



Leapfrog into decarbonisation planning with **Net Zero Data**

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CATAPULT
Energy Systems



Overview: Net Zero Data Baseline Bundle

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Decarbonisation Planning: The Challenges

As a Local Authority:

- You've declared a climate emergency and don't know where to start.
- You have a decarbonisation plan (e.g. a LAEP) but it's out of date.
- Your budgets are tight and funding a plan or refresh is difficult.
- You don't know what the energy system in your area looks like.
- You can't track progress and adjust priorities over time.
- You don't have the time, resource, or expertise.

As a Consultant:

- You spend the first few weeks of a project finding, compiling, cleansing data before doing the real work.
- You descope stakeholder engagement to meet budget constraints.

UK LAs

~80%

Climate
emergency¹

UK LAs

~60%

Haven't published
a plan²

This event

25%

Haven't published
a plan^{1,2}

Data

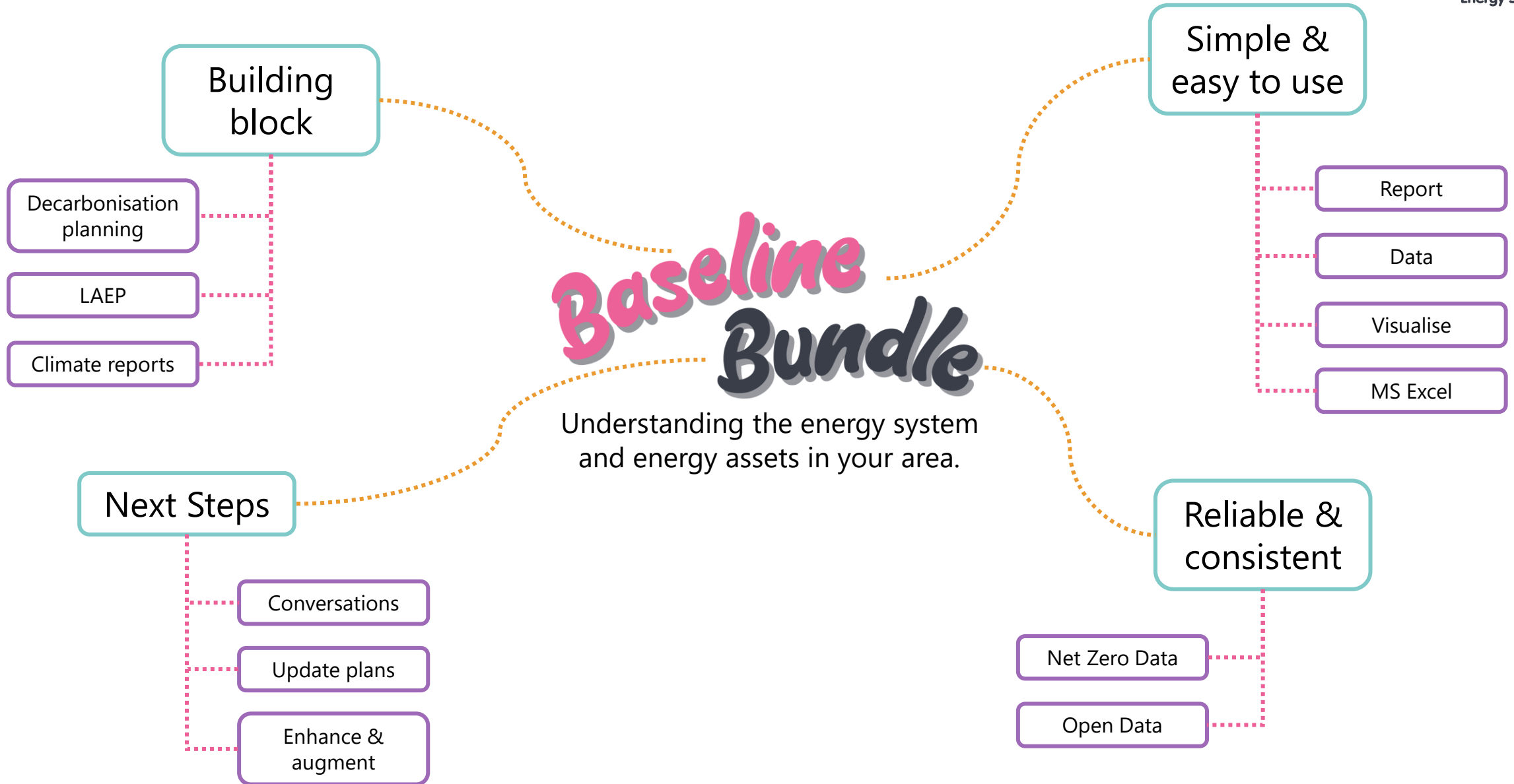
2-4wks

Sourcing,
compiling, and
conditioning data

¹Source: <https://cape.mysociety.org/>

²Energy Systems Catapult

Early-Stage Decarbonisation Planning: The Solution



Baseline Bundle: How do I use it?



Net Zero Data Baseline Bundle Demonstration

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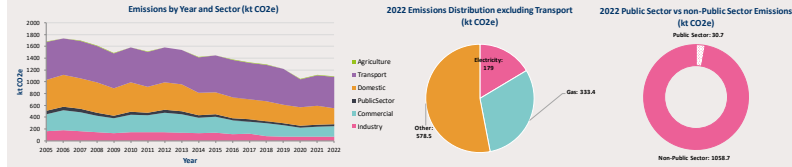
Demonstration: Baseline Summary Report

Energy Systems Catapult Net Zero Data Baseline Bundle Solihull



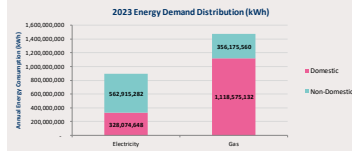
Current Emissions

Solihull has seen an overall fall in carbon dioxide equivalent (CO2e) emissions of 35.1% between 2005 and 2022. In 2022 the public sector emitted 30,747 CO2e, accounting for 3.4% of overall emissions that year. Across the entire area in 2022, Scope 2 emissions from electricity totalled 179,817 CO2e, while Scope 1 emissions (gas, transport, other) totalled 912.3 kT CO2e. Scope 3 emissions are unable to be estimated due to occurring outside the local authority, for example further down the supply chain.



Current Demand

Within Solihull, there are 99,721 electricity and 87,110 gas meters recorded in 2022, consuming 890,990 MWh of electricity and 1,474,751 MWh of gas per year.

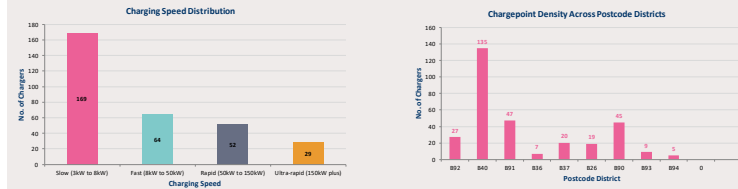


Existing Substation Headroom

The primary Distribution Network Controller (DNC) within Solihull is NGED, with a total of 982 substations. The grades of 4 substations report their available demand headroom, the highest of which is 'Walsh Hall - Train' with available headroom of 74.02 MVA, indicating a good potential location for energy projects.

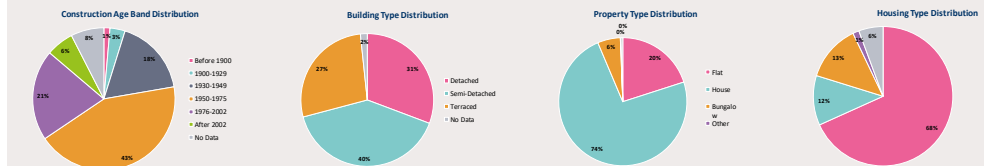
Existing Public EV Charging Infrastructure

There are 314 existing EV charging hubs across Solihull.



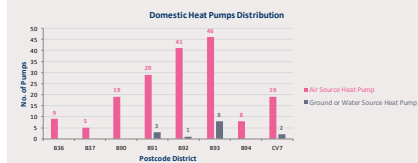
Existing Domestic Buildings

There is a total of 96,457 of domestic buildings across Solihull.



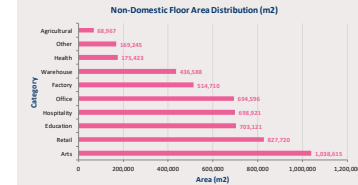
Existing Domestic Heat Pumps

There are 177 air-source and 14 ground-for water-source heat pumps installed in 10 postal districts across Solihull.



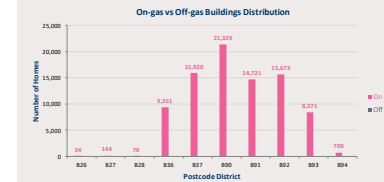
Existing Non-Domestic Buildings

There is a total of 5,327,905 m² of non-domestic floorspace across Solihull. Floorspace provides a more important and comparable metric for energy demand than number of buildings, due to the variety of what a non-domestic building may consist of.



Current Gas Network

There is a gas connection registered within every postcode in Solihull, meaning no homes are estimated to be off the gas grid.



Existing Generation & Storage

There are no operational renewable generation and storage sites above 150 kW each in Solihull.

Planning Constraints

There are 382 listed buildings within Solihull; 12 at Grade I, 331 at Grade II, and 39 at Grade II*. The grades indicate their relative national importance and interest where: Grade I - exceptional interest, Grade II* - particular importance, and Grade II - special interest.

Socio-Economic Situation

An estimated 13,083 homes are in fuel poverty in Solihull, equating to 14.1% of all homes. Across all LSOAs, this ranges from the lowest at 4.4% to the highest at 25.6%.

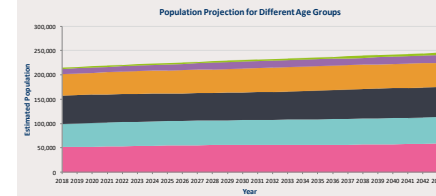
Existing Heat Networks

There are no operational heat networks in Solihull.

Committed Future Plans:

Population Projection

Between 2024 and 2045, the estimated population growth across all ages is 8.3% with the highest occurring within the 90+ age group and the least within the 60-64 age group.



Planned Heat Networks

There is a total of 4 planned heat networks awaiting permission or under construction. The largest of these is a 4 MW scheme, 'Solihull Town Centre District Heating Energy Centre', powered by Gas Fired CHP.

Planned Generation and Storage

There are 18 planned renewable generation or storage sites awaiting permission or under construction in Solihull. These planned sites have a combined 485 MW of electrical capacity.

Potentially Available Roofscape for Solar PV

There is a total of 4 MW of installed domestic solar capacity in Solihull, covering 1 available rooftop spaces for new PV. 2,733 homes have registered solar PV generation within Solihull, with a combined installed capacity of 11 MW.

Potentially Available Land for Renewable Generation

For ground mounted solar farms, there is land suitable for housing up to 3,261 MW of installed capacity, covering 65km² of land, roughly 37% of Solihull's total area. For wind, there is land suitable for either 129 MW of 100m height turbines, or 547 MW of 50m height turbines, using 6% or 25% of total land respectively.

Demonstration: Net Zero Data




Decarbonisation Planning: The Solution



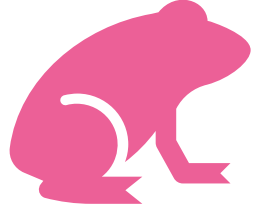
**NET
ZERO
DATA**

Reliable &
consistent



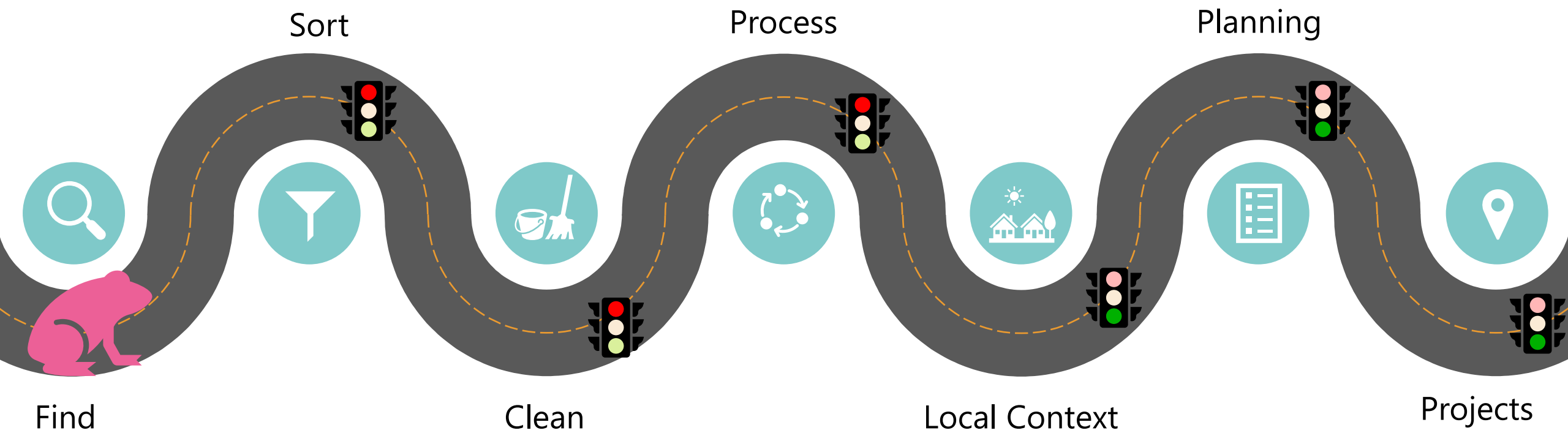
**LOCAL
AREA
ENERGY
PLAN**

Building block



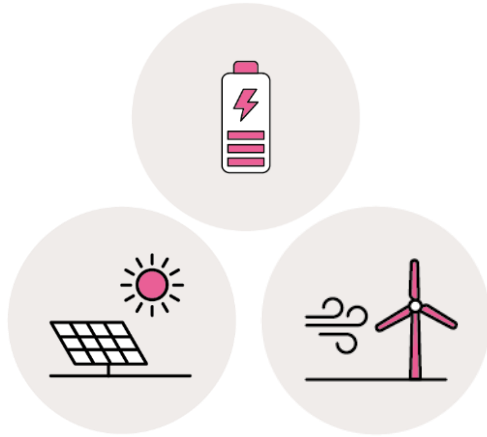
LAEPfrog

Decarbonisation Planning: The Solution



Net Zero Data: Datasets

Potential for: Renewables and Storage



Large Scale Wind Potential - Standalone

Solar PV Ground Mount Potential - Standalone

Battery Storage - Domestic

Rooftop Solar PV Potential - Domestic

Rooftop Solar PV Potential - Non-Domestic

Potential for: Heat



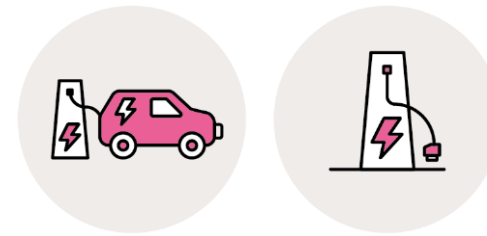
Air Source Heat Pump Potential - Domestic

Air Source Heat Pump Potential - Non-Domestic

Ground Source Heat Pump Potential - Domestic

Ground Source Heat Pump Potential - Non-Domestic

Potential for: Transport



Off Street Parking Potential - Domestic

Existing Chargepoint locations - Standalone

Potential locations for EV Hubs

Buildings and Energy



EPC Actual & Inferred - Domestic

Buildings & Modelled Energy Demand - Domestic

Buildings & Modelled Energy Demand - Non-Domestic

Non-Building Energy Demand

DNO demand headroom & capacity

Net Zero Data: Benefits according to our customers:

Time saving
at project
initiation

Robust data
source

Frees up
time for local
data analysis

Stakeholder
engagement
earlier in
process

Clarity of LA
role in area
wide energy
and Net Zero
delivery

Consistency
of approach
across a
region

Efficient use
of officer /
consultancy
time

Targeted
analysis for
project
development

Baseline Bundle: How can I get it?



www.netzeromarket.org.uk



Introductory pricing
valid until 31st March '25



Available as:
One-off download
On-going access



For:
Single LA
County or Combined



Q&A