

Electricity Markets Advisory Council

22 September 2026

Agenda

Item	Lead	Time
<i>Informal lunch and networking (optional)</i>		12:00 – 13:00
Introductions		
Welcome, introduction and update on last meeting's agenda items	Monica Collings (Chair) Rebecca Beresford, Lizzie Blaxland (NESO)	13:00 – 13:10
NESO's Councils Structure	Vicki Mustard (NESO)	13:10 – 13:20
For discussion		
NESO's 10-Year Outlook	Jenny Mills, Grace Carter (NESO)	13:20 – 14:20
<i>Break</i>		14:20 – 14:35
General updates		
Wholesale CfDs	Matt Trayner (DESNZ)	14:35 – 14:50
Day-Ahead NTC Restrictions and NESO Trading	Simon Williams (NESO)	14:50 – 15:10
For discussion		
Balancing Cost Report and Constraints Modelling	Izzie Sunnucks (NESO)	15:10 – 15:40
<i>Forward work plan and close</i>		15:40 – 15:50

Welcome

Monica Collings (Chair)

Rebecca Beresford, Lizzie Blaxland
(NESO)

NESO's Councils Structure

Vicki Mustard (NESO)

NESO Advisory Engagement

ISG
(Independent
Stakeholder
Group)

ICP
(Independent
Customer
Panel)

RESP (Regional
energy System
Planning)
strategic
boards

RESP (Regional
Energy System
Planning)
working
groups

RNP (Reformed
National
Pricing) IEP
(Industry
Expert Panel)

Electricity
Markets
Advisory
Council

Technical
Advisory
Council

Gas Advisory
Council

Engineering
Advisory
Council

NESO's 10-Year Outlook

Jenny Mills, Grace Carter
(NESO)

NESO's 10-year Outlook

Questions for the Council:

Feedback on 2026 10-year outlook: Do the electricity demand and supply projections published in the 2026 10-year outlook seem credible?

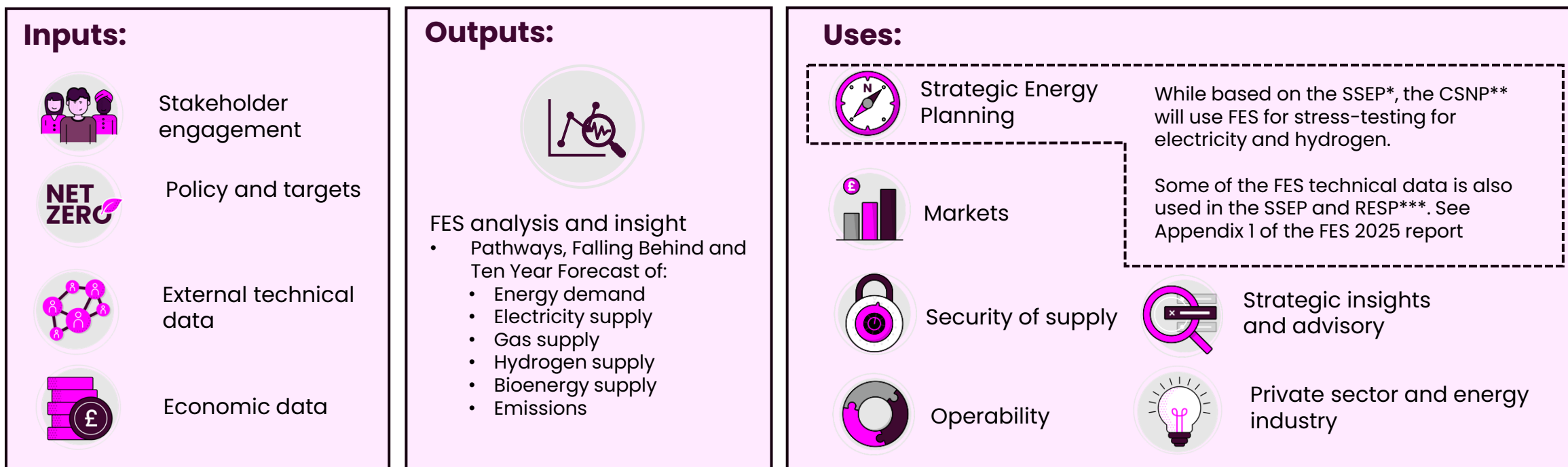
Recent developments: What recent developments are you aware of that could change the trajectory of electricity demand and supply over the next 10 years?

Uncertainties: What do you see as the key areas of uncertainty which will impact on electricity demand and supply projections over the next 10 years?

Context: 10YO vs FES Pathways

The 2026 Ten-Year Outlook (2026 10YO) provides our best view of what is most likely to happen based on historic data, current trends, stakeholder feedback, existing policy landscape etc. Used for Security of Supply analysis.

FES pathways are developed as credible routes to a net-zero energy system, considering legally binding emissions targets along the way. Pathways are not forecasts.

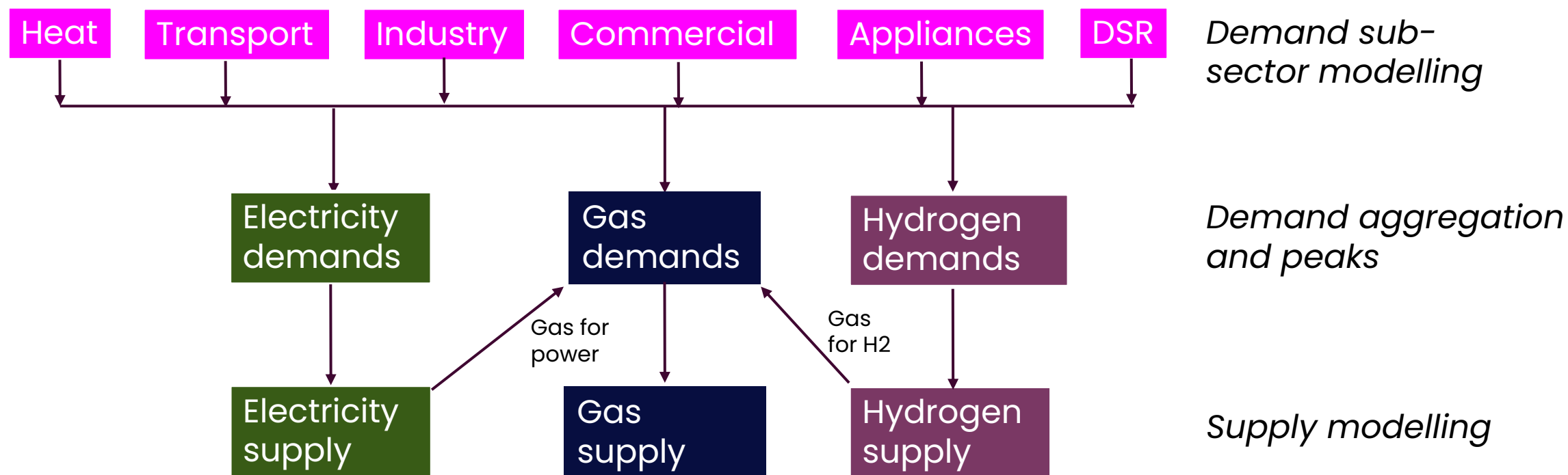


*SSEP = Strategic Spatial Energy Plan

**CSNP = Centralised Strategic Network Plan

*** RESP = Regional Energy System Planning

Context: 10-year outlook process



2026 10YO Electricity Demand

Context: demand 10-year outlook process

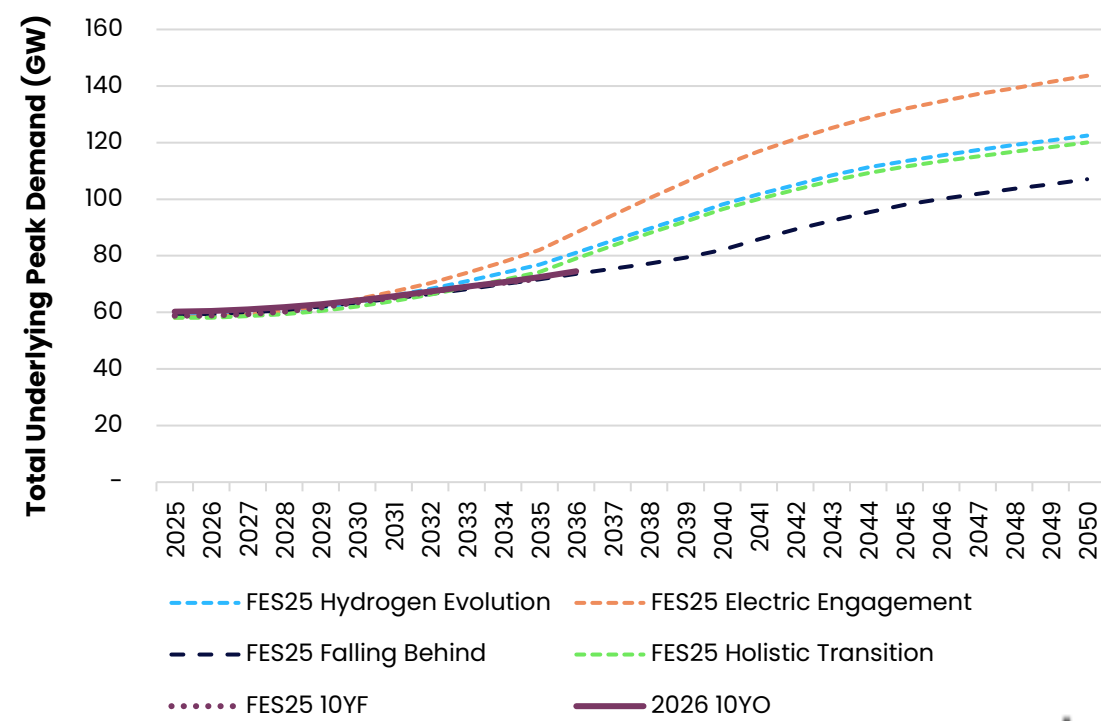
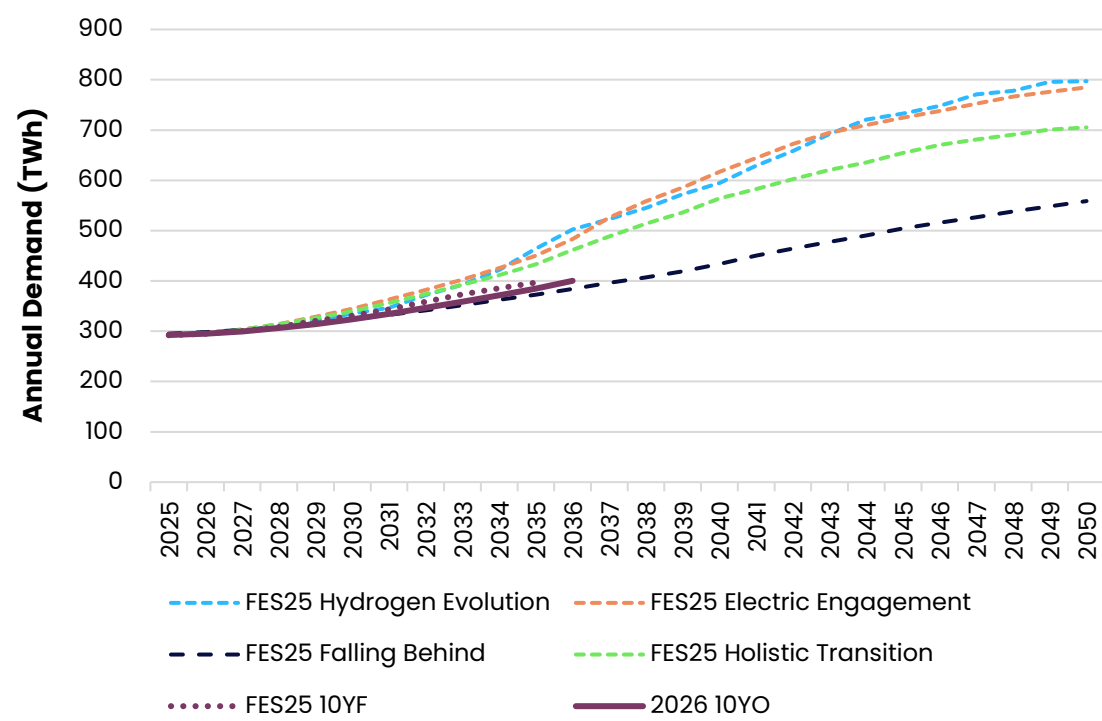


Today's objectives:

- Disseminate 2026 10YO results
- Gather evidence for 2027 10YO development
- Identify areas for improvement

Context: 10YO vs FES Pathways

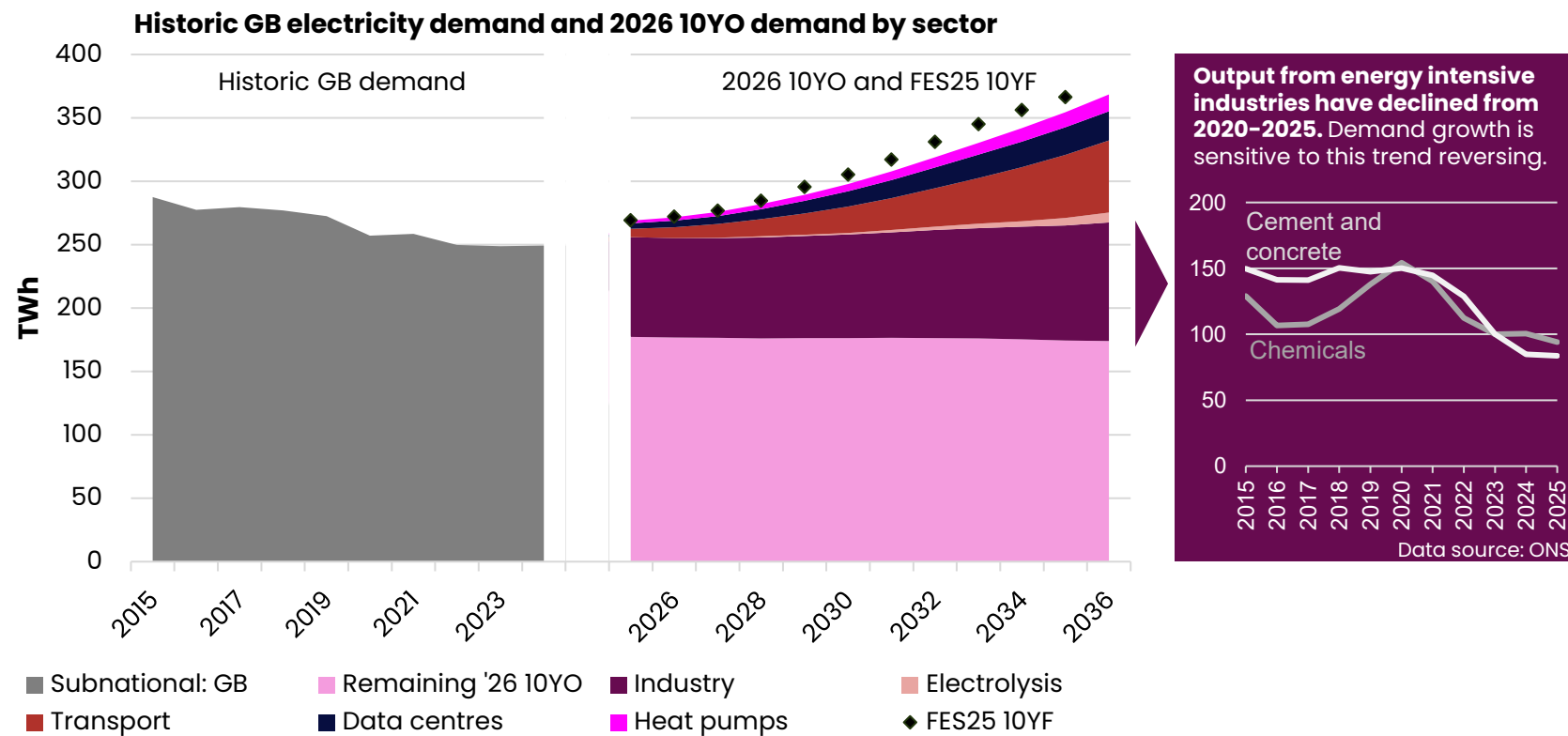
Differences in electricity demand between the 2026 10YO and pathways primarily stem from the rate of adoption and electrification e.g. 2026 10YO has slower rates of EV and heat pump adoption than outlined in FES25 pathways, leading to slower growth in electricity demand.



Demand growth driven by relatively nascent sectors – annual demand

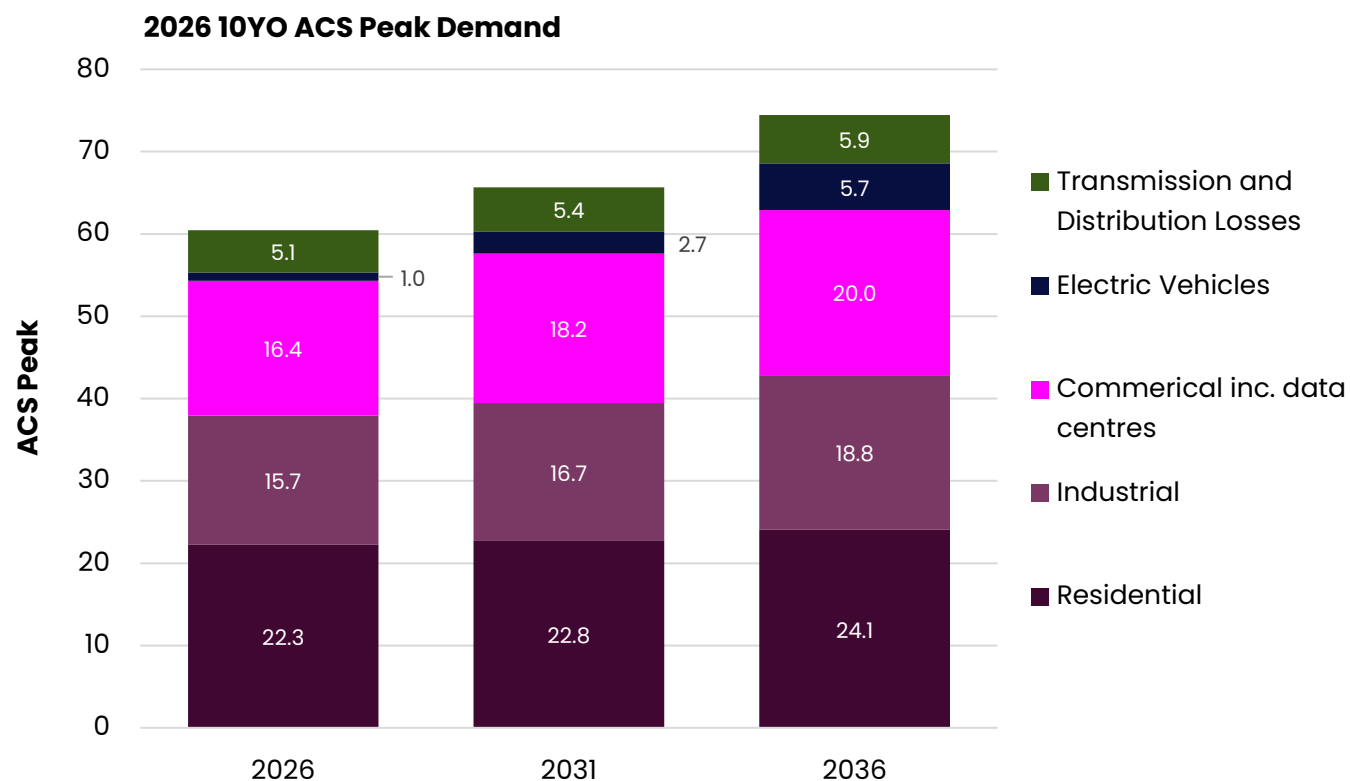
Electricity demand in the 2026 10YO grows from 269 TWh in 2025 to 368 TWh in 2036*. Structural shifts underpin this growth, with EVs, heat pumps and data centres collectively rising from 4.7% of demand in 2025 to 23.9% by 2036.

Growth in industrial demand is primarily shaped by fuel switching, though broader economic pressures and declines in energy-intensive manufacturing output highlight an inherent risk to future industrial demand.



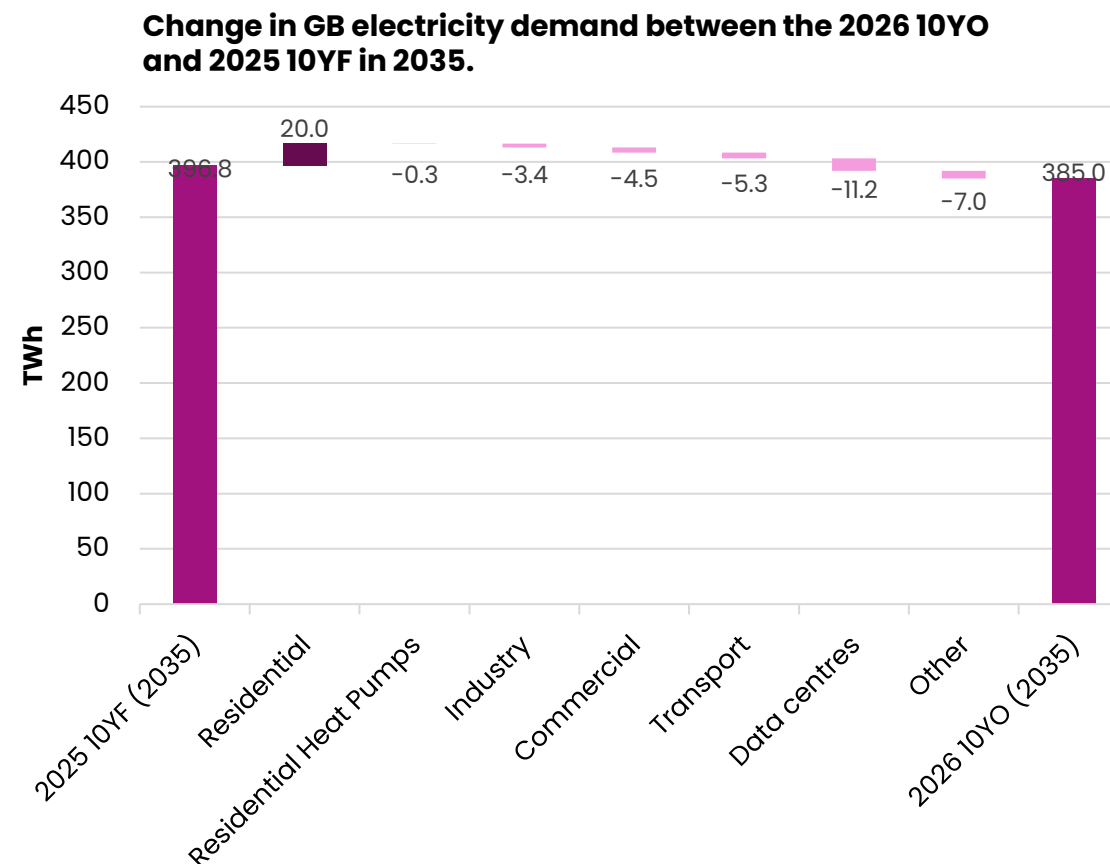
Peak demand

Similar to annual demand trends, EVs are a key contributor to ACS peak demand growth, data centres are the primary driver behind growth in commercial peak, while heat pump adoption contributes to the growth in residential and commercial peak.



Rate of electricity demand growth slightly slower than in the 2025 10YF

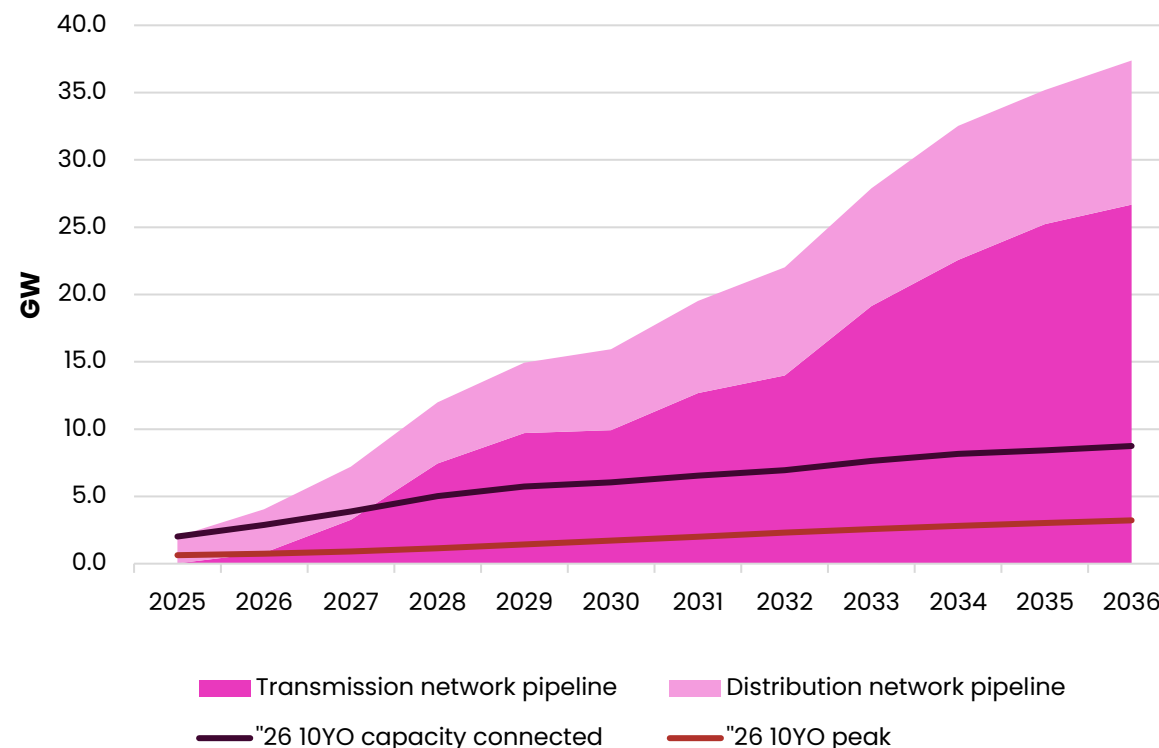
- Compared to the 2025 10YF, annual electricity demand is 3% lower in the 2026 10YO by 2035, driven by a reduction in data centre demand and slower electrification of industry and transport.
- Reduction in data centre demand primarily due to updated data around utilization and project attrition rates.
- Transport slightly lower due to use of latest data (prior to Israel/US-Iran war) and stakeholder feedback.
- Increase in residential demand due to updated assumption of largely realized lighting efficiency gains, and higher levels of electric resistive and storage heating being retained.



Data centres

- Impact of project attrition, utilisation and ramp-up rates mean the data centre pipeline is likely to significantly overstate peak data centre demand.
- Stakeholder feedback has suggested that close to 50% of project capacity may be from 'highly speculative' or duplicative applications.
- Most of the pipeline growth stems from transmission connected data centre projects (almost non-existent in 2026), which are likely to be considerably larger than existing distribution connected data centres. This indicates a shift in business models for GB data centres, with potential subsequent shifts in utilisation rates and load profiles.
- Despite growth in the connections queue, annual demand in the 2026 10YO is also lower than the 2025 10YF, primarily due to the lower utilisation rate assumed, informed by newly available data.

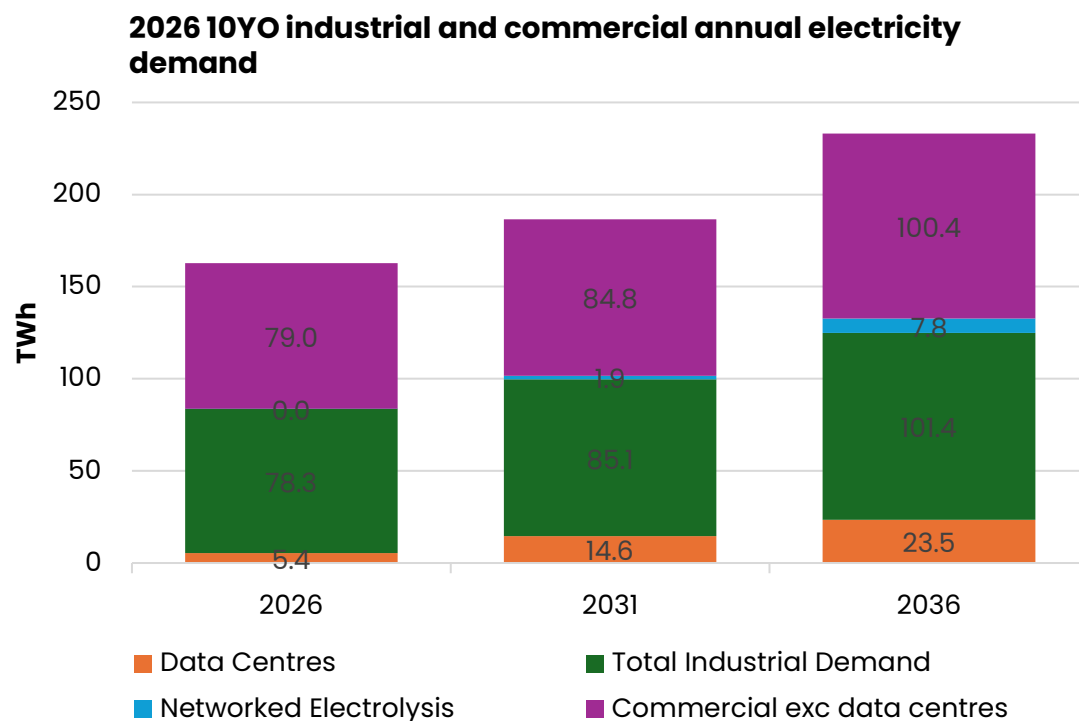
Data centre connections pipeline compared to connected and peak demand outlook



Industrial and commercial

Growth in commercial and industrial electricity demand driven by adoption of heat pumps and electrification.

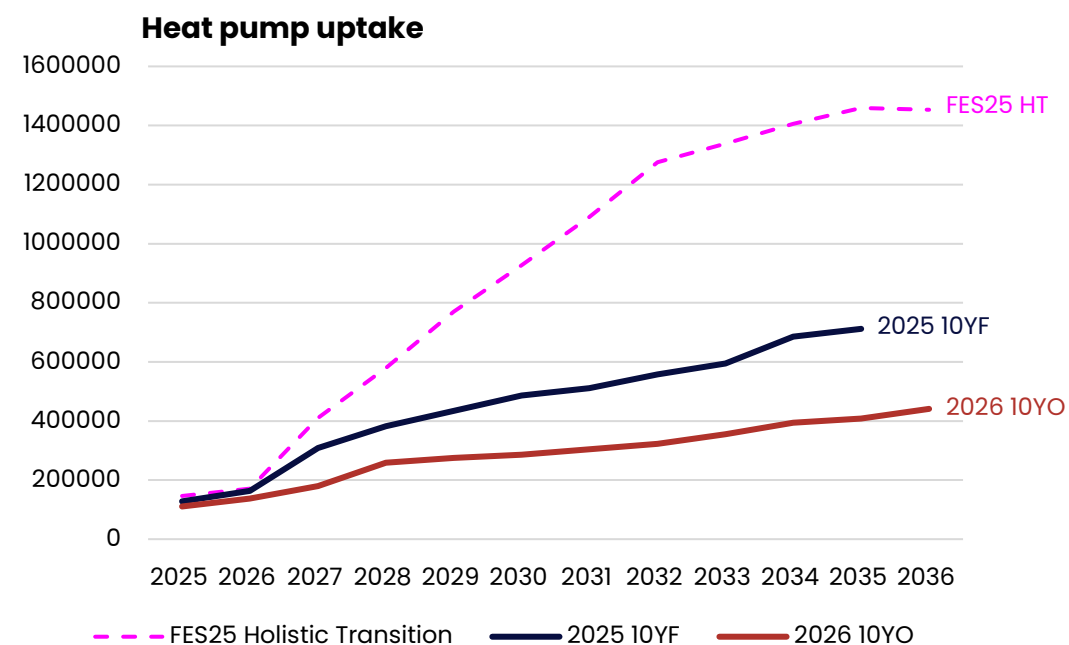
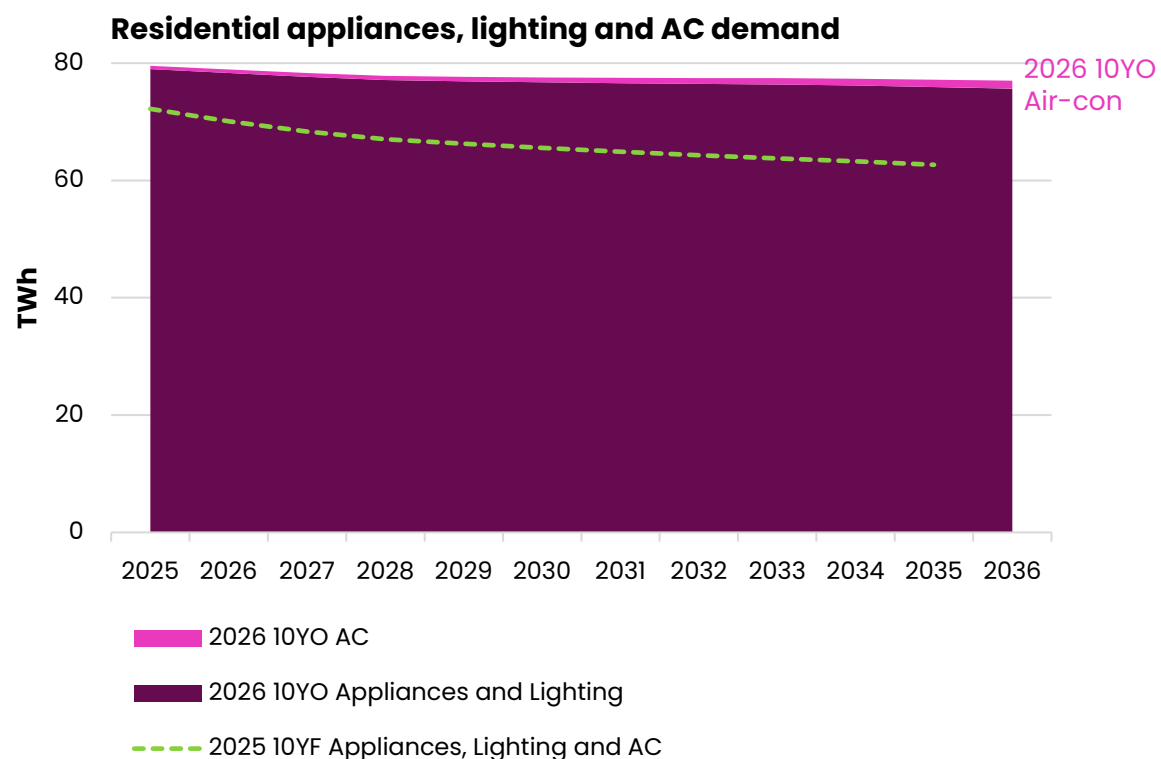
Minimal changes from 2025 10YF. Lower electrolysis outlook due to limited progress, ongoing delays and some shift of industrial demand to electrification. Small decrease in industrial electricity demand from 2029 due to delayed demand connections and electrification alongside some efficiency gains from high temperature heat pump use.



Air-conditioning and heat pumps

Baseline 2025 AC uptake in the 2026 10YO increased to 6.5% from 3% in the 2025 10YF. Short-term impact relatively limited with the 2026 10YO projecting demand of 1.2 TWh in 2036, though the adoption rate could still be conservative.

Heat pump adoption reduced vs 2025 10YF informed by the latest data and stakeholder feedback. Context: The WHP reduced the heat pump target to 450,000 annual installations by 2030, versus the prior target of 600,000 in 2028. The FHS bans fossil fuel boilers from 2027/28.

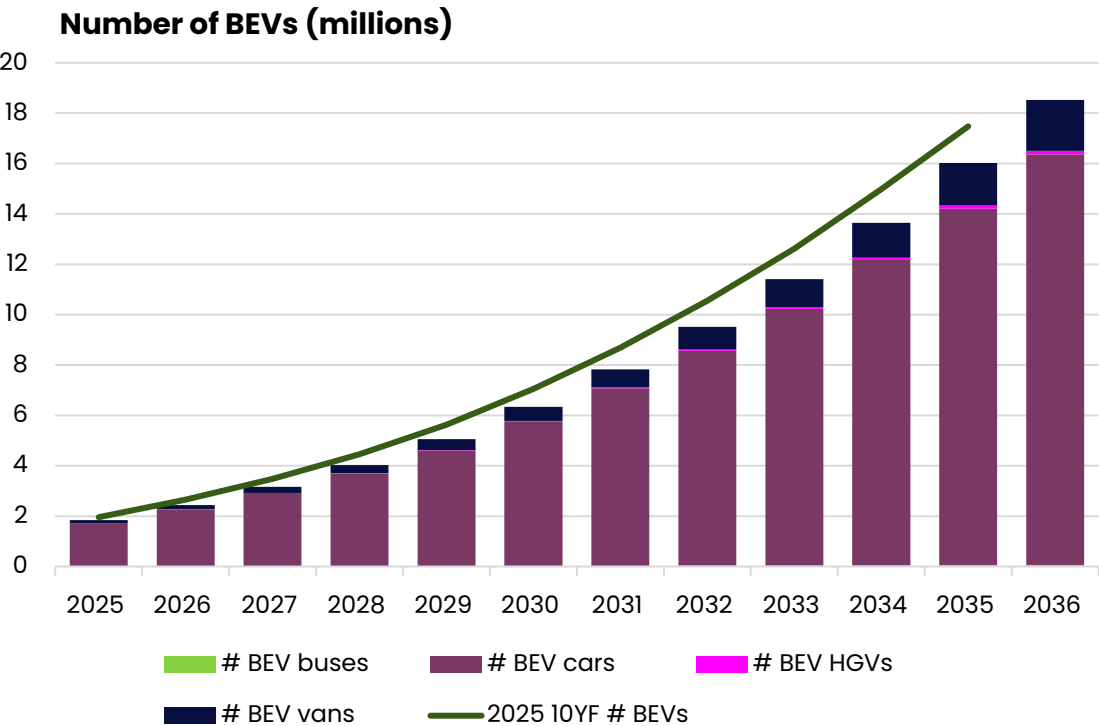


Transport

Growth in EVs continues but slightly slower than expected in the 2025 10YF, except for BEV buses. 3p/mile tax reduced uptake slightly due to impact on TCO, but 2026 10YO Transport modelling completed prior to US/Israel-Iran war.

Residential BEV car and van smart-charging reaches 46% by 2030 and 58% by 2035, unchanged from the 2025 10YF. V2G availability remains relatively low. Higher number of V2G capable vehicles expected in the 2026 10YO but grid code compliance and availability of suitable tariffs remain barriers, alongside battery health concerns.

Total V2G capacity available at peak reaches 4.2 GW by 2035, down from 6.7 GW in the 2025 10YF due to reductions in BEV car deployments and lower V2G uptake from HGVs.



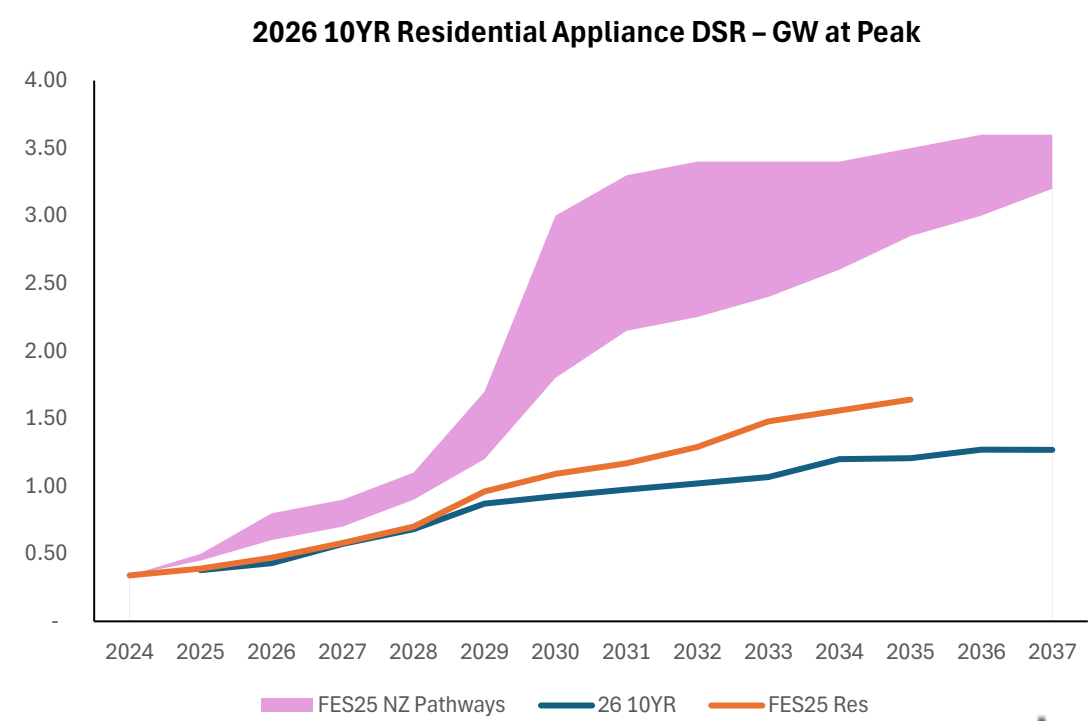
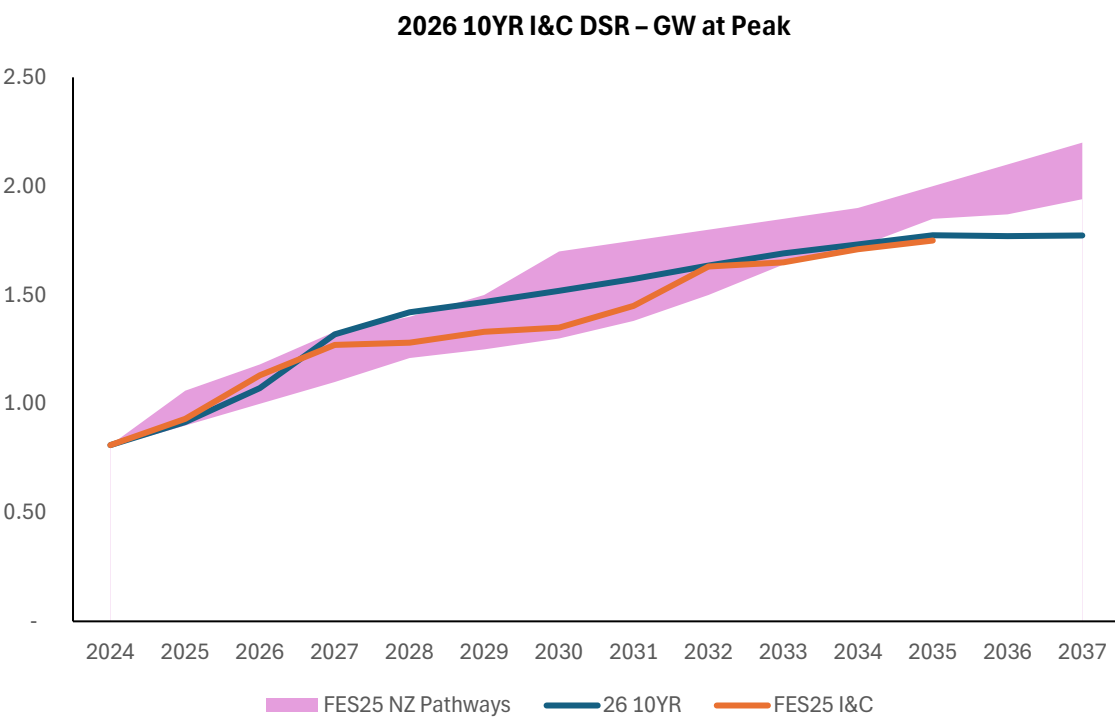
Assumed V2G availability – residential cars and vans

	Pathway	2023	2030	2035	2050
FES25	FB	0.0%	0.0%	0.2%	5.2%
	HE	0.0%	0.2%	0.8%	12%
	EE	0.0%	3.2%	11.4%	26%
	HT	0.0%	5.3%	21%	45%
	10YF	0.0%	4.2%	16%	
FES26	10YO	0.0%	3%	11%	

Demand-side flexibility

I&C flex expected to grow faster than in 2025 10YF from 2027 to 2032. Enabled through policy support and combined NESO and aggregator efforts in packaging services. Removed some flex capacity assumed from data centres.

Slower growth in residential appliance DSR than the 2025 10YF due to updated research and data suggesting that the uptake of heat pumps and EVs lowers remaining residential flexibility response.



NESO's 10-year Outlook

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2026 10YO Electricity Supply

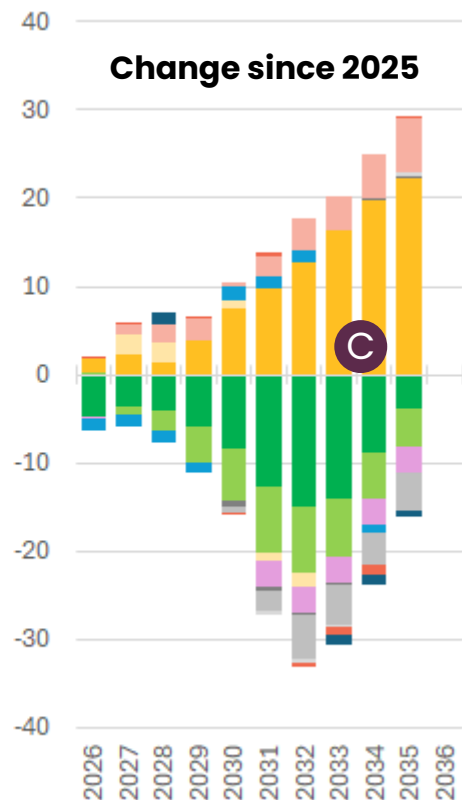
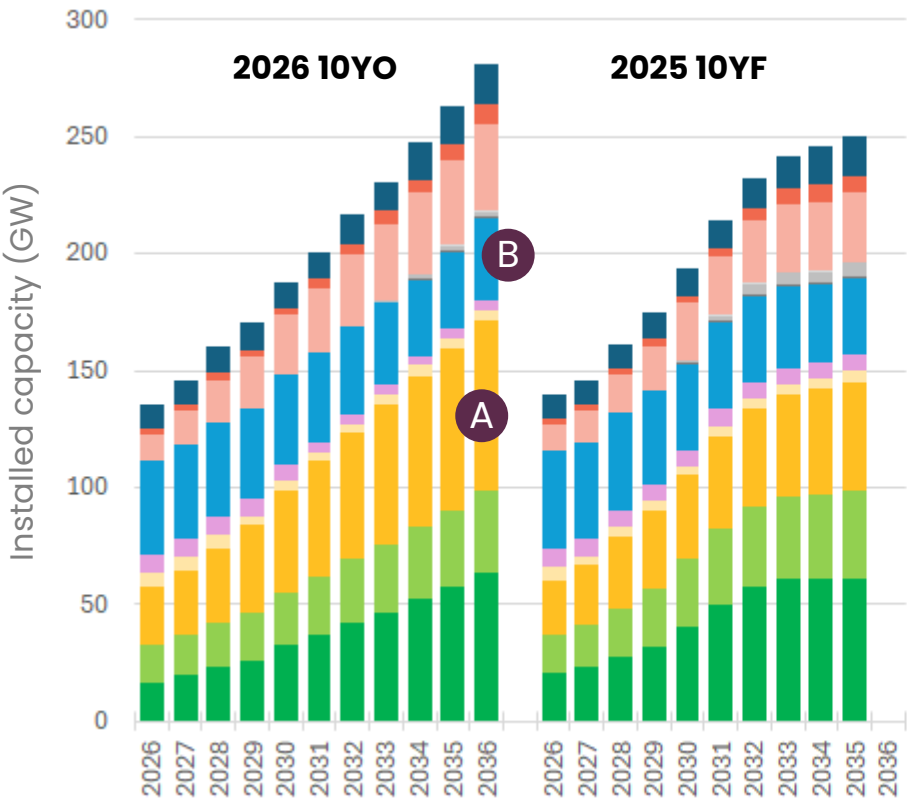
NESO's Electricity Supply - 10 Year
Forecast 2026 Feedback Form



[Electricity
Supply -
10 Year Outlook
2026 -
Feedback Form](#)



Supply Outlook to 2036

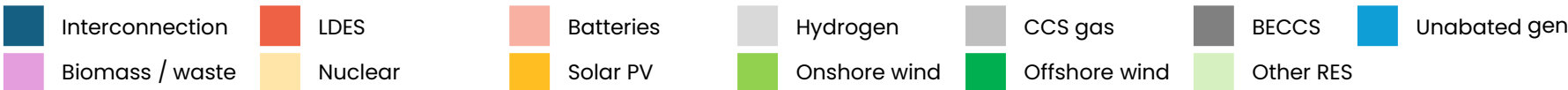


What the outlook says:

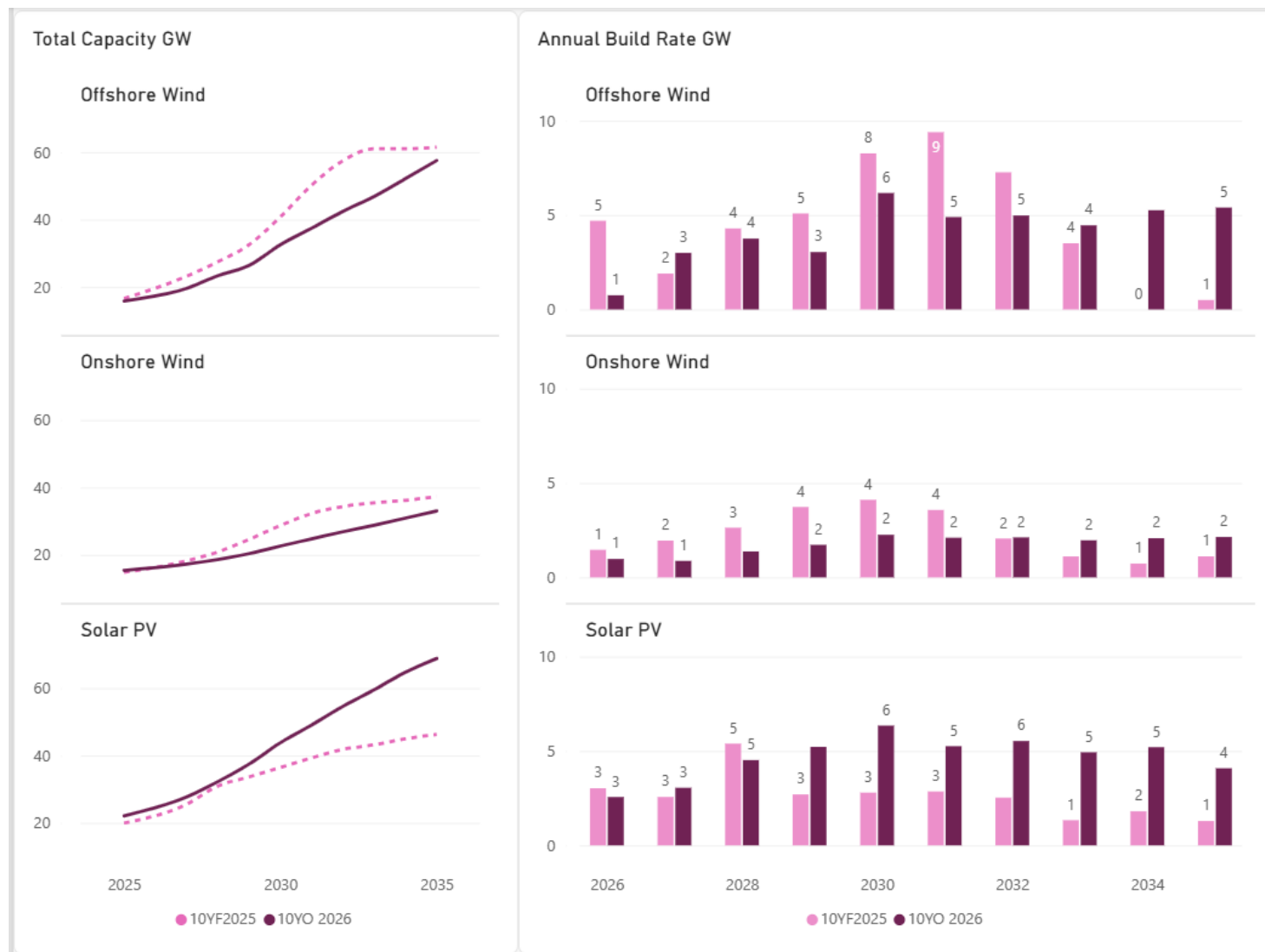
- A Strong renewable growth remains central to the outlook
- B Existing firm capacity remains important

What has changed since 2025:

- C Deployment has shifted between technologies with more solar and battery deployment but less wind and low carbon dispatchable power.



Renewable deployment remains strong, but it's timing and technology mix have shifted



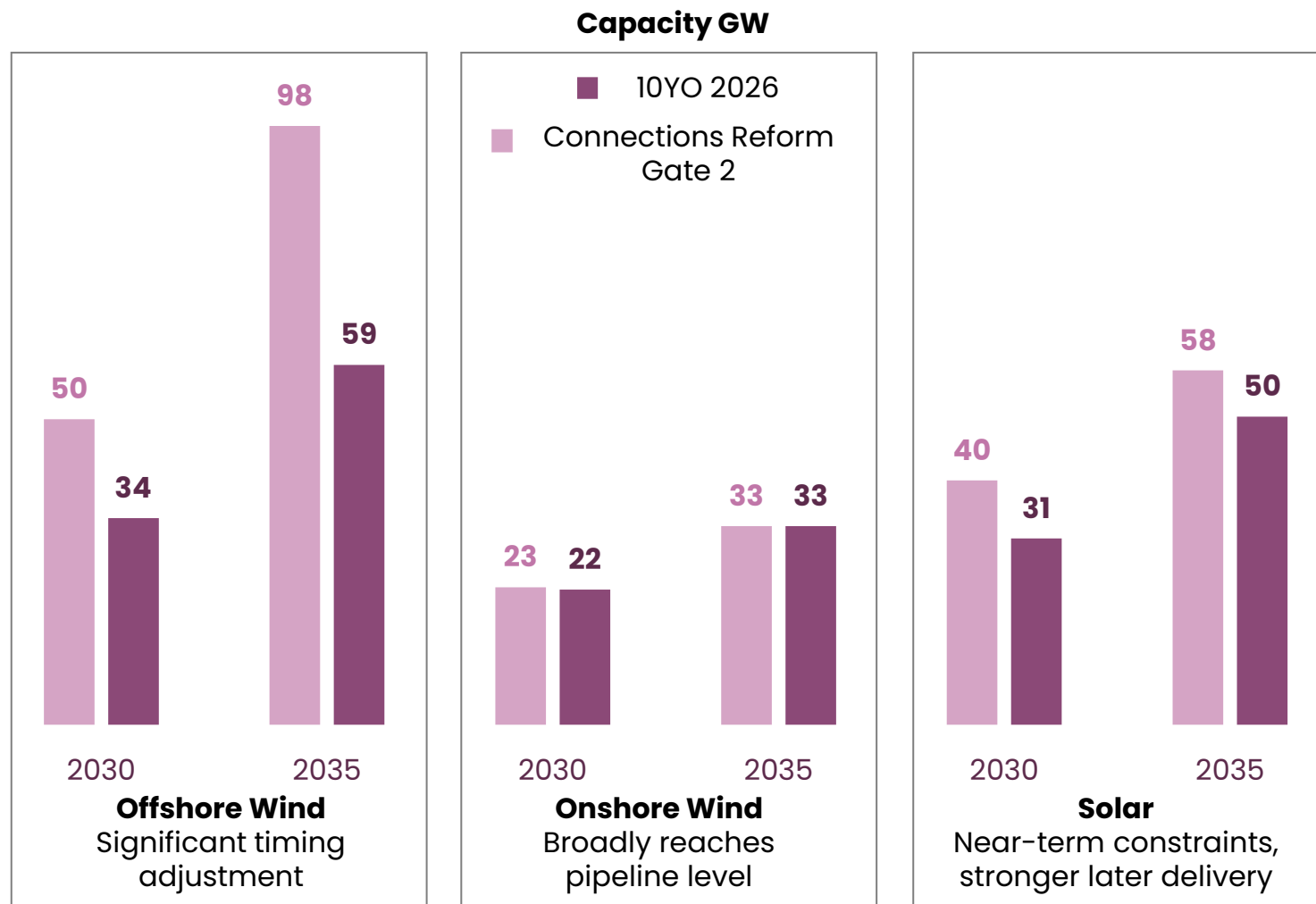
Supporting high long-term growth

- CfD Support across renewable technologies
- Large long-term pipeline evidenced through connections reform
- Higher industry expectations for distributed connected solar

Constraining near term delivery

- Offshore wind: Construction and project updates
- Onshore wind & solar: Planning and near-term connection delays

How does the 10YO 2026 treat connections reform?



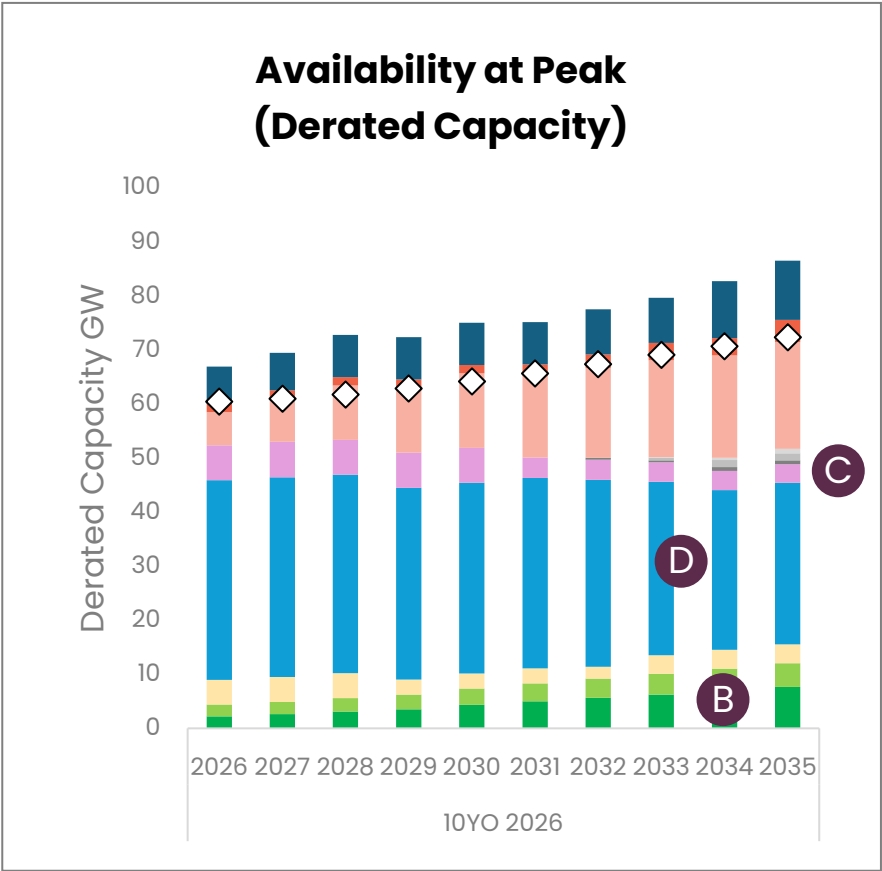
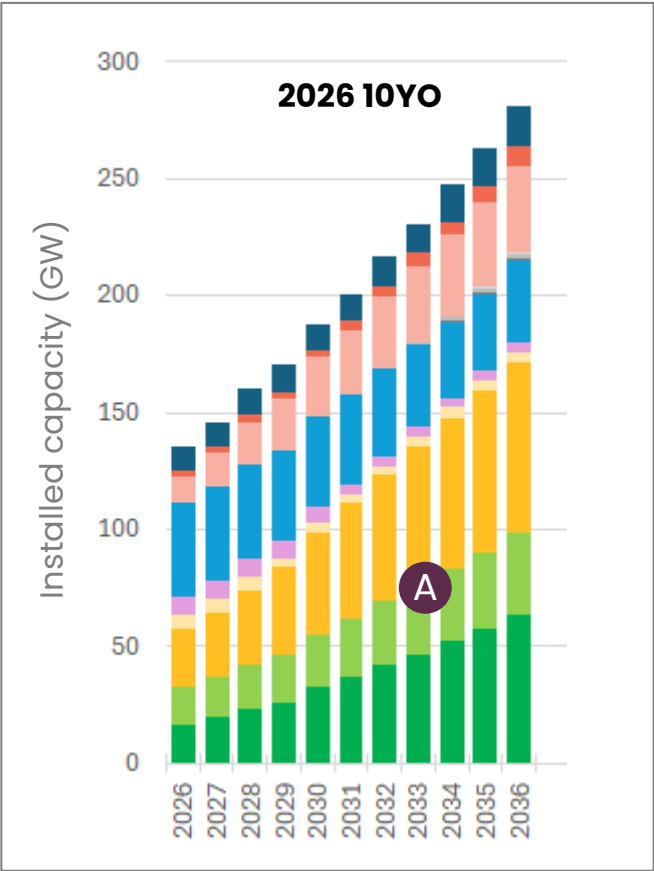
Connections Reform provides a consistent, system-wide view of the project pipeline

The 10YO uses this alongside planning, construction and wider market evidence

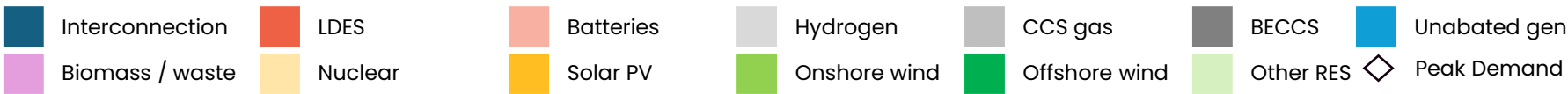
The outlook remains below the Gate 2 pipeline if constraints persist

Gate 2 status does not imply a committed delivery date.

Existing firm capacity remains important through the transition

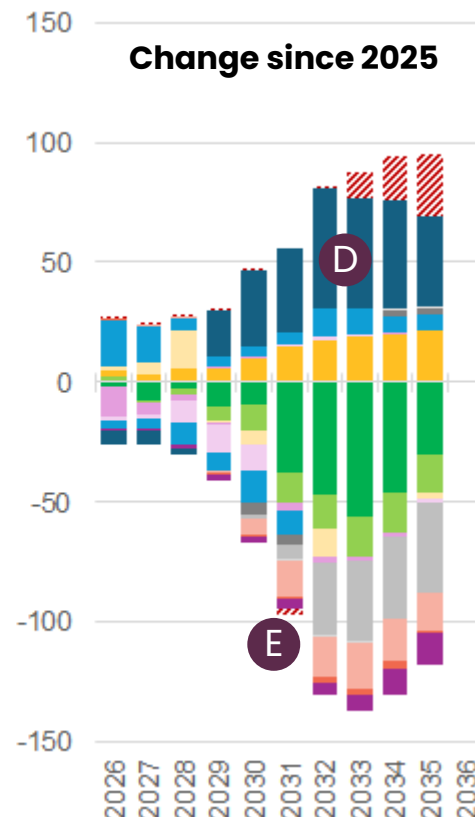
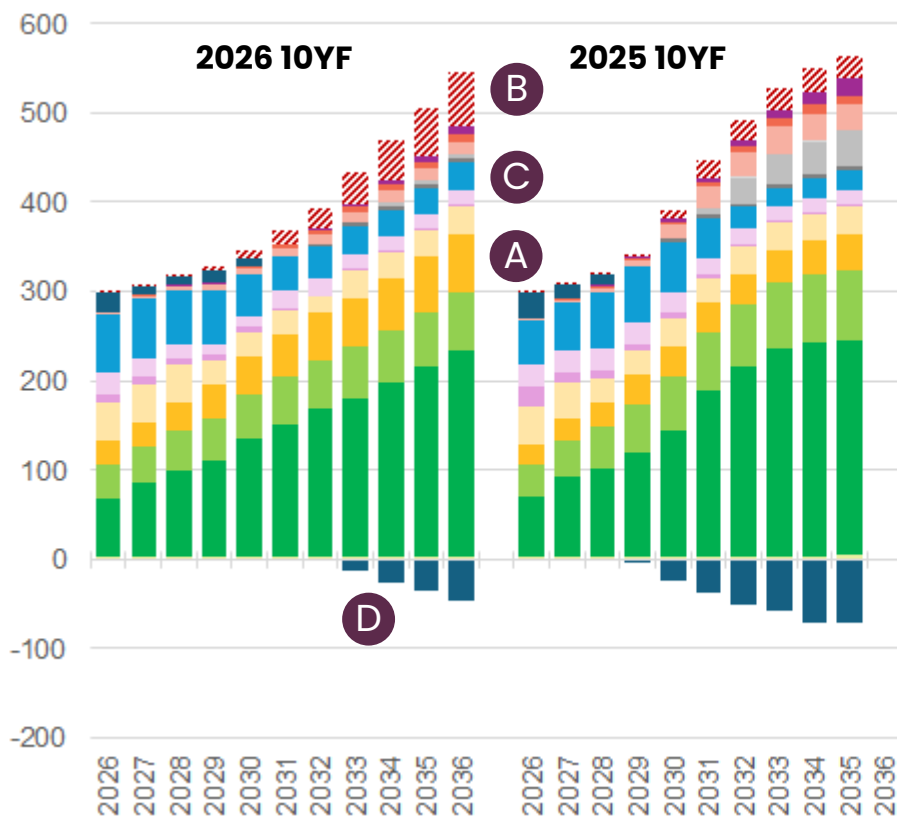


- A** Capacity grows rapidly as renewable generation expands
- B** Capacity available at peak grows much more slowly
- C** Low-carbon firm capacity remains limited
- D** Gas remains the largest source of firm capacity



Annual generation overview

Annual generation (TWh)



Strong renewable growth →

- A Renewable generation increases substantially
- B Curtailment rises to 53 TWh by 2036

Firm generation is retained →

- C Annual unabated generation decreases

A different generation balance →

- D Greater reliance on imports
- E Lower utilisation of flexibility



NESO's 10-year Outlook

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Break

Wholesale CfDs

Matt Trayner (DESNZ)

Day-Ahead NTC Restrictions and NESO Trading

Simon Williams (NESO)

Use of DA NTC restrictions on Interconnectors

- NESO has access to mechanisms to restrict the **Day-Ahead (DA)** capacities of some GB interconnectors via **Net Transfer Capacity (NTC)** restrictions.
- The interconnectors with DA NTC mechanisms available are **North Sea Link (NSL)**, **Viking Link**, **Nemo Link** and **ElecLink**. The other interconnectors do not have the mechanism available.
- NESO started using DA NTC restrictions more regularly from the **operational day** of **Friday 24th July 2026** (*operational day started at 23:00 on Thurs 23rd July 2026*)
- DA NTC restrictions may be required to guarantee the security of the GB system, should available intraday options not provide this certainty.
- The calculation of restrictions will be according to available day-ahead forecasts and resulting plans of GB system conditions at the time of calculation (*as has always been the case to date for Intraday NTC restrictions*).
 - Should these conditions change as timescales develop, any newly available capacity will be released in intraday timescales.
 - As timescales progress to intraday, further restriction mechanisms become available on IFA, IFA2 and BritNed (Intraday Trading Limits – ITLs). To ensure continued fairness, NESO will at this stage re-calculate the application of the required restricted volume, taking account of the additional mechanisms available to ensure the restrictions are still applied equitably across all available interconnectors.
- **Fairness** – restrictions to DA capacity will be applied equitably across all available interconnectors.
 - Equitably means that the total restriction would be spread across all those interconnectors which can provide the required level of security, according to the capability of each interconnector declared at the 2-day-ahead stage.
- **Transparency** – restrictions submitted by NESO will be publicly available on the [Interconnectors section](#) of NESO's Data Portal
- Any compensation for NTC restrictions applied by NESO will be made in accordance with the [Methodology for GB Commercial Arrangements relating to Interconnector Capacity Calculation](#), available on the NESO website.
- For more detailed information on:
 - NTC and ITL restrictions, please see NESO's previous OTF interconnector deep-dive, available on the NESO OTF webpages ([slides 28–30 from OTF on 5th March 2025](#));
 - How NESO calculates NTC restrictions, the factors considered and explanation of system security relating to NTCs, please see NESO's [GB NTC Calculation Policy](#), available on the NESO website;

Balancing Cost Report and Constraints Update

Izzie Sunnucks (NESO)

Forward work plan and close

Thank you