nationalgridSO

Future Energy Scenarios 2019

Future of heat workshop summary

29 Jan 2019

Summary of the discussions

Context

The first ever FES Future of heat workshop was held at our London Strand office on 20 November 2018. The workshop brought together subject matter experts across the energy industry and was carried out under Chatham House rules.

The delegates brainstormed ambitious policy prescriptions and practical implementation strategies required to meet the 2050 carbon emission reduction target for heat. A summary of the discussions which took place are set out below.

These discussions will inform the development of FES 2019.

Timelines and goals for heat decarbonisation policies

There was a degree of scepticism about whether a decision on heat decarbonisation policy will be forthcoming by 2025. However, it was also suggested that rather than being a big stop-go decision, decisions enabling heat decarbonisation are more likely to be incremental on the way to 2025.

There was a view that 2025 might be too late for a decision as significant change takes time, and industry may need clarity sooner to commit to the development and building of supply chain and network infrastructure. Delays were likely to increase costs and could exacerbate fuel poverty issue.

Regardless of which pathway is chosen, the following points were made by delegates:

- urgent changes to the Renewable Heat Incentive (RHI) are needed;
- training programmes for installers of new technologies must be developed;
- regions must be empowered to design solutions that work best for them; and
- a mandate that all new heating appliances sold from 2025 are low-carbon should be put in place.

If an electrification pathway is chosen, an urgent need to address network upgrades was highlighted as this is a regulated activity with long business planning cycles. Network reinforcements would need to be built into ED2/3 plans[1] and more transparency is required in terms of data, for example on network constraints, from network operators.

It was suggested that policy should support installation of new heat pumps in all dwellings with gas boilers from 2020 onwards.

It was also felt that the prospect of relying on DSR (Demand Side Response) instead of implementing network reinforcements contains risk given the nature of heat demand (e.g. heat demand can be more difficult than other electrical appliances.

If a hydrogen route is chosen, it was felt that decisions must be made even sooner:

- to allow sufficient time to prove the viability of CCUS (Carbon Capture Utilisation and Storage) at scale;
- so that required infrastructure upgrades are deliverable in time; and
- so that the costs can be optimised.

[1] These refer to Electricity Distribution Price Controls. RIIO-ED1 runs to 2023 (RIIO stands for “Revenue = Incentives + Innovation + Outputs”).

A point was made that in the meantime, policy must continue to support production of biomethane and to relax some of the GS(M)R (Gas Safety Management Regulation) standards to allow hydrogen blending into existing gas networks.

For a hybrid pathway, it was felt that policy must support consumer awareness campaigns about the benefits of hybrids (e.g. improved comfort and lower cost) as it took 7 years to get hybrids recognised by SAP (Standard Assessment Procedure)[2].

Technology adoption

The point was made that a significant number of people in social and rented accommodation don't have a choice about their heating systems or have the capability to change the heat source. The replacement of heating systems was seen as very much a distressed purchase – 80 to 90% of replacements. Better consumer classification and use of choice editing[3] to limit options could be potentially helpful in nudging uptake in the right direction. It was noted that incentives should cover both the upfront investments and ongoing costs.

On strategy, it was noted that a strong mandate could help deliver the low-carbon heating uptake on scales required to meet the 2050 target, provided the vulnerable sections of society are adequately protected. In addition, stronger promotion of the reasons for the move away from natural gas heating was viewed as important e.g. better air quality, more comfort, economic benefits.

In the commercial sector, it was suggested that carbon intensity should be built into fuel pricing as opposed to letting fuel prices follow costs. Mandating any changes in the industrial and commercial sector, risks losing out to international competition – when costs become too high companies will leave. Narrowing the bands of emissions/energy efficiency within sub-sectors was also raised as a potential improvement. Like in domestic properties, it was noted that there are a lot of commercial businesses that do not own the premises they operate from, which can lead to a breakdown in the responsibility of heating technology decisions (i.e. the user is often not responsible).

It was suggested that district heating and biogas could be used as supply-led solutions to minimise disruption to end consumers but also that these may not be sufficient. Heat as a service[4] could bring down the capital cost of low carbon technology much like hire purchase car financing. One of the main problems identified is that if consumers fail to pay for the heat service, unlike cars which can be repossessed, heat service suppliers can't switch consumers off.

There was also a suggestion that a softer mandating approach involving regional promotion of standards (not necessary technologies) might be more effective than a central government hard mandate. This is because it was felt that people are often more likely to buy into local/community led initiatives and can like the feeling of making voluntary decisions.

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[2] This is a standard for measuring the energy performance of buildings.
[3] This is a deliberate process of controlling the choices available to consumers so as to drive to an end goal (i.e. rather than always encouraging more options).
[4] 'Heat as a service' is just one of the ways that the increased access to data by smart systems in homes could be used to deliver heat as a packaged service (covering financing of the heating appliance, cost of maintenance or replacement, demand side response, energy efficiency measures) rather than heat as a unit of fuel.

Energy efficiency

Some delegates raised concerns that national energy efficiency policy is currently fragmented between CLG (Communities and Local Government Committee of the House of Commons), BEIS, and Ofgem. They felt that policy strategy should be consolidated under one body that sets national minimum standards and that a firm policy needs to be in place by 2023.

It was noted that individuals are generally reluctant to carry out the deep retrofits required in existing stock because it can be invasive, disruptive, and the cost savings may not always justify this. Instead it was felt that improving public attitude towards insulation through community based initiatives should be a priority.

Better compliance monitoring tools such as attractive thermal performance certificate displays (e.g. thermal camera shots) and use of postal stamps (e.g. as opposed to traditional ads) might increase awareness alongside making insulation financially advantageous.

On the practical steps to be taken now, it was noted that there is a mix of potential strategies depending on the building segment:

- introducing better monitoring of compliance with existing policies;
- building on ongoing effort by industry and CLG to pass into law the target of EPC band C or higher in most buildings by 2035 (as set out in the Clean Growth Strategy);
- requiring new building standards to set targets for new builds that get progressively higher over time;
- for existing stock, incentivising homeowners to insulate at key triggers points such as when they renovate, sell, do extensions, rent out;
- introducing scrappage schemes for roofs or entire buildings; and
- starting to think of ‘heat as a service’ in certain segments of the building stock.

In the commercial sector, it was suggested that policy should mandate displaying of energy certificates and for businesses to be encouraged to publish the cost benefits of reduced energy consumption.

Finally, it was suggested that energy efficiency programmes should prioritise heat intensive businesses such as hair dressers, care homes, swimming pools etc. where marginal costs of improvements could be significant as this would start to build confidence in the supply chain.

Please note that the views, thoughts, and opinions expressed in the text above belong to those that attended and participated in the workshop and do not necessarily reflect those of the event organiser.