A landscape photograph featuring snow-capped mountains in the background and a valley in the foreground. Several bright, glowing yellow light trails curve across the valley floor, suggesting a long-exposure shot of a road or a path. The sky is filled with dramatic, golden-hued clouds, indicating a sunrise or sunset.

ESO Operational Transparency Forum

05 October 2022

You have been joined in listen only mode with
your camera turned off

Transparency Forum Changes

From the 2nd of November your current calendar invite will stop working.

If you have downloaded this from the website please delete this and register using the following link

<https://subscribers.nationalgrid.co.uk/h/d/2A778732FDAC77ED>

After 2nd November, everyone registered on this list will receive a direct calendar invitation allowing us to manage event changes more appropriately and keep you updated on event status. Only those registered will be able to join the event but it will remain open to everybody to register, please use business rather than personal emails for registration.

Please send us questions in advance

With the publication of the winter outlook report on 6th October we anticipate that the forum will be extremely busy and we may not have opportunity to answer all of your questions. For this reason, we will be trialling the use of advance questions: <https://forms.office.com/r/k0AEfKnai3>

In order to ensure we effectively respond on any topic please submit questions by 12:00 on Monday 10th for priority, we will endeavour to answer all questions but may still need to take some responses away.

Sli.do will still continue to be used for live Q&A following the weekly slides being presented

Stay up to date on our new webpage: <https://www.nationalgrideso.com/OTF>

Introduction | Sli.do code #OTF

Please visit www.sli.do and enter the code #OTF to ask questions & provide us with post event feedback.

We will answer as many questions as possible at the end of the session. We may have to take away some questions and provide feedback from our expert colleagues in these areas during a future forum. **Ask your questions early in the session to give more opportunity to pull together the right people for responses.**

To tailor our forum and topics further we have asked for names (or organisations, or industry sector) against Sli.do questions. If you do not feel able to ask a question in this way please use the email: box.NC.Customer@nationalgrideso.com

These slides, event recordings and further information about the webinars can be found at the following location:

Stay up to date on our new webpage: <https://www.nationalgrideso.com/OTF>

Regular Topics

Demand review
Costs for last week
Constraints
Questions from last week

Sign posts:

ESO's Markets Forum Recap
Winter Outlook 2022
Demand Flexibility Service consultation
Dispatch Transparency ("Skip Rate") Event
Firm Regulating Reserve webinar
Winter contingency contracts

Deep Dives:

Trading Activity
NTC / ITL Data Publication

Future deep dive/ response topics

Upcoming soon:

Winter Outlook will be covered at the dedicated launch event.

Items we have taken away and will come back to this forum on in the future

REMIT obligations on ESO

Feedback welcomed on our proposed deep dive topics

Markets Forum Recap – 28 September

The forum covered:

- **Short-term priorities:** Approach to Winter 2022
- **Medium-term priorities:** Updates on new projects such as Demand Flexibility and Upward Firm Regulating reserve
- **Long-term priorities:** Net Zero Market Reform
- In-person breakout collaborative sessions

View the slides and recordings here:

[Markets Forum events | National Grid ESO](#)

We have also written one-pagers to provide additional clarity, these can be found here:

[Winter Operations | National Grid ESO](#)

If you were unable to provide any feedback about the event on the day, and would still like to, please do email us at box.market.dev@nationalgrideso.com

Winter Outlook & Seminar – 6 October

We are about to publish our Winter Outlook Report for Winter 2022.

Ofgem are hosting a joint seminar with us (National Grid ESO) and the Gas System Operator (GSO) to present views on security of supply for the winter ahead.

The Winter Outlook reports will be published shortly before the event, 14:00.

Sign up for the seminar here:

<https://www.eventbrite.co.uk/e/winter-outlook-seminar-2022-tickets-429195062987>

Key information

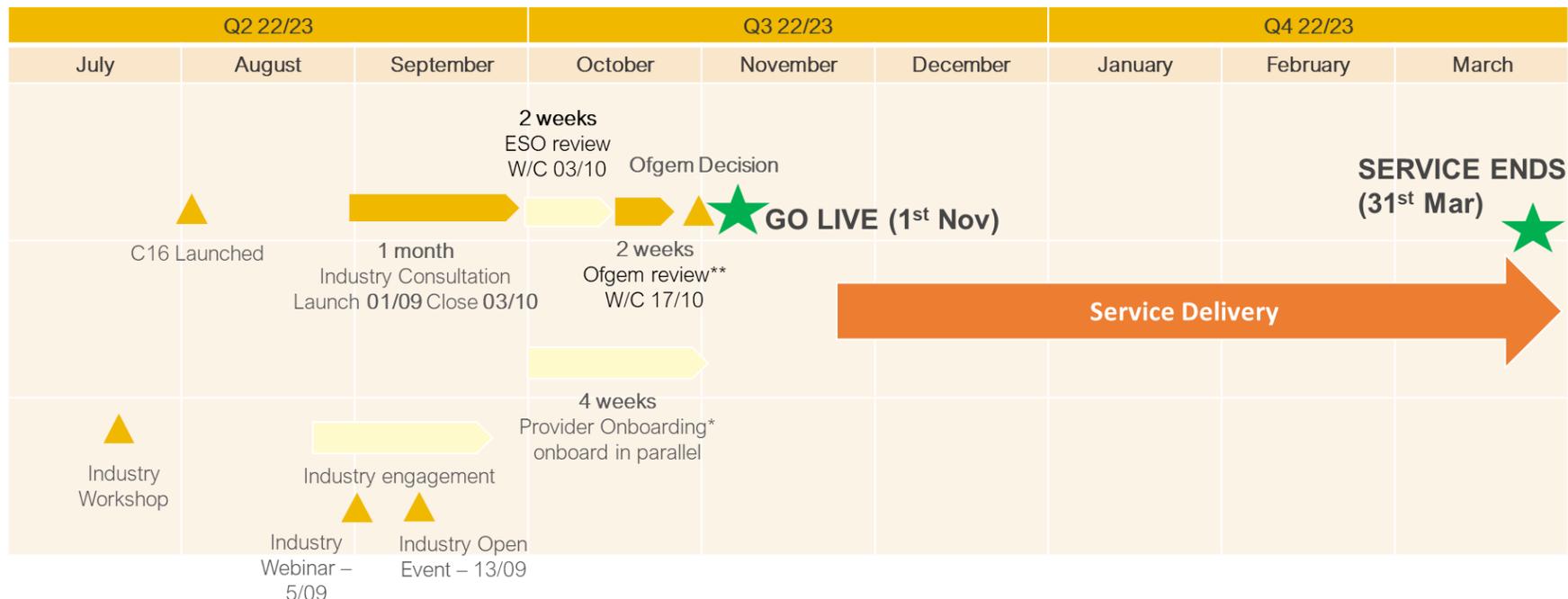
Date: Thursday 6 October

Venue: Online

Time: 14:30 – 16:00

Demand Flexibility Service Update

- On 1 September we launched a consultation on a new Demand Flexibility Service. The full consultation on terms and conditions for the service can be found on our website [EBR Article 18 Demand Flexibility Terms and Conditions | National Grid ESO](#)
- The consultation closed on Monday 3 October** and we had 20 responses from across industry. All feedback will be reviewed before being submitted to Ofgem.
- The consultation will then be reviewed by Ofgem and once approved all details will be published on the National Grid ESO website <https://www.nationalgrideso.com/industry-information/balancing-services/demand-flexibility>



If you would like to speak to the Demand Flexibility Service team or if you would like to be included on our mailing list, please email DemandFlexibility@nationalgrideso.com

Dispatch Transparency ("Skip Rate") Event – Thursday 20 October

We would like to invite you to Wokingham for a transparent discussion about how we dispatch and "Skip Rates".

The event will take place in person at our Wokingham offices on Thursday 20 October. Lunch will be provided and a visit to the control room viewing gallery will be organised.

A Skip refers to an event when a BOA is instructed at a higher cost than an alternative option. The ESO strives to have zero skip rates, unless not preventable. We would like to invite you to discuss our dispatching process (including some examples) as well as the dispatch transparency data available on our portal. This event will also be an opportunity to share your questions regarding skip rates.

We very much look forward to seeing you at this event.

Key information

Date: Thursday 20 October

Venue: National Grid ESO
Wokingham Office

Time: 10:00 – 14:30

Firm Regulating Reserve Webinar – Thursday 20 October

We are hosting a webinar to provide further information on our plans to procure Regulating Reserve in a firm capacity at day ahead.

This follows on from a brief presentation at our Autumn Markets Forum event.

The webinar will take place over teams, please following the link to register below.

An email will be circulated to the Future of Balancing Services distribution list shortly, you can sign up for FoBS by emailing the team at:

box.futureofbalancingservices@nationalgrideso.com

Key information

Date: Thursday 20 October

Venue: Teams

Time: 11:00 – 11:50

Winter Contingency Contracts

Name	Volume	Date
West Burton A	2 x 400MW	1 Oct 2022 – 31 Mar 2023
Drax	2 x 570MW	1 Oct 2022 – 31 Mar 2023
Ratcliffe	1 x 480MW	Nov 2022 – 31 Mar 2023

£340m to £395m subject to the procurement and use of the coal

Cost recovered through BSUoS between 01/10/22 and 31/03/23 with cost spread equally between these days

The units contracted will not be available to the open market and will only be dispatched at the request of ESO

- Dispatch via Balancing Mechanism (BM) or trade with a price of £0/MWh and system flagged.
- Post event, ESO will withdraw BOA and replace through BSAD with price of £99,999/MWh

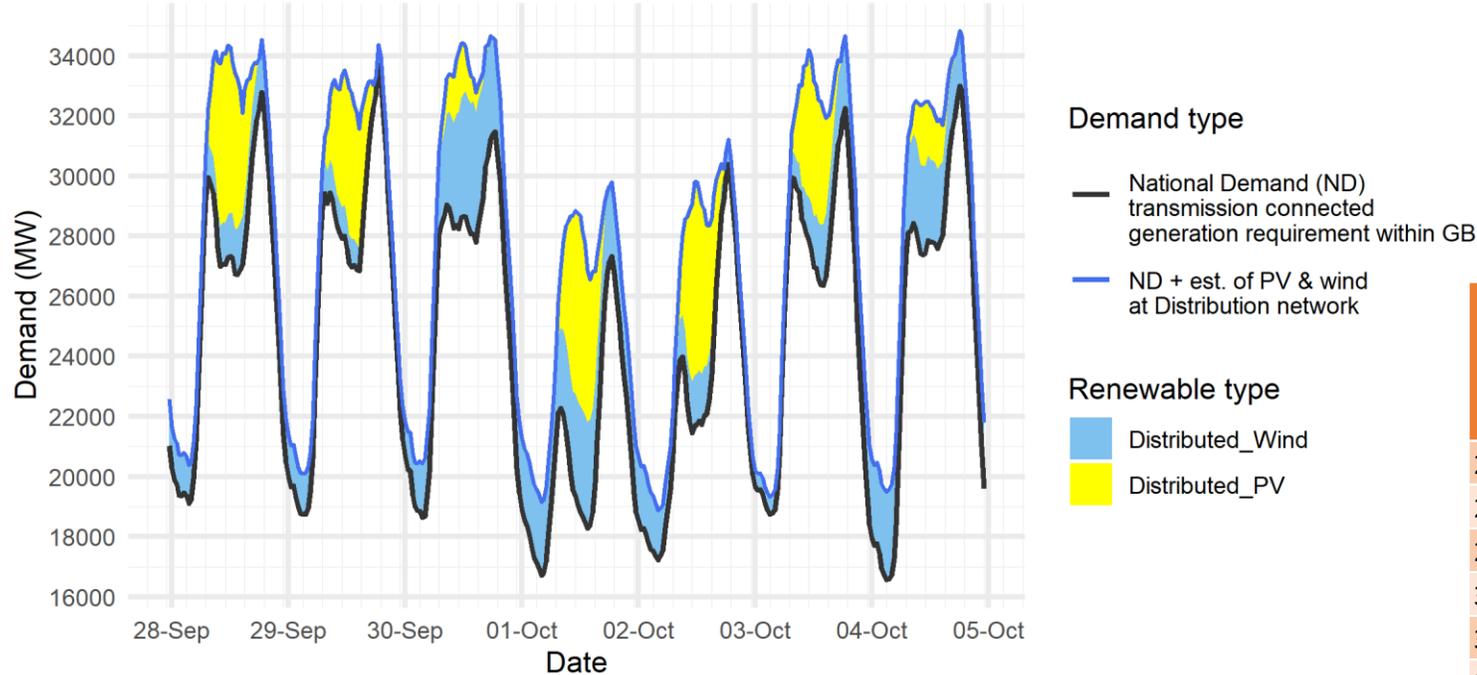
Market will be informed of warming and dispatch instructions through normal channels

[Urgent BSC Modification P447](#): 5WD consultation closing 12 October

[Additional C16 consultation](#): 5WD consultation closing 12 October

Demand | Last week demand out-turn

ESO National Demand outturn 28 September-04 October 2022



Date	Forecasting Point	FORECAST (Wed 28 Sep)		OUTTURN	
		National Demand (GW)	Dist. wind (GW)	National Demand (GW)	Dist. wind (GW)
28 Sep	Evening Peak	33.2	1.8	32.8	1.7
29 Sep	Overnight Min	19.4	1.3	18.7	1.4
29 Sep	Evening Peak	34.4	0.7	33.7	0.7
30 Sep	Overnight Min	19.2	1.5	18.6	1.8
30 Sep	Evening Peak	30.0	3.8	31.5	3.1
01 Oct	Overnight Min	16.5	2.6	16.7	2.4
01 Oct	Evening Peak	28.4	2.9	27.3	2.5
02 Oct	Overnight Min	15.2	2.8	17.2	1.7
02 Oct	Evening Peak	29.5	2.4	30.4	0.8
03 Oct	Overnight Min	17.8	1.4	18.7	0.6
03 Oct	Evening Peak	33.9	1.2	32.3	2.4
04 Oct	Overnight Min	18.7	1.3	16.6	2.9
04 Oct	Evening Peak	33.1	1.7	33.0	1.8

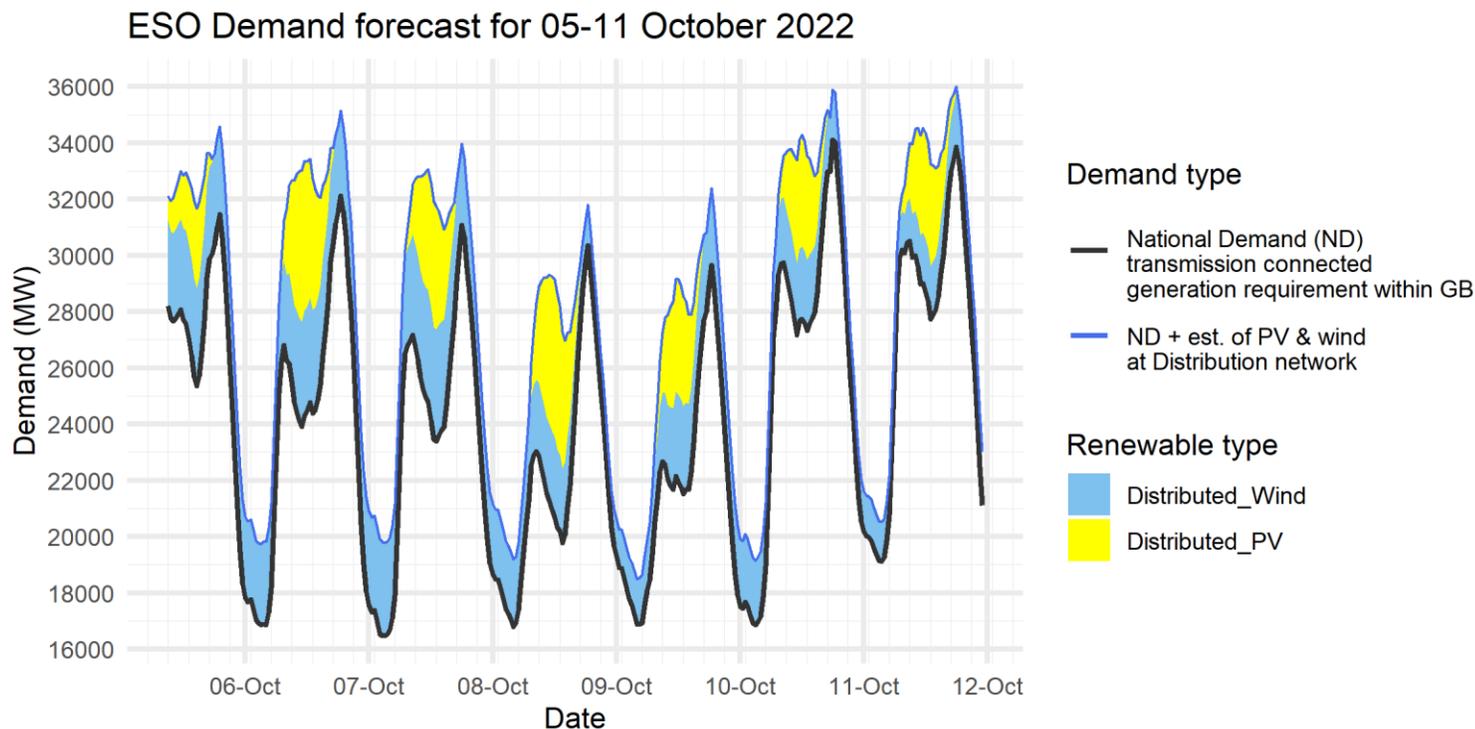
The black line (National Demand ND) is the measure of portion of total GB customer demand that is supplied by the transmission network.

ND values **do not include** export on interconnectors or pumping or station load

Blue line serves as a proxy for total GB customer demand. It includes demand supplied by the distributed wind and solar sources, but it **does not include** demand supplied by non-weather driven sources at the distributed network for which ESO has no real time data.

Historic out-turn data can be found on the [ESO Data Portal](#) in the following data sets: [Historic Demand Data](#) & [Demand Data Update](#)

Demand | Week Ahead



The black line (National Demand ND) is the measure of portion of total GB customer demand that is supplied by the transmission network.

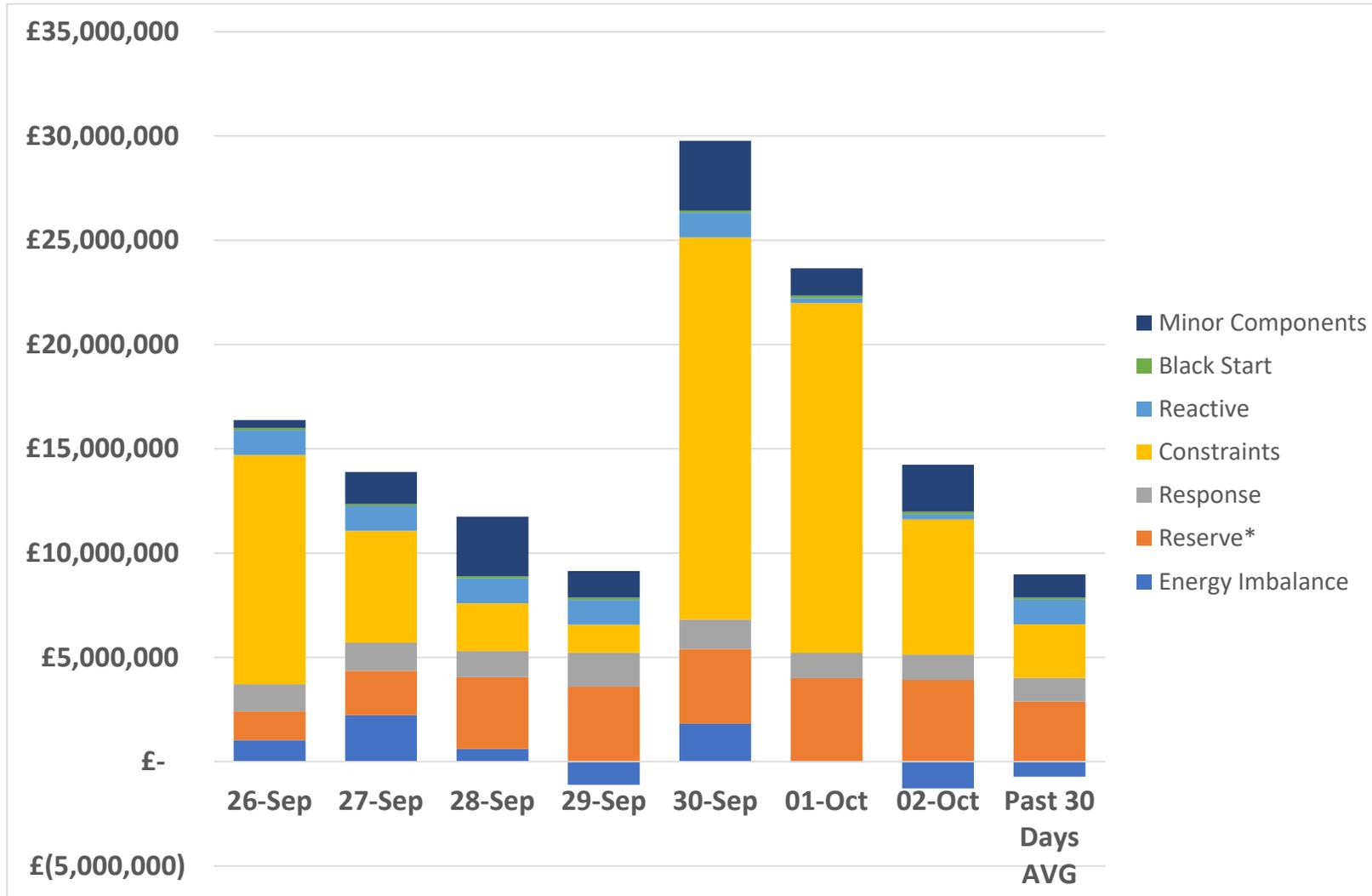
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Historic out-turn data can be found on the [ESO Data Portal](#) in the following data sets: [Historic Demand Data](#) & [Demand Data Update](#)

		FORECAST (Wed 05 Oct)	
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)
05 Oct	Evening Peak	31.0	3.2
06 Oct	Overnight Min	16.9	2.9
06 Oct	Evening Peak	32.1	3.0
07 Oct	Overnight Min	16.5	3.3
07 Oct	Evening Peak	31.1	2.9
08 Oct	Overnight Min	16.8	2.4
08 Oct	Evening Peak	30.4	1.5
09 Oct	Overnight Min	16.9	1.7
09 Oct	Evening Peak	29.7	2.8
10 Oct	Overnight Min	16.9	2.3
10 Oct	Evening Peak	34.1	1.8
11 Oct	Overnight Min	19.1	1.4
11 Oct	Evening Peak	33.9	1.9

ESO Actions | Category costs breakdown for the last week

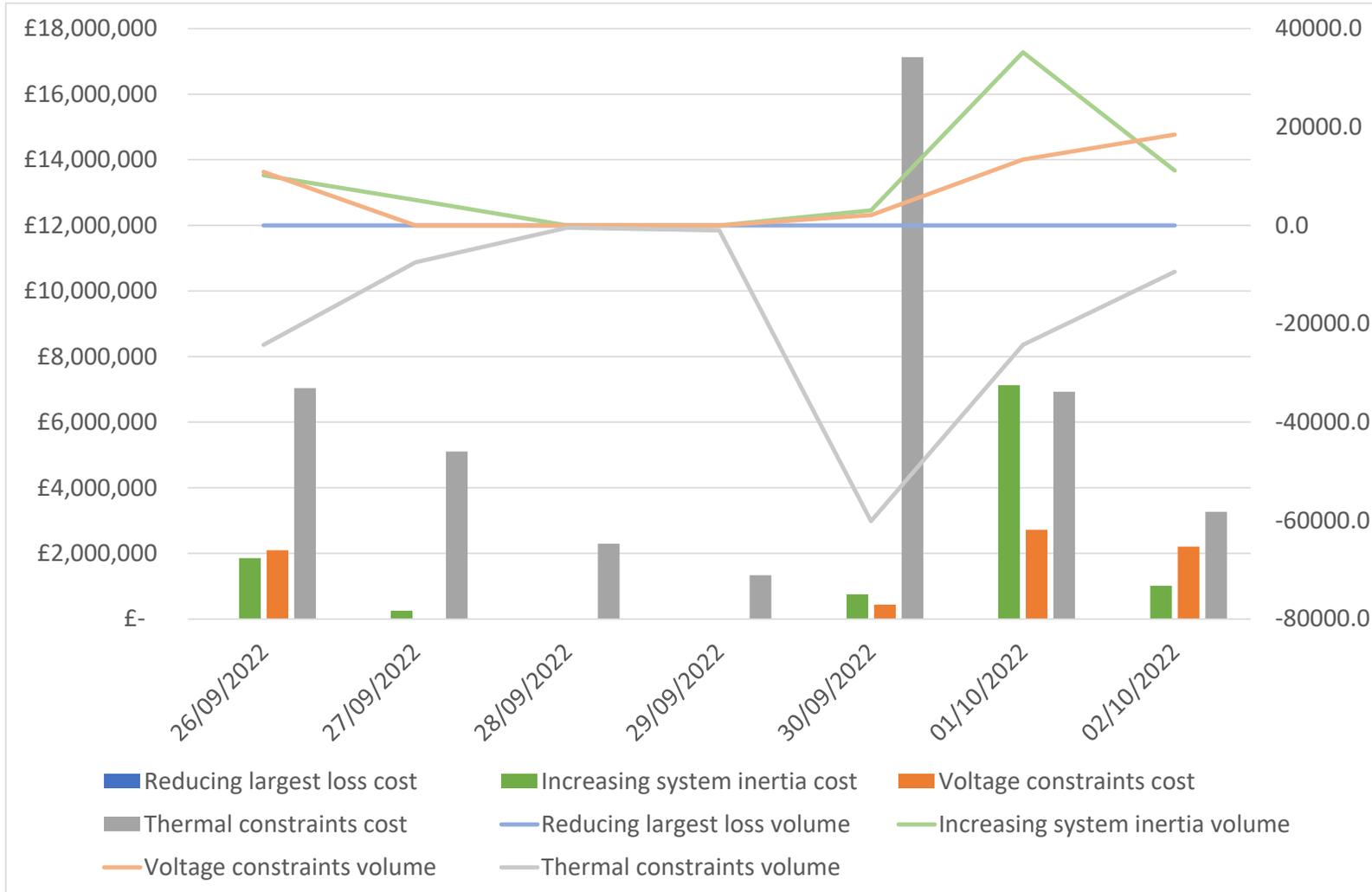


Date	Total (£m)
26/09/2022	16.4
27/09/2022	13.9
28/09/2022	11.7
29/09/2022	8.0
30/09/2022	29.8
01/10/2022	23.6
02/10/2022	13.0
Weekly Total	116.4

Constraints costs (mostly thermal) were relevant on Monday and Tuesday and over the weekend due to high wind output.

Please note that all the categories are presented and explained in the **MBSS**.

ESO Actions | Constraint Cost Breakdown



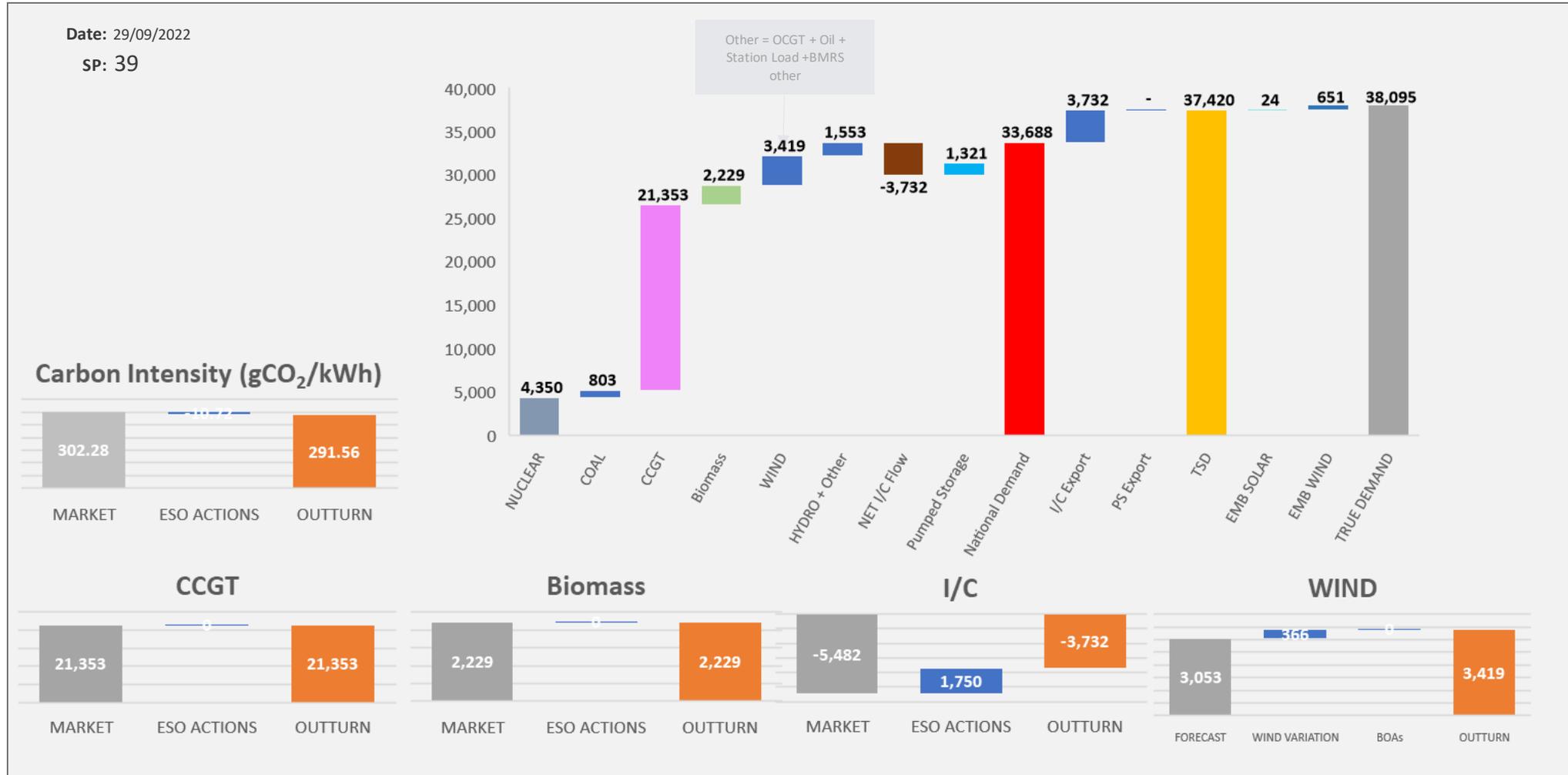
Thermal – network congestion
 Actions required to manage Thermal Constraints throughout the week.

Voltage
 Intervention to manage the voltage levels on Monday and over the weekend.

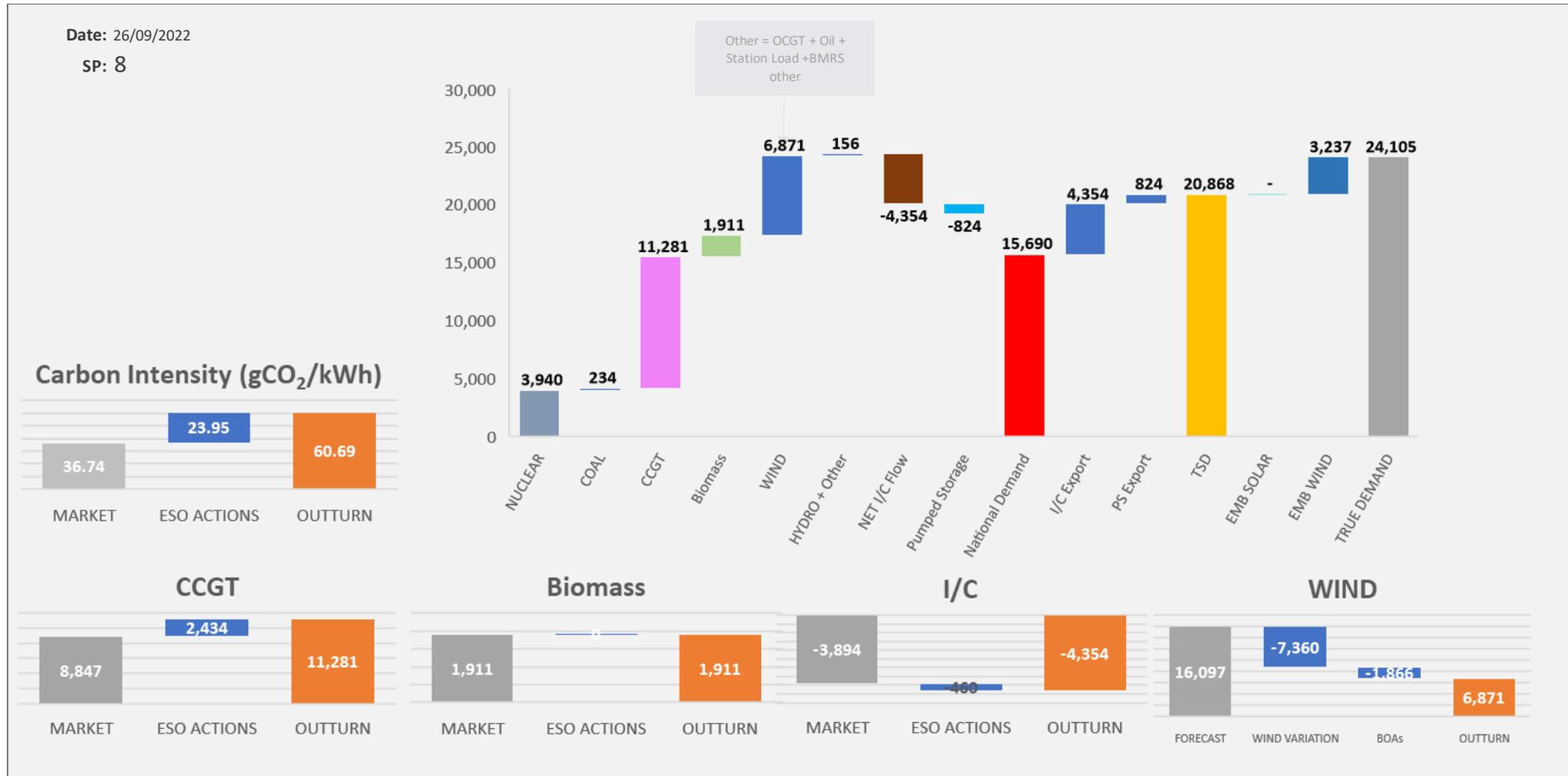
Managing largest loss for RoCoF
 No Intervention required to manage largest loss.

Increasing inertia
 Intervention required to manage Inertia on most days.

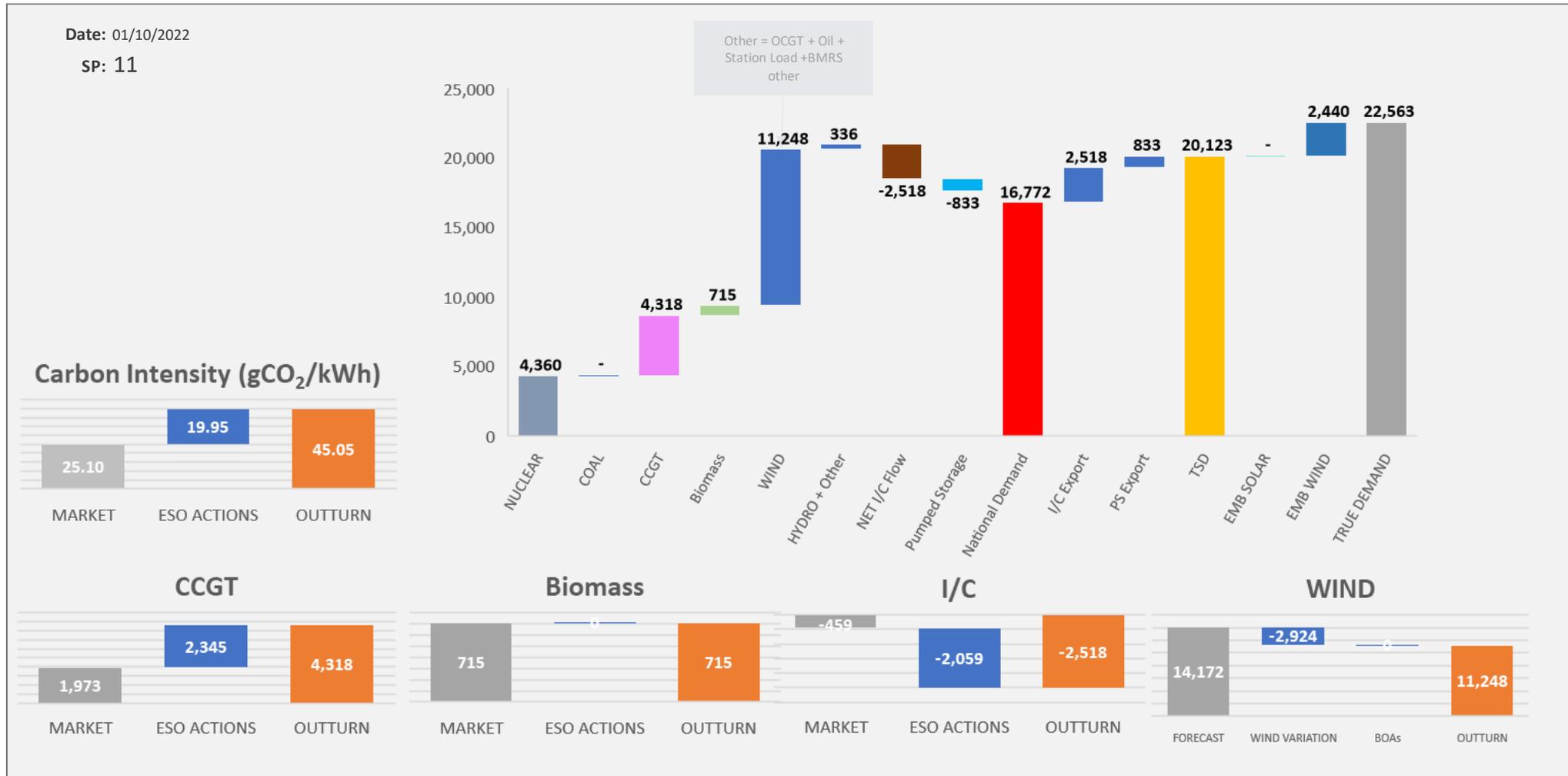
ESO Actions | Thursday 29 September – Peak Demand – SP spend ~£96k



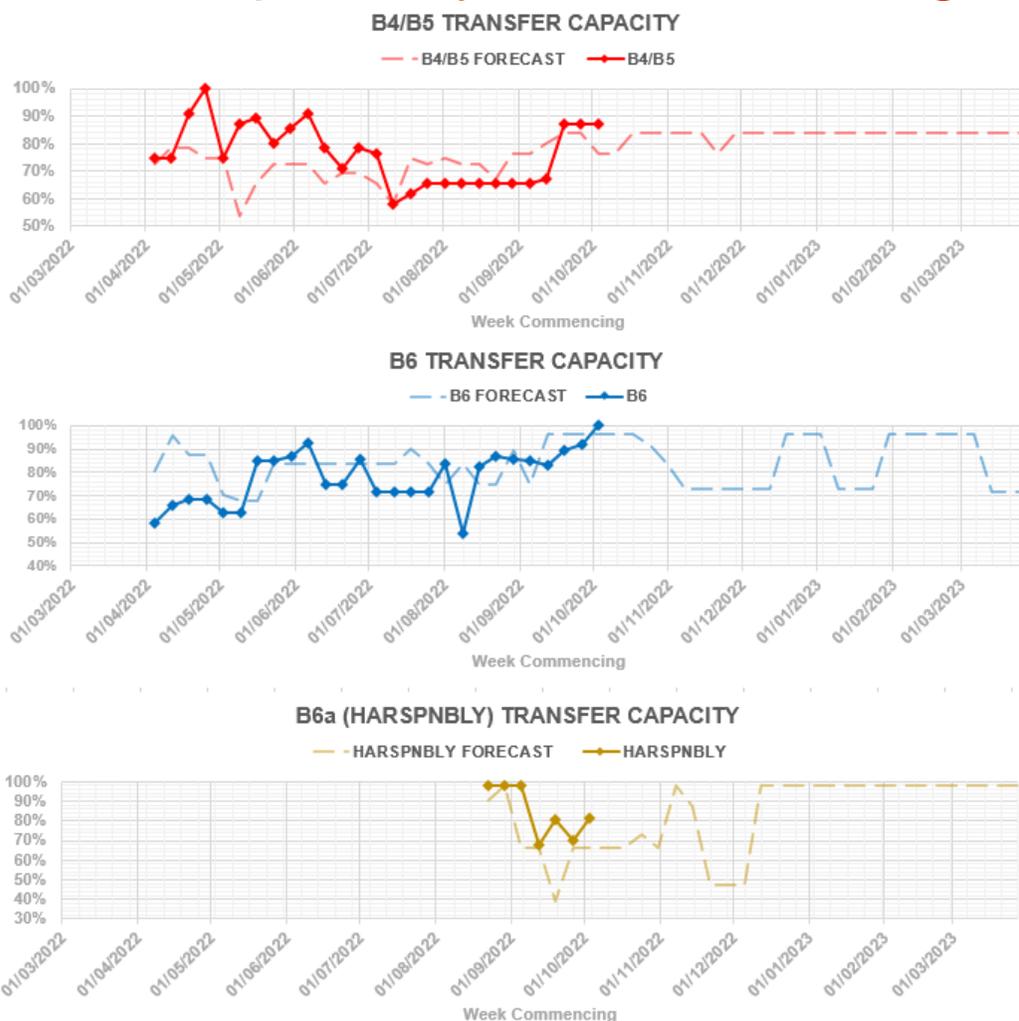
ESO Actions | Monday 26 September – Minimum Demand – SP Spend ~ -£581k



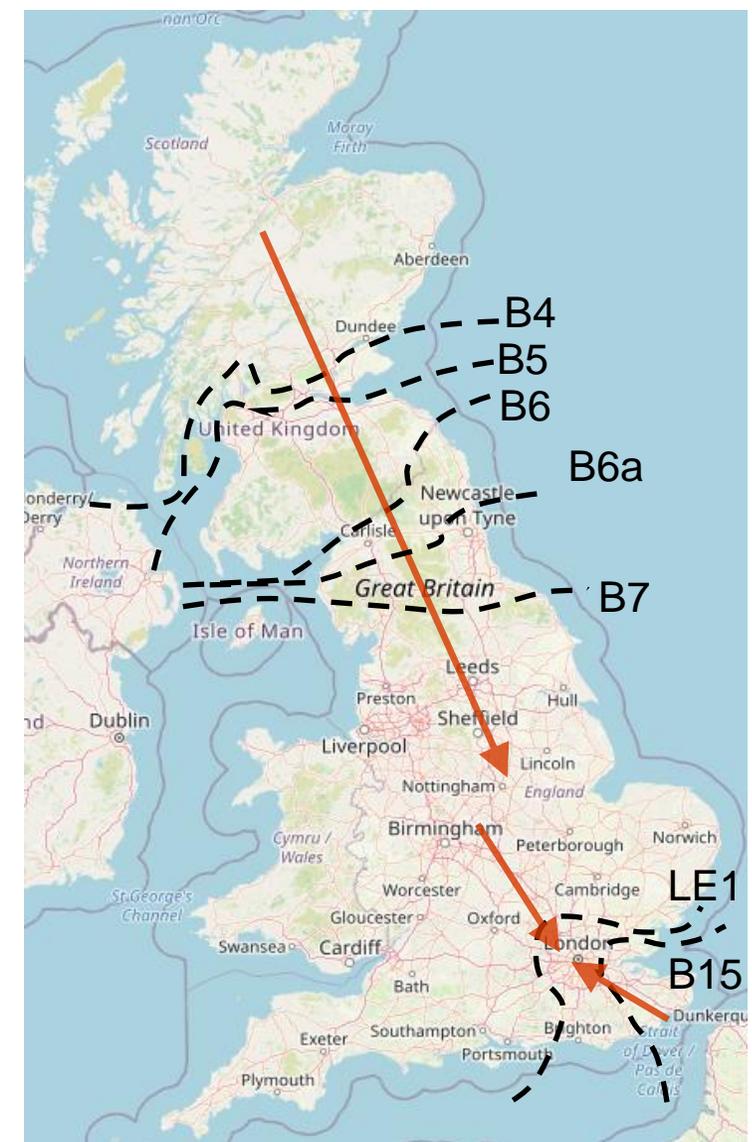
ESO Actions | Saturday 01 October – Highest SP Spend ~£810k



Transparency | Network Congestion

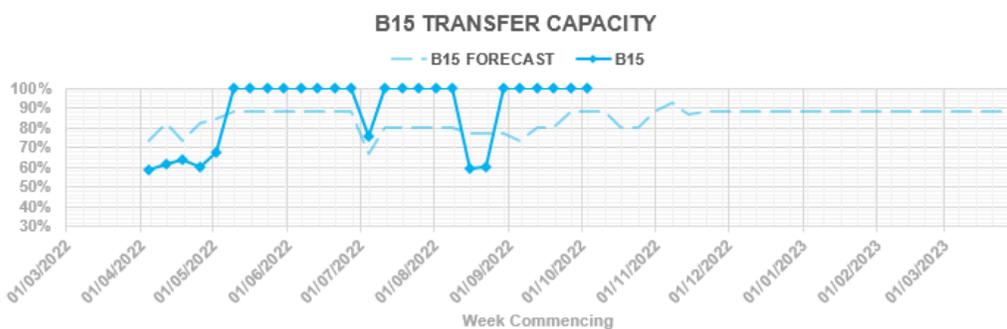
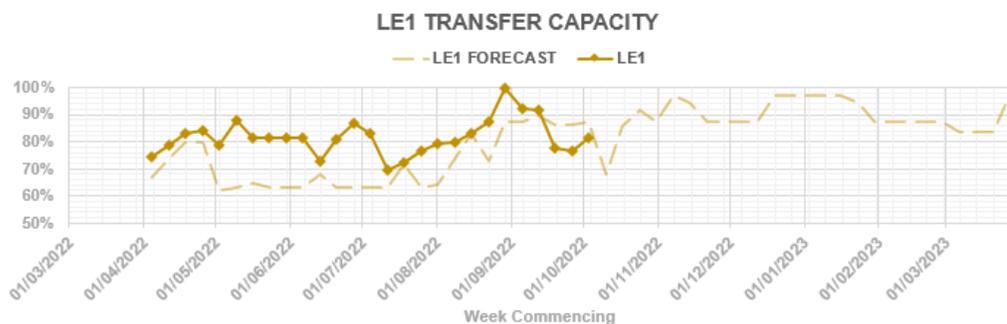
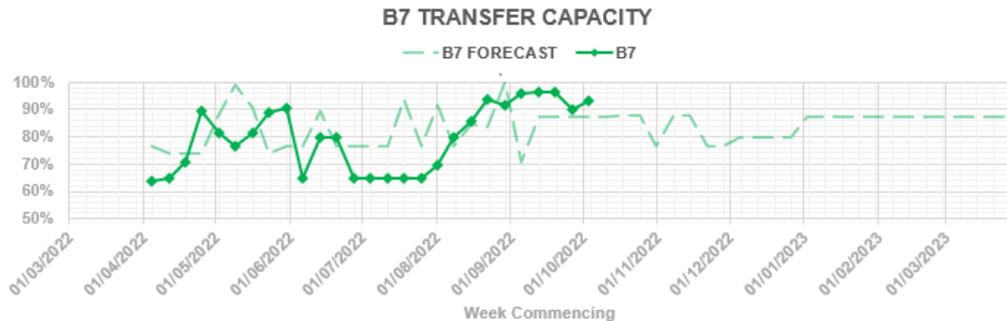


Boundary	Max. Capacity (MW)
B4/B5	2750
B6	5600
B6a	5850
B7	8500
LE1	8250
B15	4500

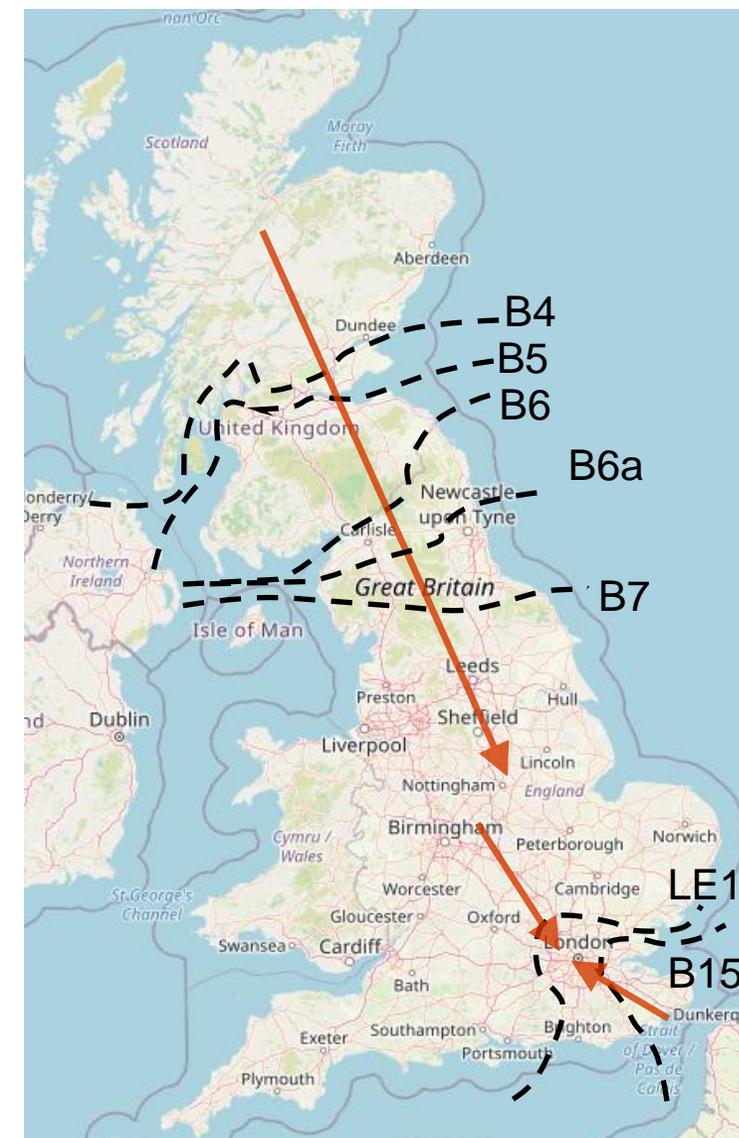


Day ahead flows and limits, and the 24 month constraint limit forecast are published on the ESO Data Portal: <https://data.nationalgrideso.com/data-groups/constraint-management>

Transparency | Network Congestion



Boundary	Max. Capacity (MW)
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Day ahead flows and limits, and the 24 month constraint limit forecast are published on the ESO Data Portal:

<https://data.nationalgrideso.com/data-groups/constraint-management>



Trading Update

Mark Burrige

Why we trade?

- Licence obligation to balance the system economically - benefits the end consumer.
- Additional tool in ESO system balancing portfolio.
- Risk mitigation – helps alleviate BM uncertainty for system planning purposes.
- Gives BMUs more certainty which hopefully results in more favourable prices.
- Avoid emergency actions: emergency assistance, emergency instruction & demand disconnection.

However:

- Further out our requirements are less certain and there is the risk of over trading.
- Could leave us exposed to expensive BM actions.

No speculative Trading

How do we trade?

GTMA Trading Schedule 7A

- **Interconnector**

Running Interconnector auctions, trade with Interconnector capacity holders:

- Thermal Constraints (LE1 / B5 / B6 / SC1)
- Margin (Upwards / Downwards)
- Response
- RoCoF

- **BMUs**

Contact qualified CPs, Trade against BM, providing certainty ahead of BM, deliver better value to end consumer.

- Voltage

- **Wind / Hydro**

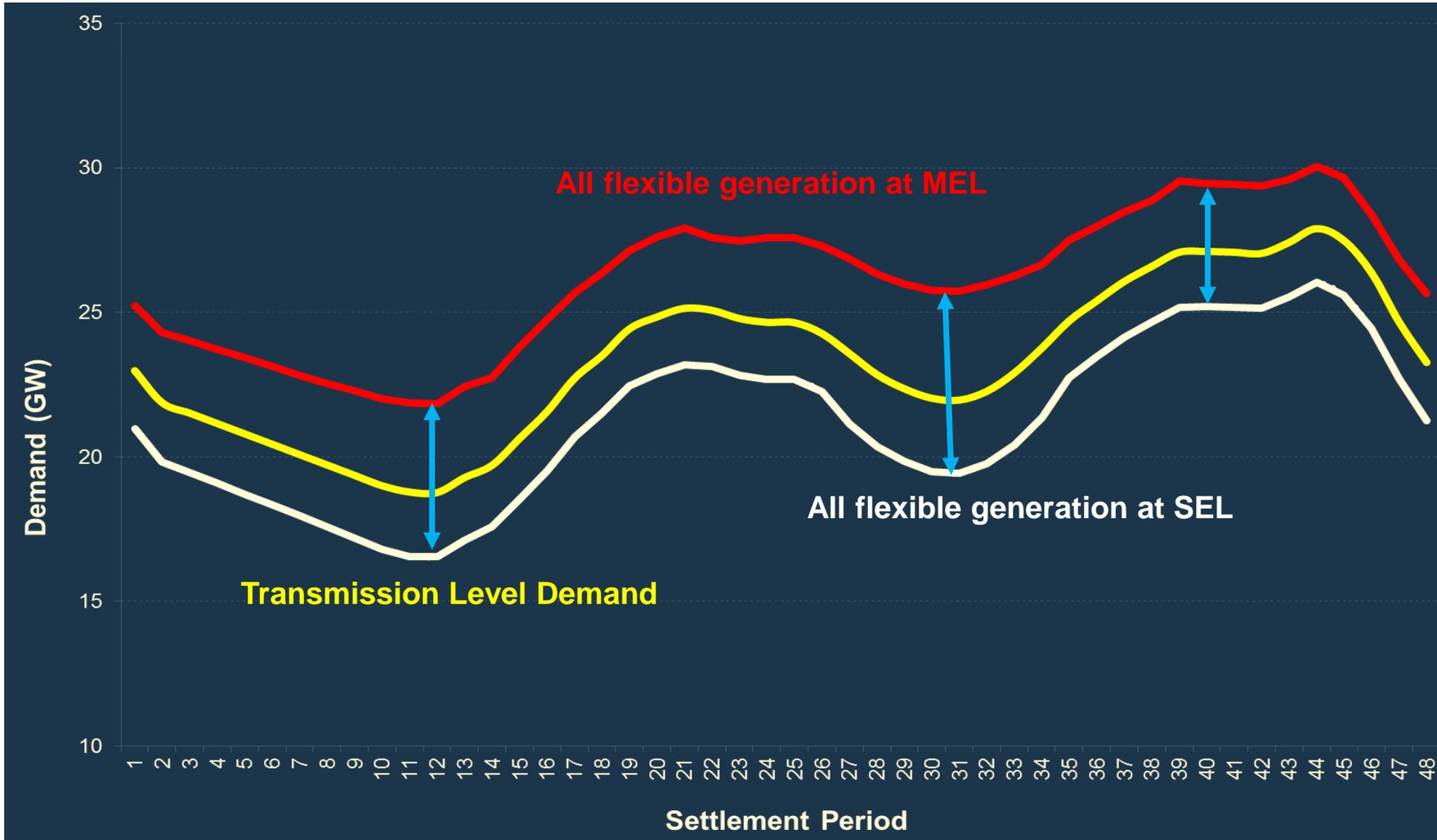
Manage constraints, trade against EI

- Thermal

Contract Enactment:

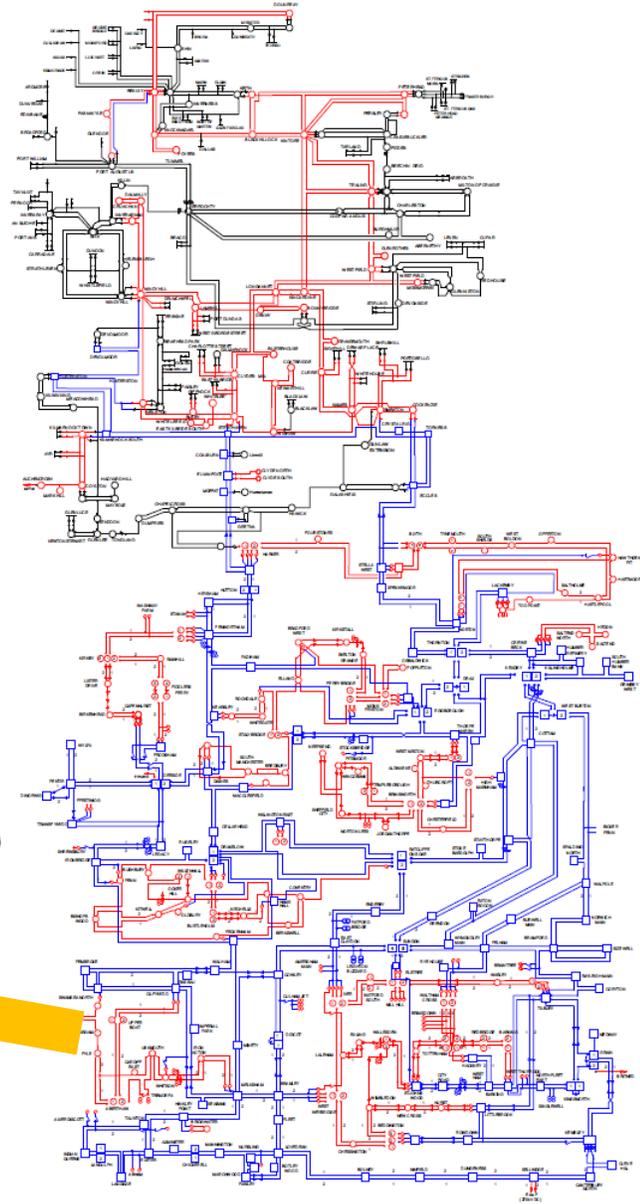
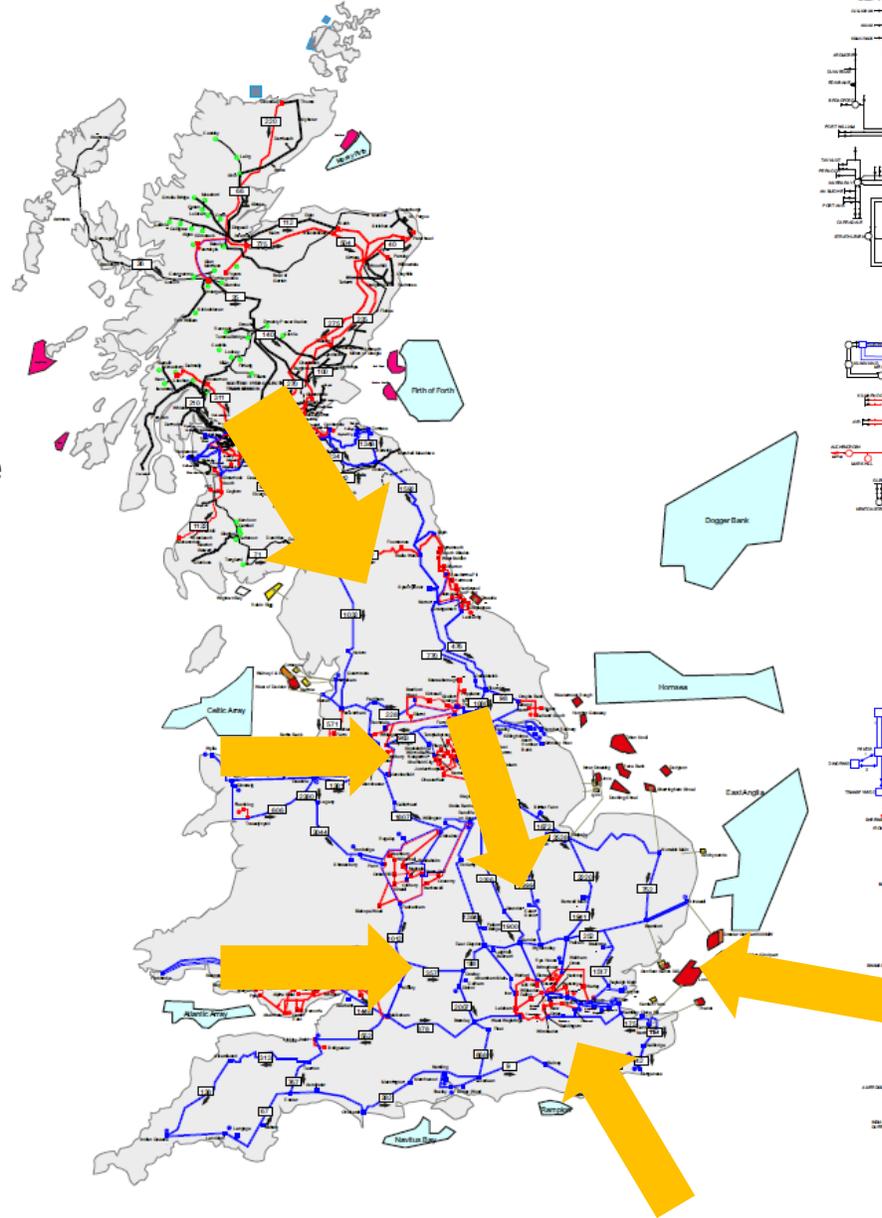
- Spread index Contract / SuperSEL / Reactive / Constraint Management

Maintain Sufficient Margins



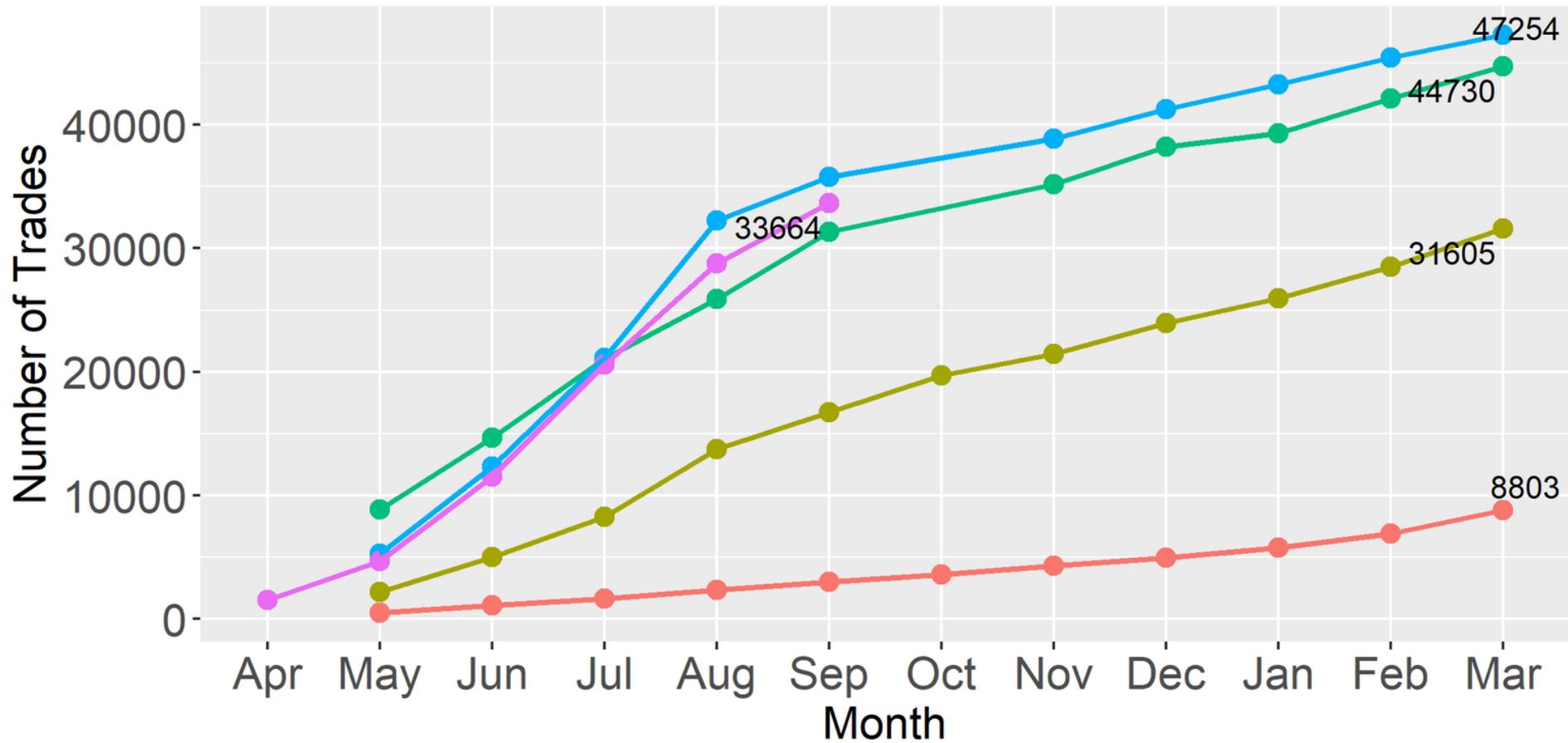
Thermal Constraints

- Generation is rarely located near demand.
- An overloaded network is dangerous to the asset and the public.
- The ESO must constrain generators that are overloading the local network.
- Wind generation is frequently located in Scotland but demand is still centred around London.
- Switching off generators to relieve network congestion results in energy imbalance.



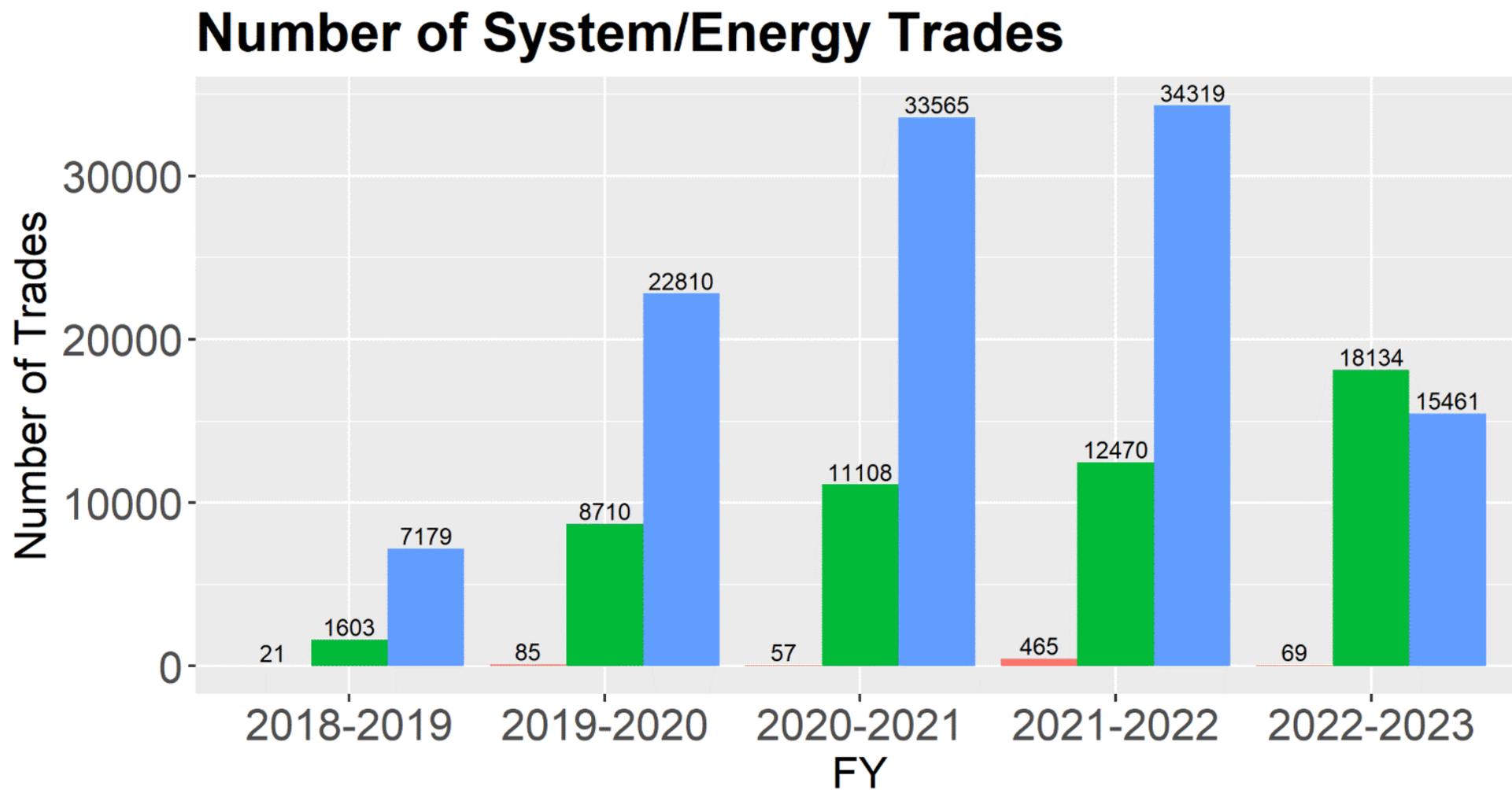
Trading activity 2018-2022

Cumulative Number of Trades

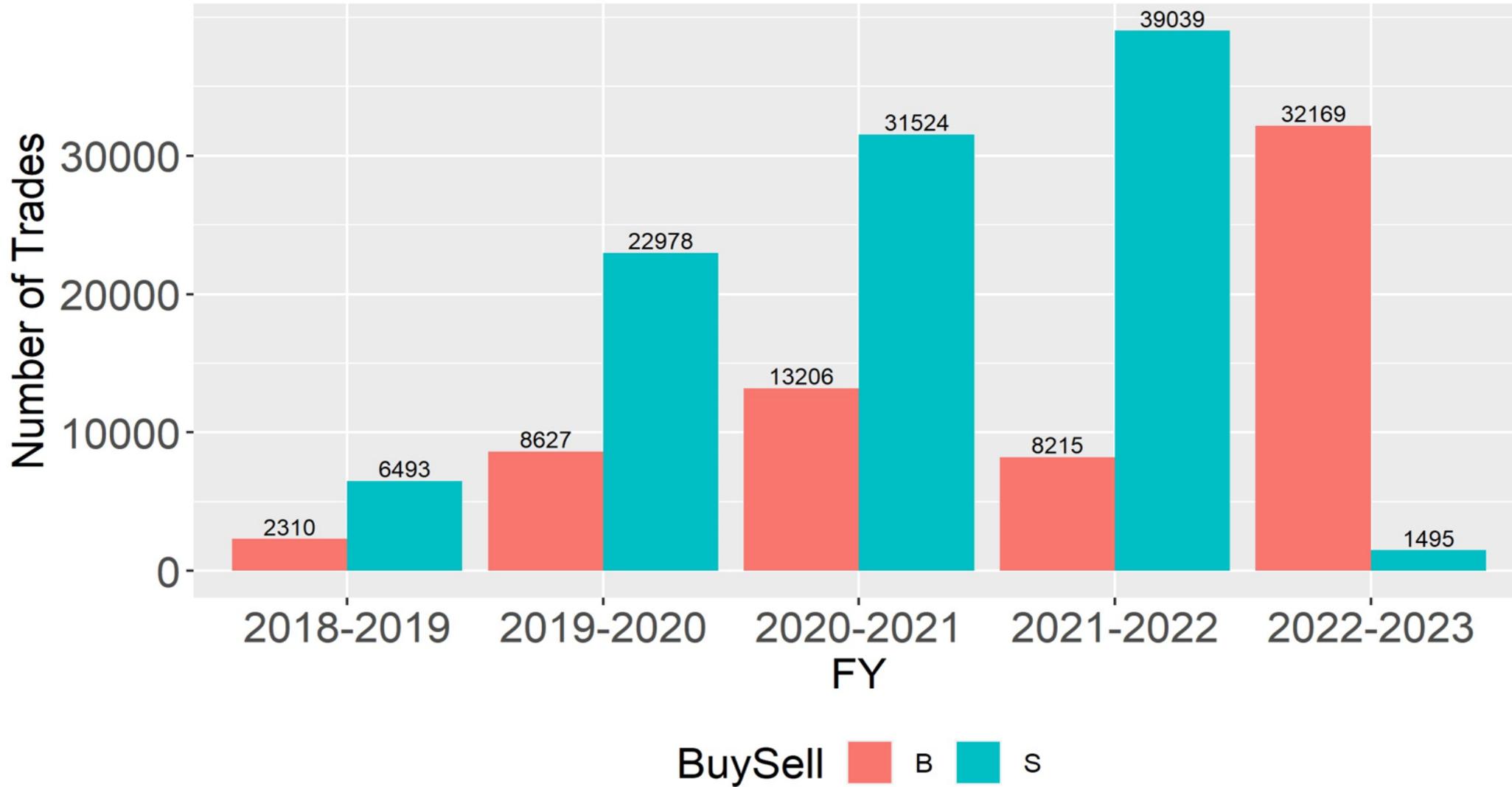


FY 2018-2019 2019-2020 2020-2021 2021-2022 2022-2023

Trading activity 2018-2022



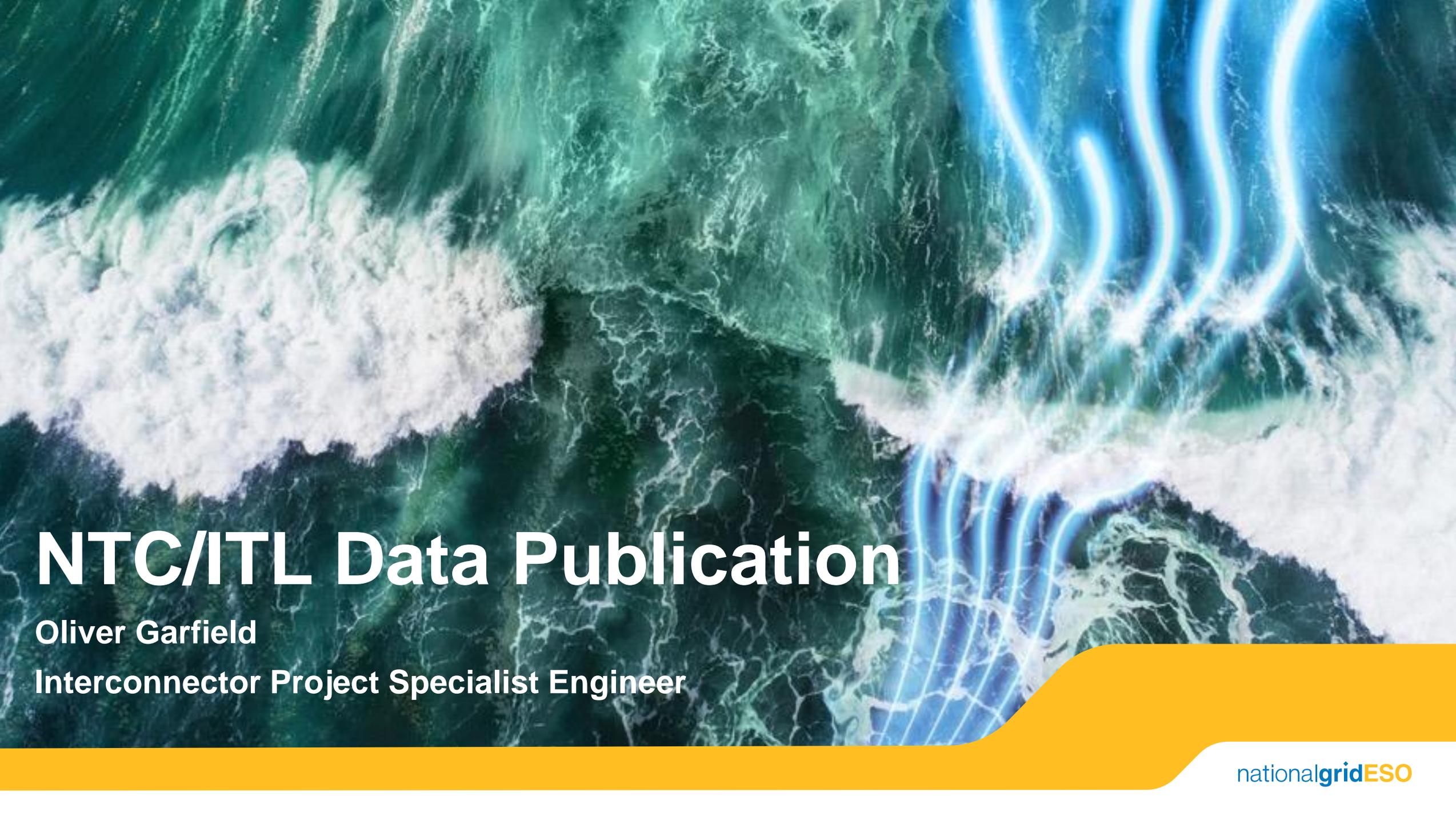
Trading activity 2018-2022



Interconnector Auction example

- This requirement is from Monday 3rd October for LE1 (lots 1-6) and Margin (7-13)
- Weighted average prices accepted alongside the best and clearing prices
- Total Bid volumes are shown alongside the total cleared (traded) volume

Lot	From	To	Filled?	Clearing Price (£/MWh)	Best Price (£/MWh)	VWA Price (£/MWh)	Cleared Volume (MW)	Total Bid volume	Buy/Sell	BN	NEMO	IFA2
1	16:00:00	17:00:00	Cleared	590.34	379.00	519.72	850	2301	Buy	425	425	
2	17:00:00	18:00:00	Cleared	433.23	404.00	420.36	1050	5226	Buy	645	405	
3	18:00:00	19:00:00	Cleared	519.45	430.04	498.40	1050	4959	Buy	520	530	
4	19:00:00	20:00:00	Cleared	435.88	359.10	418.98	1250	4797	Buy	705	545	
5	20:00:00	21:00:00	Cleared	376.00	339.30	364.56	1050	4722	Buy	530	520	
6	21:00:00	22:00:00	Cleared	344.20	300.28	329.56	650	4654	Buy	230	420	
7	16:00:00	17:00:00	Part Filled	384.65	382.80	383.25	200	4054	Buy	0	0	200
8	17:00:00	18:00:00	Cleared	435.00	399.79	434.32	250	6800	Buy	95	155	
9	18:00:00	19:00:00	Part Filled	478.00	468.00	473.00	100	6358	Buy	0	0	100
10	19:00:00	20:00:00	Cleared	443.05	404.00	439.08	450	7447	Buy	150	300	
11	20:00:00	21:00:00	Cleared	396.00	347.00	385.73	950	7672	Buy	261	689	
12	21:00:00	22:00:00	Cleared	363.80	319.65	351.56	950	7604	Buy	366	584	
13	22:00:00	23:00:00	Cleared	323.63	298.28	313.31	950	5900	Buy		950	

An aerial photograph of a river with white water rapids, overlaid with glowing blue energy lines that resemble power cables or data streams. The background is a mix of green and brown, representing the river and surrounding land.

NTC/ITL Data Publication

Oliver Garfield

Interconnector Project Specialist Engineer

NGESO NTC/ITL Restrictions published on ESO Data Portal

NGESO will commence the publication of NGESO's Network Transfer Capacity and Intraday Transfer Limit restrictions applied on GB Interconnectors.

<https://data.nationalgrideso.com/data-groups/interconnectors>

This data will show each Interconnector's maximum import and export transfer limits applied by NGESO.

These values can be used by NGESO to restrict each Interconnector's maximum import and/or export flows required in order to guarantee GB system security where alternative flow alteration options are not available.

- Publication of daily data for NSL & ElecLink commenced on Tuesday 4th October 2022
- Publication of weekly data for IFA, IFA2, BritNed & NemoLink will commence w/c 17th October 2022

N.B. – Publication of daily data for IFA, IFA2, BritNed & NemoLink will commence gradually as they required process changes are implemented in coordination with the Interconnector Owners and Connected TSOs

Questions outstanding we are still working on

Q: The Irish ICs over July (Moyle basically all July, East-West 10th July) generated to a nomination profile completely away from their PNs. This is a semi-regular occurrence since ISEM. After several years why are PNs still not submitted correctly for Irish ICs?

Request for clarification:

Q: You said a few weeks ago that this was a gas crisis not a capacity procurement crisis. This winters spark is £110-that is 21% of the winter contract value. Is it not capacity underprocurement? The system I understand is only secured for a 1 in 3 weather event or am I wrong where it was higher b4

We will come back to those questions in the future:

Q: Ref Q @ top of slide 25; could someone please explain exactly what “a requirement from ESO” where “such requirement being under ESEC” per footnote 3 of 2022 Direction is? Also, means ESEC has to be activated 1st before requirement for coal applies - otherwise this Direction does not legally apply.

Feedback

Please remember to use the feedback poll in sli.do after the event.

We welcome feedback to understand what we are doing well and how we can improve the event for the future.

If you have any questions after the event, please contact the following email address: box.NC.Customer@nationalgrideso.com

slido



Audience Q&A Session

ⓘ Start presenting to display the audience questions on this slide.

