

Open Report on behalf of Richard Wills, Executive Director of Environment and Economy

Report to:	Environmental Scrutiny Committee
Date:	10 June 2016
Subject:	District Heating – Progress Report

Summary

This report provides an update on the District Heating project, the purpose of which is to utilise heat which is produced by the Energy from Waste (EfW) facility in North Hykeham.

Actions Required:

Members of the Environmental Scrutiny Committee are invited to consider and comment on the District Heating Project update report.

1. Background

The EfW facility in North Hykeham incinerates approximately 150,000 tonnes of the county's waste every year. This process enables around 11MW of electricity to be generated which is currently sold back to the National Grid. Around 10MW of heat energy is also produced but this is not being utilised and is being vented into the environment.

The District Heating project hopes to utilise this lost heat and circulate it to local buildings in the form of a Heat Network. Such heat would be sold to the end user and would be a replacement for a historical energy supply such as gas.

In 2015 Environmental Services successfully bid for funding from the Department of Energy and Climate Change (DECC) grant from the Heat Network Delivery Funding (HNDU). The purpose of this fund was to appoint a specialist consultant to carry out a Greater Lincoln Energy Study and in 2015 Element Energy (EE) were appointed. The scope of the study would be to see if it is feasible to progress with a District Heating project and if so, how best to achieve it. The study would also look at cooling and private electricity wire possibilities.

2. Current Status

EE have a 9 month contract to undertake 2 study stages which will look at the following:

- Stage 1 – Energy Mapping Study.
- Stage 2 – Energy Master Planning Study.

Stage 1 is now complete and EE have collected data on energy demand in the Greater Lincoln area. A database of potential heat users has been developed (Heat Map) showing locations and density of energy zones. This has involved consultation with property owners.

Stage 2 began in October and has focussed on more detailed scenarios being produced. Seven distinct areas have been analysed with economic assessments carried out to establish the viability of DH for those potential end users. The southernmost area extends to Witham St Hughes and the northern most extends to the city centre incorporating the County Hospital and the Prison. These two properties represent the largest anchor loads. The third largest loads are the University and surrounding commercial developments.

EE will now analyse the different data and make further contacts with potential users to establish if it is economically viable for a potential switch to DH. One of the main economic restrictions around viability is the distance of the end user from the EfW plant. Up to 70% of the cost of DH is in providing the pipe network and therefore locations closer to EfW may be more realistic around the Teal Park and LN6 area. However all options are still being considered.

The issue around feasibility is that there must be a financial benefit to a customer of switching from being an existing gas user to DH. This is ordinarily achieved by buying the heat at a rate lower than the gas market price. The capital outlay of providing the pipe network, pump station and back up boiler by the authority along with the operating cost must be offset by the sale of heat to customers. Long term commitments can be difficult to obtain with small scale developments but properties such as hotels and leisure centres are ideal for this type of energy.

3. Consultation

This is not a consultation item.

4. Background Papers

No background papers were used in the preparation of this report:

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