A pathway for efficient and decarbonised district heating in Central and Eastern Europe
C4E Forum, 13.30-15.00, 24 May 2023, Room: Innovation
Jointly organized by Danfoss and the European Climate Foundation

Central and Eastern Europe (CEE) has a relatively high share of district heating in its residential sector. These district heating systems are largely running on fossil fuels, in particular coal and gas. In recent years, transition plans included a switch from coal- to gas-fired district heating, and to some extent biomass and waste. This is not compatible with the long-term goals of climate neutrality and is unsustainable regarding energy security. Russia's invasion of Ukraine has dramatically changed the viability of gas as an option from both the energy security and affordability perspectives.

The "Fit for 55" package creates some opportunities to put district heating on a pathway to decarbonisation. The newly revised Energy Efficiency Directive (EED) and Renewable Energy Directive (RED) include new provisions on district heating. For example, the EED has adapted requirements on what can be considered efficient district heating as well as a requirement on countries to mandate cities to develop local heating and cooling plans. The RED has a 49% target for renewable energy share in buildings in 2030, including a gradually-increasing target for countries for renewable heating and cooling. These latest legal developments provide EU level opportunities to transform the district heating in the region.

Taking a holistic approach is crucial to decarbonize in a cost-optimal way. Two things go hand in hand: improving energy efficiency of the district heating system as well as the buildings that take heat from it and ensuring the remaining demand is covered by carbon-neutral energy sources.

District heating systems are uniquely well-positioned to support municipalities in achieving key energy and climate goals and can play a prominent role in local heating and cooling plans. Contemporary multi-source (including excess heat) district heating systems are resilient energy infrastructures with high energy security. Further, they are effective for decarbonizing the building's thermal demands, as they provide the means for fast transitioning from fossil fuels to renewable energy sources for entire cities. The key enablers to successful district heating systems are digitalization and advanced controls to ensure continuous adaption of the heat supply to the actual demand of each connected building. Sector Integration is a strong contributor to the acceleration of this process. On the other side, efficient buildings would require less heating demand, per building and overall, and thus make a transition to low-temperature district heating feasible.

We invite participants to jointly explore pathways to improve efficiency and decarbonise district heating in CEE. We will discuss what policies, regulatory measures and financing instruments are needed in order to decarbonise district heating.

We will hear from experts on the opportunities and challenges to modernise the district heating systems in their countries. We will also get insights from running projects and case studies on how demand-side measures in buildings support the decarbonisation process as well as the model of community-based district heating and how it could work. Participants will be invited to share their own experience in decarbonising district heating in their respective cities or regions.

Panelists and speakers: Oddgeir Gudmundsson (Danfoss Climate Solution), Piotr Kleinschmidt (Forum Energii), Felix Kriedemann (Rescoop.eu), Louise Sunderland (Regulatory Assistance Project), Michaela Valentova (Czech Technical University in Prague)

Introductions by Aytaj Imanova Kinner, Global Public Relations Specialist, Danfoss Climate Solution
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