

Update on Renewable Heat Target and Action - 2019

October 2019

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The Climate Change (Scotland) Act 2009 requires Scottish Ministers to report annually on 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 baseline of the average energy consumption in 2005-07) and contributes to the delivery of our world-leading statutory targets to reduce greenhouse gas emissions.¹

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

Scotland's Energy Strategy

[Scotland's Energy Strategy](#), published in December 2017, set out the Scottish Government's vision for a flourishing, competitive energy sector, delivering secure, affordable, clean energy for Scotland's households, communities and businesses.

The vision is guided by three core principles:

- **A whole-system view** – broadening the focus of the Scottish Government's energy policy to include heat and transport, alongside electricity and energy efficiency – creating an integrated approach which recognises the effect that each element of the energy system has on the others.
- **An inclusive energy transition** – recognising that the transition to a low carbon economy over the coming decades must happen in a way that tackles inequality and poverty, and promotes a fair and inclusive jobs market.
- **A smarter local energy model** – enabling a smarter, more coordinated, approach to planning and meeting distinct local energy needs that will link with developments at the national scale.

The Strategy committed the Scottish Government to publishing an [Annual Energy Statement](#) in order to monitor delivery of the Strategy, the first of which was published in May 2019 alongside a new [Annual Compendium of Scottish Energy Statistics](#) (ACSES).

¹ 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 set the 11% renewable heat target. It was [updated in 2010, refreshed in 2011](#) and subsequently subsumed into the 2020 Routemap.

The Statement highlights the key developments in the sector which will have an impact upon our ability to deliver the Strategy, progress made to date, and key plans for the coming year and beyond.

The Energy Strategy set the target for the equivalent of 50% of the energy for Scotland's heat, transport and electricity consumption to be supplied from renewable sources by 2030. Latest figures from 2017 show that we are currently providing 19.1% of total energy through renewable sources.

Progress towards the renewable heat target

In 2018, an estimated 2.01GW of renewable heat capacity was operational in Scotland, producing an estimated 5,230GWh of useful renewable heat. This represents a 4% increase in renewable heat capacity and a **14% increase in useful heat generated from renewable sources compared with the 2017 figures**. This shows an upward trajectory in the use of renewable heat in Scotland.

In 2018, Scotland produced enough heat from renewable sources to meet an estimated 6.3% of non-electrical heat demand. This is an increase from 5.5% in 2017.

As in 2017, the majority of this heat capacity and output came from biomass primary combustion and biomass combined heat and power (CHP). Combined, these technologies account for 83% of renewable heat capacity and 74% of output. The increase in output seen in 2018, compared to 2017, is largely due to newly operational biomass and energy from waste sites, as well as an increase in heat output from existing biomass sites.

Whilst biomass dominates renewable heat generation, there has also been a small amount of growth, since 2017, in output from heat pumps and energy from waste facilities.

Progress towards the 11% target also depends on changes in non-electrical heat demand (whether renewable or not); if, for example, renewable heat output remains constant but heat demand increases, progress towards the 11% target would decrease. Between 2008 and 2015 heat demand fell due to increased energy efficiency and increases in average annual temperatures. Heat demand has, however, increased each year since 2015.² This emphasises the continued importance of energy efficiency and minimising heat demand where possible.

This data is drawn from the [Renewable Heat in Scotland 2018](#) report, published by the Energy Saving Trust on 29 October 2019, which provides further detail.

² Increased energy consumption is not specific to Scotland; it has increased across the UK as a whole between 2016 and 2017 and in most European countries as well. <https://ec.europa.eu/eurostat/data/database>

Update on action

The *Heat Policy Statement* reiterated our focus to reduce 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 using low carbon and renewable heat. All three aspects have relevance to the renewable heat target. Both reducing the demand for heat from non-renewable sources and increasing the renewable supply of useful heat increase the percentage of heat demand provided by renewables. Efficient supply systems such as well-designed and operated heat networks can help to deliver the renewable heat produced to more users.

The *Heat Policy Statement* retains our ambition to deliver district or communal heating to 40,000 homes or more by 2020. The most recent data available indicates that approximately 29,600 homes are connected to district or 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 2018. For any actions prior to this, please refer to the previous Update on Renewable Heat Target and Action reports.

<u>Activity</u>	<u>Progress</u>
Improve accuracy of data used in calculating the heat target and progress towards meeting it	<p>The <u>UK Combined Heat & Power Quality Assurance (CHPQA) Programme</u> 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 of 'Renewable Heat in Scotland' the Energy Saving Trust (EST) included aggregate CHPQA data across the time-series for the first time, although it wasn't possible to break down the data by technology type and installation size category. These breakdowns were available for the 2017 CHPQA data included in EST's 2017 report.</p> <p>Scottish Government and EST continue to work with BEIS on improved access to data from the non-domestic Renewable Heat Incentive (RHI) to obtain a comprehensive picture of renewable heat output and capacity in Scotland. This year, for the first time, the Scottish Government has access to installation level data on the non-domestic RHI which has allowed a more thorough matching of the data to EST's renewable heat database and led to improvements in the accuracy of estimates of capacity and output.</p>

	<p>Similar improvements have also been seen in the processing of data from the CHPQA programme and the Micro-generation Certification Scheme (MCS), where reductions have been made in the incidence of double counting. Revised estimate figures for 2017 have been included in analysis to allow meaningful comparisons and further revisions will be made in future reports to help improve the accuracy of the series.</p> <p>Enforcement of the <i><u>Heat Network (Metering and Billing) Regulations 2014</u></i> provides a further source of data which improves estimates of renewable heat.</p> <p>An extract of Scottish Network data has been included in the renewable heat database for the second time in 2018, improving the coverage of evidence used to monitor renewable heat capacity and output in Scotland.</p> <p>The Scottish Government and EST will continue to incorporate updated heat network data into the renewable heat database as it becomes available. It is expected that increased use of this data source will be able to be made in 2020.</p>
<p>Develop a heat map for Scotland</p>	<p>The heat demand estimates that form the core of the Scotland Heat Map were updated in 2016 to incorporate the latest building characteristics and Energy Performance Certificate (EPC) data, as well as the latest official statistics on energy consumption. Energy supply data was also updated to provide a more complete and up-to-date picture of energy generation in Scotland.</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>Work is underway to provide an update of the heat map to local authorities early in 2020 with an initial focus on providing more up-to-date estimates of heat demand and on exploiting new sources of data, such as the Home Analytics database as well as non-domestic EPCs to provide greater confidence in the figures. Subsequent updates will expand on this to provide much greater coverage of data on heat networks, utilising data from the new heat metering and billing collection.</p>

	<p>To date, feedback from stakeholders confirms a wide and useful application of the map. Resource Efficient Scotland have used the Heat Map, in scoping and delivering around 20 district heating feasibility studies, in completion of around 87 district heating opportunity assessments, and in developing and delivering workshops and more focussed support to local authorities and other stakeholders in the area of low carbon heat. The Heat Map has been a vital tool in helping local authorities to develop their approaches to creating Local Heat & Energy Efficiency Strategies, as part of Energy Efficient Scotland.</p>
<p>Progress towards wider heat decarbonisation</p>	<p>In this year's Programme for Government 2019-2020 we announced that we will consult on new building standards, to be introduced in 2021, and work with the construction industry to develop regulations for new homes consented from 2024 onwards.</p> <p>Our intention is that new homes from that date onwards must use renewable or low carbon heat, rather than fossil fuel boilers. For non-domestic buildings, our ambition is to phase in this approach from the same date.</p> <p>Through the Programme for Government we have also now committed to working with the wider public sector to develop a standard for new public sector buildings to ensure they are very low carbon and have low lifecycle costs.</p> <p>The Scottish Government continues to work to improve its knowledge about the factors influencing the technical feasibility of low carbon heating in Scotland's buildings- both domestic and non-domestic. To support this target, the Scottish Government has commissioned research to develop a set of archetypes for Scotland's existing residential building stock disaggregating them by the key attributes affecting the suitability of low carbon heating. Other research with the same objective has been commissioned for the non-domestic buildings of Scotland. These studies' outputs will inform the assumptions used in our climate change modelling and will enable a better understanding of how - and at what cost - the decarbonisation of heat can be achieved.</p> <p>In line with advice from the Committee on Climate Change (CCC), we are committed to publishing a Heat Decarbonisation Policy Statement in Summer 2020 setting out actions to decarbonise heat supply to buildings.</p>

	<p>We recently sought evidence and views on decarbonising the heat supply in off gas buildings through our Call for Evidence, which closed in June 2019. This call for evidence included questions on earlier advice from the CCC which recommended banning gas connections to new buildings.</p>
<p>Progress the goals of the Low Carbon Infrastructure Transition Programme</p>	<p>The Low Carbon Infrastructure Transition Programme (LCITP), which launched in 2015, is a collaborative partnership led by the Scottish Government, working with Scottish Enterprise, Highlands and Islands Enterprise, Scottish Futures Trust and Resource Efficient Scotland.</p> <p>It is co-funded by the European Regional Development Fund and focuses on supporting the acceleration of low carbon infrastructure projects across the public, private and community sectors.</p> <p>The programme aims to stimulate commercial interest and investment and maximise Scotland’s vast potential in the low carbon sector whilst contributing to the positive progress of the Scottish Government in reducing Scotland’s greenhouse gas emissions.</p> <p>Since March 2015, LCITP programme has awarded around £35 million of funding to 10 demonstrator projects supporting low carbon heat generation.</p> <p>As part of the Programme for Government the First Minister announced that to support Scotland’s response to the Global Climate Emergency, a Low Carbon Heat Fund, providing a minimum of £30 million support for local and industrial renewable heat projects would be launched. Applications for capital support closed in October 2019 and projects must be completed by 2022.</p>
<p>Introduce legislation on Heat Networks</p>	<p>The Scottish Government has strong ambitions for a growth in heat networks in Scotland and this is widely shared by the market and third sector organisations.</p> <p>We have set an ambition to have 40,000 homes connected to heat networks by 2020 and figures from December 2018 estimated that we were almost three-quarters of the way towards this ambition.</p> <p>The Scottish Government will bring forward a Heat Networks Bill in 2020. The Bill aims to contribute to our climate change ambitions by regulating heat networks. Heat networks have a key role to play in the decarbonisation of heat, and the Bill will stimulate the deployment of district and communal heating by</p>

	de-risking investment and increasing consumer awareness and acceptance.
Continued support and promotion of the domestic and non-domestic Renewable Heat Incentive while simultaneously working to increase householder awareness of, confidence in and uptake of small scale heat generation technologies	<p>Scottish Government continue to actively promote the GB-wide Renewable Heat Incentive (RHI) scheme which is due to end on 31 March 2021. UK Government have yet to advise what support will be available post current scheme closure. Scottish Government continue to request clarity on any future iteration of renewable heat subsidy for both the domestic and non-domestic market.</p> <p>To maximise the up-take of the RHI to the benefit of Scottish households and businesses, the Scottish Government :</p> <ul style="list-style-type: none"> • Provides expert and bespoke advice via the Renewables and Energy Efficiency Specialist Advice Service via the Energy Saving Trust and Home Energy Scotland helpline • Provides support through the District Heating Loan Fund and the Warm Homes Projects Fund which together have supported 49 renewable district heating projects with £11m, leveraging an additional £6.6m investment • Provides support through the Low Carbon Infrastructure Transition Programme (see above) • Funds an interest-free Home Energy Scotland Loan Scheme up to the value of £38,500 for both energy efficiency measures and renewable technologies via the Energy Saving Trust • 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 <p>The UK Government is currently working toward the closure of the current RHI scheme on 31 March 2021. Lack of clarity on support and financial subsidy post 2021 and a number of changes during the RHI scheme, including the introduction of a budget cap without tariff guarantees until much later, has resulted in uncertainty amongst Scottish businesses, with delays to capital investment.</p> <p>Despite this, Scotland continues to attract more than its pro-rata share of both domestic and non-domestic RHI accreditations. Up until the end of August 2019, there has been:</p> <ul style="list-style-type: none"> • 3,753 accreditations in Scotland to the non-domestic RHI scheme accounting for 19% of all accredited installations GB-wide, well above pro rata.

	<ul style="list-style-type: none"> • 14,047 accreditations in Scotland to the domestic RHI scheme, accounting for 19% of all accredited installations GB-wide, again, well above pro-rata.
Energy Efficient Scotland	<p>As part of our wider aims for Energy Efficient Scotland - the removal of poor energy efficiency as a driver of fuel poverty, and our ambitions for emission reductions - a second round of £3.5 million capital funding is being made available to social landlords across financial years 2019/20 and 2020/21 for decarbonisation activity. This will assist social landlords in maximising compliance with Energy Efficiency Standard for Social Housing post-2020 (ESSH2) which requires the number of socially rented homes to be achieving Energy Performance Certificate (EPC) Band B to be maximised by 2032, and for all socially rented housing to be at least EPC Band D for new lets from 2025.</p> <p>A consultation was launched in March 2019 to seek views on the impact of bringing forward the date of the long term target for homes from the current target date of 2040. Responses to that consultation are now being analysed and an analysis report and response will be published in due course.</p> <p>The Scottish Government will consult on actions to improve owner occupied housing, under Energy Efficient Scotland, this year.</p>
Introduce the Fuel Poverty Bill, and a new Fuel Poverty Strategy	<p>On 18 July 2019 the Fuel Poverty (Targets, Definition and Strategy) (Scotland) Bill received Royal Assent and is now an Act http://www.legislation.gov.uk/asp/2019/10/contents/enacted.</p> <p>The new Act sets out our ambition to eradicate fuel poverty and to ensure that by 2040: no more than 5% of households in Scotland are in fuel poverty; no more than 1% of households in Scotland are in extreme fuel poverty; and the median fuel poverty gap of households in fuel poverty in Scotland is no more than £250 in 2015 prices before adding inflation. It also includes interim targets at 2030 and 2035. By setting targets for reducing extreme fuel poverty and implementing a definition that is closely aligned to income poverty, we are prioritising households who need support the most. We will also include an uplift in the Minimum Income Standard for households in remote rural, remote small town and island areas, (with a separate uplift for islands) to reflect the higher cost of living in these areas and an expansion of the suite of enhanced heating regimes.</p> <p>We are developing an ambitious Fuel Poverty Strategy to tackle all the root causes of fuel poverty. As part of the Fuel</p>

	<p>Poverty Strategy we will be setting out the characteristics of fuel poor households and considering what changes could be made to our funded schemes to better target support and those who need it most.</p> <p>Warmer Homes Scotland is the Scottish Government's national fuel poverty scheme designed to help those households living in fuel poverty or at risk of fuel poverty through the installation of measures such as insulation and heating systems in their homes. Air source heat pumps have always been available under Warmer Homes Scotland and the number of air source heat pumps being installed has increased year on year. 122 air source heat pumps were installed in the 2018/19 operating year and 44 have been installed in the period up to 31st July in the 2019/20 operating year. Since 1 June 2019 additional renewable measures including ground source heat pumps, micro-wind, micro-hydro, micro-CHP have also been made available under the scheme.</p> <p>Since 2013, we have supported delivery of small numbers of air source heat pumps and other renewable heat measures through our funding for Area Based Schemes delivered by local councils. ABS is focused primarily upon insulation measures for 'hard to treat' properties but increasingly these projects include renewables to help achieve energy efficiency targets for housing, for example this year we are funding air source heat pump projects with both Glasgow City and Scottish Borders councils.</p>
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