

EVENT RECAP

15 February 2019, Brussels, Belgium

Roadmaps are ready: now what?? Exploring the realities of the heat transition



The aim of Heat Roadmap Europe 4 (HRE4) (March 2016 – February 2019) was to produce the scientific evidence required to effectively support the decarbonisation of the heating and cooling sector across Europe and democratise the debate.

This has been achieved by developing “Heat Roadmaps” for the 14 largest EU countries in terms of heat demand, policy recommendations at national and EU level and business strategies that were presented and discussed on the 13th of February 2019 during the final HRE4 event in Brussels.

Nearly 100 stakeholders from the EU Commission, NGOs, industry, city partners and research institutions took the opportunity to discuss the project results, their policy implications at both the EU and national levels and the challenges of implementation.

Vincent Berrutto, the Executive Agency for SMEs – European Commission, highlighted the growing significance of heating and cooling in EU energy and research policy discussions and the role of EU-funded projects such as HRE4 in his welcome address.

The EU strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy by 2050 was presented by Hans van Steen, Directorate-General for Energy – European Commission. This strategy demonstrates how Europe can lead the way to climate neutrality by

investing in realistic technological solutions, empowering citizens and aligning action in key areas such as industrial policy, finance or research. *“When we think about the vision for a climate neutral EU, the importance of heating and cooling cannot be overestimated.”* - concluded van Steen.

Differences between the EU strategy modelling tools and the HRE4 energy models were underlined by the project coordinator Brian Vad Mathiesen, Aalborg University (Denmark). He questioned the different tools currently used for EU policies for their limited or lack of capacity to model the intermittent nature of renewable energy sources.

“Based on the data, knowledge, methodologies and scenarios developed and published by the HRE4 project, it is clear that the European Union should focus on implementing change. This could be achieved by developing markets for existing technologies and infrastructures to maximise the benefits of energy efficiency.” – added Mathiesen.

In the HRE4 scenarios, reductions in the primary energy supply are created by combining several energy efficiency measures in the form of further end-use savings, district heating and cooling grids and the use of renewable and excess heat sources. This is linked to electrification through a considered distribution of heat pumps. In rural areas, this can be achieved at an individual building level and in the form of large-scale heat pumps in district heating and cooling grids.

“This combination of electrification, thermal grids and energy savings has benefits across the entire energy sector and for the integration and flexibility of renewable energy capacities”, explained Susana Paardekooper, Aalborg University (Denmark) while presenting the HRE4 outcomes.

Key points of the HRE4 research:

- The Heat Roadmap Europe (HRE4) scenarios confirm that it is possible to **significantly reduce** CO2 emissions employing **technologies** and approaches which **already exist**.
- Reductions in the primary energy supply are created by **combining** several energy efficiency measures in the form of further end-use savings, **district heating** and cooling grids and the use of **renewable** and **excess heat** sources.
- The European Union should focus on **implementing change** and supporting structures for **existing technologies** to maximise the benefits of **energy efficiency**.
- In the vast majority of urban areas, **district energy** is technically and economically more viable than other solutions.
- **Energy efficiency** in both supply and demand are necessary to cost-effectively reach decarbonisation goals.

In addition to interesting presentations from the EU Commission and project partners, a highlight of the event was a vivid panel discussion featuring representatives from cities and industry. They focused on influencing policies and business strategies to enable practical implementations of the HRE4 recommendations.

One of the main achievements of the HRE4 project was to enable sustainable heating and cooling policies at a local level. To the delight of the organisers, the audience actively participated in discussions and representatives from cities and regions confirmed their commitment to implementing sustainable heat transition policies and projects.



Participants gained an insight into the potential of excess heat recovery as a major source for district energy networks in Europe, as well as business models and bankability of such projects. The latter was the focus of the complementary workshop of the ReUseHeat project (October 2017 – September 2021). This project explicitly builds on the knowledge of HRE4 and intends to overcome both technical and non-technical barriers towards the development of urban waste heat recovery investments across Europe.

Key facts about ReUseHeat:

- The objective of ReUseHeat is to demonstrate **advanced, modular and replicable** systems enabling the recovery and reuse of excess heat at an **urban level**.
- Four large scale **demonstrators** will be deployed, monitored and evaluated during the project: data centres (Brunswick), sewage collectors (Nice), a hospital cooling system (Madrid) and an underground train station (Berlin – amendment underway).
- The knowledge generated from the demonstrators and from other examples across the EU will be consolidated into a **handbook** which will contain: innovative and efficient technologies and solutions, suitable business models and contractual arrangements, an estimation of investment risks, the bankability and impact of urban waste heat recovery investments and authorisation procedures.

The concept of combining the final HRE4 event and the ReUseHeat project workshop was a great success and allowed an exchange among the representatives of public authorities, utility companies, EU, national and local decision-makers and the research community who are all facing the realities of the heat transition.

The event programme and presentations can be viewed [here](#).



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