COOL DH
COOL DISTRICT HEATING

Cool ways of using low-grade Heat Sources from Cooling and Surplus Heat for heating of Energy Efficient Buildings with new Low-Temperature District Heating (LTDH) Solutions.

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PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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Scope of deliverable

This deliverable provides documentation for the participation of COOL DH partners in external projects events, representing the COOL DH consortium and promoting the project. The purpose is to contribute to reporting and assessing the overall impact of the dissemination tasks.

Context of deliverable

Participation in other project events is part of the overall dissemination and communication efforts at the international/European level made within the COOL DH project to promote the project's results and raise awareness of the COOL DH project and its results

Perspective of deliverable

The main outcome of the participation in other related project events was the important learnings that project partners shared with the audience to demonstrate the project achievements and to receive feedback as well. It is extremely important to facilitate the uptake of the project's solutions to exchange experiences with other related projects and research the District Heating & Cooling community at the European level.

Involved partners

The partners who represented the COOL DH consortium in international and European events listed in this report are: COWI-DK, City of Lund (MUN-SE), Kraftringen Energi AB (UTIL-SE), Lund University (UNI-SE) Logstor (IND-DK), Høje-Taastrup Municipality (MUN-DK) and EHP-BE.

English summary

The following report aims to point out the events where the partners have participated in promoting the Cool DH progress, ideas and results. The report has the following structure, after a short introduction to the task, the external events are listed with a summarised description. A general conclusion is at the end. In total 15 external events are listed where COOL DH had the opportunity to reach an audience of over 950 people from the district energy sector.

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Introduction

One of the aims of the COOL DH dissemination activities is to facilitate the uptake of COOL DH solutions by technical and policy stakeholders at the EU level and to exchange experiences with other related projects. It is important to encourage the sharing of knowledge and policy perspectives and promote the project results, encouraging replication in other countries and thereby contributing to EU objectives of improved Energy Efficiency, CO2 reduction, and security of energy supply. To achieve this aim the Grant Agreement and subsequently the dissemination plan provide for the participation of project partners in several conferences, webinars, and workshops aiming to transmit the knowledge to a large audience among the European community about the potential of the use of low-grade heat sources for low ultra-low temperature district heating networks.

External events

Listed below are external dissemination and capacity-building events where COOL DH achievements and findings were presented. These events were selected to be described here based on their pan-European target audience and the large number of participants.

1. Nordic Clean Energy Week, 2018

Conference

The Nordic Clean Energy Week 2018 took place in Malmö and Copenhagen and the programme included seminars and activities within the following themes: Sustainable heat and cooling, Smart electricity grids, Smart industry, Green mobility and the role of cities and regions in the energy transition. The COOL DH project participated in the event with a session on 22 May 2018 where COOL DH was represented by the City of Lund (MUN-SE), with the topic "**COOL DH – new ways of using low-temperature district heating".** The target audience was professionals in municipalities within sustainable development with approx. 120 participants in the audience.

2. EASME International workshop, 2019

Workshop with sister EU projects

On 9 September 2019, a network and EU event took place with the topic **"Contractors Meeting on heat and cold utilisation called by EU".** The workshop was organised by EASME officer Stavros Stamatoukos, as a side event adjacent to the '5th International Conference On Smart Energy Systems at the Aalborg University campus in Copenhagen. The partner representing the COOL DH project was COWI. It was a meeting with other EU-funded projects, with 21 participants in total aiming to meet each other and create a collaboration.

Picture 1 Reto M. Hummelshøj (COWI-DK) presenting at the EASME workshop.

3. 5th International Conference On Smart Energy Systems

Scientific Conference

COOL DH was presented at a session of the 5th International Conference On Smart Energy Systems, which took place on 10-11 September 2019 in Copenhagen. The conference is a continuation of the 4th Generation District Heating International Conference, which was expanded to include the research topics of Electrification, Electrofuels, and Energy Efficiency. Lund University (UNI-SE) represented the COOL DH project. The target audience was professionals with 60 participants.
(https://smartenergysystems.eu/conference-2019/)

Picture 2 COOL DH presented at the 5th SES Conference.

4. The Future of Thermal Grids, 2019

EU Project event

On 24 September 2019 the LowTEMP Midterm Conference: The Future of Thermal Grids, took place organised by the LowTEMP project in Malmö, Sweden. The conference was dedicated to the future of district heating, showing how the smart, low-temperature district heating and cooling systems offer new possibilities for greater energy efficiency by lowering heat losses and utilising more renewable energy and waste heat, especially in energy-efficient buildings. The conference was arranged by the Sustainable Business Hub and Kraftringen under the sponsorship of the Interreg Baltic Sea Region project LowTEMP. The audience included representatives from municipalities, energy agencies, utilities, companies, universities, associations, institutes, consultants, and manufacturers from 16 countries, totalling up to 150 participants. The representative partner for the COOL DH project were Kraftringen Energi AB (UTIL-SE), Lund University (UNI-SE), COWI, and Logstor (IND-DK). (https://www.lowtemp.eu/lowtemp-conference-the-future-of-thermal-grids/)

Picture 3 Reto M. Hummelshøj (COWI-DK) presenting at the LowTEMP midterm conference.

Picture 4 Sara Kralmark (UTIL-SE) presenting at the LowTEMP midterm conference.

5. Green Energy Park Conference, 2019

Conference

The Green Energy Park Conference 2019 took place On the 24 of November. Green Energy Park is a project aiming to develop and operate a research campus in the Researchpark of Zellik with a focus on the following three research domains: Energy and mobility transition, hospital of the future; smart regions. Kraftringen Energi AB (UTIL-SE) presented the progress of the project and shared its own examples. The audience was composed of energy sector professionals, with approx. 40 participants.

6. Greening our cities with District Energy, 2020

EU Project event

On 15 September 2020 the Interreg NWE Heatnet project held an online conference on the topic *"Greening our cities with district energy*". The audience (around 50 participants) included representatives from municipalities and utilities. COOL DH partner Kraftringen Energi AB (UTIL-SE) participated with a presentation about the COOL DH project progress and results.

(https://www.nweurope.eu/projects/project-search/heatnet-transition-strategies-for-delivering-low-carbon-district-heat/events/save-the-date-heatnet-nwe-final-conference-15th-september-2020/)

7. SPARK Tech Innovation Sustainability, 2020

International Conference

On 17 September 2020, the international conference dedicated to energy efficiency was held online reaching a broad audience unable to travel due to pandemic-related restrictions. The target audience was Industries around 50 participants. Kraftringen Energi AB (UTIL-SE) participated aiming to give information to the audience about the COOL DH Project and its progress. The target audience was representatives of municipalities and industry with 50 participants.

8. The Future of Thermal Grids, 2020

Conference

This international conference was held online on 25 and 26 November 2020 and was arranged by Sustainable Business Hub, SweHeat & Cooling, Cool DH and Euroheat & Power, in cooperation with Swedenergy, Energiforsk, Swedish Energy Agency, Business Sweden and Smart City Sweden. On the first day a session dedicated to COOL DH titled "*Innovation workshop by COOL DH project - Solutions for safe tap water in buildings connected to low temp networks*" was held with Kraftringen and LKF as the presenters. On the second day the session *"Innovation Workshop by COOL DH project - How to introduce and replicate low-temperature DH solutions*" was held, where COWI-DK presented. The audience was mainly composed of district heating professionals and energy planners. The participants reached approx. 200 each day. On the second half of the second day, a virtual study visit to the COOL DH demo site in Lund - *the world's largest Low-Temperature District Heating grid* - took place, with the City of Lund (MUN-SE) as the presenter. (Conference page: https://www.sbhub.se/future-thermal-grids)
(COOL DH website post: http://www.cooldh.eu/webinar/join-us-at-the-future-of-thermal-grids/)

9. LowTEMP Final Conference, 2020

EU Project event

On 9 December 2020 took place the LowTEMP Final Conference: Transformation of District Heating. The conference was organised by the German Centre for Energy, Construction, Architecture and the Environment (ZEBAU GmbH) and the German Energy Efficiency Association for Heating, Cooling, and CHP (AGFW). The online Conference offered more than 140 district heating experts from energy companies, suppliers, municipalities, and the academic sector from all over Europe the opportunity to discuss the potential and challenges of low-temperature district heating. The representative partner from the COOL DH project was Euroheat and Power. The audience of approx. 30 participants included mostly district energy professionals. (https://www.lowtemp.eu/lowtemp-final-conference-transformation-of-district-heating/)

10. 7th International Conference on Smart Energy Systems, 2021

Scientific Conference

The 7th International Conference on Smart Energy Systems took place on 21 and 22 September 2021 in Copenhagen. Lund University (UNI-SE) participated with a presentation titled "A pioneering project to implement LTDH systems as an integrated part of smart energy systems". The audience of the parallel

session, where COOL DH was presented, was made up of researchers, planners and professionals in the district energy field, reaching approx 30 people. (https://smartenergysystems.eu/2021-2/)

Picture 5 Ali Moalemi (UNI-SE) presenting at the 7th Smart Energy Systems Conference

11. 'How to heat plan' workshop, 2021

Expert workshop

On 6 May the Danish Board of District Heating organised a workshop on heat planning which was sponsored by the Danish Energy Agency and the Danish Ministry of Foreign Affairs Affairs and German. The topic was 'How to heat plan - a day-to-day approach' where experts and guests discussed among others 'Challenges we often see', 'Inspiration from Denmark - perspectives from municipalities and a DH company'. Høje-Taastrup Municipality (MUN-DK) represented COOL DH with a presentation on heat supply and development in Høje-Taastrup, providing information about the COOL-DH project. Energy planners and city servants from the EU countries were most of the participants who totalled approx. 50 people.

12. Lessons learned from the Integration of Heat Pumps in District Heat Networks, 2021

Online Workshop

The Institute of Refrigeration (IOR) in the UK organised on 7 July 2021 an online session on "Lessons learned from the Integration of Heat Pumps in District Heat Networks". This interactive meeting brought together the UK and European experts to discuss the use of district heat networks to reduce carbon and deliver heating, cooling, and power in a low-carbon way. Ali Moallemi from the University of Lund (UNI-SE) gave a presentation about the 'COOL DH - Case study of a 5th generation district heating network in Lund Sweden'. Several professionals in the field of district energy and heat pumps were members of the audience. (https://ior.org.uk/heatpumpslessons)

13. LowTEMP 2.0 Conference, 2021

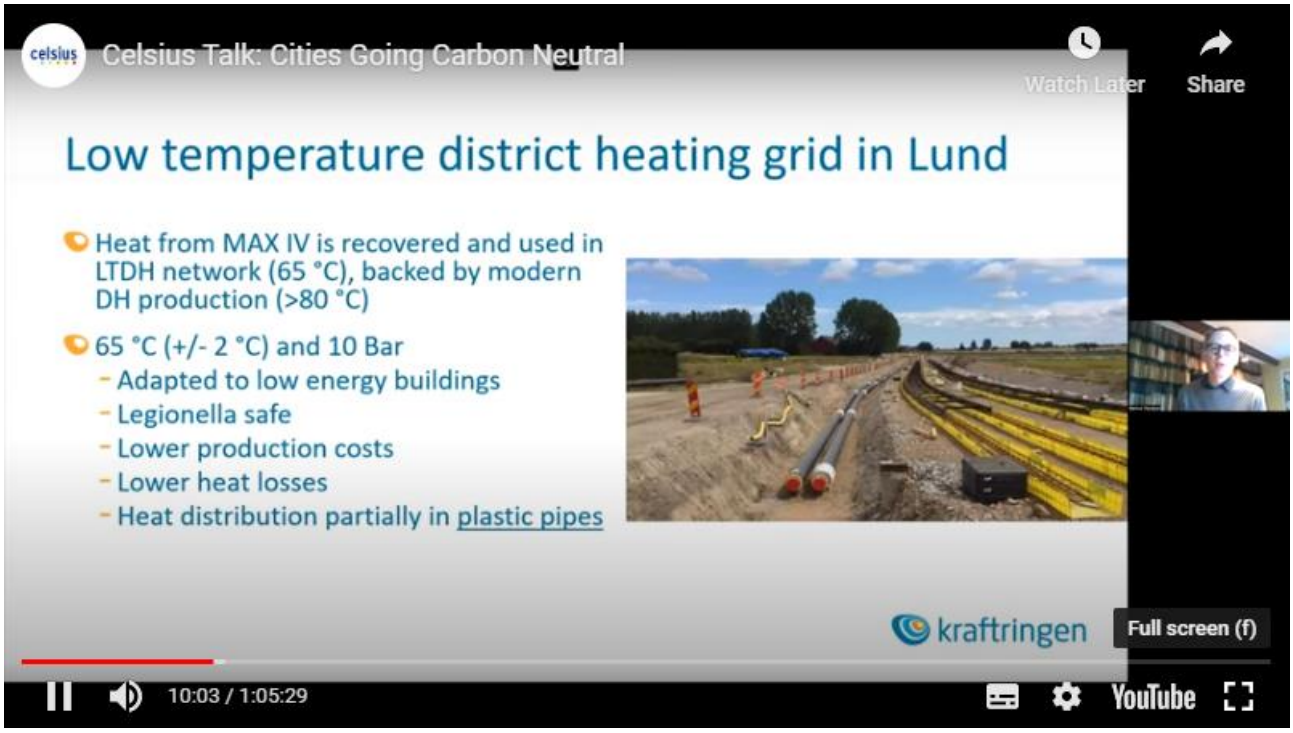
EU Project event

On 21 November 2021 took place the hybrid conference about the EU LowTEMP 2.0 on 4th Gen DH for the Baltic Sea Region was arranged by IMPPAN (Szewalski Institute of Fluid Flow Machinery Polish Academy of Science). The representative partner from the COOL DH project was Kraftringen Energi AB (UTIL-SE). The target audience was professionals in the District heating sector with more than 100 participants. (https://www.lowtemp.eu/uncategorized/lowtemp-2-0-final-conference-shows-that-district-heating-is-not-only-sustainable-but-also-exciting/)

14. CELSIUS Talk, 2022

Webinar

On 23 February 2022 COOL DH participated in the well-established webinar series of CELSIUS Talks. The episode focused on 'Cities Going Carbon Neutral' and the COOL DH intervention was made by Markus Paulsson from the City of Lund (MUN-SE) where the world's largest LTDH grid was recently awarded the Global District Energy Climate Award in the category 'New Scheme'. (https://celsiuscity.eu/celsius-talk-cities-going-carbon-neutral/)



Picture 6 Markus Paulsson (MUN-SE) presenting at the CELSIUS Talk.

15. 10th Plenary Meeting CA EED, 2022

Expert meeting

On 22 March 2022, the 10th Plenary Meeting Concerted Action Energy Efficiency Directive took place as a hybrid event online and in Lisboa. The Plenary Meeting was designed to allow the Member States and Norway to exchange experiences and learn from each other. Reto M. Hummelshøj from COWI-DK demonstrated at the parallel session on 'Working Group 10.2 – Energy systems integration – the role of heating and cooling, DHC infrastructure, energy storage', that low-temperature district heating (LTDH) networks enable successful integration of the low-grade waste heat sources. Over 150 experts, policymakers and implementers gathered together in Lisbon and virtually to discuss issues related to the implementation of the EED in the Member States. Approx. 35 people attended the session.
(https://www.ca-eed.eu/ia_document/10th-plenary-meeting-proceedings/)

Conclusion

The above list of selected events demonstrates the great effort for dissemination of COOL DH by the project partners. All of these events were targeting international audiences from around Europe directly related to and involved in district heating and low-grade heat sources. Another crucial criterion for selecting the events and categorising them as of European level is the English language. English is the most common language these events were held in; de facto the language mostly used in international events across Europe. An indication of the high outreach could be the summing up of all those who attended these events: over 950 people in total attended a session, lecture, or presentation where the COOL DH project was presented.

The promotion of the COOL DH project in relevant events on a European scale had a double goal. On one hand, through these conferences the project promoted its progress, experiences, and examples, aiming to gain feedback and other comments from professionals and interested stakeholders to be used for improvement. On the other hand, project partners raised awareness about the COOL DH implementation examples giving inspiration to the community, and pushing for further implementation of low-grade heat sources use in district heating and cooling systems.