

# **Update on Renewable Heat Target and Action - 2017**

**October 2017**

## UPDATE ON RENEWABLE HEAT TARGET AND ACTION – 2017

In June 2015 the Scottish Government published its [Heat Policy Statement Towards Decarbonising Heat: Maximising the Opportunities for Scotland](#). This sets out how Scotland might use less energy for heat, and how low carbon heat can reach more householders, business and communities and a clear framework for investment in the future of affordable low carbon heat in Scotland in order to largely decarbonise the heat system by 2050.

The *Heat Policy Statement* and the [2020 Routemap for Renewable Energy in Scotland](#) replaced the *Renewable Heat Action Plan*, (which was [updated in 2010, refreshed](#) in 2011 and subsequently subsumed into the *2020 Routemap*).

The *Climate Change (Scotland) Act 2009* requires Scottish Ministers to report regularly on the progress towards meeting the target to deliver 11% of non-electrical heat demand from renewable sources by 2020. This complements the energy efficiency target to reduce the total final energy consumption in Scotland by 12% (against a base line of the average energy consumption in 2005-07) and contributes to the delivery of our world-leading statutory targets to reduce greenhouse gas emissions.

This report fulfils the requirement in the *Climate Change (Scotland) Act 2009* to report on the *Renewable Heat Action Plan*.

### Scotland's draft Energy Strategy

The draft [Scottish Energy Strategy](#), consulted on between January and May 2017, provides a 2050 vision for a modern, integrated, low carbon energy system that delivers reliable supplies of energy at affordable prices to consumers in all parts of Scotland. The vision in the strategy builds upon the existing economic strengths of the energy sector in Scotland, whilst protecting energy security and tackling fuel poverty. Renewables and low carbon technologies play a key part in this. We are committed to maintaining Scotland's world leading position as the place for renewable energy development and deployment, which is why we consulted on a proposed new 2030 target of 50% of Scotland's total energy consumption to be met by renewable energy.

Related consultations, including on Scotland's Energy Efficiency Programme, Local Heat & Energy Efficiency Strategies and Regulation of District Heating, were also published in January 2017.

The Scottish Government plans to publish the final Energy Strategy before the end of 2017. Thereafter, we will publish an annual statement recording the progress made towards the priorities and targets set in the final Scottish Energy Strategy.

### Progress towards the renewable heat target

In 2016 an estimated **1.710 GW of renewable heat capacity** was operational in Scotland, producing an estimated **3,752 GWh of renewable heat**. This represents a **13% increase** in renewable heat capacity and a **11% decrease** in heat generated

from renewable sources compared with 2015. The increase in renewable heat capacity was largely driven by 'small to medium' sized sites and installations supported by the Renewable Heat Incentive, though 'micro' and 'large' installations also saw an increase. This reduction in output was primarily due to the closure of the Tullis Russell paper mill in Fife, a significant user of renewable heat. Without these reductions, renewable heat would have increased.

2015 is the most recent year that data for non-electrical heat demand is available, and this was published at the end of September 2017. Therefore, estimated progress for 2016 is shown using a range of heat demand scenarios. These **estimates suggest that, in 2016, Scotland produced enough heat from renewable sources to meet between 4.8% and 5.0% of non-electrical heat demand.**

This is a decrease on 2015, for which renewable heat generation equated to 5.4% of Scotland's non-electrical heat demand and significantly up from 3.8% in 2014.

In 2016, the capacities of 'micro' and 'small to medium' installations increased by 11% and 30% respectively, and the total outputs of these installations increased by 21% and 35% respectively. The majority of both capacity and output came from biomass primary combustion and biomass combined heat and power. Whilst biomass continues to dominate there has also been considerable growth in other technologies. In 2016, heat pump output increased by 21%, whilst energy from waste output increased by 78% (driven mostly by an increase in 'biomethane to grid' output), when compared with 2015.

Heat demand in Scotland has been steadily falling over the last decade, due to improved energy efficiency and increases in average annual temperatures. This decrease in demand means that renewable heat meets a greater proportion of total heat demand than would otherwise have been the case. Between 2008-09 and 2015, reductions in heat demand have contributed to around 85% of progress towards the renewable heat target while the remaining progress has been due to increased renewable output.

This data is drawn from the *Renewable Heat in Scotland, 2016* report, published by the Energy Saving Trust on 31 October 2016, which provides further detail: [energysavingtrust.org.uk/renewable-heat-in-scotland2016](http://energysavingtrust.org.uk/renewable-heat-in-scotland2016)

### **Update on action**

The *Heat Policy Statement* reiterated our heat hierarchy: reducing the need for heat through energy efficient buildings; supplying heat more efficiently and at least cost to consumers, such as development of district heating and the use of unused excess heat through heat recovery; and then using low carbon and renewable heat. All three aspects of the hierarchy have relevance to the renewable heat target. Both reducing the demand for heat and increasing the useful heat provided increase the percentage of renewable heat provided. Efficient supply systems such as well-designed and operated district heating can help to deliver renewable heat produced to more users.

The *Heat Policy Statement* retains our ambition to deliver district or communal heating to 40,000 homes by 2020. The most recent data available indicates that at least 25,800 homes are connected to district and communal heating in Scotland.

The following table sets out some of our key activities against the actions contained in the *Heat Policy Statement*, with a focus on those since early 2016. For any actions prior to this, please refer to previous *Update on Renewable Heat Target and Action* reports.

Activity	Progress
<p>Improve accuracy of data used in calculating the heat target and progress towards meeting it</p>	<p>In June 2013 an improved methodology was proposed by Scottish Government for reporting on the target, developed in consultation with stakeholders. The <a href="#">Renewable Heat in Scotland, 2014</a> report (published by the Energy Saving Trust – EST - in October 2015) used aggregated RHI data provided by UK Government for the first time, giving a more comprehensive picture of renewable heat capacity and useful output.</p> <p>Enforcement of the <i>Heat Network (Metering and Billing) Regulations 2014</i> provides a further source of data which may improve estimates of renewable heat. Early estimates of heat supplied through shared heat networks in Scotland was published in <a href="#">Energy in Scotland 2017</a> in February 2017. The Scottish Government and EST are working to incorporate heat network data into the renewable heat database to further improve the coverage of evidence used to monitor progress towards the renewable heat target.</p> <p>The UK Combined Heat &amp; Power Quality Assurance (CHPQA) Programme began in 2001. The scheme is voluntary, however, various government tax breaks and incentives require CHP installations to be a member of the CHPQA scheme to be eligible. In the 2016 update EST included aggregate CHPQA data across the time-series.</p>
<p>Develop a heat map for Scotland</p>	<p>The methodology informing the <a href="#">Scotland Heat Map</a> was amended in 2015 to incorporate official statistics on energy consumption to provide a more robust estimate of heat demand. Energy supply data was also updated to provide a more complete picture of energy generation in Scotland. (See <a href="#">Update on Renewable Heat Target and Actions 2016</a> for details.)</p> <p>Local authorities and other public sector bodies with access continue to receive updates of the Heat Map. The latest version of the Heat Map was issued to local authorities in August 2017.</p> <p>To date, feedback from stakeholders confirms a wide and</p>

	<p>useful application. Resource Efficient Scotland have supported use of the Heat Map, producing around 12 district heating feasibility studies and over 70 opportunity assessments, and in delivering workshops to local authorities to support development of district heating strategies. The Heat Map will also be a vital tool in helping local authorities in developing their Local Heat &amp; Energy Efficiency Strategies, under Scotland's Energy Efficiency Programme pilot scheme (see below).</p>
<p>Establish Heat Network Partnership for Scotland</p>	<p>Established in 2013, the <a href="#">Heat Network Partnership</a> for Scotland (HNP) is working closely with a number of projects on the technical, financial and procurement aspects of heat networks, and with local authorities on the strategic development of district heating. In 2016-17, the HNP:</p> <ul style="list-style-type: none"> <li>• Continued to deliver our <a href="#">Local Authority Strategy Support Programme</a>, guiding 6 participating local authorities through the process of developing a district heating strategy, or the district heating element of a wider strategy. Workshops covered heat mapping, opportunity assessment, planning, delivery structures and stakeholder engagement.</li> <li>• Produced a <a href="#">District Heating Sponsors Guide</a>, to guide senior decision makers through the processes for developing a district heating project.</li> <li>• Developed a series of <a href="#">Technology Factsheets</a> to assist district heating developers in identifying the most appropriate solutions available.</li> <li>• Assisted the Scottish Government in developing support to produce Local Heat &amp; Energy Efficiency Strategies under the Scotland's Energy Efficiency Programme (SEEP) pilot programme (see below).</li> </ul>
<p>Undertake research into the potential for deep geothermal heat in Scotland</p>	<p>On 30 August 2017, the Cabinet Secretary for Economy, Jobs and Fair Work announced the investment of £5.3 million to turn a former Kilmarnock bottling plant into a low carbon development, which will include hundreds of affordable homes. The £5.3 million funding package included £1.8 million from the Low Carbon Infrastructure Transition Programme towards the costs of a geothermal district heating system, the first large scale deep geothermal heating system in Scotland and the first in the UK in nearly 30 years.</p>
<p>Progress the goals of the Low Carbon Infrastructure Transition Programme</p>	<p>The Low Carbon Infrastructure Transition Programme (LCITP), supported by European Structural Funds, was launched in March 2015. LCITP is a Scotland-wide, collaborative cross-sector Project Development Unit with a budget of £76 million until 2018. LCITP focuses on accelerating the development of low carbon infrastructure projects to investor readiness stage.</p>

	<p>In September 2017 it was announced that a further budget of £60 million until 2020 will be made available through LCITP.</p> <p>To date, LCITP has provided catalyst and development financial support to 51 low carbon projects covering a wide range of technologies, including elements of low carbon and renewable heat. Since early 2016, LCITP has provided around £26 million capital support to 10 renewable heat demonstration projects in Scotland, which are expected to be operational by October 2018.</p> <p>LCITP also has launched a series of Calls targeting specific technologies and low carbon sectors, including (since 2016):</p> <ul style="list-style-type: none"> <li>• 2016: LCITP supported the SEEP pilot programme (see below).</li> <li>• 2016: Standalone Low Carbon Energy Demonstrator Solutions Call sought projects that to demonstrate the commercial application of technologies which support decentralised and distributed low carbon energy solutions and energy security in Scotland. One project was supported with capital funding and is now operational.</li> <li>• 2016: The Transformational Low Carbon Demonstrator Invitation is designed to encourage innovation of both design and business models, along with aggregation at scale and acceleration of large scale transformational low carbon infrastructure projects in Scotland. 13 projects received over £43 million and are due to be operational by October 2018.</li> <li>• 2017: The Innovative Local Energy Systems Call is designed to support and accelerate the development and delivery of innovative, local low carbon energy opportunities across Scotland. In particular, it aims to support solutions in rural and remote parts of Scotland, smaller towns and settlements, and areas that are off gas grid. Offers of support for 14 projects, focusing on utilising a variety of technologies for the provision of heat are in the process of being finalised.</li> </ul>
<p>Continued support and promotion of the domestic and non-domestic Renewable Heat Incentive (RHI) while working to increase householder awareness of, confidence in and uptake of small scale</p>	<p>Scottish Government actively promotes the GB-wide Renewable Heat Incentive (RHI) scheme which has been confirmed to continue until 2020-21. To maximise the take-up of the RHI to the benefit of Scottish households and businesses, the Scottish Government:</p> <ul style="list-style-type: none"> <li>• funds an interest-free Home Energy Scotland Loan Scheme up to the value of £35,000 for both energy efficiency measures and renewable technologies via the Energy Saving Trust (EST). The scheme has</li> </ul>

<p>heat generation technologies</p>	<p>supported 1,284 renewables systems with a value of £10.056 million from April 2015 until August 2017.</p> <ul style="list-style-type: none"> <li>• funds the SME Loan Scheme which provides loans to business up to £100,000 for the installation of efficiency measures and renewable technologies via Resource Efficient Scotland (RES). Since inception to August 2017, 864 projects have been supported resulting in estimated lifetime energy savings of 330 GWh and financial savings of over £36 million.</li> </ul> <p>The UK Government published its response to an open consultation on proposed RHI scheme changes in December 2016. Delays in implementing these changes have resulted in some uncertainty amongst Scottish businesses, with expected delays to capital investment until clarity in legislative changes and timeframes is known. Despite this, Scotland continues to punch above its weight in its share of both domestic and non-domestic RHI accreditations. Up to the end of August 2017, there has been:</p> <ul style="list-style-type: none"> <li>• 11,566 accreditations in Scotland to the domestic RHI scheme, accounting for 20% of all accredited domestic installations GB-wide, well above pro-rata.</li> <li>• 3,288 accreditations in Scotland to the non-domestic RHI scheme accounting for 19% of all accredited installations GB-wide, again, well above pro-rata.</li> </ul> <p>The Scottish Government continues to support work with stakeholders via EST and RES to encourage micro-generation uptake to support in the decarbonisation of heat. Support has included:</p> <ul style="list-style-type: none"> <li>• Home Energy Scotland specialist advisors provided 2,375 in-house visits from April 2016 until June 2017 in Scotland to householders.</li> <li>• An estimated £8.9 million was received from FiT's and RHI funds from April 2016 until March 2017 from specialist advice given via EST/RES.</li> <li>• The Green Network of exemplar homes and businesses has 1,144 members as of March 2017.</li> </ul>
<p>Designation of energy efficiency as a National infrastructure priority and development of Scotland's Energy Efficiency Programme</p>	<p>The <a href="#">Infrastructure Investment Plan 2015</a> reaffirmed the designation of energy efficiency as a National Infrastructure Priority. The cornerstone of this will be <a href="#">Scotland's Energy Efficiency Programme</a> (SEEP) which will commence in 2018. As well as making our homes and businesses warmer, the programme will support our fuel poverty targets and bring clear economic benefits. It will be a co-ordinated programme to improve the energy efficiency of homes and buildings in</p>

	<p>the commercial, public and industrial sectors with an estimated overall investment of up to £10 billion required.</p> <p>The <a href="#">Programme for Government 2016-17</a> committed over half a billion pounds to SEEP over the next four years.</p> <p>Work on the programme is already underway. During the first phase of the programme we are focusing on delivering existing programmes more effectively, developing new pilot schemes, to test integrated delivery mechanisms for the domestic and non-domestic sectors. We are piloting approaches with local authorities between 2016-19. Phase 1 pilots helped local authorities to pilot new and innovative approaches to energy efficiency with community groups and businesses, helping reduce costs and improving warmth in homes, schools, hospitals and businesses. Phase 2 pilots continued this integrated approach and also include support to 12 local authorities to pilot different approaches in developing a Local Heat &amp; Energy Efficiency Strategy (or elements of).</p>
<p>In partnership with the Fuel Poverty Forum, implement the forum's workplan</p>	<p>Two independent short life groups (the Scottish Fuel Poverty Strategic Working Group and the Scottish Rural Fuel Poverty Task Force) were instructed by the Scottish Government in 2015 to look anew at the issues and make recommendations to inform our approach to tackling fuel poverty. The groups published their findings in October 2016, making over 100 recommendations. Our <a href="#">response</a> to those reports, set out our intention to develop a new fuel poverty strategy, including a new fuel poverty target, which we will consult on shortly and take forward in a new Warm Homes Bill.</p>



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