enzen

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LAEP: designing the smart local energy systems of the future

Accelerating sustainable development at a local level

As part of the energy transition, cities, towns and other communities need to achieve clean economic growth, while giving citizens reliable, efficient and cost-effective infrastructure services.

A key aspect of this and an integral feature of RIIO-ED2, Local Area Energy Planning (LAEP) is the strategic approach to managing energy resources at a local level and aligning them with regional and national goals. This can include:

- resource assessment
- energy demand analysis
- infrastructure planning
- efficiency measures
- environmental considerations
- community engagement
- policy and regulation.

The Enzen LAEP Method

To enable communities to balance and optimise local energy flows in a more intelligent and responsive way, Enzen has created a LAEP methodology. Our modelling combines future energy scenarios and data landscape reports with place-specific insights based on local authority and urban planning. Our seven step methodology is:

1. Preplanning: determining the geography, defining roles and responsibilities

2. Interested parties: charting the identities of stakeholders and delineating their roles in shaping the LAEP

3. The local picture: identifying, cleaning and using data and information at the local level

4. Modelling: simulating alternatives for reducing carbon emissions in the local region and establishing consensus on potential scenarios

5. Economic pathways: using economic analysis to guide and refine scenarios

6. Prioritisation: enabling short, medium and long-term activity

7. Launch: sharing the plan with the wider community and engaging with them.

RESO: a pioneering new vision for energy systems in the UK

The first UK project of its kind, the West Midlands Regional Energy System Operator (RESO) created an innovative blueprint for a Smart Local Energy System (SLES) in Coventry.

A SLES harnesses the power of big data and superfast digital networks. It creates an intelligent and future-proof smart cross-energy vector system that integrates heat, power, transport, data analytics and technologies, improving efficiency, reducing cost and emissions, while avoiding the need for expensive infrastructure upgrades.

RESO was an evidence-based design project focused on whole systems analysis, with Enzen overseeing the programme management, technical design, electricity network engagement and private investment facilitation.

Collaborating with the city council, an electricity network, a gas network, two universities and two small-to-medium enterprises, Enzen delivered an innovative example of cross-sector collaboration that's pioneering a new vision for energy systems in the UK.

Financially, RESO would achieve a full Net Present Value of £721 million over 30 years, accelerating Coventry's drive to net zero, reducing energy prices and boosting the city's economic growth.

To learn more about how Enzen can support Local Area Energy Planning, contact:

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