

Appendix 1

Case study: Bradford City Centre Heat Network

Level of capital investment (£)	Phase 1 of the heat network: £6,935,170 Total (Phases 1 & 2 of the network): £13,054,282
Leverage	Leverage achieved will be at least 1:37 (Phase 1), with the potential to rise to 1:70 (Phases 1 & 2) depending on the approach to procurement.
Delivery date	Contract notice – Q2 2021
Current status	In delivery

Project description

Bradford Council's plans for heat networks stem from a range of objectives to:

- reduce the cost of energy for council buildings;
- minimise carbon emissions from heating;
- create a vehicle to generate income for the council and contribute towards regeneration in the city; and
- provide competitively priced energy, thereby encouraging businesses to locate in the city.

The Bradford Civic Quarter heat network will use a mix of heat from a biomass boiler and gas CHP, together with thermal storage, to supply heat and electricity to a range of buildings in the city centre.

The first phase of the heat network, which will supply 6GWh of heat per annum through 1,361m of trench is focussed on supplying public sector buildings, most of which are owned by Bradford Council. As part of this £6.9m initial phase, it is proposed to connect seven buildings including City Hall, the Magistrate's Court, Alhambra Theatre, Margaret McMillan Tower, Sir Henry Mitchell House and Nelson Street Police Station.

The £6.2m Phase 2, which will supply an additional 8.5GWh of heat per annum, will see additional public sector buildings connected including the planned Public Service Hub (Phases 1 and 2) and Combined Courts Building, as well as other major new developments e.g. Odeon, One City Park (see figure 2 below). In addition, major private sector buildings such as the Jury's Inn, Provident Buildings West and the Yorkshire Pension Fund building will all be targeted for connection.

Scope of Energy Accelerator support

STAGE 1

Stage 1 of the support required is to undertake Detailed Project Development, culminating in the sign off of an Outline Business Case (OBC) for the heat network, allowing an application to the Heat Network Investment Project (HNIP) funding.

The scope of works to be undertaken as part of the Energy Accelerator support will be focussed on developing the five individual cases of the OBC, as required by the Treasury Green Book:

1. Strategic Case
2. Economic Case
3. Commercial Case
4. Financial Case
5. Management Case

Working closely with the Council and the external Project Manager, the Energy Accelerator will support Bradford Council in obtaining approval for the OBC from the Council's cabinet in Q1 2020.

STAGE 2

Stage 2 of the support required is the Commercialisation of the project in order to bring it to the 'Point of Delivery'. The exact nature of this support will be determined as part of the OBC; however, it is envisaged that this could include commercial support to agree the final commercial arrangements with stakeholders (e.g. heat customers), as well detailed engineering design, further legal and procurement advice and the development of contract documentation.

Expected outcomes

Phase 1 of the project is expected to deliver:

- CO₂ reduction: 925 tonnes per annum
- 11.55 temporary jobs
- 1.60 permanent jobs

The Overall Project (Phases 1 & 2 combined) are expected to deliver:

- CO₂ reduction: 2,059 tonnes per annum
- 21.75 temporary jobs
- 3.07 permanent jobs

Given the scheme will be using a mixture of renewable and low carbon sources, the exact proportions of heat from each technology are yet to be finalised. But current estimates are that at least 10% of the heat generated across Phase 1 & 2, or 1.46 GWh will be from biomass.