90	31.67	31.67
Max:	165.00	159.15	55.77	53.74
StDev:	34.18	29.00	11.98	11.51

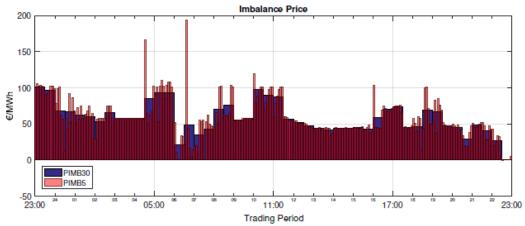


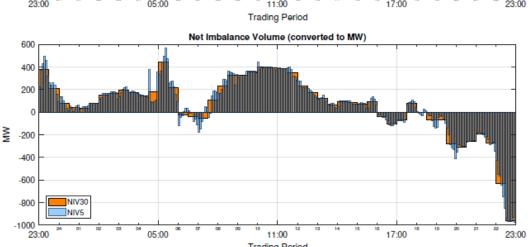






Imbalance Price Summary for: 15-Oct-2018



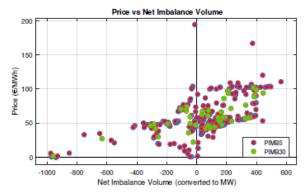


11:00

Trading Period

17:00

	PIMB5 (€/MWh)	PIMB30 (€/MWh)	NIV5 (MWh)	NIV30 (MWh)
Min:	-1.01	0.85	-81.14	-79.76
Mean:	58.16	58.16	5.23	5.23
Max:	193.91	101.73	47.08	37.14
StDev:	26.75	21.21	22.12	21.93



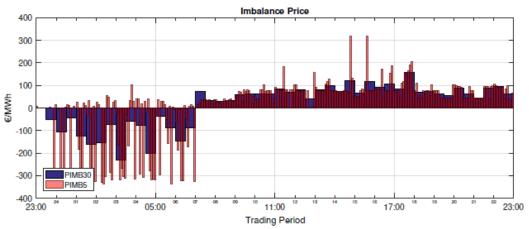




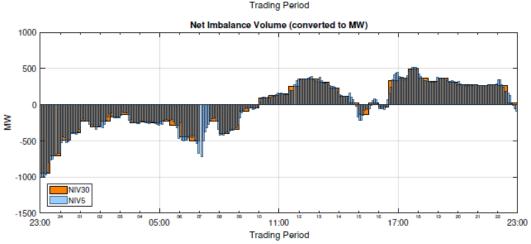


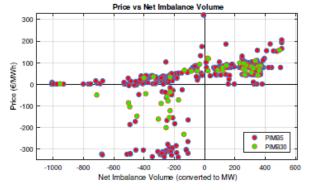
05:00

Imbalance Price Summary for: 16-Oct-2018



	PIMB5 (€/MWh)	PIMB30 (€/MWh)	NIV5 (MWh)	NIV30 (MWh)
Min:	-338.22	-232.71	-84.03	-79.32
Mean:	14.21	15.21	-2.51	-1.91
Max:	319.50	156.80	42.63	41.29
StDev:	125.37	94.39	27.68	27.45



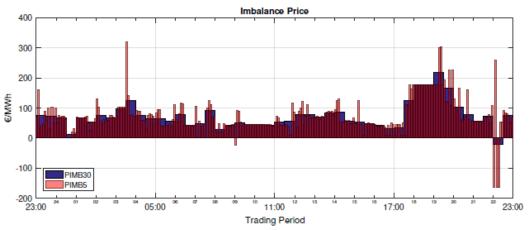




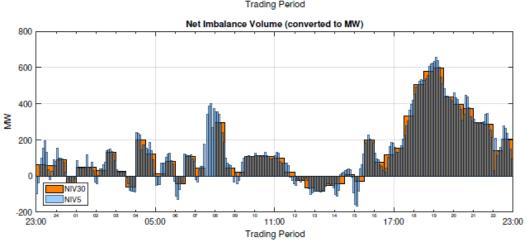


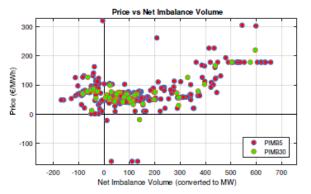


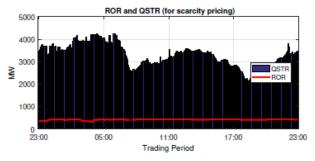
Imbalance Price Summary for: 17-Oct-2018



	PIMB5 (€/MWh)	PIMB30 (€/MWh)	NIV5 (MWh)	(MWh)
Min:	-163.32	-20.12	-13.98	-6.89
Mean:	72.32	72.31	11.16	10.83
Max:	319.50	218.85	54.86	49.79
StDev:	55.77	42.89	14.71	14.20



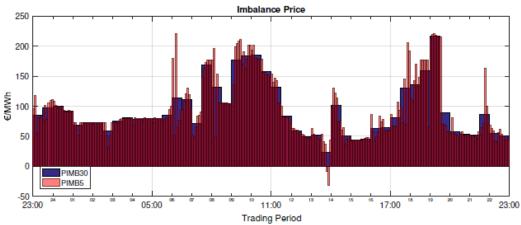




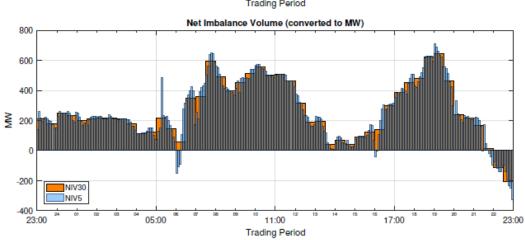


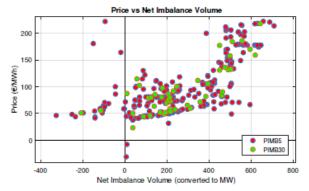


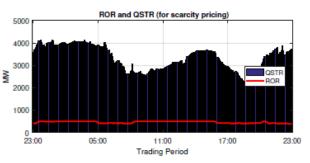
Imbalance Price Summary for: 18-Oct-2018







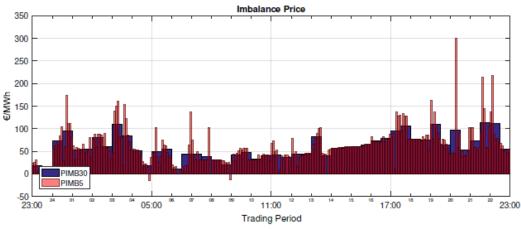




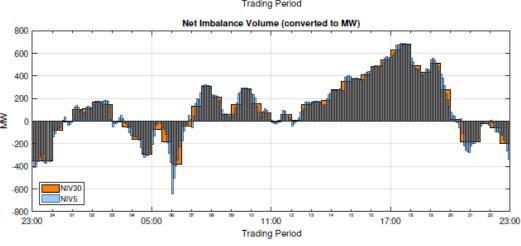


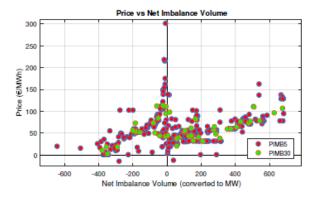


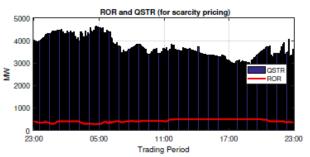
Imbalance Price Summary for: 19-Oct-2018



	PIMB5 (€/MWh)	PIMB30 (€/MWh)	(MWh)	(MWh)
Min:	-14.94	1.74	-53.60	-31.60
Mean:	59.45	59.45	9.22	9.22
Max:	300.79	112.46	57.08	56.51
StDev:	37.92	27.64	21.95	21.68







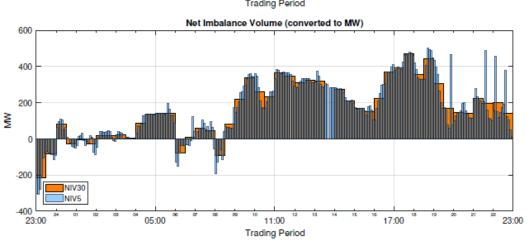


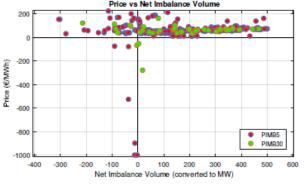


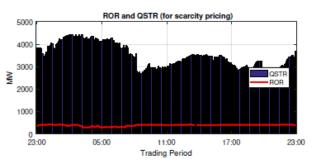
Imbalance Price Summary for: 20-Oct-2018



	PIMB5 (€/MWh)	PIMB30 (€/MWh)	NIV5 (MWh)	NIV30 (MWh)
Min:	-999.96	-281.16	-25.45	-17.74
Mean:	51.70	51.84	13.66	13.48
Max:	220.53	158.48	41.77	39.03
StDev:	117.02	60.09	13.61	13.02



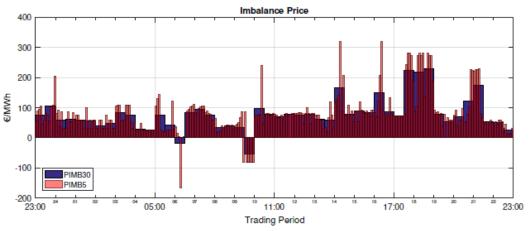




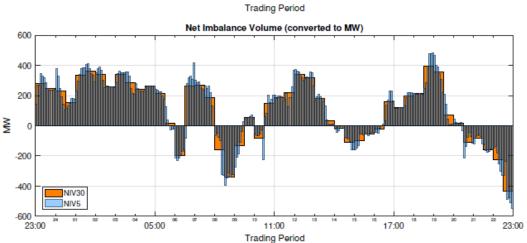


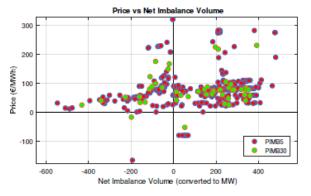


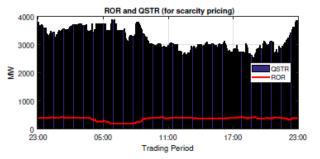
Imbalance Price Summary for: 21-Oct-2018



	PIMB5 (€/MWh)	PIMB30 (€/MWh)	NIV5 (MWh)	NIV30 (MWh)
Min:	-166.26	-52.77	-45.45	-35.90
Mean:	77.86	77.86	8.81	8.81
Max:	319.50	230.02	40.14	32.70
StDev:	66.36	54.09	17.46	16.91







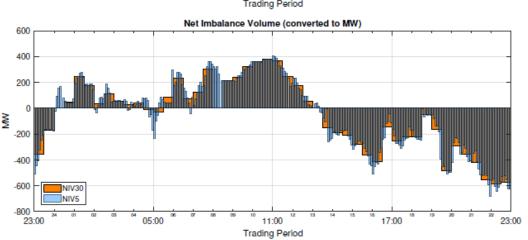


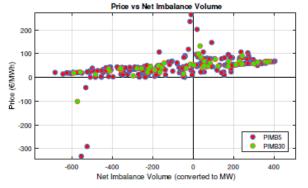


Imbalance Price Summary for: 22-Oct-2018















Imbalance Pricing – Conclusions

- A number of issues identified to date:
 - Negative reserve flagging (fixed)
 - FX rate application (fixed)
- QBOA, flagging and tagging continue to be analysed proactively
 - 3rd & 9th in compliance with rules.
 - Half hourly stepped pattern in QNIV in line with rules.
 - Volatility at low NIV under consideration.
- Aside from above issues, prices tend to reflect underlying drivers of:
 - Demand, wind, margin, trading behaviour, system length



LTS indicative schedules

- LTS run approved every 4 hours operational restrictions allowing
- Grid code requirement to have an indicative schedule published for 16:00hrs each day preceding the relevant Trading day
- The early weeks of the market have been challenging to meet these requirements
- Firm Interconnector schedules received at
 - 08:45hrs, firm from 11:00hrs to 23:00hrs D
 - 12:30hrs, non firm from 23:00hrs D to 11:00hrs D+1
 - 18:10hrs, firm from 23:00hrs D to 11:00hrs D+1
- 16:00hrs indicative schedule contains a non firm interconnector schedule



LTS publish times from Market go live

	Scheduled LTS Run											
Date	1	2	3	4	5	6						
01/10/2018	00:28	03:39	10:38	16:56	20:41	23:32						
02/10/2018	02:07	07:49	11:01	16:20	19:47	21:42						
03/10/2018			10:51	15:14	20:03	21:39						
04/10/2018			10:01	15:45	19:30							
05/10/2018	01:50		10:45	15:54	18:46							
06/10/2018	01:52		10:46	16:02	19:40							
07/10/2018	00:43	06:10	10:11	16:23	17:21	22:25						
08/10/2018	03:38		09:46	16:58	20:20	23:26						
09/10/2018	01:22	04:22	10:24	17:38	21:53	00:19						
10/10/2018		06:13	11:04	16:33	21:49							
11/10/2018	01:25	06:45	10:50	16:04		23:05						
12/10/2018	02:10	06:56	10:32	15:32	18:48							
13/10/2018	01:40	06:18	11:22	17:08	18:33	23:26						
14/10/2018	01:43	06:15	10:40	15:51	19:09	22:51						
15/10/2018	01:37		10:30	16:24		22:54						
16/10/2018	01:28		10:01	15:37	20:53	22:47						
17/10/2018	01:57		10:53	16:17	19:40	23:30						
18/10/2018	01:20	06:20	10:48	14:20	19:09	22:11						
19/10/2018	01:29	06:38	11:18	15:00	18:46	22:46						
20/10/2018	01:41	08:20	11:21	15:12	18:33	21:28						
21/10/2018	01:42	07:54	09:25	15:39	18:58	22:04						
22/10/2018	01:38	06:29	11:38	15:36	19:02	23:58						
23/10/2018	01:17	06:25	11:03	15:53	19:04	23:36						



LTS publish times from Market go live

Run 4 (14:00) Stats.	
No. of runs approved before 16:00	12
No. of runs approved after 16:00	11
Average Approval time	16:00

- Significant improvement in publish times and number of runs being published over the last 6 days
- Control room operations now settling down after initial market introduction has lead to an improvement in publishing indicative LTS schedules before 16:00hrs



Trading on Interconnectors

- I-SEM has started to provide the 'correct' flows on interconnectors
- If the wind is low in I-SEM then interconnectors generally flow into I-SEM
- If wind is high in I-SEM then interconnectors generally flow out of I-SEM
- The need for TSO trading has been greatly reduced as a consequence of the interconnector flows provided to I-SEM
- TSOs still under taking trial of interconnector trading
- All trading has to be co-ordinated with NGET so no guarantee a trade will be achieved, especially on Moyle



Agenda

Item	Presenter
Welcome	Anne Fitzgerald
Ex-Ante Market	Liam McAllister
Balancing Market	Aodhagan Downey, Tom McCartan
Settlements & Funds Transfer	Sean O'Rourke, John O'Dea
Disputes	Brendan O'Sullivan, David Carrol
Special Focus: 9 October Amber Alert Event	Tom McCartan, Aodhagan Downey
IT & Market System Development	Michael Harrington, David Lee
Query Management	Claire Breslin
Q&A	



Settlements: Key processing events to date

Trade Dates	Туре	Run Type	Executed runs
30 th Sep – 23 rd Oct	Settlements	Indicative	25
30 th Sep – 18 th Oct	Settlements	Initial	19
30 th Sep – 24 th Oct	Credit Reports	Daily	29
30 th Sep – 13 th Oct	Settlement Documents	Weekly	2
30 th Sep – 6 th Oct 7 th Oct – 13 th Oct	Payments In & Out	Weekly	2

- Weekly Settlement documents published per timelines on the the 12th & 19th Oct
- 3 Daily Credit reports now published since Oct 22nd
- Strong focus continues on meeting evening timelines for indicative runs



Settlements & Credit runs : Upcoming events

Trade Dates	Туре	Run Type	Date
14 th Oct – 20 th Oct	Settlements Documents	Weekly	26/10/2018
1 st Oct – 31 st Oct	MO Charges	Monthly	09/11/2018
1 st Oct – 31 st Oct	Capacity Statements (CRM)	Monthly	09/11/2018

Daily Credit Reports:

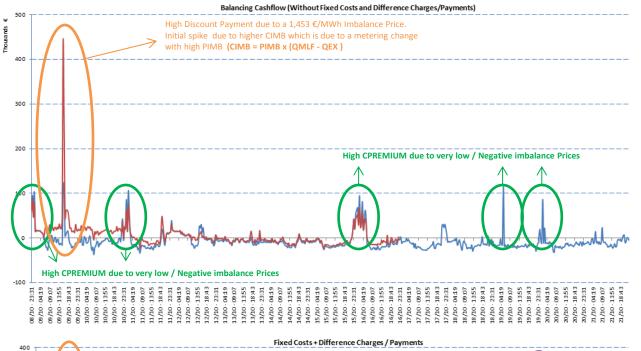
- Three Daily Credit reports published Start time of 09:00am, 12:00pm & 3:30pm
- Typically published within 1 hour of start time

BAL/IMB Payments in/out:

- Payments in date for Settlement Documents issued 26th: D+3 by 12:00pm
- Payments out date for Settlement Documents issued 26th: D+4 by 17:00



Settlements – Balancing Market



0 —						_		_			_			_		_	_		_	_	_		_	FD	ec	ı	os	ts+	·Ν	ше	re	nc	cı	ıar	ge	٠/	Pay	ym	en	ts_		_			_	_		_	_	_		_									_
Ï				_																									_																							1	7	1	_						_
L				1																																																	L								
Т	7			Т										_	_	7			Γ.	_											_														_					_		1									Ī
+	┰	-+		-+				-			-					t	-	7	F	-	_		-	=	=	_	_	_	_			-			-		-	-			-				_	_	_	_				-	=-								-
Ł	4			-4				_			_					_			-			-	-	-					_		-	=	-	\rightarrow	>			-				_	4	_	_			-				-									
L	┸	_1						_			_		_			_	_		_				_	_				_				_	_F	ixe	d	Со	sts	P	ayr	ne	nt	s a	nc	l cl	na	rge	es	_				_			_						
		- 1		╌																																																									
t	╅	-1				_	<	_			_	_	_	_		_	_		_	-	_		_	_	_	_		_	_			_			_		_	_	_	-	_	_		_	_			_	_		_	_			-	-		-			
H	-			-#-				-	3	7-	-					-	-		-				-	-				-				-			-			-							-			-				-									
L	-1	-4		<u>.</u>				_													e I											_			_			_			_				_			_				_									
	- 1	'		/							Th	ey	We	re	tr	gg	er	ed	by	/ th	ne	hi	gh	ıIr	nb	ala	an	ce	Pr	ice	9																														
31	139	ις.	E 4	9 5	6	52	E +	E .	6 1	2 :	0 5	7	7 9	2	LO.			- 61	6	LC.	E +	33	0	2 2	3 :	n :	m	33	6	6	ı,	E	33	6	h :	n.	2	33	2 2	3	<u>ا</u> و	n ;	E :	2 5	÷ :	n :	n ;	H 9	5 5	2	<u>س</u>	E .	31	6 1	6	ın.	E .	31	2 5	3 :	
23:	8 8	7	7	2 8	8	135	ĝ	23:	8	8	ä	ê	Š	8	134	00	23	8	8	134	ĝ	23	Š	5 8	3 3	ä	ŝ	23	8	8	13	ê	23	8	8	ä	ê	23	3 8	3	135	ê	23:	3	B :	3	ê	7	3	8	135	ŝ	23	8 1	8	133	18	23	3 8	3	•
ġ.	ġġ	Ŕ	ġ;	ġġ	ġ	ģ	ġ.	ġ,	ġ;	ġ;	ġ,	ġ;	ġ	ġ	ġ	ġ	٤	Ŕ	ġ	ġ	Ŕ	ġ	ģ	9 9	ġ	Ė,	ġ.	ġ	ġ.	ġ.	ġ	ġ	ġ,	ġ,	ġ;	Ė,	Ė,	ġ	ġ,	Ė.	ġ;	Ė;	ġ;	Ė;	Ė;	ġ,	ġ;	ġ	Ė;	ġ,	ġ;	ġ.	ġ,	ġ?	ġ?	0/10	ġ.	ġ?	ġβ	à !	
08/10	8 8	8	8	3 3	10	10	9	9	1	1	1	1	9	12/	12/	. 5	2	13	13/	13/	13	13	3	1	Ì ;	4	14)	14)	13	12	35	35	12	16,	16,	ê.	9	16,	3	à	1	3	3	ê ê	9	9	9	e e	a :	61	61	19	19	R R	R R	Ŕ	Ŕ	Ŕ	ďξ	ते त	ē
				_		_													,		_																																								

Charge Code	Amount	Description	Settlement
CABBPO	177,195	Bid Price Only Accepted Bid Payment or Charge	BALANCING
САООРО	-82,227	Offer Price Only Accepted Offer Payment or Charge	BALANCING
CCURL	-388,115	Curtailment Payment or Charge	BALANCING
CDIFFPIMB	1,083,000	Imbalance Difference Payment	BALANCING
CDISCOUNT	2,920,283	Discount Payment	BALANCING
CFC	-118,600	Fixed Cost Payment or Charge	BALANCING
CIMB	-3,548,180	Imbalance Payment or Charge	BALANCING
CIMP	-6,569,036	Imperfections Charge	BALANCING
CPREMIUM	4,374,937	Premium Payment	BALANCING
CREV	-857,156	Residual Error Volume Charge	BALANCING
CSOCDIFFP	-269,433	Difference Payment Socialisation Charge	BALANCING
CUNIMB	-144,849	Uninstructed Imbalance Charge	BALANCING
CCA	-19,108	Currency Adjustment Charge	BALANCING
CDIFFCNP	-1,252,175	Non-performance Difference Charge	BALANCING
CDIFFCWD	-1,414,770	Within-day Difference Charge	BALANCING
CTEST	-5,328	Testing Charge	BALANCING
Grand Total	-6,113,561		

Indicative figures for the period 09/10 - 21/10

Indicative



Settlement Areas of Analysis

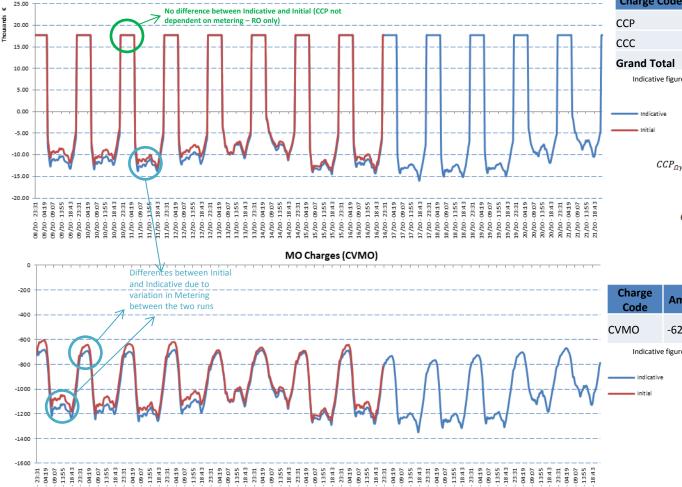
<u>Difference between Initial and Indicative:</u> Mainly driven by Imbalance Charge and Discount Charge. Currently analysing differences in metering between Indicative and Initial.

Within Day Difference Charges: Potential issue with the calculation of the QDIFFTRACKB does not seem to be taking away the QAO amounts within the tracking of ranked BOA volumes in a trading period. This is leading to incorrect calculation of the QDIFFCTWD. 24/10 fix delivered

<u>Fixed Costs:</u> Where Complex COD has been submitted, 'No Load Costs' and 'Start Up Costs' are not being applied to the correct Trading Periods where BOAs and Dispatch start flags are present. This has resulted in incorrect CFC being calculated for the affected Billing Period. We are currently working with our vendor to resolve the issue as a top priority. Full impact still not determined.



Settlements – Capacity / MO Settlements



Capacity Market (CCC + CCP)

Charge Code	Amount	Description	Settlement
ССР	11,062,831	Capacity Payment	CAPACITY
CCC	-11,714,475	Capacity Charge	CAPACITY
Grand Total	-651,643		

Indicative figures for the period 09/10 - 21/10

$$CCP_{\Omega\gamma} = \sum_{n \in \gamma, qCCOMMISS \neq 0} \left(qC_{\Omega n} \times PCP_{\Omega n} \times \frac{1}{ISPIY_y} \right)$$

$$CCC_{vv} = QMLF_{vv} \times FQMCC_v \times PCCSUP_v$$

Charge Code	Amount	Description	Settlement
CVMO	-626,701	Variable Market Operator Charge	мо

Indicative figures for the period 09/10 - 21/10

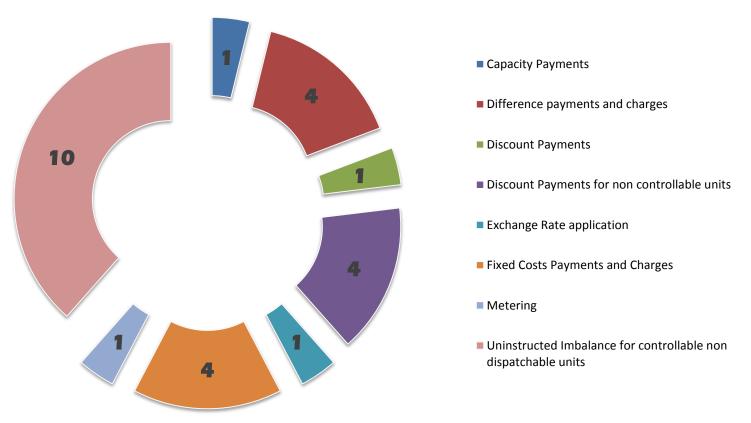
$$CVMO_{vb} = \sum_{v \text{ in } b} QMLF_{vy} \times PVMO_{y}$$





Settlements – Formal Queries

Settlement Formal Queries by Category



17 completed Formal queries out of a Total of 26 (65%)



Settlements – Other Queries analysis

Some analysis triggered by Settlement Queries:

- -DSU's Discount and Premium components: We found that Discount and Premium components were not being settled for DSU's. An emergency fix was implemented for this defect on the 22/10.
- <u>-Controllable, non dispatchable Wind units receiving Uninstructed Imbalances:</u> It is correct that this charge is calculated for these units however a defect was found in the calculation of **dispatch quantities** within the instruction profiler process and as a consequence, the uninstructed imbalance value was not correctly calculated.
- -NI Non controllable, non dispatchable units: Northern Ireland Non Controllable Non Dispatchable wind units receiving CDISCOUNT payment component due to **Availabilities** being submitted. This resulted in these unit types having a QBOA calculated and feeding into settlement. Units are currently being removed from the Availability data feed and Vendor working on a solution for the QBOA calculation to skip the unit type in its calculations. A manual workaround has been implemented until data feed is corrected.
- -Autoproducers: The traded positions of TU units are not being considered for difference payments and charges.



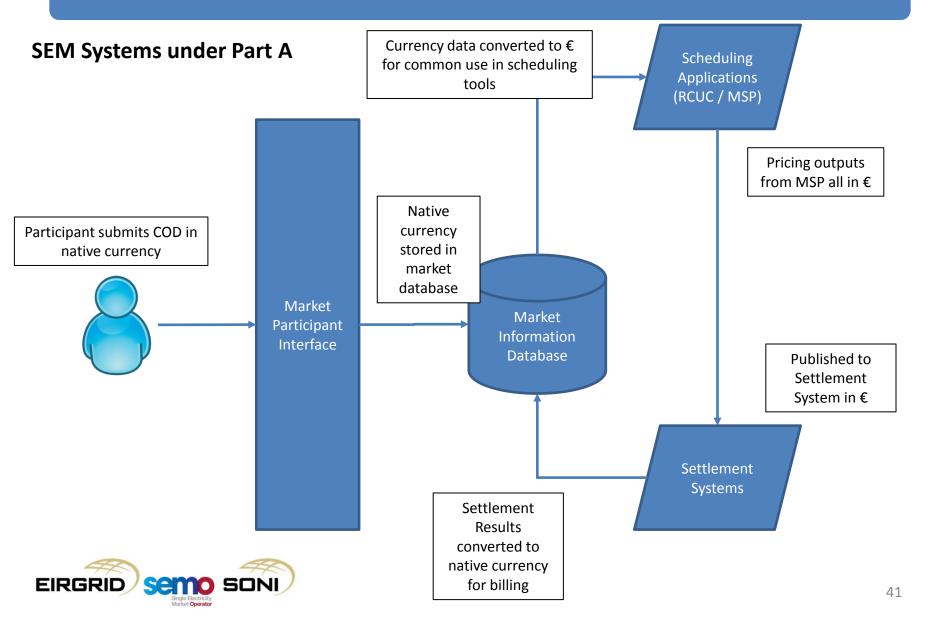
Agenda

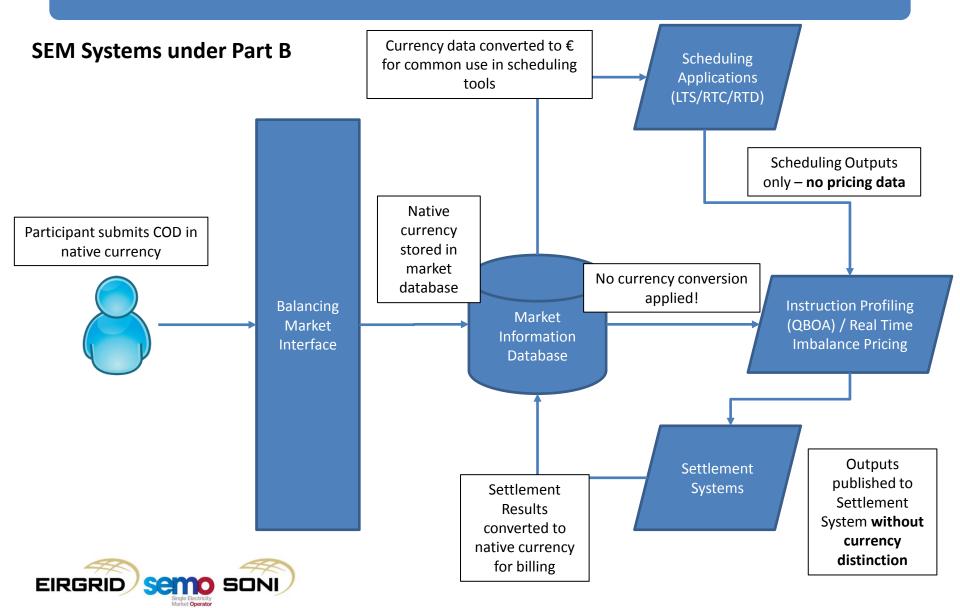
Item	Presenter
Welcome	Anne Fitzgerald
Ex-Ante Market	Liam McAllister
Balancing Market	Aodhagan Downey, Tom McCartan
Settlements & Funds Transfer	Sean O'Rourke, John O'Dea
Disputes	Brendan O'Sullivan, David Carrol
Special Focus: 9 October Amber Alert Event	Tom McCartan, Aodhagan Downey
IT & Market System Development	Michael Harrington, David Lee
Query Management	Claire Breslin
Q&A	



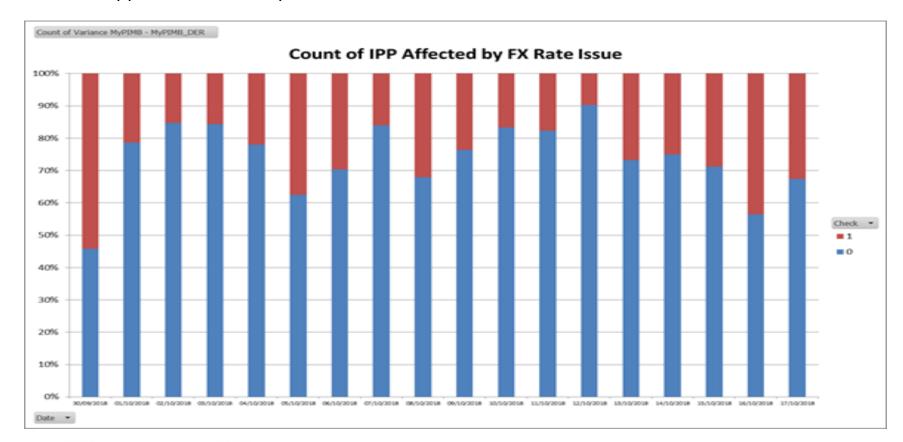
- Following on from internal reviews and queries from external participants, an issue was identified around the application of the Trading Day Exchange Rate in the Imbalance Price calculations
- The issue arises in the modules that calculate the Bid/Offer Acceptance
 Price and Quantity data
- This module retrieves Commercial Offer Data directly from the market database but does not apply an FX conversion
- This is a post-processing module which happens after TSO scheduling runs
- The TSO schedulers already have FX conversions applied as Commercial
 Offer Data is retrieved and as a result are not impacted by this issue







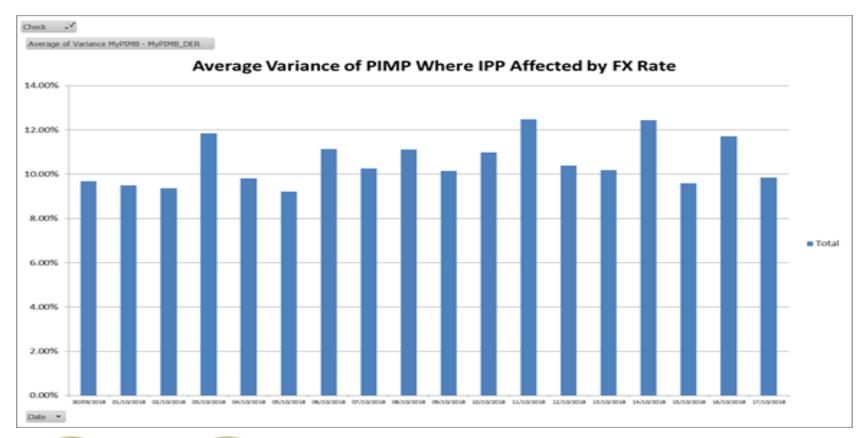
- Initial assessment of FX issue (Oct 1st to Oct 16th)
 - Approx. 1600 IPP impacted out of almost 5000







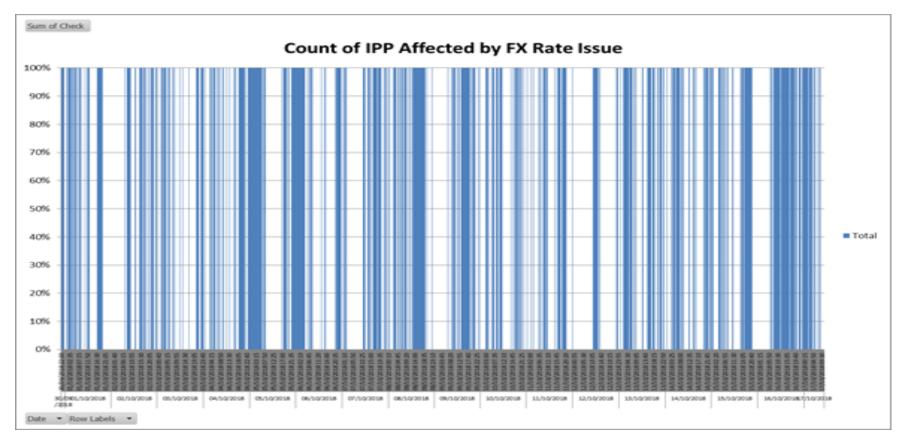
- Initial assessment of FX issue (Oct 1st to Oct 16th)
 - average variance was around 10% to 11%







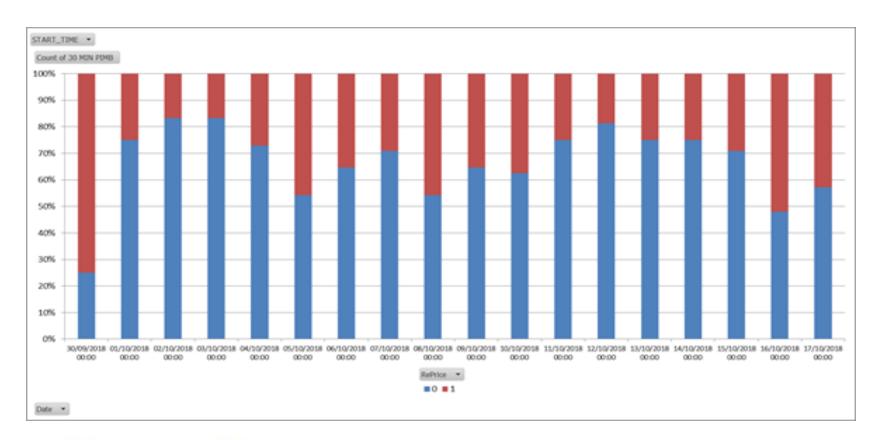
- Initial assessment of FX issue (Oct 1st to Oct 16th)
 - All trading days are impacted with some grouping of prices from the different jurisdictions







- Initial assessment of FX issue (Oct 1st to Oct 16th)
 - Looking at a half hour ISP basis, approx. 30% of ISPs appear impacted







- Initial assessment (ALL VALUES ARE APPOXIMATES)
- When looking at the Negative Reserve issue, we see potentially
 - 30min Imbalance Settlement Periods Affected (above 5% threshold): 221 (approx. 30% of periods)
 - Max Expected 30min Price Increase: ~260 €/MWh
 - Max Expected 30min Price Decrease: ~195 €/MWh
 - Expected Average Price Change: ~2.30 €/MWh Increase
- And this translates over into imbalance settlement as –

	Net	Absolute
CIMB	~ <i>€6,500</i>	~ €1,900,000
CPREMIUM	~ €136,000	~ <i>€280,000</i>
CDISCOUNT	~ -€110,000	~ <i>€720,000</i>
Total	~ <i>€30,000</i>	~ €2,900,000



Route to correct pricing errors (contd.)

- FX rate issue was confirmed on Oct 15th;
- Pricing Disputes have been submitted by Participants for all impacted Trading Days from Oct 9th onwards;
- While the Pricing Dispute window had closed for dates before Oct 8th, the Code provisions allow that –
 - Existing Pricing Disputes apply to all Imbalance Settlement Periods within the disputed Trading Day
 - The non-application of the FX Rate represents a manifest error in the calculation of the Imbalance Price
 - Resolving manifest errors in the calculation as part of existing Pricing
 Disputes is not limited to the Negative Reserve issue but will also
 extend to the FX Rate error



Summary of Pricing Disputes

Summary of Pricing Disputes by count of Trading Days affected Incorrect application of Exchange Rate in imbalance pricing Imbalance prices above strike price Application of Negative Reserve Constraint in Imbalance Pricing 5 25 10 15 20 Application of Negative Reserve Incorrect application of Exchange Imbalance prices above strike price Constraint in Imbalance Pricing Rate in imbalance pricing ■ Dispute upheld: SEMO determined that a manifest error occurred in the pricing calculation and schedule for 16 24 repricing and resettlement is being developed ■ SEMO advised that there no manifest error in the pricing calculation related to this specific issue. Dispute not 2 3 upheld nor referred. ■ SEMO advised that there no manifest error in the pricing calculation related to this specific issue. Referred to 3 Dispute Resolution Board ■ To be upheld: SEMO determined that a manifest error occurred in the pricing calculation and schedule for 1 repricing and resettlement is being developed



Path to Resolution – Pricing Errors

- Recalculation required on significant number of periods
- Good progress being made on options available
- Fully automated solution being developed with vendor as a priority
- Interim 'in house' solution also being developed in parallel
- Assessing re-certification requirements
- More robust timelines should be known in coming weeks
- SEMO will keep Participants informed through upcoming MOUGs



Agenda

Item	Presenter
Welcome	Anne Fitzgerald
Ex-Ante Market	Liam McAllister
Balancing Market	Aodhagan Downey, Tom McCartan
Settlements & Funds Transfer	Sean O'Rourke, John O'Dea
Disputes	Brendan O'Sullivan, David Carrol
Special Focus: 9 October Amber Alert Event	Tom McCartan, Aodhagan Downey
IT & Market System Development	Michael Harrington, Severin Garanzuay
Query Management	Claire Breslin
Q&A	

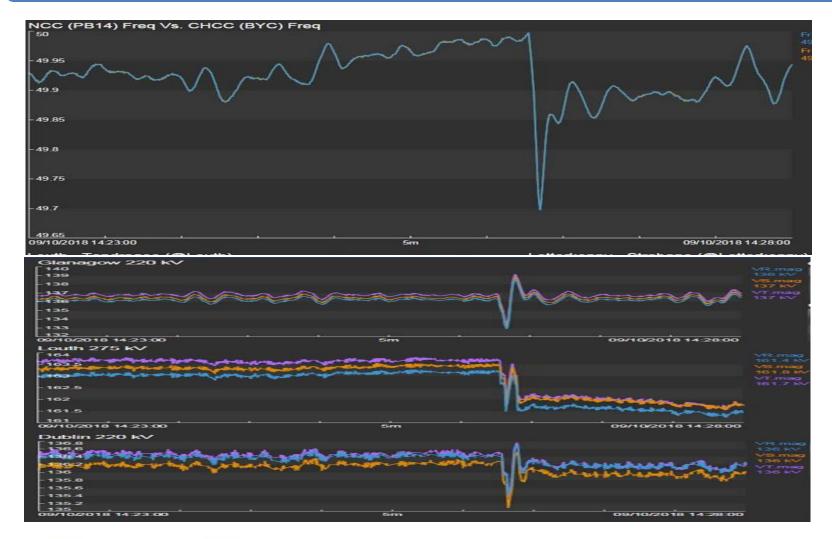


System event 9th October 2018

- 14:26hrs Tuesday 9th October 2 (out of 3) 'large' NI generators tripped simultaneously
- Significant event, not secured against under Operational Security Standards
- Frequency nadir 49.69Hz, units operating a relatively low output, combined 237 MW, hence from a frequency perspective relatively small deviation with small oscillations
- 3 set rule in NI to maintain Operational Security Standards now NI down to 1 generator
- To secure the system in NI GTs dispatched with geographical spread.
 GTs not in NI 3 set rule so NI still not meeting Operational Security
 Standard even with GTs on load



System event 9th October 2018



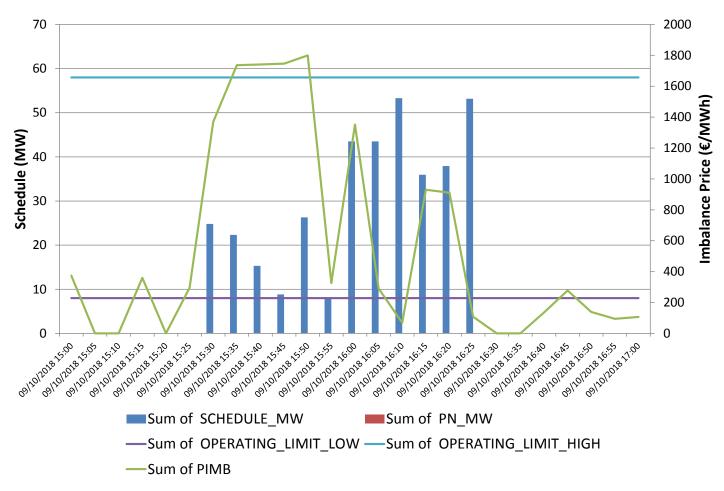


System event 9th October 2018

- 15:55hrs Amber alert issued as units still not available and experiencing problems
- Another unit in NI agreed to apply best endeavours to have unit synchronised as early as possible
- NI DSUs dispatched
- Between 16:30hrs and 18:30hrs the two units that tripped synchronised and proceeded to min gen. Between 18:36hrs and 19:23hrs GTs and DSUs dispatched off as 'large' units became stable and dispatchable
- Emergency assistance on Moyle held in reserve as it could provide MW but no inertial support for NI
- 18:57hrs amber alert removed NI system now secure again



Imbalance Price Insights – GU_500284 Schedule





Agenda

Item	Presenter
Welcome	Anne Fitzgerald
Ex-Ante Market	Liam McAllister
Balancing Market	Aodhagan Downey, Tom McCartan
Settlements & Funds Transfer	Sean O'Rourke, John O'Dea
Disputes	Brendan O'Sullivan, David Carrol
Special Focus: 9 October Amber Alert Event	Tom McCartan, Aodhagan Downey
IT & Market System Development	Michael Harrington, Severin Garanzuay
Query Management	Claire Breslin
Q&A	



I-SEM Market Technical Issues

- This slide presents a summary of the technical issues encountered by the Market Participants over the last two weeks.
 - **SEMOpx Ex Ante Auctions:** No high impact technical issues encountered. A minor issue (impacting two users) was encountered in M7 on 23/10 relating to password resets. This was highlighted on the 9.30 call and is currently being assessed for root cause.
 - **SEMO Settlement:** No high impact technical issues recorded. See Known Issues section of this document for functional issues.
 - Balancing Market: There have been two technical issues encountered, these relate to:
 - 1. ISP issue which caused the unavailability of the Market Participant Interface (MPI)
 - 2. Authentication Service Account issue which caused Market Participant Interface MPI access issues.



Known Issues: Summary

Market / Function	Known Issues
SEMOpx	2
SEMO Settlements	16
SEMO Balancing Market	9

The Known Issues details will be reviewed at the Market Operator User Group meetings.



I-SEM BM Long Day Submissions (MPI) - Reminder

EirGrid have recently published an overview of what Market Participants should expect for the Long Day Balancing Market submission. Summary available here.

Summary:

On the 28th of October, the local time in Ireland 02:00 IST reverts to 01:00 IST / UTC.

Impact:

- The I-SEM Trading day will still contain 50 half hour periods due to the addition of the 1 hour (Long Day).
- The 28th of October Trade Date will commence @ 22:00 UTC and cease @ 23:00 UTC.

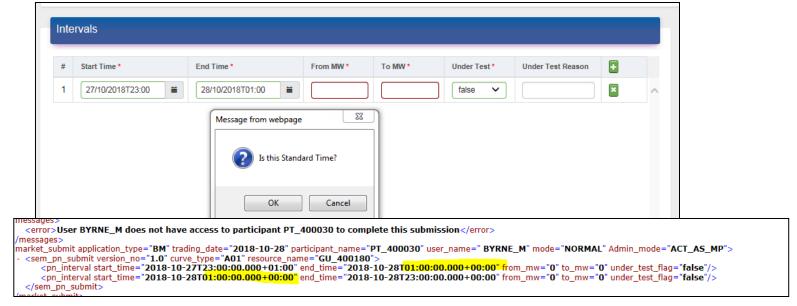
<u>Participant Impact:</u>

- Physical Notifications
- Simple & Complex Offer Data



I-SEM BM Long Day Submissions (MPI) - Reminder

The MPI requires the user to define the time zone (UTC or Local) if they select 01:00 28th of October on the MPI, when the user selects "OK" it is entered as UTC time in the XML submission.



- 1. The same is applicable to Simple and Complex COD submissions.
- When generating an XML submission for the Trading Date the 28th, the first time period will start @ 22:00 UTC / 23:00 IST and end at 23:00 UTC as per the above screenshot.



I-SEM Clock Change Balancing Market Report

- On the 28th of October at 2am the short day clock change occurs.
- As currently produced all XML reports are in UTC and have a daily timespan from 22:00 – 22:00. XML Reports will continue to be published in UTC and cover the I-SEM Trade day 23:00 – 23:00
- On the 28th reports will begin at 22:00 on the 27th of October UTC as per usual during the short day. Then at 2am there will be an additional row produced and published. This can be illustrated in the table below based on an daily report and half-hourly intervals

Row#	Start Time	End Time
1	2018-10-28T00:00:00 + 1:00	2018-10-28T00:30:00 + 1:00
2	2018-10-28T00:30:00 +1:00	2018-10-28T01:00:00 + 1:00
3	2018-10-28T01:00:00 + 1:00	2018-10-28T01:30:00 + 1:00
4	2018-10-28T01:30:00 + 1:00	2018-10-28T02:00:00 + 1:00
5	2018-10-28T02:00:00 + 1:00	2018-10-28T02:30:00 + 1:00
6	2018-10-28T02:00:00 + 0:00	2018-10-28T02:30:00 + 0:00
7	2018-10-28T02:30:00 + 0:00	2018-10-28T03:00:00 + 0:00

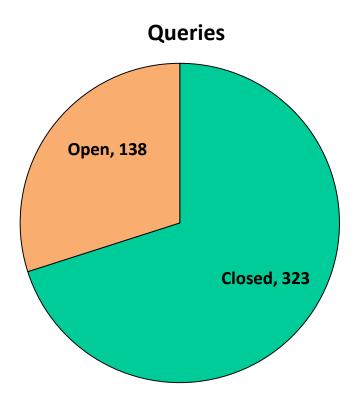


Agenda

Item	Presenter
Welcome	Anne Fitzgerald
Ex-Ante Market	Liam McAllister
Balancing Market	Aodhagan Downey, Tom McCartan
Settlements & Funds Transfer	Sean O'Rourke, John O'Dea
Disputes	Brendan O'Sullivan, David Carrol
Special Focus: 9 October Amber Alert Event	Tom McCartan, Aodhagan Downey
IT & Market System Development	Michael Harrington, Severin Garanzuay
Query Management	Claire Breslin
Q&A	



Query Management – General Queries



General Queries since the 1st of Oct – Average 163 per week



Query Management – Formal Queries

Formal Settlement Queries

In Progress: 12

Completed: 18

Disputes

- In Progress: 4

Resolution Agreed (pending final Paperwork): 7

Completed: 22



Query Management – Further Information

- Formal Query and Dispute Forms are now available on <u>www.sem-o.com</u> and <u>www.semopx.com</u>
- The timeline for the Market Operator to respond to a Formal Settlement Query is 20 Working Days
 - Please refer to Agreed Procedure 13 <u>here</u>
- SEMOpx, Pricing and Settlement Disputes follow various timelines, please refer to the appropriate Code reference:
 - Pricing and Credit Dispute timelines are in Agreed Procedure 14 <u>here</u>
 - SEMOpx Disputes timelines are in See section G.2 of the SEMOpx Rules <u>here</u>



Registration Update

- Authorized Users Please ensure you have set the correct permissions in the BMI for users with key code activities e.g. Authorised to Submit an LCF.
- Certs Expiry Please check what date your cert is due to expire and renew in ample time. You can check this at any time in the BMI.



Agenda

Item	Presenter
Welcome	Anne Fitzgerald
Ex-Ante Market	Liam McAllister
Balancing Market	Aodhagan Downey, Tom McCartan
Settlements & Funds Transfer	Sean O'Rourke, John O'Dea
Disputes	Brendan O'Sullivan, David Carrol
Special Focus: 9 October Amber Alert Event	Tom McCartan, Aodhagan Downey
IT & Market System Development	Michael Harrington, Severin Garanzuay
Query Management	Claire Breslin
Q&A	



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.

