

Governance of heating decarbonisation

Workshop report

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Overview

This report summarises discussions held at the governance of heating decarbonisation workshop held in Durham on Tuesday 21 November 2023. The workshop brought together over 50 stakeholders from universities, industry, local/national government, regulators, civil society and social enterprise. It was co-organised by the Centre for Demand Solutions and the Network+ for the Decarbonisation of Heating and Cooling.

The workshop was designed to meet three aims:

- 1) To better understand why organising to deliver local, place-based heat decarbonisation is a challenge.
- 2) To explore promising governance arrangements to unlock the organisation and delivery of local, place-based heat decarbonisation that are both effective and just.
- 3) To build connections between people interested in the governance of local, place-based heating decarbonisation.

The workshop began with four short presentations. **Alan Patrickson** (Durham County Council) welcomed participants to Durham and provided a local authority view. **Kayla Ente** MBE (Brighton & Hove Energy Services Co-operative) highlighted the lack of leadership from Westminster on heat decarbonisation as viewed from a social enterprise. **Luke Fraser** (Aquatera) gave us an Island perspective on heat decarbonisation from his work on Orkney. Finally, **Anna Devenish** (Eindhoven University of Technology) provided an overview of the Dutch approach in which local authorities are tasked with leading local delivery.

The rest of the workshop was designated to breakout groups. First, participants were allocated to groups to discuss the governance challenges of decarbonising heat. Second, participants were invited to identify what changes in governance arrangements they thought necessary to enable the local place-based delivery of heat decarbonisation with each group being asked to reach consent on three priority areas. Third, through a process of collective rationalisation these 15 priority areas were reduced to five. Each topic area was then explored in depth during the

afternoon within five separate breakout groups. Participants were invited to self-allocate to break out groups.

The following report summarises the discussions held over the course of the day in three sections. Section 1 summarises challenges identified in decarbonising heat. Section 2 introduces the range of governance changes thought necessary to enable heat decarbonisation before Section 3 summarises the detailed discussions on different governance solution areas.

1. What are the governance challenges in decarbonising heat?

Multiple issues and challenges were raised across groups. Below we detail distinctive challenge areas derived through clustering of flip chart notes, though challenges were often interrelated.

The nature of heat and its solutions

Multiple participants saw the fundamental nature of heat and its consequent decarbonised solutions as a primary source of contemporary governance challenges. This included how heat does not travel well and how not all heat is equal. Different sectors (homes, commercial buildings, industry) have different needs for heat; but in any given place, there may be useful synergies between sectors (eg use of waste heat). Sources of heat need to be located close to demand, making solutions highly localised in nature. Knowledge of local contexts is vital.

Known inter-dependencies between heat decarbonisation solutions and energy efficiency of the building stock, new and old, were repeatedly mentioned. Heritage buildings were also included in this.

It was suggested that heat solutions necessitate interconnected social and technical changes, have multiple uncertainties, and are more complicated than other low carbon solutions (e.g. solar panels).

Heat decarbonisation requires collective action to resolve, not only individual action. There are different risks involved for different stakeholders, and some fair means needs to be found to manage them at a system level. Innovators may benefit from a 'first mover advantage' but they also run the risk of being disadvantaged if the move they make leads to time and money being lost in confronting governance problems. Meanwhile, future cooling needs were raised as further complicating societal responses but is largely ignored at present.

Lack of coordination

The lack of coordination between issue and organisations was mentioned frequently. How to coordinate between actors, policies, sectors, and levels of governance was a recurrent issue. Multiple participants and groups raised inadequate nature of current governance structures. The uneven devolution of power and responsibilities for heat decarbonisation versus gas were

also raised. Limited coordination between heat decarbonisation and standards for new build and heat, local planning policy, and energy efficiency or retrofit programmes were seen as problematic, as were interactions between heat decarbonisation solutions and electricity systems. The need to enhance coordination between national, devolved and regional strategies, local decisions and actions creates further challenges. As do the roles and responsibilities of public, private and third sector actors. Sharing data between organisations was also viewed as problematic.

Policy landscape

Coordination challenges were frequently linked to issues within national policy landscapes. Most notably, participants saw limited urgency within national debates and suggested inconsistent national policy posed acute challenges. Limited frameworks, structures or powers to organise and deliver particular heat solutions, such as heat networks, were also raised. A repeated concern is the perverse incentive created by policy levies being charged to electricity tariffs, not gas tariffs. There was broad agreement that polluting fuels should be more expensive than less polluting fuels.

People, engagement

A lack of public awareness or understanding of the urgency and challenge of heat decarbonisation featured prominently within group discussions, resulting in calls for better citizen and/or community engagement approaches. Inconsistent advice, deriving from different sources was thought to provide a further challenge leading to indecision and delay. How to provide simple, locally appropriate information and advice based on sufficient technical understanding was proposed as a subsequent challenge.

Skills, knowledge, and capabilities

The need to build up appropriate skills, knowledge and capabilities was raised in multiple groups. Despite there being examples of good practice, gaps also exist; inconsistency creates its own problems. Some local authorities were thought to have little or no knowledge and capabilities for heat decarbonisation, making place-based initiatives very difficult. Similarly, in industry the necessary skills and knowledge are not always present, with 'cowboy' installers identified as a challenge.

Funding and finance

Finally, a set of challenges around funding and finance were identified. These concerned the limited commercial viability of heat solutions, high costs associated with heat solutions as well as retrofit, all contributing to potential investors lacking confidence in technical solutions. At the same time the limited, competitive allocation of public funding for local heat coordination was thought to undermine local coordination and delivery efforts.

2. What changes in governance arrangements are needed to enable the delivery of effective and just, place-based heat decarbonisation?

In this session participants were asked to share ideas for changes to governance arrangements that support the local, place-based decarbonisation of heat. In the process participants also shared views on perceived characteristics of good governance.

Characteristics of good governance:

- Clear national policy framework to guide change including consumer protections and market incentives that favour electrification over gas
- Coordination between actors and levels of governments with clear roles, responsibilities and resources, accountability between actors set within clear strategies, backed by fair funding arrangements
- Informed decision-making based on public data and evidence, with monitoring leading to learning and feedback
- Societal understanding of the challenge and support for decarbonised solutions, including awareness of co-benefits
- Simple and smooth customer journeys, resulting from confidence in new heat services
- Fair and equitable outcomes

Suggested changes in governance arrangements:

- Strategic leadership from central government
- Development of fit for purpose national strategies, e.g. on energy efficiency and retrofit, heat decarbonisation
- Development of approaches that set out how to organise heat decarbonisation locally, e.g. heat network zoning, local area energy planning
- Specification of roles to organise and deliver local solutions, e.g. a local convenor role, as well as clearer roles for existing actors (local authorities, net zero hubs, electricity system operator, etc)
- Creation of knowledge sharing networks
- Regulation to provide standards, ban certain heating types (fossil), provide local monopolies for heat (e.g. customers would have to opt out, not opt in)
- Public information campaign
- Local responsibility and resource for plans, delivery, operation, accountability
- Citizen Assemblies to inform local decisions
- Develop standard framework for collecting evidence to inform decisions
- Development of a typology of pick-and-mix, locally appropriate solutions
- Development of tools for local grid management

3. Governance solutions areas

The following sections summarise discussion within each of the breakout groups on the five topics selected for in depth discussion during the afternoon.

Citizen Engagement

To adopt new heating technologies citizens need to recognise the need for heat decarbonisation, be aware of possible zero carbon heat technologies and be motivated to act. Whilst citizens were viewed as central, multiple other stakeholders were discussed as needing engagement including businesses, non-domestic customers, and local trades. Discussion subsequently focussed on what engagement entails in practice: building awareness and fostering confidence leading to action. Proposed solutions sought to build on existing, trusted local actors and approaches where possible, for instance using community-based approaches. Creating a local area engagement plan through consultation with local actors was proposed as a good governance solution to unlock citizen engagement.

Market rules and Unintended consequences

To support local heat decarbonisation market rules need to encourage the adoption of new technologies and create consumer confidence. Aligning market rules towards heat decarbonisation requires changes to how markets are governed nationally, whilst avoiding unintended consequences resulting from the systemic nature of heat decarbonisation – such as damp, mould or fuel poverty. Multiple possible changes to market rules were discussed from rebalancing levies between electricity and gas, through incentivising heat-as-a-service models, to recovering local authority investments through changes to council tax. Recognising political feasibility as a central challenge to achieving change, the discussion explored central principles to guide what should be done and possible avenues to achieve change.

Infrastructure and tools for data

Evidence-based decision making is prioritised but widely viewed as challenging to achieve in practice. Discussion in this group subsequently focussed on developing new infrastructures and tools to gather data and evidence to enable coordination of, and inform decisions for, local heat decarbonisation. Data was recognised as being important for different phases of heat decarbonisation (planning, delivery, and operation) with attention concentrated on the former as an acute governance challenge that requires strategic intervention to unlock local action. Multiple sources of evidence were identified as important for informed decision-making, located at different scales, suggesting that new infrastructures for gathering evidence needed both national and local components. Accessibility and transparency were identified as core characteristics of future data infrastructures alongside the need for regular updating.

National-Local policy interface

Central government sets the context for local government. National policy should inform and frame local policy and action. It was felt that clearer responsibilities between national and local level are needed (a regional level may also be needed). The role of the private sector and various regulators and government agencies means that coordination is needed across stakeholders, not just levels of government. Devolution has created some opportunities in Scotland, Wales and Northern Ireland, but devolution sometimes creates barriers to coordination (e.g. heat is a devolved issue, but gas is not). Strategies are needed in different sectors relevant to heat decarbonisation, but coverage is uneven. Delivery also requires adequate funding. Local area energy planning and heat zoning were thought to provide the granular detail needed to inform local delivery plans. The Local Heat and Energy Efficiency Strategies in Scotland provide a model for coordinating across policy levels. Whether that could be replicated elsewhere in the UK remains unclear.

Roles, responsibilities and resources

Some new bodies are being created with a specific coordination role, but coverage is uneven (e.g. 13 Regional Energy Strategic Planners cover all of GB; Net Zero Hubs operate in just 5 English regions). It was felt that policy decisions are not often supported by adequate consideration of roles, responsibilities and resources. Policy reform in other domains may be needed to facilitate heat decarbonisation (e.g. land-use Planning to expedite new infrastructure; improved Energy Performance Certificates). The role of local/regional government was generally agreed to be important, even though the public sector was felt by some to be slow to act and subject to political short-termism. There is no statutory duty on heat decarbonisation for local authorities; any new responsibilities need to be supported by funding. Public sector procurement can help to achieve scale and support supply chain investment. Partnership between the public sector and private/social enterprise was identified as key to delivery, and more coordination is needed between local authority and industry plans. Financial organisations also need to be engaged. A convenor role is needed to broker the necessary partnerships, combining technical, socio-economic and leadership capabilities. Solutions need to be place-specific, but there is potential to standardise methods and data to some degree, for example in support of smart flexibility. Community-scale solutions are associated with business model innovations (e.g. heat concierge services) but regulation may be needed for large-scale replication (e.g. community-led heat networks in Denmark are supported by an obligation on consumers to connect).

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