Market Operator User Group

28th January 2021



Item	Presenter
Welcome	Anne Fitzgerald
Release Program Update	Eamon Garrigan
Market Development Roadmap	Eamon Garrigan
Ex-Ante Markets	Liam McAllister, Michael Atcheson
Post-Brexit Update	Michael Kelly
Repricing Update	Michael Atcheson
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Release Program Update

Туре	Release G Summary Participant Effecting	Business Area	System
CR	CR-072: Clarification to Intra-Day Quantity and Payment	Settlement	CSB
CR	CR-081: Amendment of conditions in which the Market Backup Price is used (MOD_03_19)	Trading/Pricing	RTPIMB
CR	CR-126: Configuration of Variable Market Operator Price to apply on a Tariff Year basis, not Calendar Year	Settlement	CSB
CR	CR-158: Repricing and relationship with Instruction Profiling	Trading/Pricing	RTPIMB
CR	CR-129: Correction of QUNDELOTOL calculations	Settlement	CSB
CR	CR-119: Changing Day Ahead Difference Quantity to Day Ahead Trade Quantity Within Day Charge Calculations	Settlement	CSB
CR	CR-088: Changes to configuration of FX Rates	Settlement	CSB
CR	CR-079: Registered Capacity Report Amendments	General/Other	Reports

Title	Delivery Schedule								Update					
Title	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	opuate		
ABB Release G		D	esign		-							FAT test review and defect test		
				Buil	d/FAT	:		SIT/L	JAT	*		analysis in progress. Test scripting in progress		
ABB Release H			S	coping		Desig	n					CRs under development		
(Scope Open)									Build / F	AT		- CKS under development		

EIRGRID Semo SONI

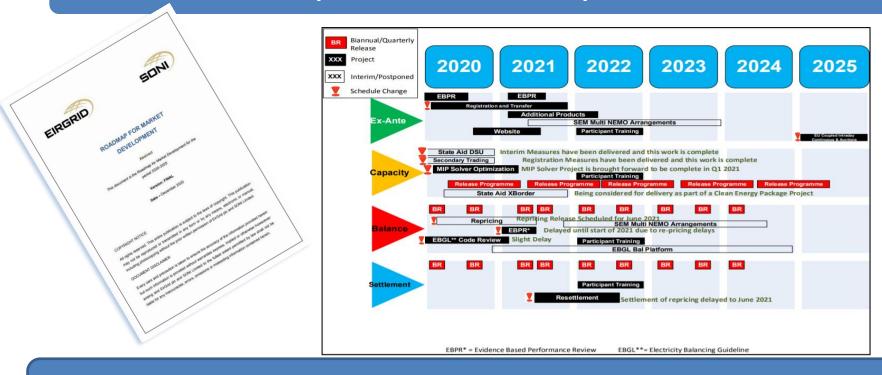
Release G (Scheduled for June '21)

- 8 Change Requests
- 18 Defects
- 10 items from Known Issues
 Report to be included
- High Level Impact Assessment For Release G will be published in advance

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Market Development Roadmap



Feedback from Market Participants on this document has been extended to **5pm on 1st February 2021** and should be sent via email to info@sem-o.com using the subject Market Development Roadmap

EirGrid Group is currently developing an integrated all-island vision of the 2030 power system called 'Shaping our electricity future' spanning three dimensions of the all-island electricity system: networks, power system operation and electricity markets.

In 2021, we will:

conduct a large-scale public consultation and engagement programme (commencing in Q1 2021) on our draft 'Shaping our electricity future' vision. This will act as a framework for an informed discussion on the island of Ireland; and

following the analysis of the feedback received from stakeholders, a final pathway to deliver on this ambition will be published. This will set out what is required to deliver a reliable and efficient power system and wholesale electricity market in a future with significant levels of generation from renewable sources.

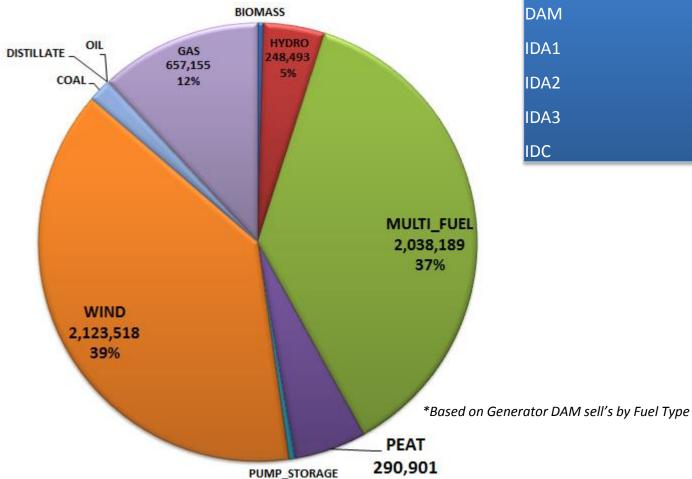
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Ex-Ante Markets

Volumes and Fuel Mix Nov - Dec 2020

*Using approx. prices and fuel type breakdowns



5%

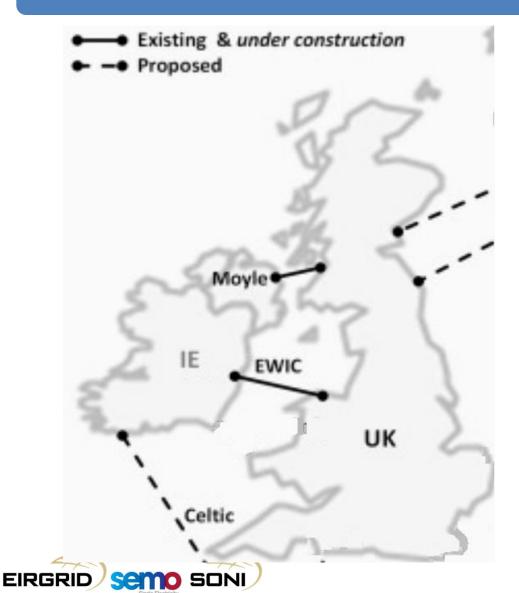
		% of
	Value	DAM
DAM	€391,473,489	
IDA1	€33,520,452	8.56%
IDA2	€16,223,941	4.14%
IDA3	€5,023,771	1.28%
IDC	€382,806	0.10%

Ex-Ante Markets - Post-Brexit

- Post-Brexit processes working well
- Auctions running on time, without issues
- Auction Volumes are healthy
- Generated Auction Prices are as expected, given the challenging fundamentals



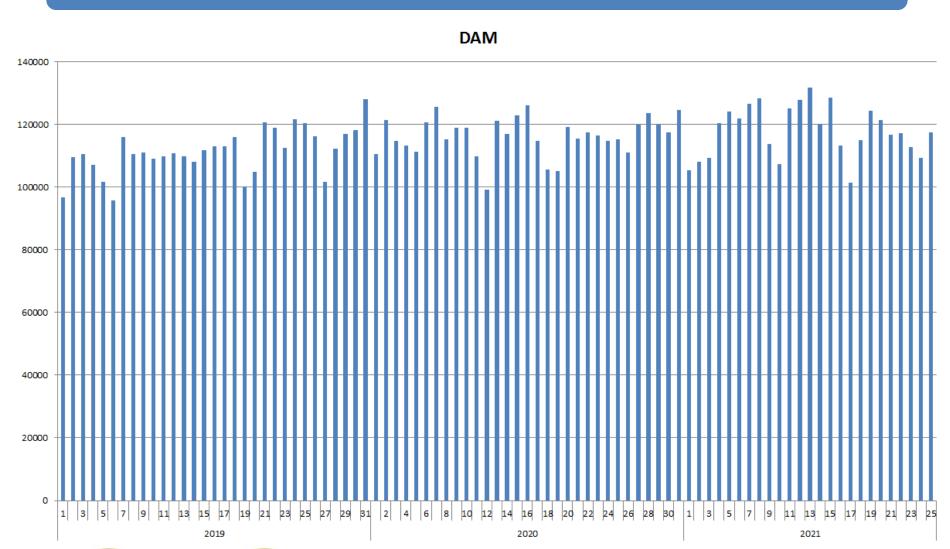
Post-Brexit How are Interconnectors Scheduled?



We Export on INTC's when our Auction Prices are cheaper than GB's



How have DAM Auction Volumes held up post Brexit?

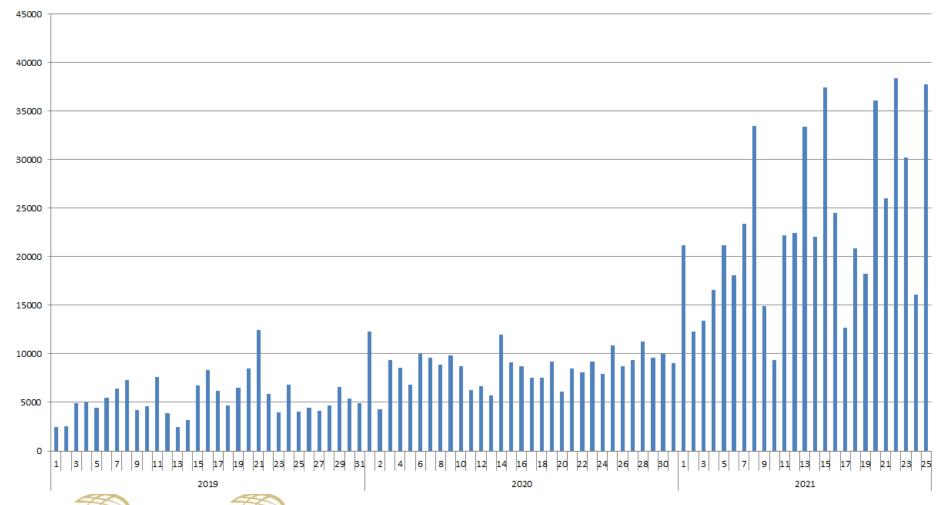




DAM (uncoupled) volumes on a par to previous years coupled

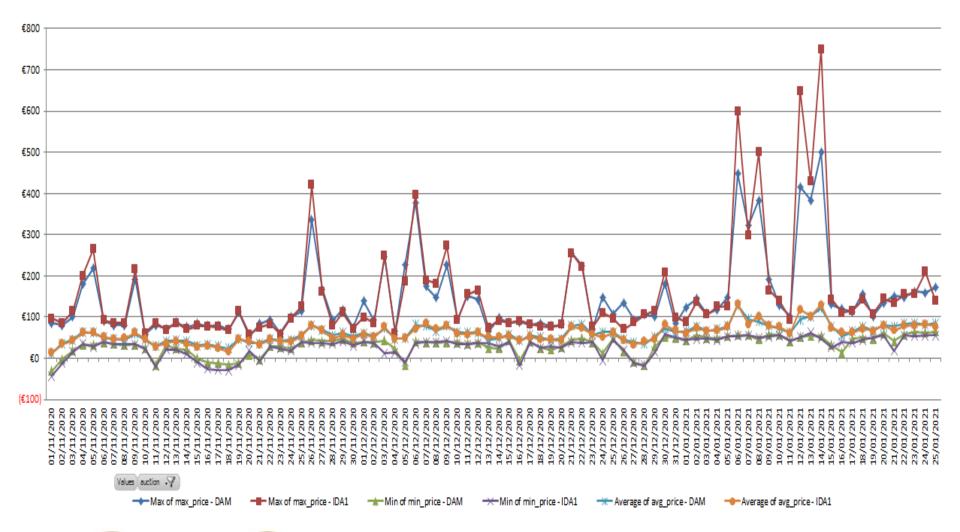
And IDA's Coupled Volumes?

IDA1





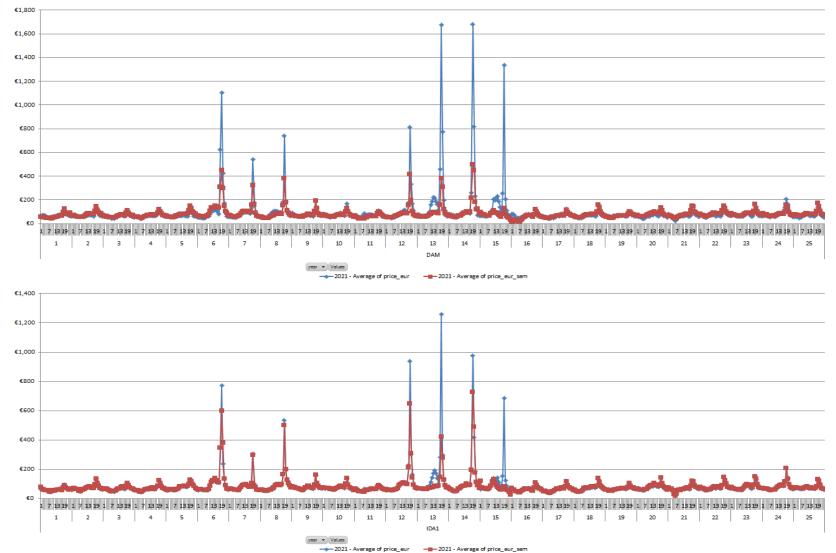
High Prices over the Peak







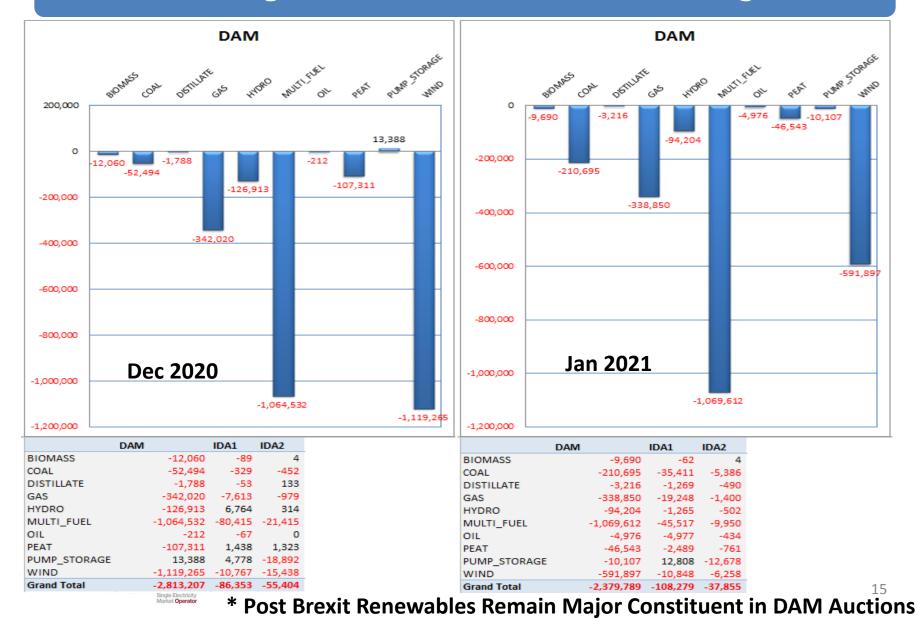
What's Changed? SEM-GB Price Spread – INTC's No Help!!



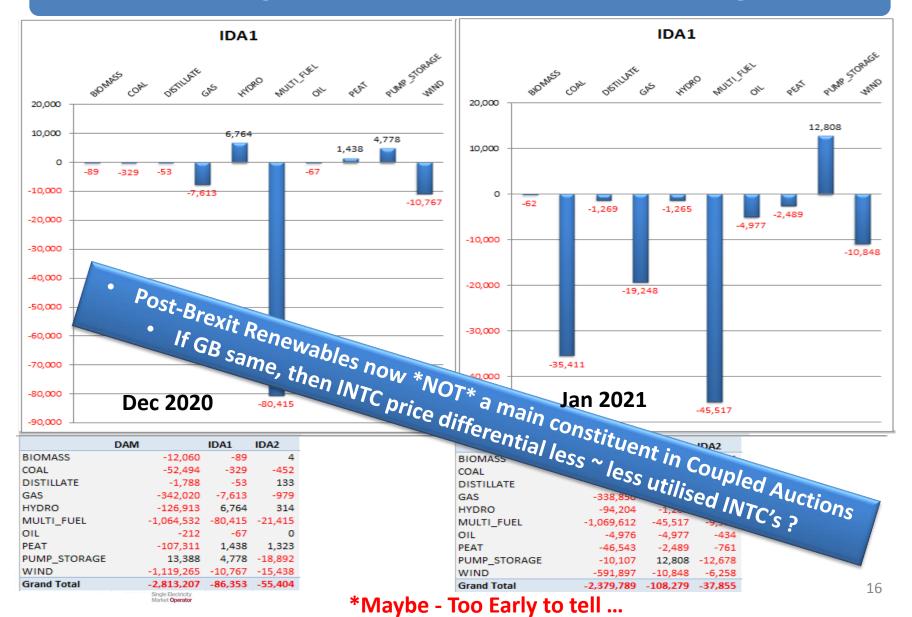




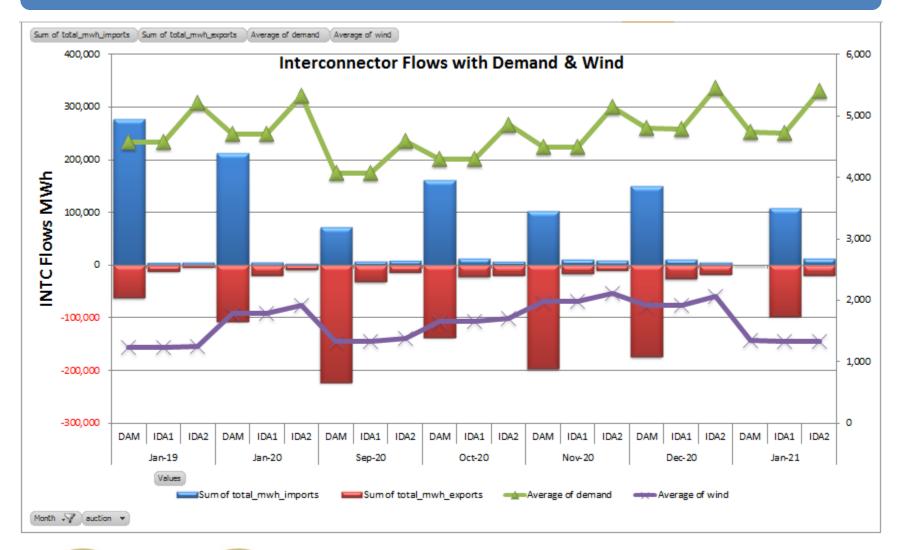
What has Changed? Are Non-Renewables driving INTC's?



What has Changed? Are Non-Renewables driving INTC's?



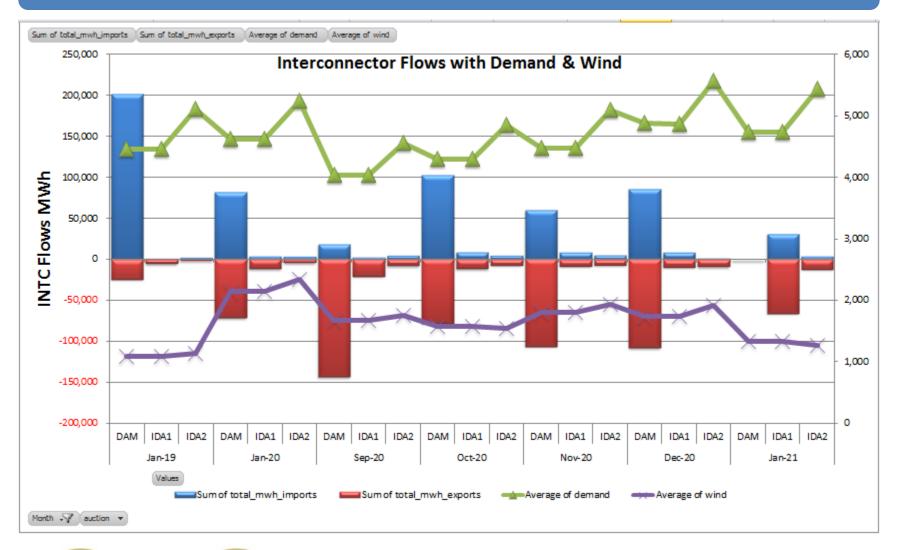
Ex-ante Interconnector Flow Pre/Post Brexit Comparison







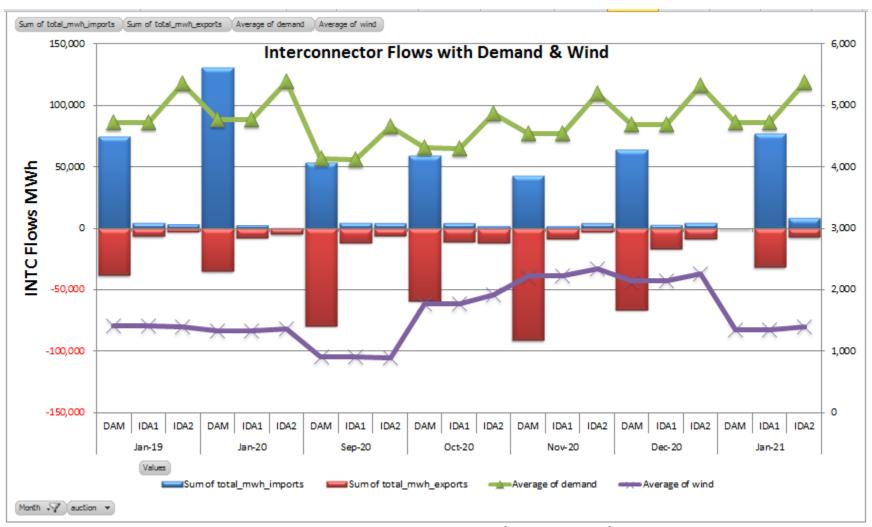
Ex-ante Interconnector Flow Pre/Post Brexit Comparison







Ex-ante Interconnector Flow Pre/Post Brexit Comparison







Next 11 days of Brexit (Day 15-25)

- More time (data) needed to observe developing patterns

Ex-Ante Market Analysis

- In Summary
- ✓ Simple Look Back Analysis located on SEMOpx website here :
 - https://www.semopx.com/documents/general-publications/lookback_mkt.xlsx



ETS Releases

Version	Content	Client	Impact	Timeline
V3.5	 Changing the certificate handling in ETS (Enhancement on API) Change in the handling of the cypher suite admission (Internal enhancement for API connections TSL) 	New client	Not- upgradable	Q1 2021



ETS Maintenance Windows

Date & time	Impact	Reason	Communication
12/01/2021 18:40 to 21:15	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)
09/02/2021	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)
09/03/2021	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)



^{*}Regular maintenance: Between 18:40 and 21:15 IST every 2nd Tuesday of the Month.

M7 Releases

Version	Content	Impact	Timeline
V6.11	Release notes / Impact to be sent.	No information yet	Q2 2021



M7 Maintenance Windows

Date & time	Impact	Reason	Communication
12/01/2021 19:45 - 23:00	Maintenance	DBAG, EPEX & ECC	M7 chat message (1 hour before the maintainance) + OMM message (email sent a week in advance and on the same morning)
09/02/2021	Maintenance	TBC (ECC)	M7 chat message (1 hour before the maintainance) + OMM message (email sent a week in advance and on the same morning)
09/03/2021	Maintenance	TBC	M7 chat message (1 hour before the maintainance) + OMM message (email sent a week in advance and on the same morning)

^{*}Regular maintenance: Between 18:40 and 21:15 IST every 2nd Tuesday of the Month.



Upcoming Training Sessions

Submission on Behalf of Tool training session:

16th February 2021

Communication issued out on 27th January 2021 outlining the training session overview and registration requirements

Decoupling training simulation:

3rd March 2021

Information package shall be provided in due course



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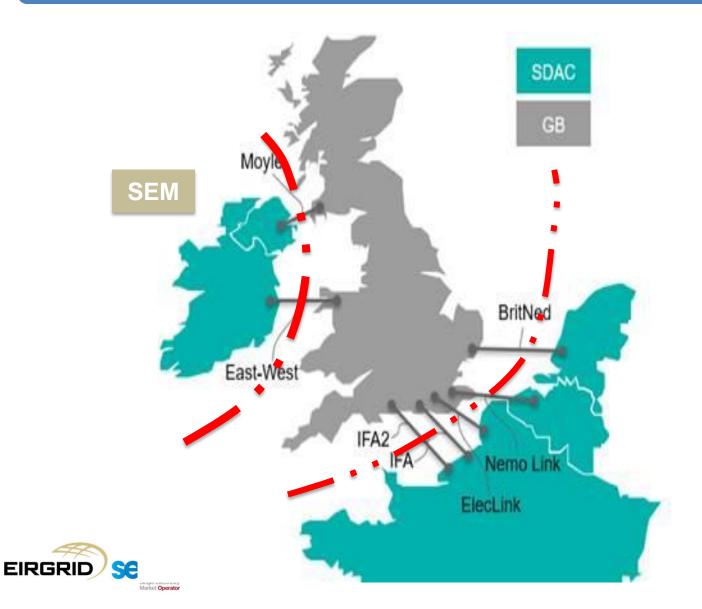


 Position of SEM following the draft EU-UK Trade and Cooperation Agreement

 New market trading options between the SEM Great Britain (SEM-GB)



BREXIT and the challenge for SEM



So where are we now...?

The Single Electricity Market (SEM) will continue to operate as an all-island market

EU energy law (Clean Energy Package, Network Codes, REMIT, Transparency Reg) still apply in Northern Ireland

A 'Central Scenario' developed in 2020 & in line with previous communications from both the EU and UK regarding the arrangements for the Single Electricity Market (SEM) and its coupling with the GB and EU Internal Energy Markets is now in place, which includes:

Interconnector Forwards market: No longer any forwards financial transmission rights products available

Day-ahead market: An all-island local day-ahead market operating on an isolated basis using the EUPHEMIA platform; i.e. no longer any day-ahead cross-border trade

Intraday market: Continuation as per existing Intraday arrangements for trade between GB-SEM (outside EU intraday arrangements)



EU-UK Trading and Cooperation Agreement (TCA)

- Specialised Committee on Energy will ensure that TSOs develop technical procedures for DA trading. It may take decisions itself if it doesn't recommend implementation of TSOs' proposals
- DA trading to be based on multi-region loose volume coupling, calculating net positions between UK and directly connected Bidding Zones (SEM, FR, BE, NL) using:
 - commercial DA bids/offers from UK and SEM, FR, BE, NL;
 - network capacity data, under agreed procedures;
 - data on expected commercial flows between SEM, FR, BE, NL and other EU BZs, as determined by EU TSOs; and
 - DC interconnector characteristics, including losses and ramping requirements.
- Market coupling function will provide reliable and repeatable results in time to use as inputs into each party's DA markets, using a distinct and separate algorithm from the algorithm used under CACM, and using only bids and offers from directly connected EU Bidding Zones.
- CBA and proposal 3 months; technical procedures within 10 months; entry into operation within 15 months
- Specialised Committee on Energy may recommend TSOs prepare technical procedures for other timeframes

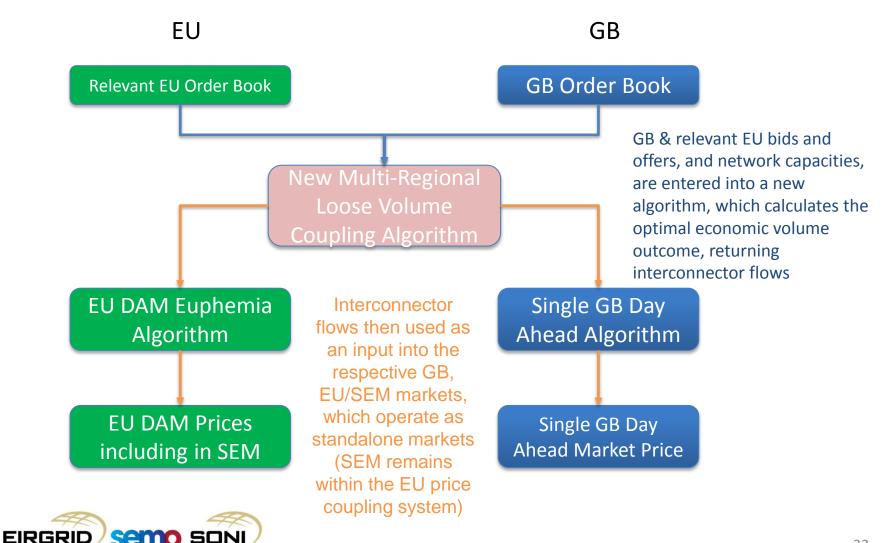


Multi-Regional Loose Volume Coupling

- IC flows determined by a new algorithm, determining interconnector volumes and not prices. SDAC auction then establishes the prices based on the volumes from the new algorithm. In GB, resulting IC flows are used in a second GB-only auction to determine prices.
- Continuation of intraday implicit auctions for cross-border trading between GB and SEM.
- FTRs based on DA prices from SDAC? GB prices and SEM prices may differ to what they would have been under price coupling.



Loose Volume Coupling Potential Schematic



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Repricing Update

Market Message published 28/01/2021

This is an information notice that Balancing Market Repricing is due to commence. The first repricing publication is scheduled to take place on **Thursday**, **4**th **February 2021**.

The **Repricing Participant Guide** and associated **Repricing Calendar** can be found here:

- Repricing Participant Guide
- Repricing Calendar

The Repricing Calendar has been updated to reflect the initial programme of work; up to the end of April 2021. As a reminder, further information notices on repricing will be communicated via the **Balancing Market Repricing distribution list**, only.

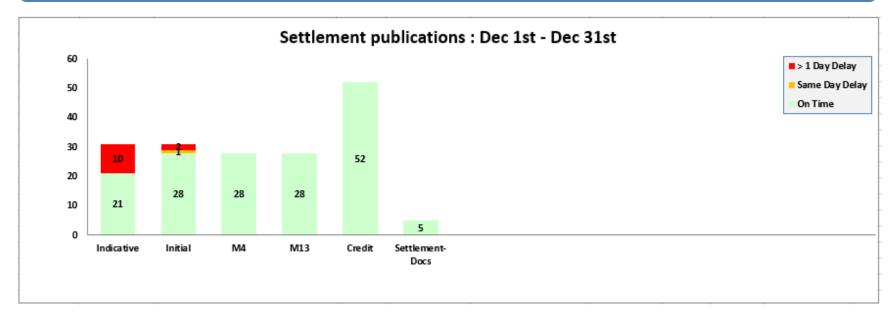
You may subscribe to this distribution list on the <u>SEMO Website</u>. Should you have any queries, please contact info@sem-o.com.



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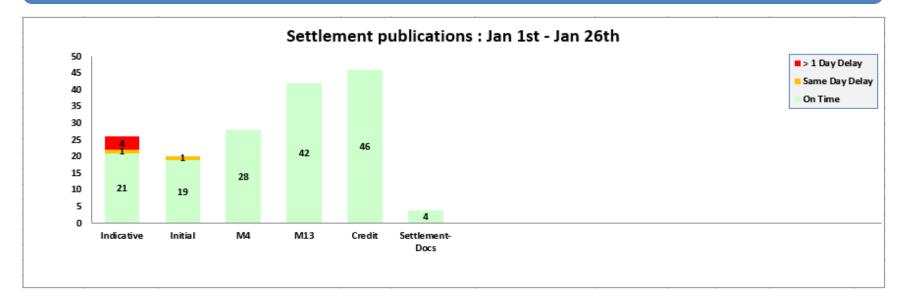
Settlement publications & timelines : Dec 2020



- Indicative publications: Delays due to DA/IDT trade import issues (4), Instruction profile process issues (3) and meter data delays (1).
- **Initial publications:** 2 delayed publications > 1 day in December were due to Instruction profile process issues.
- M4 Resettlement: M4 of Week 33 2020 delayed by one-week, double M4 issued on the 18th
- M13 Resettlement: 2 single M13 weeks & 1 double M13 published in December
- **Settlement Documents:** Extra Settlement Document date in Dec (2nd) due to delayed SD Nov 27th KIR ID #199,930



Settlement publications & timelines: Jan 2021 to date



- Indicative publications: Delays due to MDP metered data delays (4) and impact of an internal system outage (1)
- Initial publications: 1 delayed publication (same day delay) due to additional analysis required
- M4 Resettlement: Published on time
- M13 Resettlement: Double M13 resettlement due to complete on 29/01/2021
- Settlement Documents: Published on time

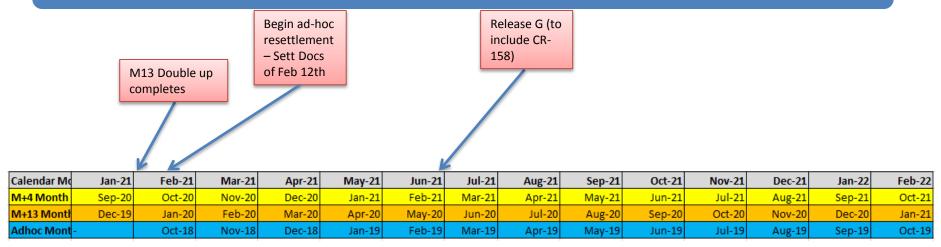


Settlements & Credit Processing: Other updates

- Adhoc resettlement schedule update: market message issued 20th January re: Adhoc processing & KIR ID 199107. Adhoc resettlement of Week 39, 2018 now scheduled to be included with Settlement Documents on Feb 12th 2021.
 Planned adhoc schedule on slide 40.
- **SMART metering release & cut-over schedule**: Impact to settlements processing on Monday, February 15th;
- No indicative settlements publications on Feb 15th, processing to occur on Feb 16th for indicative dates 12th 15th Feb. Market message reminder will issue in advance.



SEMO Resettlement plan – Jan 2021 update



Key Events:

M13 double up due for completion in Jan 2021 Planned start of ad-hoc resettlement in Feb 2021 Release G into production which includes CR 158 – June



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System (Amber) Alert

System Alert - Elevated risk of not being able to meet system demand and/or risk of operational security limits (frequency/voltage) being violated

- Reserve capacity reduced by 20% for longer than 30 minutes
- Frequency outside Operational Limits for certain period
- Unresolved contingency which may lead to Operational Security Standards not being met
- Multiple contingencies probable due to storms
- Jurisdictional Margin is such that the tripping of the largest infeed, would give rise to a reasonable possibility of failure to meet the System Demand



Interconnectors: Security Actions

Market

- •Market determines the power schedule for Moyle and EWIC.
- •TSO should only change for system security / priority dispatch reasons

TSO Trade

- EirGrid/SONI request a counter-trade to adjust the schedule for system security of priority dispatch purposes Cross Border Balancing (CBB) or CTPT (Coordinated Third Party Trading)
- •National Grid may reject

EA

- •EirGrid/SONI request 'Emergency Assistance' (EA) 200 MW on Moyle and 150 MW on EWIC available
- •Used in extreme cases when one party foresees difficulty meeting demand system must be in alert
- •National Grid may reject or withdraw on system security grounds

ΕI

- •EirGrid/SONI invoke an 'Emergency Instruction' (EI)
- Party experiences problems with system safety/security (load shedding imminent)
- •Reduces the flow towards zero only (no additional import)







ICs – System Peak Security Trades (to 19 Jan)

	17:30 Peak Values					EWIC Security Trades			Moyle Security Trades					
Date	EWIC IDA2 (MW)	Moyle IDA2 (MW)	IE Wind (MW)	NI Wind (MW)	IE Demand (MW)	NI Demand (MW)	Trade Volume (MWh)	Time Trade Executed	Trade Period	Trade above €500/MWh	Trade Volume (MWh)	Time Trade Executed	Trade Period	Trade above €500/MWh
									17:00-				16:30-	
06/01/2021	-314	-409	127	32	5225	1560	79	14:15	18:00	YES	182	14:15	18:00	YES
									16:30-				16:30-	
							267	16:23	19:00	YES	366	16:14	19:30	YES
													16:00-	
07/01/2021	-103	-409	813	186	5127	1538					612	13:20	18:30	YES
													16:00-	
08/01/2021	-431	-409	804	29	5082	1478					327	15:30	18:30	NO
													16:30-	
12/01/2021	-526	-409	864	99	4974	1531					443	14:11	18:30	YES
													15:30-	
14/01/2021	-526	-409	629	114	4850	1473					538	15:16	18:30	NO
													16:30-	
19/01/2021	0	-17	2047	109	4930	1505					71	11:21	17:30	NO



Al System Alert – 6 January

Events leading up to 6 January

- 31 Dec: NGESO notify TSOs it is tight 5 & 7 January
- 4 Jan: NGESO notify TSOs it is tight 6 8 January seeking assistance
- 5 Jan: NGESO issue Electricity Market Notice (EMN)
- 5 Jan 18:00: IDA1 has 400 MW export on Moyle & 260 MW export on EWIC over peak
- 5 Jan 20:43: Market Notice issued by TSOs

6 January events

- 08:40: IDA2 has 400 MW export on Moyle & 300 MW export on EWIC over peak
- 12:00 CTPT Trade agreed in principle with NGESO for 300 MW not enough to avoid an alert
- 13:05 System Alert issued for IE & NI and Market Notice issued
- 16:15 NGESO confirm further 300 MW trade possible; leaves EWIC at 0 MW & Moyle 100 MW export at peak
- 17:30 System Status
 - Demand: 5225 MW in IE, 1560 MW in NI
 - Generation Availability: ~5.7 GW in IE, ~1.9 GW in NI
 - Wind: 130 MW in IE, 30 MW in NI
 - All available units dispatched in IE & NI as per merit order
- 18:05 System Alerts IE & NI removed



NI System Alert – 8 January

7 January

- 0730: NGESO notify TSOs it is tight 8 January
- 18:00: IDA1 has 400 MW export on Moyle & 228 MW export on EWIC over peak
- 20:05: NGESO issue Electricity Market Notice (EMN)

8 January events

- 08:40: IDA2 has 400 MW export on Moyle & 411 MW export on EWIC over peak
- 10:20: Market Notice issued by TSOs expecting IE & NI to be in alert that evening
- 13:45: System Alert NI issued
- 15:30 CBB Trade agreed with NGESO for 200 MW on Moyle (lifts IE from being in Alert at 16:00)
- 16:15 NGESO confirm further 300 MW trade possible; leaves EWIC at 0 MW & Moyle 100 MW export at peak
- 17:30 System Status
 - Demand: 5082 MW in IE, 1478 MW in NI
 - Generation Availability: ~5.4 GW in IE, ~1.7 GW in NI
 - Wind: 800 MW in IE, 30 MW in NI
 - All available units dispatched in IE & NI as per merit order
- 18:25 System Alert NI removed



System Trials

- Negative Reserve (NR) Trial complete: NR moved from 150 MW to 50 MW
- 70% SNSP Trial commenced 15 January (3 month trial)





Scheduling & Dispatch Audit Report and Consultation

System Operator Obligations:

- EirGrid TSO Licence Condition 10 A.9 and SONI TSO Licence Condition 22 A.9
 - "The Licensee shall arrange for the carrying out of a periodic audit of the scheduling and dispatch process, its operation and implementation in accordance with directions given to it by the RAs.....
 - The Licensee shall, where directed to do so by the Commission, implement the recommendations contained in any audit report."
- Separate from the market code audits.



Consultation: Scoping 2020 and 2021 Audits

- Consultation Document
- Reasonable Assurance Engagement (ISAE 3000)
 - Assurance Report and Approach Document
- Calendar year audit periods
- Proposed scope is in line with 2018/19.....



Outcome of 2018/19 Audit

- Assurance Report and 'Approach Document'.
- PwC's opinion:
 - "Based on our procedures, in our opinion, in all material respects, The Transmission System Operators
 have complied with The Requirements as they relate to the specified elements of the scheduling and
 dispatch process during the 15 month period ended 31 December 2019."
- Additional testing and materiality assessments applied to a small number of evidence related issues.
- Auditor recommendations are being assessed.



Scope of Audit Procedures

Priority Dispatch

- Unit Status in MMS
- Dispatch Down

Dispatch Instructions

- PN
- Unit Availability
- Outages
- Policy Parameters

Merit Orders

- Dispatched
- TOD

Operational Constraints

- Transparency
- MMS Settings

Constraint Flagging

- Logical Test
- Transparency

IT General Controls

- Programme Development
- Change Management
- Access



Consultation: Scoping 2020 and 2021 Audits

- Consultation Document
- Open until Friday 12th February
- Queries and submissions:
 - OpsCompliance@SONI.ltd.uk or
 - OpsCompliance@EirGrid.com



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Balancing Market Registration

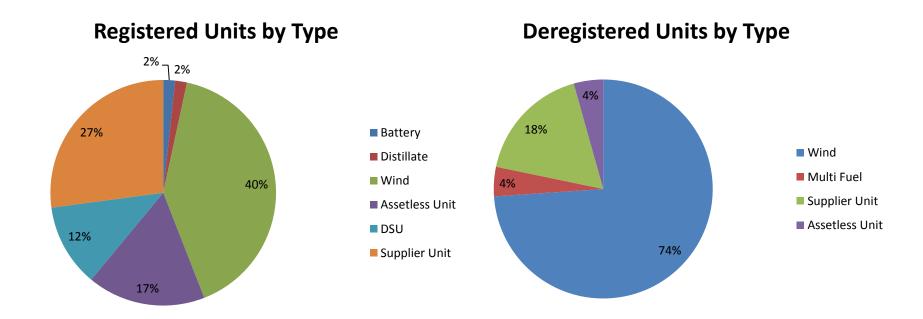
01 January 2020 - 01 January 2021

- 8 new Parties registered in the Balancing Market
- **59** Unit registrations (Generator Units, DSUs, Supplier Units and Assetless Units)
- 23 Unit deregistrations
- 73 Unit data changes (updates to registered capacity, Unit switch to controllable etc.)



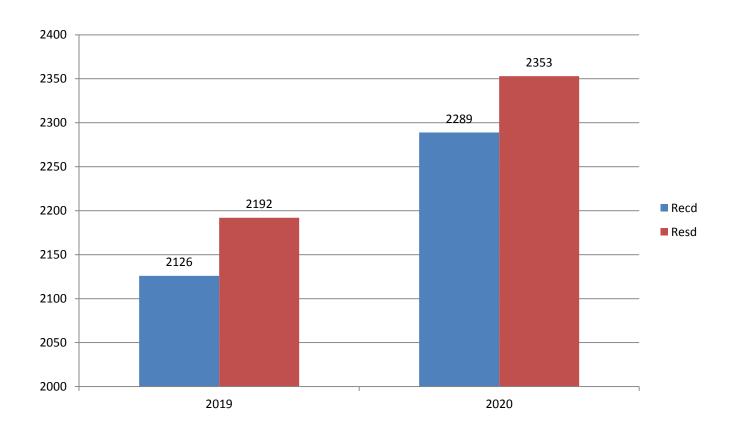
Breakdown of Registrations & Deregistrations

01 January 2020 - 01 January 2021



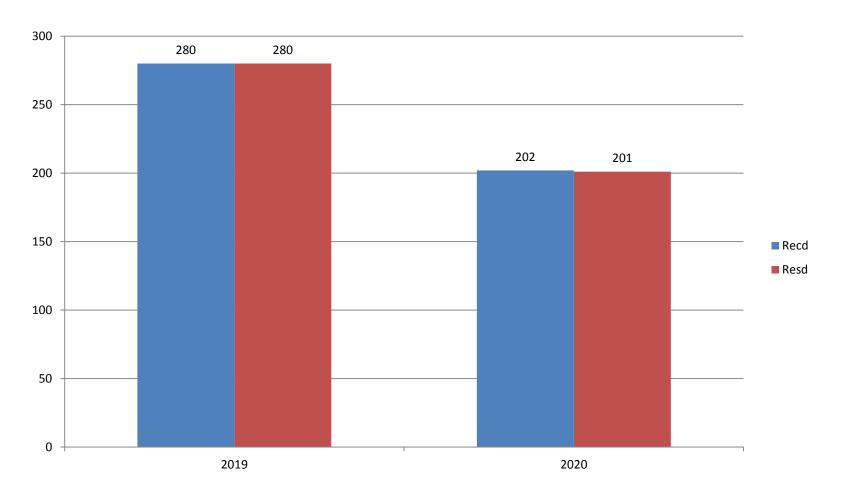


General Queries Overview 2020



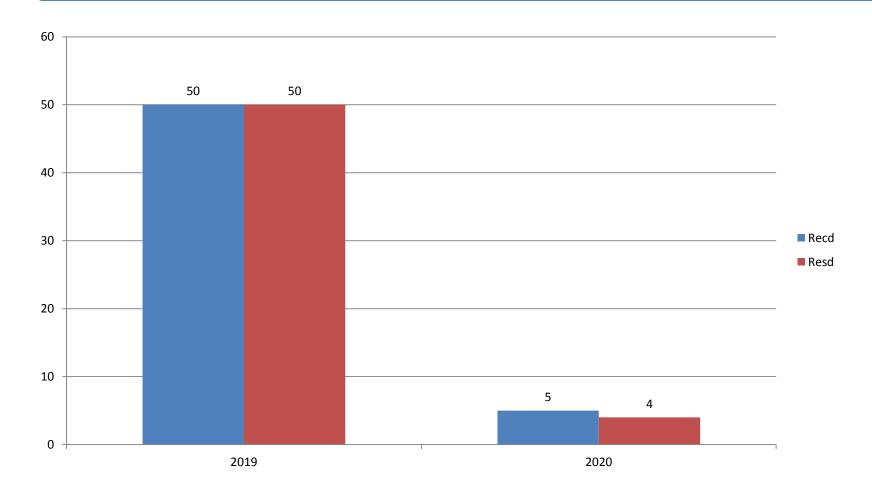


Formal Queries 2020





Disputes 2020







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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>
- Capacity Market: <u>CapacityMarket@sem-o.com</u>

Thank you for your attendance.

