

Introduction | Sli.do code #OTF

To ask questions live and provide us with post event feedback go to Sli.do and join event code #OTF.

- Ask your questions as early as possible as our experts may need time to ensure a correct answer can be given live.
- Please provide your name or organisation. This is an operational forum for industry participants therefore questions from unidentified parties will not be answered live. If you have reasons to remain anonymous to the wider forum please use the advance question or email options given on the slide.
- Questions will be answered in the upvoted order whenever possible. We will take questions from further down the list when: the answer is not ready; we need to take the question away or the topic is outside of the scope of the OTF.
- Sli.do will remain open until 12:00, even when the call closes earlier, to provide the maximum opportunity for you to ask questions.
- All questions will be recorded and published. Questions which are not answered on the day will be included, with answers, in the slide pack for the next OTF.
- Ask questions in advance (before 12:00 on Monday) at: https://forms.office.com/r/k0AEfKnai3
- Ask questions anytime whether for inclusion in the forum or individual response at: box.NC.customer@nationalgrideso.com

Future deep dive / focus topics

Today

No deep dive

<u>Future</u>

3rd April 2024 – Overview of Easter weekend and clock change

We are currently reviewing the large number of requests we received via the OTF survey feedback.

We will be updating in April with outcomes of the survey.

If you have suggestions for future deep dives or focus topics please send them to us at: box.NC.customer@nationalgrideso.com and we will consider including them in a future forum

Data Portal: Planned changes and issues

We have scheduled maintenance for the Data Portal on 2nd April 2024 from 2:00 AM to 6:00 AM. During this time, the Data Portal will be unavailable for up to 4 hours and all activities will be suspended. This maintenance is aimed at improving the portal's stability, providing users with a more reliable environment.

<u>Data Portal: Planned Changes & Known Issues | ESO (nationalgrideso.com)</u>

For any queries or feedback on the ESO Data Portal please contact:

box.OpenData.ESO@nationalgrideso.com

Balancing Programme Webinar

Date: 27 March 2024

Time: 14:00 – 15:30 PM

Hear the latest on:

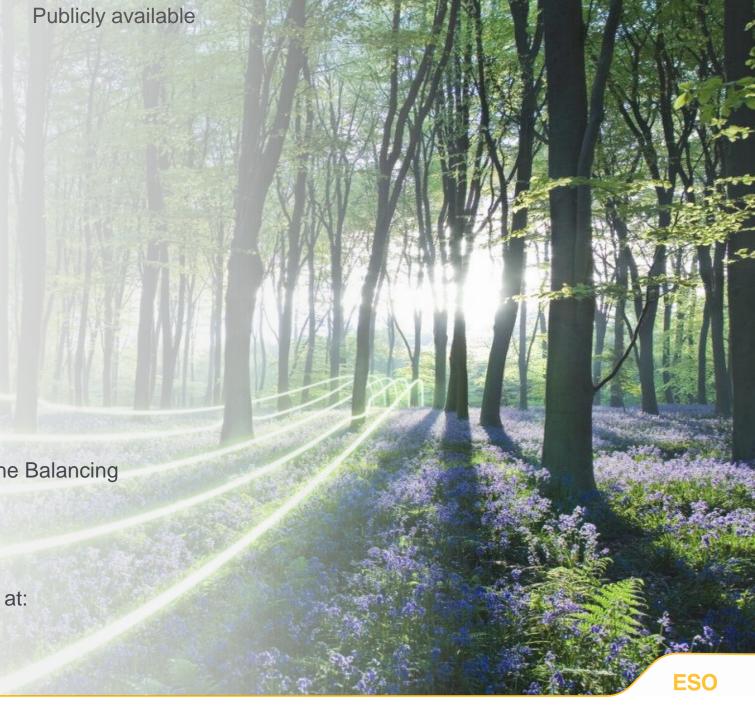
- Progress to transform our balancing capabilities
- Upcoming releases and their anticipated impact
- Opportunities for proactive collaboration

To sign up to the webinar, click here

To stay up to date with the latest information from the Balancing Programme, subscribe to our newsletter by clicking here

If you have any questions, please contact the team at: box.balancingprogramme@nationalgrideso.com

Slido code #OTF



Operational Separation Cutover - Billing System Changes

System Outage	What this means to you and your business	Direct questions to email below	As we approach our new role as	
TNUoS	No impact. Invoices will be raised as normal for May	Contact here	National Energy System Operator (NESO) this summer,	
	Variable Direct Debit customer collections will be delayed until restoration of system		there will be a requirement to update our billing systems. This	
Connections	No impact. Invoices will be raised as normal for May	Contact here	means that there will be an	
	Variable Direct Debit customer collections will be delayed until restoration of system		outage from 26 th April to 21st May 2024.	
BSUoS	The last run of BSUoS will be the 25th April. The next run is expected to be 21st May	Contact here	During this we will not be able to produce or send billing	
AAHEDC (Hydro)	Invoices will be raised in advance with payment date reflecting the standard due date	Contact here	information and invoices during this period.	
Settlement providers	Payments will be made earlier than the current published payments calendar. May payments will be made in line with the current billing calendar	Contact here	We will share more detailed communications regarding this, including the revised BSUoS	
App Fees	Invoices will be raised before outage if applicable and manually via offline process should this be required	Contact here	calendar shortly.	

New Data Set for Constraint Management Intertrip Service

Background

ESO has contracts in place with a number of generators to be used for intertrip to manage the B6/Anglo-Scottish constraint boundary.

ESO will instruct SPT of the units and circuits to arm and subsequently what to disarm. No action is required of the generator for arming and disarming.

New Data Set

A new Data Set is available on the Data Portal with information when units have been armed to the Intertrip scheme.

Where arming crosses midnight, this will be shown as two records.

Cost for utilisation = Current Arming Fee in £/SP divided by 30 to give Arming Fee per minute.

This is multiplied by the number of minutes between Disarming Date Time and Arming Date Time.

Α	В	С	D	E
BMU ID	Arming Date Time	Disarming Date Time	Current Arming Fee (£/SP)	Cost for this utilisation (£)
WHILW-1	2022-04-03T17:11:00+00:00	2022-04-04T00:00:00+00:00	3809.45	51935.5
WHILW-1	2022-04-04T00:00:00+00:00	2022-04-04T20:05:00+00:00	3809.45	153012.91
BLLA-1	2022-04-03T17:11:00+00:00	2022-04-04T00:00:00+00:00	1408.92	19208.28
BLLA-1	2022-04-04T00:00:00+00:00	2022-04-04T20:05:00+00:00	1408.92	56591.62

The data set will be updated monthly and new files will be created for each financial year.

https://www.nationalgrideso.com/data-portal/constraint-management-intertrip-service-information-cmis

Enhancing the use of Storage Assets in our Balancing Activities

New 30-minute rule implemented

- We have now transitioned from the **15-minute rule to 30 minutes**. This will allow energy storage units to be instructed for up to 30 minutes, depending on system conditions, and responds to industry feedback which highlighted that the 15-minute rule hindered battery dispatch and utilisation.
- Units operating under the 30-minute rule are required to ensure they can sustain their declared available energy for the length of the instruction (up to 30 minutes), this will be monitored as per normal processes.
- The new 30-minute rule will be in place until new energy storage parameters are in place as part of GC0166.
- For more information regarding the 30-minute rule, please refer to the updated <u>EDT/EDL Submissions</u> Guidance.
- If you have any further questions regarding this transition, please get in contact with us at box.balancingprogramme@nationalgrideso.com.



OTF Survey Feedback – Transmission Network

In the OTF survey we received multiple requests for more information about the future of the transmission network.

Last week ESO published the Beyond 2030 report, which maps the way to a clean, secure and affordable energy future, including recommended investment in the transmission network.

The Beyond 2030 report can be found here: https://www.nationalgrideso.com/document/304756/download

If you have any questions, please contact: box.OffshoreCoord@nationalgridESO.com

The future of the transmission network is a strategic topic and therefore sits outside the OTF scope of 'operational timescales'. Any questions we receive through the OTF will be directed to this mailbox.



Participation in the Operational Transparency Forum

Thank you to everyone who participates in the OTF, whether you join weekly, monthly, on specific occasions or follow up with the webinar recordings and published slides. We hear from participant feedback and our ESO colleagues that all of us value the opportunity to share information, ask questions and share the answers.

One of the reasons this format works so well is the professional courtesy we see demonstrated every week.

However, in recent weeks there have been some Slido questions and comments in the Q&A session directed at specific market participants suggesting their actions are not appropriate. This is concerning because:

- The statements are being made in a public forum without the opportunity to reply
- The negative comments may impact these businesses directly, or indirectly e.g.: through social media, etc.
- The individuals asking questions could not be traced using the details provided in Slido

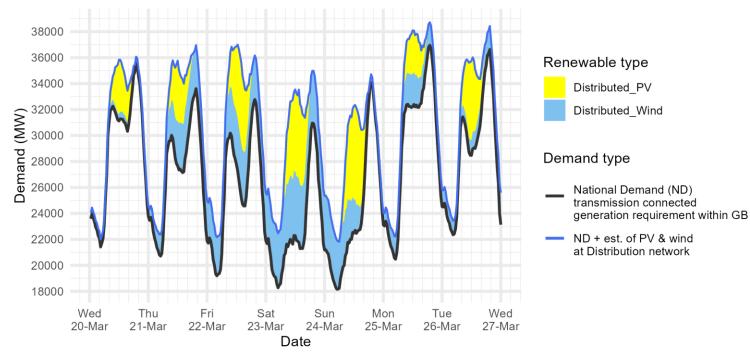
The OTF is not the place to challenge the actions of individual parties (other than the ESO) and we will not comment on these challenges. This type of concern can be reported to the Market Monitoring team at: marketreporting@nationalgrideso.com

Remember, if you have reasons to remain anonymous to the wider forum, or have concerns your question may not be one to ask in public, you can use the advance questions or email options.

OUTTURN

Demand | Last week demand out-turn





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

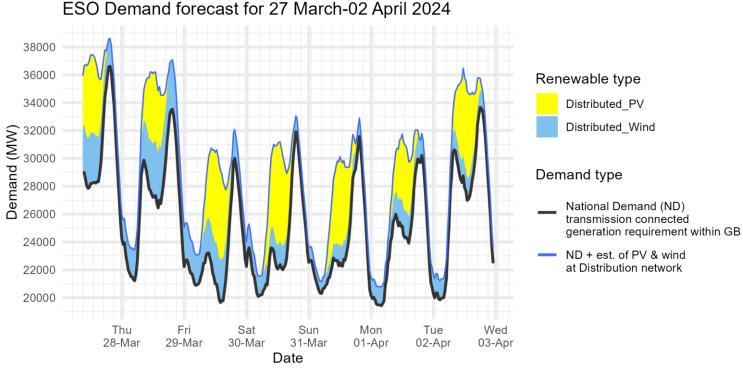
Blue line serves as a proxy for total GB customer demand. It includes demand supplied by the distributed wind and solar sources, but it <u>does not include</u> demand supplied by non-weather driven sources at the distributed network for which ESO has no real time data.

Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)	National Demand (GW)	Dist. wind (GW)
20 Mar	Evening Peak	37.2	0.5	35.5	0.5
21 Mar	Overnight Min	21.5	1.3	20.7	1.7
21 Mar	Evening Peak	34.7	3.2	33.6	3.4
22 Mar	Overnight Min	19.5	3.0	19.2	3.0
22 Mar	Evening Peak	33.5	3.3	32.8	3.4
23 Mar	Overnight Min	18.6	3.5	18.3	4.2
23 Mar	Evening Peak	31.6	3.4	31.0	4.0
24 Mar	Overnight Min	18.4	3.1	18.2	3.7
24 Mar	Evening Peak	34.8	1.0	34.1	0.4
25 Mar	Overnight Min	21.9	0.8	20.5	1.8
25 Mar	Evening Peak	38.7	1.1	36.9	1.8
26 Mar	Overnight Min	22.6	1.1	22.4	1.1
26 Mar	Evening Peak	37.2	2.5	36.6	1.8

FORECAST (Wed 20 Mar)

Historic out-turn data can be found on the <u>ESO Data Portal</u> in the following data sets: <u>Historic Demand Data</u> & <u>Demand Data Update</u>

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.

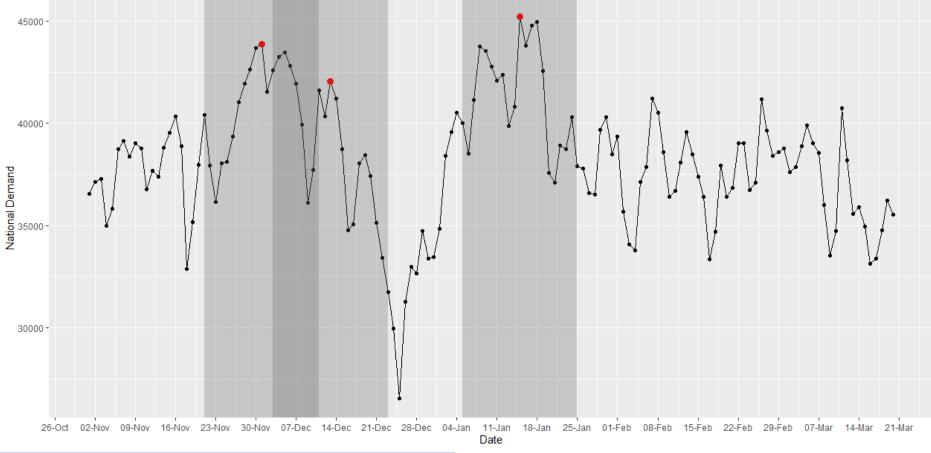
ND values **do not include** export on interconnectors or pumping or station load

Blue line serves as a proxy for total GB customer demand. It includes demand supplied by the distributed wind and solar sources, but it <u>does not include</u> 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 <u>ESO Data Portal</u> in the following data sets: <u>Historic Demand Data</u> & <u>Demand Data Update</u>

	FORECAST (\	Wed 27 Mar)
Forecasting Point	National Demand (GW)	Dist. wind (GW)
Evening Peak	36.6	2.0
Overnight Min	21.2	2.2
Evening Peak	33.5	3.5
Overnight Min	20.9	2.2
Evening Peak	30.0	2.1
Overnight Min	20.1	1.5
Evening Peak	31.9	1.1
Overnight Min	20.3	0.8
Evening Peak	30.0	1.3
Overnight Min	19.4	1.3
Evening Peak	30.0	1.6
Overnight Min	19.8	1.4
Evening Peak	33.7	1.2
	Point Evening Peak Overnight Min Evening Peak	Forecasting Point Demand (GW) Evening Peak 36.6 Overnight Min 21.2 Evening Peak 33.5 Overnight Min 20.9 Evening Peak 30.0 Overnight Min 20.1 Evening Peak 31.9 Overnight Min 20.3 Evening Peak 30.0 Overnight Min 19.4 Evening Peak 30.0 Overnight Min 19.4 Evening Peak 30.0 Overnight Min 19.8

Demand | Triad data (based on operational metering)



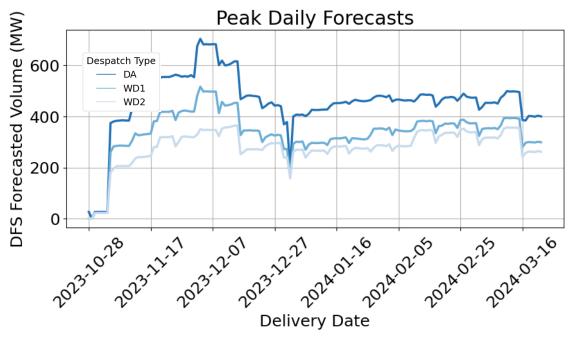
ESO operational metering					
Date	Time	National	Estimated triad avoidance (MW)		
(HH ending) Demand (MV			(HH corresponding with the time of the peak)		
15/01/2024	1800	45202	400		
01/12/2023	1730	43886	700		
13/12/2023	1800	42043	0		

ESO values do not include station load.

Indicative triad demand on Elexon's BMRS <u>website</u> quotes "GB Demand" which is based on the Transmission System Demand definition (it adds 500MW of station load onto the National Demand). Also, it shows time as half hour beginning.

A DFS event ran over the demand peak on 1 Dec - the estimated triad avoidance will also include this amount.

Demand Flexibility Service



Dogwatah	Number of events			
Despatch Type	Live	Test (GAP £3,000/MWh)	Test (GAP £0/MWh)	
Day-ahead	2	2	0	
Within day 1	0	3	2	
Within day 2	0	2	5	
Total	2	7	7	

DA	Day-ahead procurement.
WD1	Procurement at around 09:00 for same day delivery.
WD2	Procurement at around 12:00 for same day delivery.

Latest events:

Delivery Date: 21st March 2024 (Thursday); 17:30 to 18:00 h and 18:30 to 19:00 WD2, GAP = 0£/MWh.

On this day, 20 participants engaged via 49 DFS Units to offer up to 289 MW.

The highest accepted price was £750/MWh whilst the lowest was £425/MWh.

In total, we secured 80 MW and 84 MW for the 17:30 h and 18:30 h periods respectively.

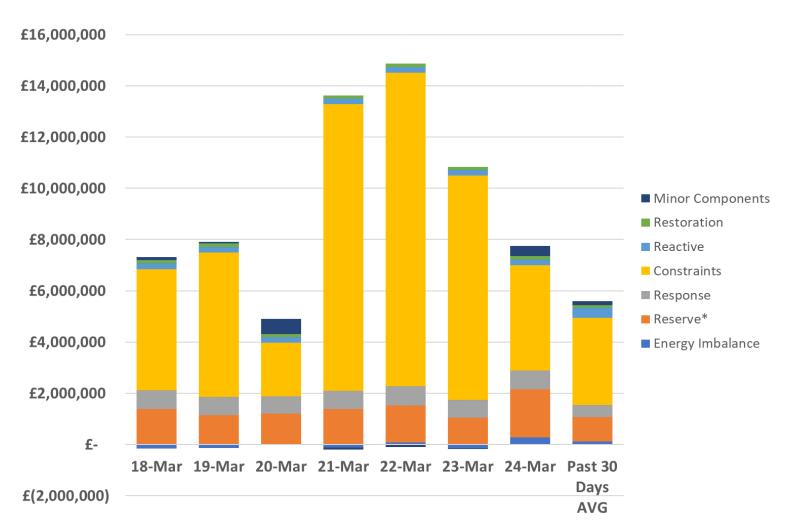
DFS Webinar – Overview & What's next

Recording of this session, which took place Friday 22nd March 2024, is available here

This will be the final OTF weekly update concerning Winter 23/24 Demand Flexibility Service

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ESO Actions | Category costs breakdown for the last week



Date	Total (£m)
18/03/2024	7.2
19/03/2024	7.8
20/03/2024	4.9
21/03/2024	13.4
22/03/2024	14.8
23/03/2024	10.7
24/03/2024	7.8
Weekly Total	66.5
Previous Week	41.3
	•

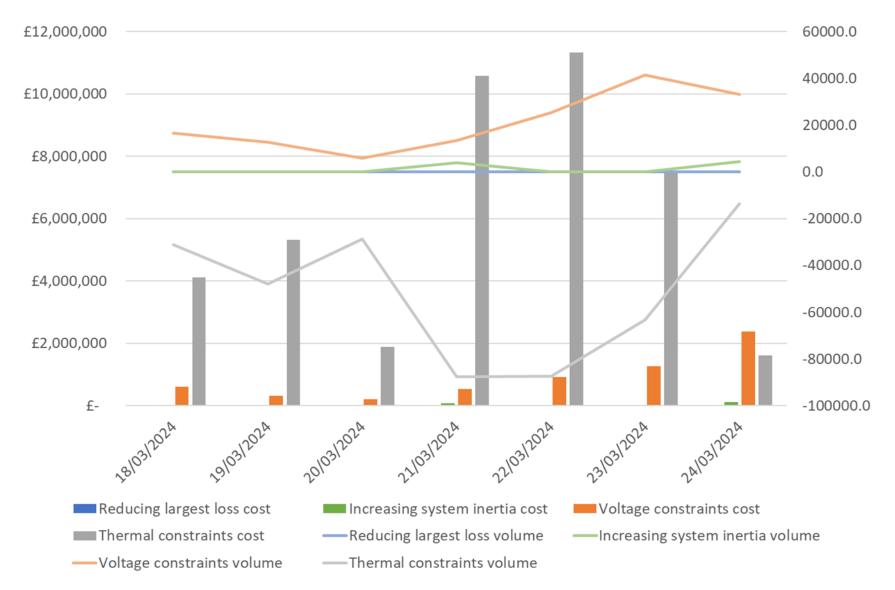
Constraints and Reserve costs were the key cost component for the week.

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

Data issue: Please note that due to a data issue on a few days over the last few months, the Minor Components line in Non-Constraint Costs is capturing some costs on those days which should be attributed to different categories. It has been identified that a significant portion of these costs should be allocated to the Operating Reserve Category. Although the categorisation of costs is not correct, we are confident that the total costs are correct in all months. We continue to investigate and will advise when we have a resolution.

ESO

ESO Actions | Constraint Cost Breakdown



Thermal – network congestion

Actions were required to manage thermal constraints throughout the week, with the most significant costs on Thursday, Friday and Saturday.

Voltage

Intervention was required to manage voltage levels throughout the week.

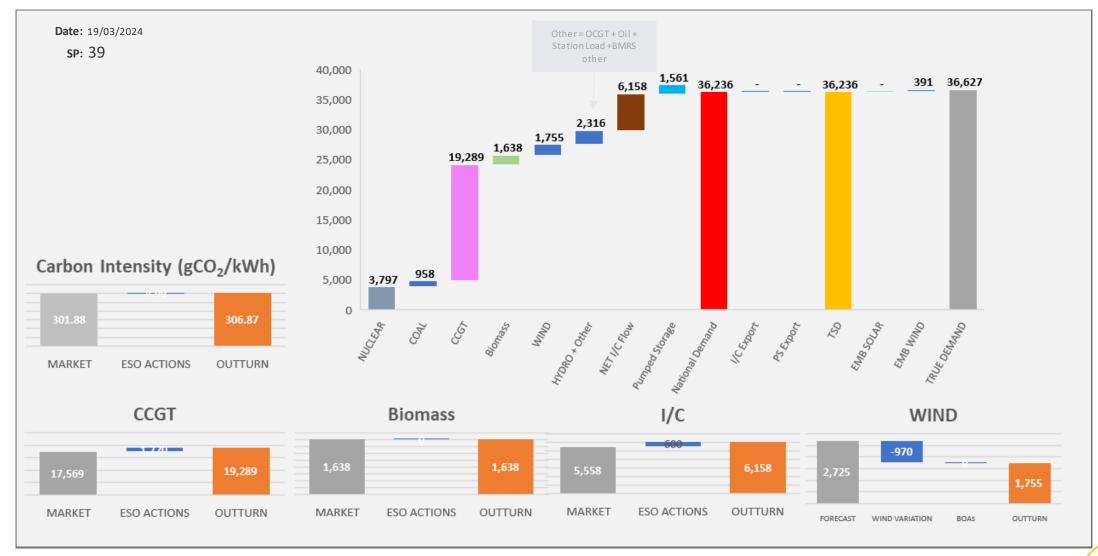
Managing largest loss for RoCoF

No intervention was required to manage largest loss.

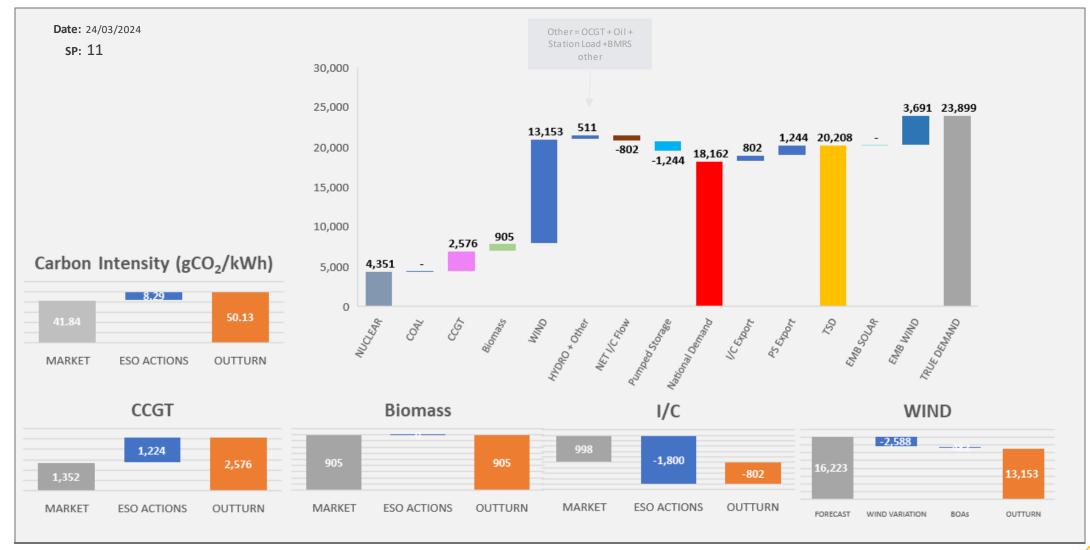
Increasing inertia

Some intervention was required to manage System Inertia on Thursday and Sunday.

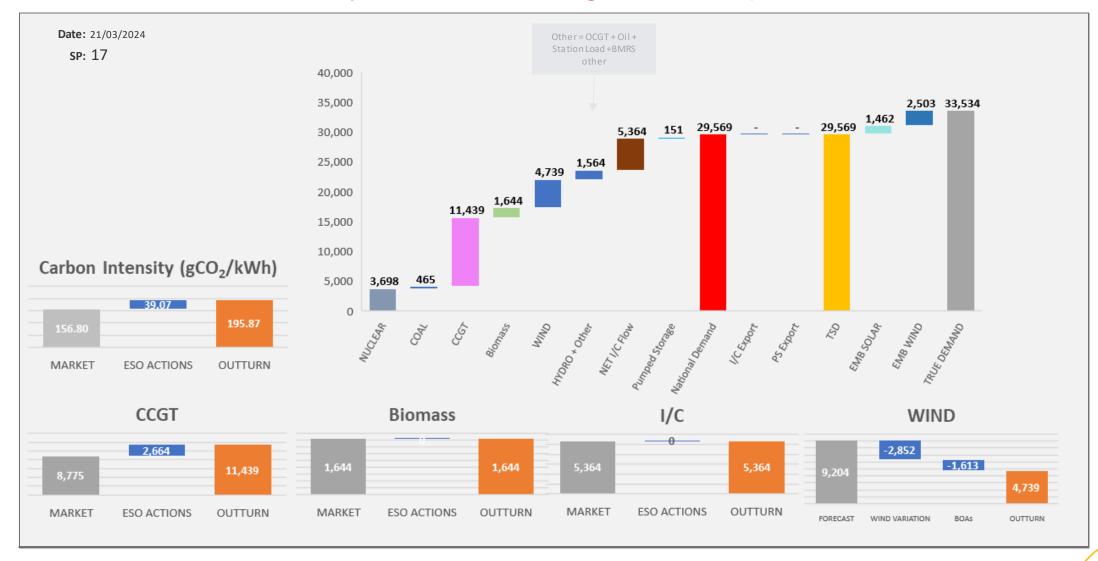
ESO Actions | Tuesday 19 March - Peak Demand - SP spend ~£92k



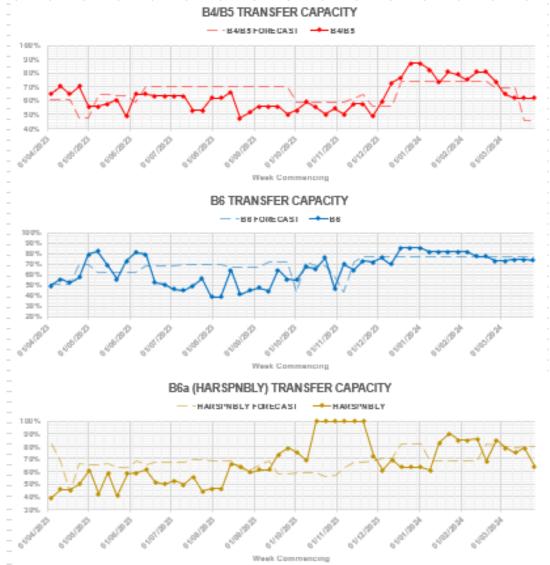
ESO Actions | Wednesday 24 March - Minimum Demand - SP Spend ~£208k



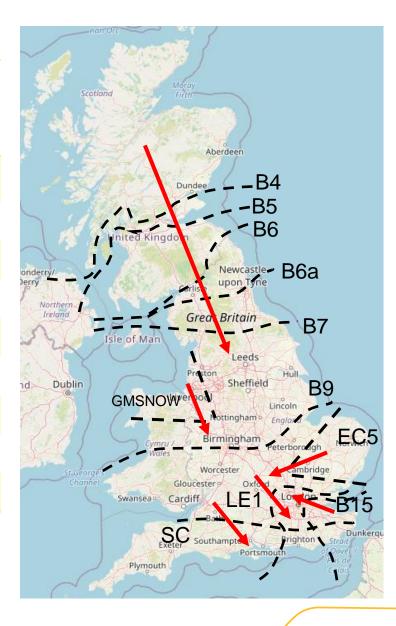
ESO Actions | Wednesday 21 March - Highest SP Spend ~£395k



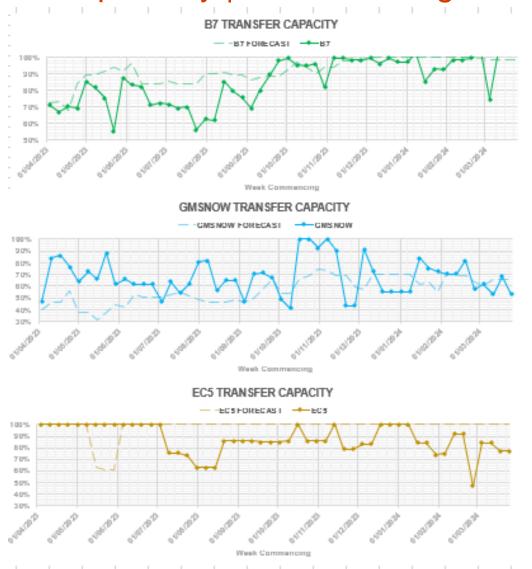
Transparency | Network Congestion



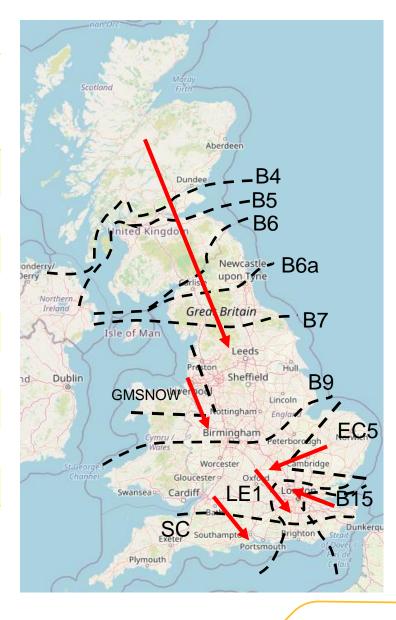
Boundary	Max. Capacity (MW)	Current Capacity (%)
B4/B5	3400	62%
B6	6800	74%
B6a	8000	64%
B7	8325	100%
GMSNOW	4700	53%
EC5	5000	77%
LE1	8500	79%
B15	7500	95%
SC	7300	100%



Transparency | Network Congestion

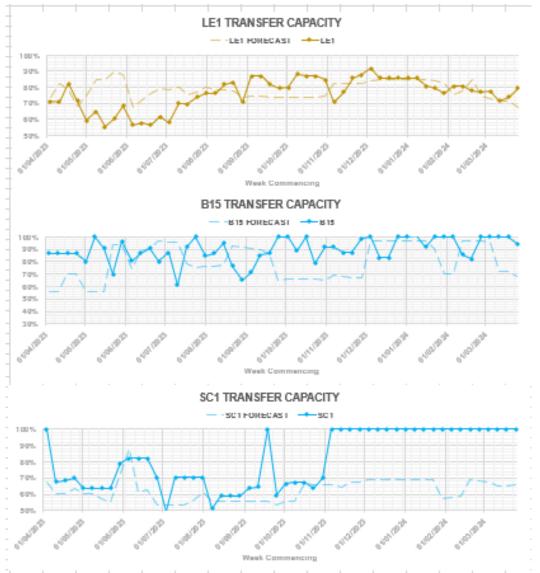


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SC	7300	100%

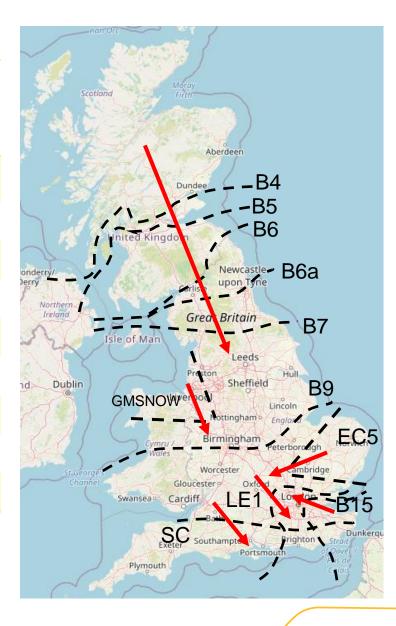


Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal: Constraints Management

Transparency | Network Congestion



Boundary	Max. Capacity (MW)	Current Capacity (%)
B4/B5	3400	62%
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B7	8325	100%
GMSNOW	4700	53%
EC5	5000	77%
LE1	8500	79%
B15	7500	95%
SC	7300	100%



Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal: Constraints Management

Previously asked questions

Q: On what date are you planning to publish the Summer Outlook?

A: We are intending to publish the Summer Outlook on 11 April.

Q: Can you comment on how the intertrip contracts with generators are procured? Is it bilateral arrangements or an open process?

A: The commercial intertrip contracts that are listed in the new data set were all competitively procured through a tender.

Results for the current live contracts which end in September 2024 can be found here and the results for contracts that will start in October 2024 can be found here.

Reminder about answering questions at the ESO OTF

- Questions from unidentified parties will not be answered live. If you have reasons to remain anonymous to the wider forum please use the advance question or email options. Details in the appendix to the pack.
- Questions will be answered in the upvoted order whenever possible. We will take questions from further down the list when: the answer is not ready; we need to take the question away or the topic is outside of the scope of the OTF.
- Sli.do will remain open until 12:00, even when the call closes earlier, to provide the maximum opportunity for you to ask questions.
- All questions will be recorded and published All questions asked through Sli.do will be recorded and published, with answers, in the Operational Transparency Forum Q&A on the webpage: https://www.nationalgrideso.com/what-we-do/electricity-national-control-centre/operational-transparency-forum
- **Takeaway questions** these questions will be included in the pack for the next OTF, we may ask you to contact us by email in order to clarify or confirm details for the question.
- Out of scope questions will be forwarded to the appropriate ESO expert or team for a direct response. We may ask
 you to contact us by email to ensure we have the correct contact details for the response. These questions will not be
 managed through the OTF, and we are unable to forward questions without correct contact details. Information about
 the OTF purpose and scope can be found in the appendix of this slide pack

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Audience Q&A Session

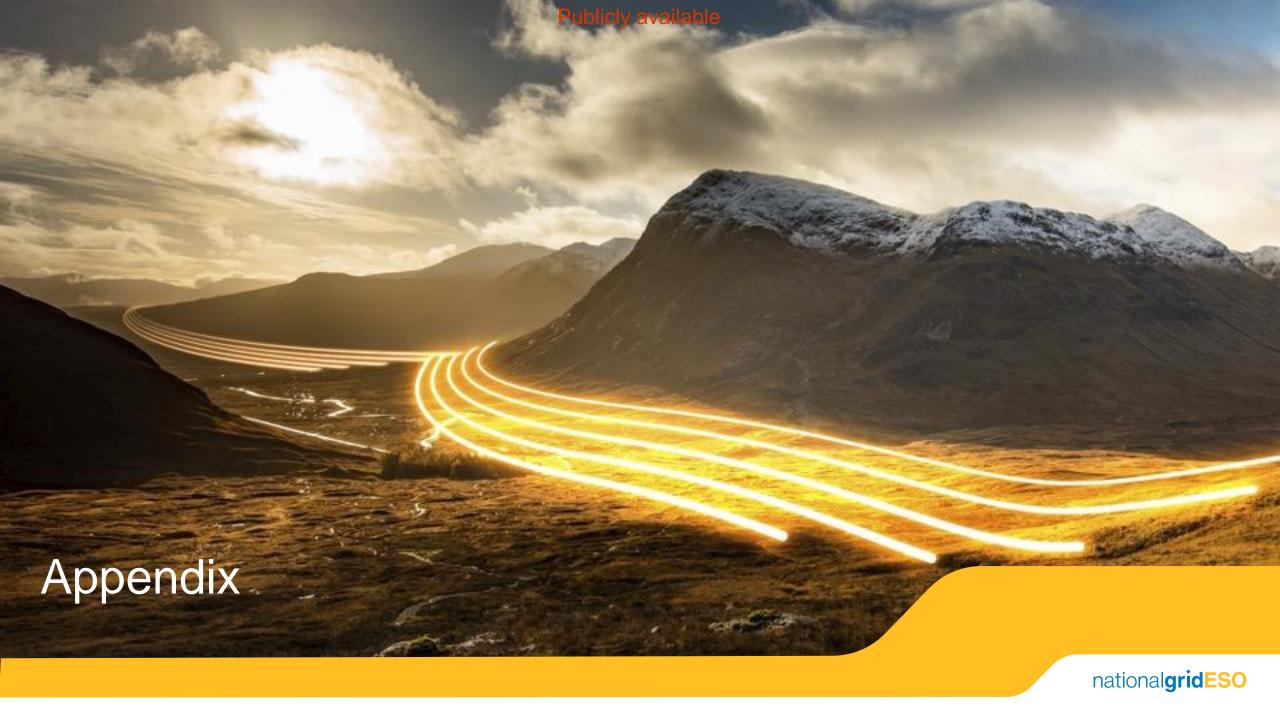
⁽i) Start presenting to display the audience questions on this slide.

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



Purpose and scope of the ESO Operational Transparency Forum

Purpose

The Operational Transparency Forum runs once a week to provide updated information on and insight into the operational challenges faced by the control room in the recent past (1-2 weeks) and short term future (1-2 weeks). The OTF will also signpost other ESO events, provide deep dives into focus topics, and allow industry to ask questions.

Scope

Aligns with purpose, see examples below:

In Scope of OTF

Material presented i.e.: regular content, deep dives, focus topics

ESO operational approach & challenges

ESO published data

Out of Scope of OTF

Data owned and/or published by other parties

e.g.: BMRS is published by Elexon

Processes including consultations operated by other

parties e.g.: Elexon, Ofgem, DESNZ

Data owned by other parties

Details of ESO Control Room actions & decision making

Activities & operations of particular market participants

ESO policy & strategic decision making

Formal consultations e.g.: Code Changes, Business

Planning, Market development

Managing questions at the ESO Operational Transparency Forum

- OTF participants can ask questions in the following ways:
 - Live via Slido code #OTF
 - In advance (before 12:00 on Monday) at https://forms.office.com/r/k0AEfKnai3
 - At any time to box.NC.Customer@nationalgrideso.com
- All questions asked through Sli.do will be recorded and published, with answers, in the Operational Transparency Forum Q&A on the webpage: <u>Operational Transparency Forum | ESO (nationalgrideso.com)</u>
- Advance questions will be included, with answers, in the slide pack for the next OTF and published in the OTF Q&A as above.
- **Email questions** which specifically request inclusion in the OTF will be treated as Advance questions, otherwise we will only reply direct to the sender.
- Takeaway questions we may ask you to contact us by email in order to clarify or confirm details for the question.
- Out of scope questions will be forwarded to the appropriate ESO expert or team for a direct response. We may ask you to contact us by email to ensure we have the correct contact details for the response. These questions will not be managed through the OTF, and we are unable to forward questions without correct contact details. Information about the OTF purpose and scope can be found in the appendix of this slide pack