

Scottish Renewables' written evidence to the House of Commons Business, Energy and Industrial Strategy Committee Call for Evidence on decarbonising heat in homes

About Scottish Renewables

Scottish Renewables is the voice of Scotland's renewable energy industry. Our vision is for Scotland leading the world in renewable energy. We work to grow Scotland's renewable energy sector and sustain its position at the forefront of the global clean energy industry. The sectors we represent deliver investment, jobs, social benefits and reduce the carbon emissions which cause climate change. Our members work across all renewable energy technologies, in Scotland, the UK, Europe and around the world. In representing them, we aim to lead and inform the debate on how the growth of renewable energy can help sustainably heat and power Scotland's homes and businesses.

Executive Summary

Scottish Renewables welcomes the opportunity to provide written evidence to the House of Commons Business, Energy and Industrial Strategy Committee inquiry into decarbonising heat for homes.

Scottish Renewables' written evidence focuses on the importance of renewable heat for delivering net-zero.

Our submission focuses on three key areas:

- The importance of a successor scheme to the Non-Domestic Renewable Heat Incentive
- Extension of the Green Heat Networks Fund
- The technologies needed to deliver renewable heat

Written Evidence

What has been the impact of past and current policies for low carbon heat, and what lessons can be learnt, including examples from devolved administrations and international comparators?

1. As set out in the UK Government's *Future Support for Low Carbon Heat* consultation, the Renewable Heat Incentive (RHI) has made a significant contribution to progress against renewable energy targets and carbon budgets.

The majority of the 7,600 low-carbon heat projects in Scotland to date have been supported by the RHI. The scheme has funded installations in off-gas grid buildings, new builds and heat networks, as well as in biomethane production.

2. Heat as our main use for energy continues to represent more than a third of UK emissions and requires greater support from the UK Government, not less. It is counterintuitive for the UK Government to have chosen to close the main initiative designed to support investment in low-carbon heat without the development and introduction of suitable alternatives.

The numerous changes to the RHI over its existence have resulted in a scheme which strikes an appropriate balance between the needs of investors, industry and consumers with the need to ensure value for money and wider objectives and assurances, such as air quality. To close the scheme now would be to lose the benefit of those lessons, unless they are incorporated into replacement schemes.

3. The limited proposals contained in *Future Support for Low Carbon Heat* mean that there will be no dedicated support for the use of low-carbon heat in the vast majority of non-domestic properties, which are either too large for the Clean Heat Grant or which will not fit the criteria for the Industrial Energy Transformation Fund, from April 2021. This can only result in a slowing of progress in the urgent task of decarbonising heat use. Whilst the consultation makes clear that the Clean Heat Grant and Green Gas Support Scheme are part of a wider package of support, there is no detail available on the detail of other interventions, what these will support, or how.

The consultation document states that the Non-Domestic Renewable Heat Incentive (NDRHI) is forecast to save some 113mtCO₂e over its lifetime, compared to the projected savings of around 23mtCO₂e for the proposals set out in the Future Support for Low Carbon Heat consultation. Given the need to accelerate progress to meet future carbon budgets Scottish Renewables does not accept this significant downscaling of government ambition, with 'successor arrangements' outlined in the Future Support for Low Carbon Heat abating around a fifth of the carbon emissions of the NDRHI.

It would be useful if the Clean Heat Grant (CHG) were to be amended and expanded to cover larger installations. We note the recent announcement by the UK Government on extending application deadlines for the NDRHI scheme by 12 months for eligible projects in light of the impact of Covid-19 on the private sector and this is welcome, however this is only for some existing projects not new applicants.

The restriction of support to projects below 45kW can only lead to a massive slowdown in investment in, and economic activity from, projects above that threshold.

4. The Renewable Energy Association Review 2020 has identified over 32,000 direct jobs in the heat pump, solar thermal, biomass boiler, biomass CHP and AD sectors in 2018, with a further 12,000 indirect jobs in ancillary services such as the production of biomass for fuel. The closure of the RHI will clearly reduce deployment and therefore employment across all aspects of the market, and while very small scale installations will be supported by the CHG this will only create a market for businesses at the smaller end of the scale.

It is therefore difficult to draw any other conclusion than that the closure of the RHI will result in the permanent loss of jobs in the parts of the market focused on medium and large-scale heat demand, and temporarily in the smaller scale end of the market. Given government ambitions for a green recovery from coronavirus and the need to achieve jobs stimulus, this is a retrograde step.

It could also potentially undermine the growth of employment in sectors which are finally starting to reach critical scale of deployment required to upscale manufacturing and deliver economies of scale, such as Ground Source and Water Source Heat Pumps.

5. As stated on page 11 of the consultation, larger schemes represent 'better value for money'. With the Clean Heat Grant purposefully focused on smaller projects in the absence of additional or amended proposals, there will be no support nor business case for investment in the projects which will deliver the best value for money.

What key policies, priorities and timelines should be included in the Government's forthcoming 'Buildings and Heat Strategy' to ensure that the UK is on track to deliver Net Zero? What are the most urgent decisions and actions that need to be taken over the course of this Parliament (by 2024)?

6. For the reasons outlined in the previous answer we would urge the UK Government to either continue the NDRHI after March 2022, or to bring forward a new tariff-based support scheme for low-carbon heat projects above 45kW, in line with the Climate Change Committee (CCC) proposals for a funded mechanism to recognise the ongoing operational costs associated with fuel switching through the Industrial Energy Transformation Fund.

Additional measures should include:

- The UK Government's 'Green Heat Networks Fund', announced at the budget, should apply in Scotland. This should mean continued support for large heat pumps beyond the end of the RHI in 2022
- UK Buildings and Heat Strategy should dovetail with the Scottish Government's Heat in Buildings Strategy. Collaboration across governments is needed if we are to achieve the tough decarbonisation targets set by the CCC

- Granting the Scottish Government powers over consumer protection, specifically in relation to heat networks
7. Renewable heat supports healthier communities, removing the need to burn natural gas in boilers which impacts on public health (boilers produce nitrogen dioxide and nitric oxide, a key contributor to the urban air pollution which is estimated to cause 2,000 deaths and cost the NHS £2 billion per year in Scotland), whilst also insulating households against fossil fuel price volatility which is a key driver of fuel poverty. The UK Government should also ensure that fossil fuel heating systems bear the costs of their impacts on climate and health.

Which technologies are the most viable to deliver the decarbonisation of heating, and what would be the most appropriate mix of technologies across the UK?

8. The wide variations in building fabric and population density across urban, suburban and rural areas mean that a mixture of technologies will be required to decarbonise heat.
9. In areas of sufficient population density, district heat networks are a proven and low-regrets solution that can scale up our use of low-carbon heat. They can access heat from a variety of sources, including heat pumps extracting energy from water, biomass and geothermal, providing a flexible approach to decarbonisation.

Today there are 113 heat networks in Scotland supplying around 1,000GWh of heat per year, equivalent to 1% of Scotland's total heat demand. To hit our climate change targets this will need to grow substantially. To reach net-zero emissions the CCC recommends that heat networks supply 50% of all non-domestic buildings and 20% of homes by mid-century.

It is essential that government policy support the installation of low-carbon heat sources into these networks from their inception. The continuation of or replacement of the NDRHI outlined above would enable this.

10. In less densely-populated areas, heat pumps will deliver the majority of heat decarbonisation for buildings. In its 'core scenario' for achieving net-zero, the CCC estimate that 17 million heat pumps will need to be installed by 2050, whilst in its 'further ambition' scenario, this increases to 19 million. To reach this target we would need to be capable of installing around 750,000 heat pumps per year by the late 2020s, compared to around 30,000 currently installed per year.
11. Beyond district heat networks and heat pumps, wider deployment of a range of technologies, both existing and in development, will be required to decarbonise the heating sector in line with net-zero. These will include hydrogen-ready boilers, solar thermal systems and hybrid heat systems, these being particularly relevant for hard-to-treat buildings.
12. As both district heat networks and heat pumps are proven, low-regrets solutions, the initial focus of government policy should be on mainstreaming these technologies in all properties where they are appropriate. As the newer low-carbon heat technologies mature, these should be rolled out to properties for which district heat networks or heat pumps are not a viable solution.

What are the barriers to scaling up low carbon heating technologies? What is needed to overcome these barriers?

13. The main barrier to the scaling up of low-carbon heating technologies is the cost disparity between the incumbent high-carbon heating systems and low-carbon heating technology. Driving down the cost of low-carbon heating technologies will require a supportive policy environment and deployment at scale. Together these will drive the industry and investor confidence needs to unlock private sector investment and the reduction of costs through economies of scale.

Government support will be required to catalyse this process and lessons can be learned from the schemes used to support the early stages of adopting onshore and offshore wind technology to generate renewable electricity. These schemes having enabled a rapid decline in costs to the current situation where these technologies are the cheapest forms of electricity generation.

What incentives and regulatory measures should be employed to encourage and ensure households take up low carbon heat, and how will these need to vary for different household types?

14. The successful adoption of low-carbon heating technologies is intrinsically linked to improvements in the energy efficiency of buildings. Incentives and regulatory measures should therefore be put in place to ensure all buildings meet at least EPC C standards where possible, accepting that this will not be possible in certain historic buildings.

The major barrier to the adoption of low-carbon heat technologies by households is the cost disparity between gas heating systems and low-carbon technologies. Government support is needed to increase funding for renewable systems as part of any fuel poverty and energy efficiency support schemes, such as the recent changes to the energy efficiency loan scheme in Scotland with 75% cashback for homeowners up to the value of £7500 towards the cost of a renewable heating system. Increases in funding for energy efficiency loans were also recently announced for SMEs by The Scottish Government which will allow them to modernise their heating systems as well as cutting carbon emissions. Other household types require access to grants rather than loans, and the UK Government's Green Homes Grant Scheme could be extended to apply to the devolved nations. The extension of the Green Homes Grant scheme by a further year is a welcome step for improving the energy efficiency of homes and replacing fossil fuel heating.

What action is required to ensure that households are engaged, informed, supported and protected during the transition to low carbon heat, including measures to minimise disruption in homes and to maintain consumer choice?

15. To ensure that households are engaged, informed, and supported during the transition to low-carbon heat, Government signalling will be necessary. A good example of this is the previous target for banning fossil fuel and diesel vehicles. With a clear long-term target in place industry will increase innovation leading to lower costs for householders. This, in conjunction with a nationwide information campaign with the Climate Assembly, will support increased carbon literacy. As discussed above, scaling up low-carbon heating technologies but being cognisant about costs and ensuring financial support is available for those who need it will go a long way to ensuring that households are supported in the transition to low-carbon heat.
16. To ensure that households are protected during the transition, consumer protection is essential. As heat is a devolved area consumer protection in this policy area should also be fully devolved to Scotland and strengthened, especially in the case of heat networks. This is an area which is currently unregulated, although this is soon to be corrected by legislation. Customers on a heat network need to be protected and have rights to transparency, relevant pricing and quality of service.

Where should responsibility lie for the governance, coordination and delivery of low carbon heating? What will these organisations need in order to deliver such responsibilities?

17. Whilst certain powers on heat are devolved to The Scottish Government, UK Government policy plays a vital role in providing funding and strategic direction. It is essential that documents such as the long-awaited Energy White Paper and the Buildings and Heat Strategy are delivered in a timely manner to set out headline strategic commitments on the journey to net-zero. It is hoped that these documents set out a clear strategy to achieve the decarbonisation of heat as this is urgently needed to meet net-zero.

November 2020