

Public

Balancing Programme Forecasting Stakeholder Focus Group

5 June 2025
11:30 – 13:00

Forecasting Focus Group Agenda

Time	Agenda Item	NESO Presenters	Details
11:30 – 11:35	Welcome & Introductions	Rich Sykes , Product Manager (Platform for Energy Forecasting – PEF)	<ul style="list-style-type: none">• Aims of the session• Audience participation
11:35 – 11:45	Session 1 Recap	Rich Sykes	Recap on content covered at the 1 st of these 2 Forecasting sessions on 21/05
11:45 – 12:00	Stakeholder Insights	John Walsh , Forecasting Manager	Playback of insights from stakeholders from session 1 re: NESO Forecasting Strategy goals & factors influencing energy consumption both now and in the future
12:00 – 12:45	Interactive Mural Breakout Session – accessible here.	John Walsh & Rich Sykes	<ul style="list-style-type: none">• What new forecasts are needed?• What additional data is required?• What does good look like – KPIs?
12:45 – 12:55	Q&A	John Walsh & Rich Sykes	Please place your questions in the Teams Q&A or raise your hand
12:55 – 13:00	Next Steps	Rich Sykes	<ul style="list-style-type: none">• Forecasting Strategy & delivery plan next steps• Future engagement opportunities
13:00 Meeting Close – Thank you for engaging with us			

Audience Participation



A key element of this session is the interactive Mural Board – please proactively engage with the board during the allotted time.



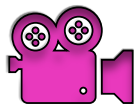
There is time allocated to Q&A towards the end of the session – Please post your questions in the Teams Q&A or raise your hand & come off mute ensuring to state both your **name** **and organisation** – this will enable us to follow up with you after the webinar if necessary.



Out of scope questions will be forwarded on to the appropriate NESO team or expert for a direct response. We may ask you to contact us by email to ensure we have the correct contact details for the response.



If you have any further questions after the Focus Group, please get in contact with us at **box.balancingprogramme@neso.energy**



Today's Forecasting Focus Group will be **recorded and published online** after the session, along with the slide pack.

Public

Session 1 Recap

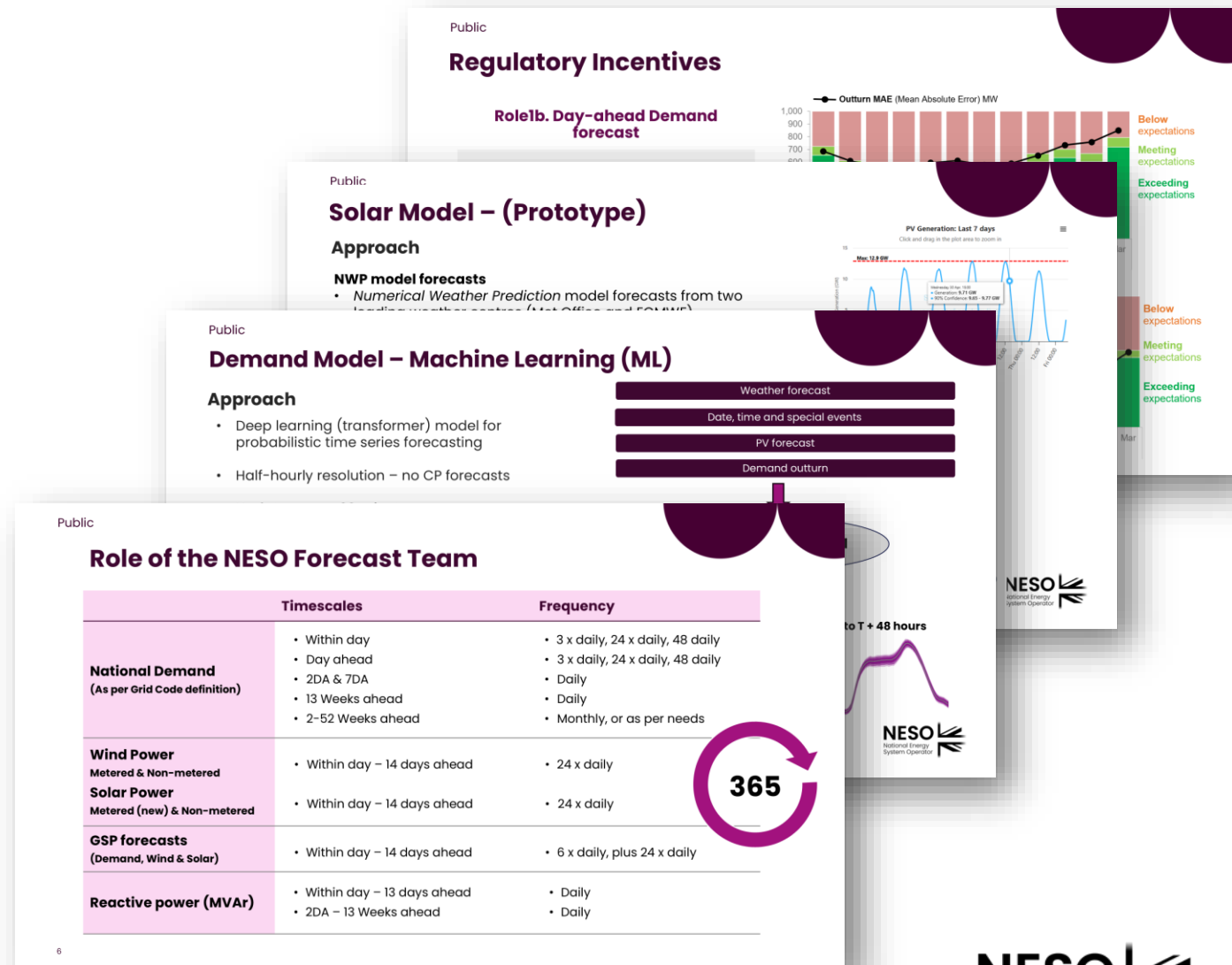
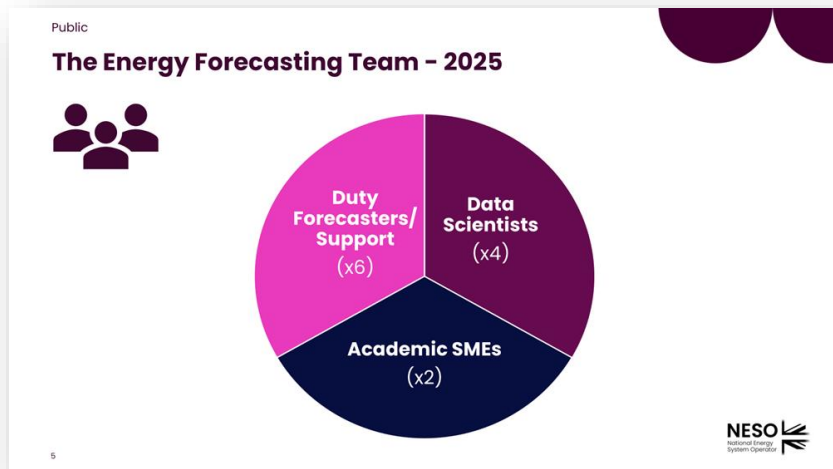
Rich Sykes



Session 1 Recap

The Current State of Energy Forecasting

- What the Energy Forecasting team do
- Modelling methodology
- Demand challenges
- Regulatory incentives



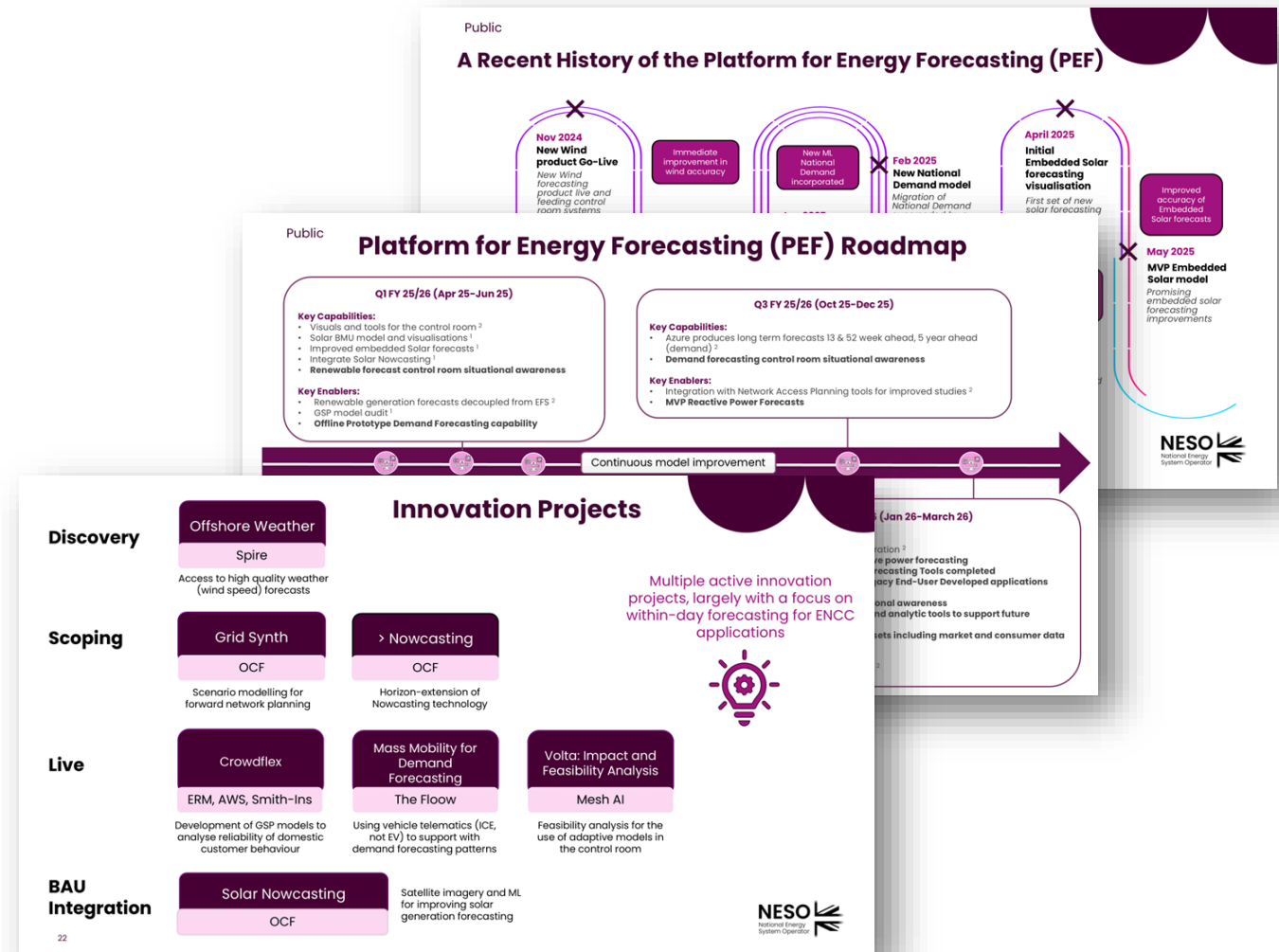
Session 1 Recap

PEF Roadmap

- Brief history of PEF
- Roadmap up to March 2026

Innovation Projects

- High level run through of innovation projects from Discovery to BAU integration



Session 1 Recap

Forecasting Strategy

- Shared early draft of Forecasting Strategy 3 main goals
 1. Produce more accurate and informative forecasts
 2. Establish digital infrastructures that unlock value
 3. Increase engagement with suppliers and consumers of forecast data
- Interactive session gathering stakeholder feedback

The image displays three overlapping slides titled "Forecasting Goals" from NESO (National Energy System Operator). Each slide lists goals for forecasting, with some goals highlighted in pink.

Slide 1 (Top):

- 1. Produce more accurate and informative forecasts
- 2. Establish digital infrastructures that unlock value
- Adopting **best practices**, such as blending multiple sources of weather and forecast data
- **Probabilistic forecasting** to quantify uncertainty coherently across space, time and variables

Slide 2 (Middle):

- 1. Produce more accurate and informative forecasts
- 2. Establish digital infrastructures that unlock value
- 3. Increase engagement with suppliers and consumers of forecast data
- Develop more **accurate and informative forecasts** on PEF
- **Expand interfaces** between PEF and other systems to enable (1) and (3) in collaboration with OBP, DAP, Data Sharing Infrastructure etc...
- **Build internal capability** to maintain and develop PEF in- ensuring business testing at NESO

Slide 3 (Bottom):

- 1. Produce more accurate and informative forecasts
- 2. Establish digital infrastructures that unlock value
- 3. Increase engagement with suppliers and consumers of forecast data
- Consume **best-in-class weather forecast data** taking advantage of advances in weather forecasting
- Consume **third-party energy forecasts** to complement and benchmark internal capability
- Increase **data exchange** with distribution networks, suppliers, Virtual Lead Partys (VLPs) to increase visibility of demand and embedded assets

NESO National Energy System Operator logo is visible on the bottom right of each slide.

Session 1 Recap

Future Energy Consumption Influences 2026 –2031

- NESO understanding of Future Energy Consumption Influences
- Interactive session gathering stakeholder feedback

Public

For Example Demand side flexibility

- **Demand Side Flexibility Growth:** "Demand side flexibility will need to grow by four-to-five times in the next five years."
- **Smart Meters:** "Around 10 million more working smart meters in our homes."
- **Electric Vehicles (EVs):** "Smart charging of EVs could make the largest contribution to demand flexibility through 2030."
- **Vehicle-to-Grid (V2G):** "EVs could support the grid further by providing 1 GW of vehicle-to-grid (V2G) in 2030 at peak."
- **Demand Turn-Up:** "Demand turn-up... has strong potential with 14.3 GW"

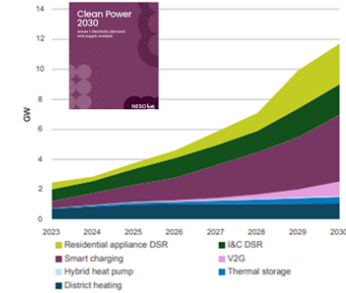


Figure 2: Demand side flexibility capacity at peak in our Further Flex and Renewables pathway.

Public

Future Energy Consumption Influences

There are a significant number of new drivers of uncertainty, which may influence energy consumption



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Feedback Playback

What did you tell us re:
Forecasting Strategy
Goals?



John Walsh

Strategy Goals: What We Heard From You



Need for Improved Transparency

- Don't just expand internal capability to ingest inputs
- Feeling that NESO publishes some forecasts but uses others internally, which can make NESO decision-making opaque and confusing
- Want for inputs that flow into the ENCC to flow to publication channels – all working on the same understanding
- Better understanding of the forecasting models used
- Transparency re: what sites are metered vs. not metered
- Require operationally metered wind farms to provide actual wind speed data
- More solar sites to be metered
- NESO to lead in publishing demand forecasts



Space for Innovation

Create an environment of innovation for NESO data scientists & remove barriers preventing this.



Additional Data Publication Requirements

- Publish regional forecasts and actuals, not just national – locational awareness is important.
- Publish interconnector forecasts
- Real-time & frequent publication
- Need for data from Distribution Network Operators (DNOs) to support improved understanding of evolving picture of embedded generation / distributed resources
- Need for improved outage & constraint data
- Need for accurate predictions of growing and shifting load profiles, especially with Time-of-Use tariffs
- Improving accuracy using combined models (e.g., GFS from Windy.com with NEMS-GFS), especially for cyclonic systems
- Behind-the-meter storage volumes / usage
- Account for increased variability due to consumer trends and behaviour



Long-Term Thinking

Need for longer-term thinking as part of the forecasting strategy & roadmap development

How will we use this Information?

Context:

- There are a significant number of **new drivers of uncertainty**, which may influence energy consumption & demand e.g., growth of embedded and flexible assets, retail incentives etc.
- **Growth of wind and solar capacity** – Accurate generation forecasting will be critical for markets and ENCC to operate as efficiently as possible.
- **Forecasting active and reactive power at GSP** and national level is required but complicated by largely unobserved activation of flexibility.

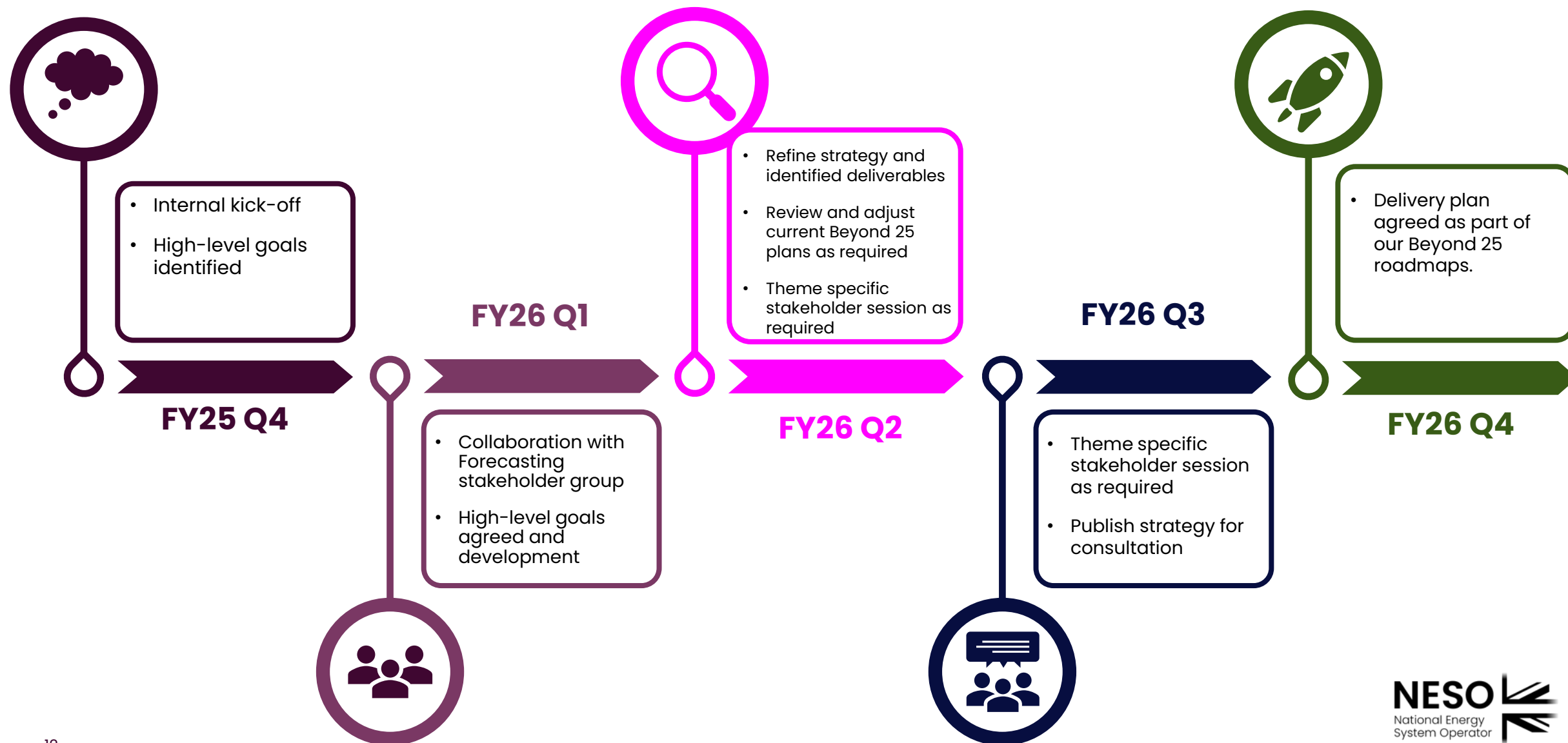


A coherent & co-created Forecasting Strategy is required to ensure we can optimise forecasting accuracy, whilst enabling clean power and consumer value



- **Commitment to produce a NESO Forecasting Strategy in BP3**; these focus groups (21 May & 05 June 2025) are the early engagement touch-points for Industry to input into the shaping & design of the strategy. A consultation will officially be launched on the strategy in Autumn 2025 – this group will be sent the consultation.
- **The strategy will help guide & inform deliverables** on the Platform For Energy Forecasting, and future innovation projects.

Purpose – NESO Forecasting Strategy & Delivery Plan



Feedback Playback

What did you tell us re:
Future Energy
Consumption Influences



John Walsh

What we heard re: Future Energy Consumption Influences

Collectively we identified a significant number of drivers of uncertainty, which may influence energy consumption both now & in the future, posing forecasting challenges we need to effectively manage



Regulatory, Economic, & Natural Environment

- Weather changes (Global warming)
- REMA (Review of Electricity Market Arrangements) – potential to influence how systems operate and how distributed generation is sized
- Incentives reshaping how demand is managed and responded to inc. demand-side incentives
- Economic outlook
- Cross-border complexity – Increasing difficulty in managing international energy flows & extra regional load from European consumption is affecting interconnectors.



Consumer Behaviour & Engagement

- Workforce or consumer behaviour
- Retail incentives inc. Time of Use tariffs
- Demand-side flexibility
- Consumer behaviour clustering around half-hourly settlement boundaries
- Behind-the-meter demand aggregator challenges
- Growth/decline of certain industries e.g., data centre growth
- Appetite for self-generation & consumption
- Cost of living



Technological Developments

- Growth and evolution of established technologies (Energy, Storage, Heat Pumps & EVs, Smart appliances etc.) e.g., EV batteries increasing in size, reducing charging frequency – more variability in when and where charging occurs.
- Emerging technologies
- Increased volumes of Distributed Energy Resources
- Active network management



Over to you . . . Let's Discuss Forecasting Technology, Data & Best Practice

10 minutes is allocated to each question for the 3 thematic areas identified – we will pause after each question and reflect on feedback.

1. What new forecasts are required and why (type / regularity / granularity), what problem will it solve?
2. What additional data might be required over the next 6 years that will unlock improved forecasting, and where is it?
3. What might an industry recognised “What does good look like” be? What KPIs could we use to measure progress?



**Scan the QR code to interact
with the Mural Board**

Q&A

Please raise your hand &
come off mute or post your
question in the Q&A on Teams

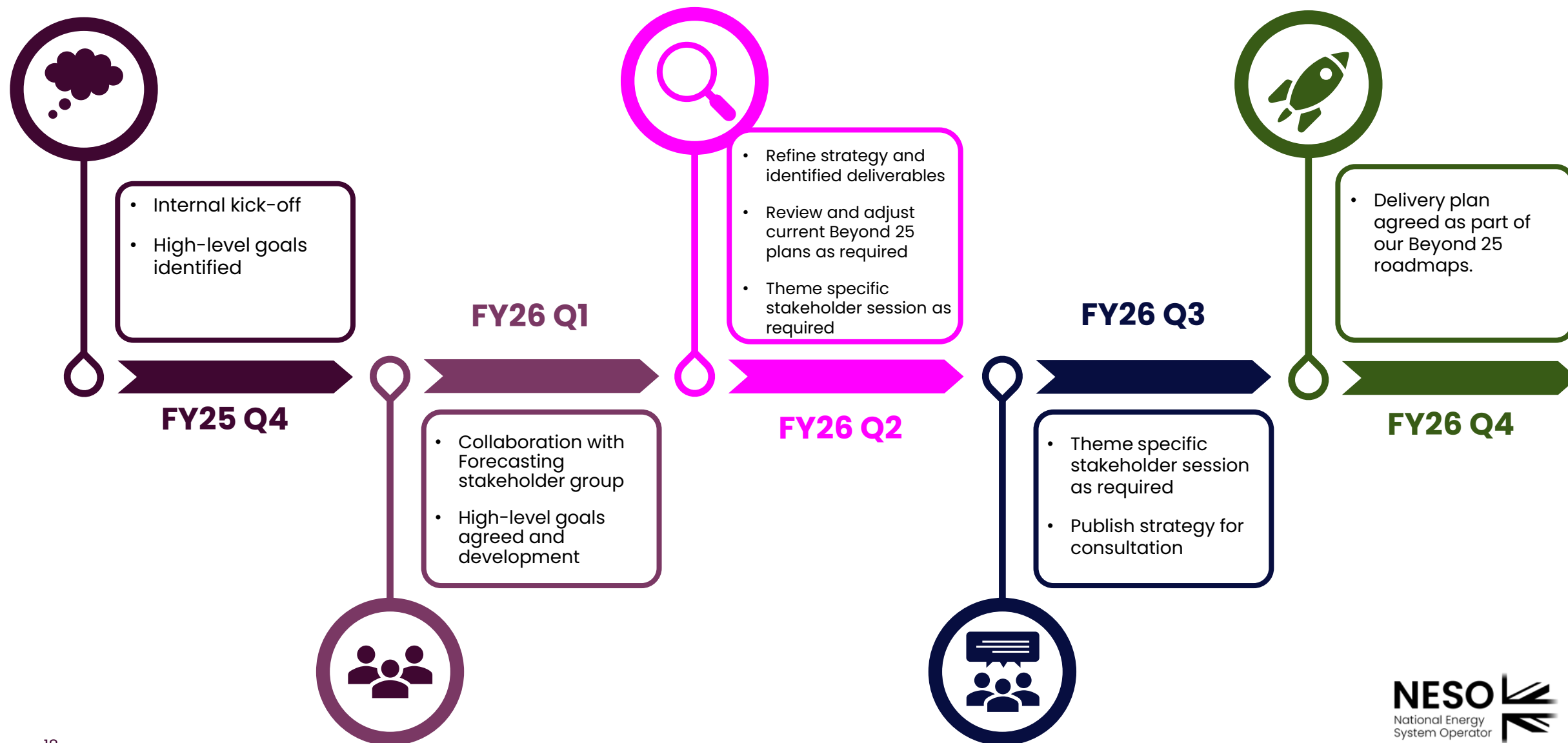




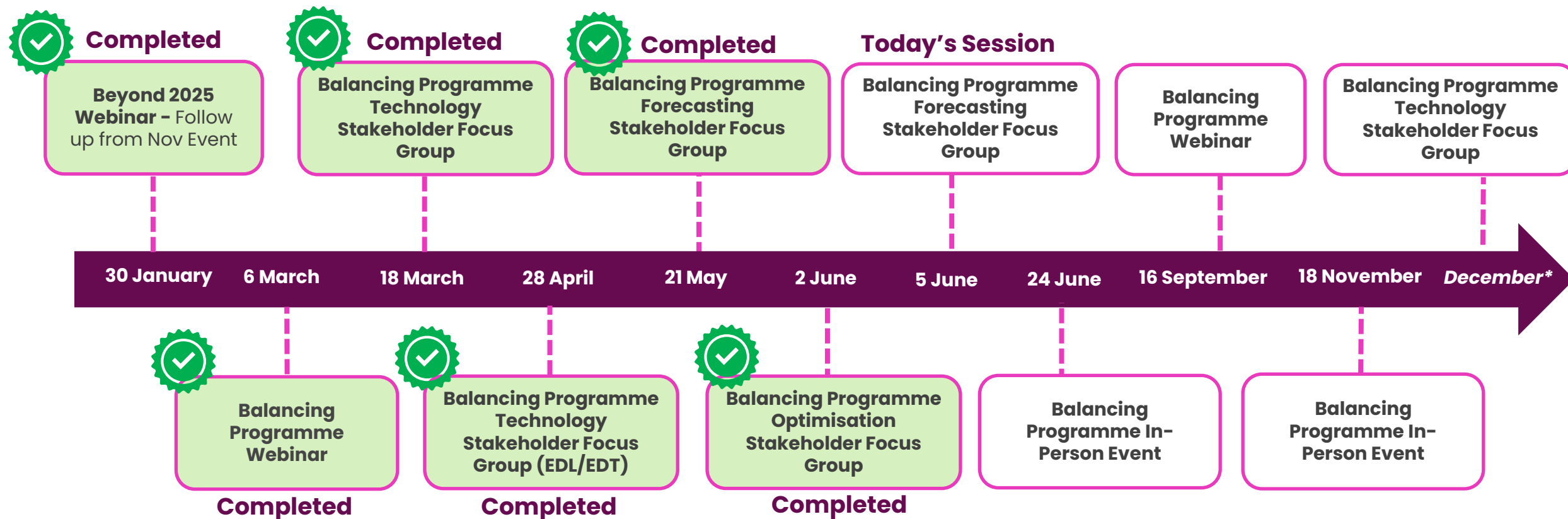
Next Steps

Rich Sykes

Next Steps: Co-Created NESO Forecasting Strategy & Delivery Plan



2025 External Engagement Timeline



* Exact date TBC

Balancing Programme **relationship management meetings** throughout 2025 & **external NESO newsletters 'Energising Progress'** with Balancing Programme content issued regularly, providing updates between online & in-person events. **Further Stakeholder Focus Group dates** to be added throughout 2025.

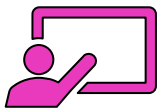
Closing Remarks . . .



We welcome your feedback & questions – please get in contact with us at box.balancingprogramme@neso.energy



The recording and slides from today's session will be published on our website by close of this week.



Our 24 June 2025 in-person Balancing Programme Event has reached capacity – if you would like to attend, please register your interest [here](#) or scan the QR code, and if spaces become available, we will contact you.



Subscribe to our new NESO newsletter [here](#) – please select **Future of Balancing Services inc. Balancing Programme** to keep up to date.



Sign-up to our other Stakeholder Focus Groups for Technology & Optimisation – [Balancing Programme Stakeholder Focus Groups.](#)



If you are interested in a regular meeting with a representative from the Programme and would like more information, please get in contact using the email address above.



24.06.25 Event

Public

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