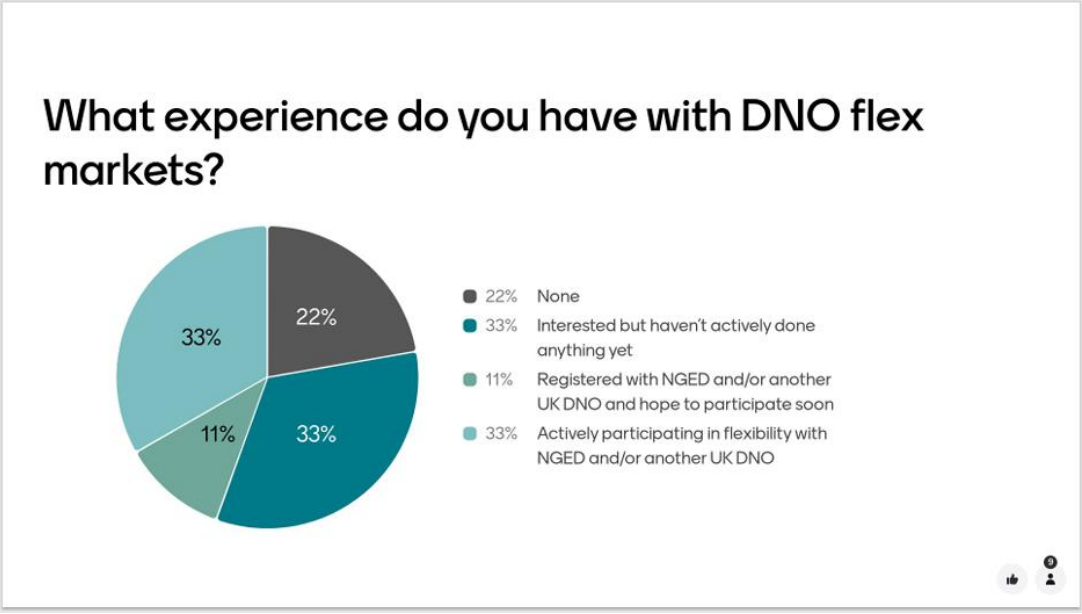
Distributed Generation Owner/Operator Forum – meeting notes

14:00 - 16:00, Tuesday 9 July
London

Forum Webpage Generation Portal

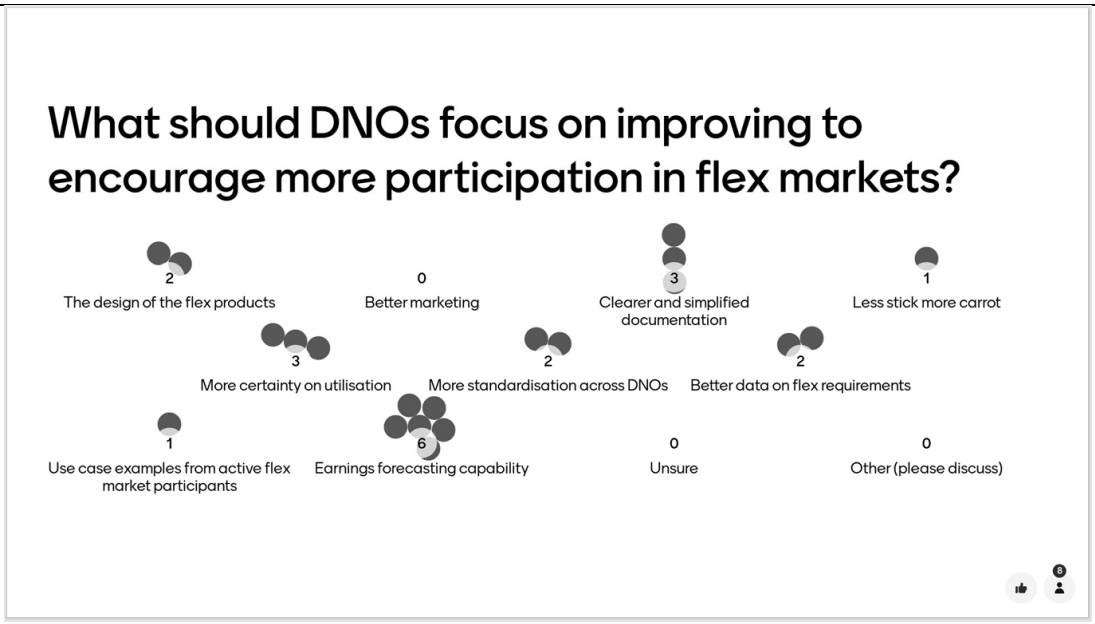
Agenda Item	*Questions,* responses / actions
14:00 Introductions Hannah Stanley, stakeholder manager, Regen Robert Ballentine, head of control centres, NGED	Introduction to the owner operator forum for the new members - Set up with the aim of opening a communication pathway between control room team and the asset owners and operators that manages sites in their license areas. - Four meetings will take place over the year and will explore areas important to delegates from an operational perspective. The room held representatives from asset owners, operators, developers and investors from across the UK. The full attendee list is below. NGED has a new integrated projects team (IPT) that helps to facilitate better engagement between the control room and other departments including the projects, primary network design, engineering design and consents and wayleaves teams. Within the control room team these roles are filled by - Tom West – Engagement & Resilience Engineer (South West & Wales) - Sam Gray – Engagement & Resilience Engineer (East & West Midlands)
14:15 Update on NGED outages and constraints Danielle Greedy, control support engineer, National Grid Electricity Distribution	National Grid Electricity Distribution Outages for 2024 - Reference slides for details Current number of upcoming planned outages total approximately 2,100. This is 300 less than the April check in. The break down of these per license area as follow: - South West – 509 - South Wales – 434 - East Midlands – 726 - West Midlands – 437 These include the number of ongoing outages along with approved, provisional and submitted outage requests. There are currently future plans to identify the impact on the above outages on Distributed Energy Resources (DER) customers.
14:25 Update from the DSO team	Flexibility Markets - the Market Gateway is for distribution flexibility services, enabling customers to register assets for flexibility provision to NGED and NESO only. The platform has been developed with Piclo and Electron.

Helen Sawdon, flexibility commercial manager, National Grid Electricity Distribution	NGED procure yearly term trades and supplement this with weekly trades using existing assets only. Interaction with the markets can be done so via Piclo Max or directly through the Market Gateway.
	
	There are three types of flexibility services offered through the market, these are:
	
	- Dynamic Flexibility Service: allows NGED to call upon flexibility providers on short notice, typically to manage sudden changes in supply or demand.
	  o Price: The average price for this service is £2936/MWh.
	  o Usage: respond quickly to real-time events, such as unexpected spikes in demand or sudden drops in generation. It helps to maintain grid stability and avoid outages.
	- Secure Flexibility Service: used for planned events where NGED requires flexibility to maintain network security. This could be for scheduled maintenance, expected peaks in demand, or other predictable scenarios.
	  o Pricing: The average price for this service is £1045/MWh.
	  o Usage: ensures that the network remains stable and secure during periods when demand is expected to be high or outages are planned.
	- Sustain Flexibility Service: designed for situations where there is a predictable, ongoing need for flexibility over a longer period. It involves regular, scheduled reductions or increases in demand or generation to help manage the network under normal operating conditions.
	  o Pricing: The average price is £68/kW per delivery period.
	  o Usage: manage predictable, longer-term constraints on the network. This could involve balancing supply and demand during specific times of day or throughout certain seasons.
	
	There are 56 flexibility zones on the HV network with a requirement of 166MW and overall revenue stream of £2.7million. NGED are looking to grow volumes across all the markets by opening as many routes as possible, including Piclo and Market Gateway
	
	More information on flexibility and flexible power can be found here and more links can be found in the slides here.
	
	A survey was taken at the end of the session to gather feedback on the delegates participation in flexibility markets. The following are the results of this.



44% of the delegates are actively participating or have registered to participate in DNO flexibility markets with a third of delegates actively participating currently. The remaining 56% have note yet actively engaged in flexibility markets at all.

Those that are not participating in the flexibility markets highlighted that one of the biggest barriers is the lack of clarity around revenue forecasting and opportunity value. One delegate indicated that there were contractual restrictions in place on the assets, preventing their participation.



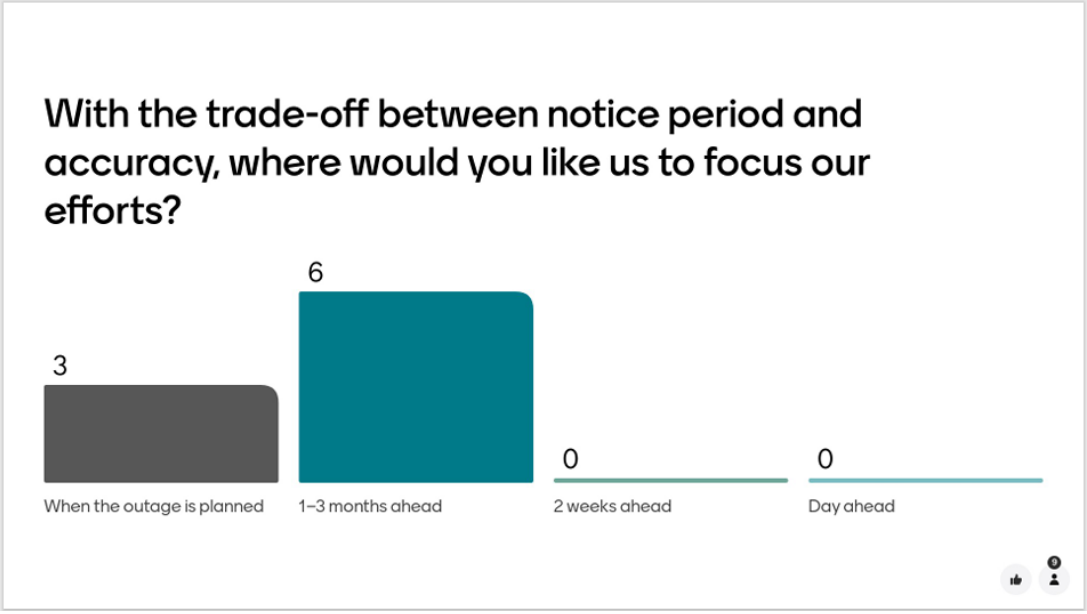
The delegates agreed that the DNO's should focus on improving the forecasting capabilities of earning potential for flexibility provision in order to encourage participation in the markets. This should be done in clearer and more simplified documentation.

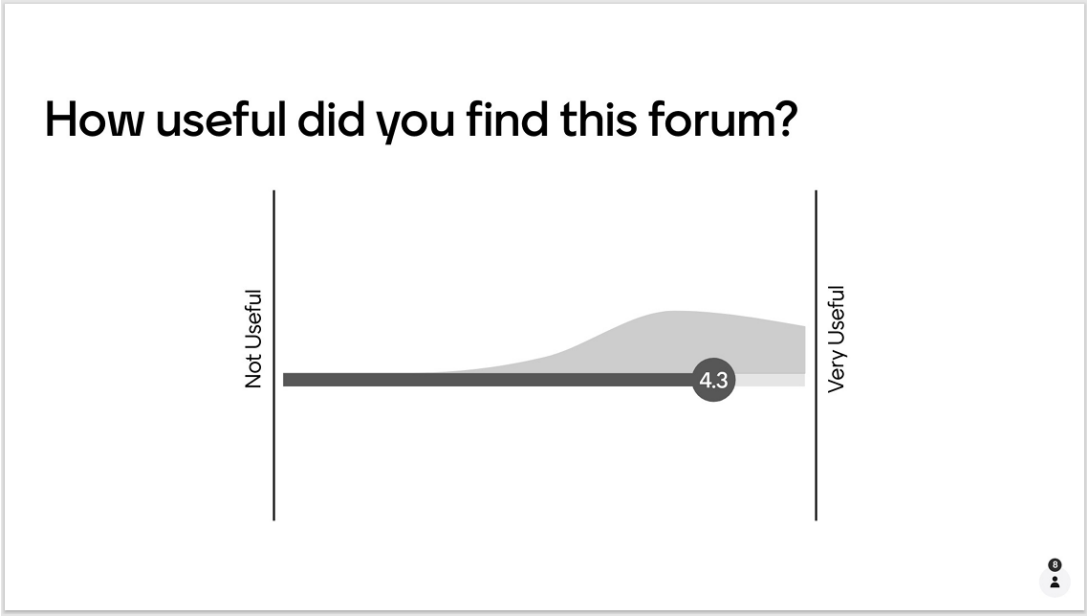
NGED agreed that there was currently an ongoing scheme of work to consolidate the available information into one location to increase clarity.

Other areas of focus were on the utilisation of the flexibility provision, the design on the flexibility products themselves and a more standardised approach to flexibility provision across the various DNOs.

	The role of the aggregator within flexibility provision was also discussed, delegates believed the platform was simple enough to participate in without the requirement of an aggregator, which would reduce the profitability of the markets. They agreed they would therefore, not be more likely to participate in the flexibility market with the use of an aggregator.  90% of participants indicated that they will be actively looking to participate in DNO flexibility markets over the next 4 years. The final 10% were unsure whether they would be participating in the future.
14:35 Constraint mitigation using Active Network Management (ANM) Pete Aston, specialist connections engineer, Roadnight Taylor	Pete discussed a case study in which there were significant outages due to the refurbishment of a 132kV substation. Roadnight Taylor were able to agree with the DNO on a number of solutions to mitigate the outages, this included a temporary connection with an alternative substation and the creation of an ANM scheme. The scheme required a considerable amount of resource and time put in place and would not have been possible with shorter notice period. Overall it saved the customer over £4million in costs relating to the outage (degeneration costs and lack of generation revenue). Important to note that this solution would not be appropriate for all outage scenarios and each must be done on a case by base basis. The following suggestions were given to both the DNO and the asset operator: 1. The longer the predicted outage, the longer the notice period required. At present, DNO's are required to provide a minimum of two weeks for each predicted outage. This is suitable for short term outages of less than a day. Excessive outages, however should be given a longer notice period.

	2. Asset owners / operators should be well acquainted with their connection agreements, taking on board curtailment and outage rights etc. This should be considered when taking on existing sites and particular attention should be paid to the condition of connected infrastructure eg the age of the substation and the possible requirement for future upgrades. 3. Communication between the DNO and asset operator is key. There are multiple possible solutions to any given scenario and these can be discussed. A solution that may cost the asset owner hundreds of thousands, may save millions and so should not be discounted.
15:00 Enhancing the outage planning process Danielle Greedy, control support engineer, National Grid Electricity Distribution	A precis of the current outage planning process can be seen below, further details can be found in the slides: 1. Week 49 – Year Ahead Outage Plan is received (year runs March to March) 2. Week 1-4 – 132kV Outage Plan developed and submitted. Any resultant planned curtailments affecting DERs uploaded to the Generation Portal 3. Week 5-8 – 66/33/11kV Outage Plans developed. Any resultant planned curtailments affecting DERs uploaded to the Generation Portal 4. Week 8 onwards – Ad-hoc outages submitted and assessed by Outage Planners. Curtailment Report send every Friday (used to be a 6 week curtailment report) *Reminder* that the curtailment requirements are based on the connection agreement so it's important to ensure this is read and understood fully. Currently, meetings to discuss the outage plans with NGED projects team happen on a yearly basis. The new outage planning process incorporates the newly developed IPT (mentioned in the intro) with monthly meetings alongside the other departments in NGED (projects, primary network design, engineering design and consents and wayleaves teams). This allows earlier visibility of longer outages, providing greater opportunity to engage with DSO departments and potentially reduce the amount of curtailment. Bespoke DSO curtailment optimisation and outage planning studies are currently being undertaken for unusual outage combinations or where outage would require excessive curtailment / interruption for DER customers. The Ad-hoc outages, not considered excessive are dealt with via the Generation Portal. *Q. What is considered an excessive outage?* *A. Excessive outages do not have a definitely quantitative measure and are considered on a site by site basis. They are considered to be those outages that have significant impact on the import or export capacity of a site and would usually by those with a prolonged time frame.*

DSO Curtailment Optimisation Joe Davey, DSO energy management engineer, NGED James Mitchell, DSO energy management engineer, NGED	The system is seeing an increase in the frequency and significance of outages due to the reduced headroom available on the network and the resultant investment. The DSO has a remit to reduce curtailment overall. The DSO Curtailment Optimisation leverages advanced data analysis and real-time operational adjustments to minimize curtailment. Within connection agreements the specific cases where curtailment is required is based on the reasonable educated scenarios that the site will be a part of within the prevailing network conditions. Year Ahead: The prevailing network conditions are used for the long term 'Year Ahead' modelling. They forecast the underlying peak loads (generation and demand) on a season by season basis, to help design the network and plan for outages over the coming year. Short Term: At about 2 weeks ahead the DSO begins to use short term forecasting, using statistical modelling with historical modelling inputs as well as the external conditions of the network. This forecasts with a lower range of values and greater accuracy but with less notice period. ANM and real time telemetry also plays a part in this short term modelling but cannot be used to forecast. The closer to real time, the greater the level of certainty and accuracy. There is, therefore a trade off between notice period and level of accuracy.  All the delegates agreed that a longer notice period is preferable even with the trade off with accuracy, with 66% opting for 1-3 months ahead. The most important factor, however, was ***certainty***, the point at which the outage becomes a certainty is where most efforts in development should be focused. *"Certainty is more important that accuracy"*

15:55 AOB and feedback Hannah Stanley, stakeholder manager, Regen	This year, the owner operator forums include two online check in meetings, each lasting an hour and two in-person events in Bristol and London. The in-person events look to encourage interaction and collaboration between owner operators and NGED. This final session of the event provided brief feedback on the session and looked at areas of interest for future events.  86% of delegates believed the event was of value with the most valuable session focusing on enhancing the outage planning process. - Additional content that delegates wanted to see in the future included: - Outage impact tailored to mode of generation (solar specific considerations etc) - Process around repowering project and level of support from DNOs on G99 applications - Additional data that can be shared - Future changes due to additional generation connecting to the network - REMA consultation process and DSOs position

Attendee List

Name	Surname	Job Title	Organisation
Pete	Aston	Specialist Connections Engineer	Roadnight Taylor
Robert	Ballentine	Head of Control Centres	National Grid Electricity Distribution
Monica	Crosa di Vergagni	Grid Services Lead	RES
Joe	Davey	DSO Energy Management Engineer	National Grid Electricity Distribution

Grace	Egan	Client Manager	Bright Renewables
Danielle	Greedy	Control Support Engineer	National Grid Electricity Distribution
Matthew	Green	Senior Asset Manager	RES
Tao	Han	Chief Representative	Windey Energy
Juan	Jose-Cuesta	Technical Director	Octopus Energy Generation
Emma	Madray	Events Manager	Regen
Chris	McKaig	Head of Grid Connections	NextEnergy Capital
James	Mitchell	DSO Energy Management Engineer	National Grid Electricity Distribution
Harry	Pratt	Commercial Asset Manager	Octopus Energy Generation
Mateusz	Przelomski	Technical Manager	WiseEnergy
Helen	Sawdon	Flexibility Commercial Manager	National Grid Electricity Distribution
Hannah	Stanley	Stakeholder Manager	Regen
Tom	West	Engagement and Resilience Manager	National Grid Electricity Distribution

For specific outage queries, please contact the NGED nominated person detailed on the outage notification within the Generation Portal, for general queries use the following regional emails:

South West
nged.swestwalesgen@nationalgrid.co.uk
02920332843

South Wales
nged.swestwalesgen@nationalgrid.co.uk
02920332843

West Midlands
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08452661688

East Midlands
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Date of next meetings

- Wednesday 18 September, 14:00-15:00 – Online check in – book here
- Thursday 21 November, 14:00-17:00 – Osborne Clarke, Bristol – book here