Market Operator User Group

25th March 2021



Agenda

Item	Presenter
Welcome	Anne Fitzgerald
Release Program Update	Eamon Garrigan
Ex-Ante Markets	Liam McAllister, Michael Atcheson
Repricing Update	Michael Atcheson
Impact of Brexit (VAT Update)	Brian Sherwin
Trading with GB post-Brexit - Energy Cross-Border Trading	Michael Kelly
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Q&A	



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



- 8 Change Requests
- 18 Defects

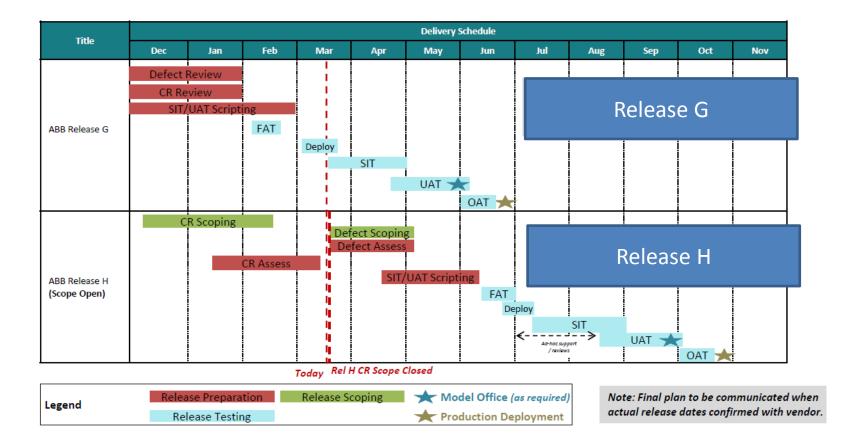
EIRGRID

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SON

- 14 items from Known Issues Report to be included (updated Known Issues Report March 19th '21)
- High level Impact Assessment Release G here

Market Management System Delivery Schedule 2021



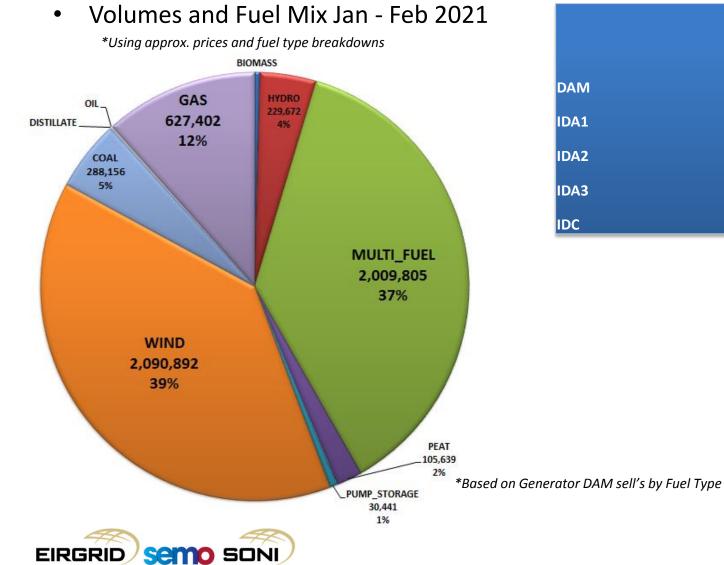


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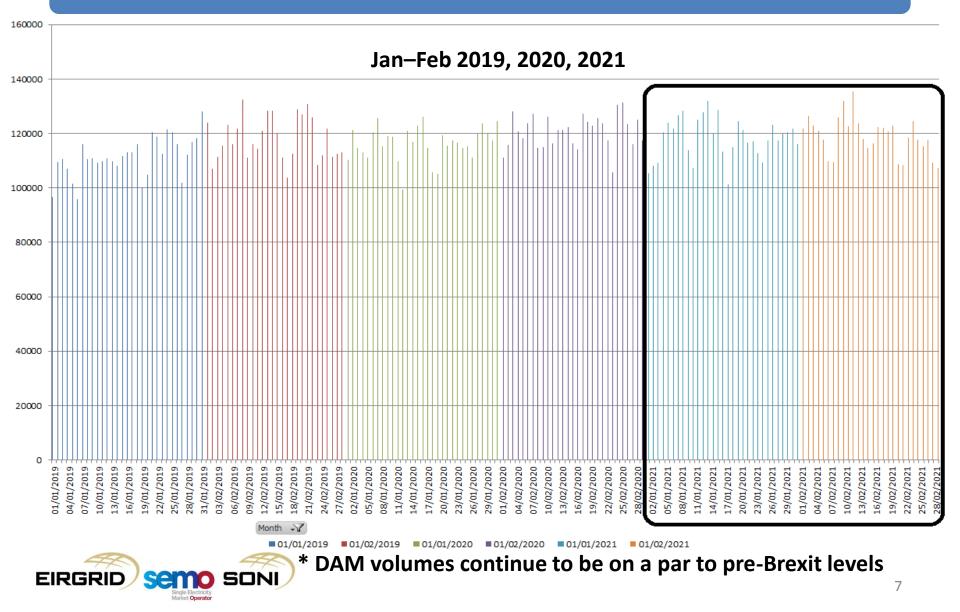


Ex-Ante Markets

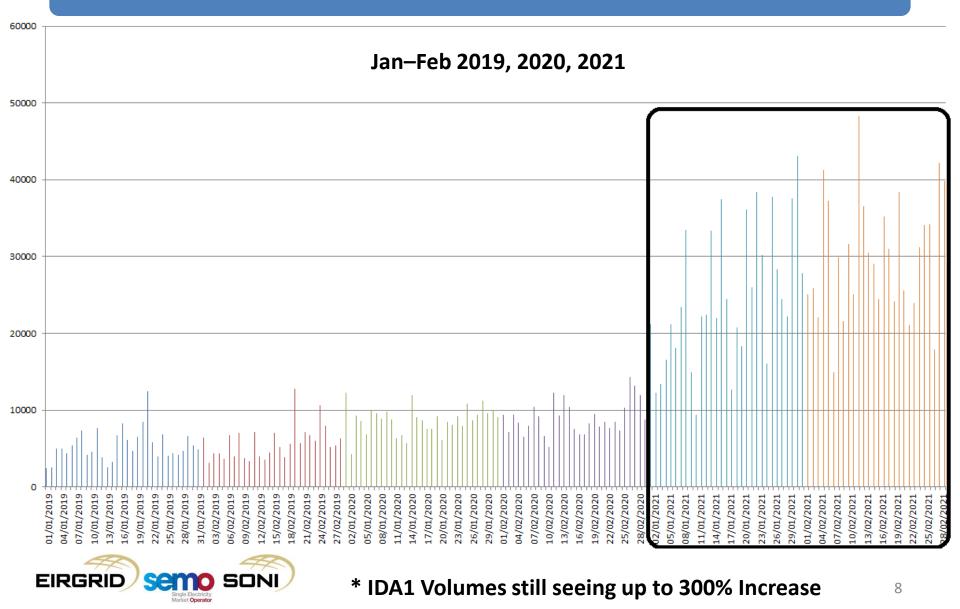


		% of
	Value	DAM
MAC	€502,140,589	
DA1	€111,733,009	22.25%
DA2	€25,165,775	5.01%
DA3	€7,283,810	1.45%
DC	€599,945	0.12%

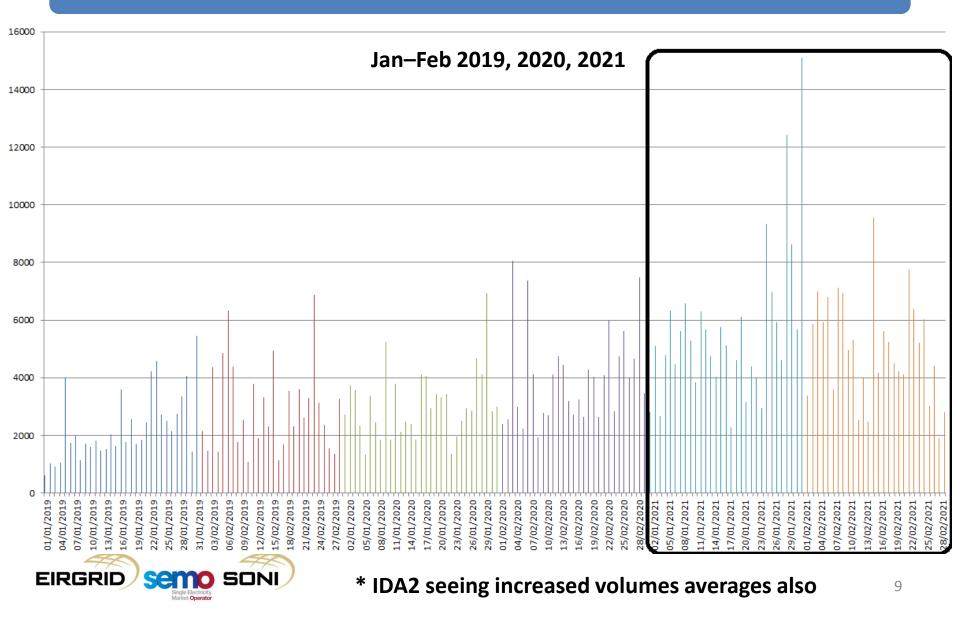
How have DAM Auction Volumes held up post Brexit?



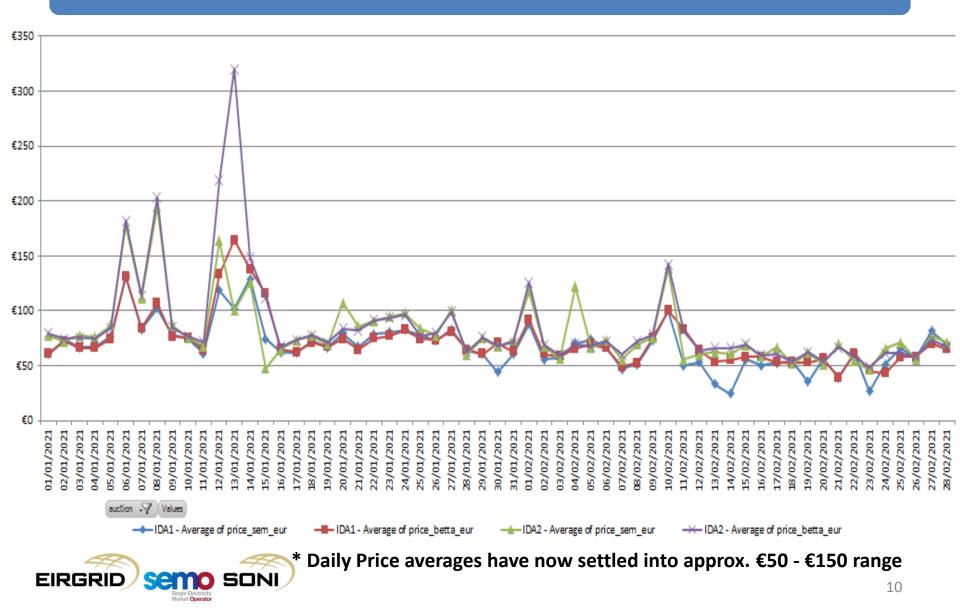
IDA1 Volumes



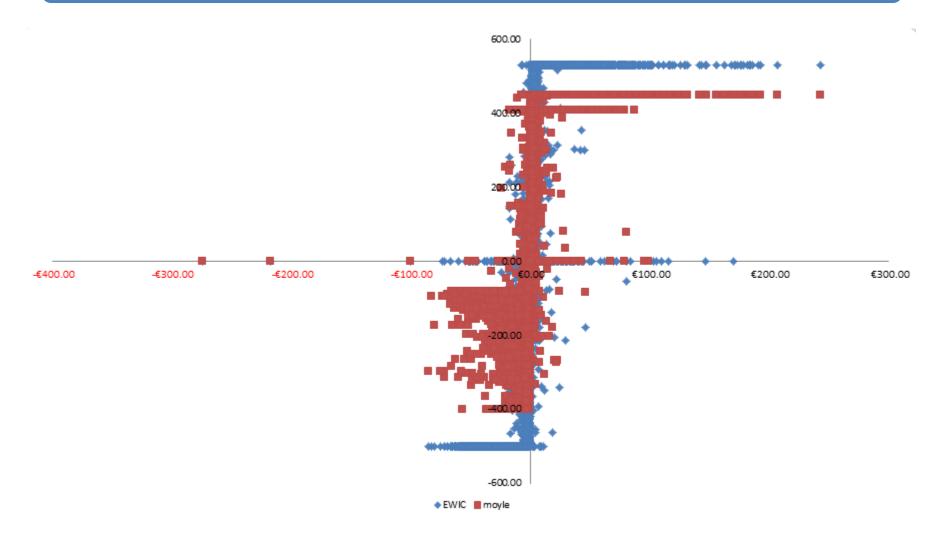
IDA2 Volumes



SEM-GB Price Spreads Jan-Feb 2021



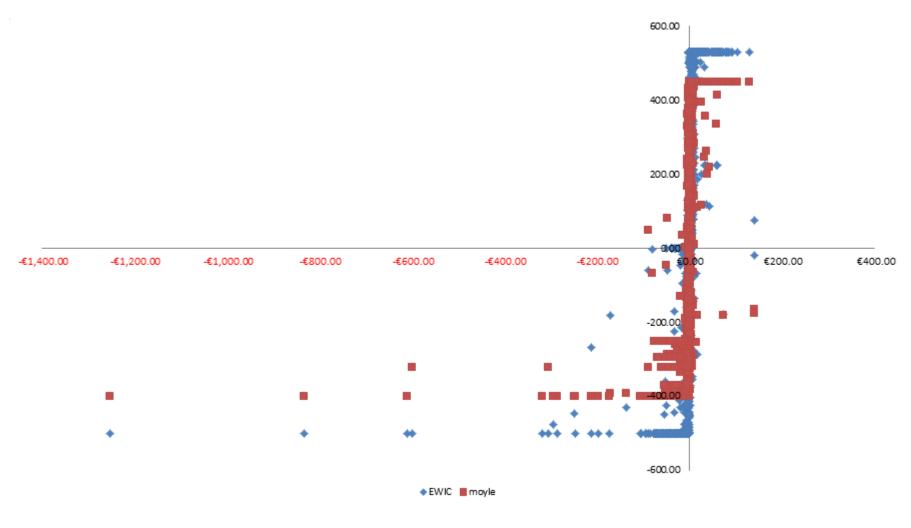
DAM SEM v BETTA Pre-Brexit Oct 2018 - Dec 2020





(DAM Scheduled Flows)

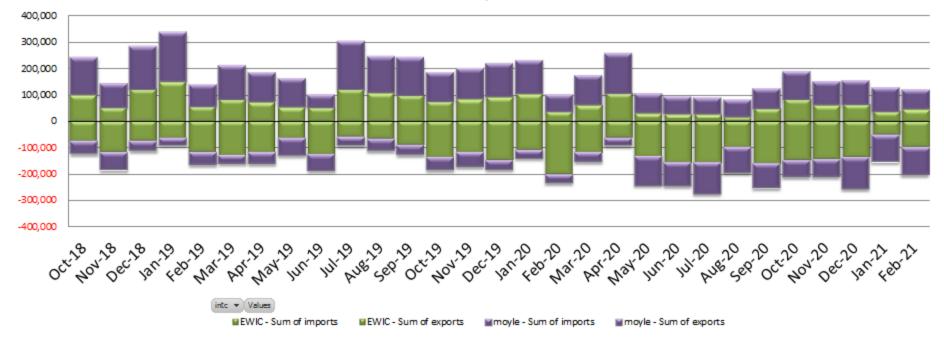
IDA1/2 SEM v BETTA Post-Brexit Jan - Feb 2021





(IDA1/2 Scheduled Flows)

Scheduled Flows Pre/Post Brexit Comparison



Scheduled Flows by Interconnector

*Still too early to determine if Monthly Flow volumes will deviate from pre-Brexit Levels



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	Upgradable	Q2 2021
V3.6	 Finalization of scoping in progress 			Q4 2021



ETS Maintenance Windows

Date & time	Impact	Reason	Communication
13/04/2021	ETS not accessible	Monthly Maintenance	ETS chat message (1 hour before the maintenance) + OMM message (email sent a week in advance and on the same morning)
11/05/2021	ETS not accessible	Monthly Maintenance	ETS chat message (1 hour before the maintenance) + 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
V6.1`2	Release notes / Impact to be sent.	No information yet	Q4 2021



M7 Maintenance Windows

Date & time	Impact	Reason	Communication
09/03/2021	Maintenance Cancelled	No updates from DBAG, ECC or EPEX IT side	M7 chat message (1 hour before the maintainance) + OMM message (email sent a week in advance and on the same morning)
13/04/2021	Maintenance	ТВС	M7 chat message (1 hour before the maintenance) + 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:

• Date TBC

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



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Materiality Review

Progress to Date

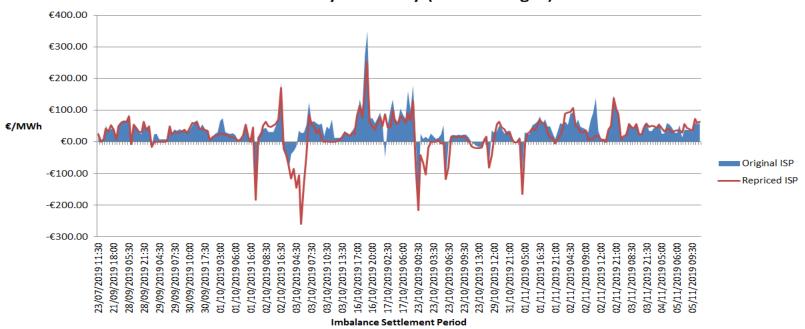
Summary Changes	To be Completed	Completion Status
Total Days To be Repriced	100	19
Total Imbalance Settlement Periods	1500	669
Total 5 Minute Prices	9000	4,014
Material Periods to Date	NA	35%

Price Change Summary (to date)

Summary Changes	Imbalance Settlement Price (€)
Average Price Change	-€ 16.07
Max Price Increase	€ 135.71
Max Price Decrease	-€ 286.57
Average Repriced ISP	€ 23.01
Average Original ISP	€ 39.08



Materiality Overview



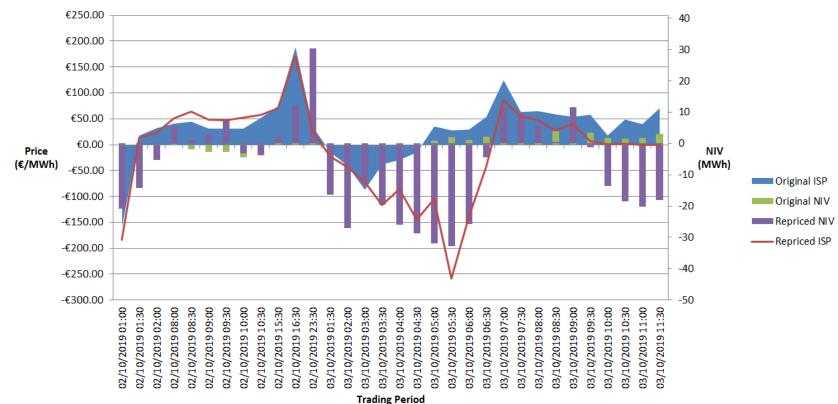
Materiality Summary (Price Changes)

Predominant Drivers of Price Changes:

- Resolution of QBOA related defects;
- Changes in Wind DIs post real-time processing;
- Erroneous QBOA calculations during the min on time of a unit (6104)



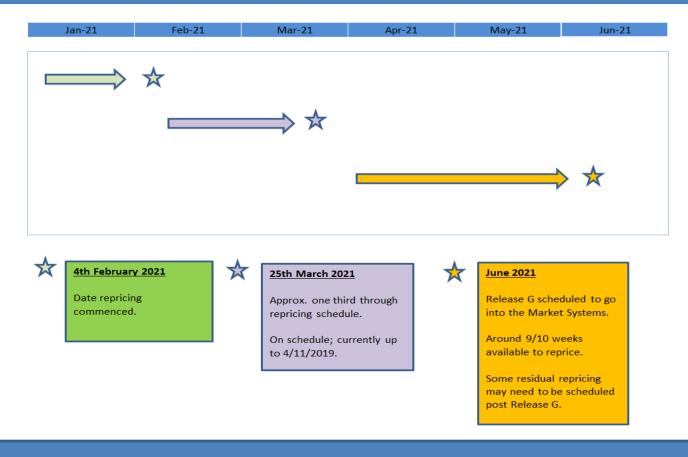
Impact of Wind Changes



Wind Data Feed Error - 2nd/3rd Oct 2019



Next Steps



Further pricing publication dates will be added to the calendar on an ad hoc basis; the volume of material periods will determine what dates we group for publication.



Incorrect Application of Two Constraints

• An error has been found in the application of two constraints within the market systems:

□ S_MWMIN_STH_MW_N □ S_MWMIN_CRK_MW_N

- Constraints should result in a SO FLAG of '0' within Imbalance Pricing, when they bind in RTD.
- A fix has been applied within the market systems as of 24th March 2021; and will now apply correctly moving forward.
- Analysis on the periods impacted is still ongoing at this time.



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Impact of Brexit (VAT Update)

- United Kingdom left the European Union as of 1st January 2021
- A new Trade Agreement between United Kingdom and the European Union has come into effect
- Detailed exercise completed by SEMO on changes required to the Market Systems post 1st January 2021
- Changes to the treatment of VAT Region on Goods and Services have been identified:
 - VAT on Goods (applies to Settlement Documents)
 - EU VAT rules will be applied to Participant companies where their place of establishment (PoE) for VAT purposes is in Northern Ireland.
 - Non-EU VAT rules will be applied to Participant companies where their PoE for VAT purposes is in England / Scotland / Wales.
 - VAT on Services (applies to Market Operator Charges)
 - Where a market operator invoice is issued by SEMO NI, UK VAT rules will be applied (i.e. UK service VAT will be charged on all market operator invoices) to all Participants registered in Northern Ireland / England / Scotland / Wales. NI along with the rest of the UK will have a VAT region of Non-EU.
 - Where a market operator invoice is issued by SEMO ROI, Non-EU VAT rules will apply to Northern Ireland, England, Scotland and Wales.

	Goods - Settlement Documents			
	Place of establishment	VAT Region (post Brexit)	VAT Region (pre Brexit)	
	NI	EU	EU	
	England / Scotland / Wales	Non-EU	EU	
	Services - Market Operator Invoices			
EIRGRID SEMO SONI	Issued by	Place of establishment	VAT Region (post Brexit)	VAT Region (pre Brexit)
	SEMO NI	NI / England / Scotland / Wales	Non-EU	EU
	SEMO ROI	NI / England / Scotland / Wales	Non Ell	EU

Impact of Brexit (VAT Update)

- Changes are for statistical purposes only no financial VAT impact as VAT on wholesale electricity is on a reverse charge basis
- These statistical changes impact on SD's split of local, EU and Non EU
- Changes relate to statistical information rather than financial and therefore will not be back dated in resettlement
- Changes being delivered in release H in November 2021 via two change requests (CR-207 CSB, CR-207a Dynamics AX)



Impact of Brexit (VAT Update)

- Changes include current MPI PoE of United Kingdom to be split in two: 1) NI 2) Great Britain
- As NI is treated as EU for goods and non-EU for services the VAT region for NI PT's will be EU in the MPI. This is because the Market System require a one to one relationship between PoE and VAT region
- The codes in the Dynamics AX Finance system VAT tables, updated via CR-207a, will however reflect the necessary items to allow for the VAT to be treated correctly for both goods and services for NI PT's
- Currently reviewing text at end of SD's and MO invoices to see if they require changes
- Currently also reviewing VAT agreements no material changes expected
- SEMO performed a detailed investigation on a work around pre the November 2021 release but concluded the risks with the work around did not out weigh the benefits



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Trading with GB post-Brexit Energy Cross-Border Trading

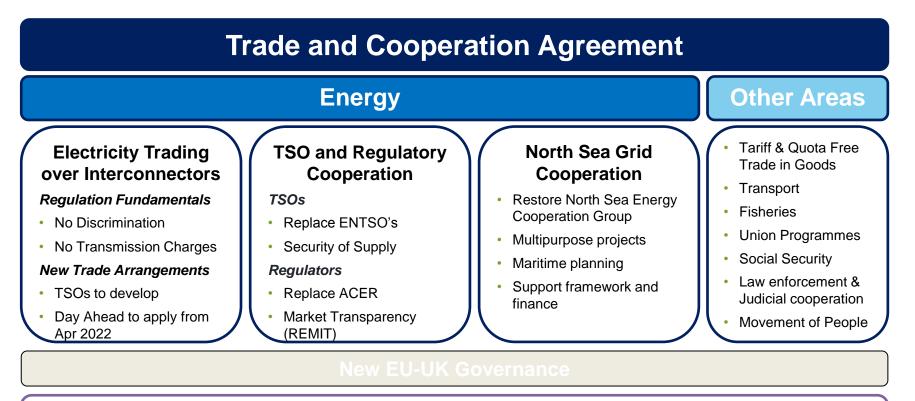


Agenda

- Background
- Technical Solution
- Timeline
- Communication



EU-UK Trade and Cooperation Agreement



• Partnership Council (Ministerial Level)

· Replacements for ACER and ENTSOe/g

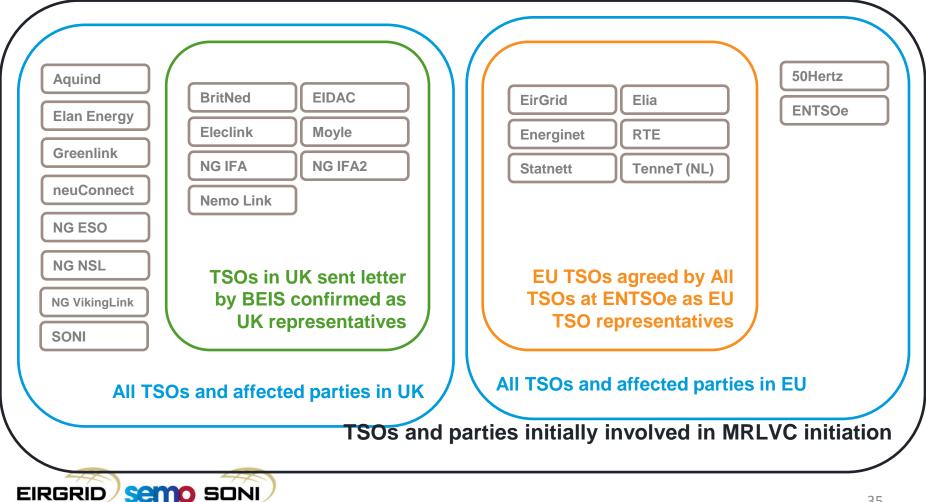
• Specialised Committee for Energy (TBC)



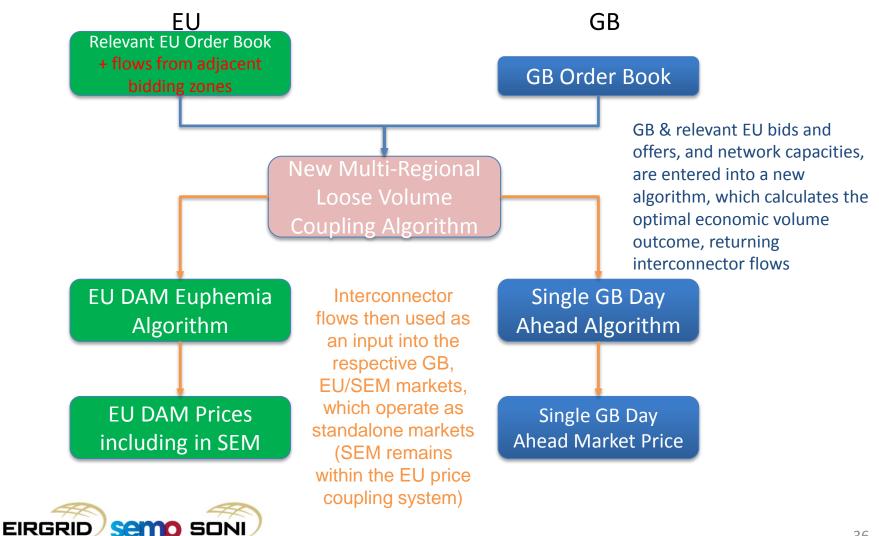
BREXIT and the challenge for SEM



Governance - MRLVC



Loose Volume Coupling Potential Schematic



Technical Solution

- Close alignment with SDAC required
 - Without compromising the stability of SDAC
- Ideally no changes to bids/offers between SDAC and MRLVC
 - Single gate closure to avoid flows against price difference
- Ideally same product set available in SDAC and MRLVC
- The most complex issue may be how to estimate the flows from non adjacent bidding zones
- A good quality MRLVC solution with FTR's as forwards product (SEM only)



New Cross-Border Trading Arrangements

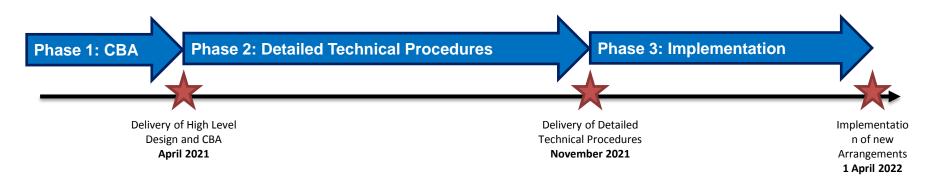
Electricity Trading over Interconnectors

New Trade Arrangements

- TSOs to develop
- Day Ahead to apply from Apr 2022

UK and EU TSOs have been given the responsibility to develop these arrangements:

- Three parts to the work:
 - Develop a High Level Design (from the Annex ENER-4 outline) and Cost Benefit Analysis of the High Level Design
 - 2. Develop Detailed Technical Procedures to implement the High Level Design and seek regulatory opinions
 - 3. Following approval from the Specialised Technical Committee for Energy, to implement the approved mechanism





Communications

1. Information

Updates via MOUG on the initial programme of work

2. Feedback

Submission of CBA & HLD to UK & EC and parallel publication of CBA & HLD

3. Consultation

Formal consultation in accordance with TCA. Mid summer 2021



Forwards

- The objective of the SEM-GB parties working on the TCA is to ensure that the design facilitates optimal trading on our borders
- The existing SEM design using FTR's was efficient pre-Brexit; Channel PTR's under pre Brexit using implicit coupling were also largely used as FTR products; (UIOSI)
- Given the tight timeframes if the LVC design and CBA are positively endorsed we would aim to re-introduce the existing FTR design with local Access Rules
- Alternative options including PTR's will be considered if the LVC solution that emerges and the CBA are inefficient / model poorly against SEM-GB

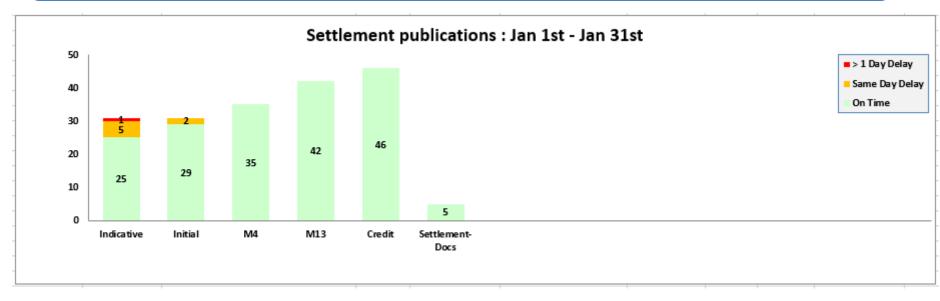


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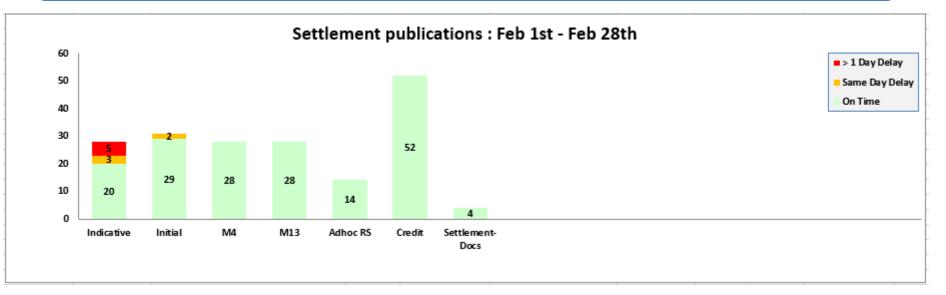
Settlement publications & timelines : Jan 2021



- 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 completed on 29/01/2021
- Settlement Documents: Published on time



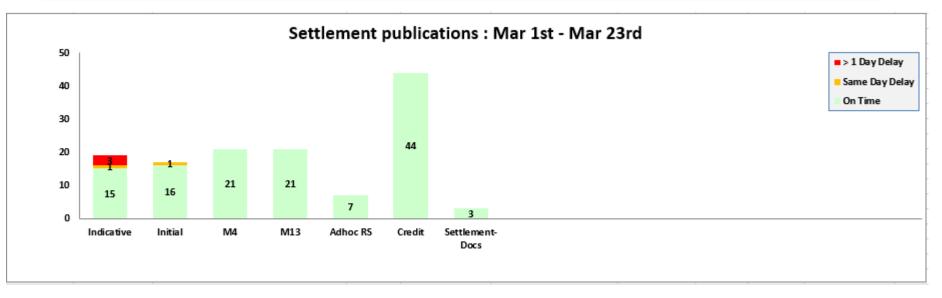
Settlement publications & timelines : Feb 2021



- Indicative publications: Delays were due to SMART metering cutover/ metered data delays (4), impact of an internal system outage (1) and Instruction Profiling/ ACTA delays (2)
- Initial publications: 1 delayed publication (same day delay) due to additional analysis required, 1 delayed publication (same day delay) due to SMART metering cutover / metered data delays
- M4 Resettlement: Published on time
- M13 Resettlement: Published on time
- Adhoc Resettlement: Weeks 39,40 2018 included with Settlement Docs in Feb 2021.
- Settlement Documents: Published on time



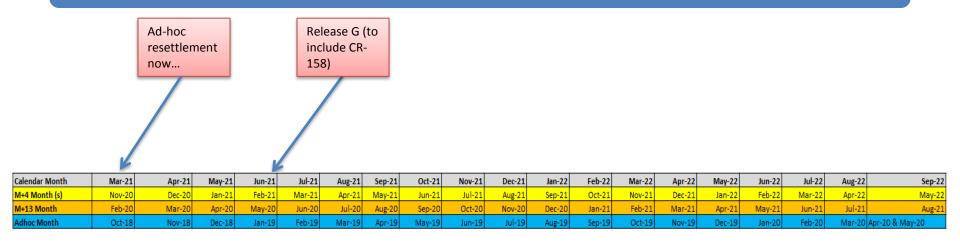
Settlement publications & timelines : Mar to date



- Indicative publications: Delays due to Instruction Profiler issue (KIR ???) (3) 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: Published on time
- Adhoc Resettlement: Weeks 41,42 2018 included with Settlement Docs in Mar 2021.
- Settlement Documents: Published on time



SEMO Adhoc Resettlement timelines – Mar 2021 update



Notes:

- Release G will include CR 158 for re-pricing end of June 2021 timelines
- Adhoc resettlement needs to be run on Oct 2018 May 2020 (inclusive) for Release F: corrections and re-pricing resettlement
- Potential adhoc acceleration will be reviewed over the coming months as adhoc resettlement progresses
- Targeted adhoc resettlement will need to take place for billing periods where formal queries require a future release to be deployed



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System Operator Insights – Winter 2020/21 Review MOUG – March 2021



Winter 2020/21 Review

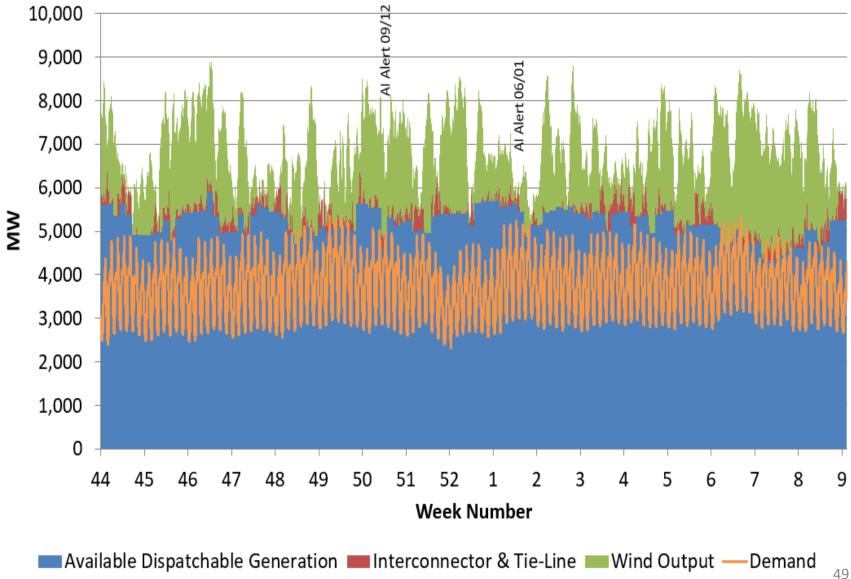
- System Alerts: 2 All Island & 5 NI only
 - Low wind / high exports / high demand
 - GB extremely tight at times driving exports
 - Forced generation outages often with little notice
 - Poor availability of certain generators/DSUs
- TSO actively traded on ICs for Security of Supply reasons
- New records:
 - Ireland Demand: 5357 MW
 - Ireland Wind: 3569 MW
 - All Island Wind: 4437 MW



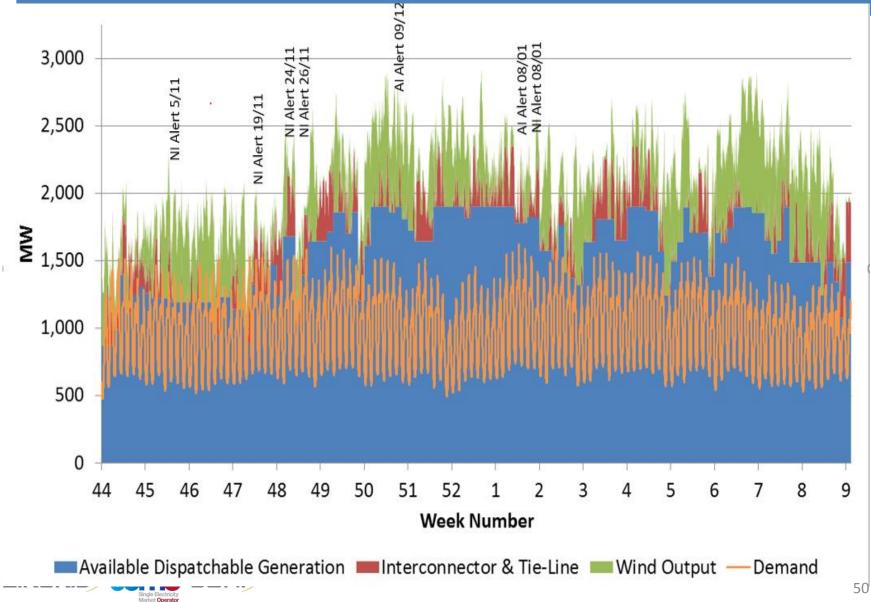
Winter 2020/21 – Ireland

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Market Operator



Winter 2020/21 – Northern Ireland



2021 outlook

- System Margins tight until end June
 - Scheduled / unscheduled outages of large generators in IE & NI
 - Forced outages of HN2 and WG1
- Winter 2021/22 forecast to be very tight
 - Forced outages of HN2 & WG1: 850 MW
 - Demand growth Ireland: 5.5 GW
- Dublin constraints challenging
 - HN2 outage coupled with scheduled outages of DB1, PBA/B & EWIC



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Shaping our Electricity Future 25 March 2021



Focus on Markets

Industry Consultation



Factors driving investment signals and market behaviour



GR

Markets: Pragmatic market design

Three main principles to guide development of the various market components

- Alignment:
 - Enabling alignment between Energy, Capacity, System Services, support schemes and network tariffs and more closely to operational requirements.
- Commitment:
 - Instilling confidence in market participants that the TSOs will continue to provide the necessary operational and investment incentives.

Clarity:

- Being clear on market discipline (i.e., the rules and incentives for desired market outcomes) and focusing on "usability" (i.e., balancing of risk between investors and the consumer)
- Risks need to be visible to be able to be balanced appropriately
 - Constraints
 - Curtailment
 - Penalties/Incentives



Markets: Material consideration

• EU/UK Policy

- Recognise that unlike Networks and Operations much of Market design is driven by EU legislation and also post Brexit UK/EU legal agreements
- Engage with EU/UK Policy makers to ensure SEM market can deliver on Climate ambitions while also achieving pragmatic compliance with relevant policy and regulations- often driven by Central EU design, with less consideration of operational challenges of high SNSP
- Maximise benefits of SEM isolation while also preparing for reconnection to EU platforms and Markets when Celtic is complete
- Systems Design Build and Market Maturity:
 - Ensuring that systems design and build is appropriate for the transition that is required both operationally and from a markets perspective will be critical to ensure that markets can evolve to facilitate the 2030 requirements.
 - Systems required that meet the needs of; Market Participants, Market Operator, TSO and DSO Operations, control centres and consumers
 - It will be important to include stakeholder engagement during design phases in a manner that helps deliver timely system changes. Further industry engagement on 22nd April.



Industry consultation & webinar- 22nd April

- Industry consultation <u>link</u> Please respond by 14th June -12 noon
- Industry webinars on 22nd April 2021.
 - Please register <u>here</u> for Eirgrid webinar
 - Please register <u>here</u> for SONI webinar



Time	EirGrid Webinar	Time	SONI Webinar	
09.00	Welcome and Introduction	14:00	Welcome and Introduction	
09.30	Electricity Markets and Q&A	14:15	Electricity Markets and Q&A	
10.30	Break	15:00	System Operations and Q&A	
10.45	System Operations and Q&A	15:45	Break	
11.30	Break			
11.45	Transmission Networks and Q&A	16:00	Transmission Network and Q&A	
12.45	Final Reflections	16:45	Final Reflections	
13.00	Close	17.00	Close 58	2



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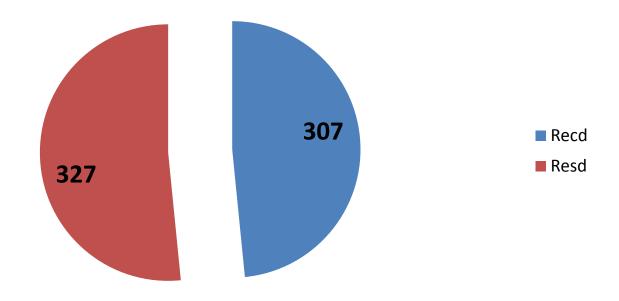
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General Queries Overview 28th Jan – 23rd March 2021





Formal Queries and Disputes

- 25 Formal Queries have been received
- 2 General Disputes were received

All Formal Queries and Disputes are being managed within the timelines allowed in the TSC.



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Close

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

