District Heating: an important contributor to support the energy transition in the heating sector



Munich, 29.09.2021: Modern and renewable district heating systems are very important technologies for achieving the European climate mitigation targets, including the aim to limit the global temperature rise to 1.5°C above pre-industrial levels by the end of the century according to the Paris Agreement. This was the important message of the final Upgrade DH workshop "Towards efficient district heating and cooling in Europe" which took place on Wednesday, 15 September 2021, online. The final event of the Upgrade DH project, supported by the European Union's Horizon 2020 research and innovation programme, was a full success: more than 90 participants attended the event, asked questions, and contributed to a fruitful discussion on modern heating solutions.

"The heating sector was for a long time neglected in the political debate, in comparison to the power sector", stated Dominik Rutz, the coordinator of the Upgrade DH project. It was therefore strongly acknowledged that the spotlight is currently directed on renewable heating and energy, at least at the European level. Radoš Horáček, representative of DG Energy of the European Commission, presented the current European energy efficiency legislation and discussion on the higher uptake of sustainable renewable heating and cooling. For example, the "Fit for 55 Package" of the European Commission proposes a new 55% greenhouse gas reduction target for 2030, whereby measures in the heating sector will play a significant role in achieving this target.

That is exactly why EU projects like Upgrade DH are important. The overall objective of this project, which will be concluded after 41 months of implementation at the end of this month, was to improve the performance of inefficient district heating networks in Europe by supporting selected demonstration cases for upgrading, which can be replicated in Europe. The consortium, consisting of research institutes, DH associations, utilities, consultants, and DH operators, not only came up with a full range of information materials such as handbooks, best practice examples, and guidelines, it intensively worked together with local stakeholders of 8 DH systems in Europe to upgrade these systems. Measures included reduction on the temperature levels, improvement of the pumps and pipelines, integration of renewable energies, or cross-cutting topics such as digitalisation of the system, for example. This was accompanied by a broad image raising campaign to inform European citizens about the various advantages of DH. "Through the campaign, we reached more than 50,000 citizens", said Aksana Krasatsenka from Euroheat and Power. She was responsible for the implementation of the campaign, as well as for the organisation of the final workshop.

The overall impact of Upgrade DH is significant. The proposed measures for upgrading lead to a reduction of 16.9% of the primary energy demand and 51.9% reduction of greenhouse gases of the DH systems at the eight demo sites. In absolute numbers, this is a reduction of more than 150,000 t of CO_2 equivalent per year. Furthermore, the share of using waste heat increased by 3.3% and the share of renewable energies increased by 21.7%. Several of the upgrading measures are currently being implemented, some measures were even finalised.

To support similar projects, the European Commission has recently published the calls for the new programme called Horizon Europe. Stavros Stamatoukos, project officer of the European Climate Infrastructure and Environment Executive Agency and responsible for the Upgrade DH project, gave an insight on project opportunities in the field of heating and cooling and encouraged the workshop attendees to participate.

Finally, in the framework of the workshop participants had a chance to virtually visit two CHP plants that recently undertook upgrading measures and can serve as inspiration for other DH systems striving to become more efficient. These examples of knowledge exchange are needed and will lead to a

stepwise improvement of the DH sector in Europe and thereby contributing significantly towards the 1.5 $^\circ C$ climate target.

Presentations of the event:

https://www.upgrade-dh.eu/en/publications-reports/the-final-upgrade-dh-conference/

https://www.euroheat.org/events/towards-efficient-district-heating-cooling-europe/

Recording of the event:

https://youtu.be/Ag6ZasFMxRE

Project website:

https://www.upgrade-dh.eu/