

GREATER MANCHESTER DISTRICT HEAT NETWORKS

CONTACT

For more information contact:

Greater Manchester Environment Commission

Telephone 0161 770 4089 Email environmentcommission@oldham.gov.uk

Web http://www.agma.gov.uk/commissions1/environment_commission/index.html

Decarbonising the city is funded by DECC's Local Carbon Framework and NWIEP



SYNOPSIS

District Heat Networks are already being successfully used across Europe, and there are potentially huge carbon emissions savings to be made by implementing such networks across Greater Manchester.

A number of local authorities have undertaken feasibility studies that have demonstrated the long term financial and carbon savings. There are currently four new and one improved existing heat network proposals:

Bury Town Centre

Manchester City Centre/Corridor (including MMU network)

Stockport Town Centre

Trafford (Manchester Ship Canal Corridor from Carrington CHP)

Oldham District Heating Centre

(re-investment/expansion)

The town centre heat network proposals are at differing stages of development and feasibility, but they definitely present a unique opportunity. Most of the proposals are linked to planned physical developments and creating sustainable town centres is a core feature of Greater Manchester’s investment strategy.

SCALE OF INVESTMENT

District heating requires a long term commitment. The projects often have relatively high capital costs, though these vary significantly depending on the individual scheme. Ernst & Young has developed a dedicated financial model to assist project sponsors in determining the potential rate of return. Our aim is that funding and returns received for all low carbon projects in Greater Manchester will be recycled so that we can support a larger number of low carbon projects.

WIDER BENEFITS

Alongside the carbon savings, district heat networks bring a wealth of additional benefits, including:

Attracting new developers to town centres with

‘zero carbon enabled’ energy infrastructures

Assisting developers to meet BREEAM and Code

for Sustainable Homes standards

Attracting and promoting carbon conscious businesses

Improving Energy Performance rating to attract higher

value sales and tenancies for commercial properties

Assisting businesses and councils to meet their

Carbon Reduction Commitment Energy Efficiency

Scheme requirements

Assisting colleges to meet future HEFCE Carbon Reduction

Requirements and to secure capital investment funding

Helping to reduce fuel poverty

Protecting stakeholders from future rises in energy costs

PARTNERS

In order to be successfully delivered heat networks will require high level commitment to long term energy supply contracts from local authorities and other stakeholders.

WHAT ARE HEAT NETWORKS?

Most homes and businesses receive gas and electricity direct to their homes. Heat networks generate heat at a central location, then provide heat by pipe to buildings in the form of hot water or steam. This can be an effective way of using heat generated as a by-product from electricity generation or industrial processes. This kind of energy use is known as cogeneration (or trigeneration, when cool water is also produced). Many towns and cities already have small heat networks, and the most famous UK low carbon heat network is in Woking, Berkshire.

DELIVERY

With significant projects such as a district heating networks, there will need to be a step change in how we plan and deliver new developments and energy infrastructures.

The initial work has been led by a supply side approach – identifying where heat networks could potentially work. We are now examining the demand side to ensure that the required customer base exists.

The planning stages of each of the following proposed schemes are well underway:

Bury Town Centre

This is a unique opportunity to invest in a zero carbon-heating network supplying a busy town centre with an investment requirement of £3-5 million.

The proximity of a landfill heat source (Viridor at Pilsworth) to the town centre and ease of installing the pipeline along the East Lancs Railway make this a very feasible scheme.

There are many different building uses in the town centre – some will be key stakeholders, which could potentially provide a stable customer base.

Manchester City Centre

On a truly large scale, the Manchester City Centre Heat Network has the potential to be a national flagship project. A network serving existing and planned developments throughout the city centre, the Oxford Road Corridor, and across a regenerated New East Manchester will be made up initially of a series of independent ‘clusters’. Over time these clusters will expand and interconnect to create the integrated network, maximising the number of customers served, the efficiency of the system, and the amount of carbon saved. Several clusters are currently being developed by a number of partners including the City Council and the Universities, with strategic planning work underway in parallel to develop a long-term programme of project clusters. The scale of the vision is unprecedented outside of London and will be a core element of Manchester’s low carbon infrastructure as the network develops over the next 20 years.

Stockport Town Centre

An independent study has identified that Stockport Town Centre has the potential to operate a district energy scheme, initially serving Council owned buildings and the Grand Central redevelopment and its existing swimming pool, with potential for a network to be significantly extended to serve a wider range of public, commercial and residential buildings. A detailed feasibility study was commissioned by Stockport Council in May 2011.

Trafford

District heat networks are proposed around the Manchester Ship Canal corridor, utilising heat from the two new CCGT power stations at Carrington to supply public buildings and new developments across Trafford, Salford and Manchester city centre with a potential investment value of £70-100 million.

St Mary’s Biomass Project, Oldham

ERDF funding will be utilised to replace the existing boiler plant in an existing district heating network. The existing boiler plant has some useful life remaining, but it emits large amounts of CO₂ and is becoming increasingly expensive to operate as gas prices rise. The funding allows the early replacement and infrastructure upgrade, which could also provide the demand for locally sourced wood chip fuel. The project will provide low-carbon heat to 1500 homes on the the St Mary’s estate in Oldham Town Centre. The district heating network is also linked to Oldham Leisure Centre and the upgrade will mean that it can be extended to the town centre.