



ESO Operational Transparency Forum

23rd September 2020

nationalgrid**ESO**

Introduction

Please ask any questions via the Q&A section in Webex and we will pick them all up at the end of the session and answer those now which we can. We may have to take away some questions and provide feedback from our expert colleagues in these areas.

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

<https://data.nationalgrideso.com/plans-reports-analysis/covid-19-preparedness-materials>

Key topics for this week:

Questions from last week

Business continuity

Demand review and outlook

Reserve from Storage trial update

API go live

Questions from last week

Q: To avoid the CM warning how can you get your trades into the system in time? And can we have all warnings on one platform?

A: We will trade when required to meet system need and once trades have been concluded, counterparties nominate the trades. When this has happened, the new interconnector flow will feed through our systems and into the CMN calculation, which is an automatic calculation based on agreed industry rules.

There is no plan at present to move to one platform, but we will take this suggest away for possible future development. As a reminder, you can sign up for email notifications from both systems.

Q: Reserve from Storage: how far ahead of time do providers agree their BOD with NG?

A: For initial nomination of a window, we provide a commitment ten minutes ahead of gate closure, and for at least four hour window where we expect prices to remain the same as the prices which the providers have chosen to submit.

Q: CMP350 was never designed to cap BSUoS when spike caused by high demand and not enough generation .only during high bsuos caused caused by low demand but it will be capped for yesterday. Is Ofgem aware of this?

A: OFGEM and the working group were aware that the cap may be breached due to reasons other than low demand

Q: Any news on IFA2? / Any update on Sizewell?

A: The IFA2 Interconnector commissioning phase continues to progress towards active power transfers, we now expect this to commence later in October. During active power transfers, details of planned flows will be shared via the REMIT portal. With the testing of a new asset, issues may be identified, and the plan may be modified accordingly. REMIT will be updated with further information when appropriate.

The Sizewell de-load contract ends on Thursday 24th Sept 2020 and unit is expected to increase load from 2300hrs

Questions from last week cont...

Q: In respect to the answer to last week's interconnector question, it was about TNUoS and BSUoS - the public statement from the European Commission of 27th April 2018 says they will be applying those to GB as a 3rd Country - last week's question still stands?

A: We have asked our EU-Exit team to join the webinar next week

Q: As I understand it, National Grid sends instructions to providers of Mandatory Frequency Response if they want the BM Units to be in "frequency response mode". Are those instructions made publicly available?.

A: We publish information relating to Mandatory Frequency Response price and capability on our website: <https://www.nationalgrideso.com/balancing-services/frequency-response-services/mandatory-response-services?market-information>

Aggregated Mandatory Frequency Response data can be found in our Monthly Balancing Services Summary (MBSS) on the data portal: <https://data.nationalgrideso.com/balancing/mbss>

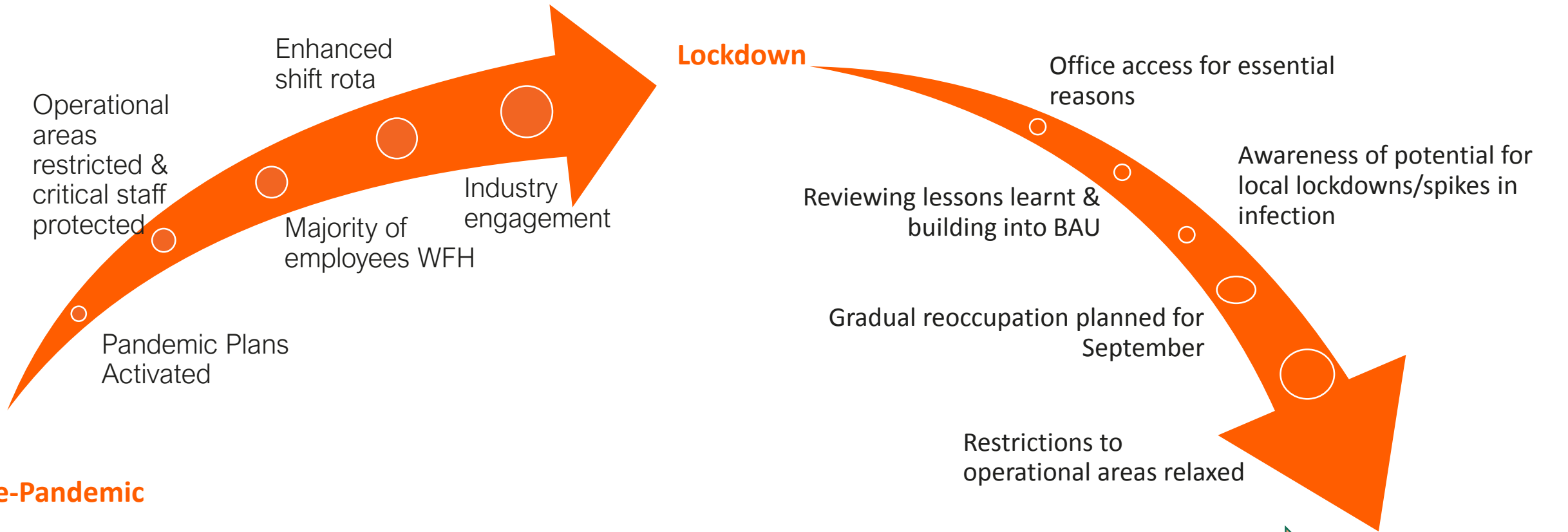
Q: Are Rocof trades tagged energy and is there a rolling total these days?

A: Actions taken to manage RoCoF are tagged as system as per the System Management Action Flagging methodology statement (SMAF) and reported in our Monthly Balancing Services Summary (MBSS) on the data portal: <https://data.nationalgrideso.com/balancing/mbss>

Q: What are the main drivers of BM expenditure during September? Expenditure for the month so far seems relatively high eg ~£8m reported in System report for the 12th

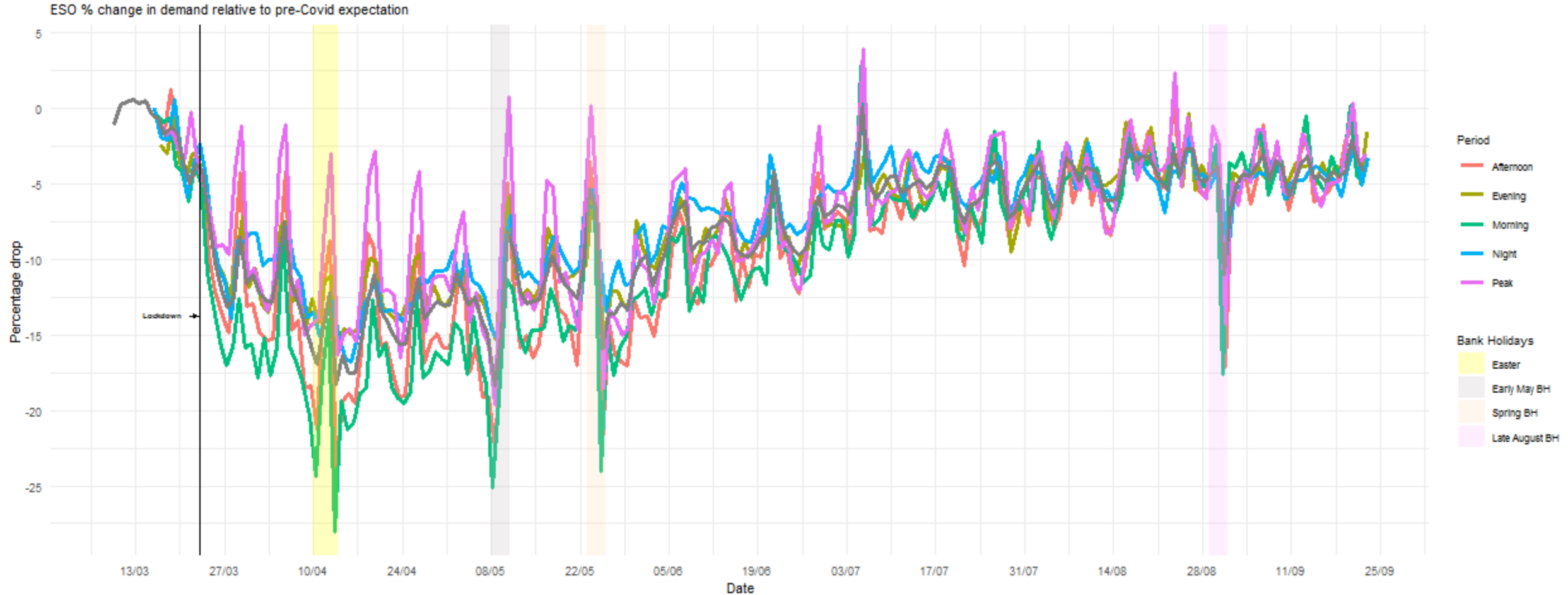
A: Higher wind levels and system outages are driving thermal constraint costs up from the levels seen in August particularly in the North. The 11th September (reported on the System report of the 12th) has been the most expensive day in September so far, we had 11GW of wind and most of the significant constraints in the North of England and Scotland were active

Protecting Critical Staff to maintain Critical Operations



Identify & respond to system operability challenges

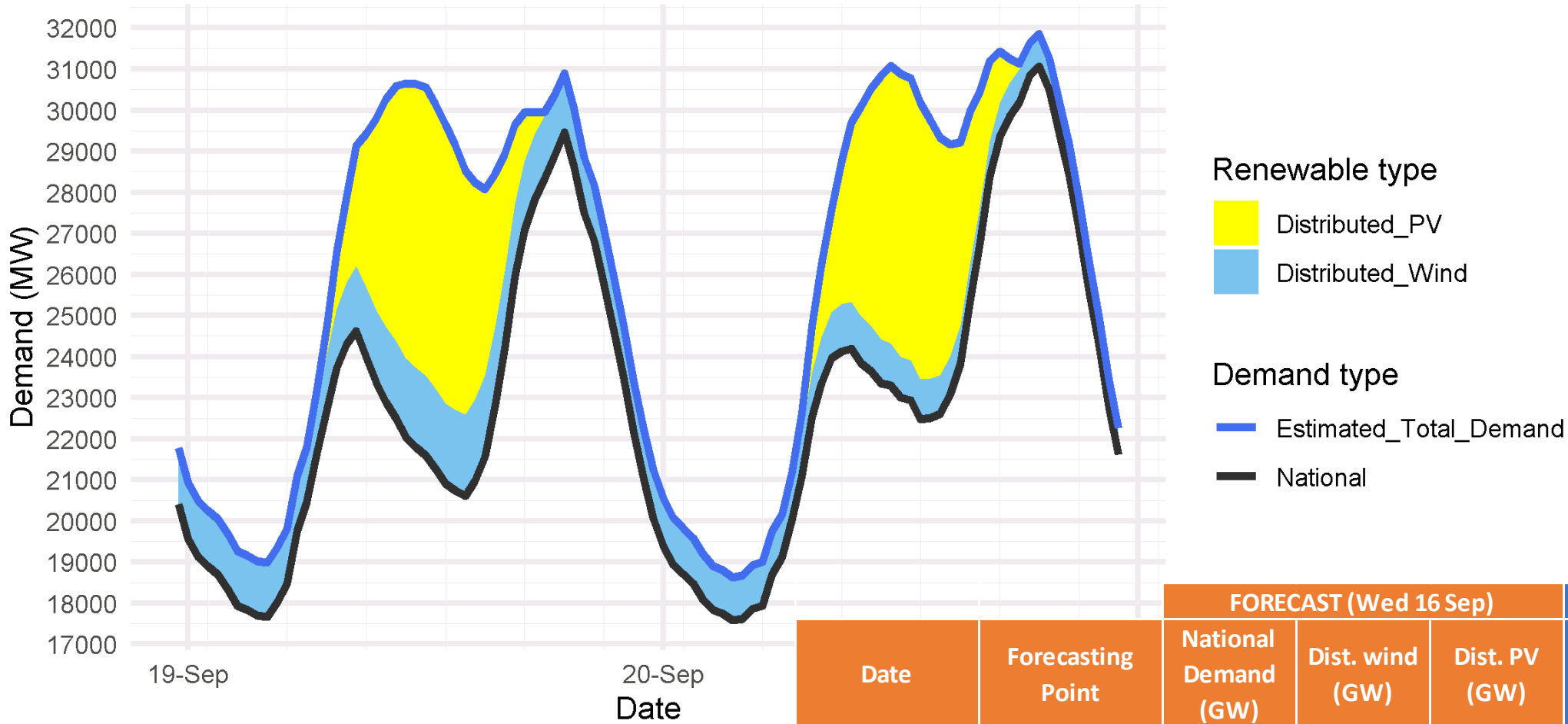
Demand | Latest demand suppression assessment



- Estimated overall demand drop over last 7days of 3.9% compared to pre-Covid situation

Demand | Last Weekend Outturn

ESO National Demand outturn 19-20 September 2020



Renewable type

- Distributed_PV
- Distributed_Wind

Demand type

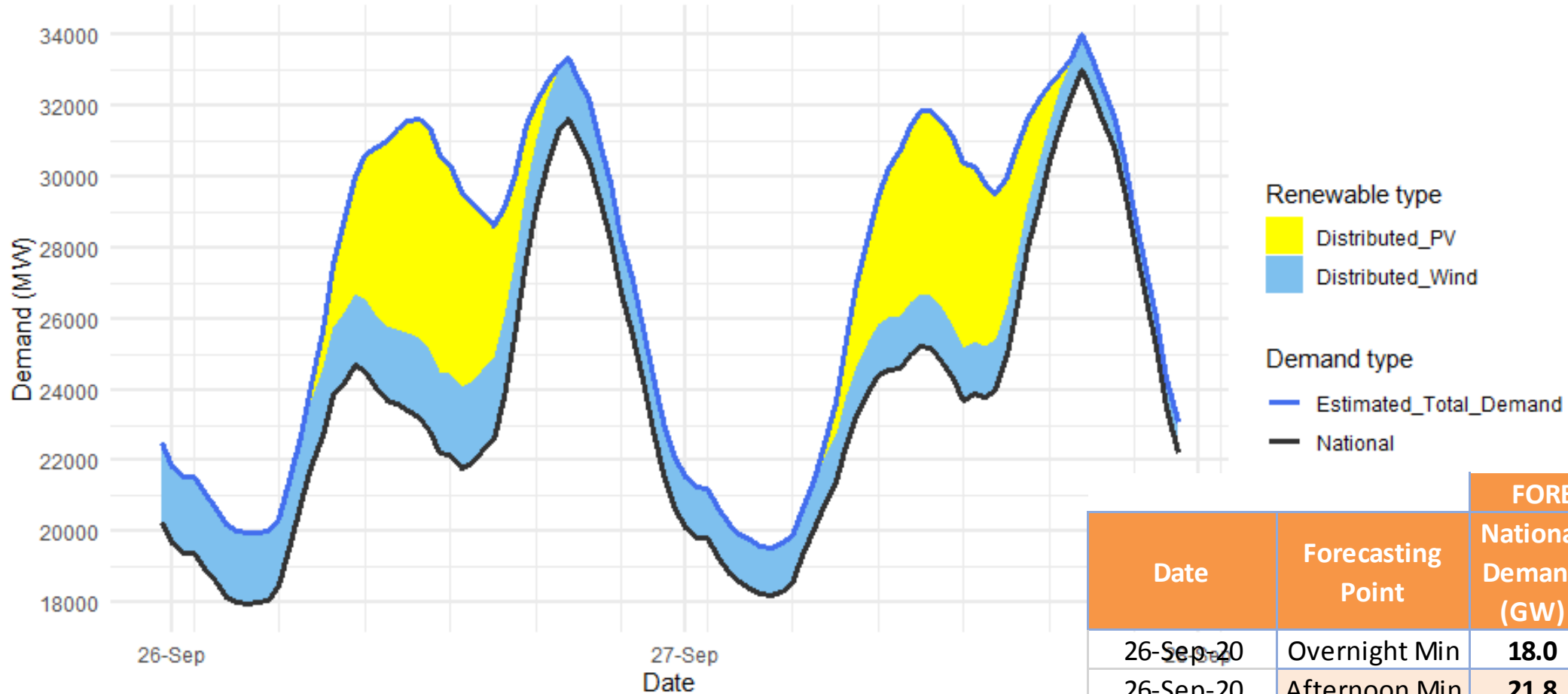
- Estimated_Total_Demand
- National

		FORECAST (Wed 16 Sep)			OUTTURN		
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
19 Sep 2020	Overnight Min	18.1	1.1	0.0	17.7	1.3	0.0
19 Sep 2020	Afternoon Min	21.1	1.8	5.1	20.6	2.0	5.9
20 Sep 2020	Overnight Min	17.3	1.1	0.0	17.6	1.1	0.0
20 Sep 2020	Afternoon Min	22.6	1.1	4.5	22.5	1.0	6.7

Demand | Weekend of 26th & 27th September

ESO Demand forecast for 26-27 September 2020

based on the current government policies in relation to the pandemic and on the latest weather forecast



		FORECAST (Wed 23 Sep)		
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
26-Sep-20	Overnight Min	18.0	2.0	0.0
26-Sep-20	Afternoon Min	21.8	2.3	5.5
27-Sep-20	Overnight Min	18.2	1.3	0.0
27-Sep-20	Afternoon Min	23.7	1.5	5.2

Demand | 2-14 day forecast

Forward Plan 2020-21

Role 1

Q3 deliverable

Daily publications at 14:45

ESO Data Portal → [Demand Data Group](#)

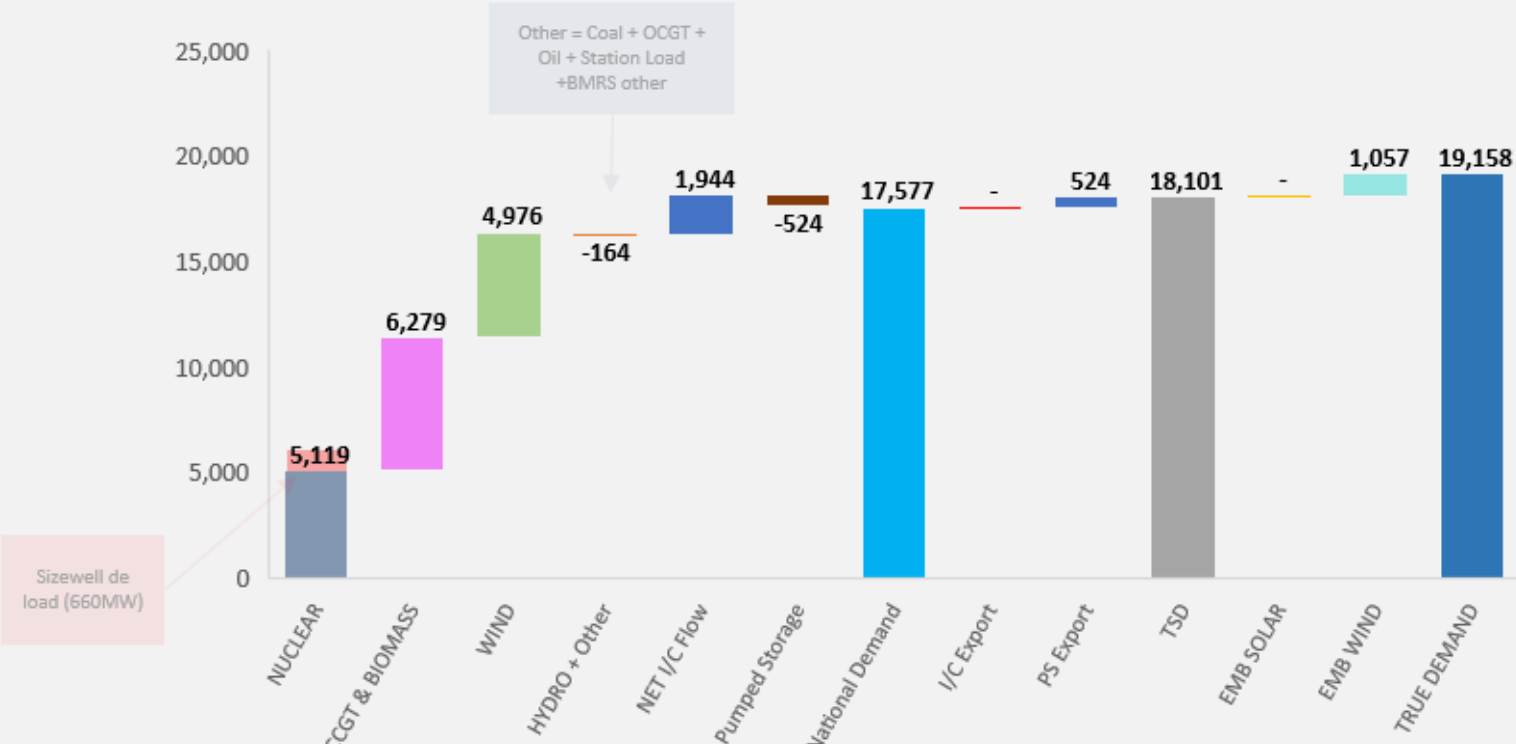
The screenshot shows the nationalgridESO website's 'Data Groups' page. The page has a blue header with the logo and navigation links (Home, Datasets, Data Groups, Help, About). A search bar is in the top right. The main content area is yellow and features a grid of data group cards. The 'Demand' card is circled in yellow. Each card includes an icon, a title, a brief description, and a 'View' link.

Data Group	Description
Ancillary Services	We procure services to balance demand and supply and to ensure the security of electricity supply across Britain's transmission system. On this...
Balancing Costs	Data on forecast and historic balancing costs, including BSUoS costs and forecasts.
Carbon Intensity	Data providing an indicative trend of regional and national carbon intensity of the GB electricity system. This includes emissions from all large...
Constraint Management	Constraint management is required where the electricity transmission system is unable to transmit power to the location of demand, due to congestion...
Demand	This data group houses forecast and historic data for: electricity demand, interconnectors, pump storage pumping, wind generation and solar...
Future Energy Scenarios	Future Energy Scenarios (FES) represent a range of different, credible ways to decarbonise our energy system as we strive towards the 2050 target. FES...
Generation	The Generation data group is comprised of a number of datasets. Firstly, forecast volumes and cost for our reserve margin, at a number of different...
Plans, Reports & Insights	This group contains data that spans a number of the other groups, for example, information on our progress against our Forward Plan.
System	System-wide data are maintained in this data group; for example, historic data on system frequency.

ESO Actions Weekend minimum | Sunday morning

Date: 20/09/2020

SP: 9



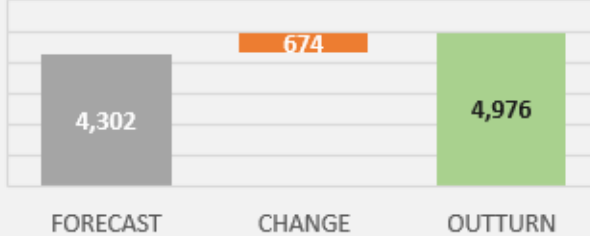
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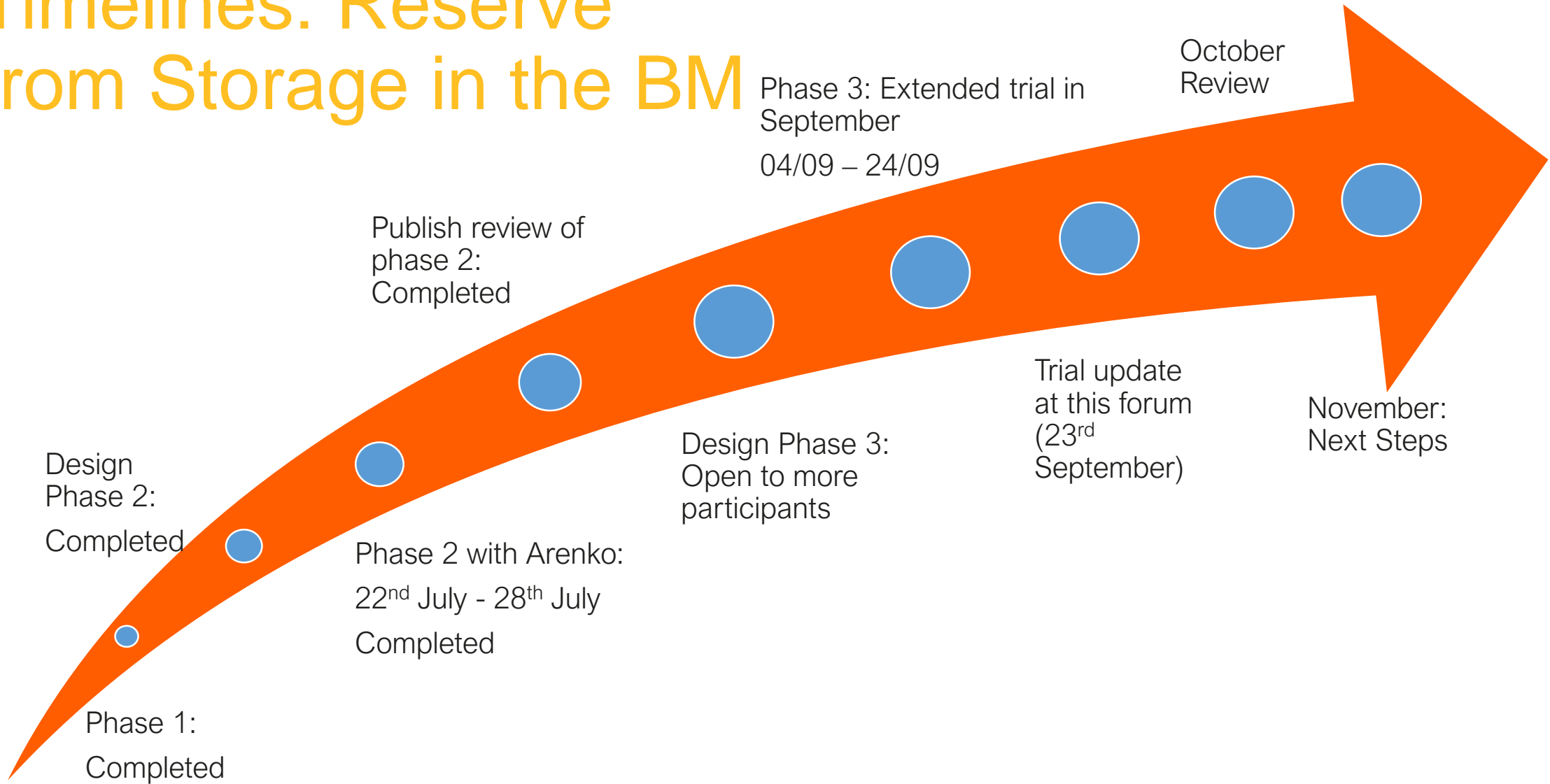
I/C



WIND



Timelines: Reserve from Storage in the BM



Reserve from Storage in the BM

Phase 3 Aims:

- Facilitate more participants efficiently and effectively?
- How does the control room robustly plan, commit and utilise providers taking account of the interactions across the various elements of flexibility accessible e.g. sustained reserve versus frequency control
- What would an enduring solution look like?
- Debate the sustainability of existing arrangements to allow access to fullest flexibility that storage can provide
- Three week extended trial allows us to operate over a variety of market and operational conditions and to adjust processes accordingly

We are learning by doing with this trial. This will feed into future engagement and next steps.

Phase 3 Trial Details

Phase 3 Trial

The following shows the participation on a 24/7 basis

Asset Owner	Operator/Optimizer	BM Unit	Asset Size	Start Date	End Date
Gresham House	Arenko	ARNKB-1	41MW	04/09/2020	24/09/2020
Gresham House	Habitat	AG-HEL00G	49MW	04/09/2020	24/09/2020
Gresham House	Habitat	AG-HEL01H	16MW Import/20MW Export	04/09/2020	24/09/2020
Gresham House	Flexitricity	AG-MFLX02	49MW	22/09/2020	24/09/2020

Reserve from Storage in the BM

Trial Learnings:

The prominent value is for provision of flexible upward reserve allocation.

Range of market and operational conditions encountered:

- Days with greater underlying uncertainty
 - Flexible to have reserve allocated which in real time is not utilised so supporting carbon free operation in 2025 and reduced scheduling cost commitment
- Days with greater volatility in demand forecast and outturn energy
 - Provides a cost-effective mechanism to manage short term real time requirements

Reserve from Storage in the BM

Trial Learnings:

We have been on a journey to gain experience of managing the range of flexibility of these assets

Improved understanding how to create ongoing value across the areas.

- Reserve allocation
- Reserve utilisation
- Frequency control – provides ongoing future reserve allocation i.e. cyclic effect

Experience of operating these assets in a different way

Reserve from Storage in the BM

Next Steps

- October: Extensive review of data and information we have obtained including drawing out interesting days as case studies
- November: Publication of our findings and areas for engagement

Wider Access

Removing barriers to entry | Facilitating competition | Cost-effective routes to market
Enabling smaller & aggregated units, new technologies and renewables

- Shifting to a more diverse mix of cleaner, decentralised power
- NGENO is enhancing systems and developing new solutions to make our system smarter and more flexible
- Facilitating wider access to the GB BM, ancillary services and European Replacement Reserve (TERRE)
- Virtual Lead Party (VLP) – a new type of market participant with fewer regulatory obligations & costs
- Bringing us closer to ‘zero carbon’ operating capability by 2025



WA API – Phase 1 Go-Live

Application Programming Interface (API) to enable Wider Access (WA) to the GB Balancing Mechanism (BM)

- Online data submission to the BM – cost effective for smaller providers
- Enables new technologies to complement our established core network
- Built with support from external test partners
- Market participants develop their own APIs to connect with our API – Tesla the first to Go-Live
- **Smooth Go-live and integrated well with existing systems and processes**

2020

Jan

Replanning – Cyber design improvements

Mar

COVID-19 impact
Resilience planning

June

All routes to market
Announced wider offer of API

July

Maintenance delays
System update issues

17 Sep

Go-Live with 1st user

Trading Transparency

On 26th August we presented our proposed improvements around trading transparency. We'd like your help on what to prioritise in terms of publishing information related to the trades we carry out

We've had 22 responses to the survey so far.

Please take the time to fill out our feedback survey sent after this presentation, which will be open until the end of this week

Trading Transparency survey:

https://nationalgrideso.fra1.qualtrics.com/jfe/form/SV_d0epwvZTTsXxXHT

Q&A

After the webinar, you will receive a link to a survey. We welcome feedback to understand what we are doing well and how we can improve the event ongoing.

Please ask any questions via the Q&A section in Webex and we will try to answer as many as possible now

Please continue to use your normal communication channels with ESO

If you have any questions after the event, please contact the following email address:

box.NC.Customer@nationalgrideso.com

