Market Operator User Group

27th March 2025









Housekeeping Rules

Please keep your video switched off



Raise your hand if you have a question



When asked to unmute your line



Thank you for your cooperation.











Agenda Items	Presenters
Welcome	Claire Kane
Release Program	Vikas Gupta
Settlements	John Tracey
SEMO Trading	Michael Rainey
SEMOpx Trading	Amy Yeung/John Rooney
Ex-Ante Markets	Joaquin Iñiguez de Gante
Special Topic -Interconnection Scheduling in the SEM	Joaquin Iñiguez de Gante
System Operations NI	John O'Higgins
Market Interface	Rosaleen Fanning









Release Program

Release N Schedule and Dispatch Tranche 1

- SDP-01 Operation of Non-Priority Dispatch Renewables (NPDR)
- SDP-02 Energy Storage Power Station (ESPS) integration
- SDP-04 Wind dispatchability improvements
- SAT is complete.
- Deployment to production in the May 2025 Go-Live window for ESPS and in September 2025 for NPDR & WDI.

Release O Schedule and Dispatch Tranche 2

- SDP-03 Fast Frequency Response (FFR)
- SDP-05 Reserve services scheduling and dispatch
- SDP-06 Synchronous condenser scheduling and dispatch
- Design in progress for SDP03, SDP05 and SDP06.
- Forecast go-live- December 2025







Release Program

SEMO Website update

- Improvements to the Search Functionality
- Introduction of an Historic Data page
- Migration to new Content Management System
- New Look and Feel
- The removal of inaccurate/outdated information
- Updates to the Settlements Calendar
- Go Live successfully done on 10/02/2025

SEMOPX Website update

- Migration to new Content Management System, no change in look and feel
- SEMOPX secure document Portal introduction
- Go Live- successfully done on 05/03/2025.

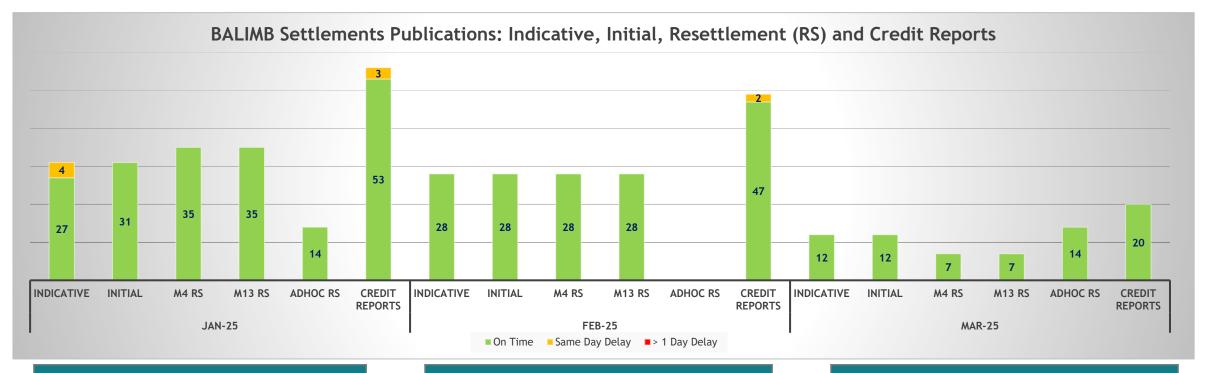








Settlement Publications & Timelines: 1st Jan 2025 - 12th Mar 2025



January 2025

- 195 settlement publications on time
- 2 delayed Indicatives due to delayed receipt of metering data. 1 delayed Indicative due to CSB System Issue. 1 delayed Indicative due to Instruction Profiler Issue.
- 3 delayed Credit reports due to system outage.
- 3 months of CRM Ad hoc also published in Jan 2025. For Oct, Nov, Dec 2024.
- All issues now resolved

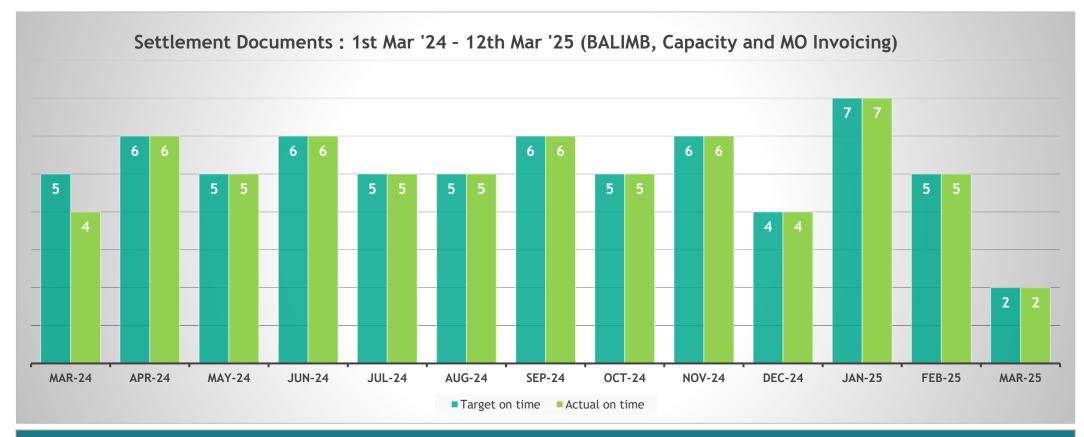
February 2025

- 159 settlement publications on time
- 2 delayed Credit reports due to system outage
- All issues now resolved

March 2025

- 72 settlement publications on time
- All issues now resolved

Settlement Documents publications

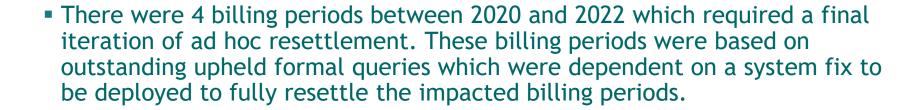


Settlement Document updates:

 67 Settlement Documents (SDs) published on time between 1st Mar 2024 and 12th March 2025 (includes BALIMB, Capacity and MO Invoices)

Ad hoc resettlement: Status update March 2025

- Ad hoc iteration 1 is <u>now fully complete</u>.
- Ad hoc iteration 2 is now fully complete.





- After agreeing with the impacted participants, SEMO completed outside the system settlement in February 2025.
- There are no outstanding formal queries relating to years 2018 2022.

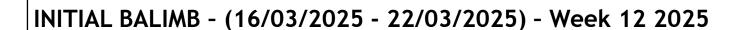




Settlement Documents to issue Friday 28th March 2025

Settlement Calendar (sem-o.com)

Settlement Document for Friday 28th March



M+4 BALIMB - (24/11/2024 - 30/11/2024) - Week 48 2024

M+4 CRM - November 2024

M+13 BALIMB - (25/02/2024-02/03/2024) - Week 09 2024

M-13 CRM - February 2024







Imbalance Pricing

Upcoming Outages

- 15th April 2025 Imbalance Pricing (10:00 to 12:00)
- 17th April 2025 Imbalance Pricing (11:00 to 12:00)
- 22nd April 2025 Imbalance Pricing (13:45 to 15:45)
- 23rd April 2025 Balancing Market Outage (14:30 to 15:30)
 - BMI and Imbalance Pricing











Repricing Update

Repricing	ISPs Impacted	Summary of Issue	Materiality	Publication of
Dates			Assessment	Updated Prices
			Publication Date	
10/09/2024	02:30 to 11:30	Incorrect application of Wind DIs	6th Feb 2025	13th Feb 2025
30/09/2024 - 01/10/2024	18:00 to 00:30	SO Trade price and volume	13th Feb 2025	20th Feb 2025
13/12/2024 - 14/12/2024	23:30 to 08:30	Incorrect application of Wind DIs	26 th March 2025	3 rd April 2025
17/12/2024	15:00 to 15:30	Incorrect calculation of QBOA for Wind Units immediately after Imbalance Price Outage	TBC	TBC*

Balancing Market Repricing Calendar

TBC* - Repricing may require a software fix from the vendor, to be deployed in a future system release.







Limited Communications Failure - Clock Change and Release N

Clock Change

Clock change occurs on **Sunday 30th March 2025**. Market Message issued with Short Day LCF Guide and LCF Tool publications:

LCF Short Day Guide

LCF Short Day Tool

Market Message here

Release N

Participant Guides to be consolidated into one document and LCF Tools will be updated to include Battery Storage units for Release N.









ETS Releases

No upcoming ETS releases

ETS Maintenance Windows

Date & Time	Impact	Reason	Communication
01/04/2025	Maintenance	Ad-hoc Maintenance	OMM message (email sent a week in advance and on the same morning)
08/04/2025	Maintenance	Monthly Maintenance	OMM message (email sent a week in advance and on the same morning)
13/05/2025	Maintenance	Monthly Maintenance	OMM message (email sent a week in advance and on the same morning)

^{*}Regular maintenance window: Between 21:30 and 01:30 GMT/IST every 2nd Tuesday of the Month.

M7 Releases

Version	Content	Impact	Timeline
6.19	TBC	TBC	June 2025 (TBC)

M7 Maintenance Windows

Date & time	Impact	Reason	Communication
08/04/2025	Maintenance	TBC	M7 chat message (1 hour before the maintenance) + OMM message (email sent a week in advance and on the same morning)
13/05/2025	Maintenance	TBC	M7 chat message (1 hour before the maintenance) + OMM message (email sent a week in advance and on the same morning)
10/06/2025	Maintenance	TBC	M7 chat message (1 hour before the maintenance) + OMM message (email sent a week in advance and on the same morning)
08/07/2025	Maintenance	TBC	M7 chat message (1 hour before the maintenance) + OMM message (email sent a week in advance and on the same morning)

^{*}Regular maintenance window: Between 18:30 and 01:30 GMT/IST every 2nd Tuesday of the Month.

SEMOpx Updates

DST23 Short Clock Change (Production)

Reminder: Trading Day 29th March 2025 (for Delivery Date: 30th March 2025)

SEMOpx Website: Member's Area

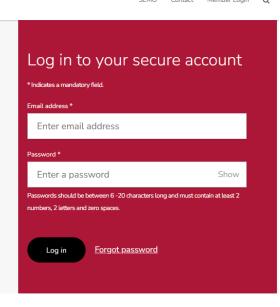
- The Member's Area is now live
- Document Library for System
 Release and technical documents
- Contact <u>info@semopx.com</u>
 to register (only for Registered
 SEMOpx Members and partners)



Welcome to the SEMOpx Members Area

Access to the Members Area is exclusive to SEMOpx Trading Members.

To register, contact info@semopx.com









DAM 30 Minute MTU Updates

SDAC Member Testing

- ECC Spot Settlement and Trade Reports
 - ECC will provide Trade, Payment, Delivery Reports during the first 3 days of SDAC Member Testing (7th April to 9th April 2025)
 - No registration process required
 - Members are encouraged to test their logins to <u>SMSS SIMU environment</u> before testing commences (please <u>contact ECC</u> if password reset is required)
 - Members will need to select the types of reports required within the SMSS SIMU environment
 - There are no changes to the structure of the reports (there will be more data and in 30Min MTU within the reports)







DAM 30 Minute MTU Updates

SDAC Member Testing

- Member Testing Registration
 - Detailed information package to be issued to members in the coming days

- SDAC Member Testing Scenarios
 - Discussion at next Thursday's Participant Call
 - Overview of the instructions for scenarios







DAM 30 Minute MTU Updates

SDAC Member Testing

- Go/No-Go Decision for Member Testing to commence
 - Decision to be made by MCSC on 28th March 2025
 - > If Go decision SDAC Member Testing will commence on 7th April 2025
 - > If No-Go decision Replanning of testing timelines will take place
 - > Communication will be issued to members to advise decision
- Go/No-Go Decision for Go-live
 - Will be in late May 2025
 - Dependent on all testing phases to complete successfully







Multiple Auction Trading System Updates

MATS Project Updates

- DAM 60 SIMU Member Testing
 - To simulate more realistic prices and volumes in the Day-Ahead Market
 - Reminder to members to participate in Wednesday submissions to MATS DAM60
 SIMU Environment for the following Delivery Dates

Upcoming Delivery Dates			
Weds, 2 nd April 2025			
Weds, 9 th April 2025			

 All members are encouraged to make submissions for the DST23 test on Wednesday, 26th March 2025 (Auction Date: 29th March 2025 for Delivery Date: 30th March 2025)

Date of the test	Scenario		SEM IDA1
26/03/2025	DST23	14:00	14:30







Multiple Auction Trading System Updates

MATS Project Updates

- DAM 30 SIMU Environment Opening
 - Will be available by 4th April 2025
 - User configuration and logins will be replicated from MATS SIMU1
 - Auctions will be executed on a daily basis (Monday Friday)
 - No auctions will run on weekends, but the environment remains open
 - Full communication available in the Member's Area
- MATS Go-Live Date (TBC)
 - Go-live window: from mid-May to DAM30 Min MTU go-live (currently planned for 11th June 2025)
 - Highlighted SEMOpx preference to go-live in the first half of window to maximise the time between the 2 go-lives
 - Go-live date will be firmed up after the start of SDAC Joint Member Testing







Multiple Auction Trading System Updates

MATS Project Updates

- MATS GoTo Session #4 on 24th March 2025
 - Presentation and Supporting Documents available on SEMOpx Members' Area
 - Monthly sessions until go-live
- Updated Functional and API Packages and Post Trading Sample Files
 - Published in <u>SEMOpx Members</u>' Area and issued to members
- API Conformance Testing
 - Can commence when member is ready
 - Contact: <u>mats-support-svpx@epexspot.com</u>
- Member Readiness Forms
 - To be filled out/updated by members self-assessed checklist of what is ready





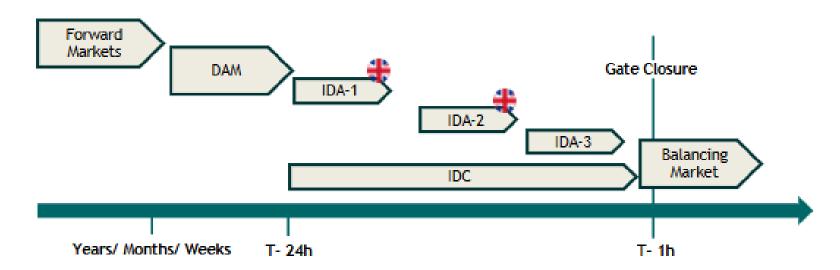


Current Position of the SEM

The SEM has been isolated from the European Energy Markets as a result of having no direct interconnection with the EU following Brexit in 2021

Current Market Arrangements





- ➤ ATC/NTC Capacity Submission
- ≥ 5 Markets available
- ▶2 Coupled markets with GB
- ➤ Single NEMO SEMOpx



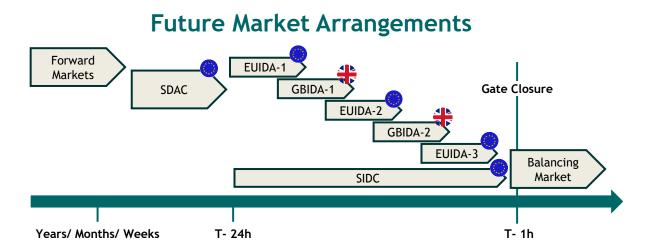




Future Position of the SEM

The implementation of the Celtic Interconnector in 2026, will physically reintegrate the SEM with the European Energy Markets. Market structure revisions are required to unlock cross border trading opportunities.







- ➤ Full integration to Core CCR
- >7 Markets available
- ➤ 2 Coupled markets with GB, 5 coupled markets with Europe
- ➤ Multi NEMO arrangements





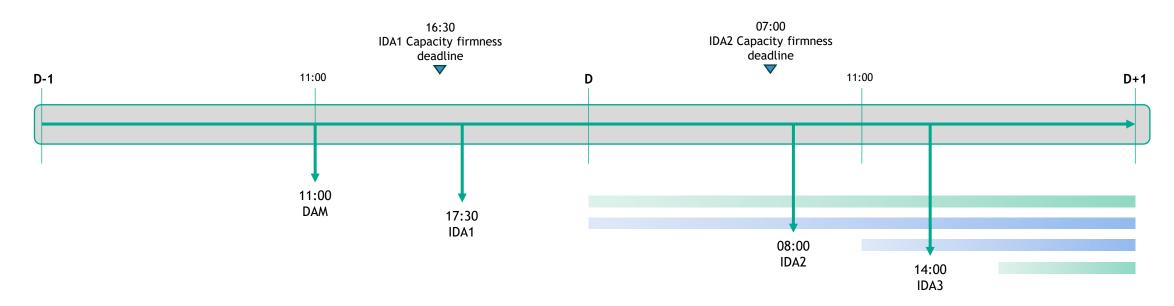


Current Trading Day

The SEMs trading day consists of ExAnte, IntraDay and Local markets, with the 2 SEM-GB IntraDay auctions coupled. It is noted IDC market is operated continuously throughout the day.

*Timings shown in GMT

Capacity Submission



Auction Gate Closure Times

Trading Periods

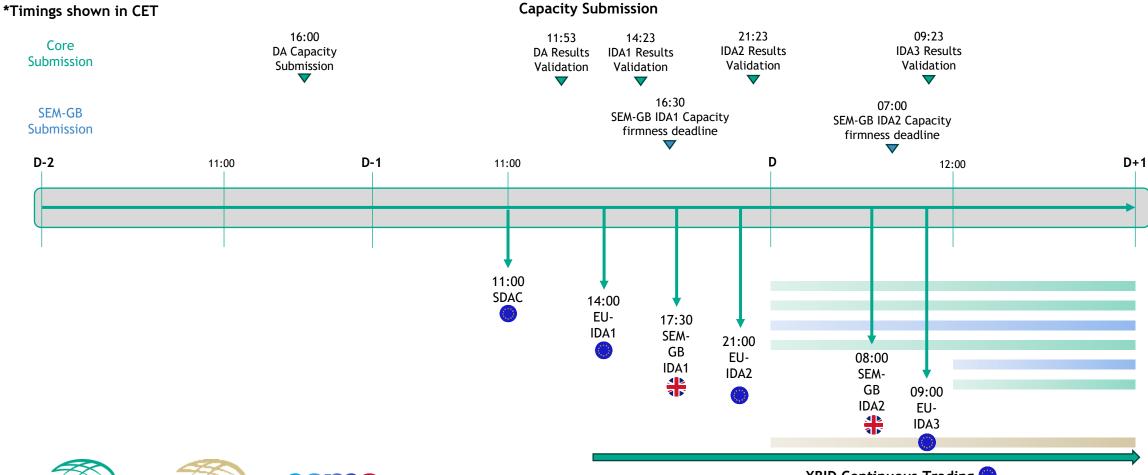






Future Trading Day

The SEMs trading day will integrate with the European ExAnte and IntraDay auctions, along with the existing SEM-GB IntraDay Auctions. It is noted the XBID market is operated continuously throughout the day with cross zonal capacity available.









Engagement Channels for Market Participants

FPM Industry Workshops

The Future Power Market (FPM) workshops are run on a monthly basis. It provides programme status updates along with deep dives for SMP, PHASS, S&D, and more.

FPM Newsletters

The Future Power Market team release monthly newsletters. Click here to view







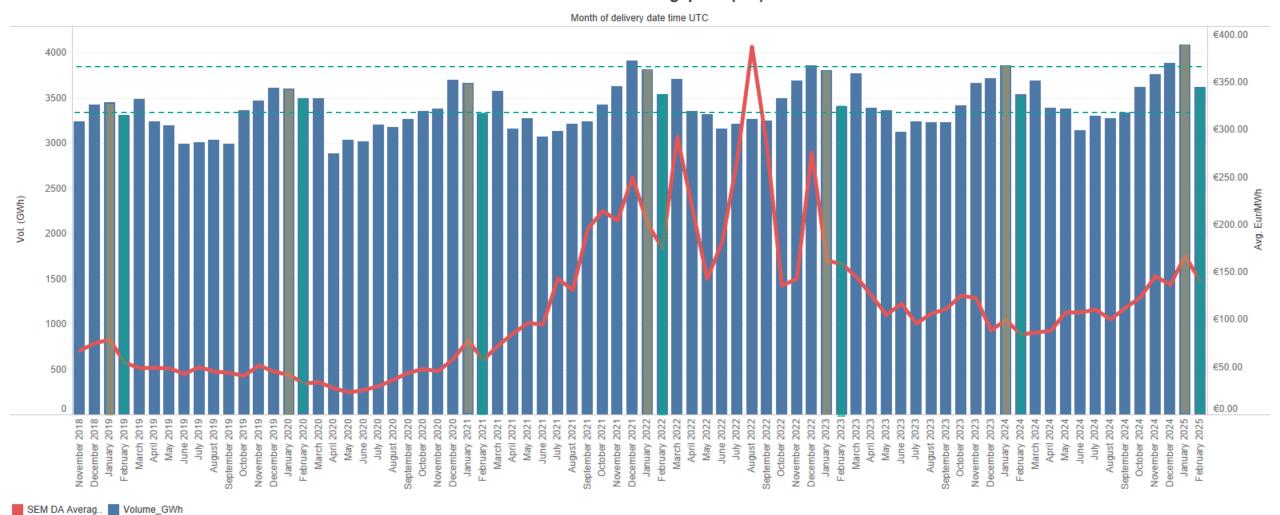






Ex-Ante Markets

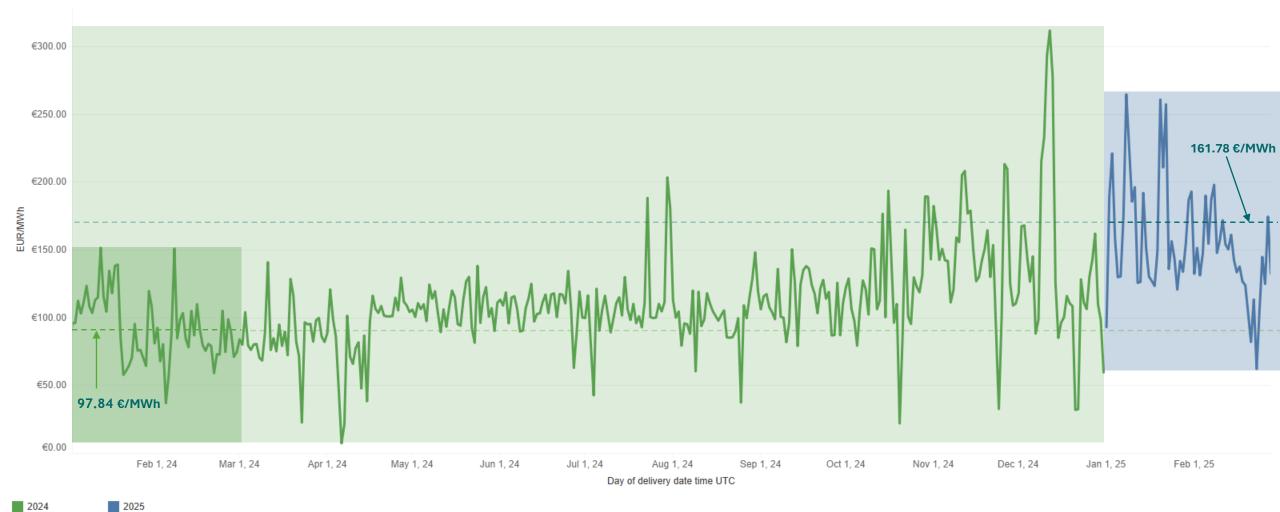
Volumd Trade vs Avg. price (DA)



- Volumes within the DAM showed a continuation of the seasonal trend, however a 6% increase was seen in January attributed to an increase of approximately 2% due to low temperatures.
- 2025 started with an average price of 178 €/MWh but saw a price drop of 18% in February.

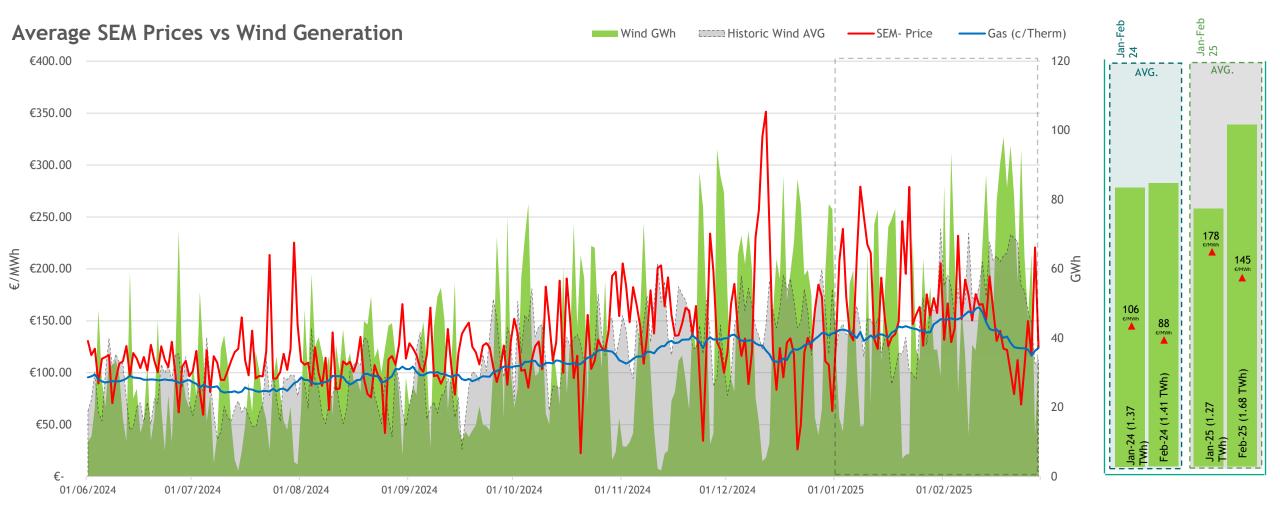
Ex-Ante Markets

Ex-Ante Markets - (DA) Daily Prices



- 2025 showed an increase in prices within the SEM due to the increase in gas prices.
- 2025 showed an average increase of 64% compared to the same period in 2024.
- 2025 recorded its highest average price at 279 €/MWh and its lowest price at 69 €/MWh.

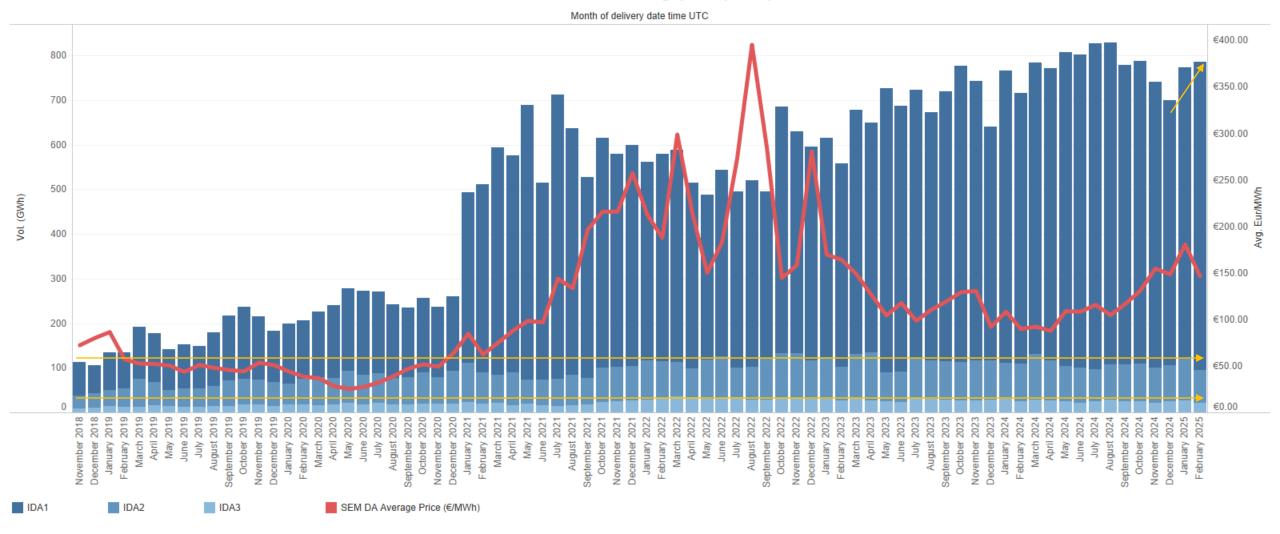
Ex-Ante Markets



- January 2025 showed a 7% decrease in wind generation compared to 2024.
- February, historically, has tended to be the month with the highest availability of the wind resource, and this year 2025 showed a 19% decrease in generation compared to 2025.
- Wind generation in February and the fall in gas prices contributed to the decrease in the average price seen in the SEM.

Ex-Ante Markets

Volumd Trade vs Avg. price (IDA's)

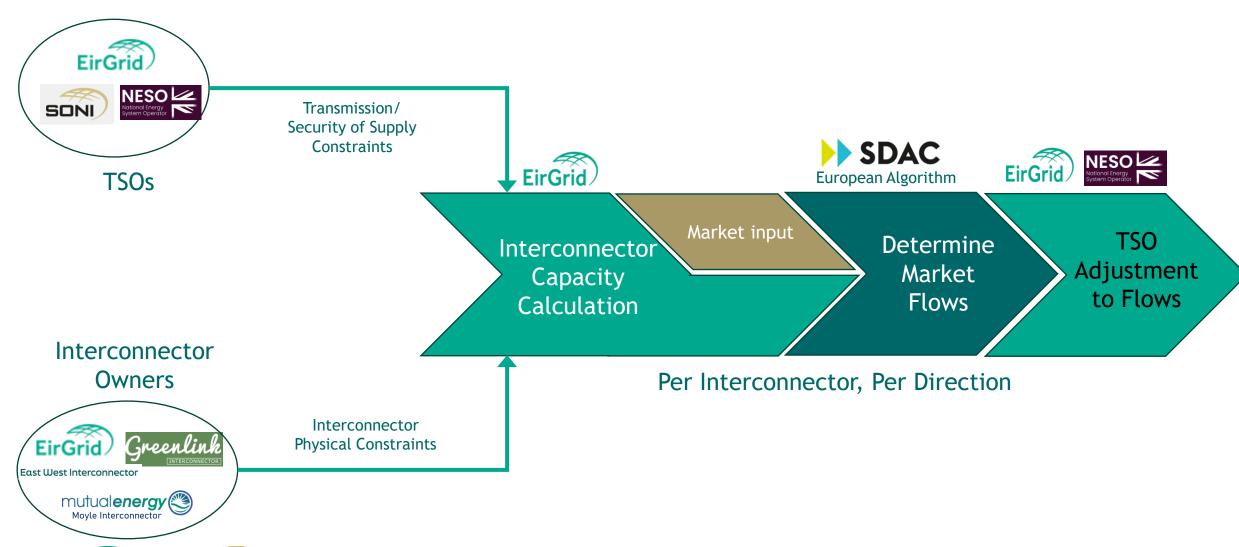


- Volumes within IDA1 continue to be influenced by the interconnector.
- IDA2 and IDA3 have maintained a constant behavior without significant changes
- February was shown to surpass the volumes seen in January 2025, which is highly correlated to the increase in interconnection flows seen by the new Greenlink interconnector.

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Interconnection Scheduling in the SEM Joaquin Iñiguez de Gante

Interconnector Scheduling Process



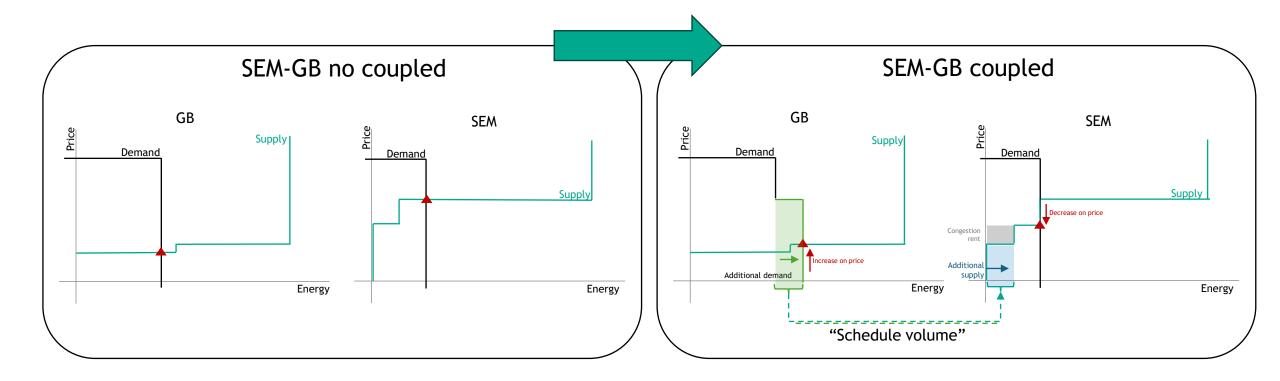






Market

- <u>Market coupling</u> ensures efficient use of interconnection capacity and maximizes the overall social welfare for the interconnected regions.
- The interconnectors also help to dampen price volatility and prices becoming closer between connected regions.
- The available interconnector capacity in SEM is allocated through the SEM-GB intraday auctions (x3).







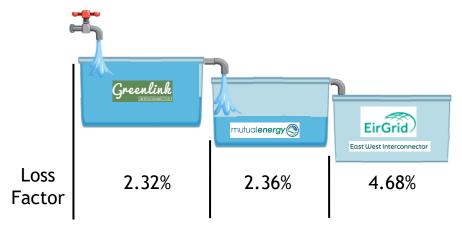


Scheduled volumes

How the volumes are Scheduled? Market inputs -Order books Network inputs -ATC -NTC How the volumes are Scheduled? Volume Match Schedule flows Prices

- Primal problem:
- ➤ Determines the optimal allocation of electricity to minimize production costs while meeting demand and respecting grid constraints.
- Double problem:
- ➤ The dual problem provides insights into the prices associated with the constraints of the primal problem. It helps understand the marginal costs of electricity production and transmission.

Who is scheduled first?



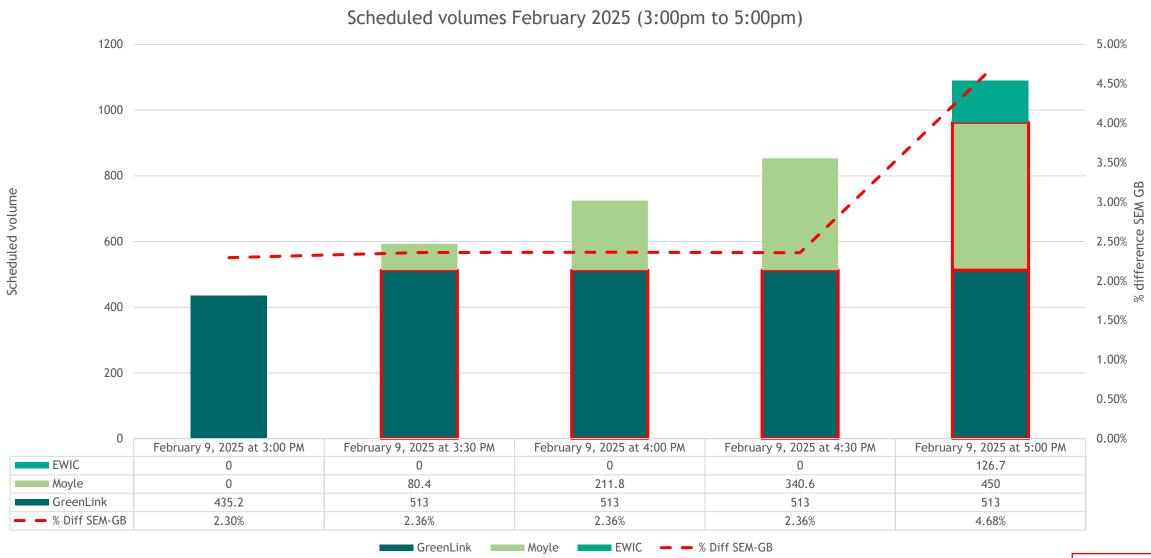
- When electricity is transmitted from one region to another, a portion of energy is lost. This loss is quantified by the loss factor.
- During market coupling the lowest losses interconnectors are utilized first as they are the most efficient to use.





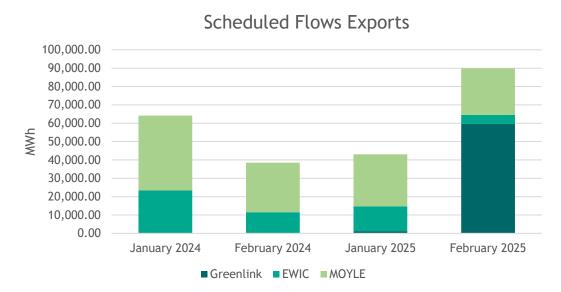


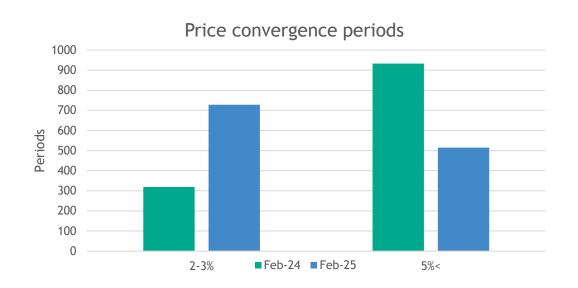
Scheduled examples



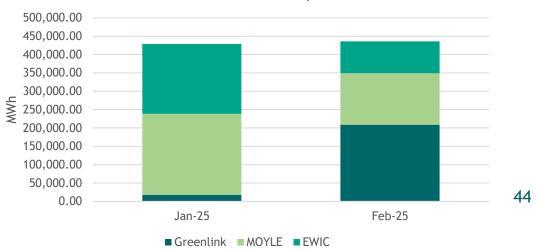
Interconnector overview SEM

- Import volumes within February 2025 increased by 9% compared to Feb 2024.
- Export volumes within February 2025 increased by 133% compared to Feb 2024. This increase can be related to the increase in wind power generation and Greenlink.
- After Greenlink the price convergence within the 2-3% price differential increased by 130% due to the availability of Greenlink and Moyle within this loss range. On the other hand, price convergence in the 5+% price range decreased by 45% which is related to the low volume allocation in EWIC.
- Greenlink in February showed 48% of import volumes, 32% Moyle and 20% EWIC.
- Greenlink in February showed 66% of export volumes, 28% Moyle and 6% EWIC.











Winter 24/25 Overview

• Storm Darragh 07/12/24

- Damaged chimney stack at Ballylumford
- 3 units available in Northern Ireland no redundancy until 4th February when a unit returned to service
- Substantial portion of the NI generation portfolio is run hour limited

Storm Eoyen 24/01/25

- Most severe storm in Northern Ireland since 1998 Wind gusts of 95 mph
- Moyle tripped numerous times due to LV faults at both Scottish and NI sides
- KGT7 tripped at 06:11 due to activity on the transmission system and remained offline for 3 hours
- Control was lost at two Battery sites in NI (Kells and Castlereagh)
- 26 x 110 kV trips on 11 different circuits.
- At the height of the storm 284,000 customers were without electricity, over 30% of Northern Ireland.
- Extremely challenging to produce an indicative schedule due to reduced demand

Two system alerts

- 1) 17/12/24 Unit required a 4-hour maintenance outage, meaning we were in breach of our security standards for this period and operating at a higher level of risk the event passed with no issues
- 2) 30/12/24 Unit tripped (back within 4 hours), again breaching security standards and increasing operational risk levels the event passed with no issues







System Outlook

- To date we have operated with a minimum three set rule, and its purpose was, and still is, to maintain system stability
- Due to the exceptional event at Ballylumford, and the amount of run hour limited generation on the system, SONI have taken measures to ensure, that security of supply will be maintained for:
 - Facilitation of planned outages
 - Chance of forced outages
 - Upcoming winter demand
- SONI have temporarily reduced the min set requirement to two units, with system limitations enacted to manage stability concerns
- These measures are temporary, and not representative of how an enduring two set arrangement would operate
- SONI are undergoing a detailed review to determine the pathway for a manageable and beneficial enduring solution

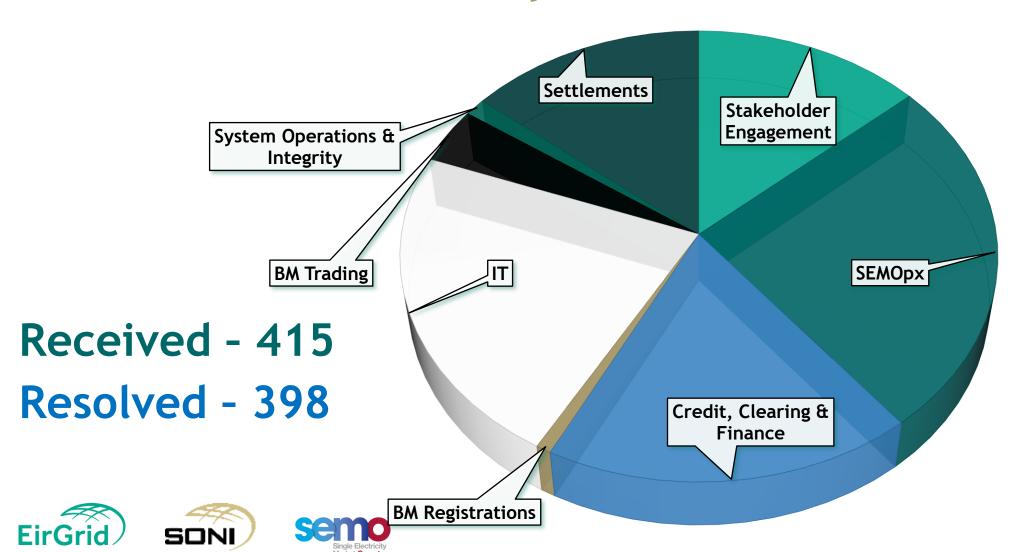








SEMO and SEMOpx General Queries 29th of January - 25th of March 2025



Disputes

 October 2024 - 25th of March 2025: No Disputes raised

Formal Settlement Queries (29th of January - 25th of March 2025)

Received: 40

Closed: 26

(25 were Upheld, 1 was not Upheld)

Open: 14









Dates to Note

- The next Thursday Participant call @09.30am will take place on 03rd of April 2025.
- The Market Operator User Group (MOUG) meetings for 2025 are scheduled on the following dates:
 - o 29th May
 - 11th September
 - o 06th November
 - 11th December







