

MUNICIPAL YEAR 2012/2013 REPORT NO. **123**

MEETING TITLE AND DATE:

Cabinet 5th December 2012

REPORT OF:

Director of Environment

Contact officer and telephone number:

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Agenda - Part: 1	Item: 10
Subject: Special Purpose Vehicle, Lee Valley Heat Network (LVHN)	
All Wards	
Cabinet Members consulted: Cllrs. Bond and Goddard	

1. EXECUTIVE SUMMARY

- 1.1 The aim of the Lee Valley Heat Network (LVHN) is to provide a new city-scale decentralised energy (DE) network to capture affordable low carbon heat (hot water and steam) from Energy from Waste (EfW) facilities and dedicated Combined Heat and Power (CHP) plants. The heat will be supplied to buildings and industry across the Lee Valley for use in space heating and hot water production, which in turn will facilitate inward investment and jobs, provide affordable low carbon heat, help tackle fuel poverty and reduce London's carbon footprint.
- 1.2 A decentralised heat network is a system of pipes that move energy in the form of hot water and/or steam from where it is created, to where it is needed, much like an electricity network.
- 1.3 LVHN will initially use hot water and steam from the Energy from Waste (EfW) facility at the Edmonton EcoPark. This facility already generates enough heat to kick-start a strategic network.
- 1.4 Recognising LVHN's ambitions for the capital, the Greater London Authority (GLA) is providing technical support through its Decentralised Energy Programme Delivery Unit (DEPDU) to enable this project to form *'The strategic scheme to demonstrate decentralised heat in London.'*
- 1.5 The GLA also supports decentralised energy in the capital through its London Plan and Implementation Plan. Furthermore, the Mayor's draft Upper Lee Valley Opportunity Area Planning Framework recognises that *'There is a unique opportunity to deliver a sustainable heat network which would put the Upper Lee Valley at the forefront of sustainable energy supply in London and give it a clear competitive advantage over other areas.'*
- 1.6 LVHN is a strategic infrastructure project. As with any scheme of this nature, it is not without its challenges. Project risks have however been balanced

against potential benefits, where the scheme as a whole represents the opportunity to create the first viable heat network of its kind in London.

- 1.7 In response to the Mayor's request to deliver 'The strategic scheme to demonstrate decentralised heat in London,' the London Boroughs of Enfield, Haringey and Waltham Forest have worked in partnership to develop LVHN and reduce exposure to project risk.
- 1.8 Work undertaken to date has confirmed that the resultant 'Strategic Heat Network' can deliver heat to sites across the Lee Valley, including sites in all three Boroughs. A summary of this work is provided as a background paper in Appendix 1, Lee Valley Heat Network, Compelling Story, October 2012.
- 1.9 LVHN is forecast to deliver significant economic, environmental and social benefits greater than would otherwise be achieved by individual developments:
- Facilitate inward investment and new jobs
 - Provide affordable low carbon heat to businesses, industries, the public sector and local residents across the Lee Valley, including the new Meridian Water development
 - Help tackle fuel poverty, reducing heating costs for residents living in some of London's most deprived neighbourhoods
 - Reduce London's carbon footprint
- 1.10 Existing research confirms LVHN's technical and potential commercial viability:
- Technically viable: LVHN will use a mature, well established pipe technology that has been employed for many decades. It will deliver hot water and steam to industry for heating, using a network of highly insulated steel pipe work. The energy (electricity, heat and steam) to feed this network of pipes can be generated from a number of sources, including Energy from Waste facilities, biomass and biomethane or conventional gas-fired Combined Heat and Power.
 - Commercially viable: local authority leadership and public funding will be required to kick start the infrastructure network, de-risking the scheme for future private sector investment. It is forecast that this pump priming will make the LVHN self-financing by 2023
- 1.11 Following completion of LVHN feasibility work in August 2012, this paper makes the case for Cabinet to agree in principle the proposal to establish the SPV, supported by up to £20k of resources to obtain initial legal advice on SPV structure and governance.

1.12 At the London Borough of Haringey Cabinet meeting on 16/10/12, it was resolved that the overall approach proposed by Haringey's Carbon Commission be endorsed and that officers should progress an Action Plan for implementation of the Commission's recommendations. This included establishing a cross borough legal company structure (initially with LB Enfield) to take forward the development of an alternative energy supply company. Setting up the legal company structure is delegated to the Lead Member for Finance and Carbon Reduction, which will be reviewed alongside the full business plan by Cabinet in early 2013.

2. RECOMMENDATIONS

- 2.1. To seek in principle approval by Cabinet to establish a Special Purpose Vehicle to deliver the Lee Valley Heat Network (LVHN) by March 2013, subject to further Cabinet approval of:
- A robust business case to establish the viability of delivering LVHN;
 - Appropriate SPV structure and governance arrangements;
 - Enfield investment in the SPV to build and operate the LVHN.
- 2.2. Cabinet approval for expenditure of up to £20,000 (shared with the LB Haringey) to cover initial legal advice to identify the appropriate SPV structure and governance arrangements.
- 2.3. To immediately and jointly establish an off the shelf 'paper' company with the London Borough of Haringey, with authority for this decision delegated to the:
- Cabinet Member for Environment
 - Cabinet Member for Business and Regeneration; and
 - Director - Environment
- This will provide further market testing, ahead of Cabinet approval of the full LVHN business case.

3. BACKGROUND

What is Decentralised Energy?

- 3.1 Decentralised Energy (DE) refers to a wide range of technologies that do not rely on the high-voltage electricity transmission network or the gas grid. A typical form of DE is the generation of electricity at or near the point of consumption, combined with the capture and utilisation of 'waste heat' associated with the electricity generation process. This heat is captured, distributed and used locally through a heat network made of highly insulated pipes for use by industries, the public sector, local residents and others.
- 3.2 In a CHP network, heat may be the primary form of energy to be generated, with electricity as the secondary product. The DE approach enables higher

fuel conversion efficiencies and lower electricity distribution losses. The energy (electricity and heat) can be generated from a number of sources, including Energy from Waste facilities, biomass and biomethane or conventional gas-fired Combined Heat and Power (CHP). Heat Networks are more sustainable than the existing centralised electricity generating system, where the waste heat generally is not captured for use in heat networks.

- 3.3 The Mayor has made a commitment in the London Plan to achieve an overall reduction in London's carbon dioxide emissions of 60% (below 1990 levels) by 2025. The Mayor has also set a target for 25% of heat and power used in London to be generated from decentralised energy sources by 2025.
- 3.4 Under the Enfield 2020 Sustainability Programme and Action Plan, Enfield aims to adopt a target to reduce borough wide carbon emissions by 40% by 2020, as compared to a 2005 baseline. This is in common with the London Boroughs of Haringey, Islington and Camden. LVHN is also a key strategic sustainability project in the Enfield 2020 Action Plan.

Background to the Lee Valley Heat Network (LVHN)

- 3.5 The LVHN will capture low-carbon heat and steam from waste to energy facilities and dedicated Combined Heat and Power (CHP) plants, supplying it to buildings and industry across the Lee Valley for use in space heating and hot water production. This will be a key driver for inward investment and jobs.
- 3.6 In the longer term energy could be derived from renewable and zero carbon sources, with heat networks also able to utilise waste heat from industrial and commercial activities. Capturing and utilising 'waste heat' associated with electricity generation enables higher fuel conversion efficiencies and lower electricity distribution losses than traditional energy processes. This in turn reduces carbon dioxide emissions.

Benefits

- 3.7 Work undertaken to date (see paragraphs 3.8 to 3.12 below) suggests that the Lee Valley Heat Network has the potential to deliver significant benefits. In summary, these include:
 - Generation of inward investment, jobs and wider regeneration. An increase of up to 1,700 jobs (safeguarded and net additional) by 2026 was forecast by a feasibility study undertaken by Parsons Brinckerhoff compared to a business as usual scenario connected with attracting inward investment from the LVHN
 - Provide affordable low carbon heat to businesses, industries, the public sector and local residents across the Lee Valley, including the new Meridian Water development
 - Help tackle fuel poverty, reducing heating costs for residents living in some of London's most deprived neighbourhoods
 - Reduce carbon emissions across North London by at least 200,000 tonnes over the life of the project

Work to Date

- 3.8 Working with the GLA's Decentralised Energy team, Enfield along with the London Boroughs of Haringey and Waltham Forest has commissioned two pieces of work. A summary of this work is provided as a background paper in Appendix 1 - Lee Valley Heat Network, Compelling Story, October 2012.
- 3.9 **Phase 1, Pre-Feasibility Study (2011):** A pre-feasibility study (or DE Master plan) undertaken in 2011 initially identified the potential for a decentralised energy network in the Upper Lee Valley, encompassing the London Boroughs of Enfield, Haringey and Waltham Forest.
- 3.10 **Phase 2, Detailed Feasibility Study (2012):** A detailed feasibility study in 2012 confirmed a hot water and steam network could be based on transferring waste heat from the Edmonton EfW plant to a 'core scheme'. The report's findings included:
- Once the initial network is established further industrial, commercial, public sector buildings and housing developments will be able to join to create even greater economic, environmental and social benefits
 - Connection to heat networks is generally easier to accomplish for new developments. The Northumberland Park and Meridian schemes have been identified as particularly suited to connect to LVHN, and there are others.
 - In addition, future phases of the initial 'core network' will expand to include 'satellite loads' in Haringey, Enfield and Waltham Forest. There is also long term potential for inter-connection to a 'London-wide' network including the Olympic Park and the London Thames Gateway Heat Network.
 - The market and policy context mean that a commercial company is unlikely to build the infrastructure to kick start LVHN and, as such, leadership is required from the public sector.
- 3.11 Work undertaken since this feasibility study suggests that phase 1 of the LVHN could include a combination of both the core network and satellite loads from the outset.
- 3.12 **Phase 3, DEPDU Business Case (2012):** the GLA's Decentralised Energy Programme Delivery Unity (DEPDU) is now using the feasibility study to develop the **full business case** for LVHN, which is scheduled to be ready for approval by each of the Boroughs in March 2013. It will detail the investment request to fund the LVHN, which is likely to unlock funding from a range of sources:
- Loans e.g. European Investment Bank (EIB), London Energy Efficiency Fund (LEEF) and Public Works Loan Board (PWLB)
 - Capital grants e.g. Energy Company Obligation (ECO)

- Developers & anchor customers making capital contributions through section 106 funding and the Community Infrastructure Levy (CIL), as well as directly investing in the provision of local network extensions and other facilities. Partnerships with the private sector will be particularly welcome for generating heat and extending the reach of the network
- 3.13 It is important to note that much of this funding is competitive and time-limited. This creates an imperative for LVHN partners to work as quickly as possible to develop and deliver LVHN.
- 3.14 Within the business case framework, DEPDU will develop a **business plan** to:
- Deliver the first phase of the LVHN project, including how commitments to connect to the network can be secured well in advance of when heat can be provided;
 - Develop further phases of the project;
 - Implement satellite schemes;
 - Where appropriate, connect satellite schemes to the strategic scheme.

The need for in principle agreement for the SPV

- 3.15 Establishing the SPV in advance of completion of the business case for the core scheme arises from the need to:
- Create the necessary credibility when talking to potential heat loads, customers and funders
 - Demonstrate ongoing Borough commitment to LVHN to keep GLA funding flowing
- 3.16 It is necessary to quickly establish a 'paper' company for the LVHN, which will later become the SPV subject to further Cabinet consideration. The company will have no decision making authority, either financial or otherwise, and no authority to enter into contractual commitments. Its purpose is to provide credibility for discussions with both heat users and heat sources about potential contractual arrangements, as well as discussions with potential funders. This will enable and provide further market testing for the full LVHN business.
- 3.17 It is recommended that authority is delegated to the Cabinet Member for Environment, the Cabinet Member for Business and Regeneration, and the Director of Environment, to jointly establish an off the shelf 'paper' company with the London Borough of Haringey. This action requires minimal financial commitment from the Council.

Legal Issues

- 3.18 Establishing the local authority led SPV to operate and deliver the LVHN requires a number of key decisions regarding delivery model, structure and governance. The in principle agreement to support an SPV will trigger the

expenditure of up to £20,000 to cover initial legal costs to address these issues, in parallel with the business case being finalised.

- 3.19 Legal Services will be instructed to ensure that the setting up of the company will comply with the relevant Companies Acts.

Delivery

- 3.20 It is proposed that LVHN be developed in 3 distinct phases:

- Phase 1: Start up (to 2014)
 - Establish SPV: Board appointed, March 2013
 - Business case approval, March 2013
 - Design network, arrange finance and sign contracts with first customers, December 2013
- Phase 2: LVHN Operational (2014 to 2022): LVHN commences operation with detailed phasing delivery of the core heat network and satellite schemes based on the financial analysis and business planning currently underway. In outline it is expected that key milestones for this operational phase of development will include:
 - Build energy centre and physically lay pipes in the ground, March 2014
 - Supply heat to customers, March 2015
- Phase 3: Local Authority Exit Strategy considered (2023): as further development of the business becomes privately financed, the local authority partners will be able to consider the full range of exit strategies linked to return on investment and delivery of strategic objectives.

- 3.21 Other local authorities will be able to join the SPV as it develops on equal terms. This will enable other local authorities to become actively involved in LVHN as and when they desire, using it to take their decentralised energy projects to market.

- 3.22 Several delivery models exist for local authority businesses in the DE sector, such as Aberdeen Heat & Power, Birmingham District Energy, Enviroenergy Ltd (Nottingham City Council), Thameswey Ltd (Woking), and Southampton Geothermal Heating Company. Well known European examples of municipal led district heating networks include Copenhagen and Malmo in Sweden. However it is believed this would be the first cross-borough SPV in the UK to deliver DE schemes.

4. ALTERNATIVE OPTIONS CONSIDERED

The full range of delivery options for the SPV will be considered in a subsequent Cabinet paper, for which specialist legal advice will be sought.

5. REASONS FOR RECOMMENDATIONS

An SPV is required to be able to deliver the LVHN project, which is forecast to deliver significant economic, environmental and social benefits greater than would otherwise be achieved by individual decentralised energy schemes. These benefits include:

- Inward investment and new jobs
- Affordable low carbon heat for businesses, industries, the public sector and local residents
- Tackle fuel poverty
- Reduce London's carbon footprint

6. COMMENTS OF THE DIRECTOR OF FINANCE, RESOURCES AND CUSTOMER SERVICES AND OTHER DEPARTMENTS

6.1 Financial Implications

6.1.1 The GLA have committed to provide the necessary technical, financial and commercial resource until August 2014. A Memorandum of Understanding is being developed and is scheduled to be agreed by the end of November 2012. This document will set out in detail the GLA funding and the Decentralised Energy Programme Delivery Unit (DEPDU) support. Current support includes funding for a Project Director to January 2013, who is currently working with DEPDU to develop the business case for the core network, which will form part of the Cabinet report scheduled for March 2013.

6.1.2 In the current financial year the only costs that will be incurred for the project will be external legal fees to establish the SPV. These are estimated at a maximum of £20,000 and will be shared by LBE and the London Borough of Haringey. It is this funding which forms Enfield's 'at risk' contribution, in the unlikely event that the business case for the LVHN core network is unsuccessful. This will be funded from the external legal budget.

6.1.3 In 2013/14 the following additional costs will be required to be funded:

- Subject to further Cabinet approval, further legal costs directly associated with the capital project will need to be shared between the participating authorities. These costs are currently estimated to be up to £80k, which on a worst case basis will need to be split between LBE and Haringey. A request for capital funding will be made.
- Procurement costs: if this process is managed internally by the participating authorities no additional cost is required. Funding is only required if external resource is needed to manage the procurement. A budget will need to be identified if a decision is made to use external resource

6.1.4 The operational costs for commercialisation, developing the investment business case, legal advice, procurement and business during LVHN's start up phase to March 2014 will be confirmed as part of the business case for LVHN network.

6.2 Legal Implications

6.2.1 The Localism Act 2011 (Commencement No. 3) Order 2012 (*SI 2012/411*) brought the general power of competence into force for principal local authorities. The general power of competence is set out in s.1 of the Localism Act 2011 and states that a local authority has power to do anything that individuals generally may do. In accordance with the Localism Act, the Council can set up a company under the Companies Act 2006 to do for a commercial purpose that which it is empowered to do under the general power of competence. Under section 95 of the Local Government Act 2003, the Council also has powers to set up a company to trade in function related activities. In addition, section 111 of the Local Government Act 1972 gives a local authority power to do any thing which is calculated to facilitate, or is conducive or incidental to, the discharge of any of its functions and and may enter into a contract with the provider of the services pursuant to section 1 of the Local Government (Contracts) Act 1997. The Council has power to produce supply and sell heat or electricity produced in association with heat under the Local Government (Miscellaneous Provisions) Act 1976.

The recommendations are in accordance with these powers.

6.2.2 The initial establishment and development of the Network will be undertaken by the LBE and London Borough of Haringey ("LBH"), jointly establishing an SPV for the development, ownership and operation of the Network. External specialist legal advice will be sought to support this high profile and strategically important project (to consider procurement, state aid, SPV structure, etc issues that arise). An external legal firm will be jointly appointed by LBE and LBH in accordance with the Councils Constitution, in particular Contract Procedure Rules. Should any individual advice be required for each council appropriate Chinese walls will be in place to enable the jointly appointed legal firm to act for both parties. All of which will be closely managed by the in-house Legal team.

6.2.3 All legal documents will need to be in a form approved by the Assistant Director of Legal Services. All documents in relation to the setting up, functions, filing etc with regards the company structure for the SPV, will be in accordance with the Companies Act 2006 and amendments thereof.

6.2.4 The Council has powers under the Local Government Act 1972 to acquire a disposal of land in accordance with a discharge of its functions. The recommendations contained in the report will require the entering in to a variety of property related agreements including acquisitions, disposals, leases, licences and wayleaves. In entering into these arrangements the Council must comply with its statutory obligations and the Council's property procedure rules. As the scope and detail of necessary arrangements are

negotiated these will need to be the subject of separate reports in accordance with the Councils Constitution.

- 6.2.5 Infrastructure contributions (whether in kind or financial) can be secured through the planning process where appropriate policies are in place. Utilisation of such contributions must be in accordance with the purpose for which the contribution was received.

6.3 Property Implications

The LVHN business case will need to consider land ownerships, negotiating access rights easements and network use rights, which may require internal resource allocation. The timescale for completing these negotiations needs to be factored into project delivery.

7. KEY RISKS

- 7.1 In the unlikely event that the business case is not viable or is not approved, the London Boroughs of Enfield and Haringey will lose their shared initial investment of up to £20k legal costs to establish the SPV.
- 7.2 Risks relating to the LVHN business case, as well as structure and governance of the SPV, will be fully considered in the subsequent Cabinet report.
- 7.3 There will inevitably be both risks and opportunities to be managed for the LVHN, however the feasibility studies provide a degree of assurance as to the likely success of the project.

8. IMPACT ON COUNCIL PRIORITIES

8.1 Fairness for All

- 8.1.1 LVHN will deliver significant economic, environmental and social benefits:

- Facilitate inward investment and new jobs
- Provide affordable low carbon heat for businesses, industries, the public sector and local residents
- Tackle fuel poverty
- Reduce London's carbon footprint

- 8.1.2 As a strategic sustainability project in the Enfield 2020 Action Plan, these benefits will be spread across the Lee Valley and the participating boroughs

8.2 Growth and Sustainability

LVHN is a key strategic sustainability project in the Enfield 2020 Sustainability Programme's Action Plan.

8.3 Strong Communities

As with the Council's aim of 'Fairness for All,' LVHN will help deliver 'Stronger Communities' through the significant economic, environmental and social benefits delivered.

9. EQUALITIES IMPACT IMPLICATIONS

As a strategic sustainability project in the Enfield 2020 Action Plan, the significant economic, environmental and social benefits listed above are forecast to be delivered across the Lee Valley and the participating local authorities. As a result, it is not relevant or proportionate to undertake an equality impact assessment/analysis as the benefits of this particular proposal will positively impact on all communities in the area.

10. PERFORMANCE MANAGEMENT IMPLICATIONS

Once the SPV is established, the SPV governance arrangements will ensure effective performance management.

11. HR IMPLICATIONS

The post of interim Project Director for the LVHN SPV is currently funded by the GLA to January 2013.

12. PUBLIC HEALTH IMPLICATIONS

12.1 LVHN will deliver significant economic, environmental and social benefits, including tackling fuel poverty.

12.2 Climate change is a major threat to public health. The Lee Valley Heat Network will help to reduce its impact.

Background Papers

None.