October 2025

# Stakeholder engagement report

## National Grid DSO's DFES 2025

nationalgrid DSO

# Contents

# Introduction

## Stakeholder engagement in Distribution Future Energy Scenarios (DFES)

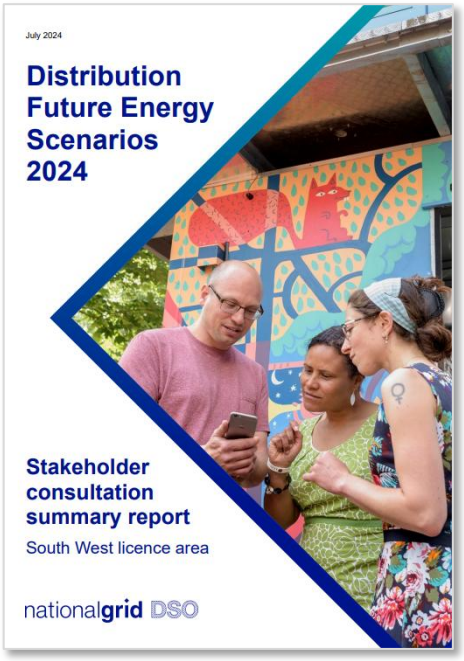
Engagement and consultation with local stakeholders are crucial to the DFES methodology, ensuring that regional factors are accurately represented in modelling and assumptions as part of the DFES analysis.

Regen and National Grid DSO have engaged stakeholders via an increasingly wide range of methods over recent years:

- Delivered a series of webinars with interactive polling around uptake or modelling assumptions for key technology sectors. These have been attended by a range of stakeholders, including project developers, local authorities, technology developers, academia, community energy groups and industrial businesses.
- An online SharePoint portal to collate data on new housing and non-domestic developments and to host a survey on local energy strategy and insights.
- Engagement with major energy users in National Grid DSO's network through webinars/meetings and a subsequent online survey process to gauge future requirements of the network from industrial customers and cluster areas.
- Developed a process to receive, review, reflect and reconcile Local Area Energy Plan (LAEP) reports and data into the granular DFES scenario modelling.
- Regen has held 1-1 meetings with project developers and individual sector representatives to gather sector-specific information and review the assumptions used in the DFES analysis.

This multi-stranded engagement method has adapted each year to consider different sources of information and feedback to ensure the DFES analysis is up to date and reflective of sector developments.

Summaries of the stakeholder engagement work National Grid DSO and Regen have undertaken in previous years are available online.




**DFES 2024**
**Stakeholder consultation summary reports**

South West licence area:
https://commercial.nationalgrid.co.uk/downloads-view-reciteme/670855

South Wales licence area:
https://commercial.nationalgrid.co.uk/downloads-view-reciteme/670856

East Midlands licence area:
https://commercial.nationalgrid.co.uk/downloads-view-reciteme/670858

West Midlands licence area:
https://commercial.nationalgrid.co.uk/downloads-view-reciteme/670854

# National Grid DSO DFES 2025

National Grid DSO (and all other Great Britain Distribution System Operators) are beginning to collect information and develop the business plan for the next regulatory period (Revenue = Incentives + Innovation + Outputs - Electrical Distribution 3 (RIIO ED3)), spanning 2028 to 2033. Alongside this, there are a number of significant reforms to processes underpinning regional and national energy planning, including:

- The significant reform to the connections process for large-scale electricity generation and storage, resulting in new processes and timeframes for network connections to rationalise the large queue of prospective projects seeking to connect. This includes the setting of regional technology capacity allocations under Clean Power 2030, which directly informs the connections reform process.
- The development and implementation of the National Energy System Operator's (NESO) new regional energy planning functions, through the delivery of the transitional Regional Energy Strategic Plans (tRESPs)

As a result of these significant activities, National Grid DSO and Regen sought to undertake a streamlined and focused stakeholder engagement process to inform DFES 2025. This specifically 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 that best align with local energy planning, and 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.
- Delivering engagement webinars with three industrial clusters to inform specific regional assumptions and local distribution factors around industrial decarbonisation and electrification.

This targeted outreach and focus on local authority engagement for DFES 2025 have resulted in a high rate of responses to this year's data request. In total, 105 of the 113 local authorities in or predominantly within National Grid DSO's licence area have responded to at least one of the new developments data requests or surveys over the past three rounds of DFES engagement. Of the eight that haven't, two have only a very small proportion of their local authority area intersecting with National Grid DSO's licence area (totalling c. 2% of their overall population).

This report summarises the approach and outcomes of these stakeholder engagement activities and how the insights gathered will inform our DFES 2025 analysis.

nationalgrid DSO

# Local authority engagement

National Grid DSO's DFES 2025

# Local Authority drop-in webinars

## Webinar details

National Grid DSO and Regen held one introduction webinar and four drop-in webinars across June and July 2025. These sessions were designed to aid local authorities in responding to Regen's data collection of planned housing and non-domestic developments, and a survey for local authorities to review DFES 2024 outputs for their area and provide input into DFES 2025 analysis and modelling assumptions.

In total, over twenty local authority officers attended across the four webinars, alongside representatives from National Grid DSO and Regen. There were three key areas that local authority officers were looking to get information on:

- Clarifying questions and guidance on the new developments data collection and survey requirements
- Understanding the broader DFES methodology (including the changed scope 2025 iteration) and its alignment with other energy planning activities, such as the tRESPs and future enduring RESPs delivered by NESO.
- The best approach to coordinating between National Grid DSO's engagement, the DFES analysis and the development of LAEPs.

## Outcomes

The primary purpose of the webinars was to answer questions around clarifying the data requirements for new housing and non-domestic developments and assist in answering the survey questions. This includes the validity of emerging plans and whether existing sites looking to expand should be included. These discussions resulted in a higher response rate for the DFES 2025 local authority engagement, particularly around new housing development data.

The table below details the other topics that were discussed during these webinars:

| Topic | Feedback | Outcome |
|---|---|---|
| New developments data request | Attendees asked what to prioritise in their response if they do not have the resources to respond in full. | Regen asked for the new housing developments data to be prioritised, due to the need to understand the impact of new housing targets in England. Regen and National Grid DSO also noted that respondents could answer the survey questions selectively. |
| | Attendees noted that new housing targets in England might not yet be translated into allocated land in local authority plans. | Where housing targets are not fully reflected in planned developments, Regen will model these homes in anticipation of future allocations. |
| | Attendees asked whether the non-domestic new developments were only for buildings, or whether other planned works (such as a quarry) should be included.<br><br>Attendees also asked a related question about the potential electrification of industrial processes. | Currently, the new developments data collection focuses on new buildings only.<br><br>Where a major non-building load is anticipated, this is considered in National Grid DSO's network planning through the connection's enquiry process. However, this is a developing area. |

| | | |
|---|---|---|
| DFES 2024 review survey | Attendees asked for information on who the survey was sent to and whether county councils had also been engaged. | The survey was sent to climate and sustainability officers or equivalents in local authorities where Regen or National Grid DSO has contact details. The survey was also sent to county councils, but the new developments data collection was targeted to district, borough, city and unitary local authorities only, due to their planning remit. It is worth noting that this year, National Grid DSO coordinated with Scottish and Southern Electricity Networks (SSEN) and UK Power Networks (UKPN) to lead engagement in local authorities where they had the most customers, to avoid 'border' local authorities receiving multiple data requests. |
| RESP/tRESP | The timing of the local authority engagement for DFES 2025 coincided with the Request for Information sent by the National Energy System Operator to inform the in-development tRESPs. Attendees were keen to understand how the DFES and the tRESP were likely to interact and make sure that their responses were being reflected. | Regen explained that the targeted approach to this year's engagement was in part a response to the tRESP engagement, acknowledging that local authorities may have limited resources to respond to multiple requests for information and data. National Grid DSO have shared DFES data with NESO to inform the tRESP and will continue to share DFES data as the transitional and enduring RESPs are developed. |
| Net zero scenarios | The survey asked which scenario the local authority was most aligned with. Attendees asked how to answer this question if their local area has a net-zero ambition ahead of 2050, as the DFES scenarios meet net zero by 2050 at the earliest. | Regen advised the local authorities to respond with the scenario most closely representing their level of net zero ambition and use the open form fields to provide further details. |
| | One attendee flagged that the Hydrogen Evolution scenario seemed more speculative than the other scenarios. | Regen and National Grid DSO detailed how the DFES works within the NESO Future Energy Scenario (FES) framework, which explores a scenario with a high focus on hydrogen. As the DFES is an annual process, as the pathway to net zero becomes clearer, the DFES will adapt to reflect these changes. |
| LAEPs | Several attendees flagged that they have LAEPs in development and would be better placed to answer the survey once these have been completed. | Regen highlighted that the DFES is an annual process. Regen also explained how LAEPs are integrated into the modelling as they are produced and published. Future rounds of engagement are likely to continue to reflect more granular LAEP data in the DFES. |

# New Developments data collection

## New developments data collection process

Regen works with local authorities to maintain an online database of new housing and non-domestic developments. This database is shared with local authority planning teams to provide updated data for the current year. These updates are then verified against the most recent local planning documents.

The following data is collected for each site:

- Use classes, such as domestic, office, industrial, retail, etc. Note that this currently uses Town and Country Planning (Use Classes) Order 1987, which was last amended in 2020 and has been superseded for planning purposes by the Use Classes Order 2020. This is due to many local plans not having been updated since 2020 and therefore containing the previous use classes. As the Use Classes Order 2020 consolidated previous use classes into fewer categories, the use classes used for DFES can be aggregated to the current use classes where necessary.
- Total number of homes or non-domestic floorspace (in sqm)
- Location details
- Stage of development in local planning

Once processed and verified, the build-out rates of individual developments are modelled based on the data provided and supplemented by relevant external data (e.g. Office for National Statistics housing projections).

## Response rate

Overall response rates to the new developments data collection this year (and 3-yearly) are as follows:

| Timeframe | Domestic new developments response rate | Non-domestic new developments response rate | Survey response rate |
|---|---|---|---|
| 2025 | 58% | 42% | 31% |
| 2023-2025 | 81% | 70% | 74% |

The high rate of responses in 2025 (and subsequently for the 2023-2025 period) for the domestic new developments reflects the guidance provided to local authorities during the 2025 engagement process. The guidance asked local authorities to prioritise new housing data if resources or timelines were challenging within the local authority teams. Domestic new developments are also often informed by local authority documents such as Five-Year Housing Land Supplies, which are updated more regularly than local plans.

In total, 105 of the 113 local authorities in or predominantly in National Grid DSO's licence areas have responded to at least one of the new developments data requests or survey over the past three rounds of DFES engagement. Of the eight that haven't, two have only a very small proportion of their local authority area intersecting with National Grid DSO's licence area (totalling c. 2% of their overall population).

## Outcomes

The updated new developments data from local authorities is directly integrated into the DFES scenario projections for new housing and non-domestic floorspace under the four future scenarios. In addition to this, the analysis models low carbon technologies (LCTs) associated with these new developments, such as rooftop solar PhotoVoltaic (PV), heat pumps, Electric Vehicle (EV) charge points and home batteries. These LCT projections reference policies such as the Future Homes Standard and analysis of the current rate of LCT installation on new developments.

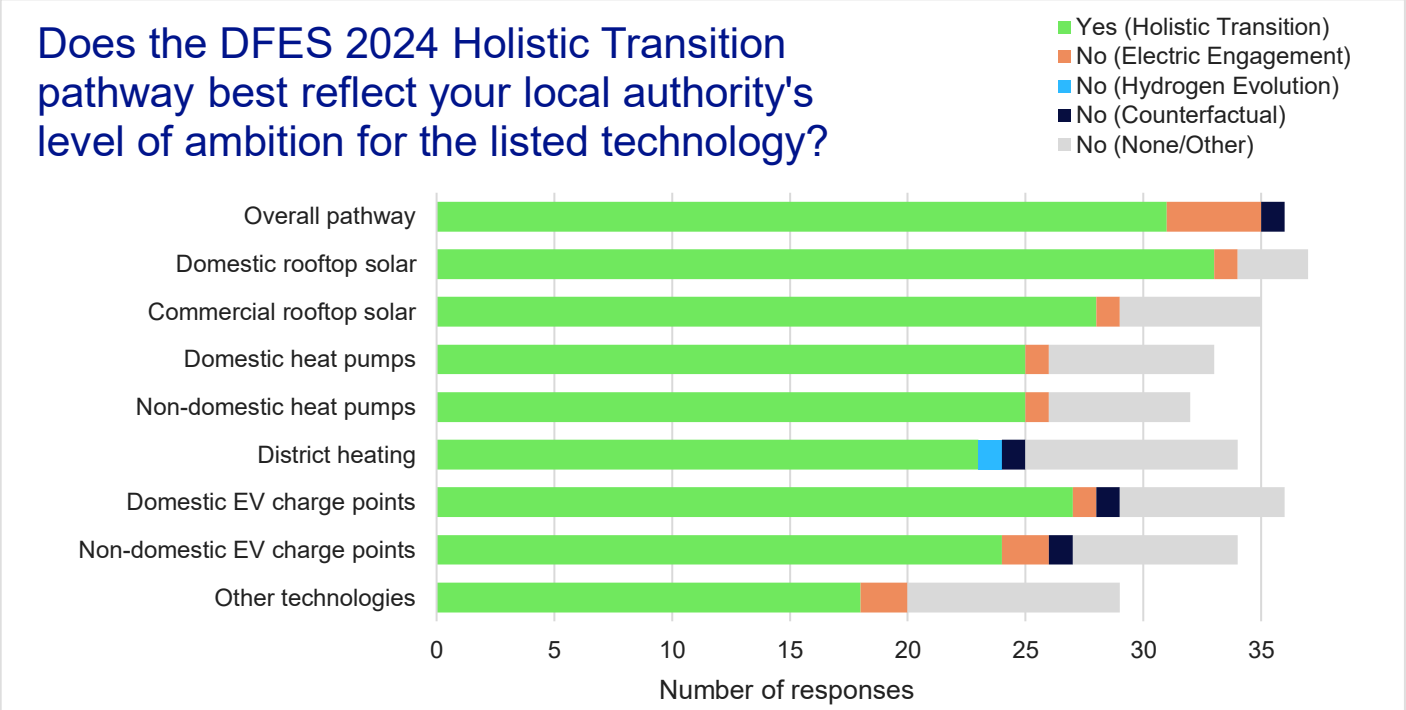
# Local Authority survey

The full list of survey questions issued to local authorities to inform DFES 2025 is detailed in Appendix 1: Local Authority survey questions.

## Summary of responses

### Use of the Holistic Transition scenario

For the eight technology sectors included in the survey, local authorities were asked whether the DFES 2024 Holistic Transition scenario best reflected their local authority's ambition for that technology. If not, respondents were invited to detail whether one of the other DFES scenarios was more reflective:




Holistic Transition was confirmed by local authority respondents as the most reflective scenario by a sizeable majority for all technology types included in the survey. Where this was not the case and another scenario was identified, Electric Engagement was most commonly chosen as the most representative scenario. These local authorities noted that this was due to Electric Engagement having the lowest amount of hydrogen for heating and transport and a greater focus on electrified solutions. In the instances where Counterfactual was identified as the best reflection, this was mostly due to there not being clear programmes, funding or political ambition to meet the ambitious net zero scenarios.

Where respondents did not agree that Holistic Transition was reflective but did not identify another DFES scenario, the most common reason given was a lack of evidence held by the local authority to accurately assess the DFES scenarios against local ambition. In many of these cases, respondents detailed that completing in-development LAEPs would allow them to answer the question more fully in the future.

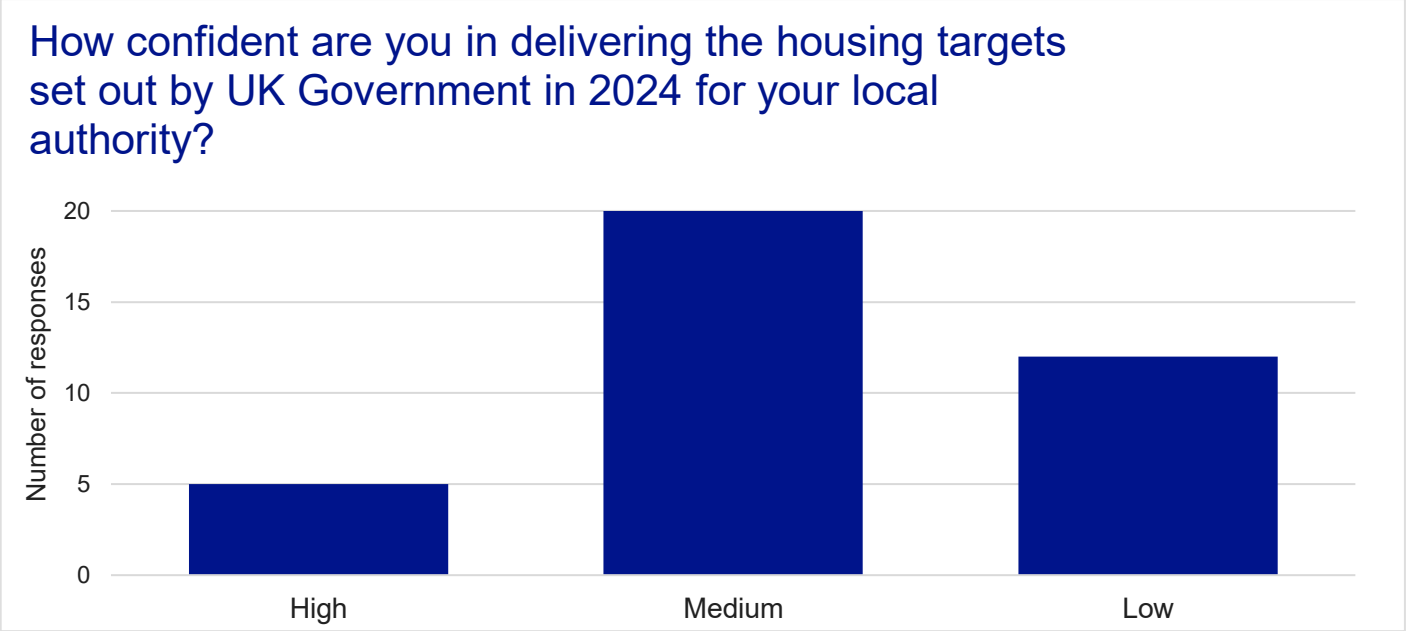
### Local Area Energy Plans

The DFES methodology includes a reconciliation to LAEPs, to compare and check that LAEP projections are reflected (where applicable) within the DFES scenario envelope. Where LAEP outcomes are above the highest DFES scenario, an uplift is applied to the projections within the relevant local authority on a technology-by-technology basis to reflect this higher level of ambition.

In total, 23 local authorities responded that they have a newly published or drafted LAEP or have one currently in development. Nine local authorities provided their LAEPs directly. These will be reviewed and incorporated into the DFES analysis as detailed above. The remaining in-development LAEPs will be logged and revisited in future DFES analyses.

### Housing targets

In light of recently updated UK government housing targets for local authorities in England, local authorities were surveyed on their confidence in delivering their allocated housing targets. This aimed to inform the DFES projections for new build housing across the four scenarios out to 2050:




As only a small minority of local authorities were highly confident in delivering the most recent housing targets, the DFES analysis will directly reflect local authority housing targets only under the Holistic Transition scenario. In the remaining three scenarios, the DFES modelling will assume a delayed build-out of housing related more closely to historic deployment levels.

### Projects and initiatives

For each technology included in the survey, local authorities were asked to note any specific projects or initiatives related to that technology. This information is then used in the DFES to inform the factors used in distributing technology projections spatially to individual substation areas across National Grid DSO's licence area:

| Technology | Summary of projects and initiatives | Impact on DFES 2025 modelling |
|---|---|---|
| Domestic rooftop solar | Several respondents noted that their local authority participates in Solar Together, a bulk-buying scheme for rooftop solar installations. | In the more ambitious scenarios, we assume domestic rooftop solar becomes more accessible and equitable. Schemes such as Solar Together are an example of how these higher uptake rates could be achieved. |
| | Funding for rooftop solar on social homes, through social housing funds and community energy funding. | Social homes currently receive a small uplift weighting for the distribution of domestic solar PV. We will consider whether this should be increased further in the near term to reflect the highlighted initiatives. |

| | | |
|---|---|---|
| | Installations or plans to install solar panels on council properties, including leisure centres. | Public buildings, such as leisure centres, schools and hospitals, are currently included in the spatial distribution of future commercial rooftop solar. |
| Commercial rooftop solar | As per domestic rooftop solar, the Solar Together scheme is available to Small or Medium-sized Enterprises (SMEs)in several local authorities.<br><br>In addition to this, several local authorities flagged grants and support schemes for commercial and public rooftop solar installations. | In the scenarios with higher levels of distributed renewables, domestic rooftop solar becomes more accessible and equitable. Schemes such as Solar Together are an example of how these higher uptake rates could be achieved. Where grants are locally specific, we will consider how this could be reflected in the uptake of commercial rooftop solar in the near term. |
| | One local authority highlighted the potential for solar canopies on car parks. | We currently do not consider car parks as a potential distribution factor for rooftop solar PV. We will assess whether to reflect car parks explicitly in the distribution of commercial-scale solar PV. |
| Domestic heat pumps | Several local authorities noted a focus on domestic retrofit through appointed coordinators, task forces and pilot projects. | Scenarios that are more supportive of heat pump uptake assume very high levels of deployment, relative to the current baseline. We assume that this is enabled by initiatives such as the ones highlighted by local authorities. Where this is locally specific, we will consider how this could be reflected in the uptake of heat pumps in the near term. |
| | Multiple local authorities noted plans to install heat pumps in social homes as part of the Warm Homes: Social Housing Fund funding. | The DFES heat modelling currently assumes an accelerated rate of heat pump uptake in social homes. |
| Non-domestic heat pumps | Two local authorities flagged initiatives to install heat pumps in public buildings, including schools and leisure centres. | We will investigate how the DFES non-domestic heat modelling could reflect accelerated uptake of heat pumps in public buildings. |
| District heating | Several local authorities provided heat network zoning information or feasibility studies. | Depending on how developed the provided studies are, we will either directly integrate these potential district heat network zones into the modelling or use them to sense-check the DFES assumptions around the location of future heat networks, which is currently based on Opportunity Areas for District Heat Networks in the UK, but will be based on DESNZ Heat Network Zoning outputs once they are published. It is anticipated that many local authorities' heat network zones will align with heat network zoning, especially in local authorities included under the Heat Network Zoning Pilot. |

| | | |
|---|---|---|
| Domestic EV charge points | Several councils highlighted initiatives to install EV chargers in gullies or lamp posts for on-street parked vehicles, for homes without access to off-street parking. | On-street vehicle chargers are a specific subtechnology in our EV charger model. We will consider how the rollout of gully and lamppost charging might impact the spatial distribution of these charger types to residential streets rather than, e.g. community hubs. |
| Domestic and non-domestic EV charge points | Many respondents noted Local Electric Vehicle Infrastructure (LEVI) funding supporting the installation of on-street charge points and banks of EV chargers in car parks. | We will analyse and reflect the LEVI fund data in the local distribution of DFES non-domestic EV charge point projections. We have also received data tables of existing LEVI-funded projects in some areas, which will be directly fed into the near-term modelling for EV chargers. |
| Non-domestic EV charge points | Several local authorities flagged plans to install fast and rapid chargers to charge their local authority vehicle fleets. Many of these are in the feasibility or planning stage. | Public vehicle fleets are projected to electrify in all scenarios, including two scenarios where almost all vehicles are electrified by 2050. We will use existing fleet depot locations, such as bus and coach stations, to inform the distribution of non-domestic EV chargers for these vehicles. |
| | Local authorities with significant bus depots highlighted plans with local bus operators to roll out electric buses and associated charging infrastructure at existing bus/coach depots. | The DFES directly models EV buses and coaches and their associated charging. We will continue to distribute this charging demand to existing depots. |

nationalgrid DSO

# Industrial cluster engagement

National Grid DSO's DFES 2025

# Industrial cluster engagement sessions

## Introduction

Future electricity load growth will impact the distribution network in several ways. The development of distributed generation and storage and the electrification of demand (such as space heating and road transport) are driven by a range of customer groups. Previous DFES engagement identified that industrial areas could be a significant contributor to future electricity load growth, including:

- On-site renewable energy generation deployment to offset grid imports (e.g. rooftop PV)
- Deployment of electric vehicle charging hubs for fleet and commercial vehicles
- Installation of low-carbon space heating for occupied buildings in industrial areas (e.g. heat pumps)
- The electrification of industrial processes, operations and equipment (including non-space heat)

To inform previous rounds of DFES analysis, Regen and National Grid DSO have engaged industrial and commercial customers in various ways (such as a major energy users survey and participation in regional stakeholder engagement webinars) to feed into the modelling assumptions and spatial distribution of future scenario projections for a range of technology building blocks. For DFES 2025, Regen and National Grid DSO held a series of focused workshop meetings to examine the impact of industrial areas within National Grid DSO's licence area.

This direct engagement was aimed at supporting National Grid DSO to understand better the priorities, developments, projects or plans in the following industrial areas:

- South Wales Industrial Cluster (SWIC)
- East Midlands Freeport and Industrial Sector
- West Midlands and Black Country Industrial Cluster

For this round of DFES, there was no industrial engagement in the South West licence area, as the engagement focused on established industrial cluster areas already working with National Grid DSO.

The structure of these sessions was largely consistent across the three areas, covering:

- Background to National Grid DSO and wider strategic network planning
- Overview of the DFES methodology, previous approaches to stakeholder engagement/input and how industrial electrification and demand are currently considered.
- Sector-specific discussion sessions on:
    - Hydrogen use and hydrogen electrolysis development.
    - Heat in buildings and heat network development.
    - Electrification of road transport
    - Electricity generation (thermal and renewable) and electricity storage
    - Development of data centres and Artificial Intelligence (AI) Growth Zones in the context of industrial areas.
    - Development of nuclear small modular reactors (SMR)
    - Industrial process electrification
- Interaction with wider strategic planning processes and activities such as LAEPs and NESO's RESPs.

The following sections summarise the key points of feedback and outcomes from the three industrial area workshops Regen delivered with the National Grid DSO team across the latter weeks of July.

## South Wales

**When:** 14 July 2025.
**In attendance:** Representatives from National Grid DSO, Regen, NESO, Net Zero Industry Wales, Wales & West Utilities, Convatec and the South Wales Industrial Cluster.

**Key topics discussed:**

- Fossil gas electricity generation: Need for clear evidence for future decommissioning of gas-fired power stations/reciprocating plants. A lot of sites currently make use of onsite Combined Heat and Power (CHP).
- Hydrogen: The pipeline of hydrogen electrolysis projects in Wales must be reflected and balanced against the potential for blue hydrogen development in the region.
- Heat networks: Use of waste industrial heat for heat networks is practically challenging due to the lack of a firm legal framework, low commercial value of waste heat and high investment risk.
- EVs: Need for clear evidence to support EV (or hydrogen vehicle) rollout in rural areas of Wales.
- Industrial electrification: Big potential in the SWIC area, need for site-by-site considerations, especially for tRESP planning. LAEPs were not cognisant of industrial electrification, as it was generally not part of stakeholder engagement undertaken to produce the LAEPs.

**Considerations for DFES 2025 modelling:**

| Technology sector | Feedback | DFES modelling consideration |
|---|---|---|
| Fossil gas electricity generation | Decommissioning of gas-fired power needs to be carefully modelled. Some significant capacity is assumed to decommission in DFES 2024. | Confirmed use of a range of scenarios to reflect future scenarios for unabated fossil fuel generation, remaining within the overarching FES framework of achieving net zero by 2050 in three of the four scenarios. Where clear evidence can be found for near or medium-term plans for site decommissioning or change of onsite technology, the DFES will reflect these plans more specifically. This will include CHP refurbishment timeframes as a driver for some technology/fuel switching (e.g. Hydrotreated Vegetable Oil (HVO), biogas or battery storage).<br><br>Note that fossil gas electricity generation is not in the technology scope for DFES 2025. As such, this insight will be reflected in future iterations of DFES. |
| Hydrogen electrolysis | Feedback that several sites are being developed in Wales, including some industrial premises, looking at on-site hydrogen production for self-use. | DFES will consider all known grid-connected pipeline projects, which include National Grid DSO connections enquiries/offers and winners of the Hydrogen Allocation Round (HAR) contracts.<br><br>The DFES modelling uses industrial areas as a primary spatial distribution factor for longer-term projections of electrolysis capacity. |
| EV chargers | EV charging in rural Wales is difficult to plan for accurately. | We are aware of the limitations of data and potential future consumer behaviour, and that |

| | | |
|---|---|---|
| | | this may have a larger impact in some geographic areas. Our current transport modelling process relies on Department for Transport data and the latest datasets on EV charger rollout. |
| | Companies often do not own their Heavy Goods Vehicle (HGV) fleets, so decisions around fuelling are not always made locally. Potential to reference the Welsh Commercial Vehicle Decarbonisation strategy document. | The projections and priorities within this strategy document are broadly in line with the FES framework, so DFES modelling (which trends heavily to EV uptake in the FES at a Grid Supply Point (GSP) level) will equivalently be in line. |

## West Midlands

**When:** 22 July 2025.
**In attendance:** Representatives from National Grid DSO, Regen, NESO, Black Country Industrial Cluster and West Midlands Energy Capital.

**Key topics discussed:**

- Hydrogen: Lower emphasis on hydrogen in the West Midlands as a decarbonisation solution for industrial areas, in response to National Infrastructure Commission recommendations.
- Nuclear SMR: Potential for West Midlands to be a hub for SMRs, due to manufacturing expertise, central location and sector-leading companies like Rolls-Royce and Holtec being based in the region.
- Low-carbon transport: Many automotive companies are based in the West Midlands, making it a potential EV hub, leading to possible future demand from additional manufacturing.
- Heavy industry: Big sources of demand in the region stem from metal forges and foundries, chemical manufacturing, construction products, some plastics and food manufacturing/processing. Cement production is also present in the region, with organisations like Cemex and Tarmac having several operational sites.

**Considerations for DFES 2025 modelling:**

| Technology sector | Feedback | DFES modelling consideration |
|---|---|---|
| Hydrogen | Hydrogen is unlikely to be a priority for the West Midlands. HyNet considers the conversion of major gas users (e.g. brick factories) to hydrogen, but there is potential that industries like these will relocate to other areas. | Whilst DFES analysis considers one scenario (Hydrogen Evolution) with a hydrogen transmission network, there are other scenarios with less hydrogen infrastructure/development (Holistic Transition /Electric Engagement). The DFES spatial analysis of existing energy demand assumes no migration of industry to different regions or countries. |
| Heat networks | There will need to be attractive incentives for district heating from businesses. Breweries and food facilities might be prime targets. | Spatial analysis of heat networks is primarily informed by the Department of Energy Security and Net Zero (DESNZ) Opportunity Areas for District Heat Networks in the UK study. This will account for appropriate industries and heat supply density mapping. |

| | | |
|---|---|---|
| EV charging | There are plans for significant EV charging along the M6. | Regen's EV charger modelling accounts for en-route charging on major motorways. |
| Carbon capture and storage | The industrial cluster views that Carbon Capture and Storage (CCS) will be challenging. Some operational emissions from sites like Cemex in Rugby and brick factories could use CCS. This may not necessarily impact the electricity distribution network, however. | This aligns with DFES assumptions around CCS being focused on larger (transmission network scale) projects. |
| Battery storage | Battery storage was considered in a metal processing facility, but challenging due to the need for multi-organisation collaboration to make the project investment stack up. | This feedback justifies a limited deployment of High Energy User battery storage sites in DFES battery storage modelling, under more scenarios focusing on distributed flexibility technologies. |
| Nuclear SMR | The industrial cluster is supportive of the SMR development opportunity. Discussion with Rolls-Royce and Midlands Nuclear about the potential for SMRs to decarbonise industrial clusters in the West Midlands, where there is less renewable energy resource. Also, stakeholders identified potential value in manufacturing the parts for SMR within the cluster. | Appreciate the clear linkage and interest in SMR development in the region. However, the Rolls-Royce design has not been considered connecting at the distribution network level, due to its 470 MW SMR design being at the scale to connect directly to the transmission network. |

## East Midlands

**When:** 30 July 2025.
**In attendance:** Representatives from National Grid DSO, Regen, NESO, East Midlands Combined Authority, Nottingham City Council, Leicestershire County Council, Leicester and Leicestershire Enterprise Partnership (LLEP), Motor Industry Research Association (MIRA) Technology Park, Charnwood Campus Science, Innovation and Technology Park and East Midlands Freeport.

**Key topics discussed:**

- Hydrogen electrolysis: East Midlands Hydrogen and Cadent's HyNet initiative are looking at hydrogen production, pipeline and carbon capture infrastructure in the North West region.
- Space heating: Potential for hydrogen to be available for heating and district heat networks in industrial clusters.
- Low-carbon transport: Many logistics hubs and major strategic roads in the East Midlands. Important to consider the uptake of electric HGVs as well as other vehicles. HGV chargers will have a significant impact at service stations. Hydrogen potential as a fuel for HGVs.
- Menti comments chat: HGV depot at East Midlands airport, potential for fleet chargers. Support for modelling eHGV chargers as a separate technology.

**Considerations for DFES 2025 modelling:**

| Technology sector | Feedback | DFES modelling consideration |
|---|---|---|
| Hydrogen electrolysis | Electrolyser project at MIRA Technology Park highlighted by attendees. | Cross-checked with National Grid DSO baseline connections data. |
| | Consideration of the impact of Cadent's HyNet hydrogen infrastructure initiative. | Confirmed that the HyNet area is used as a reference to identify future hydrogen availability zones for future uptake. |
| Electric vehicles/ chargers | The East Midlands is a transport and logistics hub. Need to factor in demand from electric HGVs and chargers.<br>Also potential for hydrogen to be an alternative fuel. | Confirmed that eHGV are in scope of the wider road transport electrification scenario modelling to 2050.<br>A lesser adoption of eHGVs is considered under the Hydrogen Evolution scenario. |
| | There is an HGV depot and associated eHGV charging hub being considered at East Midlands Airport. | Clarified that analysis includes the airport as a potential location of fleet chargers and included it as a spatial distribution factor driver for our eHGV projections. |
| Local Area Energy Plans | Potential to consider LAEP for DFES 2025 and granularity/format of LAEP outputs. | Regen can receive LAEP data in either report or data format to inform spatial analysis reconciliation (and uplift if applicable). |
| Airport decarbonisation | Sustainable Aviation Fuels (SAFs) could be a significant source of future electricity demand for production, transportation and storage. | This was confirmed as part of the wider electrification of airport operations at East Midlands Airport through Regen's Airport electrification scenario modelling in DFES 2024. |
| Heat networks | Charnwood Campus in Loughborough is investigating options to decarbonise the site through low-carbon heat networks. | The area of the Charnwood is within the district heating spatial zoning analysis that informs the DFES heat networks modelling. |
| Solar PV | The Charnwood Campus and the Loughborough University Science and Enterprise Park (LUSEP) plan to generate energy on-site by installing PV arrays. | As well as being directly reflected when applying for/updating relevant connection agreements, university buildings are already included as a distribution factor in the DFES commercial rooftop PV modelling. |

We would like to express our sincere gratitude to all stakeholders who engaged with us throughout this process. Your contributions, whether through the provision of data, attendance at webinars, or participation in workshops, have been instrumental in informing DFES 2025. We greatly appreciate the time, expertise, and thoughtful input you have shared, and we remain committed to continuing this collaborative approach as we continue to work with National Grid DSO to strengthen the DFES process.

# Appendix 1: Local Authority survey questions

The full list of survey questions issued to local authorities to inform DFES 2025 is detailed below.

## Survey details

| Q# | Question | Response options |
|---|---|---|
| Q01 | We think that Holistic Transition is a credible pathway to net zero that aligns with local and regional ambition.<br>Do you agree this pathway credibly reflects your ambition and priorities? | Yes/No |
| | If not, please state which pathway best reflects your local/regional level of ambition. | Open form |
| | If you feel like none of the pathways best reflects your level of ambition, can you provide some more information/explanation? | Open form |
| Q02 | Have there been any newly created or updated LAEPs or energy plans/strategies in your Local Authority area? | Yes/No |
| | If yes, please can you provide a link to where this/these can be accessed or attach/send the energy plan files to us to review. | Open form |
| Q03 | How confident are you in delivering the housing targets set out by UK Government in 2024 for your local authority? | High/Med /Low |
| Q04 | Does the DFES 2024 Holistic Transition pathway projection, as detailed in the DFES 2024 Local Authority Workbook, best reflect your local authority's level of ambition for domestic rooftop solar generation? | Yes/No |
| | If not, please state which DFES 2024 pathway projections best reflects the level of ambition. | Open form |
| | If you feel like none of the DFES 2024 pathway projections best reflect your level of ambition, can you expand on why? If possible, please include specific projections/targets with units. | Open form |
| Q05 | Are there any strategic projects or initiatives in your area for domestic rooftop solar generation that you would like to make us aware of? | Yes/No |
| | If yes, please can you provide details of (or links to) these projects or initiatives. | Open form |
| Q06 | Does the DFES 2024 Holistic Transition pathway projection, as detailed in the DFES 2024 Local Authority Workbook, best reflect your local authority's level of ambition for commercial rooftop solar generation? | Yes/No |
| | If not, please state which DFES 2024 pathway projections best reflects the level of ambition. | Open form |
| | If you feel like none of the DFES 2024 pathway projections best reflect your level of ambition, can you expand on why? If possible, please include specific projections/targets with units. | Open form |
| Q07 | Are there any strategic projects or initiatives in your area for commercial rooftop solar generation that you would like to make us aware of? | Yes/No |
| | If yes, please can you provide details of (or links to) these projects or initiatives. | Open form |
| Q08 | Does the DFES 2024 Holistic Transition pathway projection, as detailed in the DFES 2024 Local Authority Workbook, best reflect your local authority's level of ambition for domestic heat pumps? | Yes/No |
| | If not, please state which DFES 2024 pathway projections best reflects the level of ambition. | Open form |

| | | |
|---|---|---|
| | If you feel like none of the DFES 2024 pathway projections best reflect your level of ambition, can you expand on why? If possible, please include specific projections/targets with units. | Open form |
| **Q09** | Are there any strategic projects or initiatives in your area for domestic heat pumps that you would like to make us aware of? | Yes/No |
| | If yes, please can you provide details of (or links to) these projects or initiatives. | Open form |
| **Q10** | Does the DFES 2024 Holistic Transition pathway projection, as detailed in the DFES 2024 Local Authority Workbook, best reflect your local authority's level of ambition for non-domestic heat pumps? | Yes/No |
| | If not, please state which DFES 2024 pathway projections best reflects the level of ambition. | Open form |
| | If you feel like none of the DFES 2024 pathway projections best reflect your level of ambition, can you expand on why? If possible, please include specific projections/targets with units. | Open form |
| **Q11** | Are there any strategic projects or initiatives in your area for non-domestic heat pumps that you would like to make us aware of? | Yes/No |
| | If yes, please can you provide details of (or links to) these projects or initiatives. | Open form |
| **Q12** | Does the DFES 2024 Holistic Transition pathway projection, as detailed in the DFES 2024 Local Authority Workbook, best reflect your local authority's level of ambition for district heating? | Yes/No |
| | If not, please state which DFES 2024 pathway projections best reflects the level of ambition. | Open form |
| | If you feel like none of the DFES 2024 pathway projections best reflect your level of ambition, can you expand on why? If possible, please include specific projections/targets with units. | Open form |
| **Q13** | Are there any existing or planned district heat networks being developed in your local authority area? | Yes/No |
| | If yes, please can you provide details of (or links to) these projects. | Open form |
| **Q14** | Are there any zones or designated areas for potential future district heat networks in your local authority area? | Yes/No |
| | If yes, please can you provide details of (or links to) these studies. | Open form |
| **Q15** | Does the DFES 2024 Holistic Transition pathway projection, as detailed in the DFES 2024 Local Authority Workbook, best reflect your local authority's level of ambition for domestic EV charge points? | Yes/No |
| | If not, please state which DFES 2024 pathway projections best reflects the level of ambition. | Open form |
| | If you feel like none of the DFES 2024 pathway projections best reflect your level of ambition, can you expand on why? If possible, please include specific projections/targets with units. | Open form |
| **Q16** | Are there any strategic projects or initiatives in your area for domestic EV charge points (on-street and off-street) that you would like to make us aware of? | Yes/No |
| | If yes, please can you provide details of (or links to) these projects or initiatives. | Open form |
| **Q17** | Does the DFES 2024 Holistic Transition pathway projection, as detailed in the DFES 2024 Local Authority Workbook, best reflect your local authority's level of ambition for non-domestic EV charge points? | Yes/No |
| | If not, please state which DFES 2024 pathway projections best reflects the level of ambition. | Open form |

| | | |
|---|---|---|
| | If you feel like none of the DFES 2024 pathway projections best reflect your level of ambition, can you expand on why? If possible, please include specific projections/targets with units. | Open form |
| **Q18** | Are there any strategic projects or initiatives in your area for non-domestic EV charge points that you would like to make us aware of? | Yes/No |
| | If yes, please can you provide details of (or links to) these projects or initiatives. | Open form |
| **Q19** | Do the DFES 2024 Holistic Transition pathway projections, as detailed in the DFES 2024 Local Authority Workbook, best reflect your local authority area's level of ambition for other technologies? | Yes/No |
| | If no, which technology or technologies are not well reflected in the Holistic Transition scenario? | Open form |
| | If no, please state which DFES 2024 pathway projections best reflects the level of ambition for this technology or technologies. | Open form |
| | If you feel like none of the DFES 2024 pathway projections best reflects your level of ambition for this technology or technologies, why? | Open form |
| **Q20** | Are there any other technology sectors not included in this survey that you would like to make us aware of in your local area? | Yes/No |
| | If yes, can you describe this technology and any initiatives or projects you would like to highlight to us? | Open form |