



Subject:	Heat Network update
Date:	5 th December 2024
Reporting Officer:	John Tully, Director of City and Organisational Strategy. Debbie Caldwell, Climate Commissioner
Contact Officer:	Debbie Caldwell, Climate Commissioner

Restricted Reports

Is this report restricted? Yes No

Please indicate the description, as listed in Schedule 6, of the exempt information by virtue of which the council has deemed this report restricted.

Insert number

1. Information relating to any individual
2. Information likely to reveal the identity of an individual
3. Information relating to the financial or business affairs of any particular person (including the council holding that information)
4. Information in connection with any labour relations matter
5. Information in relation to which a claim to legal professional privilege could be maintained
6. Information showing that the council proposes to (a) to give a notice imposing restrictions on a person; or (b) to make an order or direction
7. Information on any action in relation to the prevention, investigation or prosecution of crime

If Yes, when will the report become unrestricted?

After Committee Decision	<input type="checkbox"/>
After Council Decision	<input type="checkbox"/>
Sometime in the future	<input type="checkbox"/>
Never	<input type="checkbox"/>

Call-in

Is the decision eligible for Call-in? Yes No

1.0	Purpose of Report/Summary of Main Issues
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1.1	To update members on the ongoing work to explore a heat network in the city centre.
2.0	Recommendation
2.1	<p>Note the contents of the report, specifically the following updates:</p> <ol style="list-style-type: none"> I. The internal Heat Network Working Group established to help support delivery has been expanded to include the Senior Programme Delivery Manager in Property & Projects and the Marketing Manager, City Development. II. A technical advisor (AECOM) has been appointed to develop a heat map of a heat network in the city centre by Feb 2025. III. A commercial and legal advisor (Bird and Bird) has been appointed to advise Council on the legislative and regulatory requirements, potential delivery models and procurement implications associated with connecting to a heat network.
3.0	Main Report
3.1	Background
3.2	<p>Belfast has a high dependence on gas and oil for heating buildings across the city and low levels of insulation which is contributing to high emissions of greenhouse gas and high levels of fuel poverty exacerbated by the energy and cost of living crisis. Unlike power and transport, decarbonising heat in buildings can be challenging due to age and quality of the building stock.</p>
3.3	<p>Belfast's high density residential areas in close proximity to significant base loads (buildings with a high heat demand) and local sources of waste heat is unusual for most cities and make it ideal for a heat network.</p>
3.4	<p>Heat networks are one of five priority projects identified in the Local Area Energy Plan as a cost-effective measure to decarbonise the city, reduce fuel poverty, create employment and reduce exposure of households and local businesses to price volatility from imported fossil fuels. A heat network would make a significant contribution to Belfast's emission reduction targets – 66% reduction by 2025; 80% by 2030; 100% by 2050 and also to Northern Ireland's "net-zero" emissions target of 2050. as well as reduce fuel poverty.</p> <p>Various low carbon technology options exist: geothermal, water source heat pump etc. Heat networks tend to be marginal investments with high upfront costs. Attracting private sector finance is challenging in the absence of any grant funding – schemes in other parts of the UK provide 50% capex funding.</p> <p>In order to create a strong value proposition and compete for investment, proponents of this scheme will have to consider:</p> <ul style="list-style-type: none"> • including measures that reduce the operating costs utilise such as waste heat, a direct wire to a wind or solar facility (which reduces the electricity costs of heating the water), consider producing cooling as well as heat and grid constraint payments; • coordinate a sizeable base load of initial off-takers are willing to sign heat supply agreements to give confidence to investors that an initial upfront investment will yield a financial return; • providing land to establish an energy centre; and • engaging with central government departments to advocate for grant support. <p>Off-takers will typically be required to sign a 15-20 year heat supply agreement with a commitment to only use heat from the network. Costs will include a connection fee, a fixed charge for O&M and a variable charge depending on the amount of heat drawn off the network.</p>
3.1	Progress update

<p>3.2</p> <p>3.3</p> <p>3.4</p>	<p>Following the last update to members in February 2024.</p> <ol style="list-style-type: none"> 1. The internal Heat Network Working Group (comprising representatives from Climate Team, Procurement, Property and Projects, and Legal Services) established to help support delivery has been expanded to include the Senior Programme Delivery Manager in Property & Projects and the Marketing Manager, City Development. 2. A technical advisor (AECOM) has been appointed to develop a heat map of a heat network in the city centre - The Climate Team is currently working through a long RFI from AECOM which involves requesting data from 3rd parties. A heat supply analysis and the low and zero carbon heat source analysis is largely complete (pending receipt of sewer mapping data from NIW). Heat demand clusters and potential Energy Centre locations are also being identified. This will enable AECOM to commence the design and optioneering ahead of the techno-economic modelling. 3. A commercial and legal advisor (Bird and Bird) has been appointed to advise Council on the legislative and regulatory requirements, potential delivery models and procurement implications associated with connecting to a heat network. This has involved meetings with some of the potential off-takers (EANI, NIHE, QUB and UU) that could provide large heat loads for phase 1 and a workshop with CMT. The potential delivery models for delivering city-scale heat networks were presented to Committee in November. include: <ol style="list-style-type: none"> a. Local Authority Delivered; b. Private Sector Delivered; and c. Local Authority (Public/Private) Joint Venture (JV ESCo; Infrastructure/Operation Split; Concession; and Strategic Partnership). 4. A Project Manager (from Arup) has been appointed to coordinate the Innovate UK funded Net Zero Belfast Pathfinder project (£150K) which commenced in June 2024 to de-risk a heat network and a solar PV project. 5. Engagement has also continued with other key stakeholders including DFE and the NI Utility Regulator on the potential use of a private heat network in Belfast as a use case to inform the development regulatory framework for heat networks in NI.
<p>3.1</p>	<p>Next steps</p> <ol style="list-style-type: none"> 1. Continue to engage with all of the stakeholders above. 2. Delivery of a heat map of a heat network in the city centre by AECOM (anticipated Feb 2025). 3. Continue to work with Bird and Bird to ensure Belfast is the client of choice in a competitive landscape for heat developers. 4. Continue to deliver the Innovate UK funded Net Zero Belfast Pathfinder project in partnership with the Energy Systems Catapult (with an update to members in due course). This work will include an opportunities assessment for local communities. 5. Continue the support and oversight of the programme of work by the internal Heat Network Working Group.
	<p><u>Financial and Resource Implications</u></p> <p>The project is funded via the £150k funding award from Innovate UK and in-year City and Organisational Strategy budget.</p> <p><u>Equality or Good Relations Implications/Rural Needs Assessment</u></p> <p>None identified. Engagement with Equality & Rural Needs team is ongoing across the Programme.</p>
<p>4.0</p>	<p>Appendices - Documents Attached</p>

	None