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Technology Change Logs

Change logs detailing key modelling updates and differences against DFES 2024 technology summary reports.

nationalgrid DSO



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About Regen

This report was undertaken by Regen and National Grid DSO. Regen provides independent, evidence-led insight and advice in support of our mission to transform the UK’s energy system for a net zero future. We focus on analysing the systemic challenges of decarbonising power, heat and transport. We know that a transformation of this scale will require engaging the whole of society in a just transition.

This report was commissioned by National Grid Electricity
(NGED)

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Version V3 (Post-tRESP)

Glossary

Short-form	Definitions
AR7	Allocation Round 7
ASHP	Air Source Heat Pump
BSP	Bulk Supply Point
CfD	Contracts for Difference
CM	Capacity Market
CNDM	Connections Network Design Methodology
CPA	Consistent Planning Assumptions
CP30	Clean Power 2030
CSNP	Centralised Strategic Network Plan
DFES	Distribution Future Energy Scenarios
DEC	Display Energy Certificate
DNO	Distribution Network Operators
DNS	Developments of National Significance
EIA	Environmental Impact Assessment
EPC	Energy Performance Certificate
ESA	Electricity Supply Area
EV	Electric Vehicle
FES	Future Energy Scenarios
FY	Financial Year
GB	Great Britain
GSHP	Ground Source Heat Pump
GSP	Grid Supply Point
GW	Gigawatt(s)
HAR	Hydrogen Allocation Round
HGV	Heavy Goods Vehicle
kW	Kilowatt(s)
LAEP	Local Area Energy Plan

LGV	Light Goods Vehicle
MW	Megawatt(s)
NESO	National Energy System Operator
NGED	National Grid Electricity Distribution
ONS	Office for National Statistics
PV	(Solar) Photovoltaics
RESP	Regional Energy Strategic Plan
RIIO-ED3	RIIO: Revenue = Incentives + Innovation + Outputs ED3: The third price control period for Electricity Distribution RIIO-ED3 is Ofgem's upcoming price control framework for GB electricity distribution networks (2028-2033)
SMR	Small Modular Reactor
SEP	Strategic Energy Plans
SSEP	Strategic Spatial Energy Plan
sqm	Square metre
TIA	Transmission Impact Assessment
tRESP	Transitional Regional Energy Strategic Plan
UK	United Kingdom
UPRN	Unique Property Reference Numbers

1. Introduction

National Grid Electricity Distribution (NGED) has been developing Distribution Future Energy Scenario (DFES) projections for its licence areas in collaboration with Regen since 2015.

The DFES forms a key component of NGED's broader future load forecasting and investment planning methodology, and is a regulatory requirement for all Distribution Network Operators (DNOs). The DFES projections and wider approach have continually adapted to external policy shifts, new sources of local and regional data and ambition, and the need to model new 'disruptive' sources of electricity load (distributed generation or demand) that may impact NGED's network in the medium or long term.

The UK is in a major transitional phase in its approach to energy planning for net zero. This transition is impacting the DFES itself and wider forecasting and investment planning processes for network companies across GB. Across 2025, a number of significant policies, targets and regulatory reforms have been introduced, which have impacted the approach taken to electricity network planning at the regional and national level.

Some of the key reforms that have impacted the analysis include:

- The UK government's Clean Power 2030 (CP30) targets and action plan, including technology-specific regional capacity allocations (or 'caps') for the deployment of key renewable energy and electricity storage technologies to 2030 and 2035.
- Major reforms to the network connections process and project queue management methodology. These reforms are intended to streamline the connections queue and progress the connection of new renewable energy and low-carbon projects to the electricity system.
- The appointment of NESO to deliver a series of Strategic Energy Plans (SEPs) at different levels of the UK energy system, including:
 - Strategic Spatial Energy Plan (SSEP)
 - Centralised Strategic Network Plan (CSNP)
 - Regional Energy Strategic Plans (RESPs)
 - Future Energy Scenarios: Pathways to Net Zero (FES).
- Ofgem's methodology and guidance for DNOs for the development of their RIIO-ED3 business plans, covering the period of 2028 to 2033.
- The ongoing adoption and coordinated delivery of Local Area Energy Plans (LAEPs) at city, borough, district and county council levels across the UK.
- Government recognition of the economic opportunity of AI services in the UK, through the implementation of AI Growth Zones. This has created a rapidly growing pipeline of large-scale, power-intensive data centre projects at various locations around the UK.

Building on the extensive analysis undertaken in 2024, the 2025 edition of NGED's DFES has been streamlined in terms of technology scope, but also adapted to be cognisant of specific data points (such as CP30 pipeline evidence) and produced in line with NESO guidelines (e.g. using Consistent Planning Assumptions (CPAs) for heat and transport, where appropriate).

2. Technology scope

As stated above, the DFES 2025 methodology has been adapted to conduct an updated view of the 2024 analysis and projections for key technology build blocks, including:

- Electricity generation and storage:
 - Large-scale solar PV
 - Large-scale battery storage
 - Onshore wind
 - Small-scale solar PV
 - Small-scale battery storage
 - Nuclear Small Modular Reactors (SMR)
- Electricity demand:
 - Electric vehicles (EVs) and EV chargers
 - Electrified heat in buildings
 - Hydrogen electrolysis (baseline and pipeline projects only)
 - New property developments.

Accordingly, this DFES 2025 Technology Change Log report is intended to be read alongside the NGED DFES 2024 Technology Summary Reports, as a summary of the key changes for the technology sectors listed above. This report is not intended to be read as a standalone report with results for specific licence areas. For further details around the base methodology, assumptions and a full list of technology building block projections, please see the NGED DFES 2024 Technology Summary Reports (published in January 2025):

- [NGED East Midlands DFES Technology Summary 2024](#)
- [NGED West Midlands DFES Technology Summary 2024](#)
- [NGED South West DFES Technology Summary 2024](#)
- [NGED South Wales DFES Technology Summary 2024](#)

The DFES 2025 report summarises the entirety of all NGED's network (covering results for all four licence areas) and does not provide individual licence area summaries.

3. Stakeholder engagement

NGED and Regen undertook a streamlined and focused stakeholder engagement process to inform DFES 2025. This included:

- A targeted outreach to local authorities to:
 - Update new housing data (in reference to UK government housing targets)
 - Seek views on the DFES 2024 scenario projections for individual technology sectors, that best align with local energy plans
 - Signpost any recently published LAEPs
- Hosting of a series of drop-in workshop sessions to support local authorities in responding to this data request and targeted survey, alongside discussing the wider DFES methodology.
- Delivery of engagement webinars with three industrial clusters to inform specific regional assumptions and local distribution factors around industrial decarbonisation and electrification. The industrial clusters engaged were:
 - South Wales Industrial Cluster (SWIC)
 - East Midlands Freeport and Industrial Sector
 - West Midlands and Black Country Industrial Cluster

This targeted local authority outreach directly fed the DFES 2025 analysis for new housing, as well as driving further inclusion of (and reconciliation to) LAEP target pathways and broader LA ambition in specific technology building blocks.

The engagement with industrial clusters also provided insights and endorsed adapted assumptions for the range of topics, including the deployment of hydrogen electrolyzers, demand for commercial EV charging, the viability of heat network connections, the role of nuclear SMR and the decarbonisation of airport operations.

[A separate report summarising the approach and outcomes from these stakeholder engagement activities is available online.](#)

4. Policy and scenario environment

FES 2025: Pathways to Net Zero

The NGED DFES 2025 makes use of the National Energy System Operator’s (NESO) Future Energy Scenarios (FES) 2025 framework, adopting the same national-level societal, technological and economic assumptions as the FES under four scenarios. Three of these scenarios are modelled to meet net zero (**Holistic Transition**, **Electric Engagement**, **Hydrogen Evolution**), while **Falling Behind** does not meet net zero. **Falling Behind** is a new FES 2025 scenario and corresponds to the FES 2024 **Counterfactual** scenario.

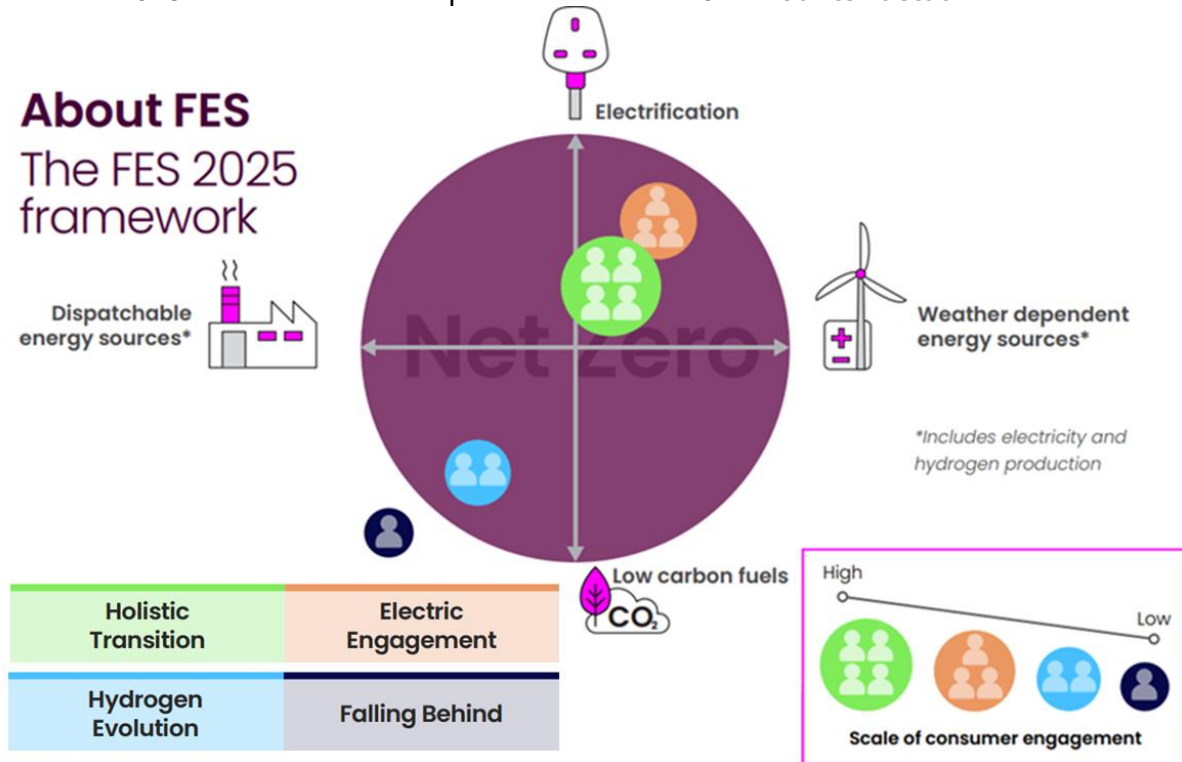


Figure 1: Future Energy Scenarios 2025 framework | Source & Credit: NESO FES 2025: Pathways to Net Zero.

The overall trends for each of the technology building blocks in scope for this year’s analysis, as well as specific regional (Grid Supply Point (GSP)-level) data held within the FES 2025 workbook, have been interrogated and reconciled to DFES analysis. Alongside wider policy reforms, changes in technology adoption trends in the FES have been reflected in the DFES analysis out to 2050, depending on the technology.

Clean Power 2030 and connections reform

The UK Government, Ofgem and NESO have worked together to reform and implement significant new policies and processes to address the very large queue of projects seeking network connections with NGED and other network operators across GB. This includes:

- ▶ The UK government’s CP30 Action Plan, which includes regional technology capacity allocations to 2030 and 2035
- ▶ The Grid connection reform, including reordering the queue of electricity generation and storage projects via NESO’s Connections Network Design Methodology (CNDM) and associated grid code modifications.

As part of the DFES 2025 analysis, Regen undertook detailed site research to identify which onshore wind, solar PV and battery storage projects in NGED’s connections pipeline could

potentially secure 'Gate 2' connection offers for connection by 2030 or 2035. This analysis was updated in September 2025 and has been fed directly into the scenario projections for these technologies.

A full and detailed summary of CP30 and the impact on the NGED DFES 2025 scenario modelling was undertaken in April 2025 and refreshed in September 2025. The analysis was incorporated into the Clearview CP30 platform to provide stakeholders with an early view on the projected development of the connections queue, and is incorporated into our final DFES 2025 dataset

Transitional RESP

NESO have been appointed to deliver a suite of SEP documents to support a coordinated approach to future energy planning. A core component of the SEPs is the development of RESPs, including an early view 'transitional' RESP (tRESP) output to support DNOs with their ED3 business planning. The development of these tRESPs (11 publications, covering 11 regions across GB) has involved NESO engaging with network companies and a range of regional stakeholders to define:

- Technology building blocks (defining technologies in scope and the sub-technology categorisation)
- CPAs for key low-carbon technologies
- Strategic investment needs and strategically important projects in each region
- Future net zero pathways for key technologies in each region.

These components have been considered in the DFES analysis in a few different ways.

- The technology building blocks were already closely aligned to the DFES building blocks. The potential for analysis to be aggregated up for comparison/reconciliation hinges on the granularity of the projections being at the same level.
- The CPAs provided by NESO for EVs and heat pumps have been considered in the equivalent DFES modelling assumptions.
- The future net zero pathways for the building blocks have been interrogated and reconciled to the DFES projections at NGED's network level after the tRESP was published in late January 2026.
- Commentary on the variances seen for each technology building block within the scope of tRESP is included in this, as an updated version of this change log report.

Local Authority Energy Plans (LAEPs)

As with previous DFES analysis, LAEPs are incorporated into the NGED DFES 2025 modelling. For 2025, LAEPs were provided or found through direct stakeholder engagement with local authorities and via manual web scraping. Direct stakeholder engagement involved a Regen facilitated 'ask-once' process ensuring local authorities serving populations across multiple DNO licence areas (SSEN, NGED and UKPN) could feed information into a single platform.

With the DFES projections taken down to Electricity Supply Area (ESA) level, a direct comparison can be undertaken where:

- LAEP data is provided at the local authority level (or a spatial granularity that can be aggregated up to the local authority level)
- LAEP targets/pathways are summarised at a suitable technology building block level and in a comparable unit (MW capacity, number of vehicles, etc).

Extracting these relevant technology-specific LAEP datapoints (targets, pathways or projects) enables them to be reconciled with equivalent DFES projections. This process can be applied in three different ways, depending on how the LAEP outputs compare to the DFES modelling:

- Where a LAEP target is within the envelope of DFES scenario outcomes for that technology, no change is made as the DFES already reflects or exceeds the LAEP target
- Where a LAEP target is above the highest DFES scenario by up to 10%, the highest DFES projection for that technology in that area is uplifted to directly reflect the LAEP target
- Where the LAEP target is above the highest DFES scenario by more than 10%, the highest DFES scenario outcome for that technology in that area is uplifted by 10%. This aims to reflect the ambition detailed within the LAEP, but ensures that the wider NGED DFES projections remain consistent with the overarching NESO FES scenario framework.

DFES 2025 analysis timeframe

Reflecting the rapidly developing policy environment for 2025 DFES, this Technology Change Log report aims to build on the detailed analysis from NGED DFES 2024 and summarises key changes for each technology that will materially change the projections to 2050. The DFES methodology is intended to be agile and robust, providing an important evidence base for NGED's networking planning and ED3 business planning processes, ensuring their network is adaptive to evolving policy and regulatory impacts and reforms. However, the results presented here are based on data and policy positions that were available at the time of analysis, and developments such as the ongoing Gate 2 reformed queue, evolving tRESP CPAs and imminent new policy announcements (e.g. Warm Homes Plan) will continue to evolve into 2026.

Transitional Regional Energy Strategic Plan (tRESP) update

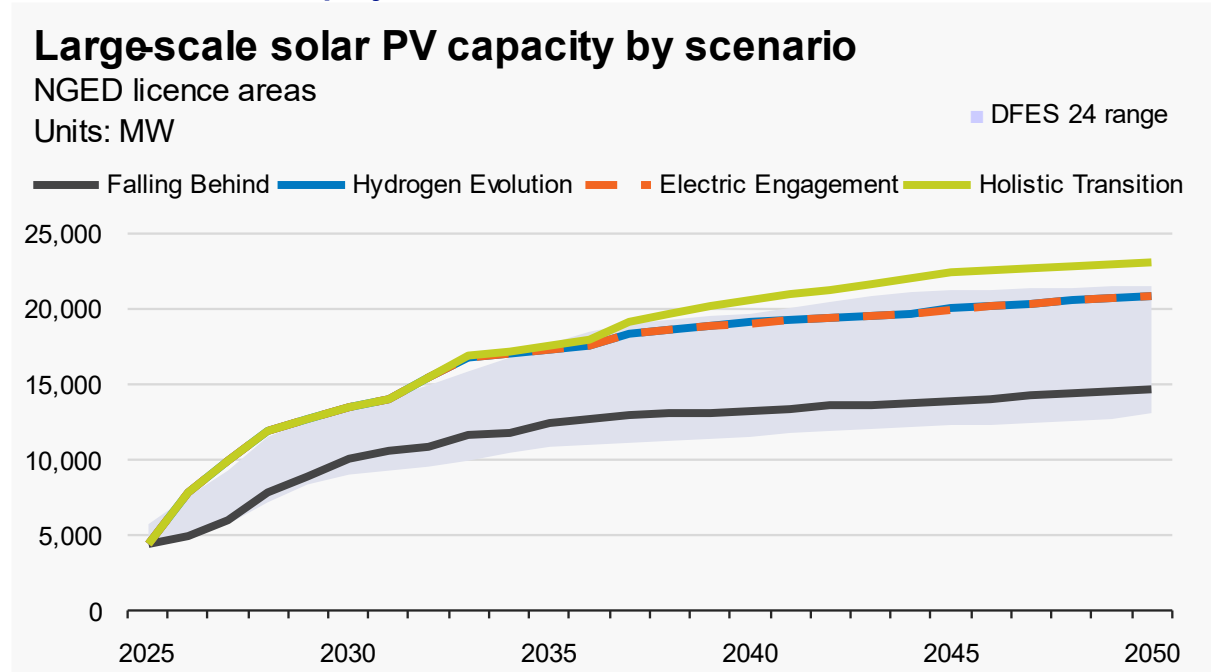
The tRESP was [published by NESO](#) on 30 January 2026. The plan will help inform future network investments by electricity DNOs for the next price control period (2028-2033). The results of the DFES 2025 analysis were used as key inputs to the subsequent tRESP outputs. This report details the modelling decisions and assumptions made in creating the DFES 2025 ahead of the tRESP finalisation and publication. As a result, the outcomes detailed in the report do not align directly with the tRESP outcomes in all cases.

Following publication of the tRESP in early 2026, this report has subsequently been updated with a tRESP reconciliation analysis between DFES 2025 'inputs to tRESP' and the tRESP outputs. A summary of the results of this analysis can be found in the Reconciliation sub-section of each technology summary chapters. In addition, a further row has been added to the reconciliation tables covering how NGED is expected to use the tRESP outputs in their ED3 business plan and wider network planning.

5. Generation and storage change logs

Large-scale solar PV

DFES 2025 scenario projections



Baseline and pipeline

Status	Details	Capacity (MW)	Changes since DFES 2024
Baseline	Connected	4,413	The baseline of installed capacity has significantly increased (by 431 MW) compared to the DFES 2024 baseline.
Pipeline	All planning statuses	17,676	The pipeline of contracted capacity remains very large at over 17 GW, but is not significantly higher than 2024.
Pipeline	Planning permission granted	5,059	The total capacity of sites with planning approval has increased by 585 MW since DFES 2024.
Pipeline buildout methodology	DFES 2025 reflects NESO’s CP30 plan, which includes capacity allocations for large-scale solar PV in NGED’s licence areas by 2030 and 2035. The three net-zero-compliant scenarios share the same pipeline buildout assumptions. This is a departure from DFES 2024, which projected a greater spread of pipeline capacity.		

Post-pipeline projections

Scenario	Changes compared to DFES 2024
Holistic Transition	By 2050, total large-scale solar generation capacity in NGED's licence areas reaches 22.8 GW. This is 1.3 GW higher than the total projected for DFES 2024. This is due to the pipeline of projects that are compliant with CP30 eligibility criteria and are modelled to connect in the 2030s.
Electric Engagement	By 2050, total large-scale solar generation capacity in NGED's licence areas reaches 20.6 GW. This is 951 MW higher than the total projected for DFES 2024. This is due to the pipeline of projects that are compliant with CP30 criteria and are modelled to connect in the 2030s.
Hydrogen Evolution	By 2050, total large-scale solar generation capacity in NGED's licence areas reaches 20.6 GW. This is 3.5 GW higher than the total projected for DFES 2024. This is due to the pipeline of projects that are compliant with CP30 criteria and are modelled to connect in the 2030s.
Falling Behind	By 2050, total large-scale solar generation capacity in NGED licence areas reaches 14.7 GW. This is 1.6 GW higher than the total projected for DFES 2024. Falling Behind reflects an overall slower deployment of large-scale solar PV out to 2050, including a delayed deployment of CP30 technologies.

Modelling factors

Factor	Impact	Changes compared to DFES 2024
Planning progress and CP30	Uptake modelling	<p>The three net zero scenarios were modelled to align with CP30 capacity allocations and eligible projects in NGED's licence areas. This differs from DFES 2024, which modelled each scenario individually.</p> <p>Each pipeline site was assessed and researched to determine whether it would receive a Gate 2 connection offer. Sites determined to have received a Gate 2 connection offer, were modelled to connect under the three net-zero-compliant scenarios. The year each site is modelled to connect is based on site-specific evidence on planning status, Capacity Market (CM) or Contracts for Difference (CfD) market results.</p> <p>Delays to pipeline connections are reflected in the least ambitious Falling Behind scenario. Sites with no planning evidence were not modelled to connect in any scenario.</p>
Repowering assumptions	Uptake modelling	<p>The following assumptions were used to consider the repowering of solar sites reaching the end of their operational life, out to 2050:</p> <ul style="list-style-type: none"> The operational life of a solar array is assumed to be 20-30 years, depending on capacity scale and scenario. Baseline sites that are 5 MW or larger are modelled to repower at the end of their operational life with +25% capacity in Electric Engagement and Hydrogen Evolution and +50% in Holistic Transition. No additional capacity is assumed to be added under Falling Behind.

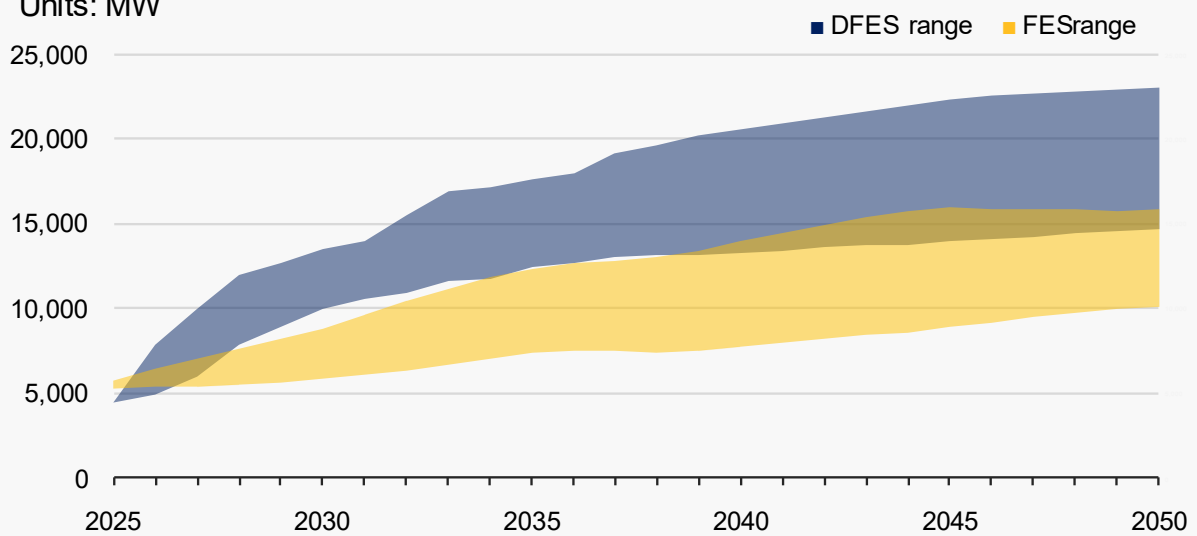
- Modelling did not rewire sites with additional capacity greater than 5 MW before 2035, as these sites would fall under a Transmission Impact Assessment (TIA) and would require a Gate 2 offer. Sites that were due to connect in the 2035/36 financial year (FY) were modelled to rewire in the 2036/37 FY, after CP30 Gate 2 offers are fulfilled.

Reconciliation

Largescale solar PV— FES/DFES comparison

NGED licence areas

Units: MW

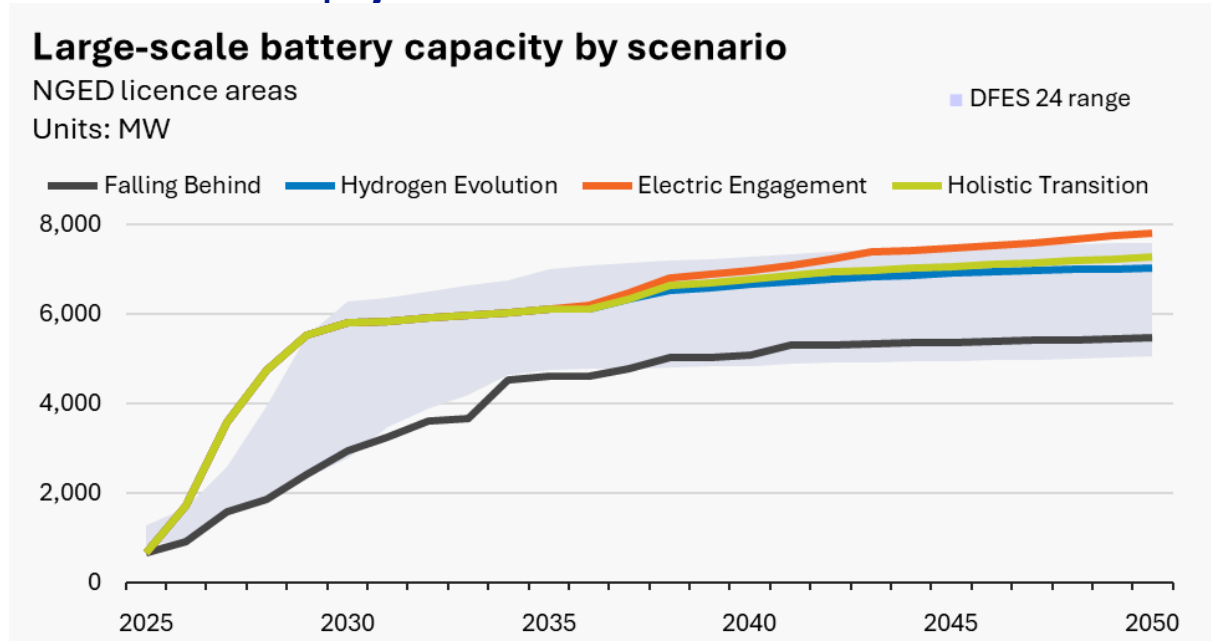


Comparison	Details
DFES 2025 to DFES 2024	Overall, the three net zero scenarios are closely aligned with the Holistic Transition scenario from DFES 2024. Hydrogen Evolution capacity is modelled to be aligned with Electric Engagement in the long-term in DFES 2025. Both of these scenarios are aligned with the DFES 2024 Electric Engagement projection. The capacity projected under the Falling Behind scenario is well aligned with DFES 2024 Counterfactual .
DFES 2025 to FES 2025	The DFES 2025 near-term uptake reflects the significant pipeline of projects and CP30 allocations for NGED’s licence areas. The capacity of projects found to be eligible to connect under CP30 and modelled in the DFES analysis is notably above the FES regional projections. The CP30 allocation for large-scale solar in 2030 is 13.9 GW for NGED’s licence areas, which is met in the DFES net zero scenarios, whereas the most ambitious FES regional projection only reaches 8.8 GW by 2030.
DFES 2025 inputs to tRESP	The tRESP Pathway outputs broadly align with the DFES 2025 results at a GSP level. In GSPs where there is some variance, the DFES 2025 results tend to be slightly higher, typically by up to 25%. The differences are primarily driven by the tRESP modelling being finalised

	after the production of DFES 2025 and therefore reflecting more up-to-date outcomes for the connections pipeline, particularly with regards to Connections Reform.
Use of tRESP outputs in NGED network planning	NGED’s network planning processes will utilise the tRESP’s GSP-level Pathway outcomes for this technology. For network planning below GSP level, the DFES 2025 Primary-level results will be scaled to match the tRESP outputs at GSP level.

Large-scale battery storage

DFES 2025 scenario projections



Baseline and pipeline

Status	Details	Capacity (MW)	Changes since DFES 2024
Baseline	Connected	665	Increase from the 640 MW reported for DFES 2024, due to a 25 MW project connecting in Newport. 43 large-scale battery projects are now connected across NGED’s licence areas.
Pipeline	All planning statuses	26,273	Total capacity of the pipeline of sites with accepted connection agreements remains very large, but has decreased slightly from the 27.5 GW recorded in DFES 2024.
Pipeline	Planning permission granted	8,077	Total capacity of the pipeline of sites with planning permission has increased significantly from the 5.1 GW recorded for DFES 2024. This large increase over the past 12 months is almost certainly due to projects seeking to secure planning permission as required evidence under the CP30 connections reform process and timeline. Submitting proof of planning approval would grant projects protected status and a Gate 2 connection offer.

Pipeline	Prequalified for, or have won, CM contracts	2,373	<p>An additional 800 MW of capacity has won capacity agreements in recent CM auctions since DFES 2024. These sites are modelled to commission in their T-4 CM delivery year. We are aware of recent developments for a small number of battery storage projects that have relinquished their CM agreements. These updates to individual sites have been reflected in the analysis, but we are continuing to use CM dates as a modelling input for sites that hold a CM agreement.</p>
Pipeline buildout methodology		<p>DFES 2025 reflects the CP30 plan, with its allocations for battery storage capacity to be deployed in NGED licence areas by 2030 and 2035. The net-zero-compliant scenarios Holistic Transition, Electric Engagement and Hydrogen Evolution share equal pipeline buildout assumptions. This is a departure from DFES 2024 which projected a greater spread of pipeline buildout outcomes across the three net zero scenarios.</p> <p>There is a chance that some battery storage projects in NGED’s licence areas may have submitted applications to the first round of the long duration electricity storage (LDES) cap and floor revenue support scheme. 77 sites (totalling 28.7 GW) have successfully passed initial eligibility assessments. However, the visibility of the location of these 8 hour (minimum) projects is not yet publicly available.</p>	

Post-pipeline projections

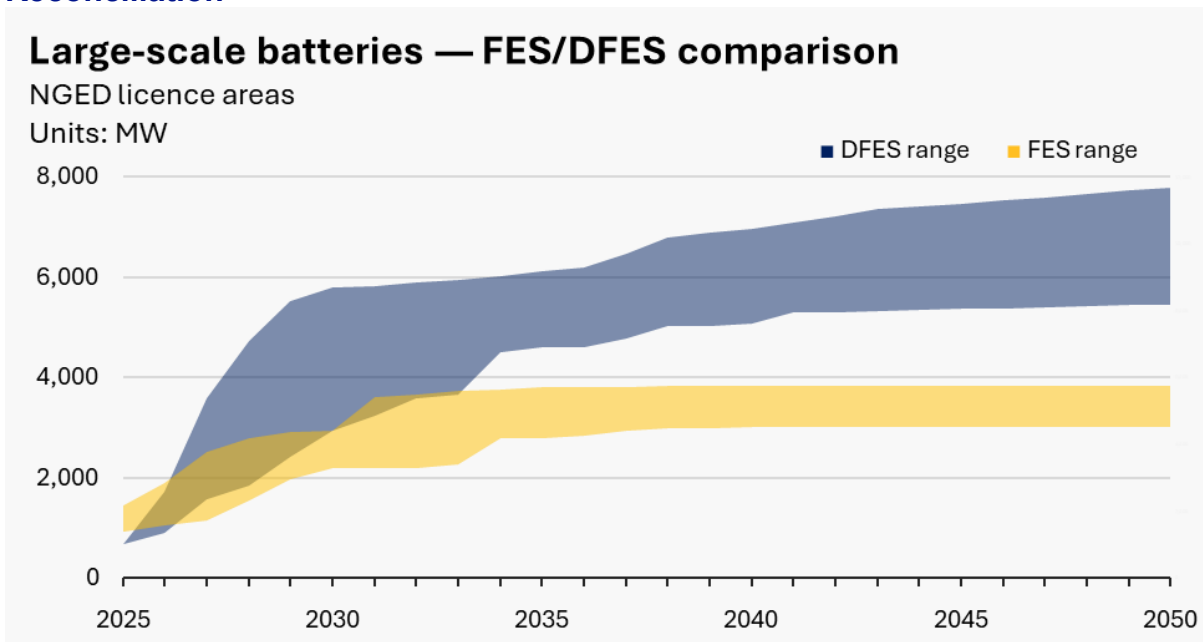
Scenario	Changes compared to DFES 2024
Holistic Transition	By 2050, total large-scale battery storage capacity across NGED’s licence areas reaches 7.3 GW. This is 300 MW lower than the total projected for DFES 2024. This is due to Holistic Transition becoming the second-highest growth scenario for large-scale battery storage in the FES framework. Previous FES and DFES projections saw it as the highest growth scenario.
Electric Engagement	By 2050, total large-scale battery storage capacity across NGED’s licence areas reaches 7.8 GW. This is 1 GW higher than the total projected for DFES 2024. This is due to Electric Engagement becoming the highest growth scenario for large-scale battery storage in the FES framework. Previous FES and DFES projections saw Holistic Transition as the scenario that was most supportive of battery storage deployment. The projection for collocated storage, driven by projections for onshore wind and solar deployment, is the only source of variation in the scenarios from 2035 to 2050.
Hydrogen Evolution	By 2050, total large-scale battery storage capacity across NGED’s licence areas reaches 7 GW. This is 840 MW higher than the total projected for DFES 2024. This is due to Hydrogen Evolution sharing the same CP30-aligned pipeline buildout assumptions as Holistic Transition and Electric Engagement . Previous DFES projections for Hydrogen Evolution assumed a greater attrition of pipeline sites.
Falling Behind	By 2050, total large-scale battery storage capacity across NGED’s licence areas reaches 5.5 GW. This is 400 MW higher than the total projected for DFES 2024. This is largely based on the pipeline of sites with planning approval / development evidence.

Modelling factors

Factor	Impact	Changes compared to DFES 2024
Planning progress and CP30	Uptake modelling	As part of the ongoing connections reform process, NESO created an allocation for the total capacity of battery storage that can connect in the NGED’s licence areas by 2030 and 2035. Under this mechanism, any site that has been granted planning permission or secured a CM agreement is given protected status and guaranteed a Gate 2 connection offer regardless of whether it would exceed the allocated storage capacity across NGED’s licence areas. In NGED, the pipeline of projects with protected status significantly exceeds the licence area’s battery storage capacity allocation. This leaves no remaining capacity for less advanced sites. As a result, it is assumed that any site without protected status will not receive a Gate 2 connection offer and will not build out under any scenario. This is a change in the approach used for DFES 2024, whereby projects which had submitted planning permission could build out under more ambitious scenarios. The 2025 analysis has tethered the three net zero scenarios together from 2025 to 2035. In addition, due to the number of sites with planning permission and the scale of the pipeline with Gate 2 offers, sites with planning permission before 2021, but

		with no further evidence of progression, are also assumed not to build out. This impacts 13 sites totalling 530 MW.
Co-located storage with renewables	Uptake modelling	Reflecting evidence from the pipeline of sites with connection offers, higher rates of co-location are modelled under Holistic Transition and Electric Engagement , relative to DFES 2024. Under these scenarios, 20-40% of future wind and solar capacity is assumed to co-locate with battery storage. Hydrogen Evolution and Falling Behind maintain the same 10% rate of co-location, which was modelled for all scenarios in DFES 2024. The projection of co-located storage, driven by projections for onshore wind and solar deployment, is the driver of variance between the scenarios from 2035 to 2050.
Modelled post-pipeline capacity	Uptake modelling	The CP30 battery storage allocation for NGED’s licence areas is filled in 2030 and 2035 by projects with planning permission and, hence, protected status. It is highly unlikely that any sites not already in the connections queue will connect before 2035. As with DFES 2024, no large-scale standalone post-pipeline capacity has been modelled. This reflects the likelihood that the markets and commercial model for grid-scale battery storage services will become saturated.

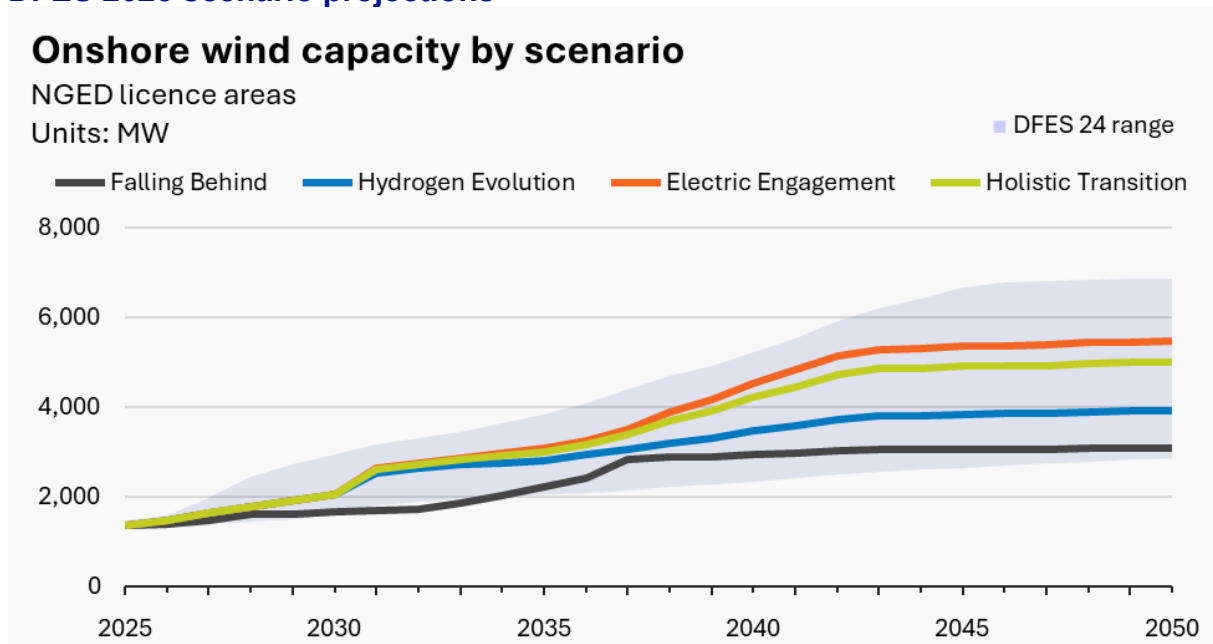
Reconciliation



Comparison	Details
DFES 2025 to DFES 2024	<p>While Holistic Transition, Electric Engagement and Hydrogen Evolution project higher near-term growth relative to DFES 2024 scenarios, the Falling Behind scenario is aligned with DFES 2024's Counterfactual in the near term.</p> <p>Across net-zero-compliant DFES 2025 scenarios, installed capacity by 2050 is aligned with figures projected under Holistic Transition in DFES 2024. Electric Engagement sees an increase due to it becoming the highest growth scenario in the FES framework.</p> <p>The primary reason for the variances seen is due to the adapted modelling to reflect Gate 2-compliant projects in all net zero scenarios.</p>
DFES 2025 to FES 2025	<p>The DFES baseline of 665 MW is lower than the 1.4 GW baseline reported in FES 2025. The DFES 2025 baseline is based on NGED connections data.</p> <p>FES 2025 projects a lower 2050 capacity and a narrower range of outcomes. DFES considers the full scale of the project pipeline, which is likely to receive Gate 2 connection offers.</p>
DFES 2025 inputs to tRESP	<p>The tRESP Pathway outputs vary from the DFES 2025 outcomes in two key ways. In the near term, the DFES 2025 outcomes are higher, reflecting a faster deployment of battery storage when compared to the tRESP Pathways. In the longer term, from the 2030s and beyond, the tRESP Pathway outputs are higher than the DFES for large-scale battery storage. In 2050, the tRESP Holistic Transition Pathway contains 33% more battery storage capacity across NGED's licence areas than the DFES 2025 Holistic Transition Pathway shows (9.8 GW compared to 7.3 GW).</p> <p>The differences are driven by the tRESP modelling being finalised after the production of DFES 2025 and therefore reflecting more up-to-date outcomes for the connections pipeline, particularly with regards to Connections Reform. This has resulted in a greater number of battery projects receiving Gate 2 offers than was modelled in the DFES 2025, culminating in higher overall projections in the tRESP Pathways.</p> <p>However, a greater number of these projects receiving Phase 2 offers are set to be connected after 2030, resulting in a slower near-term uptake in the tRESP Pathways compared to DFES 2025.</p>
Use of tRESP outputs in NGED network planning	<p>NGED's network planning processes will utilise the tRESP's GSP-level Pathway outcomes for this technology. For network planning below GSP level, the DFES 2025 Primary-level results will be scaled to match the tRESP outputs at GSP level.</p>

Onshore wind

DFES 2025 scenario projections



Baseline and pipeline

Status	Details	Capacity (MW)	Changes since DFES 2024
Baseline	Connected	1,352	There is a marginal decrease from the DFES 2024 baseline, due to capacity adjustments at some existing operational sites.
Pipeline	All planning statuses	2,092	Increase from the 2 GW pipeline capacity recorded for DFES 2024, with seven additional sites in the pipeline.
Pipeline	Planning permission granted	238	Five additional sites totalling 120 MW have secured planning permission since DFES 2024. These are primarily in the South Wales licence area.
Pipeline buildout methodology	DFES 2025 reflects the CP30 plan, with regional capacity allocations for onshore wind to be deployed in England and Wales by 2030 and 2035. The net-zero-compliant scenarios (Holistic Transition , Electric Engagement and Hydrogen Evolution) share equal pipeline buildout assumptions in line with CP30 policy and project-specific Gate 2 evidence. This is a departure from DFES 2024, which projected a greater spread of pipeline buildout outcomes across the scenarios.		

Post-pipeline projections

Scenario	Changes compared to DFES 2024
Holistic Transition	Under this scenario, no additional capacity beyond the known pipeline has been modelled, outside of repowering. This means that the total installed capacity by 2050 has decreased by approximately 370 MW, relative to DFES 2024.
Electric Engagement	Under this scenario, no additional capacity beyond the known pipeline has been modelled, outside of repowering. This means that the total installed capacity by 2050 has decreased by approximately 1.4 GW, relative to DFES 2024.
Hydrogen Evolution	Increased repowering assumptions under this scenario, relative to DFES 2024, mean that by 2050, the total installed capacity across NGED's licence areas has increased by c. 20 MW, relative to DFES 2024.
Falling Behind	Increased repowering assumptions under this scenario, relative to DFES 2024, mean that by 2050, the total installed capacity across NGED's licence areas has increased by c. 220 MW, relative to DFES 2024.

Modelling factors

Factor	Impact	Changes compared to DFES 2024
Planning progress and CP30	Uptake modelling	<p>The DFES 2024 analysis assumed that sites with no evidence of progress through planning would only build out under more ambitious scenarios.</p> <p>NESO's connections reform process has created allocations for the amount of onshore wind capacity to be connected within NGED licence areas and wider national regions by 2030 and 2035. The 2035 allocation for onshore wind is large enough to accommodate the buildout of the entire NGED project pipeline. As a result, in DFES 2025, the entire pipeline of projects which are over 5 MW (and subject to a TIA) is assumed to build out under all scenarios.</p> <p>Delays to projects coming online are reflected in the less ambitious Falling Behind scenario. Sites with connection offers not yet accepted are also not modelled to build out under this scenario.</p>
Repowering assumptions	Uptake modelling	<p>Higher uplifts in site capacity from future repowering have been assumed in DFES 2025. This is based on desktop research, anecdotal evidence from network operators and analysis of operational sites which have already repowered.</p> <p>Baseline sites are assumed to repower with a percentage of additional capacity, with total additional capacity at the BSP/GSP level indicating potential future impact across the onshore wind fleet. The percentage of additional capacity modelled varies by scenario:</p> <ul style="list-style-type: none"> • Electric Engagement: 250% additional capacity • Holistic Transition: 200% additional capacity • Hydrogen Evolution: 100% additional capacity • Falling Behind: 50% additional capacity.

	<p>A more detailed, site-by-site assessment of repowering potential would require a more detailed understanding of constraints, including:</p> <ul style="list-style-type: none"> • Projected local network capacity • Planning constraints • Site access for larger turbines • Financial feasibility. <p>A maximum repowered capacity of 100 MW has been assumed. This reflects the likelihood that sites will encounter these constraints. Above this level, sites are classified as 'large' under the grid code, incurring additional costs for developers.</p>
<p>Modelled post-pipeline capacity</p>	<p>Uptake modelling</p> <p>DFES modelling has historically included post-pipeline capacity for large-scale onshore wind in NGED's licence areas, connecting in the 2030s and 2040s. This was due to the lack of a significant project pipeline and more conservative assumptions around repowering capacity, leaving room for potential additional capacity connecting out to 2050.</p> <p>For DFES 2025, however, no large-scale post-pipeline capacity has been modelled. Pipeline projects falling within the CP30 allocation capacities and uplifted assumptions around onshore wind repowering, have defined the basis for all modelled post-pipeline capacity out to 2050.</p> <p>The CP30 onshore wind allocation for NGED's licence areas is largely filled in 2030 and 2035 due to the buildout of the known project pipeline and the repowering of older onshore wind sites. It is unlikely that any sites not already in the connections queue will connect before 2035.</p> <p>Repowering results in an acceleration in capacity growth through the late 2030s and into the 2040s. Repowering of ageing sites is the most significant driver of additional capacity in this period. Locations already in use for wind farms are less likely to face local opposition and will benefit from existing infrastructure. The government will also be supporting onshore wind sites to repower through the CfD scheme from AR7 onwards.¹ This modelled capacity incorporates new sites which connect to existing sites, as site extensions.</p>

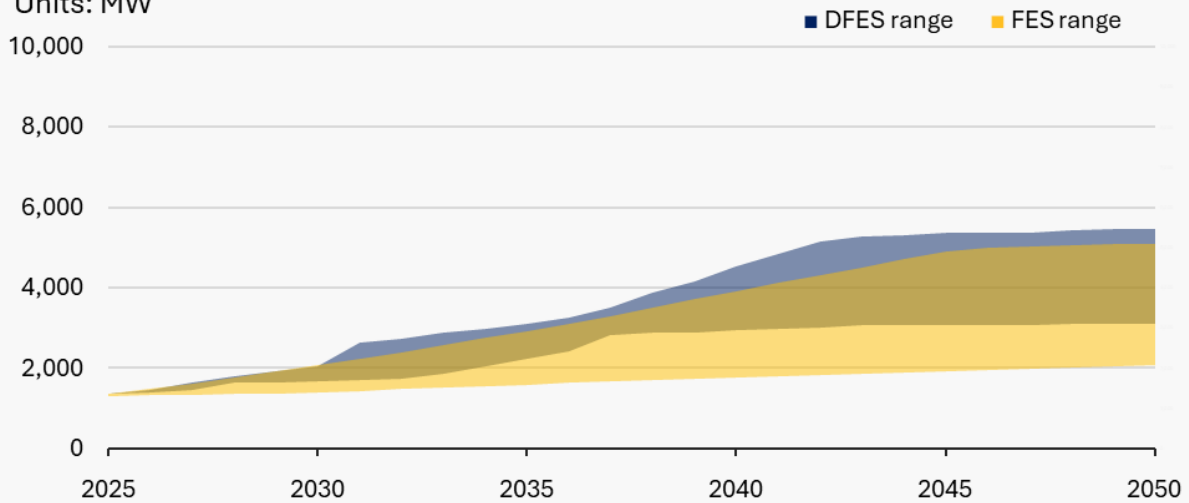
¹ UK Government, [Consultation response for Allocation Round 7](#), July 2025

Reconciliation

Onshore wind — FES/DFES comparison

NGED licence areas

Units: MW

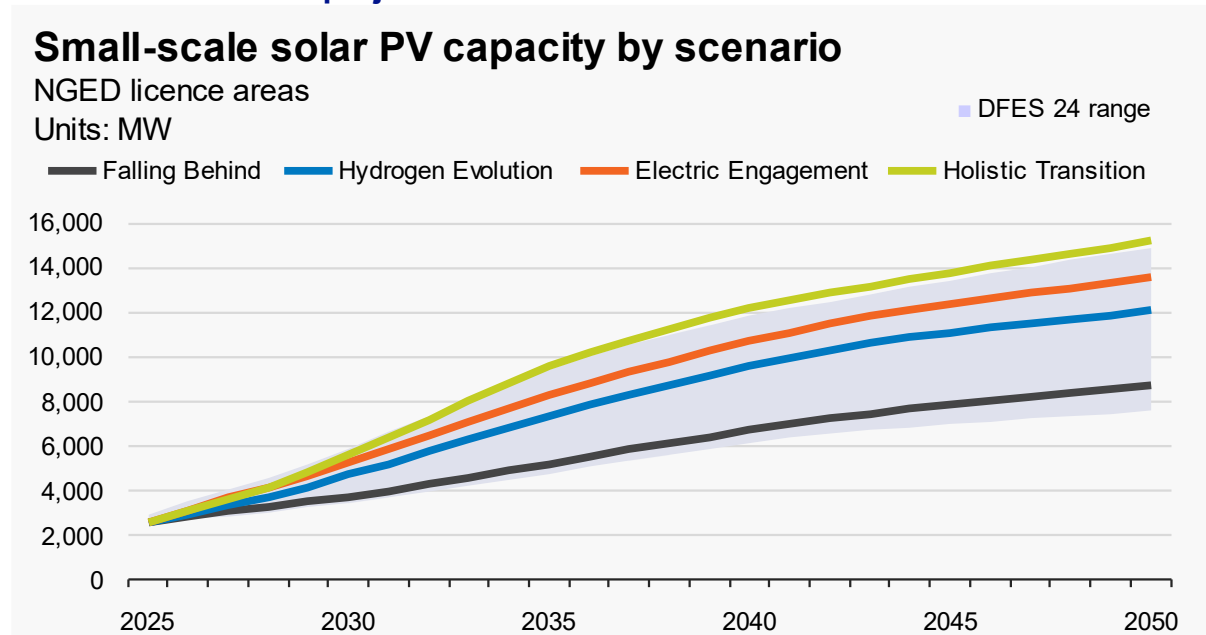


Comparison	Details
DFES 2025 to DFES 2024	The near-term buildouts modelled under Electric Engagement , Holistic Transition and Hydrogen Evolution scenarios for DFES 2025 are closely aligned with the near-term buildout projected under the Holistic Transition scenario for DFES 2024. The total installed capacity by 2050 under the highest growth Electric Engagement and Holistic Transition scenarios is lower than the figures reported for DFES 2024. Hydrogen Evolution and Falling Behind have additional onshore wind capacity installed by 2050 relative to their DFES 2024 equivalents. This is partly driven by increased capacity assumed from the repowering of older onshore wind farms.
DFES 2025 to FES 2025	Across all scenarios, DFES 2025 projects higher near-term and long-term growth relative to FES 2025. This is based on the pipeline of projects with connection agreements, analysis that is in line with NESO’s CP30 Gate 2 criteria and the potential for baseline sites to repower with potentially significantly higher capacities.
DFES 2025 inputs to tRESP	In most GSP areas, the DFES 2025 and tRESP outcomes broadly align throughout the scenario timeframe. In a small number of GSPs, the DFES 2025 results are moderately higher than the tRESP equivalents. The differences are likely driven by the tRESP modelling being finalised after the production of DFES 2025 and therefore reflecting more up-to-date outcomes for the connections pipeline; particularly with regards to Connections Reform.
Use of tRESP outputs in NGED network planning	NGED’s network planning processes will utilise the tRESP’s GSP-level Pathway outcomes for this technology. For network planning below GSP level, the DFES 2025 Primary-level results will be scaled to match the tRESP outputs at GSP level.

Small-scale solar PV

Solar PV technology below 1 MW in capacity.

DFES 2025 scenario projections



Baseline and pipeline

Status	Details	Capacity (MW)	Changes since DFES 2024
Baseline	Connected	2,533	Installed capacity has increased by 335 MW since DFES 2024.
Pipeline	Total	166	The pipeline remains small, reflecting the faster turnaround of small-scale installations and NGED’s ‘connect and manage’ policy for smaller connections. However, capacity has increased by 7 MW since DFES 2024.

Post-pipeline projections

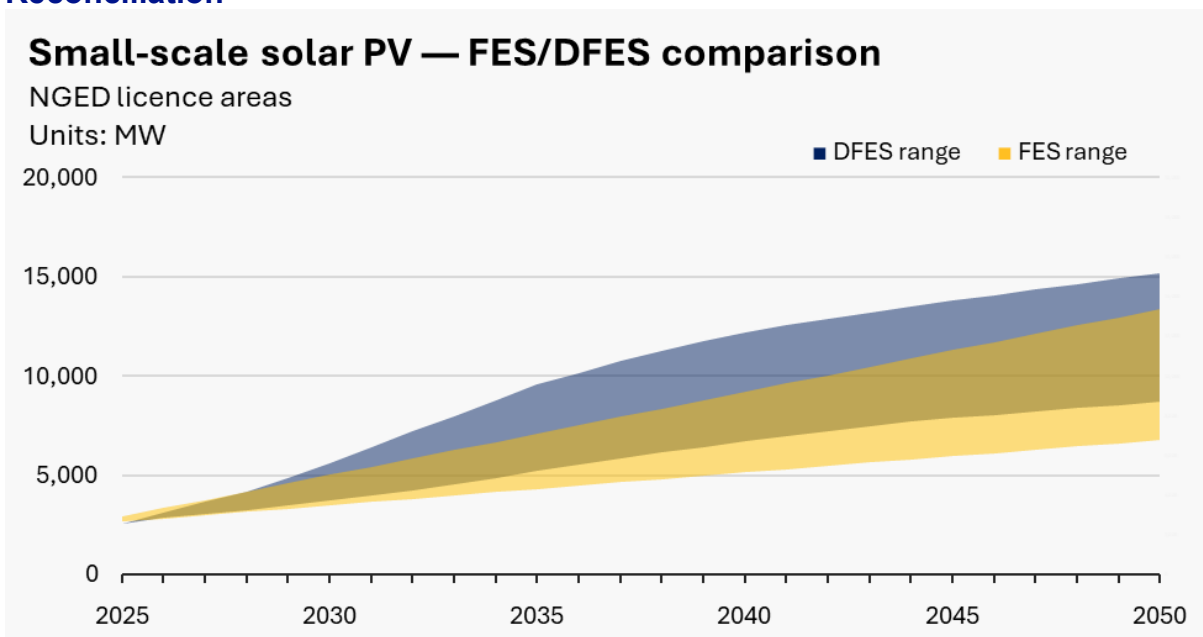
Scenario	Changes compared to DFES 2024
Holistic Transition	By 2050, total small-scale solar capacity in NGED’s licence areas reaches 15 GW. Total capacity under Holistic Transition is 0.3 GW higher than DFES 2024. This is due to an increase in new development projections. Whilst DFES 2025 has seen a large increase in the number of new developments, which impacts small-scale solar projections, FES 2025 has reduced the projected capacity of small-scale solar on existing buildings under this scenario compared to FES 2024. This has resulted in a small overall change in capacity compared to DFES 2024.
Electric Engagement	By 2050, total small-scale solar capacity in NGED’s licence areas reaches c.14 GW. The total capacity under Electric Engagement is 0.3 GW higher than DFES 2024. This is due to an increase in new development projections.

	In the very near term (2026 and 2027), small-scale solar capacity under Electric Engagement is greater than under Holistic Transition . This is because the FES 2025 framework has Electric Engagement as the scenario with the greatest uptake of rooftop solar. After 2027, the higher uptake of rooftop solar associated with new developments in the Holistic Transition scenario results in Holistic Transition overtaking Electric Engagement out to 2050.
Hydrogen Evolution	By 2050, total small-scale solar capacity in NGED’s licence areas reaches 12 GW. Overall capacity under Hydrogen Evolution is 1 GW higher than DFES 2024, due to an equivalent higher uptake in FES 2025.
Falling Behind	By 2050, total small-scale solar capacity in NGED’s licence areas reaches c.9 GW. Capacity under Falling Behind is 1 GW higher than DFES 2024, due to higher uptake under this scenario in FES 2025. For both the Falling Behind and Hydrogen Evolution scenarios, FES 2025 projects a significant increase in the uptake of small-scale solar on existing buildings, which has contributed to a larger increase from DFES 2024 than in the Electric Engagement and Holistic Transition scenarios.

Modelling factors

Factor	Impact	Changes compared to DFES 2024
Average technology size	Uptake modelling	Reflecting evidence from the most recent baseline data, the average technology size of domestic and commercial rooftop solar PV installations has been updated. Average domestic rooftop capacity has increased from 4 kW to 5 kW, and commercial rooftop capacity has increased from 15 kW to 30 kW. This has slightly increased the overall projected capacity out to 2050.

Reconciliation

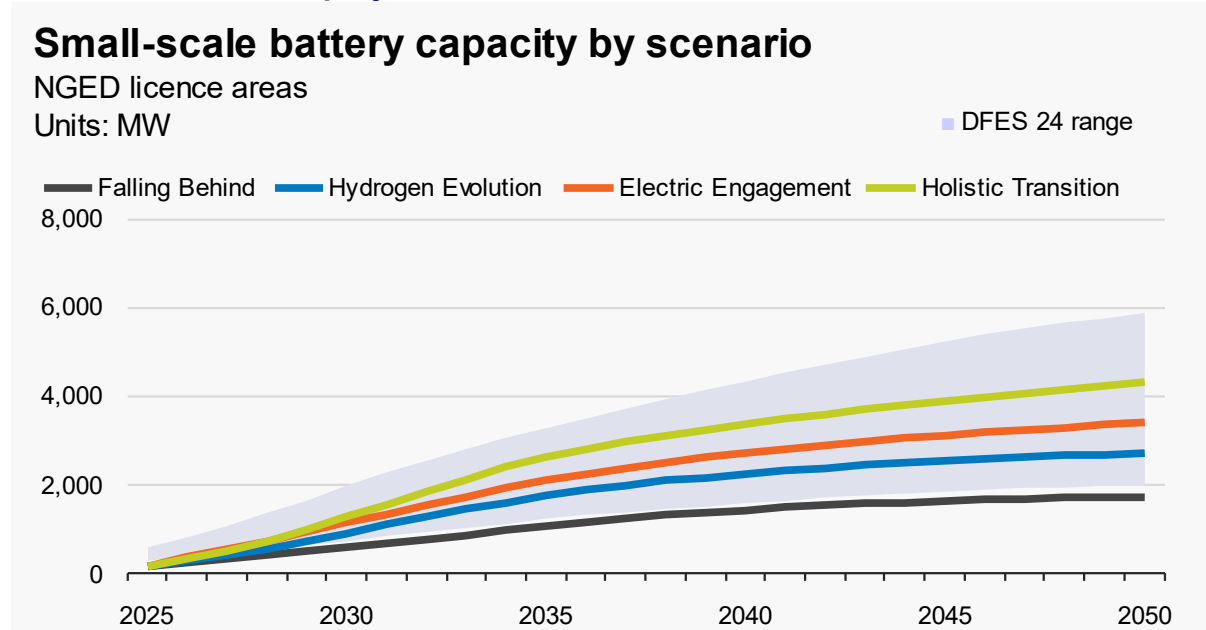


Comparison	Details
DFES 2025 to DFES 2024	Across all scenarios, DFES 2025 projects higher small-scale solar deployment across the period to 2050, relative to DFES 2024. This is based on higher new house building targets and an increase in the average size of domestic and commercial rooftop solar installations.
DFES 2025 to FES 2025	Across all scenarios, DFES 2025 projects higher small-scale solar PV capacity across the period to 2050, relative to FES 2025. The reason for this is unclear, but it could be related to differences in the number of future new developments.
DFES 2025 inputs to tRESP	The DFES 2025 and tRESP outcomes align very closely from the baseline to 2050. This is due to shared baseline inputs (e.g. MCS data), minimal pipeline and the tRESP analysis directly using DFES data to inform the Pathways. There is almost no difference between the tRESP and DFES outcomes at each GSP.
Use of tRESP outputs in NGED network planning	NGED's network planning processes will utilise the tRESP's GSP-level Pathway outcomes for this technology. For network planning below GSP level, the DFES 2025 Primary-level and Low Voltage results will be scaled to match the tRESP outputs at GSP level.

Small-scale battery storage

Battery storage technology below 1 MW in capacity.

DFES 2025 scenario projections



Baseline and pipeline

Status	Details	Capacity (MW)	Changes since DFES 2024
Baseline	Connected	135	The baseline of connected capacity has decreased by 41 MW compared to DFES 2024. This is due to more accurate data being used to calculate the baseline (see modelling assumptions for more information).
Pipeline	Total	27	The pipeline remains small, reflecting the faster nature of small-scale battery installations and NGED’s ‘connect and manage’ policy for smaller connections. Pipeline capacity has increased by 16 MW since DFES 2024.

Post-pipeline projections

All projections for small-scale storage have decreased since DFES 2024. The reason for the reduced capacity seen across all scenarios is outlined in the modelling factors table below.

Scenario	Changes compared to DFES 2024
Holistic Transition	By 2050, total small-scale battery storage capacity in NGED's licence areas reaches c.4 GW. This is c.2 GW lower than the total projected for DFES 2024.
Electric Engagement	By 2050, total small-scale battery storage capacity in NGED's licence areas reaches c.3 GW. This is c.1 GW lower than the total projected for DFES 2024.
Hydrogen Evolution	By 2050, total small-scale battery storage capacity in NGED's licence areas reaches c.3 GW. This is 0.8 GW lower than the total projected for DFES 2024.
Falling Behind	By 2050, total small-scale battery storage capacity in NGED's licence areas reaches c.2 GW. This is 0.3 GW lower than the total projected for DFES 2024.

Modelling factors

Factor	Impact	Changes compared to DFES 2024
NGED flexibility registered assets data	Baseline modelling	Previous DFES 2024 analysis modelled an approximate domestic storage baseline based on whole-GB market data. For DFES 2025, the modelling has directly used data from NGED on flexibility-registered assets. This has resulted in the domestic storage baseline being revised down. It is very likely that not all domestic storage is registered as a flexible asset. However, without a clear method to quantify this shortfall, the registered assets have been used to inform the domestic storage baseline directly in this year's analysis.
Co-located storage with solar	Uptake modelling	The proportions of domestic and commercial solar baseline sites which are co-located with battery storage, were calculated by licence area and used to project future co-location capacity out to 2030. After 2030, these proportions were linearly decreased to meet the same levels in 2050 as modelled in DFES 2024. This is a change to the modelling approach used in DFES 2024, which used evidence from a market report to set the proportion in 2025, and then linearly decreased to meet 2050 levels from this point. The market report rate was higher than that calculated using baseline data, meaning that projections decreased slightly using this new method.
Average technology size	Uptake modelling	Reflecting evidence from the most recent baseline data, the average technology sizes of domestic and high-energy user battery storage installations have been updated. Average domestic battery capacity has increased from 5 kW to 6 kW, and high-energy user battery capacity has decreased from 120 kW to 30 kW, which now aligns with the average capacity of commercial rooftop solar installations. In DFES 2024, high-energy user battery capacity was projected to increase linearly up to 300 kW by 2050.

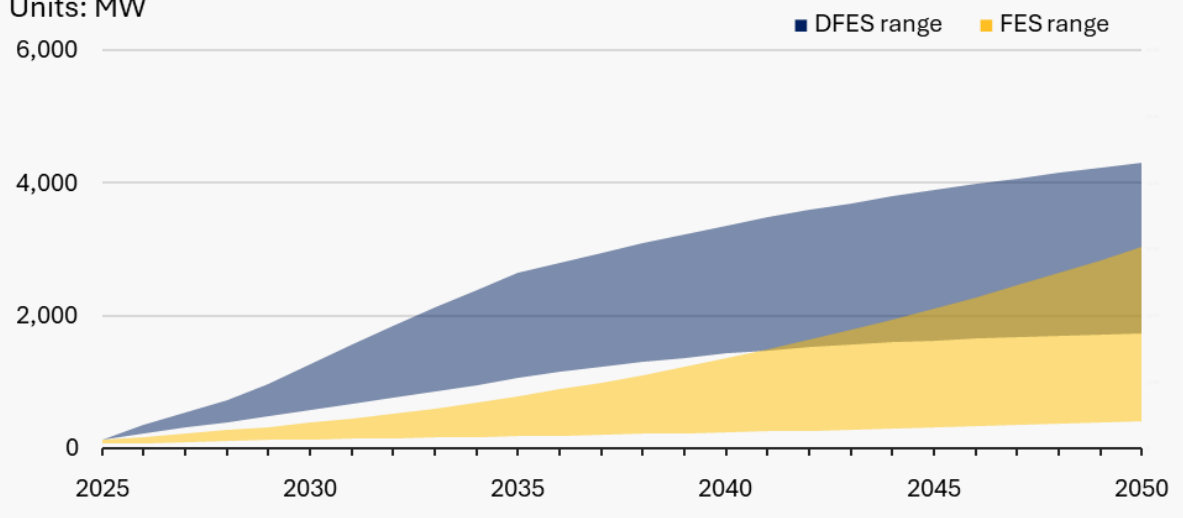
		The change in domestic battery capacity has slightly increased projections, whereas the decrease in high-energy user battery capacity has equivalently decreased projected capacity out to 2050.
Pipeline connection date	Uptake modelling	For high-energy user batteries, the pipeline has been modelled to connect over the next two years, with an even split between 2026 and 2027. This is a change from the approach used in DFES 2024, which modelled the whole pipeline to connect in the first year.

Reconciliation

Small-scale batteries — FES/DFES comparison

NGED licence areas

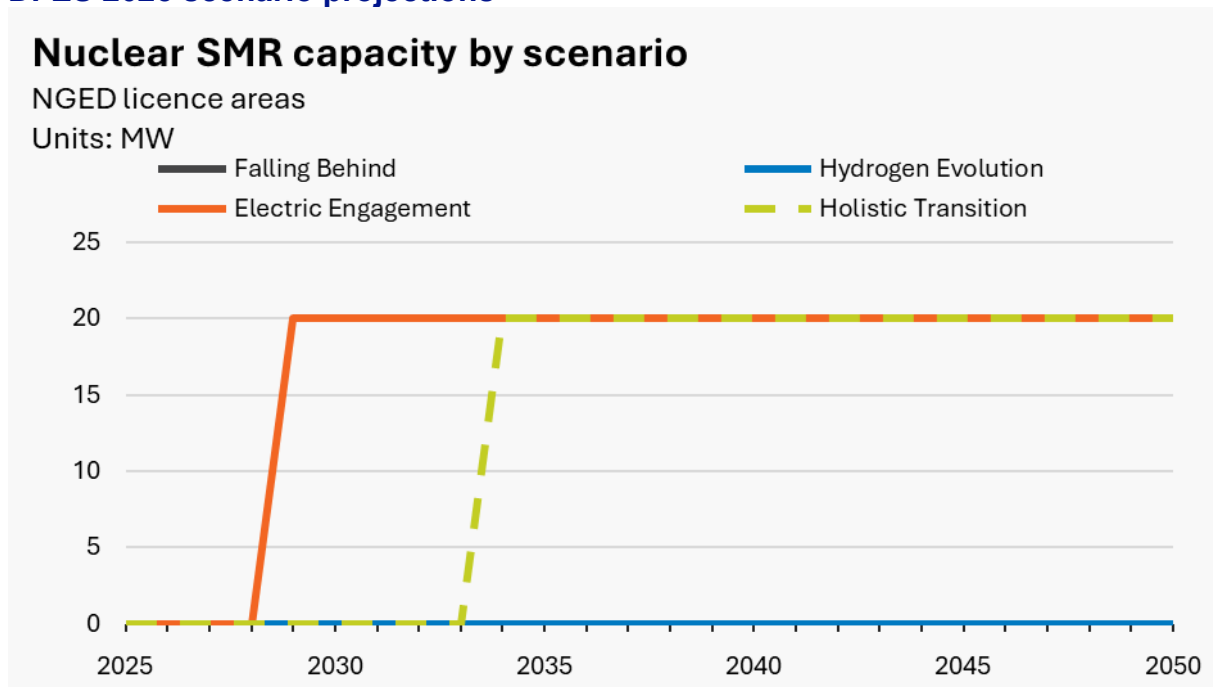
Units: MW



Comparison	Details
DFES 2025 to DFES 2024	Across all scenarios, DFES 2025 projects lower capacity across the period to 2050, relative to DFES 2024. This is due to a more accurate, lower baseline capacity, updated modelling assumptions reflecting current rates of co-location with rooftop solar and lower average battery technology size for high-energy user installations.
DFES 2025 to FES 2025	Across all scenarios, DFES 2025 projects a higher capacity across the period to 2050, relative to FES 2025. This is based on the projected co-location of storage with new rooftop solar sites.
DFES 2025 inputs to tRESP	The DFES 2025 and tRESP outcomes align very closely from the baseline to 2050. This is due to shared baseline inputs, minimal pipeline and tRESP usage of DFES data to inform the Pathways. There is almost no difference between the tRESP and DFES outcomes at each GSP.
Use of tRESP outputs in NGED network planning	NGED’s network planning processes will utilise the tRESP’s GSP-level Pathway outcomes for this technology. For network planning below GSP level, the DFES 2025 Primary-level and Low Voltage results will be scaled to match the tRESP outputs at GSP level.

Nuclear SMR

DFES 2025 scenario projections



Baseline and pipeline

Status	Details	Capacity (MW)	Description
Baseline	Connected	0	There are currently no operational nuclear SMR projects anywhere in GB.
Pipeline	Pre-planning	20	The Llynfi Clean Energy Project, located in Bridgend, South Wales, is being developed by Last Energy. The project is currently undertaking statutory planning activities as a Development of National Significance under the Welsh Government planning regime. This includes Environmental Impact Assessment (EIA) scoping and community consultation. The project has a grid connection for a single 20 MW reactor, but Last Energy has highlighted its aim to develop four 20 MW reactors, totalling 80 MW of generation capacity, onsite.

Post-pipeline projections

Scenario	Description
Holistic Transition	<p>These scenarios have significant buildout of nuclear SMR in the FES 2025 scenario framework, though all of this is proposed to be transmission network-connected. However, the 20 MW pipeline site is developed on planned timescales in the most ambitious Electric Engagement scenario, connecting to the network in 2029. Under Holistic Transition, the 20 MW site connects to the network in 2034, five years behind its planned timescale. The potential 60 MW of further capacity at this site has not been modelled to connect in any scenario. This is due to uncertainties in how future capacity may connect to the network, with the project’s EIA noting potential for direct transmission connection and/or private wire agreements, and nuclear SMR’s overall nascent development stage.</p>
Electric Engagement	
Hydrogen Evolution	<p>These scenarios have lower buildout of nuclear SMR in the FES 2025 scenario framework. As a result, the Last Energy pipeline project is not modelled to connect in these scenarios, due to being in the early stages of development.</p>
Falling Behind	

Modelling factors

Factor	Impact	Description
Known pipeline sites	Uptake modelling	All modelling is based on a single known pipeline site that holds a connection agreement for 20 MW and potential for a further 60 MW of capacity, as detailed on the project website.

Reconciliation

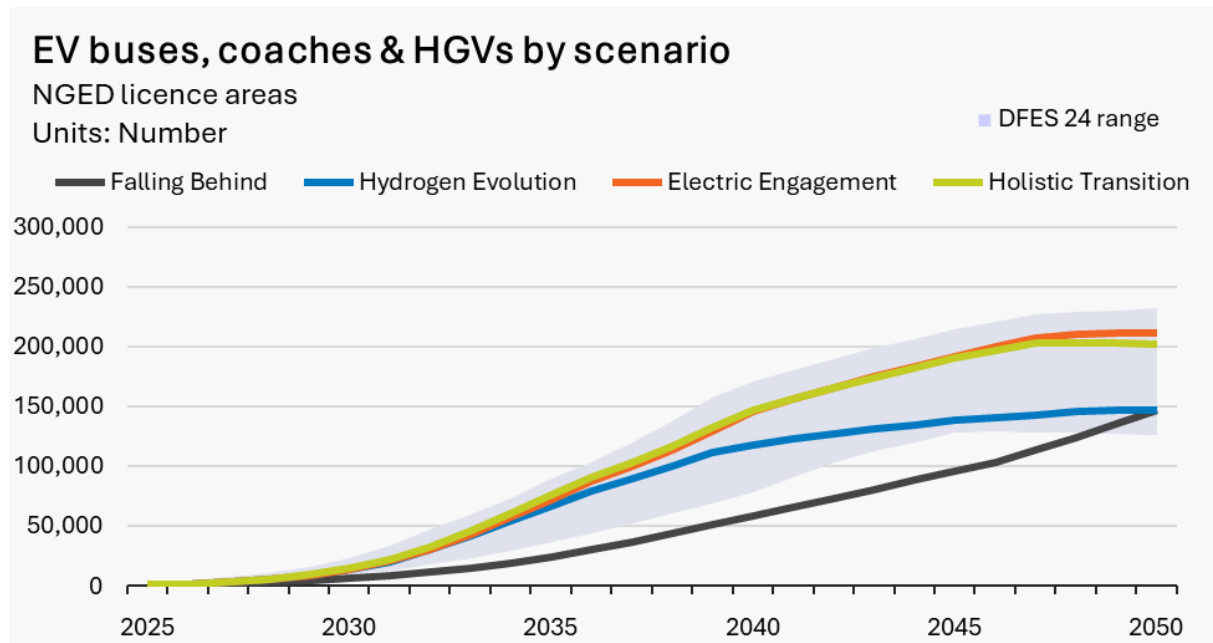
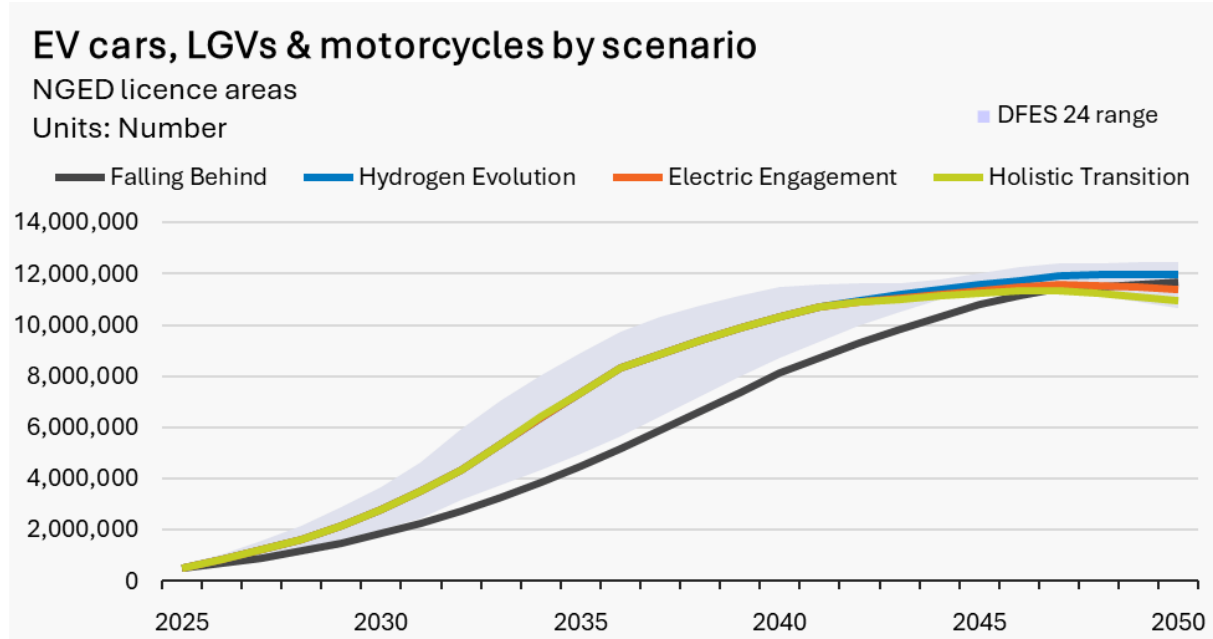
Comparison	Details
DFES 2025 to DFES 2024	There was no projected capacity for nuclear SMR in DFES 2024, as there were no baseline or pipeline sites in NGED’s connections register at the time of analysis.
DFES 2025 to FES 2025	There is no projected capacity for nuclear SMR at the distribution level in FES 2025, with all nuclear SMR capacity projected to connect at the transmission level.

6. Demand technology change logs

EVs and EV chargers

DFES 2025 scenario projections

Number of vehicles

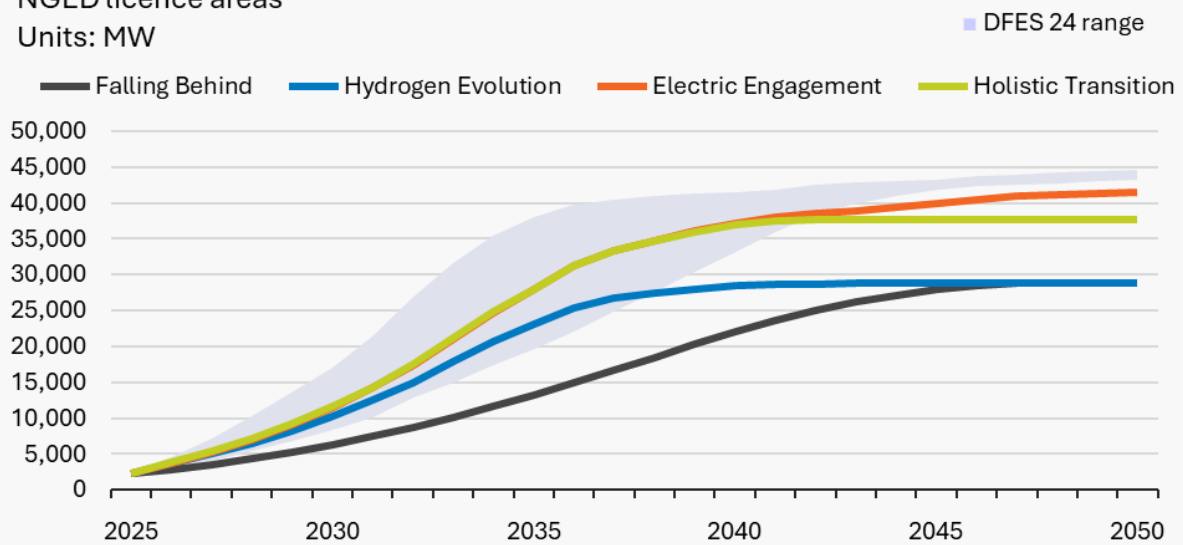


EV chargers

Domestic EV charger capacity by scenario

NGED licence areas

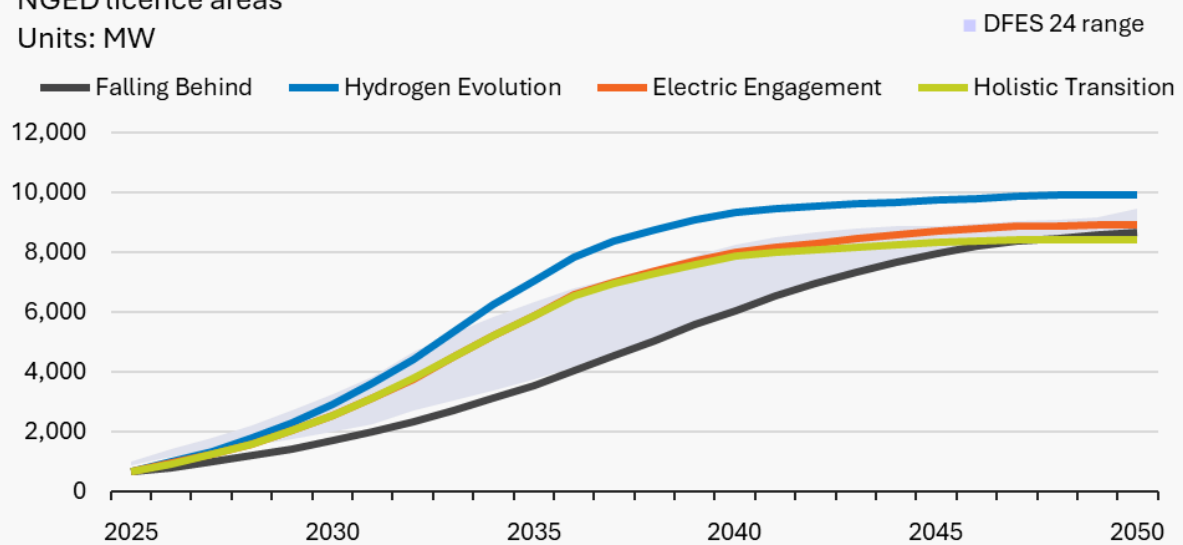
Units: MW



Non-domestic EV charger capacity by scenario

NGED licence areas

Units: MW



EV baseline

Status	Vehicles (thousands)	Changes since DFES 2024
Baseline		
Pure electric car	329	EVs have increased from 399,000 to 532,000. However, the total number of vehicles of all fuel types in NGED areas has reduced by 3% from 11.5 million. This is due to changes in local authority boundaries, which carry through to Regen’s analysis of licence area baselines and affect future vehicle projections.
Plug-in hybrid car	166	
Pure electric LGV	32	
Other EVs	5	

EV charger baseline and pipeline

Status	Capacity (MW)	Changes since DFES 2024
Baseline	Domestic	2,286 The baseline for off-street charging capacity has increased by 827 MW compared to the DFES 2024 baseline, reflecting the rapid uptake of EVs over the last year. This is moderately higher than the 2025 projection of 2.2 GW in the Holistic Transition pathway of DFES 2024.
	Non-domestic	671 Non-domestic chargepoint capacity decreased by 16 MW from DFES 2024, from 687 MW to 671 MW. This reduction is due to changes in the OpenChargeMap data source used to inform the existing installed capacity. The capacity reduction is primarily in the East Midlands licence area across the en-route national network and destination chargers. Other NGED licence areas have seen an overall increase in charger capacity, with more weighting towards workplace charger capacity.
Pipeline	369	The visible pipeline of EV charger projects has decreased by 129 MW since DFES 2024 due to a reduction in the number of en-route national network charger sites. Over 75% of the pipeline in DFES 2025 is made up of en-route national and destination chargers, with the remainder of the capacity from destination, fleet, and en-route local chargers.

Projections

Scenario	Changes compared to DFES 2024
Holistic Transition	Uptake of EV cars, LGVs and motorcycles is faster compared to DFES 2024, though there are marginally fewer total EVs from 2042 onwards. EV bus, coach & HGV uptake is lower than in DFES 2024, with 7% fewer of these vehicles by 2050. These changes are due to adjustments in the baseline number of vehicles across NGED licence areas, as well as changes in the FES uptake pathway. Despite being higher in the short-to-medium term, domestic charging capacity in 2050 is 15% lower than DFES 2024. This is due to changes to the overall methodology, outlined in the modelling factors section below. Non-domestic charger uptake is more closely aligned to DFES 2024.
Electric Engagement	Until 2045, the uptake of EV cars, vans and motorcycles under this scenario is slower relative to DFES 2024. However, the number of EVs in 2050 is 7% higher than DFES 2024. EV buses, coaches and HGVs are lower overall than DFES 2024 under this scenario, with 9% fewer of these vehicles by 2050. These changes are due to adjustments in the baseline number of vehicles across NGED's licence areas, as well as changes in the FES uptake pathway. Domestic EV charger deployment under this scenario is overall lower than in DFES 2024, modelling significantly slower uptake in the medium term and 6% less capacity by 2050. This is due to changes to

	<p>the overall methodology, outlined in the modelling factors section below.</p> <p>Despite a slower uptake of non-domestic chargers, there is an additional 3% capacity by 2050 compared to DFES 2024.</p>
Hydrogen Evolution	<p>In the short-to-medium term, the uptake of EV cars, vans and motorcycles is significantly higher under this scenario than in DFES 2024. However, by 2050, there are marginally fewer EVs of this type when compared to DFES 2024. These changes are due to adjustments in the baseline number of vehicles across NGED licence areas, as well as changes in the FES uptake pathway.</p> <p>EV buses, coaches and HGVs are significantly higher in the medium-to-long term relative to DFES 2024, with 17% more of these vehicles modelled to be on the road by 2050. This is due to a shift away from hydrogen as a potential transport fuel solution within the FES 2025 assumptions, and a resultant higher adoption of EVs.</p> <p>Domestic charger deployment is similar to DFES 2024 in the short term, but significantly lower in the long term, with 34% less capacity by 2050. This is due to changes in the overall methodology, outlined in the modelling factors section below.</p> <p>Non-domestic chargers have a significantly higher deployment, with an additional 7% capacity relative to DFES 2024 by 2050. This is due to the shift away from hydrogen as a transport fuel solution for non-domestic vehicles, the higher uptake of EVs in the medium term, as well as the charging methodology.</p>
Falling Behind	<p>Uptake of EV cars, LGVs and motorcycles in Falling Behind is aligned with the DFES 2024 Counterfactual scenario, although it is slightly lower throughout the modelling period. By 2050, DFES 2025 has marginally fewer of these vehicles.</p> <p>The uptake of EV buses, coaches and HGVs in Falling Behind is aligned with DFES 2024 until the early 2030s, after which it is significantly lower. By 2050, there are 18% fewer EVs in these vehicle classes in DFES 2025 compared to DFES 2024.</p> <p>The uptake of EV buses, coaches and HGVs is lower than in DFES 2024, with 18% fewer of these vehicles by 2050 under Falling Behind, compared to Counterfactual in DFES 2024. These changes are due to adjustments in the baseline number of vehicles across NGED's licence areas, as well as changes in the FES uptake pathway.</p> <p>Domestic EV charger deployment is significantly lower than DFES 2024, with 33% less capacity. This is due to changes in the methodology outlined in the modelling factors section.</p> <p>Non-domestic charger capacity is well aligned to DFES 2024 up until the late 2040s, but has 9% less capacity by 2050.</p>

Modelling factors

Factor	Impact	Changes compared to DFES 2024
Vehicle uptake	Number of vehicles	<p>There have been two key changes to the modelling factors for EV uptake, relative to DFES 2024.</p> <p>First, the uptake curves for battery electric and hybrid cars and LGVs under the three net zero scenarios have been taken from the DFES 2024 Electric Engagement scenario up to 2040, after which they follow the FES 25 uptake. The uptake rates under the net zero scenarios in FES 2025 assume that sales of new hybrid vehicles</p>

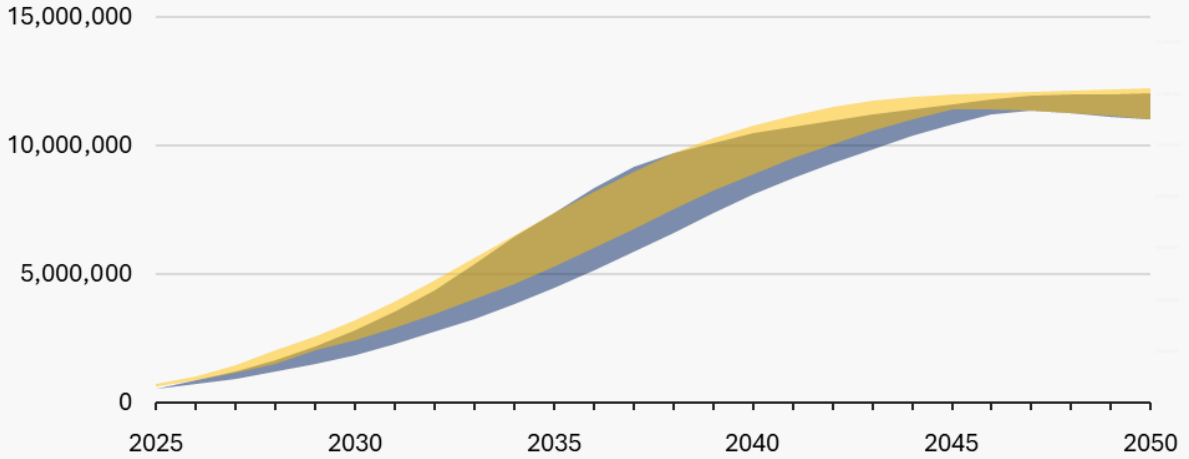
		<p>(without a plug) would be phased out from 2030. However, a policy change has since allowed these vehicles to be sold until 2035, delaying the uptake in that period. The DFES 2025 net zero scenarios reflect the latest policy position, whereas the FES 2025 scenarios do not.</p> <p>Second, changes to local authority boundaries have affected the baseline vehicle counts within each licence area. This has led to a reduction in total vehicle numbers across NGED's licence areas. Since EV uptake is calculated as a proportion of total vehicles, this change has a direct impact on uptake figures.</p>
Domestic charger methodology	Domestic charger capacity	<p>The methodology to determine domestic charging capacity has been updated to be more reflective of actual charging demand and the tRESP CPAs published by NESO. This has caused a minor decrease in capacity in the Electric Engagement and Holistic Transition pathways and a significant decrease in the Hydrogen Evolution and Falling Behind pathways. Differences across these scenarios are reflective of the underlying assumptions of charging behaviour.</p>
Domestic charger methodology	Domestic chargers in new build homes	<p>DFES 2024 directly reflected legislation for new build homes with associated parking to have an EV charger. However, this resulted in modelling a high volume of additional domestic EV chargers that, in reality, were unlikely to be used in the near and medium term, as EV cars remain a significant minority of vehicles. As a result, the DFES 2025 modelling has been updated to reflect the expected utilisation of these domestic chargers instead of directly modelling a charger for most homes.</p>
Percentage of miles driven on electricity	Charger capacity	<p>The percentage of miles which hybrid vehicles do via their electric drivetrains has been uplifted from 30% to 50% in line with the tRESP CPAs published by NESO.</p>
EV charger pipeline buildout	Charger capacity	<p>Pipeline EV charger sites are modelled to deliver capacity at a consistent annual rate, with equal volumes added each year until the cumulative total reaches the full pipeline capacity.</p>

Reconciliation

EV cars, LGVs & motorcycles — FES/DFES comparison

NGED licence areas

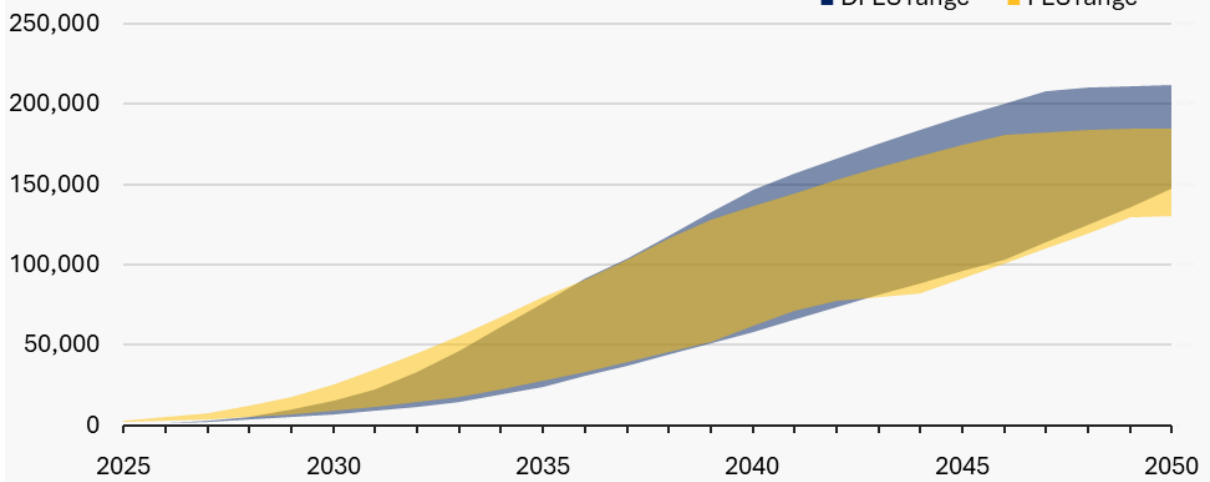
Units: Number



EV buses, coaches & HGVs — FES/DFES comparison

NGED licence areas

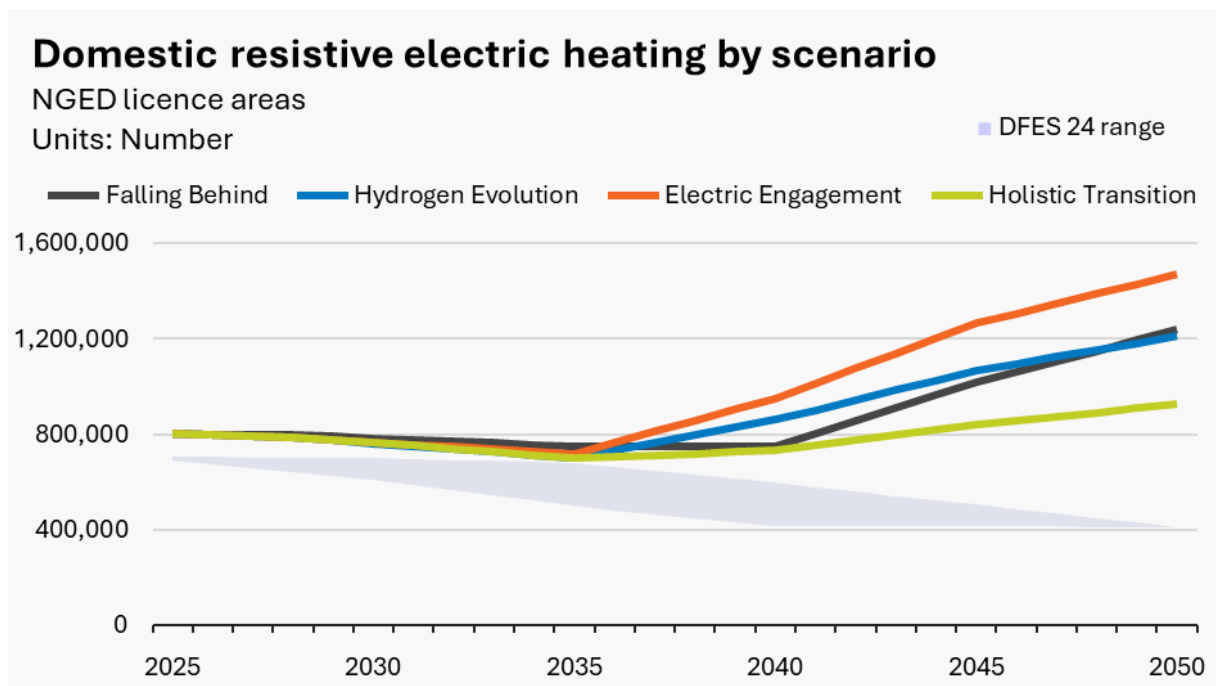
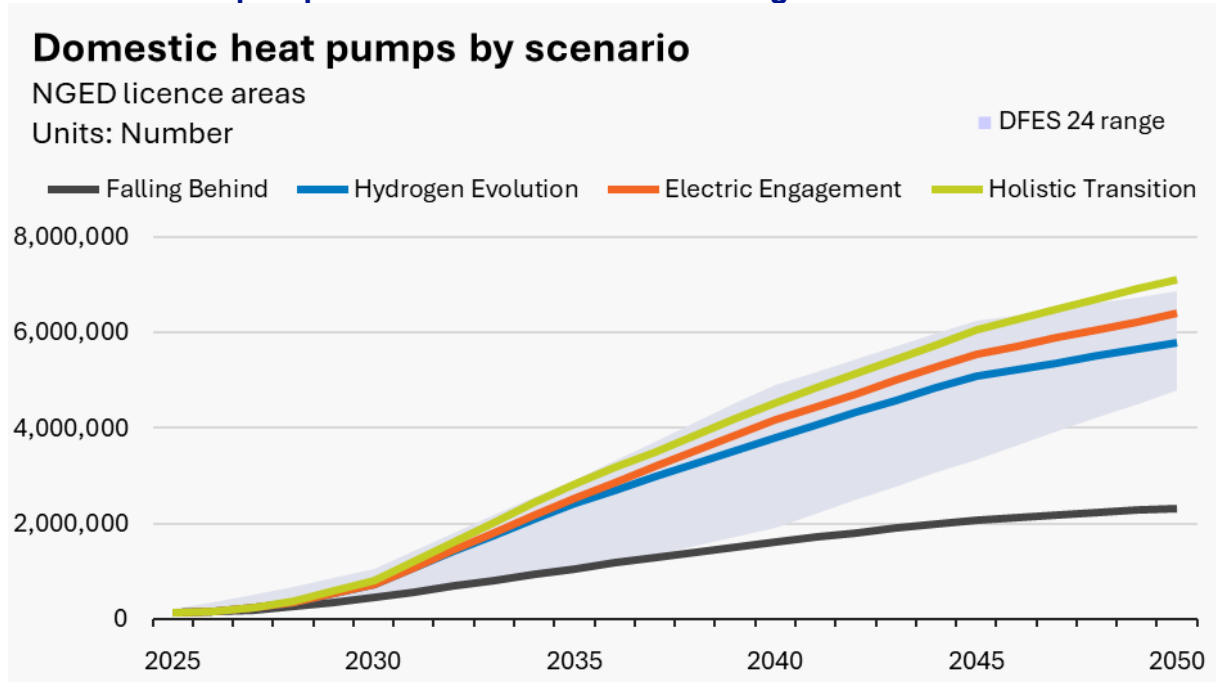
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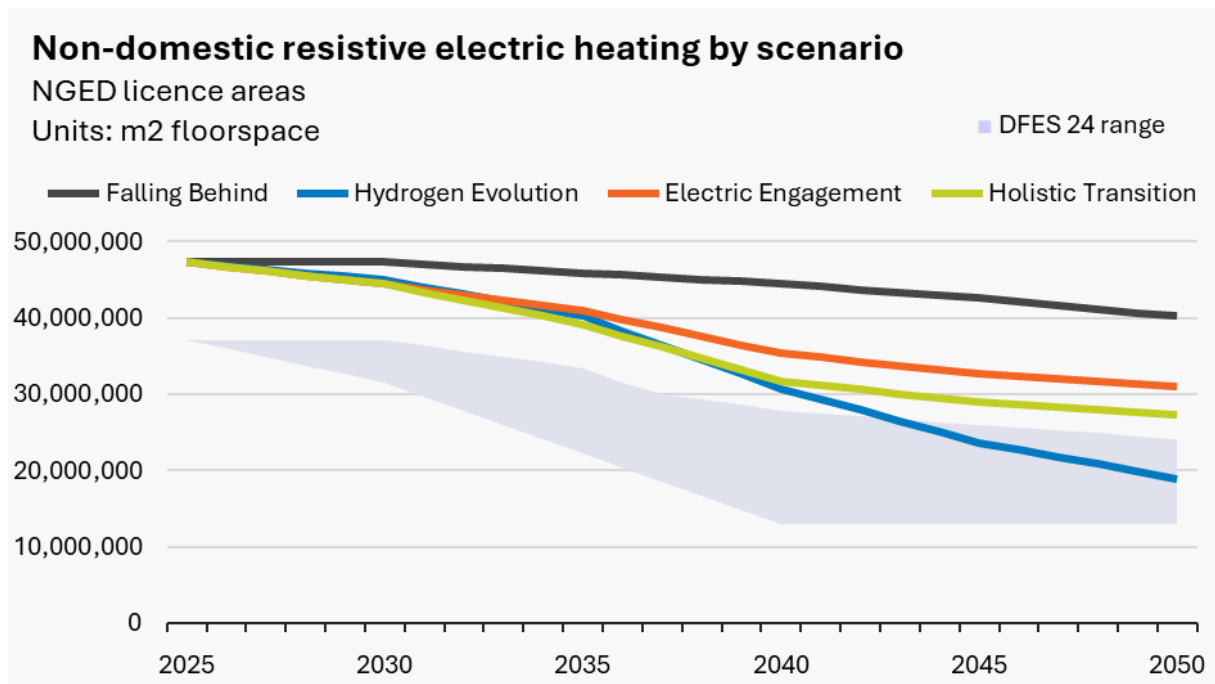
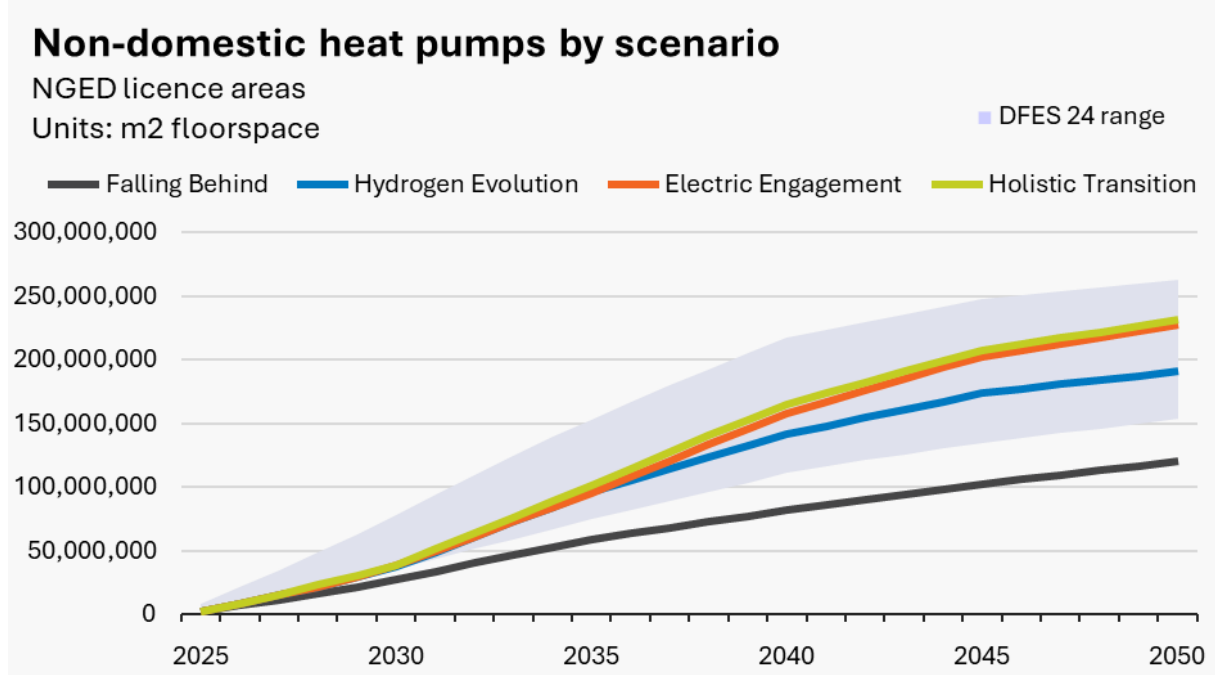
Comparison	Details
DFES 2025 to DFES 2024	<p>The DFES 2025 scenario range for EV cars, vans and motorcycles falls slightly below the DFES 2024 range in the near and medium term. However, the number of these vehicles is closely aligned from 2045 onwards, with a similar scenario range by 2050.</p> <p>EV buses, coaches and HGVs, though also below DFES 2024 projections, are much more closely aligned. By 2050, DFES 2025 has a much narrower scenario range than DFES 2024 for these vehicle types.</p> <p>Domestic charger capacity growth is much slower in DFES 2025 than in DFES 2024, particularly under the Hydrogen Evolution and Falling Behind scenarios. The scenario range by 2050 is also significantly wider in DFES 2025. These changes are reflective of changes to the modelling factors defined above, in part as a result of DFES analysis reflecting the tRESP CPAs published by NESO.</p> <p>Non-domestic charger capacity in DFES 2025 is closely aligned to DFES 2024 for all scenarios except Hydrogen Evolution, which has a much greater capacity.</p>
DFES 2025 to FES 2025	<p>Vehicle adoption for EV cars, vans and motorcycles is closely aligned with the FES throughout the modelling period, though with a slightly wider projection range in the DFES.</p> <p>For EV buses, coaches and HGVs, the short-term projections are lower than the FES 25 results. In the medium-to-long term, the DFES analysis is modelled to exceed them.</p> <p>FES does not produce EV charger capacity projections, and so no comparison has been made.</p>
DFES 2025 inputs to tRESP	<p>The DFES 2025 and tRESP Pathway baseline broadly align, albeit with some GSP-level differences due to potential differences in the allocation of company keepership vehicles. This results in GSPs with high levels of company keepership vehicles in DfT datasets, having higher baselines in the DFES 2025 outcomes, and vice versa in the tRESP Pathway outputs.</p> <p>However, due to the projected scale of EV uptake under the DFES and tRESP net zero Pathways, these baseline differences are quickly reduced. The DFES 2025 and tRESP outcomes align very closely from the late 2020s to 2050. This is due to shared baseline inputs, minimal pipeline and tRESP analysis directly using the DFES data to inform the Pathways. There is almost no difference between the tRESP and DFES outcomes at each GSP beyond the baseline year.</p> <p>For hybrid cars, vans and motorcycles (Lct_BB002), the tRESP Pathway outputs are consistently slightly above the equivalent DFES 2025 outcomes from the late-2020s to the mid-2030s. This is likely an overall uplift in order to reconcile tRESP Pathways against national projections and/or help achieve interim carbon budgets.</p>
Use of tRESP outputs in NGED network planning	<p>NGED's network planning processes will utilise the tRESP's GSP-level Pathway outcomes for this technology. For network planning below GSP level, the DFES 2025 Primary-level and Low Voltage results will be scaled to match the tRESP outputs at GSP level.</p>

Heat in buildings

Domestic heat pumps and resistive electric heating



Non-domestic heat pumps and resistive electric heating



Domestic heat baseline

Status	Details	Number of homes	Changes since DFES 2024
Baseline	Heat pumps	131,000	The heat pump baseline has increased by c. 20% since DFES 2024, reflecting the growing domestic heat pump market in GB. As in DFES 2024, c. 90% of baseline heat pumps are ASHPs.
	Resistive electric heating	802,000	The resistive electric heating baseline has increased compared to DFES 2024, where it was modelled at just over 700,000 homes. This is due to refreshed building stock modelling using the latest available EPC data and does not imply that c.100,000 resistive electric heating systems have been installed over the past year.
	Connections to heat pump-driven district heat networks	1,800	Similar to DFES 2024, the baseline of heat pump-driven district heat network connections remains small. The increase is mainly driven by the identification of heating systems in updated EPC data, driven by a communal heat pump.

Non-domestic heat baseline

Status	Details	Floorspace (million sqm)	Changes since DFES 2024
Baseline	Heat pumps	1.8	The non-domestic heat pump baseline has increased by c. 20% since DFES 2024, similar to the domestic baseline. This is based on MCS-accredited non-domestic heat pump installations.
	Resistive electric heating	47.3	The resistive electric heating baseline has increased significantly compared to DFES 2024, where it was modelled at just under 38 million sqm. This is mostly due to updates to the floorspace modelling methodology rather than new installations, as detailed in the modelling factors section below.

Post-pipeline projections

Scenario	Changes compared to DFES 2024
Holistic Transition	For domestic heat pumps and district heating, the scenario projections have marginally changed compared to DFES 2024 to reflect changes in FES 2025 pathways for the transition to low-carbon heat across the UK. This results in a slower uptake of heat pumps in the near term,

	<p>reflecting current uptake trends and a slightly higher outcome by 2050 due to the removal of hydrogen for heating in this scenario. In addition, the increase in the number of new homes modelled in this scenario, reflecting government housebuilding targets, has been reflected in the uptake of heat pumps and district heating in new build properties. For domestic resistive electric heating, the DFES projections have been updated to align with the FES 2025 pathways. FES 2025 now reflects a more significant role for resistive electric heating in the longer term, as supported by the findings of Public First’s report for NESO.² In the decade to 2035, this additional electric heating is in the context of lower heat pump deployment and a slower transition more generally. By 2050, it goes alongside fewer hybrid heat pumps and hydrogen or biofuel boilers in FES 2025, as compared to FES 2024. For non-domestic heat pumps, a slower uptake is modelled in the near term, compared to DFES 2024. Similar to domestic heat, this is a reflection of limited uptake rates currently. In the longer term, the DFES 2025 projections see a lower overall heat pump projection under every scenario, albeit with a similar trend to DFES 2024, resulting in c.230 million sqm heated by a heat pump by 2050. This is due in part to modelling a greater volume of floorspace to be heated by resistive electric heat, and revisions to the overall volume of non-domestic building floorspace modelled (see modelling factors table below). Other than the increased baseline, resistive electric heat follows the same trend as in DFES 2024.</p>
<p>Electric Engagement</p>	<p>For domestic heat pumps and district heating, the scenario projection has marginally changed compared to DFES 2024 to consider changes in FES 2025 pathways for the transition to low-carbon heat across the UK. This results in a slower uptake of heat pumps in the near term, reflecting current uptake trends. For domestic resistive electric heating, the DFES projections have been updated to consider the FES 2025 pathways. This now reflects a significantly larger role for resistive electric heating in the longer term, replacing alternative low-carbon heating technologies, such as bioenergy, that featured more heavily in this scenario in FES 2024. For non-domestic heat pumps, a slower uptake is modelled in the near term, compared to DFES 2024. Similar to domestic heat, this is a reflection of current limited uptake rates. In the longer term, the DFES 2025 projections see a lower overall heat pump projection under every scenario, albeit with a similar trend to DFES 2024, resulting in c.225 million sqm heated by a heat pump by 2050. This is due in part to modelling a greater volume of floorspace to be heated by resistive electric heat, and revisions to the overall volume of non-domestic building floorspace modelled (see modelling factors table below). Other than the increased baseline, resistive electric heat follows the same trend as in DFES 2024.</p>
<p>Hydrogen Evolution</p>	<p>For domestic heat pumps and district heating, the scenario projection has marginally changed compared to DFES 2024 to consider changes in FES 2025 pathways for the transition to low-carbon heat across the UK. This results in a slower uptake of heat pumps in the near term, reflecting current uptake trends. Within the domestic heat pump subtechnologies, the DFES 2025 projects a greater number of standalone heat pumps and a smaller number of hydrogen hybrid heat pumps compared to DFES 2024. This</p>

² [Domestic Heat Decarbonisation Insight](#), Public First, April 2025

	<p>reflects changes in the FES scenarios, where NESO have shifted their assumptions on consumer demand from hydrogen to electrification across all scenarios.</p> <p>For domestic resistive electric heating, the DFES projections have been updated to consider the FES 2025 pathways. This now reflects a significantly larger role for resistive electric heating in the longer term, replacing alternative low-carbon heating technologies, such as hydrogen and bioenergy. These featured more heavily in this scenario in FES 2024.</p> <p>For non-domestic heat pumps, a slower uptake is modelled in the near term, compared to DFES 2024. Similar to domestic heat, this is a reflection of current limited uptake rates. In the longer term, the DFES 2025 projections see a lower overall heat pump projection under every scenario, albeit with a similar trend to DFES 2024, resulting in a little under c.200 million sqm heated by a heat pump by 2050. This is due in part to modelling a greater volume of floorspace to be heated by resistive electric heat, and revisions to the overall volume of non-domestic building floorspace modelled (see modelling factors table below).</p> <p>Other than the increased baseline, resistive electric heat follows the same trend as in DFES 2024.</p>
<p>Falling Behind</p>	<p>For domestic heat pumps, the scenario projection has changed significantly in the longer term compared to DFES 2024. This reflects changes in FES 2025 pathways, which project a longer period of low heat pump uptake under this non-net-zero-compliant scenario, resulting in more homes left with gas boilers to 2050.</p> <p>For domestic resistive electric heating and heat networks, the DFES projections have also been updated to consider the FES 2025 pathways. This now shows a significantly larger role for both technologies in the longer term, replacing alternative low-carbon heating technologies, such as heat pumps, that featured more heavily in this scenario in FES 2024.</p> <p>For non-domestic heat pumps, a slower uptake is modelled in the near term, compared to DFES 2024. Similar to domestic heat, this is a reflection of current limited uptake rates. In the longer term, the DFES 2025 projections see a lower overall heat pump projection under every scenario, albeit with a similar trend to DFES 2024, resulting in a little under c.120 million sqm heated by a heat pump by 2050. This is due in part to modelling a greater volume of floorspace to be heated by resistive electric heat, and revisions to the overall volume of non-domestic building floorspace modelled (see modelling factors table below).</p> <p>Other than the increased baseline, resistive electric heat follows the same trend as in DFES 2024.</p>

Modelling factors

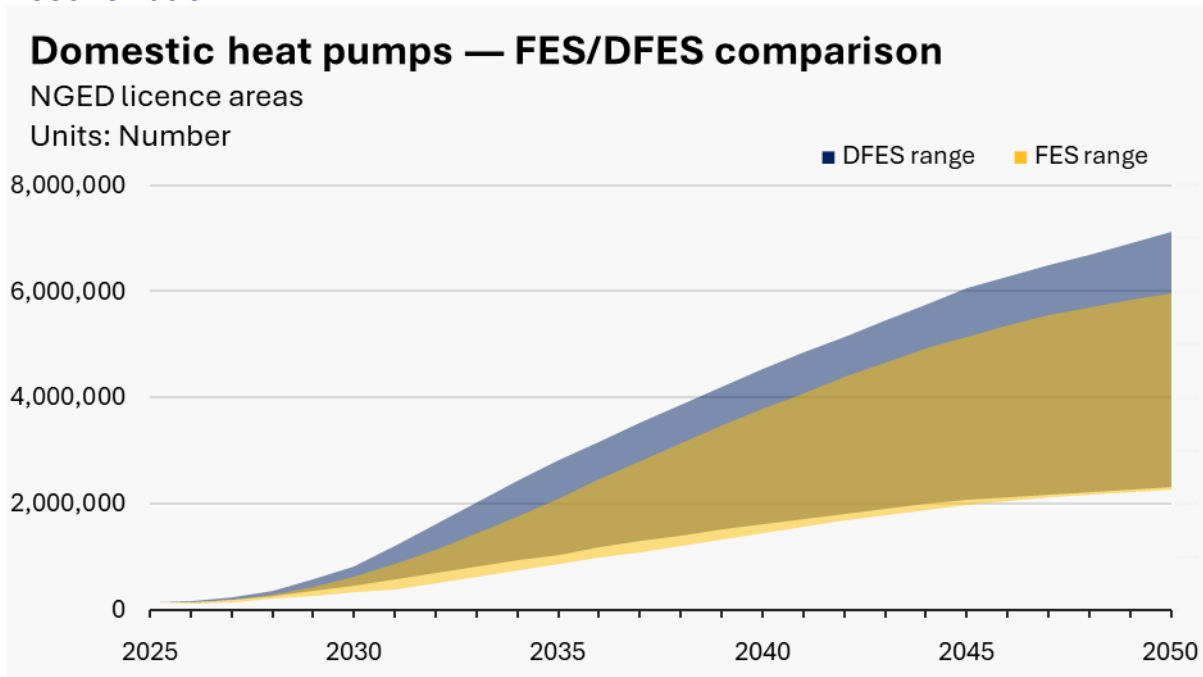
Factor	Impact	Changes compared to DFES 2024
Projected technology uptake by building archetype	Domestic uptake modelling	Regen has undertaken a full review of our technology distribution across all archetypes and scenarios. This reflects changes to the FES, the latest evidence on current heat pump uptake and new insight from the retrofit sector. The overall methodological approach is unchanged.

Modelled technologies	Domestic uptake modelling and spatial distribution	The ASHP sub-technology has been split out into Air-to-Water (hydronic) and Air-to-Air heat pump constituents. This reflects underlying modelling in previous iterations of DFES that reflected the potential for air-to-air heat pump systems in some buildings, such as flats.
Modelled archetypes	Domestic uptake modelling and spatial distribution	A new archetype has been created for existing communal heating – modelled to remain communal and be decarbonised with district heating heat pumps over time, with the rate of conversion depending on the scenario.
Electric heating in new build homes	Domestic uptake modelling and spatial distribution	Updated the proportion of new build properties that have ASHPs installed, reflecting the latest data that 25% of new builds are built with ASHPs already. This is based on EPC data, as processed by Ambient. ³ The predicted start of the Future Homes Standard is the same as DFES 2024, with no new gas boilers from 2028 FY in all scenarios, except Falling Behind , which is modelled as 2033 FY. In Holistic Transition and Electric Engagement , we have introduced a gradual replacement of gas boilers in new build properties (installed in the first few years of the projection period) with ASHPs. The proportion shifting each year has been modelled with a normal distribution with the peak replacement rate centred on 2040 and a standard deviation of 3.5 years. This means that 7.5% of new build gas boilers have been replaced with ASHPs by 2035, 50% by 2040, 92.5% by 2045 and 100% by 2050.
Projected technology uptake by building archetype	Non-domestic uptake modelling	The DFES methodology categorises non-domestic buildings into archetypes, based on each building's current HVAC system, heating fuel and location within a potential district heating or hydrogen supply zone. The uptake rates for heat pumps and resistive electric heating in each of these archetypes have been updated to reflect the FES 2025 pathways. This is a minor change and mostly results in reduced heat pump uptake in the near term under each scenario.
Non-domestic building stock	Non-domestic uptake modelling and spatial distribution	The non-domestic building stock in DFES is modelled based on location, HVAC, heating fuel and floorspace data from non-domestic EPCs and Display Energy Certificates (DECs). For DFES 2025, the addition of Unique Property Reference Numbers (UPRN) to the EPC and DEC datasets has allowed more duplicate certificates for the same building space to be removed than was previously possible. This means that the total volume of floorspace modelled has decreased by around 15%. This results in an overall lower projection for non-domestic heat pumps under every scenario. The updated non-domestic building stock modelling has led to an increased proportion of properties modelled as having resistive electric heating. This is due to updated certificates for some buildings, alongside updated classification of building HVAC environment

³ [August Electrification of Heat Tracker \(EHTT\)](#), Ambient, 28th August 2025.

		descriptions, classifying more buildings as resistive electric heating that were previously classified as other non-electric heating types, air conditioning or unheated.
Electric heating in new build non-domestic developments	Non-domestic uptake modelling and spatial distribution	DFES 2024 modelled heat pumps and district heating in new non-domestic developments based on their total modelled floorspace. For DFES 2025, this has been updated based on desk research to reflect the proportion of floorspace in non-domestic buildings that would be expected to be unheated. The heated floorspace proportion ranges from 100% in offices, schools and hospitals to 80% in factories and 60% in warehouses.

Reconciliation



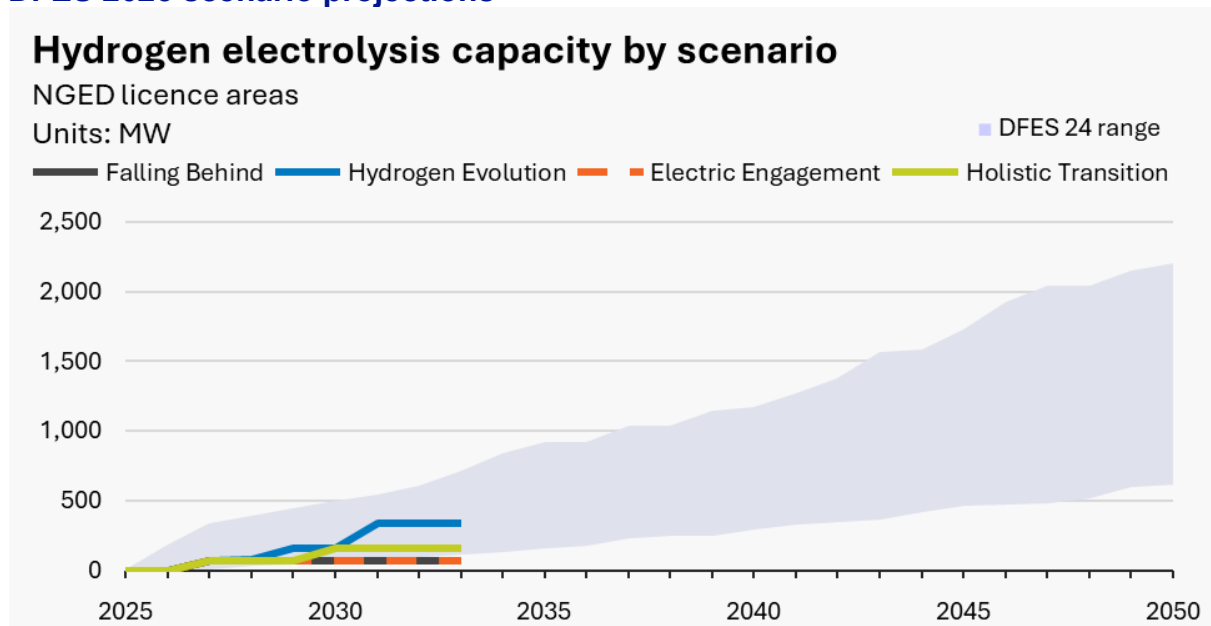
Note: The FES 2025 data does not include a regional breakdown for resistive electric heating, so no reconciliation could be undertaken for NGED’s licence areas. Similarly, the FES does not project non-domestic heat in floorspace units, and so a reconciliation cannot take place.

Comparison	Details
DFES 2025 to DFES 2024	<p>The scenario outcomes for domestic heat pumps are similar between DFES 2024 and DFES 2025 for the three net zero scenarios, though there has been a marked reduction in the proportion of GSHPs in all scenarios in the near and long term. The Falling Behind scenario sees much lower uptake by 2050, mirroring a similar change in the FES 2025 scenario framework.</p> <p>The role of hydrogen has been reduced in FES 2025, with a shift of consumer demand towards electrification. This results in a minimal role in a smaller number of boilers and hybrid heat pumps in Hydrogen Evolution and significantly lower numbers in Holistic Transition.</p> <p>The longer-term scenario outcomes for domestic resistive electric heating are much higher than projected in DFES 2024, with increasing projections from 2035 onwards under all scenarios, compared to the decline previously projected. Again, this reflects changes to the</p>

	<p>overarching FES 2025 framework, where resistive heating has a much stronger role in heat decarbonisation in the long term. This has been carried over into the DFES 2025 modelling.</p> <p>For non-domestic heating, the uptake of heat pumps and resistive electric heating follows a similar trend to DFES 2024 under each scenario, albeit starting from a higher baseline position. The main change is in the overall volume of floorspace modelled, due to the removal of more duplicates from the underpinning EPC and DEC datasets.</p>
<p>DFES 2025 to FES 2025</p>	<p>For all scenarios, the trend between the DFES outcomes and FES 2025 data for total heat pumps is similar. However, the DFES models a greater total numbers of homes modelled to have heat pumps or district heating in the medium and long term. A similar difference was observed in the reconciliation between DFES 2024 and FES 2024. This difference is likely due to a greater number of new build homes modelled in the DFES compared to FES, informed by our direct local authority engagement and data collection around new housing, as well as a direct reflection of recent UK government housing targets that have been applied at specific local authority level.</p> <p>The FES 2025 data does not include a regional breakdown for resistive electric heating, so no comparison could be undertaken.</p>
<p>DFES 2025 inputs to tRESP</p>	<p>The DFES 2025 and tRESP Pathway baseline broadly align, albeit with some GSP-level differences due to the DFES analysis making use of EPC data to model potentially uncaptured heat pumps and internal NGED notifications datasets to inform the DFES baseline. This results in the DFES 2025 baseline for domestic heat pumps being above the tRESP Pathways baseline by around 30% (c. 130,000 vs c. 100,000). However, due to the projected scale of heat pump uptake under the DFES and tRESP net zero Pathways, these baseline differences are quickly reduced. The DFES 2025 and tRESP outcomes align very closely from the late 2020s to 2050. This is due to some shared baseline inputs, minimal pipeline and tRESP usage of DFES data to inform the Pathways. There is almost no difference between the tRESP and DFES outcomes at each GSP beyond the baseline year.</p> <p>For domestic connections to heat-pump-driven district heating networks, the tRESP and DFES 2025 outcomes align closely in the baseline and in 2050. However, between 2030 and 2045, the tRESP features a much more accelerated uptake of this type of heating compared to DFES 2025. In 2033, the tRESP Holistic Transition Pathway features 260,000 connections, compared to 132,000 in the DFES 2025 outcomes. The reason for this is not clear, but may be due to more recent information on Heat Network Zoning or the Warm Homes Plan. It is noted that at a GB level, the tRESP outcomes for this Building Block are also significantly higher than the projections in FES 2025, on which the DFES 2025 analysis was based.</p>
<p>Use of tRESP outputs in NGED network planning</p>	<p>NGED’s network planning processes will utilise the tRESP’s GSP-level Pathway outcomes for this technology. For network planning below GSP level, the DFES 2025 Primary-level and Low Voltage results will be scaled to match the tRESP outputs at GSP level.</p>

Hydrogen electrolysis

DFES 2025 scenario projections



Baseline and pipeline

Status	Details	Capacity (MW)	Changes since DFES 2024
Baseline	Connected	3.1	Regen’s estimate of the existing installed capacity of electrolysis has been reduced by 1 MW after a project in the East Midlands that was announced as online, has now been identified as not being built.
Pipeline	Accepted to connect	344	<p>In DFES 2024, there were 316 MW of hydrogen electrolysis projects in the development pipeline. This has grown to 344 MW in DFES 2025. Three projects in the pipeline also secured support through the Hydrogen Allocation Round 1 (HAR1) revenue support incentive scheme:</p> <ul style="list-style-type: none"> • West Wales Hydrogen (14.2 MW) • HyBont (5.2 MW) • Llangage Green Hydrogen (7 MW). <p>All three projects have been modelled to connect by December 2026 in all scenarios, in line with the HAR1 delivery deadline. While the total supported capacity through HAR is 26.4 MW, the import capacity stated on the accepted connection offers for these projects is 67 MW. This higher import capacity has been used in the projections.</p> <p>One further project in South Wales, Magor Net Zero, has been shortlisted for HAR 2.</p>

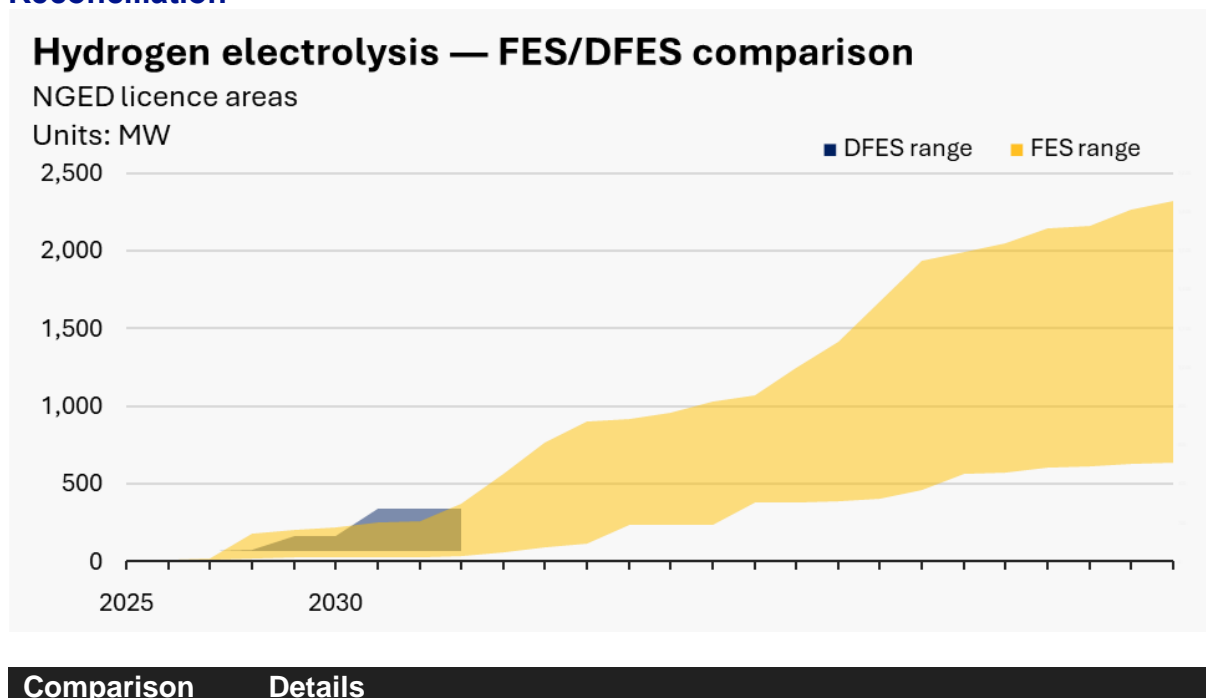
Post-pipeline projections

Post-pipeline projections have not been developed for hydrogen electrolysis in DFES 2025, as agreed with NGED. Analysis has focused on modelling the buildout of known pipeline sites only.

Modelling factors

Factor	Impact	Changes compared to DFES 2024
Hydrogen Allocation Rounds	Uptake modelling	<p>Feedback received in 2024 indicated that commercial electrolysis projects would not be feasible without financial support through the HAR scheme.</p> <p>All three distribution-network-connected sites within NGED’s licence areas that secured support through HAR1 are assumed to connect by December 2026 under every scenario, in line with the HAR1 delivery deadline.</p> <p>Under the Hydrogen Evolution and Holistic Transition scenarios, the projects shortlisted under the HAR2 round are also assumed to connect (in 2028 and 2029, respectively) in line with the HAR2 timeline.</p> <p>Only Hydrogen Evolution, as the scenario that is most supportive of decentralised green hydrogen projects, models the connection of additional pipeline projects (including those without HAR support). Under this scenario, projects with planning approval are modelled to connect 3 years after planning permission was granted.</p> <p>Other sites with accepted connection offers are assumed to connect by 2031 under Hydrogen Evolution only, in line with a future third HAR.</p>

Reconciliation



DFES 2025 to DFES 2024	Near-term projections for DFES 2025 are lower than projected in DFES 2024, reflecting the greater certainty around relatively low development activity in the NGED licence areas and a small number of electrolyser projects securing financial support through the HAR scheme.
DFES 2025 to FES 2025	The DFES 2025 and FES 2025 projections are broadly aligned in the near-term across NGED's licence areas. In the Holistic Transition scenario, the DFES 2025 projections envisage 157 MW of electrolysis capacity across the four licence areas, lower than the 206 MW projected by FES 2025. In the South West licence area, the DFES 2025 reflects the 7 MW Langage project that has HAR1 support, whilst FES 2025 envisages no capacity connecting in the near term.
DFES 2025 inputs to tRESP	n/a – the tRESP Pathway outputs do not include Building Block Dem_BB009, Hydrogen Electrolysis.
Use of tRESP outputs in NGED network planning	n/a – the tRESP Pathway outputs do not include Building Block Dem_BB009, Hydrogen Electrolysis.

New developments

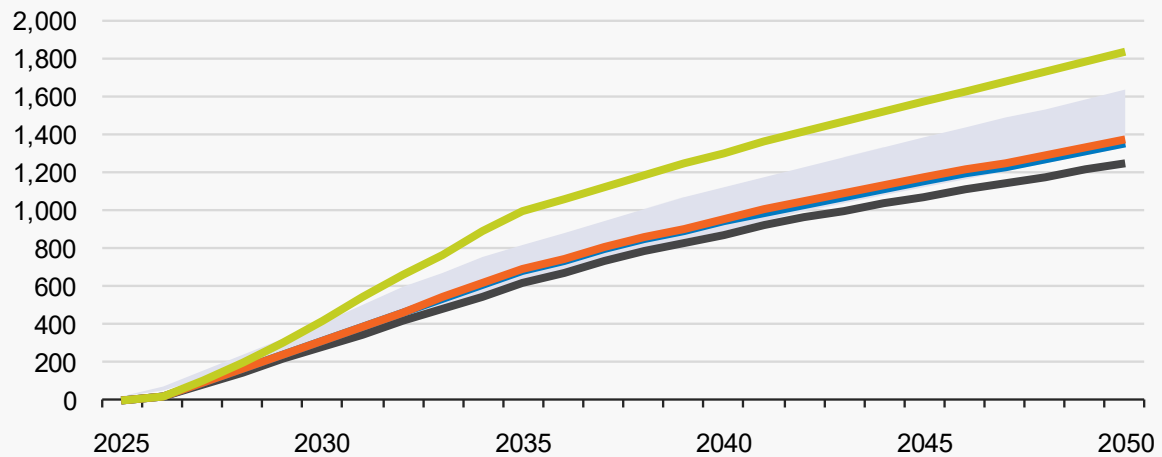
DFES 2025 scenario projections

Domestic new developments by scenario

NGED licence areas

Units: Thousand number of homes

— Falling Behind — Hydrogen Evolution — Electric Engagement — Holistic Transition

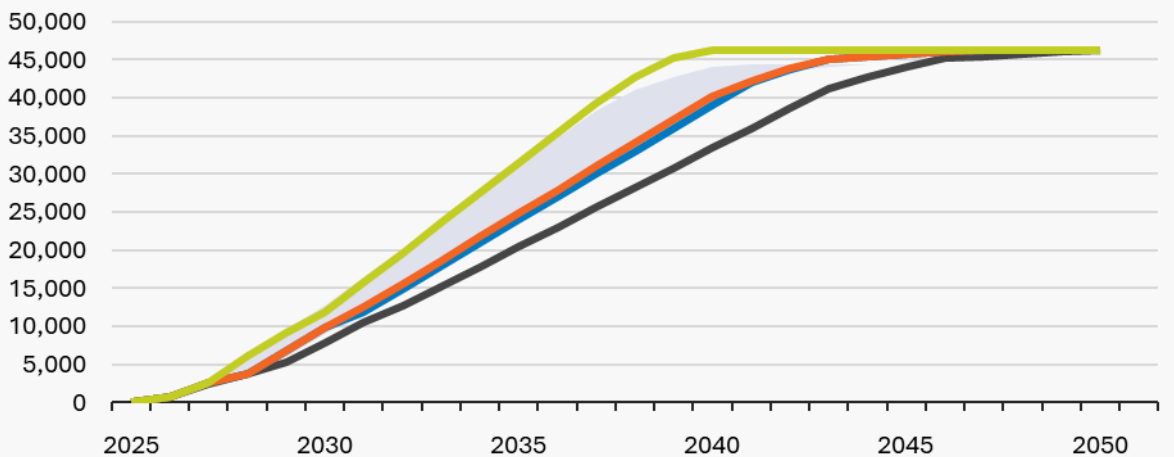


Non-domestic new developments by scenario

NGED licence areas

Units: thousand m2 floorspace

— Falling Behind — Hydrogen Evolution — Electric Engagement — Holistic Transition



Baseline and pipeline

Status	Development status	Number of domestic sites (homes)	Change since DFES 2024, sites (homes)	Number of non-domestic sites (sqm)	Change since DFES 2024, sites (sqm)
Baseline	The analysis of new developments in the DFES focuses on additional future domestic and non-domestic buildings. Therefore, no baseline is defined.				
Pipeline	Total sites (No. homes/sqm)	4,190 (829,627)	- 53 (-9,723)	2,803 (46,273,068)	- 266 (-847,045)
Pipeline	Buildout provided by local authority (No. homes/sqm)	3,262 (698,385)	+ 207 (+ 56,659)	411 (7,567,086)	- 106 (+ 741,837)
Additional sites provided by the local authority with no buildout profile provided:					
Pipeline	Under construction	53 (8,228)	- 69 (- 13,085)	234 (2,868,689)	- 78 (- 229,334)
	Granted	461 (72,859)	- 73 (- 10,412)	558 (6,765,774)	- 142 (+ 115,986)
	Outline or reserved matter	11 (2,157)	+ 9 (+ 343)	87 (2,887,569)	- 15 (+ 1,296,577)
	Submitted	70 (8,979)	+ 6 (+ 1,597)	25 (1,112,033)	+ 21 (+ 838,759)
	Allocated/pre-planning	324 (38,410)	- 106 (- 456)	706 (13,062,329)	+ 317 (+ 7,605,605)
	No information	9 (484)	+ 4 (+ 304)	782 (12,009,585)	- 50 (+ 1,384,418)

Local authority data

New development type	Local authorities that updated their data registers	Changes compared to DFES 2024
The DFES projections for new developments focus on data for new homes and non-domestic floorspace provided by local authority planning departments, including location, size and buildout rates for new housing developments, alongside the type of property for non-domestic developments.		
Domestic properties	58%	Through our 2025 local authority engagement process, a 22% increase in pipeline data was seen when compared to DFES 2024. This included 15 local authorities that have not provided data updates in more than 4 years.
Non-domestic floorspace	42%	Similarly, DFES 2025 saw a 14% increase in local authorities updating their pipeline data relating to new non-domestic floorspace, when compared to DFES 2024. This included 11 local authorities that have not provided updated data in more than 4 years.

Post-pipeline projections

Post-pipeline projections are only modelled for domestic new developments, as there are no reliable data sources for non-domestic building targets.

Scenario	Changes compared to DFES 2024
Holistic Transition	By 2050, DFES 2025 projects 1.8 million new homes built in NGED's licence areas under this scenario. This is an increase of 197,000 new homes, driven primarily by the ambitious UK housing targets, which have been applied to the relevant local authorities directly under this scenario.
Electric Engagement	By 2050, DFES 2025 projects 1.4 million new homes under these scenarios. There is no significant difference when compared to DFES 2024.
Hydrogen Evolution	
Falling Behind	By 2050, DFES 2025 projects 1.3 million new homes under this scenario. There is no significant difference when compared to DFES 2024.

Modelling factors

Factor	Impact	Changes compared to DFES 2024
Post-planned developments	Uptake modelling	DFES 2024 used 2018 ONS household projections, by local authority, to inform post-pipeline projections for all scenarios. For DFES 2025, the UK government's ambitious housing targets (300,000 new homes a year until the end of CP30 delivery (2035)) were applied under Holistic Transition . After this, ONS projections were used out to 2050. This only impacted the licence areas within England; South Wales was modelled using the DFES 2024 methodology.

Reconciliation

Comparison	Details
DFES 2025 to DFES 2024	The DFES 2025 domestic projections align with DFES 2024, except for the increase in the domestic Holistic Transition scenario, which references ambitious UK housing targets directly up until 2035. The DFES 2025 non-domestic projections under the Falling Behind scenario have a more delayed buildout compared to DFES 2024. This is due to an increased number of sites where no buildout rate was provided by local authority planning departments.
DFES 2025 to FES 2025	There is no variation for future housing growth of non-domestic floorspace under the four FES scenarios. Therefore, the new development outputs have not been reconciled against the FES 2025 data.
DFES 2025 inputs to tRESP to tRESP Pathway outputs	n/a - New developments are not directly reflected in the tRESP Building Blocks. LCTs associated with new developments have been reflected through use of the DFES 2025 projection data sets, such as for rooftop solar PV, EV chargers and heat pumps. These technologies show high levels of alignment between DFES 2025 outcomes and tRESP Pathway outputs.
Use of tRESP outputs in NGED network planning	n/a - New developments are not directly reflected in the tRESP Building Blocks.

