District Heating Strategy Support

Proposal for HNP support for Local Authorities

RESOURCE EFFICIENT SCOTLAND

HEAT NETWORK PARTNERSHIP FOR SCOTLAND

Growth that doesn't cost the earth

A programme from ZERO WASTE SCOTLAND

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Introduction

The Heat Network Partnership (HNP) provides advice and support to organisations wishing to identify and develop District Heating (DH) opportunities. The HNP brings together the Scottish funded agencies with expertise in delivering DH projects and comprises Zero Waste Scotland (Resource Efficient Scotland (RES) programme), Scottish Futures Trust (SFT), Energy Saving Trust (EST), Scottish Enterprise and Stratego.

The aim of this document is to describe a systematic approach to producing a local authority DH strategy document that will enable the participating local authority to progress development of DH schemes. Without a robust DH strategy and process in place, local authorities are at risk of adopting a piecemeal, reactive approach to individual energy supply opportunities which fail to realise the full environmental and economic benefit of a single integrated system.

The HNP will deliver a programme of support that will guide the participating local authority through the process of developing a DH strategy and will utilise the expertise of the various agencies above. The support will be delivered in modules to local authorities in regional clusters. Key deliverables are scheduled throughout the programme over an anticipated timeline of 6 months. The HNP will provide consultancy support to deliver workshops and one to one support at key stages of the programme. Templates and guides will also be provided as the foundation of the programme.

The main benefits to the participating authority are:

- Access to HNP advice and support;

- One to one consultancy advice on strategy development and local issues;

- Heat map guidance;

- Strategy template documents; and

- Knowledge sharing and problem solving.

1 Programme Content

1.1 Module 1 - Team Structure and Capacity Building

This first module lays the groundwork for the rest of the programme. Internal stakeholders are identified; buy-in is sought; and aims, approach, commitments and responsibilities are agreed.

The initial action is to establish the necessary structures and working groups within the local authority in order to pursue district heating (DH) opportunities and to ensure that key officers have the necessary awareness and understanding of DH. There is also a need to ensure political support and stakeholder commitment, so that influential decision makers understand and are committed to progressing DH opportunities.

Required Resources

Project Lead - central to the development of a successful strategy and will be the primary contact for the programme. A Deputy Project Lead would also be advantageous to both share the load and augment the skills required. The project leader will be a focal point for the Programme, coordinating and managing all the activities: leading the core team (see below), bringing them together to coordinate activities, reviewing progress and reporting.

Project Sponsor– assists to set the scope and targets for the Programme and then monitors progress and removes obstacles should they occur. The programme will cut across organisational boundaries, so the PS will also need to actively engage peers across the organisation to build involvement in the DH strategy.

Executive Sponsor - championing the DH strategy within the organisation, engaging with the project leader to raise the profile of the strategy.

Core team - the core team will ensure people across the key areas of the organisation are fully engaged. The core team should include:

Finance Champion - a senior finance point of contact for the Project Leader.

Officers from nominated departments, e.g. planning, sustainability / climate change, GIS, housing, economic development, education, leisure, estates.

Other public sector bodies: NHS, Higher Education, National parks and Housing authorities

Elements of capacity building will include:

- **Building the structures** - the internal networks and relationships. The delivery of DH schemes in a local authority requires close working relationships between different departments over a sustained period of time;
- **Securing resources** - ensuring adequate budget and /or staff time resources to promote or deliver DH opportunities, described in more detail below;
- **Improving technical understanding** - improving relevant officers' knowledge of DH and renewable technology, development opportunities for DH, using the national heat map, and related issues;
- **Raising awareness** - ensuring the benefits and opportunities for DH are understood by key officers through the authority. This will also include external stakeholder engagement, encouraging early discussions between the council officers and the owners/managers of existing DH networks, potential heat customers or generators of waste heat that might supply a DH scheme; and
- **Building political support** - developing support for DH amongst influential decision makers to gain their commitment to progressing DH opportunities.

Module 1

The module 1 workshop will launch the programme and brings participants together for the first time. Prior to the event the participants will be issued with an information pack containing key documents that will be used throughout the programme. These will include:

- Programme plan and timeline
- Strategy document template
- Introduction to the programme advisor (consultant)
- Introduction to the HNP (contacts)
- Introduction to Stratego
- SE master-planning guide
- Public sector analysis

The agenda will cover:

- o Introduction and opening comments (SG/HNP)
- o Strategy template introduction (Advisor)
- o Knowledge sharing – delegate brief introductions
- o Case studies
- o Workshop – Delivery plan

Module output – Each participating LA will leave with a draft engagement plan

1.2 Module 2 - The National Heat Map

The objective of this module is to identify 'focus areas' where there is high potential for district heating schemes using the National Heat Map.

The heat map is a powerful tool that helps visualise and assess the need for heat, where sources of heat might come from and how these can be connected in an efficient way to reduce the cost of heat supply and the carbon intensity of heat generation. It can also be used, in combination with other spatial datasets, as a tool to illustrate the socio-economic benefits of changing existing paradigms of heat supply. Each Scottish local authority has access to the heat map to support local energy planning.

The heat map dataset is very flexible and uses a GIS interface which allows analysis with other spatial datasets. The Scottish Government has issued advice on the role of planning authorities in the transition to efficient, low carbon and renewable heat. This advice describes how the heat map can support planning authorities in developing policy, strategic development planning and at determination stage.

This module will guide authorities through project prioritisation and the implementation planning process to help progress the DH opportunities identified using the heat map. Each LA will develop interventions required and the associated actions dependent on whether short, medium or long term intervention is required.

An implementation plan will be developed for the main focus areas including a list of actions required to progress the DH opportunities identified. A report discussing the approach, analysis and results of the process will be produced as part of this module.

Module 2

Module 2 will bring together the programme co-ordinators, GIS leads and planning in a session designed to ensure that the heat map is a live tool imbedded in the planning process of the local authority. In advance of the workshop, each Local Authority must have full access rights to the heat map and complete all framework agreement documentation

The agenda will cover:

o   Introduction and opening comments (SG/HNP/Stratego)

o   heat map guidance and demonstration (Advisor)

o   Use of the heat map and Layers

o   Criteria for identifying heat clusters and potential networks

o   Workshop –practical session on LA specific project

Module output – Each participating LA leave with an identified project for more detailed feasibility and a methodology for appraising future opportunities.

1.3 Module 3 - Policy

Establishing a supportive and robust policy framework is an essential element for the successful delivery of the DH projects. It is important that policies on DH are conveyed across all relevant Local Development Plan documents to ensure a coherent message and robust support for DH delivery. Local authorities may also wish to consider developing policies in other local strategies, for example housing, public sector estate, economic development or community planning.

The Scottish Governments guidance on Planning and Heat, National Planning Framework 3 (NPF3) and Scottish Planning Policy (SPP) policies will form the basis of this module. Both policies strongly support the roll-out of heat networks and the development of renewable energy. These planning documents state that development plans should seek to ensure an area's full potential for electricity and heat from renewable sources. Local development plans should use heat mapping to identify the potential for co-locating developments with a high heat demand with sources of heat supply. Development plans should also support the development of heat networks in as many locations as possible, even where they are initially reliant on carbon-based fuels if there is potential to convert them to run on renewable or low carbon sources of heat in the future.

Module 3

The module will cover the following topics:

o   Energy and Heat Hierarchy

o   Energy Assessments

o   Existing and New Decentralised Energy Networks

o   Requirement to Connect

o   Future Proofing Non-Connecting Developments

o CO_2 Emission Targets

o   DH Targets

o   DH Network Performance Specification

Module output – Each participating LA leave with the delivery plan section of the strategy document completed

1.4 Module 4 - Financial & commercial structure

This module will provide the local authority with an overall summary, in relation to district heating investment, on: local authority powers and regulatory constraints; procurement strategies; funding and financing mechanisms; and commercial delivery structures, including energy services companies (ESCOs). Scottish Future Trust has produced a range of guidance documents on these topics, which will form the basis of this module.

Each project will have unique characteristics which will determine the most appropriate financial and commercial structure. Support in developing this structure will be provided through Scottish Futures Trust.

A suitable funding strategy and commercial delivery structure for a project should be developed in parallel. This is usually an iterative process, influenced by a number of factors:

As a general guide, key factors affecting the financial and commercial structure will include the following:

1. The authority's overall objectives (and those of any partners, e.g. for collaborative public sector projects);
2. The authority's desire for control, and appetite for risk (and those of any partners);
3. The project's internal rate of return;
4. The authority's in-house capacity and capability;
5. Availability of funding and access to finance;
6. Regulatory considerations – including trading powers, public procurement and state aid; and
7. Exit strategy.

Module 4 will be based on SFT's suite of guidance on DH, and will address the following topics:

o   Local authority powers

o   Public procurement and other regulatory regimes

o   Commercial delivery structures

o   The role of ESCOs

o   Financing structures and sources of finance (public and private)

o   Topics will be illustrated by case studies.

Module output will be a statement defining how each participating authority will develop a suitable financing and delivery strategy for individual projects.

1.5 Module 5 - Project Definition and Delivery

This module will focus on the process for developing individual projects identified from the over-arching strategy as having the most potential to succeed. The project development process includes carrying out feasibility studies, developing an outline business case and moving towards procurement and delivery.

A feasibility study is normally a necessary prerequisite to the development of a business case for a local authority to take a more direct and invested role in the delivery of a DH opportunity. HNP and Low Carbon Infrastructure Transition Programme (LCITP) can provide support on early stage feasibility on a co-funded basis. The feasibility study will provide information as to the technical feasibility and financial viability of a project, as well as a helpful analysis of the risk profile.

From this stage, if the authority wishes to develop a business case for the project, further funding and commitment of internal resources will be necessary. Funding may be available from internal budgets where there is strong internal political support. Alternatively, the authority may need to apply for external funding support, available from EU funds or from current and emerging UK low carbon investment schemes.

If the business case is approved, the authority will then prepare for procurement and delivery of the project, which requires careful planning and risk management.

Module 5

Module 5 will bring the participating authorities together for the final time and will complete the final section of the strategy document. Each Authority will be tasked with submitting the final document within a 4 week period after this module.

This module will cover the following topics:

o   The project development process

o   Resources, project and risk management

o   Commissioning feasibility studies

o   Developing a business case

o   Moving towards procurement and delivery

Module output – Each participating LA leave with a strategy statement on how each Local Authority will engage with support agencies and develop heat network projects.

1.6 Programme Plan

ID	Programme Stage	Start	Finish	Duration
1	Procure consultancy support from Framework	12/01/2015	13/03/2015	45d
2	Develop template and guidance materials	24/02/2015	26/03/2015	23d
3	Enrol participating LAs (10)	05/03/2015	29/04/2015	40d
4	Module 1 workshop - programme introduction and capacity building	28/04/2015	28/04/2015	1d
5	Consultant one to one support	04/05/2015	26/05/2015	17d
6	Module 2 & 3 Workshop	26/05/2015	27/05/2015	2d
7	Consultant one to one support	26/05/2015	15/06/2015	15d
8	Module 4 & 5 Workshop	16/06/2015	16/06/2015	1d
9	Consultant one to one support	15/06/2015	30/07/2015	34d
10	Final workshop and strategy delivery	30/07/2015	07/08/2015	7d