District Heating Action Plan

Response to the Expert Commission on District Heating

May 2013
MINISTERIAL FOREWORD

In 2012, I convened the Expert Commission on District Heating to consider how to accelerate the uptake of district heating in Scotland, and make recommendations to the Scottish Government. District heating is key to our vision for the future of heat in Scotland, helping us use energy more efficiently and increase the opportunities for renewable heat. I am grateful to the Commission for sharing their expertise, and their enthusiasm in working with Scottish Government to tackle the barriers to increasing the scale of heat networks across Scotland.

Scotland already has examples of successful district heating schemes from smaller renewable projects such as the Comrie Development’s Trust at the Cultybraggan Camp near Comrie, supported by our District Heating Loan Scheme, to large urban projects such as Glasgow’s Commonwealth Games Village. But this is only the beginning, as is demonstrated by the expansion of the Aberdeen Heat & Power network which is connecting more buildings every year.

The Expert Commission was asked to look at how we can build on the successes of individual projects, to create a step change in the scale of heat networks. The Action Plan sets out how the Scottish Government will help to create the frameworks to support the investment needed in infrastructure to deliver integrated heat networks supplying homes, industry and the public sector.

I welcome the willingness of the Expert Commission to continue to provide an important role in reviewing implementation of the Action Plan. We are already seeing the benefits of both renewable and low carbon district heating in our towns and cities. But our Action Plan will set us on a course to expand the scope of our vision to build the infrastructure to deliver a long-term affordable, low carbon heat supply, making a major contribution to Scotland’s Low Carbon Economy.

Fergus Ewing

Minister for Energy, Enterprise and Tourism
INTRODUCTION

1. Heat and District Heating

1.1 Roughly half the energy we use in Scotland is used for heating (or cooling) for our homes, for our communities, offices and public buildings, and for Scottish manufacturing such as our food and drink, wood products and chemical industries.

1.2 Heat must therefore be at the centre of our move to low carbon economy. Our Outline Heat Vision for Scotland sets out the Scottish Government’s ambition to decarbonise Scotland’s heat supply by 2050, with significant progress to 2030. We need to develop a holistic approach to how we deliver heat, to ensure a long-term affordable and sustainable heat supply for the future.

1.3. District heating – the supply of heat by hot water to a number of buildings through a heat network of underground pipes – is an effective way of making the most of our heat resources, reducing the carbon intensity of heat and reducing fuel costs. A large-scale heat network may take heat from several sources including gas-fired Combined Heat & Power (CHP) plants, renewable energy such as geothermal, solar and biomass, stored heat from intermittent renewable electricity generation and heat recovered from industrial processes.

1.4 Scotland now has district heating schemes varying in size from a handful of buildings on farm steadings to thousands of homes in urban areas like Glasgow and Aberdeen. And there is even greater opportunity for expansion, to create large-scale integrated heat networks to heat our towns and cities.

1.5 But this will require new partnerships between the public and private sector, new ways of supplying our heat and most of all long-term strategic planning to deliver the public and private investment needed in infrastructure.

2 The Opportunity

2.1 The scale of the opportunity is potentially huge. European heat networks are estimated to deliver an annual turnover of €25-30 billion and 556 TWh heat sales.¹ Many European cities are almost entirely connected to a heat network and models being developed by the UK Government suggest that up to 20% of UK domestic heat demand might be served by heat networks by 2030².

2.2 The economic opportunities of accelerating the uptake of heat networks include jobs in the construction sector to build the infrastructure and in energy supply services. The potential market in Scotland can attract inward investment from district heating manufacturers as well as opportunities for our existing businesses, particularly in the supply and design of energy systems where Scotland has a large share of the UK market.

² Department of Energy & Climate Change (DECC), 2013. The Future of Heating – Meeting the Challenge
2.3 District heating is also an opportunity to reduce energy costs for businesses and households. Reducing energy costs will enhance Scotland as a competitive location for business. The Low Carbon Innovation Coordination Group estimated that innovation in heat pumps, heat networks and heat storage could reduce UK energy system costs between £14-66 billion to 2050 (cumulative 2010-2050). Heat networks can use heat recovered from processes such as distilling or data centres, producing a low cost, low carbon heat supply and generating additional revenue streams for those businesses.

2.3 Reducing heating costs will help households reduce energy bills, particularly for those most in need. Projects such as Cube Housing Association’s Wyndford Estate, managed by SSE Heat Networks, with funding from CESP and grants from the Scottish Government, use gas-fired CHP plants to supply heat at up to half the cost to thousands of households. We want to see more households benefit from such schemes, and are working with registered social landlords to see how district heating can help them gain more control over the costs of heating for their tenants.

2.2 Heat networks give us the opportunity to tackle carbon emissions on a city scale. Aberdeen’s gas-fired CHP scheme is reducing carbon emissions by up to 45% across all the buildings in the scheme. But heat networks can also help us make best use of renewables such as hydrogen or biomass. Networks heated by gas may be the most straightforward to build initially, creating the infrastructure needed to connect more renewables and low carbon heat supplies such as recovered heat in the future.

2.3 We are just starting to realise the potential in Scotland. The Scottish Cities Alliance is committed to rolling out the Heat Mapping Programme for Scotland, with heat maps completed for Inverness and Perth, and about to start in Edinburgh and Glasgow; Aberdeen Heat & Power are continuing to extend their heat network, with a heat main now taking the system into the city centre; Sustainable Glasgow has set up a District Heating Strategy Group to develop proposals for an integrated city network, to coordinate major public and private projects currently in planning and development; and, in Wick, a biomass district heating scheme is providing heat to the Pultneytown Distillery and social housing, with plans for further expansion.

2.4 We have created opportunities for investment and the Scottish Green Investment Portfolio is supporting projects for UK Green Investment Bank and Scottish Government's £103 million Renewable Energy Investment Fund. An individual project such as the heat network for Glasgow Commonwealth Games Village need may need of millions of pounds of investment. But to maximise the benefits, we need to create integrated heat networks, connecting individual projects. This requires long-term strategic planning, and partnership between the public and private sectors for example in Glasgow where SSE and ScottishPower are working with Sustainable Glasgow on the European funded Strategies Towards Energy Performance and Urban Planning (STEP UP).

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3. The Barriers

3.1 The Heat Mapping Programme will give local authorities the tools they need to identify the opportunities in their areas. But we recognise there still barriers to unlocking investment in district heating, as identified by the Expert Commission. These can be institutional and we will work with COSLA, local authorities and the wider public sector to provide support through the Heat Network Partnership.

3.2 Barriers may also be due to perceptions of risk as the supply of heat has not been viewed as a “utility” in the same way as gas or electricity. We do not want to place unnecessary burdens on a developing sector, but to achieve the scale of ambition we need to see, we need to explore with existing regulatory bodies and with industry the nature and scope of regulation and licensing for district heating.

3.3 Barriers may also be physical – creating networks that need to take pipes across rivers, road and railways to create the core network to which heat suppliers and heat users can connect. We need to have a better understanding of the strategic infrastructure need to make the connections between heat supply and demand, so will issue a Call for Evidence later in the year.

4. The Action Plan

4.1 In order to address the barriers and realise the opportunities provided by district heating, we need to take action. The Expert Commission on District Heating’s recommendation set out the key areas to be addressed. The Scottish Government’s Action Plan now sets out the steps we will take in partnership with the wider public sector, business and industry to build confidence in the public sector to drive forward projects, the private sector to invest and in consumers to connect.

4.2 The Expert Commission made 18 recommendations across 5 areas:

- Heat Vision and Action Plan (Recommendation 1)
- Overarching measures: including targets, coordinated support and heat mapping (Recommendations 2 to 10)
- Planning and regulation: including planning issues, procurement and licensing (Recommendations 11-16)
- Funding (Recommendation 17)
- Future of the Expert Commission (Recommendation 18)

4.3 The Action Plan sets out the next steps that the Scottish Government is taking in response to those actions and how they will integrate with wider policy development. How we will take forward these actions in a coordinated way is summarised in routemap at the end of the Action Plan.
HEAT VISION AND ACTION PLAN

**Recommendation 1:** The Scottish Government, working with the district heating industry and other stakeholders, to set out a clear vision and road-map for district heating in Scotland by December 2012.

The Scottish Government welcomes this recommendation and set out a range of current measures and proposed actions in its initial response at the Expert Commission’s plenary session in December, chaired jointly by Fergus Ewing, Minister for Energy, Enterprise and Tourism and Mike Thornton, Head of the Energy Saving Trust in Scotland.

This Action Plan now sets out a full response and road map for district heating. This Plan will be taken forward as part of our overall policy on heat: we published an Outline Heat Vision on 29th January 2013, alongside the Draft Second Climate Change Report on Proposals and Policies. We also set out our intention to develop a Heat Generation Policy Statement (HGPS) over the coming year. The HGPS will present our understanding of how heat is delivered now, and set out scenarios for meeting our heat vision. Work is now underway and we will be engaging with stakeholders over the coming months.

**Next Steps:**

1. **Scottish Government to develop Draft Heat Generation Policy Statement (HGPS)**

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<td>In progress</td>
<td>Stakeholder engagement – summer 2013</td>
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<td>Publication – end of 2013</td>
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Shetland Heat & Power’s district heating network, which now supplies heat to around 1,150 domestic and 110 non-domestic customers in Lerwick.
**OVERARCHING MEASURES**

**Recommendation 2:** That the Scottish Government commission work to establish baseline information and allow it to set stretching yet realistic targets for penetration of district heating in 2020 and 2030, based on the emissions trajectory defined by the Climate Change Act. This should happen with some urgency so that district heating policy can be quickly driven by a common level of ambition.

The Scottish Government accepts this recommendation, and work to establish baseline information is now complete, and a report will be finalised for publication.

The baseline report will demonstrate the range of district heating models, with the largest number being small-scale networks in rural areas, mainly heat only networks using woodfuel. A small number of large systems supply much greater numbers of properties, typically using heat from gas-fired CHP plants.

Typical examples of smaller-scale district heating supply a few buildings up to a few hundred properties with heat. Many are woodfuelled heat only systems such as on farms and estates (case studies are available from the Usewoodfuel website) or social housing schemes such as Albyn Housing’s Aviemore North scheme.

Typical examples of large-scale district heating are networks supplied by gas-fired CHP such as Aberdeen Heat & Power’s district heating scheme and the University of Edinburgh’s campus networks, or by Energy from Waste CHP in Shetland and Fife Council’s Dunfermline Heat Network.

We will be considering all these models and their scope for deployment as part of the scenarios being developed for HGPS and will consider how to define targets for district heating as part of that work.

### Next Steps:

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<td>2.</td>
<td>Scottish Government to publish baseline district heating report.</td>
<td>In progress</td>
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<td>3.</td>
<td>Scottish Government to include consideration of targets for district heating in HGPS.</td>
<td>Scoping in progress</td>
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**Recommendation 3: Scottish Government** to include within the brief for the work above the investigation of options for setting subsidiary targets for a set proportion of the public sector estate being connected to a district heating system by 2020 and 2030 and for conversion by a medium-term deadline of all multi-storey social housing to district heating where there is a viable business case.

**Public Sector Estate**

The Scottish Government recognises the importance of the public sector estate in transforming the district heating market, by providing anchor loads.

The public sector estate covers a wide range of organisations at national and regional level. We therefore need to review the make up the estate to identify the proportion of public buildings located in areas practically and commercially viable for district heating. This review will need to take into consideration the target of a 25% reduction in the size of the Scottish Government’s estate by 2016, and whether Scottish Government owns or lease the buildings.

Existing work to look at different aspects of the public sector estate has been carried out including Energy Management Solutions report for the Scottish Government, work by Scottish Futures Trust (SFT) and by the Carbon Trust. Resource Efficient Scotland also have extensive knowledge of the public estate, the actions required to make their existing systems district heating ready and the associated cost of these modifications.

Using the expertise available through the Heat Network Partnership, the work should review the data, linking where possible to the Heat Mapping Programme for Scotland, and consider the conditions under which district heating is practically and commercially viable. This will depend on a number of factors including heat density in an area, vicinity of fuel sources particularly where renewable energy is an option and the comparative costs of heating. The review should also highlight where public buildings can provide key anchor loads to catalyse implementation of heat networks.

**Multi-storey social housing**

The Scottish Government also recognises the often compelling advantages of district heating as an approach for multi-storey blocks. In 2012, Cube Housing Association’s district heating scheme at Wyndford Estate, one of the largest social housing projects in the UK, was opened by the First Minister, Alex

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5 Scottish Futures Trust. *Improving Asset Management across the Scottish Public Sector - The Local Civil Estate*. SFT, 2011.

Salmond. Around 1,500 households on the estate are benefitting from reduced heating costs, through heat supply contracts with SSE Heat Networks. The Scottish Government also made grant funding available to allow around 300 private households the opportunity to connect.

Other examples include the Aberdeen Heat & Power district heating network, where carbon emissions from these buildings have reduced by 45% and typical fuel costs to tenants have been reduced by 50% over the previous heating system. Customer satisfaction surveys also report improved health conditions, and happier and more content people.

We are already working with SFHA and a number of social housing organisations on identifying and developing district heating opportunities across their property portfolios. We will explore with SFHA, COSLA and other stakeholders the potential opportunity, timescales and possible targets for conversion of multi-storey blocks to district heating. In particular, district heating is included as a measure under the Energy Company Obligation (ECO), and the Scottish Government’s Warm Homes Fund and Home Energy Efficiency Programme will help Registered Social Landlords to maximise this opportunity.

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Multi-storey tower blocks connected to Aberdeen Heat & Power’s heat network.
Recommendation 4: The Scottish Government to fund a small team supporting district heating development and co-ordinating exchange and sharing of good practice for a period of at least three years, reflecting the long development cycles of district heating projects.

The Scottish Government agrees that there is a need for support for district heating. We are therefore building on our existing programmes of support to integrate district heating into our new programmes and to co-ordinate that support through the Heat Network Partnership. The key organisations and work programmes are:

- **Resource Efficient Scotland** is a new Scottish Government-funded programme to help businesses and the public and third sectors save money by using resources more efficiently. Their role will be to build up technical knowledge and provide project specific assistance in procurement and implementation.
- **Scottish Futures Trust** is funded by Scottish Government support public sector investment in infrastructure in Scotland. SFT has extensive commercial expertise in infrastructure financing, procurement and delivery into the public sector.
- **Energy Saving Trust in Scotland** deliver a number of schemes for Scottish Government including the District Heating Loan Fund, and the Warm Homes Fund that supports renewable district heating aimed at addressing fuel poverty.
- **Heat Mapping Programme** – through this programme, we have a programme manager working with local authorities across Scotland to implement heat maps in their areas. This is already being rolled out by Scotland’s 7 cities to help city-wide energy planning.
- **SEGEC** work with organisations across Scotland to encourage stronger engagement at a European and international level. They are working with a number of organisations to identify opportunities for European funding for district heating support programmes and capital investment.
- **Scottish Enterprise** and **Scottish Development International** are working with district heating projects to identify and exploit the opportunities for economic growth and have a key role in integrating public and private investment in district heating.
- **Scottish Government** will have a coordinating role in support for district heating and developing the District Heating Action Plan as part of our wider heat vision and Draft Heat Generation Policy Statement, which will be published by the end of the year.

District heating projects are being developed by public, private, community and social housing organisations and Heat Network Partners deliver a number
of Scottish Government funded initiatives targetted at these sectors as outlined above. The role of the **Heat Network Partnership for Scotland** will be to co-ordinate support for district heating projects, district heating development and co-ordinating exchange and sharing of good practice.

This network will provide support at all stages, from strategic planning to procurement and implementation, and will have a secretariat to coordinate actions and outputs. Figure 1 below outlines the key organisations involved and sets out their core project support roles.

The Heat Network Partnership will also provide a focus for building links with other key partners including the UK Government’s Heat Network Delivery Unit, industry bodies such as the CHPA and initiatives such as Heat in the City which is working with vanguard local authorities across the UK.

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<td>5. Scottish Government to initiate <strong>Heat Network Partnership for Scotland</strong>.</td>
<td>In progress</td>
<td>Initial Meeting – June 2013</td>
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Scottish Government
Heat Mapping Programme
Resource Efficient Scotland
Energy Saving Trust
Scottish Future Trust
Scottish Enterprise
SEGEC

UK Government
• District Heating Support Unit

Local authorities
• Scottish Cities Alliance
• City/LA DH Teams
• COSLA

Other agencies
• SEPA
• Forestry Commission Scotland

Industry
• CHPA
• IET

Finance
• Scottish Green Investment Portfolio
• REIF
• UK GIB

Other
• Heat in the City

STRATEGIC PLANNING
COORDINATING DELIVERY OF DISTRICT HEATING ACTION PLAN
PROJECT DEVELOPMENT

Primary role
Support role

- Strategic planning
- Coordinated support programme
- Knowledge sharing
- Share best practice
- Identify collaborative opportunities
- Share best practice
- Heat mapping data
- Identify financial support for feasibility
- Share best practice
- Technical advice and support
- Technical standards
- Share best practice
- Advice and support
- Identification of funding opportunities
- Coordinated investment pipeline
- Advice, support
- Standard documents, business models
- Monitoring and learning
- Data capture and mapping
- Case studies
Recommendation 5: The Scottish Government to support district heating champions with appropriate skills in local authorities with a demonstrable commitment to district heating; such support to be available for a period of at least three years, again reflecting the long development cycles of district heating projects.

The Scottish Government recognises the important role that has been played by key individuals within local authorities and other organisations, acting as champions for district heating. It is also important that a dedicated district heating role is embedded within the key organisational structures and supported by a commitment from the local authority to support these roles and the development of district heating.

Each local authority has different organisational structures, skills and resource needs. Through our Heat Mapping Programme we are developing a better understanding of the key stakeholders across local authorities and existing initiatives and strategies which will support district heating, for example in Scotland’s cities through the Scottish Cities Alliance Sustainability Group. We will continue to monitor the situation to identify where additional resources and skills may be required, on a case by case basis, and consider how best to ensure that we support capacity building within local authorities themselves.

As part of the Call for Evidence on funding (see Action 19), we will also ask local authorities to consider where there are barriers that could be addressed by additional support either through external support from the Heat Network Partnership or through direct support to local authorities.

Next Steps:  
6. Scottish Government to monitor resource requirements through Heat Mapping Programme. 

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**Recommendation 6:** The Scottish Government and local authorities to take forward heat mapping of Scotland as a priority with the aim of completing all local authority heat maps by September 2013.

The Scottish Government is committed to taking forward heat mapping, having funded pilot Heat Maps for the Highland Council, Perth & Kinross Council and Fife Council in 2011 and 2012. The Heat Mapping Programme for Scotland is ensuring that the maps are being built on readily accessible local data sources and consideration is being given to ensuring they can be updated on an agreed cycle. Using local government GIS to host the maps, allows local data (such as local development plans) and priorities to guide decisions.

This is big and challenging programme, making sure that heat maps will contribute effectively to local decisions and to build capacity in local authorities for their use, at the same time supporting national strategies and targets, including the HGPS. We intend to complete a significant proportion of the heat mapping work by October 2013 and will continue to support the remaining Scottish local authorities to roll-out of heat maps with the intention of creating a detailed representation of the entire country by March 2014.

Next Steps:
7. Scottish Government to roll out Heat Mapping Programme.

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Fife Council’s Heat Map showing heat demand in North Dunfermline, with existing (red) and planned (yellow) district heat network.
Recommendation 7: The Scottish Government and other public bodies such as local authorities, NHS Scotland and the higher education sector to adopt a policy of connecting their estates to district heating schemes.

As set out in the response to Recommendation 3, the Scottish Government recognises the importance of the public sector estate in transforming the district heating market. We will take forward this recommendation in conjunction with Recommendation 3, to review what policies are already in place and provide further guidance where required.
Recommendation 8: COSLA and the SFHA should hold seminars on district heating for senior local authority and housing association managers respectively. The Scottish Government should hold similar seminars for other key public sector stakeholders. Support for these seminars to be provided by the district heating industry (practitioners on the Commission indicated willingness to do this).

Scottish local authorities are committed to their duties under the Climate Change (Scotland) Act 2009 and correspondently seek efficiencies to reduce carbon and costs through carbon management programmes. Councils including Fife, Shetland and Aberdeen are already leading on district heating projects.

Highland Council, Perth & Kinross Council and Fife Council are amongst the councils that have so far been supported by the Scottish Government on heat mapping. COSLA will work with relevant partners such as the Sustainable Scotland Network and Resource Efficient Scotland to disseminate the value of heat mapping to local authorities. COSLA recognises that there is best practice that can be shared and that an opportune time for this may be in correspondence with the completed participation of Phase 1 and Phase 2 of the Scottish Government’s heat mapping programme. COSLA will engage with the Heat Network Partnership for Scotland to ensure continued promotion of information and best practice in district heating.

Housing associations and co-operatives have already led on the development of district heating schemes in Scotland, with schemes installed for example West Highland Housing Association in Oban, Lochalsh & Skye Housing Association in Portree and Cube Housing Association in Glasgow. The SFHA is working with a number of housing associations to raise awareness of the opportunities for district heating. In February, the SFHA, housing associations and local authority housing officers met with representatives of the District Energy Partnership on a visit to Scotland.

Through its Warm Home Fund, the Scottish Government is actively promoting the opportunities for both microgeneration and renewable district heating to Registered Social Landlords to enable them to develop renewables for their housing stock. SFHA and Scottish Government are also in discussions regarding potential social housing data to support heat mapping.

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<th>8. Further seminar programme to be considered by Heat Network Partnership.</th>
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**Recommendation 9:** The **Scottish Government** to commission appropriate standard legal and contractual document templates for district heating projects.

The Scottish Government agrees that the costs of drawing up legal and contractual documentations can be onerous and costly, and an additional barrier to district heating. The first stage is understanding the type of documents needed, therefore the **Scottish Futures Trust** commissioned work to look at the types of business models for public sector energy efficiency and district heating.

A number of guidance documents have been developed such as the [London District Heating Manual](#), and other documentation has been generated through programmes such as Community Energy Programme and the District Heating Loan Fund managed by the Energy Saving Trust and other district heating projects.

The **Heat Network Partnership for Scotland** will bring together the expertise across a number of organisations to build on existing documents for the public sector on district heating and elsewhere. In addition, industry bodies for district heating such as the CHPA and UKDEA have a key role to play and are seeking to address these issues, particularly consumer protection. The CHPA have set out draft proposals for an Independent Heat Customer Protection scheme which they will develop over the coming year\(^7\). The Scottish Government will continue to engage with the UK Government and with industry on the development of industry-led consumer protection.

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<td>9. SFT to publish report on public sector business models including district heating.</td>
<td>For publication</td>
<td>June 2013</td>
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<tr>
<td>10. Heat Network Partnership to build library of existing documents and new requirements.</td>
<td>Ongoing</td>
<td>TBC</td>
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<tr>
<td>11. Scottish Government to liaise with UK Government and industry on standardisation of legal and contractual documentation.</td>
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\(^7\) CHPA, 2013. [Independent Heat Customer Protection scheme – Draft Proposals](#)
**Recommendation 10:** The Scottish Government should ensure that district heating companies have the same wayleave and access rights as other utilities.

The Scottish Government recognises the major infrastructure needed for district heating bring new requirements for access for maintenance and repair. However, there is currently no central regulation or licensing of district heating companies, so this recommendation will be consider in parallel with **Recommendation 14** on the licensing of district heating.

District heating pipework being laid for the Commonwealth Games Village in Glasgow.
PLANNING AND REGULATION

**Recommendation 11:** The Scottish Government should issue guidance on both national and local aspects of planning for district heating. Local authorities should designate areas based on heat maps where district heating would be the presumption for new developments or refurbishments. The district heating industry should support seminars on district heating planning issues for planning practitioners and stakeholders (practitioners on the Commission indicated willingness to do this)

The Scottish Government recognises the importance of strategic planning to support uptake of district heating. As set out in our response to **Recommendation 6**, we are working with local authorities on heat mapping to support strategic planning for heat at a local level.

This recommendation is also timely as the consultation process for the next National Planning Framework 3 (NPF3) and Scottish Planning Policy (SPP) began in autumn 2012. The NPF3 Main Issues Report and Draft SPP were published on 30 April 2013 for consultation. The consultation documents are available on the Scottish Government website and the deadline for response is 23 July 2013.

**The NPF3 Main Issues Report:**

- sets out the Scottish Government’s ambition, as stated in the Outline Heat Vision for Scotland, for a largely decarbonised heat sector by 2050, with significant progress made by 2030;
- highlights the opportunities to use heat mapping to help identify the strategic opportunities for district heating and cooling;
- promotes greater use of renewable sources of heat energy and recovery of ‘waste’ heat;
- asks how NPF3 could go further in supporting a spatial framework to help achieve our ambition of decarbonising the heat sector and guiding the necessary infrastructure investments?

**The Draft SPP** sets out recommendations that:

- development plans should use heat mapping to consider the benefit of allocating and co-locating heat supply and demand;
- development plans should support heat networks where they are possible;
- development plans should support heat networks using non-renewables until it is possible to connect to low carbon solutions through renewables.

In addition, online advice on Planning and Heat has been published following publication of the NPF3 Main Issues Report and draft SPP.
The consultations include a number of key questions on district heating and the Expert Commission will be asked to comment on the proposals.

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<td><strong>12. Heat Mapping Programme</strong> to include guidance and training on heat mapping for local authorities</td>
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<td><strong>13. The NPF3 Main Issues Report</strong> and <strong>Draft SPP</strong> will be published for formal public and stakeholder consultation.</td>
<td>Consultation</td>
<td>Closes 23 July 2013</td>
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<td><strong>14. Planning and Heat online planning advice</strong> to be published alongside NPF3 and SPP</td>
<td>Guidance now published</td>
<td>15 May 2013</td>
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**Recommendation 12:** Procurement Scotland/Scottish Government to issue guidance which defines how the public sector can sign up to long term energy supplies from district heating whilst still demonstrating value on a whole life cost basis.

Guidance on the use of Framework Agreements was published by Scottish Procurement in May 2010. The European Commission has advised that call-off contracts, as well as frameworks themselves, should not last for more than four years.

However, there is no express legislative restriction on the length of call-off contracts under a framework agreement. The length of call-off contracts, as with other contracts, should be appropriate and proportionate to the subject matter of the purchase in question and should reflect value for money considerations. The duration must be determined based upon a number of factors including the subject matter of the contract in question, value for money and industry-norm contracts.

This is different for the Framework Agreement itself, as legislation states that the duration of a Framework Agreement should not exceed 4 years unless “exceptional circumstances” exist.

Scottish Procurement has recently put in place a Framework Agreement for the supply of Biomass Energy Efficiency Contracts. The Framework duration is 2 years with the potential to extend a further 2 years to make a total of 4 years for the Framework. The individual call off contracts will have a duration which is significantly longer due to the nature of the requirement. The Government Procurement service has also recently placed a long term power purchase agreement as part of its Energy for Growth Strategy and the ITT documents are available on the Cabinet office website.

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<td>15. Heat Network Partnership to share best practice and provide guidance on procurement.</td>
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**Recommendation 13:** **Procurement Scotland** to set up a framework contract for district heating consultants who meet defined standards and prices.

Scottish Government supports the need for greater standardisation and confidence in the consultancy work carried out, particularly for feasibility studies. The first step is to set out what the requirements and specifications should be for a framework. The Scottish Government will therefore commission a review of previous work, particularly where feasibility studies have been carried out including feedback from the commissioning organisation on lessons learned.

Once this work is completed we will consider whether a centralised framework or other guidance is the best way to ensure consultancy contracts for district heating deliver the necessary results.

**Next Steps:**
16. Scottish Government to commission review of feasibility work to set out best practice and guidance on commissioning.

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<tr>
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<td>Specification – May 2013</td>
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<td>Completion – September 2013</td>
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**Recommendation 14:** The **Scottish Government** should create a licensing body for district heating or add this to the responsibilities of an existing agency or organisation. Licences should be issued only to suppliers who meet defined design and operating standards and use a standard heat supply agreement which contains robust clauses guaranteeing supply and customers’ rights for all tenancies and provides full transparency on price. The **Scottish Government** should also commission work to define appropriate technical standards for design of district heating systems and for operating standards for heat only district heating.

The Scottish Government supports the recommendation for licensing of district heating based on defined design and operating standards, potentially within the existing responsibilities of Scottish Government agencies. We also welcome industry initiatives such as the CHPA’s Independent Heat Customer Protection, setting out proposals for an industry-led consumer protection scheme, across the UK. IET Standards have also engaged with government and industry on the development of a Code of Practice for Heat Network Design, Installation, Operation and Maintenance.

We recognise the need to minimise any regulatory burden on a developing sector, while ensuring licensing delivers protection for Scottish consumers. We will therefore continue to engage with industry and the UK Government on the development of industry codes of practice at Scottish and UK level and explore with existing regulatory bodies the scope for development of a licensing scheme.

On technical standards, Scottish Government will continue to engage in discussion with CHPA, UKDEA, IET Standards and the UK Government on the development of codes of practice for district heating (see also **Recommendation 9**).

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<tr>
<td>17. Scottish Government will continue to engage with UK Government and with industry on standards and regulation.</td>
<td>Ongoing</td>
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<td>18. Scottish Government to explore with existing regulatory bodies the scope for development of licensing.</td>
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**Recommendation 15:** The Scottish Government to consider the case for relief from business rates for district heating projects serving only domestic properties and partial exemption for those serving a mixture of domestic and non-domestic properties in line with the proportion of domestic properties connected to the network.

The Scottish Government has considered this recommendation, which needs to be set in the context of the importance of business in funding Councils to provide services across Scotland, including services to support businesses.

The Scottish Government's view is that the 2010 amendments to the regulations on district heating, along with exemption available by central Government for charitable bodies and local authority discretionary exemptions for not for profit organisations, which could apply to many social housing projects already address the issues raised in this exemption.

In addition, the Scottish Government recently consulted on business rates, including the reliefs offered (details available on the Scottish Government’s website). The consultation sought views on how the rating system can support business; and how to improve the transparency and streamline the operation of the rating system, whilst still raising the revenue to deliver the services on which businesses rely. The consultation closed on 22 February 2013 and the Expert Commission’s recommendations were provided to the consultation team.
**Recommendation 16:** The Scottish Government to ensure that SEPA have the power to require producers of significant amounts of heat to investigate options for capture and use of their waste heat and to facilitate the supply of waste heat to a network where this is economically viable.

The Scottish Government has asked that SEPA undertake a review of its powers, the landscape of regulatory change underway, and what options for framing further powers might exist. SEPA will provide a report to Scottish Government by July 2013.

The Energy Efficiency Directive sets out a requirement that after 5 June 2014, new or refurbished electricity generation and industrial plants will, subject to certain exemptions, be required to carry out a cost benefit analysis on heat use. Larger district heating networks will also need to carry out a cost benefit analysis where potential industrial heat sources are available. Scottish Government is working with the UK Government on transposition of the directive into UK and Scottish legislation where required.

**Next Steps:**

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<tr>
<td>19. SEPA to report to Scottish Government on relevant powers</td>
<td>In progress</td>
<td>Report - July 2013</td>
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<tr>
<td>20. Scottish Government to transpose EED Article 14</td>
<td>In progress</td>
<td>Implementation – 5 June 2014</td>
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FUNDING

Recommendation 17: Scottish Government to consider providing initial development funding through either grants or loans to take projects forward in the early stages to the point where a business case can be demonstrated. The existing Scottish Government district heating loan scheme to be continued and expanded. Scottish Government to ask the Scottish Futures Trust to investigate options for public funding or underwriting for heat mains and oversizing. Scottish Government support through loans or grants for connections to district heating networks where such support is not available through the ECO.

The Scottish Government welcomes the input from the Expert Commission on funding for district heating projects. There is a complex funding landscape across renewable and non-renewable district heating, compounded by the fact that large-scale district heating necessarily cuts across support targeted at specific sectors – domestic, industrial and public sector.

The Heat Network Partnership for Scotland will bring together funding streams which can provide initial development funding for public and private sector resource efficiency, including district heating, social housing through the Warm Homes Fund and Home Energy Efficiency Programme, ECO and the Green Deal, and specific district heating support through the District Heating Loan Scheme.

For capital support, we are committed to continuing the District Heating Loan Scheme, and both the £50 million Warm Homes Fund and £103 million Renewable Energy Investment Fund have identified district heating as a priority area. The Heat Network Partnership will work closely with the Scottish Green Investment Portfolio (SGIP) to identify where support is needed to develop investment opportunities in district heating for both REIF and the Green Investment Bank.

We also recognise the potential need for capital funding for core infrastructure, but further work needs to be done both at a local level to identify the scale and nature of the funding gap, ownership of infrastructure and, at a city level, the development of business models and infrastructure needed to integrate individual projects into a city-wide network.

As set out in the response to Recommendation 1, the HGPS will help to set a clear framework for infrastructure investment in district heating. Within that framework, the Scottish Government will ask the Heat Network Partnership through its engagement programmes with projects to consider the level and nature of investment needed in core infrastructure to unlock the major investment opportunities for district heating.
Over this year we will build up better picture of the strategic infrastructure needs through the Heat Mapping Programme for Scotland, the Heat Generation Policy Statement and carrying out additional work on public sector building as set out in response to Recommendation 3. We also need to have a better understanding of the timing of investments, given the long timescales for design, specification, financing, procurement and implementation of large-scale complex district heating projects. The Scottish Government will therefore issue a formal call for evidence on funding later this year.

Next Steps:

21. Heat Network Partnership to build up data and recommendation on funding gaps  
   Status: Not started  

22. Scottish Government to issue call for evidence on funding for district heating  
   Status: In development  
   Timing: Summer 2013

The Old Pultney Distillery is heated by steam from Ignis Wick Ltd’s biomass district heating scheme, which also serves nearly 200 homes in Wick. (Photo courtesy of Inver House Distillers Ltd)
The Scottish Government thanks the Expert Commission for the work done on the recommendations in its report and agreed that the expertise represented by the group can provide an important role in the development and review of its district heating vision, road-map and policies.

As set out in the Next Steps below, the Scottish Government will be engaging with stakeholders on development of the Heat Vision for Scotland and HGPS, of which the District Heating Action Plan is a key part.

Over the coming year therefore the Scottish Government would ask the Expert Commission to convene again to participate in the public engagement process for the HGPS to take place this summer and review the next steps under the District Heating Action Plan.

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<td>23. Scottish Government to convene a further meeting of the Expert Commission on District Heating</td>
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