

Running the Low Carbon Heat Transition

Event Write-up

On 5th May 2020, Carbon Connect held an online roundtable to discuss the governance challenges related to the low carbon heat transition. The event was sponsored by SSE and it was one of a series of roundtable discussions held as follow-up events on Policy Connect's Future Gas Series reports. This document was produced as a post-event write-up by Policy Connect. While it was informed by the roundtable discussion, it does not necessarily represent the views of all those in attendance.

Heat decarbonisation is one of the toughest challenges facing climate change policy. To ensure its effective delivery, it is important to set out the governance and policy framework that is needed to enable the transition to low carbon heat. **Key considerations** related to this include:

- **As the challenge of heat decarbonisation will be with us for the next three decades, it is important that the government sets out the long-term trajectory for heat decarbonisation.**
- As the time to start taking action is shrinking, it is crucial to **urgently deliver on the promise of the Heat and Buildings Strategy providing long-term guidance on heat policy.** When the Government commits itself to a strategy, **it can catalyse action by giving a signal to consumers and the market on what is to be done.**
- While the market cannot deliver change on its own, it is capable of delivering on heat decarbonisation if it is given a clear structural and a long-term approach. **It is important that policies and new governance instruments are developed through a cross-party approach to indicate long-term credibility for the market to implement the necessary changes.**
- **We currently have a very diverse and uncomprehensive approach to heat policy across the UK** and to ensure the efficient transition to low carbon heat, **we need to carefully think about the balance between local, regional, devolved and central government,** as well as **ensure the careful coordination across various government levels.**
- **Heat decarbonisation can play an important part in the post-COVID green recovery,** especially through its role in creating new economic opportunities and jobs, as well as boosting skills.

The challenge ahead of us

While currently 84% of UK homes are connected to the gas grid, to achieve the net zero target, all new and existing homes will need to deploy zero or ultra-low heat sources and they all need to get more energy efficient.

Besides the fact that we need to get better in building low/zero carbon homes, this also represents an **enormous retrofit challenge** as 90-95% of the buildings we have today are still going to be with us in 2050. This means that **about 20,000 will have to be retrofitted by 2050 every week.**

To achieve the net zero target, **heat decarbonisation and energy efficiency need to go hand in hand.** However, despite the significance of energy efficiency, it is also important to recognise that energy efficiency

cannot solve the challenge ahead of us on its own and it is crucial to do changes to the energy mix, as well as deploy new low carbon heat sources.

The complex structure of heat policy in the UK

Heat policy in the UK has a very complex governance structure. **To ensure the efficient transition to low carbon heat, we need to carefully think about the balance between local, regional, devolved and central government and ensure an effective coordination between them.**

In principle a range of structures could work for heat decarbonisation, given political will, leadership, cross-sector engagement and coordination which means that there is no objectively 'right' answer to how decarbonisation 'should be' done.

We currently have a very diverse and uncomprehensive approach to heat policy across the UK, in particular in the England and Scotland comparison. While certain elements of heat policy are devolved, other elements of it are reserved for Westminster-Whitehall.

However, it is still Westminster-Whitehall that holds the big keys to heat decarbonisation. Market regulation, taxes, the design of subsidies and tariffs, energy supplier obligations and consumer protection frameworks play a central part in this, dedicating a key role to BEIS, the Treasury and the Competition and Markets Authority (CMA).

So far, there was a heat strategy document published in 2012 and a Clean Growth Strategy in 2017 (which had limited policies for heat though). **Government needs to urgently set the exact direction of travel for heat decarbonisation – there is an urgent need for clarity and the delivery of the promised Heat and Buildings Strategy to set this long-term transition agenda.**

Furthermore, regardless of the different technologies used for heat decarbonisation, **the Government has a central role to set the technical standards, the accountability and transparency frameworks, as well as the necessary consumer protections.** Through their role in ensuring the good design of solutions and settling any diverging interests between consultants, developers and operators of various heat projects, they are of key importance for the effective delivery of heat decarbonisation, and they can help achieve affordability for consumers.

The role of local and regional authorities

Besides the vital need for Westminster and Whitehall to set the overall policy framework and strategy for heat decarbonisation, **it is almost a default proposition that local and regional authorities need to be engaged in the process in at least in some capacity.** This is because **the most effective solutions are likely to differ regionally** due to geography, industrial activity, type of buildings, political economy and demographics. Heat policy is not simply susceptible for a set of technocratic market rules which then appear in every location straightforwardly. This implies **a critical need for local knowledge planning, as well as local civic engagement.**

But studies show that there is dissent on what capacity, extent and with what resources local and regional authorities should be there in the heat transition process. Some of this doubt might come directly from Whitehall and Westminster as local/regional government engagement also **implies a risk of potential**

regional variation in the success of the heat transition and it is unlikely that any official or department would like to take this risk.

From the side of local and regional authorities, their engagement in the heat transition also poses the risk of central government potentially dumping tasks on them without matching the necessary powers and resources for this. This issue is already manifested by the fact that while some regions and devolved governments have ambitious plans for heat decarbonisation, they lack the means and the power to implement them, as they do not have the necessary room for manoeuvre to secure the necessary cross-sectoral engagement for these plans.

If they are granted a role in the low carbon heat transition, it is thus of utmost importance that Westminster providers them with the sufficient power and resources to act as an efficient actor in the process. Furthermore, local governments need to ensure that they have robust data on energy performance, energy sources and demand, as well as patterns of fuel poverty; and they need appropriate tools and skills to carry out smart modelling of solutions best-suited to the local area. In addition, local governments also need to pay attention to understand local needs in a consultative way, running effective consultations with local people.

To avoid the potential problems arising from local authorities needing to plan in a vacuum, as well the tension that might arise between the whole system approach and the importance of the local knowledge, it is important to support local authorities with a standardised planning framework which is flexible to take into account local knowledge, as well as effective coordination based on mutual trust between various levels of government.

Roundtable participants have also emphasised the importance of local government in the low carbon heat transition. A way in which local government's importance was highlighted was through the case of **heat networks** which can play an important role in the low carbon heating transition in urban areas and are one of the 'low regret options' due to their technologically agnostic nature. **Through their local knowledge, local authorities can play an important role in highlighting the most appropriate sources of low carbon heat locally,** as well as help to arrange that the installation of heat networks in way that it's the least disruptive for residents (i.e. through combining their delivery with other road/maintenance work). Furthermore, **local/regional authorities are likely to be the best placed actors to combine locally appropriate solutions for heating, transport and power generation.**

The role of **zoning** was also highlighted **which can strategically ensure that the most locally suitable solutions are deployed in each area.** This can also help to make sure that local resources for low carbon heating are maximised which involves a careful use of waste heat. At the national level zoning means that national government can design the policies for heat decarbonisation and pathways, but local authorities would play a central role in their implementation.

Devolution

Since the 2010 coalition government and successive SNP governments, **there has been a divergence between Westminster and Holyrood governments in the area of heat policy within a very narrow remit. While energy is a reserved business for Westminster, the Scottish Government has used its restricted powers regarding the end use of energy.**

This results in an (uncoordinated) **diversity of heat policy initiatives across the UK**, illustrated by the fact that while the Heat Networks Investment Project is a major public investment in England and Wales together with other heat networks projects, in Scotland there is currently a Heat Networks Bill before Parliament.

In 2015, energy efficiency was defined in Scotland as an infrastructure priority. This formed the basis of the Energy Efficient Scotland Programme and its 2018 route map which in principle provides a wholly systematic route for a national, locally coordinated energy efficiency and retrofit for all buildings. One of the key mechanisms there is a proposed new statutory power for local authorities who will be required to develop a comprehensive local heat and energy efficiency strategy. Furthermore, there are some proposals for the regulation for property owners.

Forward planning

Upon constructing the new Heat and Buildings Strategy, it is important to take into account the various already-existing heat-related initiatives and policies across the UK and think about how they will be aligned with the future long-term strategy.

Furthermore, in forward planning, it is important to **consider the lessons we can take from current and previous initiatives**. This includes drawing lessons from the failed Northern Irish Renewable Heat Incentive.

We should note that given the evolution work on pilot project results on the Energy Efficient Scotland programme, there are significant practical challenges of managing this type of work which need immediate attention, including the challenge of lining up property owners for the projects in multi-owner and multi-use buildings.

The Scottish example also shows how important supply chain development, skills and innovation are for this transition and demonstrated the immediate need for skilled professionals for energy efficiency and heat decarbonisation.

The UK Government has the power to determine the future of heat. But for legitimacy and for public engagement, we need decisions based on consultative approach on regulations and what bodies should be involved in its roll out. Besides effectively collaborating with local and regional government, Westminster needs to work with the devolved administrations on the division of powers and resources to decarbonise heat in the UK.

Consumers

In the next wave of decarbonisation, genuine public engagement will be needed from consumers and we are a long way from that. Current barriers to this include:

- **Few consumers are aware of the importance of decarbonising the heating systems and the journey we have to go on**, for instance, currently many people do not see their boiler as a contribution to climate change.
- This is coupled with **the challenge the disruption of heat decarbonisation will mean for individual consumers** compared to the current technologies that they know well.
- Furthermore, **low carbon heating options are currently more expensive for consumers** than their conventional alternatives which creates resistance for the uptake of low carbon heating solutions.

To overcome these barriers, we urgently need to start **designing consumer-centric approaches**. The earlier we start this, the longer the period this can be phased for consumers, reducing the shock this might mean for consumers. As part of this, we need to **raise awareness on the importance of heat decarbonisation**, and we need to think about how we can **build consensus for heat decarbonisation**.

While there is a lot of focus currently on technology, it is also **important to consider what positive developments this new technology can bring for people to start making them excited about the transition**, and innovation is crucial for this.

But it also needs to be considered that while new technologies represent exciting opportunities, they also bring about new vulnerabilities for consumers. Thus, **arranging suitable consumer protection is essential for the successful decarbonisation of heating**.

In addition, **we need to enable all consumers to decarbonise their homes and make this an easy process for everyone through effective scheme and policy design, appropriate advice available for consumers** and ensuring the **affordability** of doing so.

Finally, **as current low carbon heating options are more expensive than their conventional alternatives, it is important to provide price incentives and financial support to effectively catalyse their consumer uptake**.

The financial aspects of heat decarbonisation

The roundtable also highlighted that upon thinking about the right governance frameworks for heat decarbonisation, it is also essential to consider the financial aspects which are closely related to the question.

It is also crucial to consider the question on **who will pay for the low carbon heat transition** and arrange this in the principle of **fairness**. We need to find the right balance between what the individual consumer might need to scale up, taxation and incentives, subsidies, as well as regulation mandating investment by individuals and companies which is significant policy challenge. From a social point of view, there is also a potential to use the benefits of decarbonisation to support regions or groups which needs support for decarbonisation.

Besides implementing decarbonisation, it is crucial to keep energy affordable and ensure the protection of those who are the least able to pay. Policy frameworks and consumer protection schemes need to be designed in a way to avoid the worsening of fuel poverty and it is important to think about how the heat transition can help to alleviate fuel poverty.

Energy efficiency is important in this respect, as energy efficiency projects can deliver immediate savings and they thus lend themselves to financed installation packages where the cost of the installation could be met by energy cost savings over time.

However, it is important to highlight that **the upfront and operating costs of low and zero carbon technologies are currently higher than that of the currently more prevalent gas boilers**. Therefore, it is essential that long-term strategies and policy signals are coupled with the necessary funding and financial support for their implementation from early on.

Regarding energy efficiency, the Conservative Manifesto pledged £9.2 billion funding. As it was set out in the recent '**Future support for low carbon heat consultation**', this is supposed to be spent over a decade which is very small in comparison with the urgency of the problem and the estimates regarding how much funding is needed to make this shift.

Moreover, the recent consultation on clean heat support post the Renewable Heat Incentive has also been criticised for providing a very limited financial foundation for addressing this hard problem for public policy. It was argued that the promised £100 million funding of the Clean Heat Grant for over two years will not be able to catalyse the uptake of enough heat pumps compared with the estimated numbers on would be needed for meeting the net zero target.