



1 Energy  
Bradford  
Energy Network  
Case Study

**Project Dates:**  
Feb 2023 - Present

**Ener-Vate Product:**  
CONNECT

**Client Type:**  
Private Sector - Heat Network Developer

**Case Study Type:**  
Business Development / Stakeholder Engagement / Heat Mapping

## The Project

Bradford Energy Network is a low-carbon district heat network being developed by 1Energy in Bradford city centre. The Bradford Energy Network's development and delivery is funded partly through the Green Heat Network Fund (GHNF), a source of grant funding from the Department for Energy Security and Net Zero (DESNZ), and partly through private investment from 1Energy. Due to be operational in 2026, the network will deliver heat to public, commercial, and domestic customers, generated by one of the largest air source heat pump (ASHP) installations in the UK (7.5MWth), coupled with 373m<sup>3</sup> of thermal stores, and peaking back-up gas boilers. Construction of the Network has already started with 2.5km of pipes having gone in the ground and planning permission having been received to build the energy centre.

Ener-Vate has been supporting 1Energy in the development and expansion of the network since February 2023. Our primary role is to facilitate and progress any new enquiries, provide commercial support and expertise, request and collate technical/commercial information from potential customers, drafting of connection proposals and Heads of Terms, and commercial support in negotiations of the connection and heat supply agreements.

In contrast to Leeds PIPES and Manchester Energy Network, which are live and operational heat networks, Bradford Energy Network is still in commercialisation and development – as such our support is reflective of the stage of the network and we have provided commercial advice to develop the sales strategy, process and collateral documents in collaboration with 1Energy and support in heat mapping exercises to determine any potential additional customers.

A fundamental tool of the sales process is the 'counterfactual model', or benchmark tool, which Ener-Vate has developed and built based on our significant experience on supporting city-scale heat networks, to calculate the estimated carbon and commercial saving via connection into Bradford Energy Network against a suitable counterfactual technology. The model serves as a highly useful presentation device to demonstrate the benefits of connecting into a heat network, and allows for a detailed discussion of the wider technical and commercial aspects in a simple, clear format. Working closely with 1Energy, we modified and redesigned our template model to align with the branding of Bradford Energy Network and added complex mechanics to include bespoke technical and commercial elements specific to the Bradford Energy Network.



The features of our model include; ability to flex model term, model start date, connection start date, ability to amend the model inflation assumptions between 'Real' (without inflation) and 'Nominal' (with inflation), flex various inflation indices for CAPEX, OPEX and REPEX assumptions, flex various forecast indices for gas and electricity tariffs, and heat network charges, carbon calculation and forecast mechanics to estimate the heat network carbon emissions over time, and an ability to compare against various counterfactual technologies via a 'switch', 'summary' page consolidating and summarising all main data, technical, project, commercial and financial assumptions and outputs in one page – with the ability to export as pdf for presentation purposes to external audiences.

We have hosted several comparator workshops in Bradford to help educate and inform potential customers who have no or little prior experience of heat networks. Feedback of the sessions have been positive, and stakeholders are grateful for the in-depth and open-book nature of the workshops to reach a position in which both parties are in agreement with the outputs of the model.

## Our Role

The main task undertaken in this project were:

- Supporting heat mapping exercises to identify potential customers.
- Providing commercial advice to develop the sales strategy.
- Collaborating with 1Energy to create process and collateral documents.
- Facilitating and progressing new enquiries from potential customers.
- Requesting and collating technical/commercial information.
- Drafting connection proposals and Heads of Terms.
- Supporting negotiations for connection and heat supply agreements.
- Developing and building a 'counterfactual model' to calculate carbon and commercial savings, modifying the model to align with Bradford Energy Network's branding and bespoke commercial requirements.
- Including complex mechanics for technical and commercial elements, flexible model terms, inflation assumptions, and comparison against counterfactual technologies.
- Hosting comparator workshops in Bradford to educate potential customers about heat networks.