

Digitalising Whole Systems Energy Planning with local government, energy networks and wider stakeholders

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RESOP

Planning Optimisation



Scottish & Southern
Electricity Networks



RESOP OVERVIEW

Problems being addressed

As part of the Energy Transition, hundreds of thousands of assets need to connect to the Distribution Network and the network infrastructure will need to be put in place to support this rollout.

Local authorities find it challenging to drive and deliver decarbonisation plans. Limited data, limited tooling and a costly planning processes inhibit progress.

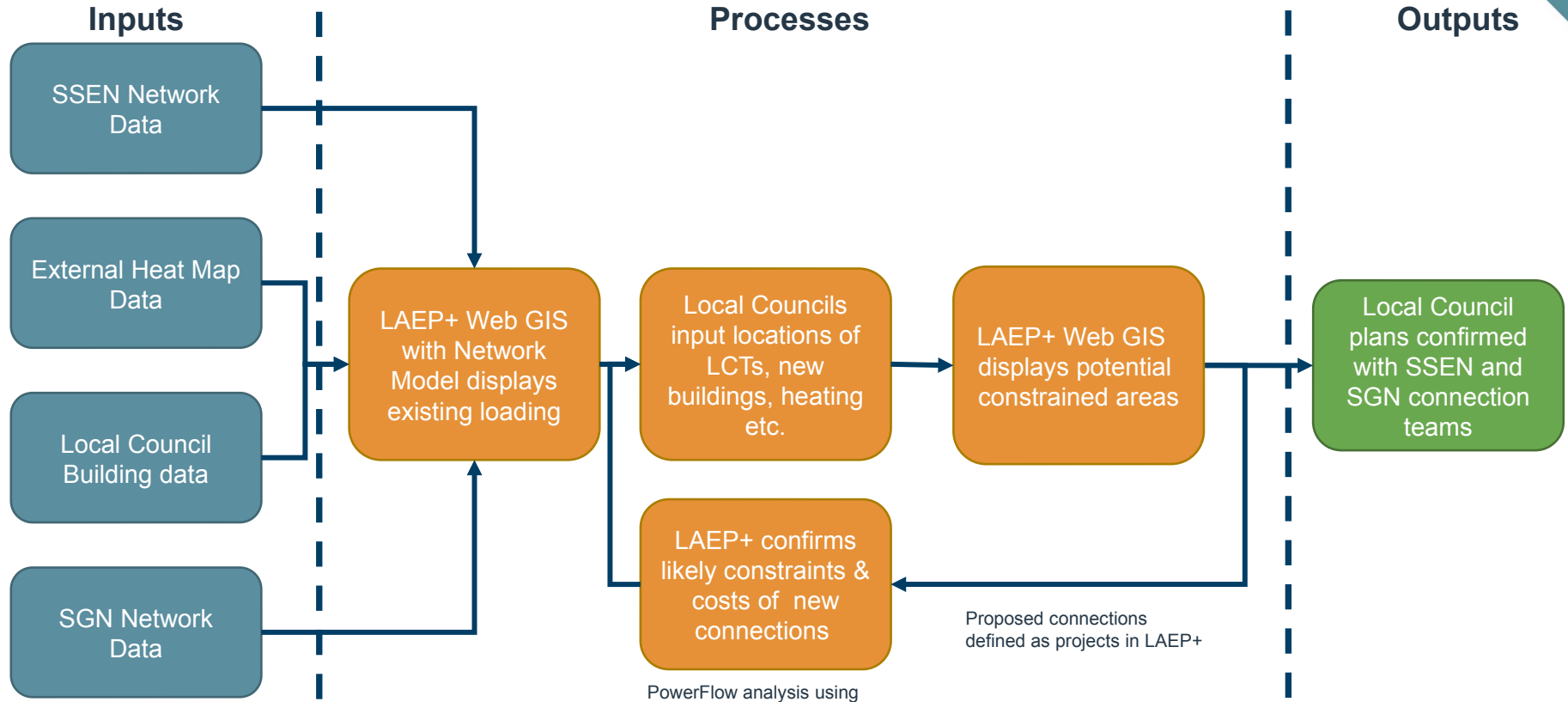
Energy network operators face the challenge of predicting future infrastructure rollout requirements and engaging with local authorities to understand and engage with decarbonisation plans.

Objectives

1. Develop a standardised process that can be used with different local authorities to create decarbonisation plans (LHEES & LAEPs).
2. To create energy plans for the trial area.
3. To determine how to reflect the local energy plans in the DFES used for network planning purposes.
4. To develop a tool to support automated analysis of LV network connections (utilising NAVI & LAEP+).
5. Provide local authorities with a digital tool and planning data via LAEP+: LV network capacity, low carbon technology opportunity sites, gas network, water network, building fabric data, etc.
6. To explore using planning data to inform network investment strategies.



RESOP OVERVIEW



PowerFlow analysis using Navi Platform



Use Case 1: Optimising EV Infrastructure Rollout

The Committee on Climate Change estimates that 300,000 EV charge point will be required by 2030. There are currently 38,000.

Accelerating and optimising electric vehicle charging infrastructure across pilot region has been supported through a digital tool LAEP+.

- ❖ Network headroom
- ❖ Pavement suitability for on street chargers
- ❖ Off street parking
- ❖ Traffic intensity
- ❖ Vehicle ownership
- ❖ Public Transport Accessibility





Use Case 2: Decarbonising Heat

Fewer than 2% of homes are currently heated with low carbon heat sources.

Unlocking action and finance requires reliable data which can be used to identify optimum heat decarbonisation pathways.

Oxfordshire County Council have used the tool across a number of infrastructure projects, including the heat pump ready programme.





Use Case 3: Digital LAEPs & LHEES

Arup will be providing Local Heat and Energy Efficiency Strategies (LHEES) and Local Area Energy Plans (LAEPs) to Perth and Kinross and Dundee City Council.

This data is to be visualised on the same digital platform (LAEP+), supporting greater transparency and interoperability of traditionally report based information.

The project has also begun exploring how these plans and projects can feed back into Distribution Future Energy Scenarios to support future forecasting of infrastructure need.

