



# SUMMARY OF LAEP ACTIVITIES FOR DUNDEE, PERTH & KINROSS & OXFORDSHIRE COUNCIL

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# RESOP

Planning Optimisation



Scottish & Southern  
Electricity Networks



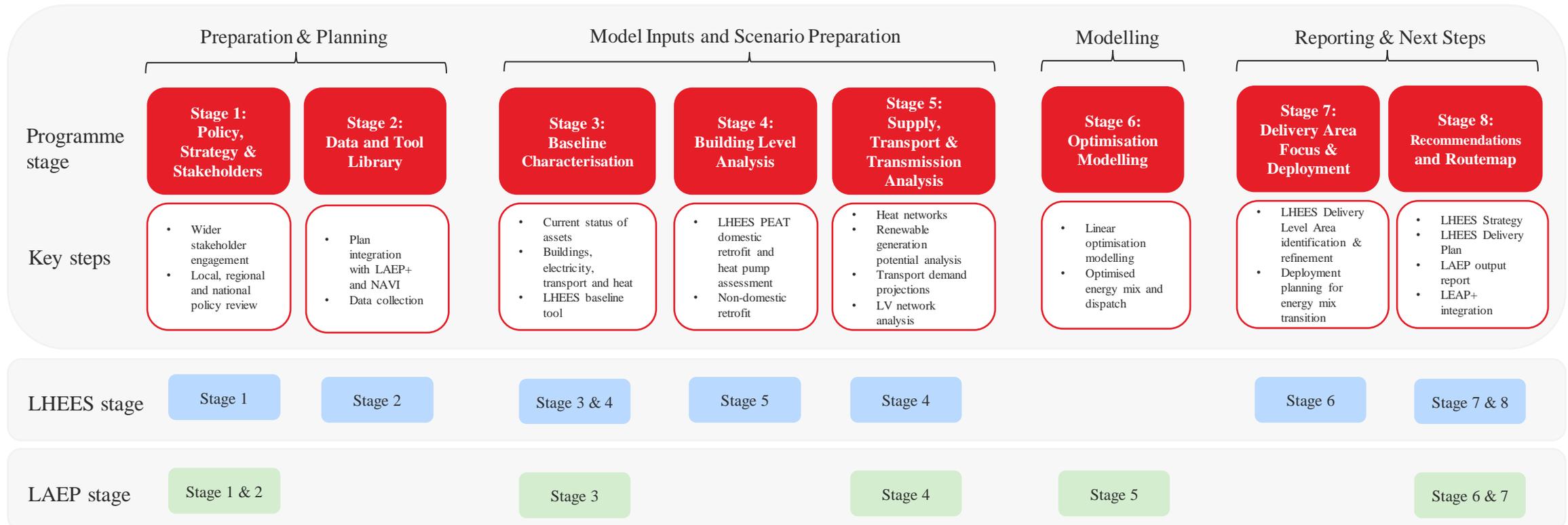
# RESOP OVERVIEW

- Dundee City Council, Perth & Kinross Council and Oxfordshire are part of RESOP or Regional Energy System Optimisation Planning, an NIA(Ofgem Networks Innovation Allowance) project that is working collaboratively with Local Authorities, Utilities (SSEN, SGN, Scottish Water) and business (Arup, Regen, AI, Derryherk).
- The aim of the project is to provide assistance to councils with their local authority energy plans (LAEP & LHEES) to help inform the optimal placement of low carbon technologies (LCTs).
- The project is designed to be collaborative, so the outputs need to have value for all parties involved.
  - Local Authorities will benefit, as they will be able to access Electricity and Gas Network data to make more informed investment decisions.
  - SGN and SSEN will benefit as they will have greater visibility of local council plans. This will help with defining investment asks during price control periods.
- The work done here can help shape the work that will be required by the proposed SSEN Whole System Co-Ordination team in RIIO-ED2
- If successful the RESOP model can be replicated for other Local Authority areas.

# LAEP and LHEES Methodology

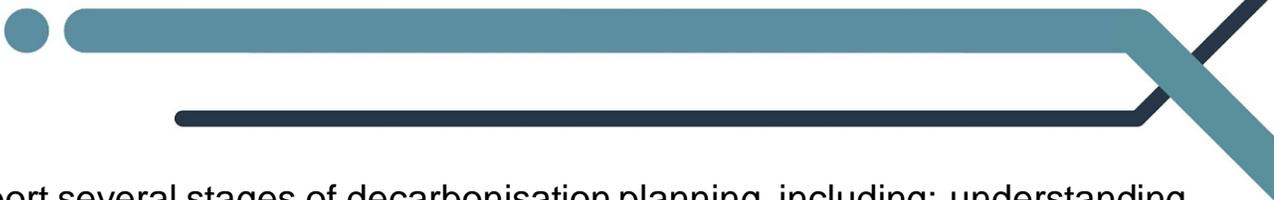
## Alignment of our approach with LHEES and LAEP methodologies

Arup are leading on the LAEP and LHEES work for both Dundee City Council and Perth & Kinross Council. Whilst there are broad similarities between the LHEES and LAEP methodologies, there are also some key steps where they diverge. Importantly, the LHEES methodology is much more prescriptive about process, outputs and the tools to be used than the LAEP methodology. The Arup approach seeks to bring these two methodologies together, to meet the requirements of both SSEN and the Council in a single integrated process. We have summarised this in the graphic below.





# LAEP+ GIS WEB VIEW



Using data from several project partners, LAEP+ can be used to support several stages of decarbonisation planning, including: understanding existing local potential for low carbon technologies like EV chargers and rooftop PV, stakeholder engagement and modelling options for the future. Local authorities can create maps, charts and dashboard to support analysis and dissemination of their decarbonisation plans.

**Indices of Deprivation**

The English Indices of Deprivation measure relative deprivation across 32,844 small areas in England called lower-layer super output areas (LSOAs). The index of multiple deprivation is the most widely used of these indices

The population weighted average of the combined ranks of LSOAs in Oxford is 13634.79. This population weighted average ranks Oxford at 189 out of 317 district authorities. The nature of this measure – using all areas, and using ranks rather than scores – means that a highly polarised larger area would not tend to score highly, because extremely deprived and less deprived LSOAs will ‘average out’. Conversely, a larger area that is more uniformly deprived will tend to score highly on the measure.

In addition to overall rank, the English Indices of Deprivation divides English LSOAs into ‘Deciles’. All 32,844 LSOAs are grouped into 10 bands (deciles), each containing 10% of the LSOAs. Decile 1 contains the 10% most deprived LSOAs in England.

Oxford City has one of the top 10% most deprived LSOAs in England and eleven of the 10% least deprived LSOAs in the country.

**Count of LSOAs per decile**

Index of Multiple Deprivation (imd) decile	Count of LSOAs
1	1
2	15
3	10
4	15
5	20
6	40
7	50
8	55
9	85
10	110

4



# LAEP+ GIS WEB VIEW

LAEP+ is a web GIS tool that connects via API to SSEN's Power Flow tool called Navi. The combination of these two tools allows Local Authority Planners to place energy projects using a wide range of data sets and call upon powerflow analysis to verify if capacity is available for the new connection(s). A 4 minute video demo on how to place EV chargers using LAEP+ can be found here: <https://www.youtube.com/watch?v=wdH8XQOQW3Q>

The screenshot displays the LAEP+ GIS web view interface. The central map shows a residential area with streets like Law Cr, Law Rd, and Killin Ave. A red line indicates a project connection. The right-hand panel, titled 'Carbon', shows a 'Project Summary' table and a bar chart of carbon saved over time.

Asset Type	Number	Total kW
ASHP	1	6

5 years  
6916 kg CO2 Saved

Year	Carbon Saved (kg CO2)
1	1504
5	6916
10	12497
15	17000

The left-hand panel shows a 'Summary' section with a 'Results' tab and a 'Warning' icon. It contains a message: 'We've run an assessment of your connection. No major issues were identified. You can download a summary below.' Below this is a 'Budget Estimation' section with a table:

Item	Cost
Price of works	£0.00
Reinforcement cost	£12,365.00

Below the budget is a 'Proceeding with a Connection Request' section with a link to SSEN's new supplies page and a note about the tool's beta status.



# LAEP+ OPERATING MODEL

