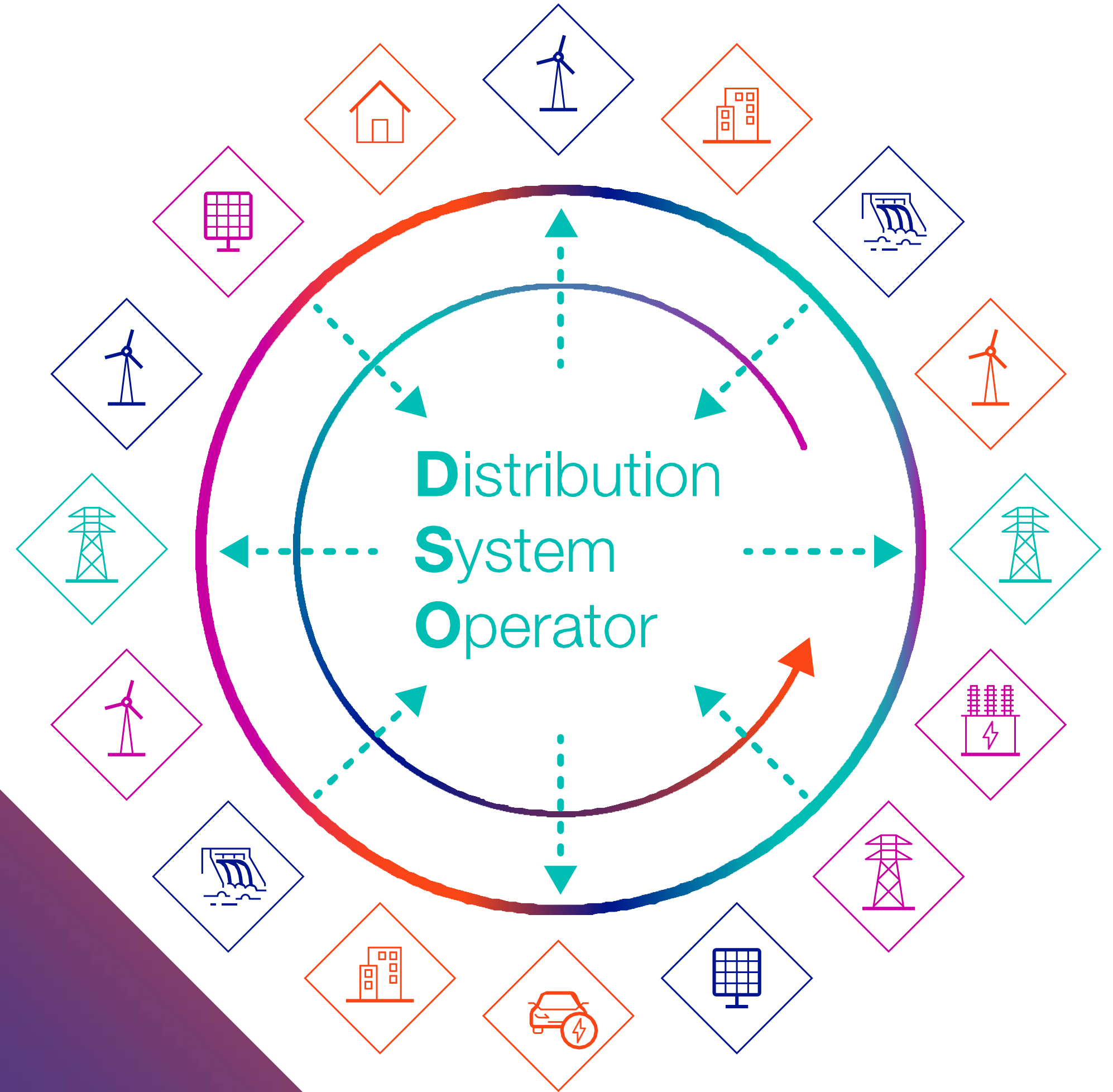


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Delivering the Electricity Future Now

Workshop for all
National Grid DSO
Stakeholders

24 October 2024

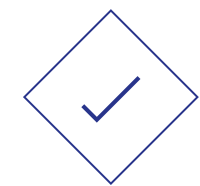


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**Welcome and
housekeeping**

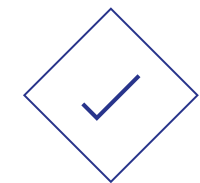


Welcome and housekeeping

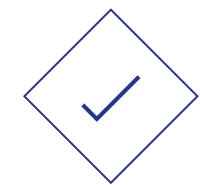


There will be several presentations throughout the morning followed by discussions in breakout rooms and some electronic voting.

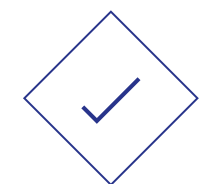
- Please mute yourselves during the presentations.
- Please turn on your cameras during the discussions – if your internet allows.



We will be recording the main presentations but not the discussions. Independent note-takers will be noting your feedback during the discussions.



We will be taking some photos and screenshots. If you are not comfortable being in a photo, please send a message in the chat to Vincent Luxmoore (EQ).



If you have any questions during the presentations, please post these in the chat. Alternatively, there will be plenty of opportunity to ask questions in the Q&A session at the end of the workshop.

Agenda

Timings
(approx.)

Welcome presentation from Cathy McClay, Managing Director National Grid DSO

10.05am

Our Mid-Year DSO Performance Update with Cathy McClay and Hayley Burden, Head of Strategy, Regulation & Governance

10.10am

- Our progress against strategic objectives and KPIs
- Stakeholder survey results and action plan

Spotlight on Flexibility with Matt Watson, Head of Flexibility Markets

10.25am

- Update on our flexibility markets development

Breakout rooms, discussion and voting

Spotlight on Connections with Matt Pope, Secondary System Planning Manager and Dave Tuffery, Head of System Models and Data

10.55am

- How the DSO enables connections
- How our data facilitates connections
- Update on our new Capacity Map, coming soon!

Breakout rooms, discussion and voting

Coffee Break

11.25am

DSO Governance Update with Steve Quinn, Senior DSO Policy Engineer

11.35am

- Progress on our governance, including conflicts of interest

Breakout rooms, discussion and voting

Panel Q&A session, facilitated by Cathy McClay

12.00pm

Wrap up and close

12.25pm

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Introduction

Cathy McClay

Managing Director, National Grid DSO



Purpose of today

- 1 Show Action**  Demonstrate our focus on delivery and how we've acted on your feedback over the past year.
- 2 Information**  Share our mid-year performance and progress on key deliverables.
- 3 Listen**  Continue to listen and understand what matters to our stakeholders; adapting our path if required.

Engaging with our stakeholders is essential for delivery of a decarbonised power system




Planning and Network Development

- Maximise 'hidden' capacity.
- Ensure network investment is delivered when it's needed, at the lowest cost to consumers.
- Collaborate and coordinate across the whole system to help stakeholders achieve their decarbonisation plans.



Flexibility Market Development

- Collaborate with industry stakeholders to simplify and standardise how we procure our flexibility services.
- Coordinate across the whole system to deliver new market opportunities and reduce barriers to entry for all customers.



Network Operation

- Facilitate whole system coordination that improves efficiency and transparency of decision-making.
- Continuously improve our data, technology, and processes to operate a responsive and dynamic network.

- 
- The DSO roles interact with many different stakeholder groups
 - We are committed to working collaboratively across the industry to deliver the pace of change required for decarbonisation
 - We appreciate your time and input in helping us to deliver value now and in the future

Our DSO Team here with you today



Cathy McClay
Managing Director,
National Grid DSO



Hayley Burden
Head of Strategy, Regulation
& Governance



Matt Watson
Head of Flexibility
Markets



Dave Tuffery
Head of System Models & Data



Matt Pope
Secondary System Planning Manager



Steve Quinn
Senior DSO Policy Engineer

Our Q&A Panel



Fiona Campbell

Deputy Director of Energy Systems Design
and Development at Ofgem



Regina Finn

Independent Chair of our DSO Panel and Director at Lucerna
Partners and Chair at Low Carbon Contracts Company



Hayley Burden

Head of Strategy, Regulation
& Governance



Gary Swandells

Director of Smart Grid Consultancy and
member of Ofgem DSO Assessment Panel

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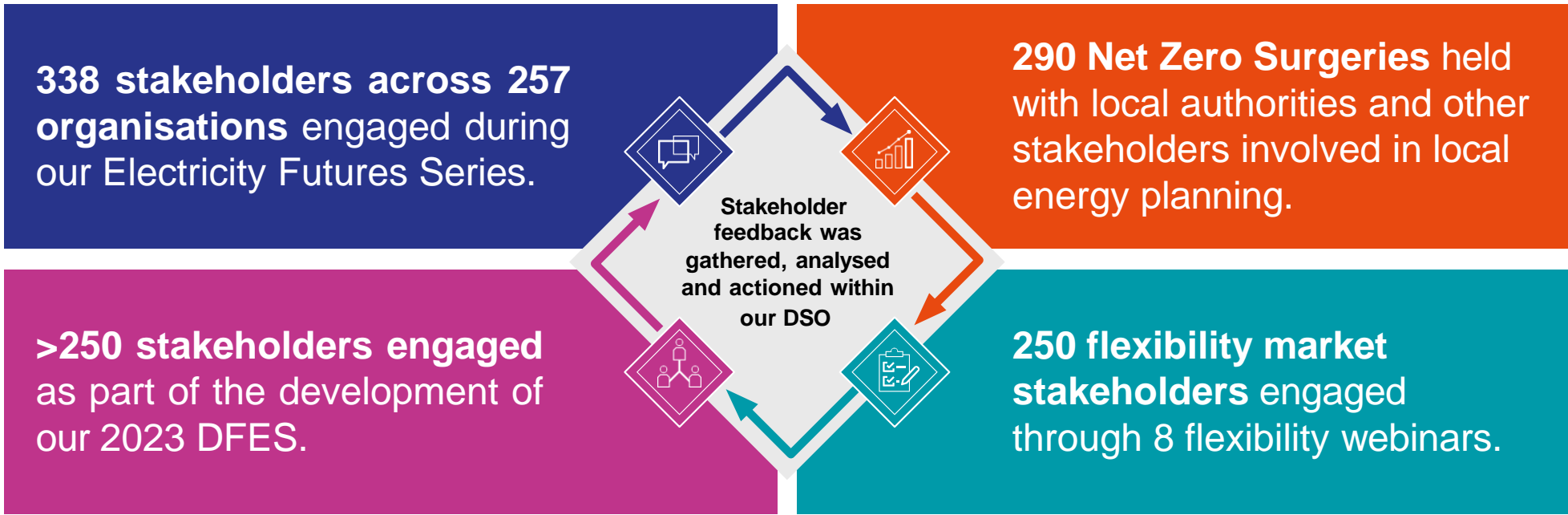
DSO Mid-year performance



Our focus last year was to listen and understand our stakeholder's priorities

Electricity Futures Series






 <p>Shaping the Future Together</p> <p>19th September QEII Westminster</p>	 <p>Supporting regional ambitions</p> <p>16th November Virtual</p>	 <p>Governance for Net Zero</p> <p>31st January IET London</p>	 <p>Ensuring continued success</p> <p>28th March Battersea Power Station</p>
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Stakeholder outputs



We have made significant progress against our commitments, with more to deliver for the remainder of FY25

FY25		Q1	Q2
	Planning and network development	<ul style="list-style-type: none"> Held 4 Distribution Future Energy Scenarios (DFES) webinars Created a systems constraint and network solutions register 	<ul style="list-style-type: none"> Network Development Plan (NDP) consultations seeking stakeholder feedback and explaining methodology NDP Report including technical annexes & datasets published
	Network operation	<ul style="list-style-type: none"> Continued to lead the Open Networks primacy working group and implement decision-making priorities 	<ul style="list-style-type: none"> Conducted NDP reviews with Local Authorities (21 complete) Secured funding for next phase of PRIDE digital innovation project Insight from DFES webinars shared
	Flexibility Market development	<ul style="list-style-type: none"> Reviewed and updated data visible on the Connected Data Portal including informing webinar with Flexibility Service Providers FSPs on flex market data 	<ul style="list-style-type: none"> Started Short term load forecasting for dispatch and curtailment modelling
	Governance	<ul style="list-style-type: none"> Flexible Power Portal API Workshop to introduce new flexibility products Distribution Flexibility Services Procurement Statement 	<ul style="list-style-type: none"> Supported the integration of PICLO Max to our Market Gateway to broaden access to our products and services DSO Joint Consultation with UKPN
	Stakeholder	<ul style="list-style-type: none"> Embedded DSO Independent Panel Published quarterly KPIs 	<ul style="list-style-type: none"> Flex Evolution Webinar - introducing new products and wider ENA influenced changes On Track to Trade Webinar - how to participate in flexibility
		<ul style="list-style-type: none"> Launched Local Authority Newsletter 	<ul style="list-style-type: none"> Supported Connections Webinar
		<ul style="list-style-type: none"> Whole System Co-ordination register Network headroom report and methodology 	<ul style="list-style-type: none"> Closing Technical Limit Phases issued to customers ENA Transformer Utilisation Methodology Statement
		<ul style="list-style-type: none"> Over 5 publications informing stakeholders on Flexibility (Flex in Five), Settlement, Use cases, and the Flex Procurement Journey First dispatch of trades via PICLO Max 	<ul style="list-style-type: none"> Governance policy document DSO3/0 Electrical Modelling and Analysis published
		<ul style="list-style-type: none"> Ongoing engagement with Local Authorities via net zero surgeries, supporting community energy events and other regional engagement initiatives 	<ul style="list-style-type: none"> Published 8th Distribution Network Options Assessment (DNOA) Regional Energy Strategic Planner (RESP) Consultation Submitted
			<ul style="list-style-type: none"> Trial processes to manage potentially conflicting decisions (primacy) progress
			<ul style="list-style-type: none"> 2nd Issue of Local Authority Newsletter Opened DSO Website refresh consultation

DSO FY25 Performance Scorecard

Role	Key Performance Indicator (KPI)	23/24 Performance	24/25 Performance	24/25 Target	Current Trend
Planning and network development	Percentage of outcomes in our annual investment report (DNOA) which recommend flexibility	22.5%	24.4%	23%	↑
	Percentage accuracy of load forecast across our substations for the year ahead	90%	-	94%	→
	Percentage of local authorities in our licence area that require our support, and we are supporting to create LAEPs and decarbonisation initiatives	93%	100%	100%	↑
Network operation	Percentage of potentially conflicting decisions between NESO and DSOs which have an agreed process to manage them	<1% (2/2600)	8.3% (96/1152)	9% Trial with UKPN	↑
	Percentage of feedback received from Network Operation publications and regular engagement with stakeholders	-	-	85%	→
	Amount of curtailment avoided through enhanced outage planning process	58GWh (5% of total curtailment)	147GWh	100 GWh (10% of total curtailment)	↑
Flexibility Market development	Assets registered and pre-qualified on Market Gateway	70,000	86,000	100,000	↑
	Percentage of feedback received from Flexibility Market Development publications and regular engagement with stakeholders	-	83%	85%	↑
	Percentage of flexibility available vs requested	34.6%	55.4%	47%	↑
	Reinforcement investment deferred through targeted use of flexibility	£80m	-	£90m	→
	Number of flexibility use cases where the revenue stacking is not possible	61%	61%	55%	→
	Volume of flexibility procured in our regions	17GWh	3.1GWh	19GWh	↑
	Volume of domestic asset capacity available through Market Gateway	166MW	310MW	237MW	↑

The background of the slide features a photograph of a renewable energy site. In the foreground, there are rows of solar panels tilted towards the sun. In the background, several wind turbines are visible against a bright, hazy sky at sunset or sunrise. The sun is low on the horizon, creating a lens flare effect. The overall scene is bathed in warm, golden light. The slide has a dark blue and purple gradient overlay on the left side.

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Stakeholder Survey Actions

Hayley Burden

Head of Strategy, Regulation & Governance

In Spring 2024, we carried out the first annual DSO survey, **scoring an average of 7.77/10**

Survey Process

Scored 1-10 (1 very dissatisfied to 10, very satisfied) on 5 questions:

- Our coordination with other network and system operators.
- Our provision of data and information.
- Our support to flexibility market development.
- Our decision-making framework.
- Our approach to network planning.

Survey Insights

- We received a total of 213 pieces of feedback.
- Local Authority stakeholders were the highest proportion of respondents.
- Our highest score was for network planning at 8.14.
- Our survey response rate was 25%.
- Stakeholders scored us on topics/questions they had little or no knowledge of.

Feedback Insights

There were three key feedback themes:

- **Data** – stakeholders value data but improvements can be made to aid accessibility and understanding.
- **LA support** – more support to understand topics such as flexibility, how to connect and understanding data.
- **Grid capacity** - Frustrations about length of time to connect, concerns about missing funding deadlines and lack of understanding of the DSO/DNO interface.

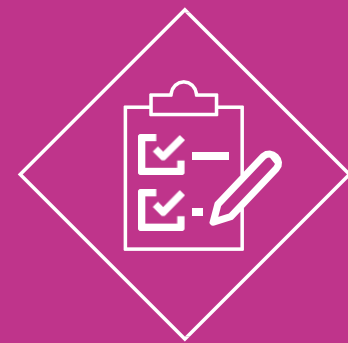
We are committed to actioning your feedback to improve our performance in the next survey.

We are taking positive action to address stakeholder feedback and improve our service to you



Actions to date

- Reviewed all feedback and developed a stakeholder survey action plan – 59 actions, 42% complete.
- Follow-up conversations with stakeholders (where known) to discuss feedback.
- Working with other DSOs and the survey provider to improve the survey process.
- Dedicated Local Authority webinar on 2nd October to help address feedback e.g. detailed data explanation.
- Published a Guide to Flexibility for Local Authorities.



Planned action before next survey

- Updates to key data maps showing future network opportunities.
- Further bitesize data explanation sessions for interested stakeholders.
- Clearer explanation of how the DSO is enabling connections (spotlight today).
- Close working with our Connections Department to improve data and digital tools – webinar 6th November.
- Provide greater clarity on how the DSO-DNO interact and manage decisions (spotlight today).

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Update on Flexibility

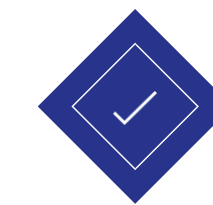
Matt Watson

Head of Flexibility Markets

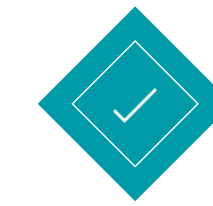


Flexibility Procurement Activity

- **64 High Voltage and 744 Low Voltage locations** where we're seeking Flexibility. **Over 230MW of requirement and £8m in market value** in our long-term trades.
- Includes **three trial zones for Demand Turn Up and Generation Turn Down**. This would incentivise consumers to increase their electricity usage at times when there's lots of low carbon energy available.
- These **incorporate the latest industry standardised outputs** from the Open Networks Project (Pre-qualification, Contracts, Products and Settlement).
- Procurement closes on the **18th November**.
- **More information around how to get involved is on our website or contact: NGED.Flexiblepower@nationalgrid.co.uk**



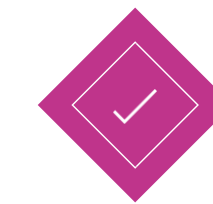
86,000 assets registered on our Market Gateway Platform



310 MW of domestic asset capacity



3.1GWh of flexibility procured



55.4% of flexibility available vs requested

Flexibility Market Development

Market Access

- First weekly trades dispatched through Piclo Max integration.
- Long-term trades now available.

Market Design

- Consulted with UKPN on topics such as Demand Turn Up, Baselineing and Performance Management.
- Outcomes shared with Open Networks.
- Summary of results and next steps to be published this month.

Market Transparency

- Held a workshop seeking feedback on Flexibility Data Accessibility.
- Constructive feedback received.
- Improvement plan in development.



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Breakout
discussions



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**Electronic
voting**



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Planning and Network Development

Matt Pope

Secondary System Planning Manager

David Tuffery

Head of System Models & Data



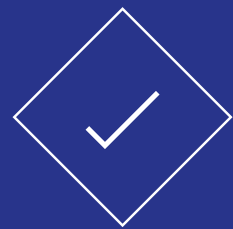
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**Do you have
an electric vehicle?**

Quick Poll: (30 seconds)



Spotlight on Connections



Commitment:

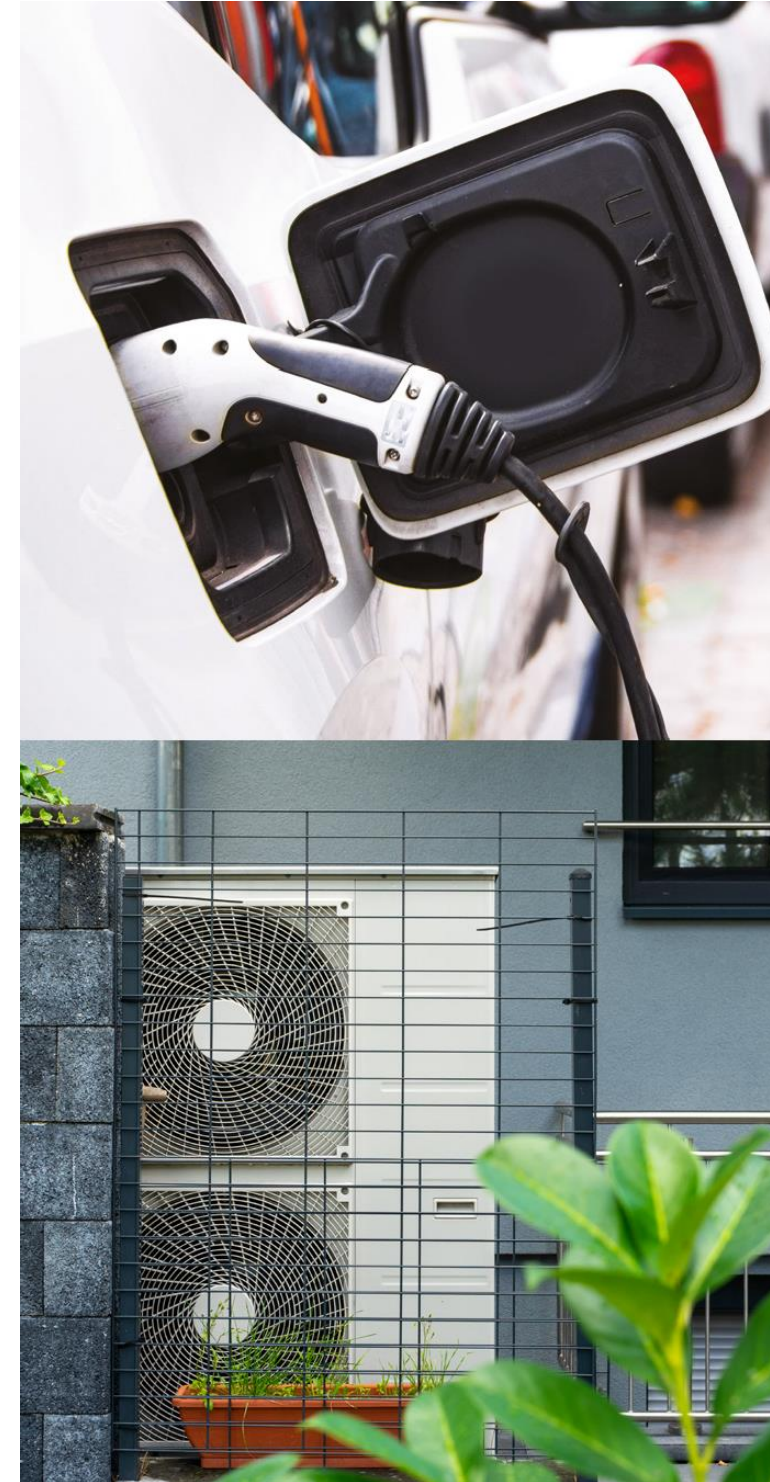
To ensure that our infrastructure is ready for **1.5 million Electric Vehicles** and **600,000 heat pumps by 2028**.

The typical heat pump requires around **5,000 Watts** – that's more than enough to power a kettle and a toaster, at the same time.

The average Electric Vehicle charge point needs a little over **7,000 Watts** – that could be enough power to cater for a whole home.

If simply added together, this would equate to **13.5 Gigawatts**.

Thankfully, diversity between individual installations means we need not consider such a high figure.



Connectability

Customers can connect their electric vehicles, heat pumps and renewable generation.

We will use innovation and digitalisation to enable customers to adopt domestic level low carbon technologies at huge scale and as soon as they want, with network capacity never a barrier to connection.

We will ensure that the infrastructure is in place to accommodate at least an additional **1.5 million electric vehicles** and **600,000 heat pumps** with adaptive plans that can flex to meet greater demand if change happens even quicker than we predict.

The DSO's Role in Connections

We listen to our **stakeholders**, such as Local Authorities and large industry.

Information fed into National Grid DSO's **Distribution Future Energy Scenarios** (DFES).

Forecasts produced for almost **190,000 individual substations**.

National Grid DSO direct proactive strategic investment – in the **right place** and at the **right time** – striking a balance between investing too early and investing too late.

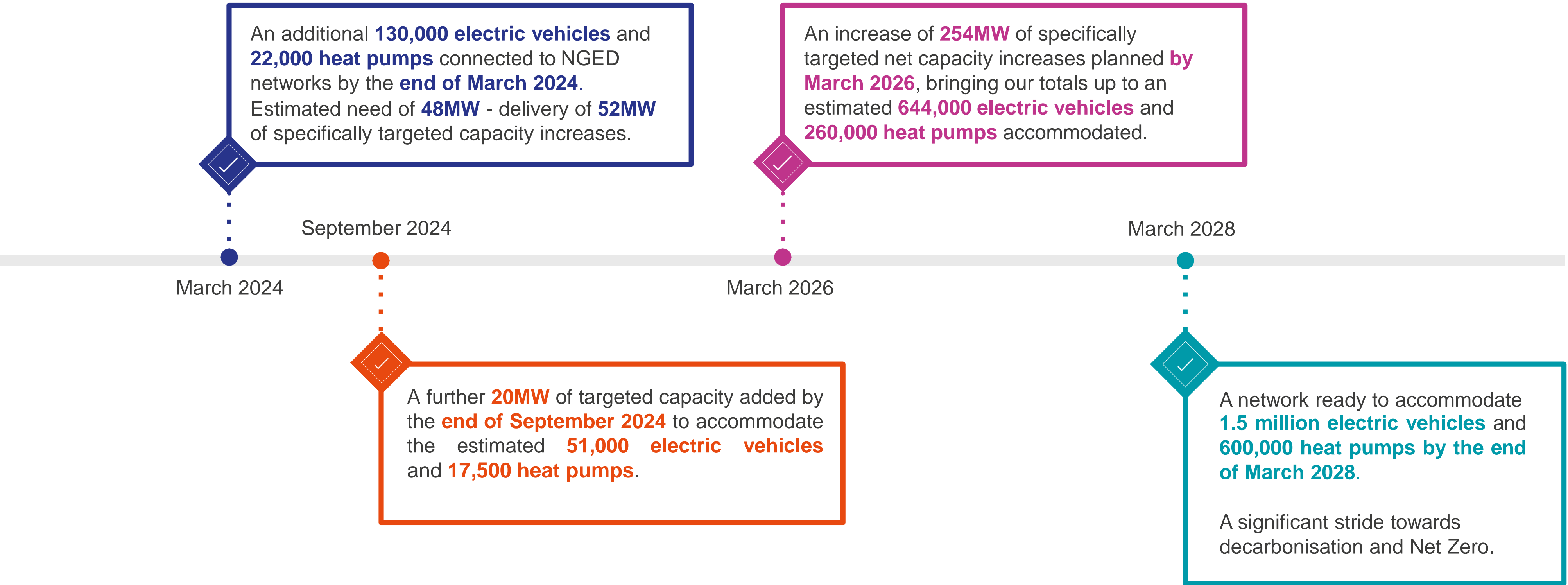
We aim to **maximise the use of capacity** in our networks through the use of **flexibility** and improved **network operation**, to help accelerate connections to our networks.

Support the DNO with **data** and **information** to help inform the connection offer process.

The DSO does not manage the connection process, queue management or the customer relationship, nor design and build the connection to National Grid's networks.



Our Secondary Network Journey



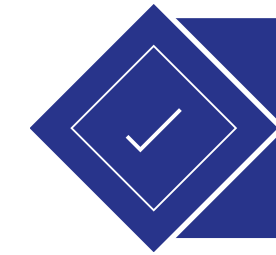
Accelerating Connections: Technical Limits

Background

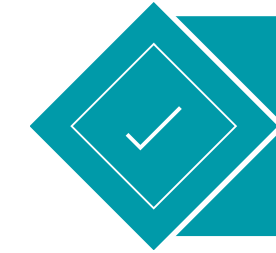
- Nationally, there are constraints on the transmission system with connection dates out to 2038.
- DNOs are required to seek permission from transmission for any generation schemes over 1MW.

What is the Technical Limit initiative?

- Prior to the Technical Limit Initiative, schemes would have had to wait for transmission works to be completed before connecting.
- The Technical Limit initiative enables more agile and shovel ready customers, lower in the connection queue at Grid Supply Points (GSPs), to connect earlier, thereby releasing capacity that is not currently being utilised.



We have already offered acceleration to 3.5GW



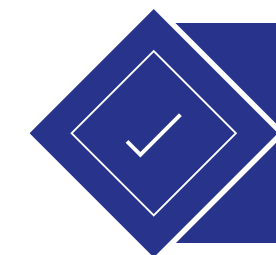
49 schemes have accelerated their connection date, totalling 1.6GW



The average acceleration is 5.8 years



We were the first DSO to energise a scheme under this initiative



We are working closely with NESO and NGET to continue developing this initiative

Coming soon - Capacity map

- Will cover both the primary and secondary networks.
- Will combine both of the existing capacity maps.
- We are looking for people to test the map and data.
- Please email NGED.DSO@nationalgrid.com to get involved.
- This will launch in November!

The screenshot displays the National Grid Capacity Map interface. At the top, the 'nationalgrid' logo is on the left and 'Capacity Map' is on the right. Below the logo, the 'Primary (Demand)' filter is active, with a 'Hide' button to its right. The sidebar contains several filter sections: 'Choose map type:' with a dropdown set to 'Primary (Demand)'; 'Filter by:' with a 'Supply Type' dropdown set to 'Show all'; 'Demand Constraint' with a dropdown set to 'Show all'; 'Licence Area' with a dropdown set to 'Show all'; and 'Location' with a search bar containing 'Search...'. The main map area shows a geographical view of the UK with numerous colored circles (green, orange, red, blue) of varying sizes, indicating capacity constraints. Labels for regions like 'West Midlands', 'South Wales', and 'East Midlands' are visible. A small inset window at the bottom left shows a browser window titled 'National Grid - Generic Substati...' with a smaller version of the map.

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**Breakout
discussions**



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**Electronic
voting**



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Coffee break

10 Minutes



How can we make our DSO
web pages better for you?
Tell us in this short survey



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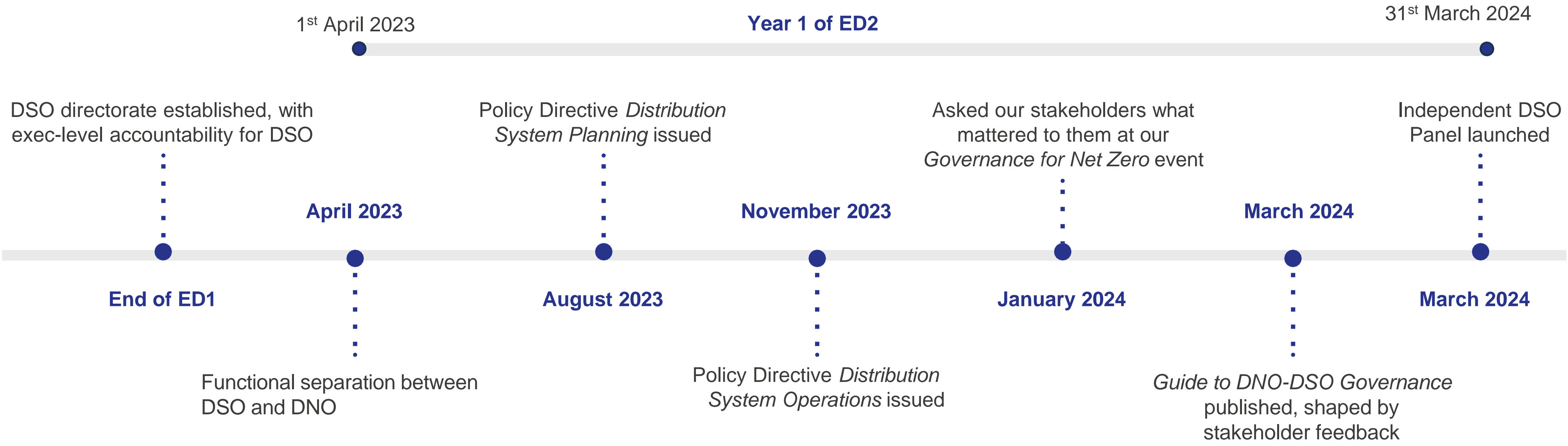
Governance update

Steve Quinn

Senior DSO Policy Engineer



Our governance progress in year 1 of ED2

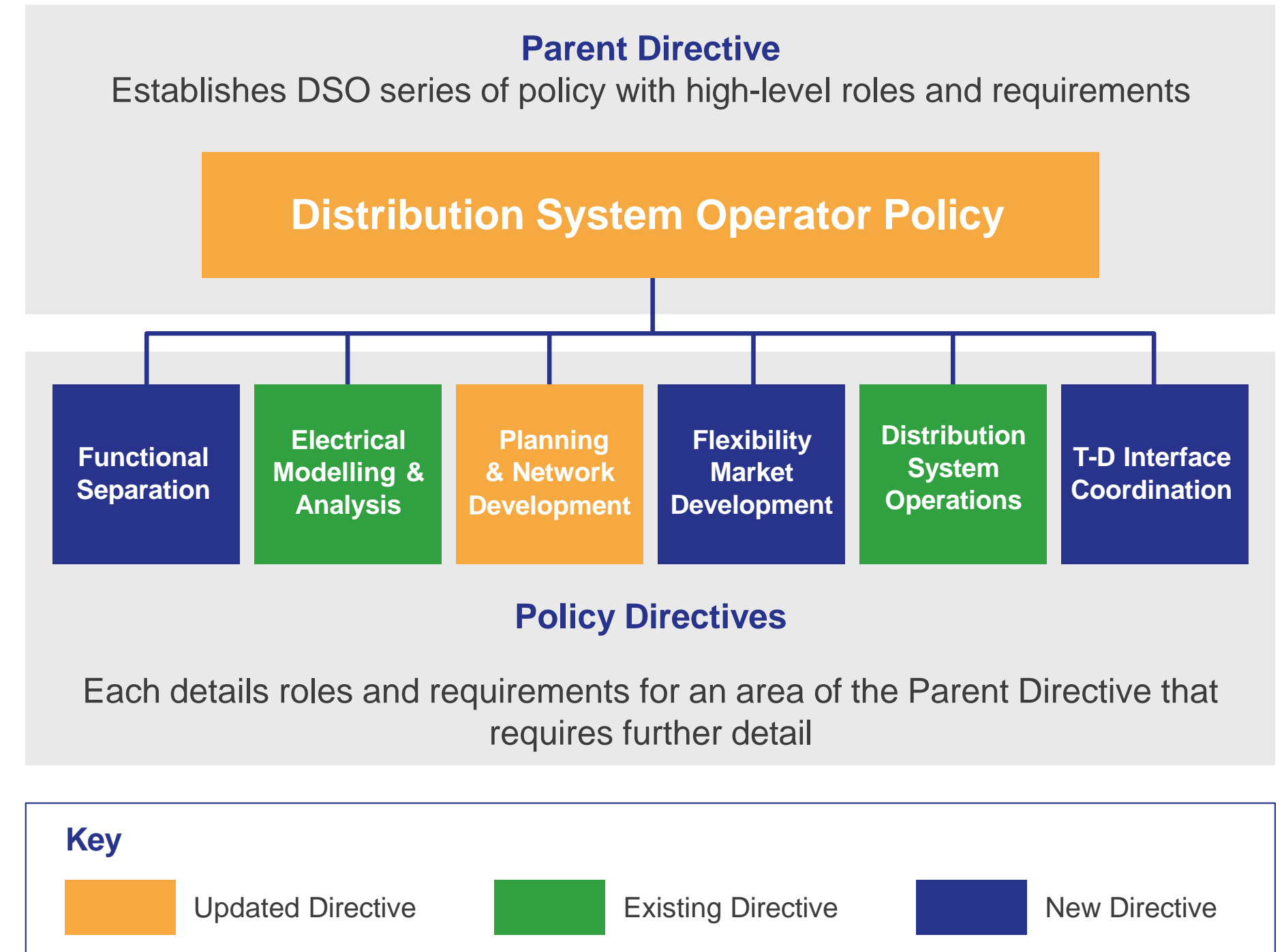


Stakeholders have told us that our governance has good visibility and takes a sensible approach, but there's more to do:

- provide more detail on how we interact with the DNO and make decisions
- explain how we manage conflict of interest between DSO and DNO

Governance in year 2 of ED2: documenting decision-making

- We established the DSO series of policy at the end of 2022.
- As we continue to implement functional separation between DSO and DNO:
 - we are updating existing policies to reflect the new accountabilities of DSO and DNO, with clear-decision making frameworks.
 - we are also creating new policies to provide comprehensive coverage of our roles as DSO and our approach to functional separation.
- These policies are primarily for internal use but are published for transparency. We will summarise them in an updated version of our *Guide to DNO-DSO Governance*.



Conflict of Interest between DSO and DNO

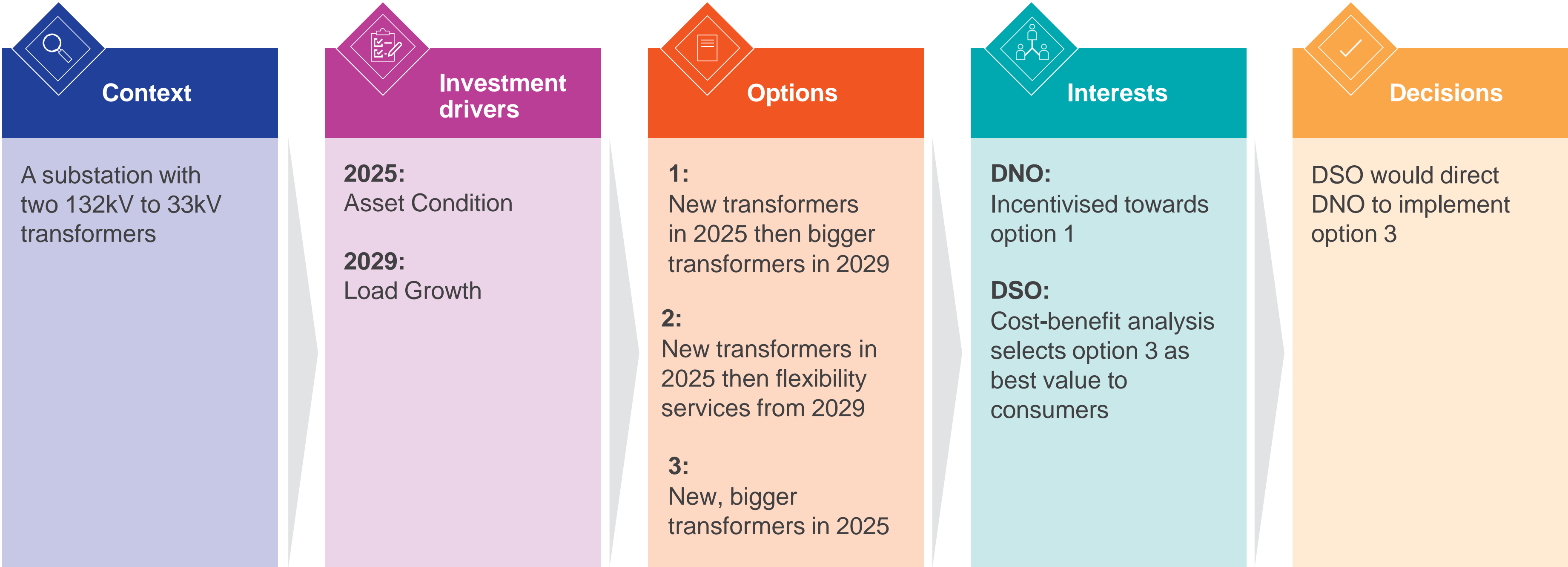
Who, what and why?

- Actual or perceived conflict between:
 - interests that are inherent in being a DNO funded on a Regulatory Asset Value model
 - interests of consumers and other customers that are assigned to the DSO in Ofgem's DSO Roles.
- Acknowledged by Ofgem in DSO Baseline Expectation 3.2.5.
- Our top-level mitigation is functional separation between DSO and DNO.
- Not all conflicts of interest have been found yet, but we are actively identifying and mitigating them.

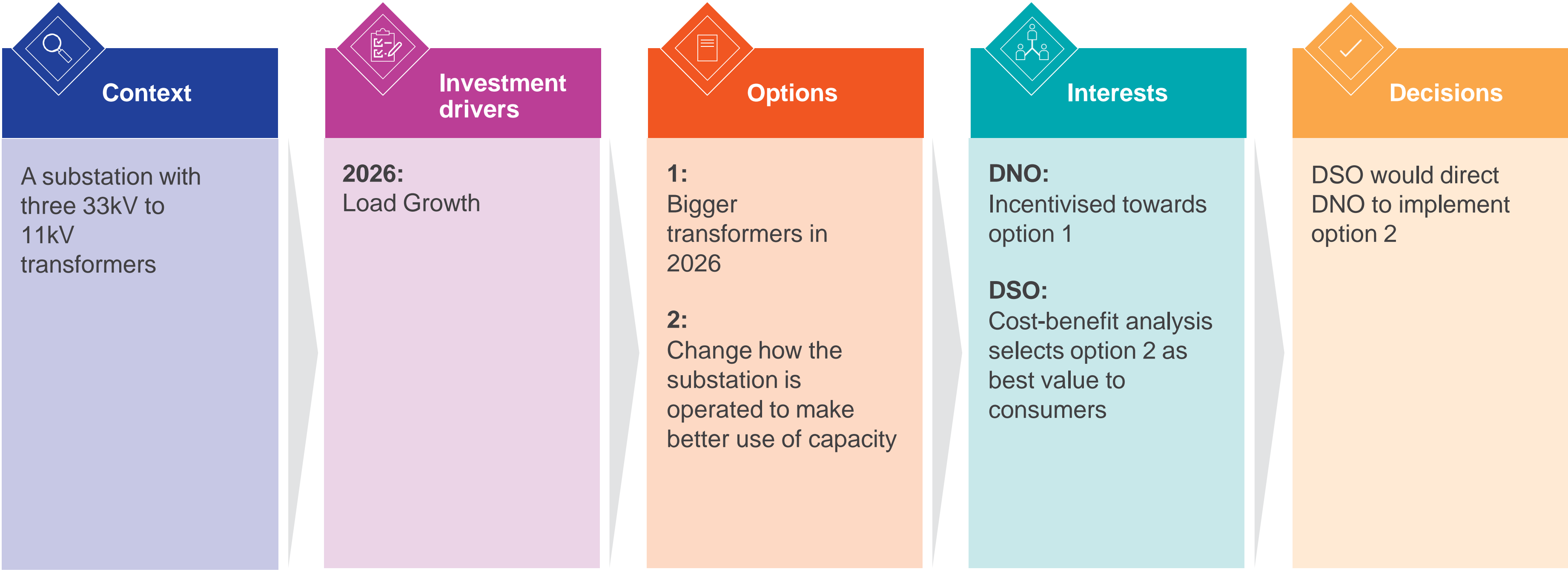
How we identify conflict of interest



Conflict of Interest: Example 1



Conflict of Interest: Example 2



The DSO will continue to improve the rigour and transparency of decision making to ensure the best interests of consumers are prioritised.

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**Breakout
discussions**



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**Electronic
voting**



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Panel Q&A



Our Q&A Panel



Fiona Campbell

Deputy Director of Energy Systems Design
and Development at Ofgem



Regina Finn

Independent Chair of our DSO Panel and Director at Lucerna
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Hayley Burden

Head of Strategy, Regulation
& Governance



Gary Swandells

Director of Smart Grid Consultancy and
member of Ofgem DSO Assessment Panel

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Wrap up
and close

Thank you

