Agenda

	Timings (approx)
Our approach to DFES 2025 engagement – Oli Spink, Head of System Planning	**14.05pm**
Explanation of the data request – Meagan Reasoner, Senior Energy Analyst (Regen)	**14.15pm**
Finding and using the Local Authority Workbook – Malachi Moses-Gair, DSO Engineer	**14.35pm**
Engagement timeline – Emily Taylor, Regional Decarbonisation Manager	**14.45pm**
Q & A	**14.50pm**
Close	**15:00pm**
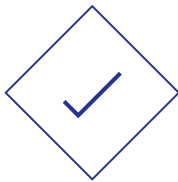
✓ Today is a 1 hour webinar.

✓ Please use the chat function to ask questions.

✓ The webinar will be recorded and shared along with the slides after the event.

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Introduction to our Distribution Future Energy Scenarios (DFES)

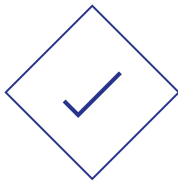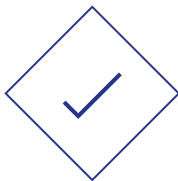- Our Distribution Future Energy Scenarios (DFES) outline the range of credible futures for the growth of the distribution network. We have been producing them since 2015.

- They are the first stage of our network investment planning process that will ensure our network is ready for a decarbonised future.

- They encompass the growth of demand, storage and distributed generation including low carbon technologies such as Electric Vehicles and Heat Pumps.

- The National Energy System Operator's (NESO's) Future Energy Scenarios (FES) are used as the overarching framework for the DFES analysis. These are now known as pathways.

- Since 2021 we have also been using Local Authority data to inform our DFES assumptions.

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Why DFES matters

- We use our DFES data to create our Network Development Plans, ensuring it informs our future investment in our network

- We will also be using our DFES data as our basis for our ED3 business plan which will inform our investment from April 2028 to March 2033.

- Our DFES 2024 data and analysis was really comprehensive. 64% of Local Authorities told us about their plans and we are already using this in our discussions with Ofgem and NESO

- Therefore in 2025 we aren't going to ask you to tell us all of your plans again. You've done that and we really appreciate it.

We think the most efficient thing to do is to focus on two key areas –

- New developments. We know housing targets have changed, therefore we will ask you to update your domestic and non domestic numbers

- We will ask you to check our DFES 2024 data for your Local Authority and tell us if it aligns with your projections

- We won't be looking at generation as the implications of CP30 is being considered as part of this year's DFES.

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DFES Methodology at a glance
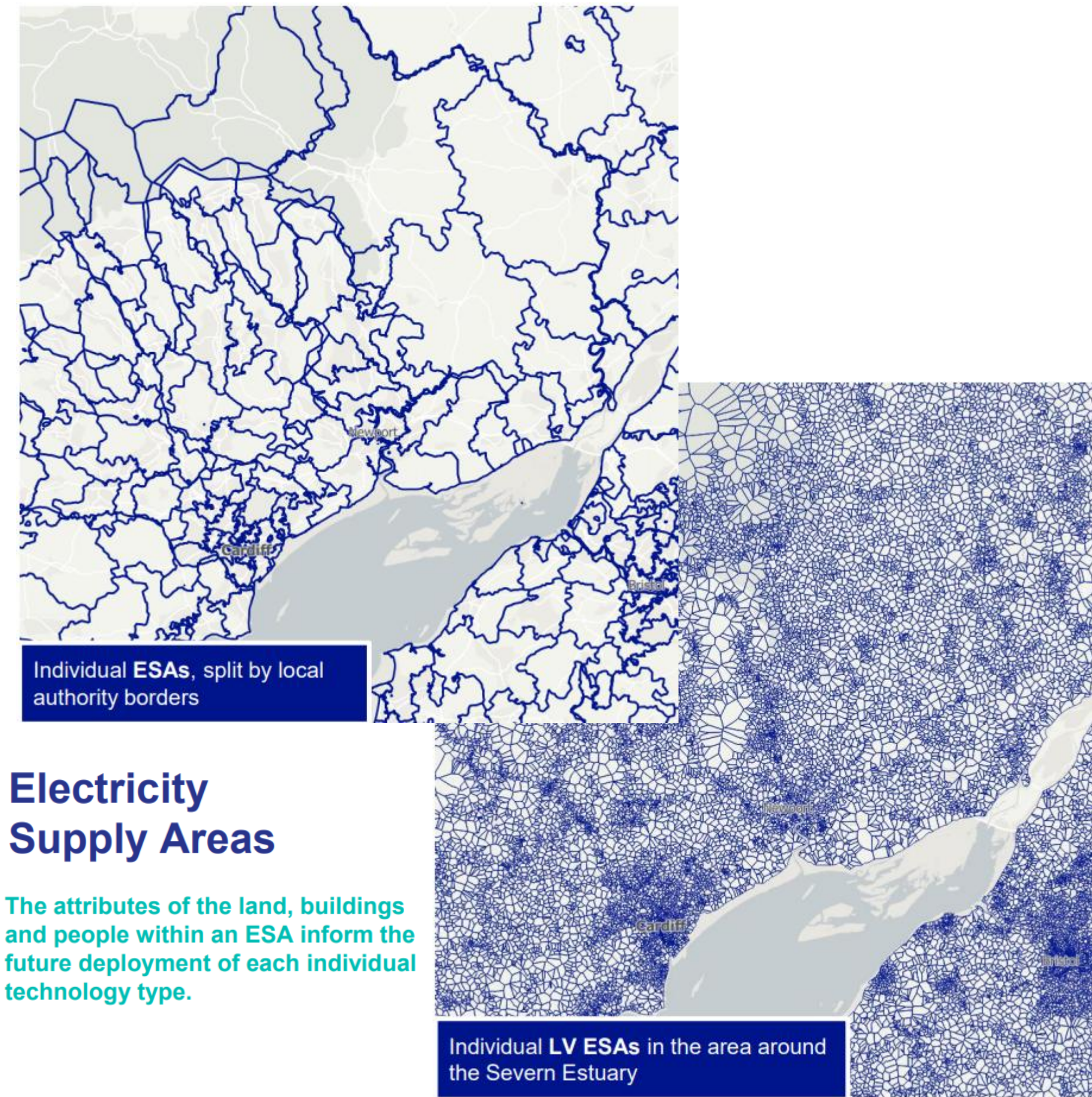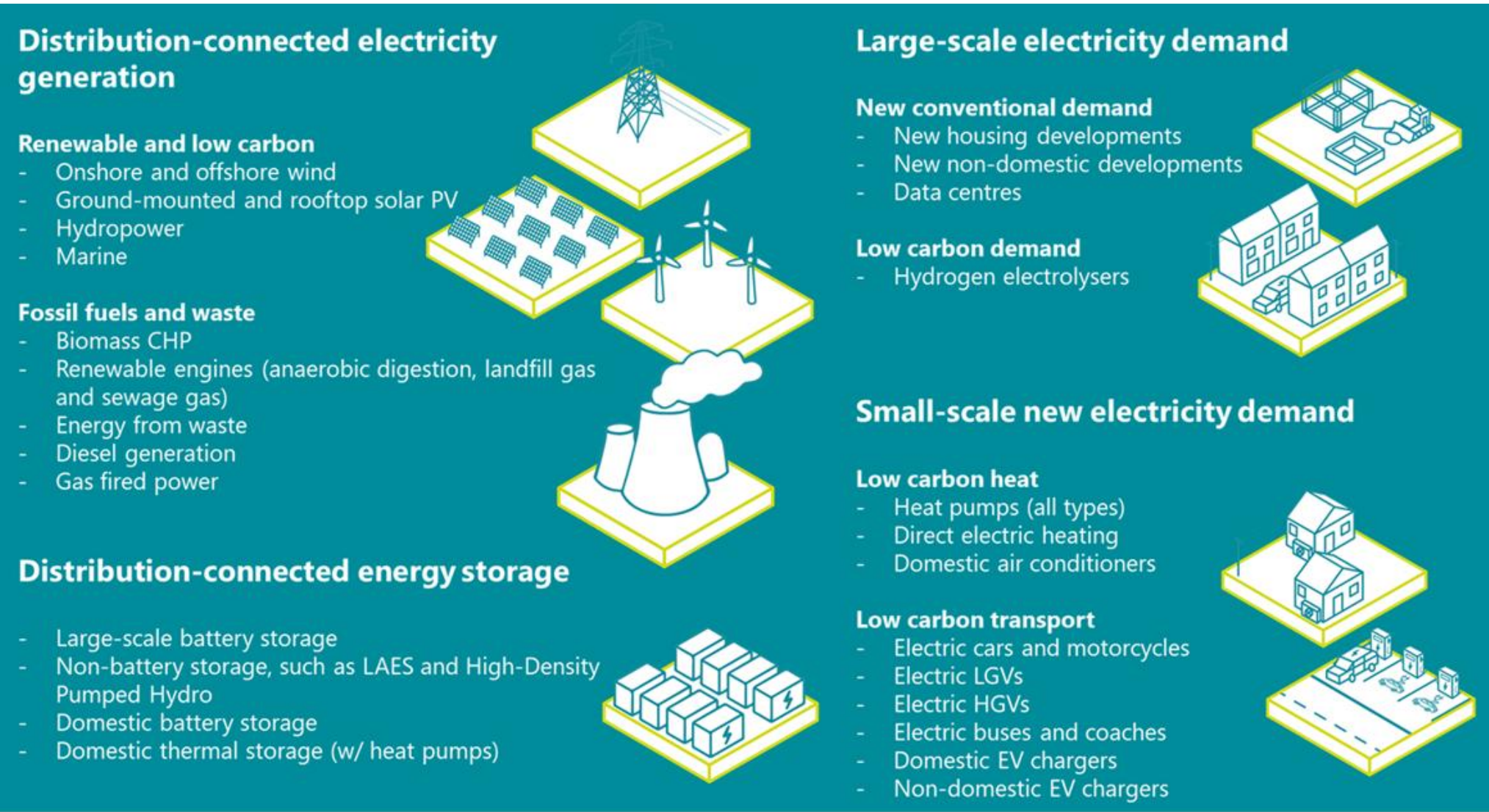

Distribution-connected electricity generation

Renewable and low carbon
- Onshore and offshore wind
- Ground-mounted and rooftop solar PV
- Hydropower
- Marine

Fossil fuels and waste
- Biomass CHP
- Renewable engines (anaerobic digestion, landfill gas and sewage gas)
- Energy from waste
- Diesel generation
- Gas fired power

Distribution-connected energy storage
- Large-scale battery storage
- Non-battery storage, such as LAES and High-Density Pumped Hydro
- Domestic battery storage
- Domestic thermal storage (w/ heat pumps)

Large-scale electricity demand

New conventional demand
- New housing developments
- New non-domestic developments
- Data centres

Low carbon demand
- Hydrogen electrolysers

Small-scale new electricity demand

Low carbon heat
- Heat pumps (all types)
- Direct electric heating
- Domestic air conditioners

Low carbon transport
- Electric cars and motorcycles
- Electric LGVs
- Electric HGVs
- Electric buses and coaches
- Domestic EV chargers
- Non-domestic EV chargers

Baseline → Pipeline → Projections → Spatial Distribution

Individual **ESAs**, split by local authority borders

Electricity Supply Areas

The attributes of the land, buildings and people within an ESA inform the future deployment of each individual technology type.

Individual **LV ESAs** in the area around the Severn Estuary
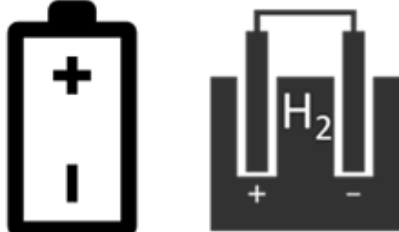
Use of local data and ambition in DFES 2024 analysis

Licence area specific engagement webinars

Direct contact with project developers and sector experts

New developments data exchange

Use of LA planning status/information

Local energy strategy survey and data share

LAEP Reflect specific local energy plans/targets

How local authorities influence each DFES Process

Baseline
- No significant impact

Pipeline
- The Regen hosted SharePoint is the basis for the new development pipeline.
- Local authority planning portals are vital to pipeline research on national grid DSO provided sites

Licence Area Projections
- **Local authority housing targets** and historic build outs help drive different scenarios for domestic new developments.
- LAEPs targets **where viable** are reconciliated against DFES projects.
- Engagement at the licence area webinars help inform overall modelling

Spatial Distribution
- Locational data provided in the new development data is used to assign an Electrical Supply Area (ESA)
- Energy strategy survey is used to inform the local ambition for spatial distribution.
- LAEPs reconciliation is used to endorse or uplift spatial distribution for relevant ESAs, **where viable.**

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New Developments

Regen Hosted Local Authority SharePoint

Local_Authority_Domestic
Local_Authority_Non-domestic

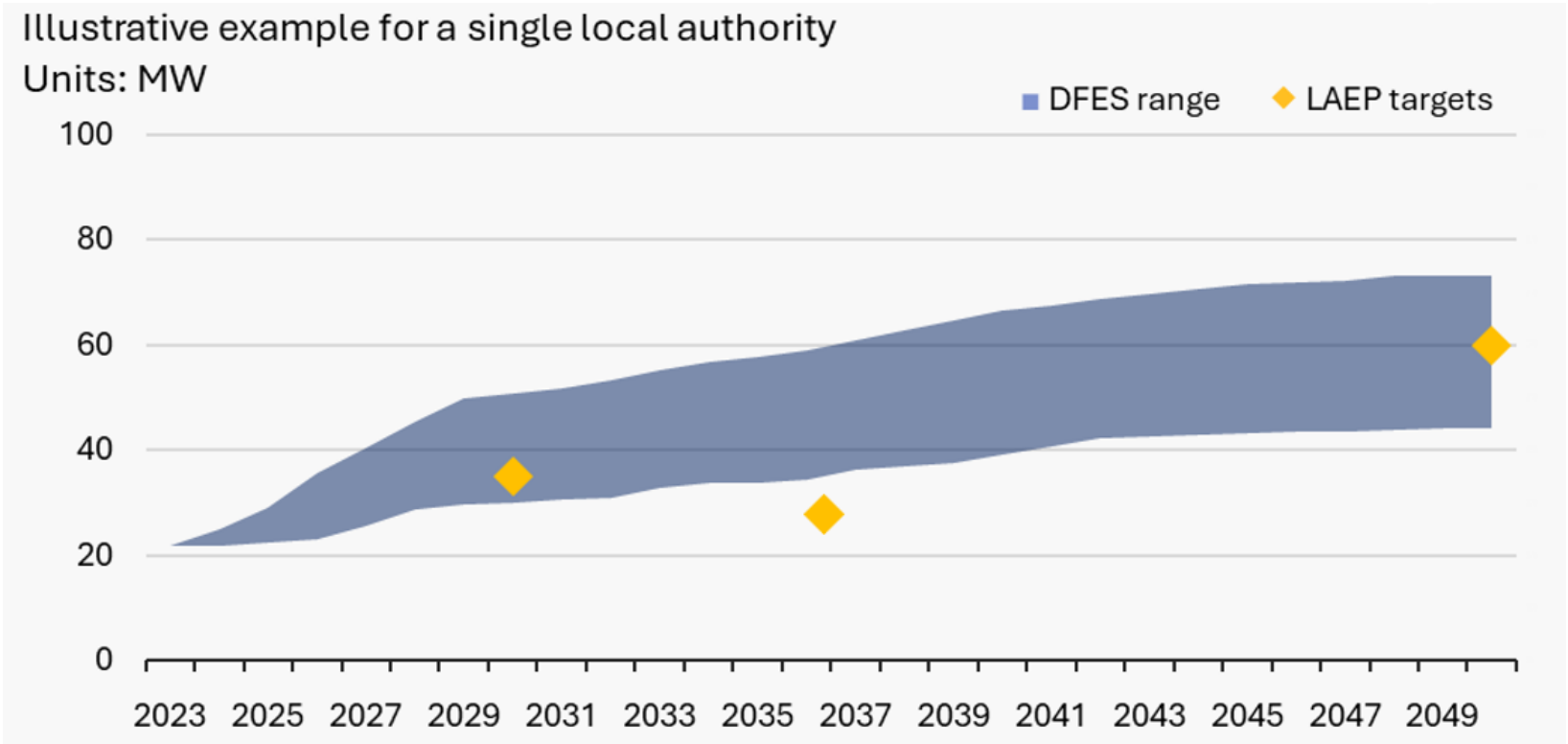| DNO	Licence area	Last updated	Site name	Local authority	Easting	Northing	Number of homes	Notes	Development stage	Land type (Brownfield/	Source	Source year	Source link	2023	2024	2025
NGED	Crownsland	05/07/2024	Red Keep	King's Landing	392743	808807	69		Pre-planning - avaliable for development		Local Plan	2023	https://gar	0	0	23
NGED	Crownsland	05/07/2024	Dragonstc	King's Landing	393424	807065	49		Pre-planning - avaliable for development		Local Plan	2023	https://gar	7	7	7
NGED	Crownsland	05/07/2024	Dun Fort	King's Landing	391089	804185	820		Pre-planning - avaliable for development		Local Plan	2023	https://gar	205	205	205
NGED	Crownsland	05/07/2024	Aegonfort	King's Landing	389627	812162	160		In planning		Primary data	2024		0	40	40
NGED	Crownsland	05/07/2024	High Tide	King's Landing	389547	803092	48		In planning	Brownfield	Primary data	2024		0	48	0

Sources for Data:
- Local Development Plans
- 5 Year Land Supply Statements
- Planning Database
- Annual Monitoring Report

New data request this year:
GIS data such as a GeoPkg or Shapefile for LDPs.
This will aid in allocations being assigned the best ESA or being split among ESAs
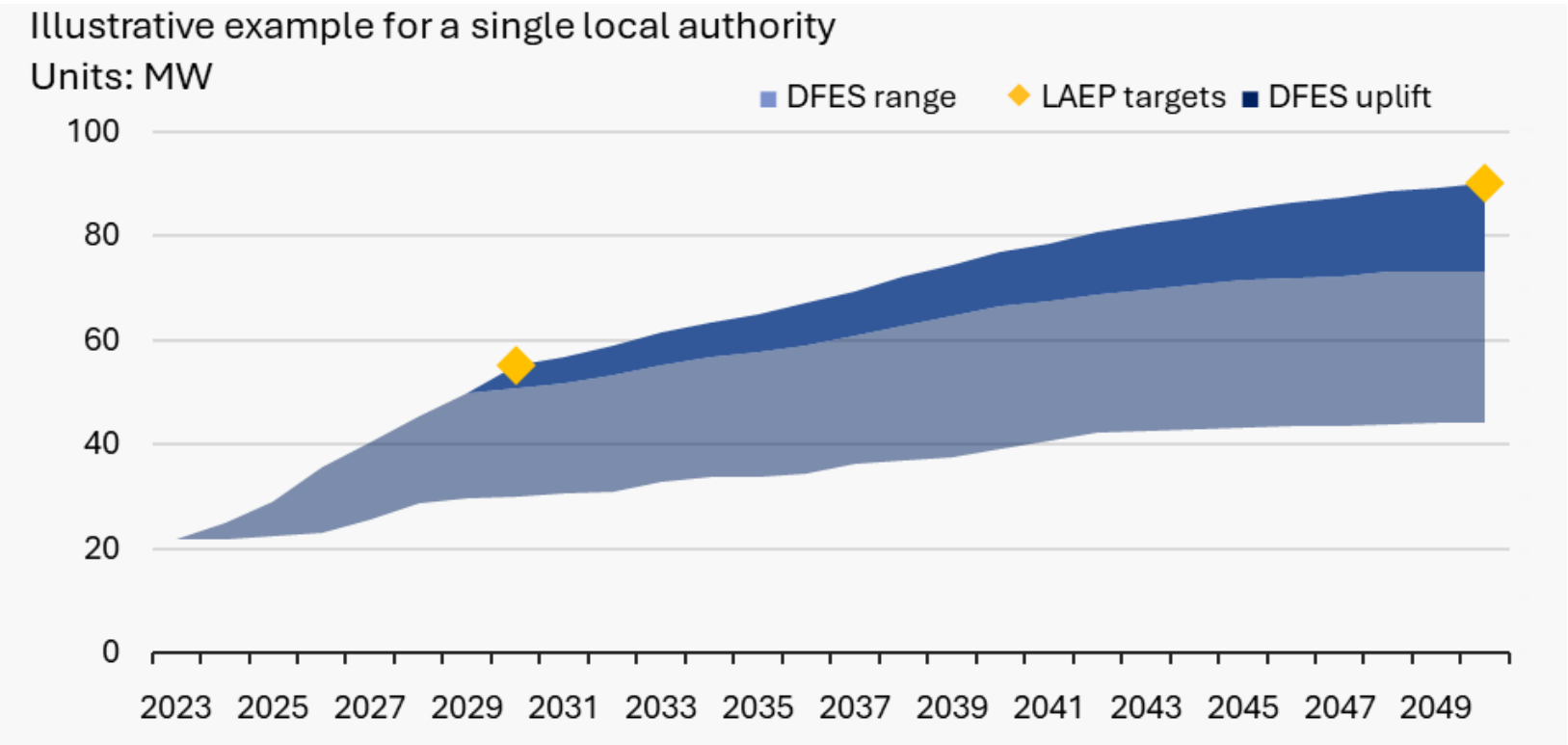
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How we are incorporating LAEP data

The DFES, as a bottom-up, local evidence-driven analysis of future electricity load growth, aims to reflect, reconcile and (where possible) align with LAEPs. There are four potential outcomes:
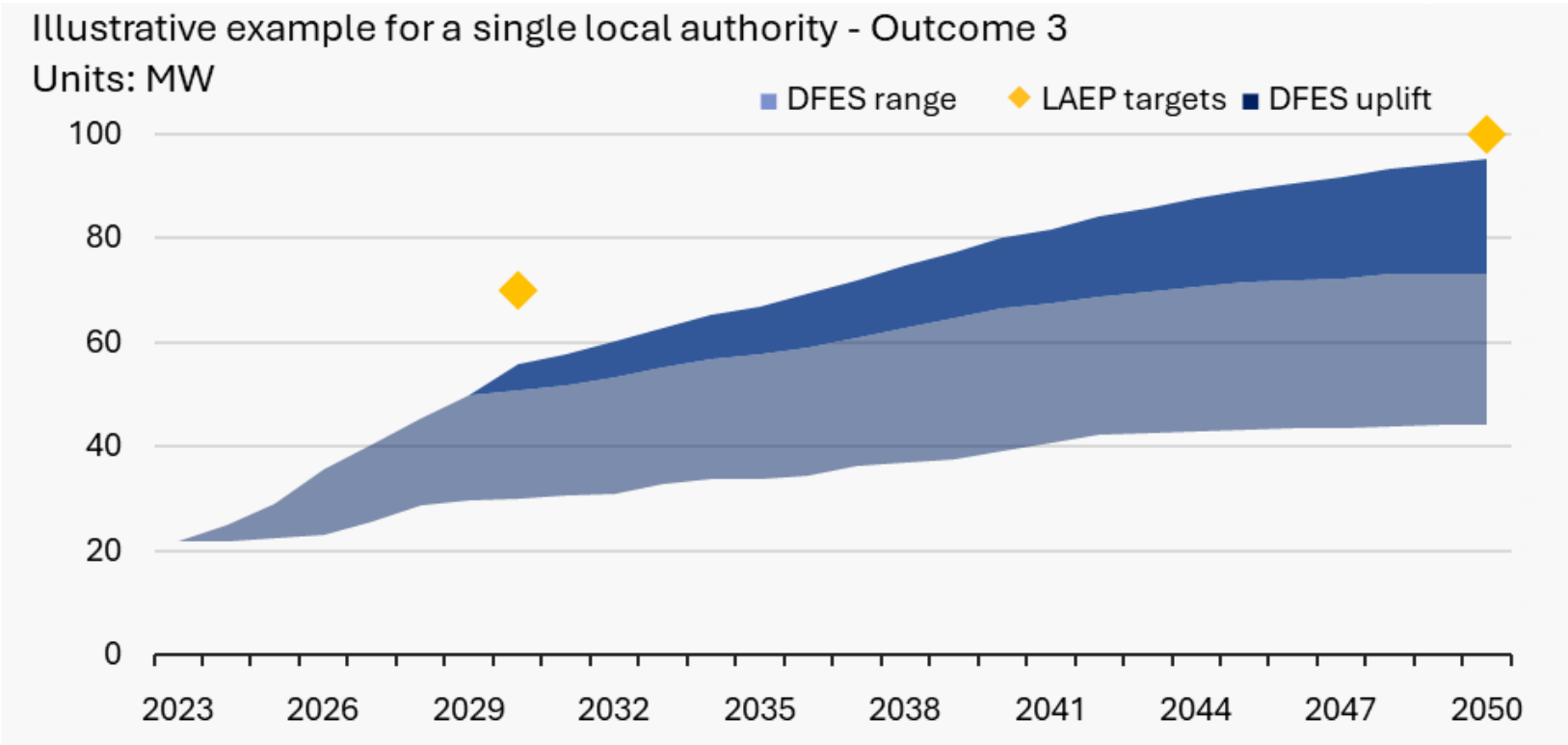1. LAEP target is within DFES scenario projection 'range' - no action
2. LAEP target is below the least ambitious scenario - no action
3. LAEP target is credibly above the initial DFES 'range' - the most ambitious scenario is uplifted to directly reflect the target
4. LAEP target is substantially above the DFES 'range', outside a credible range. Regen coordinate with NGED to agree on the best approach to adapt scenario or re-engage with local authority team.

Illustrative example for a single local authority
Units: MW
■ DFES range ◆ LAEP targets ■ DFES uplift

Outcome 3: DFES scenario uplifted to reflect LAEP targets

Illustrative example for a single local authority
Units: MW
■ DFES range ◆ LAEP targets

Outcome 1 &2 :LAEP ambition within or below DFES range.

Illustrative example for a single local authority - Outcome 3
Units: MW
■ DFES range ◆ LAEP targets ■ DFES uplift

Outcome 4: LAEP targets not credible within DFES or FES scenarios

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Impact of CP30 on DFES analysis

- Regen is currently updating the DFES 2024 for key generation and storage technologies e.g. large-scale solar, wind and battery storage, to assess the impact of Clean Power 2030 (CP30) on NGED's region.

- CP30 and the associated reforms to network connection processes contains regional capacity allocations for these technologies and criteria that must be met for projects to secure a firm grid connection offer and connection date before 2030/2035 under the reforms.

- This aims to reduce the connections queue down to the more advanced and viable projects, accelerating connections of renewables and storage over the next 5-10 years. This is likely to result in a faster uptake of solar, batteries and onshore wind compared to the DFES 2024 projections.

- Absolute details of the revised queue of projects is still being worked through between NGED and NESO. Regen developing an initial view.

- **As a result we are seeking to target further engagement around demand technologies, due to generation & storage being heavily influenced by these CP30 reforms.**


Updated pipeline compared to DFES 2024
Units: MW

Legend:
- Under construction
- Granted
- Submitted
- Pre-planning
- No information or n/a
- Rejected/withdrawn/expired/abandoned
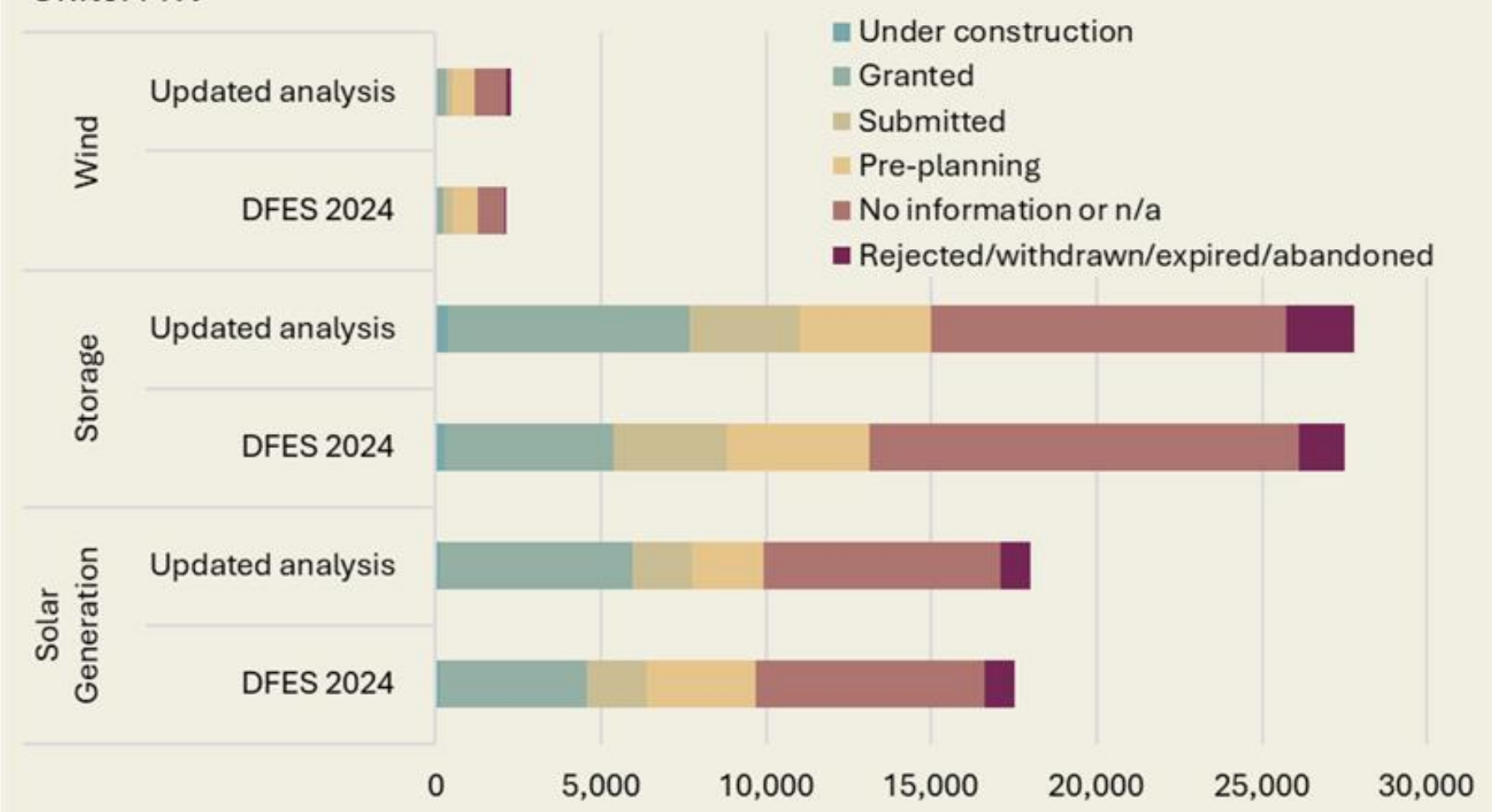
Survey to inform 2025 analysis

- We are working with NGED to undertake a streamlined DFES 2025 analysis to inform NGED's RIIO-ED3 business planning.

- Our Local Authority survey is intended to focus on reviewing existing DFES 2024 projections for demand technologies, rather than an update to the standard survey on low carbon plans and ambitions.

- We are seeking feedback on our DFES 2024 projections for key technologies e.g. rooftop solar PV, heat pumps, district heating, electric vehicles and EV charging infrastructure.

- We would also welcome any updates to LAEPs or LAEP-style plans that are (or will imminently be) published to inform the 2025 analysis.

- This survey will be issued in the coming weeks and links to the NGED's Local Authority Workbook.

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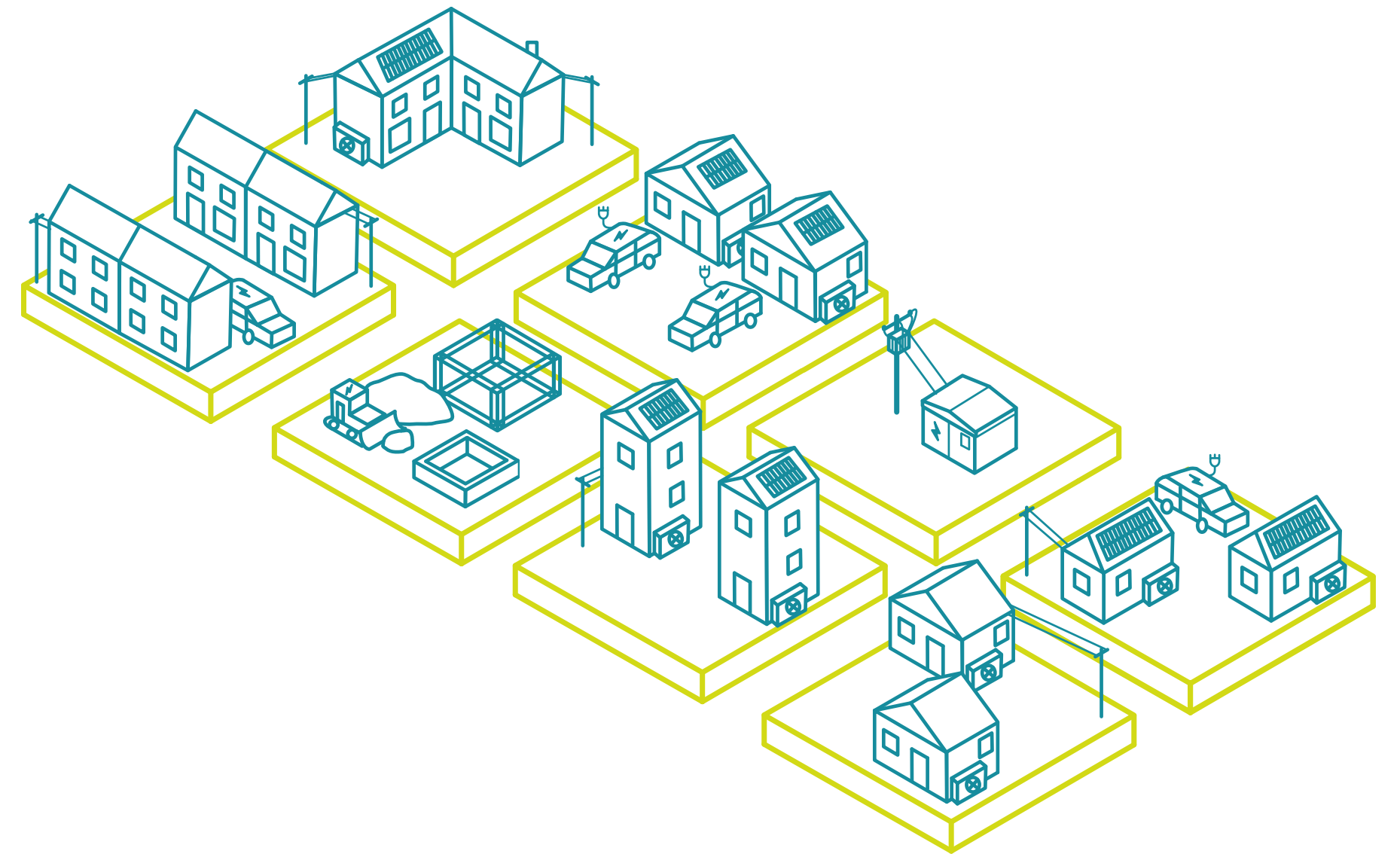
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How to query our forecasts

Malachi Moses-Gair

DSO Engineer

Local Authority DFES Workbook

Used to access all your DFES data

- Download our DFES 2024 Local Authority Workbook from our website

Distribution Future Energy Scenarios (DFES) - DFES 2024 Local Authority Workbook - Connected Data Portal | National Grid

- Check the forecasted technology numbers to answer the DFES Survey

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DFES Survey Quick View

- Select your local authority

- View key technology projections relevant to the DFES Survey

- Under the Holistic Transition scenario by 2035

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Select Your Local Authority

Local Authority
Amber Valley
Ashfield
Bassetlaw
Bath and North East Somerset
Bedford
Birmingham
Blaby
Blaenau Gwent
Bolsover
Boston
Bridgend
Bristol, City of
Bromsgrove
Broxtowe
Buckinghamshire
Caerphilly
Cannock Chase
Cardiff
Carmarthenshire

DFES 2024 Local Authority Workbook

DFES Introduction
Introduction to NGED's Distribution Future Energy Scenarios

DFES Survey Quick View
Key technologies table to quickly check DFES projections for the DFES Survey

Volume Projections
Projected number of DFES technologies in greater detail

Energy Projections (GWh)
Projected energy demand and generation of DFES technologies

Survey Responses
Table of local authority data received by NGED and how it influences the DFES process

DFES Survey Quick View
Local Authority: Bristol, City of
A quick lookup of key technology projections asked about in the DFES Survey by 2035 under the holistic transition scenario

See 'Volume Projections' tab if you wish to futher interigate the DFES projections

Technology	Units	Scenario	2024	2035	Change by 2035
District heating	Number of customers on network	Holistic Transition	1,515	8,296	6,781
Domestic	Number of dwellings	Holistic Transition	196,499	213,755	17,256
Electric vehicles	Number of electric vehicles	Holistic Transition	8,534	180,070	171,536
EV Charge Point	MW (installed capacity)	Holistic Transition	39	696	657
Heat pumps (domestic)	Number of heat pumps	Holistic Transition	1,620	60,073	58,453
Non domestic	Floorspace (metres squared)	Holistic Transition	17,158,341	17,629,743	471,402
Solar (commercial rooftop)	MW (installed capacity)	Holistic Transition	8	52	44
Solar (domestic rooftop)	MW (installed capacity)	Holistic Transition	26	160	133

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Volume Projections

- Query our DFES 2024 data in more depth

- All four scenarios and up to 2050

- All technologies and their subtechnologies

Engagement timeline

Emily Taylor

Regional Decarbonisation Manager

DFES 2025 – engagement timeline

Engagement with Local Authorities will take place May to July 2024.

06 May 2025 – Local Authority engagement webinar

⬇

Mid May 2025 – Email will be sent out to all Local Authorities with an explanation of what we need any when (from Regen)

⬇

May – July ongoing Strategic Engagement Officer support and a series of bookable support sessions with Regen

⬇

31st July - Closing date for Local Authority submissions

Strategic Engagement Officers

East Midlands	West Midlands	South West	South Wales
Elizabeth Hanger	Steven Roberts	Vaughan Pyne	Kathryn Thomas
ehanger@nationalgrid.co.uk	sroberts4@nationalgrid.co.uk	vpyne@nationalgrid.co.uk	kthomas@nationalgrid.co.uk

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Q&A and feedback

Join at
slido.com
#3806 714

Thank you for listening.

If you have any questions you can email nged.energyplanning@nationalgrid.co.uk.