

Report of the Director of Corporate Resources to the meeting of the Regeneration and Environment Overview and Scrutiny Committee to be held on 20 January 2020

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Subject:

Civic Quarter District Heat – Update on progress and presentation of the Outline Business Case’s key facts

Summary statement:

This report presents a summary of the outline business case to support the Council’s ambition to develop a City Centre based District Energy Network, supplying low carbon heat and electricity on commercial terms, to city centre civic buildings, other public sector buildings and commercial properties.

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**Portfolio: Healthy People and Places
Regeneration, Planning and Transport**

**Overview & Scrutiny Area: Regeneration
and Environment**

1. SUMMARY

This report presents a summary of the outline business case to support achieving the Council's ambition to develop a city centre based District Heat Network supplying low carbon heat on commercial terms to City Centre Civic buildings, other public sector buildings and commercial properties. (A glossary of technical terms is included in Appendix 1).

2. BACKGROUND

District Heat Networks (DHN) offers an opportunity to reduce the district's carbon emissions, create new long term secure income streams, and contribute to corporate cost reductions.

The UK government has identified DHN as a significant contributor to reducing UK greenhouse gas (GHG) emissions and as a component in the transition to low carbon energy. The Department for Business, Energy and Industrial Strategy (BEIS) is making financial and technical resources available to support DHN project development across the country.

In 2010, Bradford Council agreed to reduce its carbon emissions from its own activities and for the District by 40% by 2020. The Council also agreed a target of 20% for energy for delivery of its own functions to come from renewable sources (Council March 2010).

Executive considered a Renewable Energy report on 3rd May 2013. This presented a discussion of the Link Member Report Bradford Power 2020 and Beyond, Renewables Future for Bradford Council and set out the Council's approach to deploying a range of renewable electricity and heat projects. The report set out progress to date on a number of renewable technology projects deployed across Council assets and includes the case for use of biomass systems. Executive endorsed this approach.

Funding from the BEIS Heat Networks Delivery Unit (HNDU) has allowed the Council to commission consultants to undertake a technical and economic feasibility of a number of DHN scenarios, using the Civic Quarter as an anchor estate for the scheme and complete the current level of design work. The Outline Business Case (OBC) has also been developed using HNDU funding (67%) as well as West Yorkshire Combined Authority Energy Accelerator (WYCA) funding (33%) and BEIS have also provided grant funding for project management resource (100%). The project management is being delivered by Arcadis, and the OBC has been prepared by a consortium headed by Turner and Townsend and includes Brodies Solicitors and Carbon Trust providing specialist legal and technical advice .

The project has now achieved RIBA Stage 3 design for the electrical and mechanical elements of the network, and the economic model, for a series of scenarios, has been completed. This work package included air quality modelling across the network and a detailed assessment of the pipework route options.

A pre planning enquiry has been submitted to the Council's Planning Department. The initial feedback is positive, stating *"This proposal sits well with the objectives of the Spatial Vision and policies SC1, SC2, SC6, SC9, BD1 EC1 and EN6 of the Bradford Core Strategy."* Officers are working closely with the Air Quality team to ensure that any potential impacts are carefully considered and mitigated, to ensure the development does not create unacceptable air quality issues.

In addition to the provision of heat, the network also offers an opportunity to utilise energy storage technology at a reduced cost if incorporated into the design before construction. The size of the electrical connection would be unaffected and the technology would be able to take advantage of financial incentives available for short term energy storage, these include Frequency Response, TRIADS, peak load management, day/night pricing and the utilisation of onsite generation capacity. This needs to be explored as part of the phase 2 expansion work.

The OBC has been prepared using the 5 case model and demonstrates a strong strategic fit, commercial, economic, financial and management case. The headline information from each case is set out in the appropriate section below. The full OBC is due to be considered by council Executive on February 4.

3. OTHER CONSIDERATIONS

➤ Strategic Case

This provides context and understanding for how a district heat network fits into Bradford Council's historic and recent strategic decisions with regard to energy use in the district. Also its fit within the national and regional policy environment and its fit within the districts core strategy. The document sets out the reason that District Heat supports the desired outcomes for these strategies.

Within the strategic case is a review of the wider context of growth and regeneration within the city and the Council plan and its vision for the city centre and how this fits with the geographic spread of the network. There is analysis of the planned connections and potential future connections and how this fits into the core strategies planning policy.

The objectives of the project as laid out in the document are

- Provide competitively priced energy
- Provide a vehicle with the ability to generate income for the Council
- Minimise carbon emissions
- Reduce cost of heating Council buildings

Analysis of the project's interdependencies, assumptions and constraints is set out in detail and is supported with a risk register that sets out the high level risks and mitigation in place.

The case shows a strong strategic fit locally, regionally and nationally. It particularly fits with proposals being put forward under the transforming cities programme where there are options to share civil engineering and landscaping costs along a mutually beneficial timeline.

4. FINANCIAL & RESOURCE APPRAISAL

➤ Economic Case

This document provides analysis of the critical success factors relating to the district heat project and applies these to the various options for the development of the scheme then using an evidence based assessment recommends an option for

implementation. The options are appraised with whole life financial viability parameters which have been referenced and summarised following a quality assurance process. These include a full techno-economic model and cash flow assessment.

The report looks at the likely impact to the final Internal Rate of Return (IRR) of any risks that are realised and provides an overall economic appraisal of the core scheme's pre and post grant IRR and Net Present Value (NPV) over the life of the scheme.

The case demonstrates that there is a positive IRR for the scheme as designed and that the scheme remains technically feasible with updated information about the capital and revenue cost streams.

➤ **Financial case**

This section of the outline business case presents the findings of the financial appraisal of the preferred option recommended in the economic case. Inputs to the appraisal were primarily sourced from the techno-economic model (TEM) initial prepared by Sustainable Energy Ltd (SEL) and subsequently modified by Woodward Energy Consulting Ltd (WEC). Key issues addressed in this appraisal include funding requirements and funding sources, budget forecasting, project operations, financial risk, sensitivity analysis and state aid.

The cost of this project is £14.463M, which is proposed to be used and funded as follows:

Core Scheme	£000	%
Uses of Funds		
Energy Centre	5618	39%
Distribution Network	7840	54%
Interest During Construction	145	1%
Professional Fees	750	5%
Working Capital	110	1%
Total Uses		
	£000	%
Sources of Funds		
HNIP Grant	6459	45%
Invest to Save	5023	35%
Corporate Borrowing	2871	19%
Council Working Capital Facility	110	1%
Total Funds	14463	

The 'Council Loan' will be repaid and alongside the working capital facility is invest to save funding within the Capital Programme. The 'Council equity' of £5,023k will be funded by corporate borrowing in the Capital Programme.

The current financial modelling shows that the new District Heating Network over its

life will bring in a share of Business Rates to the Council's General Fund over and above the corporate borrowing amount – though it is the case that the Business Rates framework is currently being reviewed by the Government.

5. RISK MANAGEMENT AND GOVERNANCE ISSUES

➤ **Management Case**

The Management case takes a view on how the scheme has progressed and outlines how the project will be managed through the commercialisation phase, while providing a broad view of how the project will be implemented. It sets out the key milestones within the short and long term plan and how the project needs to co-ordinate with other development and regeneration activities within the Council such as activities related to the transforming cities fund bid.

There is a projection of the likely costs associated with the commercialisation and deliver phases splitting out the costs by each of the activities although much, if not all, of this cost is able to be funded via support from BEIS (HNDU & HNIP) and the WYCA (Energy Accelerator).

The case demonstrates that there is a viable management methodology that satisfies the council's requirements as well as the requirements of potential grant funders.

6. LEGAL APPRAISAL

➤ **Commercial Case**

This provides an overview of the procurement and commercial strategies of the project. This is particularly important given the wide range of options around both of these crucial elements and how those choices impact on the Council's options in terms of revenue, costs, access to grants and the amount of control it would retain.

The case identifies that a Special Purpose Vehicle (SPV) will be required to operate the delivery model. It sets out the benefits, risks and barriers that are associated with the recommendation as well as the process that needs to be undertaken to draft the terms correctly and what considerations need to be made during this process. Such as the board structure and where decisions require Council approval.

Secondly the case deals with the required procurement strategies

The study makes an assessment of any state aid implications on the council and the SPV and provides guidance on where different rates apply due to the majority of the scheme falling within a class 'c' assisted area.

There is an assessment of the core tasks required during the contracting phase and a recommendation that sets out the benefits, opportunities, risks and constraints of how these tasks are managed as well as providing information about the mechanisms that should be in place to ensure the required performance metrics are met.

The case finally sets out the plans for the contracts required to manage the scheme moving forwards with an assessment of any resource requirements for customer management.

The case shows that the scheme as designed will operate within the council's preferred business structure and that the recommended development packages can be procured using the routes available to the council.

➤ **Internal Considerations**

The council's commercial legal team had involvement in the commercial workshop and together with procurement has been given the opportunity to consider the OBC. There is further development required during the commercialisation phase of work around:

- the formation and role of the SPV;
- procurement options, particularly in relation to the supply of energy;
- trading powers; and
- state aid

All commercialisation development work will be undertaken in conjunction with officers from legal and procurement to ensure that an appropriate path which adheres to the Council's standing orders and to legislation will be followed throughout.

7. OTHER IMPLICATIONS

7.1 EQUALITY & DIVERSITY

No impact

7.2 SUSTAINABILITY IMPLICATIONS

- Please see background and description of Strategic Case for full details of how this project supports the Council's wider sustainability objectives.

7.3 GREENHOUSE GAS EMISSIONS IMPACTS

- Scheme is currently projected to save 12,640 tonnes of Carbon emissions over the project life however it needs to be recognised that the scheme itself is transitional with the aim being to provide a network that does not present a financial burden to the council in the earliest stages of its implementation. There are aims to continually improve the network both adding connections and reviewing the heat sources to ensure that the carbon emissions are maximised over the life of the scheme. Officers have observed from other schemes such as Nottingham and Sheffield that once the initial infrastructure is in place the secondary expansion is deliverable and networks expand to their capacity. This is also being demonstrated in Leeds where the "pipes" scheme is being expanded.

7.4 COMMUNITY SAFETY IMPLICATIONS

No impact

7.5 HUMAN RIGHTS ACT

No impact

7.6 TRADE UNION

No impact

7.7 WARD IMPLICATIONS

➤ N/A

7.8 AREA COMMITTEE ACTION PLAN IMPLICATIONS (for reports to Area Committees only)

N/A

7.9 IMPLICATIONS FOR CORPORATE PARENTING

No Impact

7.10 ISSUES ARISING FROM PRIVACY IMPACT ASSESMENT

No Impact

8. NOT FOR PUBLICATION DOCUMENTS

N/A

9. OPTIONS

N/A

10. RECOMMENDATIONS

- Recommended
That the committee request further update on the progress of the scheme at the commencement of the commercialisation work and that a request for support of the procurement strategy for the scheme itself and the procurement of energy from the scheme be sought from committee at this time.

11. APPENDICES

1. Glossary of terms

12. BACKGROUND DOCUMENTS

➤ None