

WORD BY THE COORDINATOR



"In an increasingly urgent context of climate change, the LIFE Low2HighDH project emerges as valuable contribution in the decarbonization of the European Union. Our commitment is clear: to provide support to 30 hightemperature district heating networks from Lithuania, Poland, and Slovakia, through the creation of investment plans to replace currently used coal and natural gas with innovative low-grade technologies (this is solar thermal, waste heat and heat pumps).We are aware that it will not be easy, but we trust that we have the will, the knowledge and the team to face the challenge.

With a projected investment of EUR454 million, our aim is to replace 1 TW h/year of fossil fuels, avoiding the emission of 291,000 tons of CO2 annually. This endeavour promotes energy sustainability and fosters collaboration among communities and stakeholders, laying the groundwork for a stronger and more resilient European network in the fight against climate change.

What we can see from the policy and technical community in Europe is that although the targets for decarbonizing heating and cooling are clear, municipalities tend to lack the knowledge, the skills, the tools and sometimes even the mindset to promote the transition towards cleaner district heating networks. In this context we will contribute by helping DH managers to walk along the decarbonizing journey. Even if in some cases it will not be easy to convince them or to find the

I invite all of you to follow this LIFE-funded project to discover our technical and financial solutions and check the change we are pursuing."

appropriate solutions, we will be the voice saying that this change is needed and is possible.

GET TO KNOW US

Low2HighDH is a 3-year project supporting 30 high temperature district heating sites (HTDHC) in Lithuania, Poland, and Slovakia in the implementation process of low-grade or waste heat technologies, by promoting the advantages of these energy sources and providing them with an investment plan to fulfil the proposed criteria for 'efficient district heating and cooling' from the Energy Efficiency Directive within a 10-yeartimeframe.

The support to the HT DHC owners/managers includes launching and managing at least 2requests for proposals (RFQs) to select the key suppliers for the implementation. Low-grade RES technologies to be explored will include at least solar thermal, low-temperature geothermal and heat pumps. The latter will be taken as "the enabling technology" to harness low-grade heat sources as well as to use waste heat. Being electrically driven, heat pumps can use renewable electricity for instance from wind and photovoltaics. The project will generate and disseminate capacity building materials to be used by other HT DHC sites or stakeholders, including a portfolio of technical and financial solutions that fit with the most abundant situations. An active engagement, dissemination and replication phase will be enabled by the creation of a wide network of stakeholders across the 3 case study countries and beyond - 3 national stakeholder communities, 30 local liaison groups as well as a project-wide Ambassador community. The project is expected to trigger EUR 454 Million in investments in sustainable energy (thermal RES technologies + waste heat), to replace 1 TW h/year of fossil fuels with and abate 291 Thousand Tons of CO2emissions.

FIRST MANAGEMENT MEETING IN MADRID

The partners had their kick-off meeting on25th and 26th of October 2023 in Madrid, hosted by the Coordinator, Creara, filled with a lot of enthusiasm and drive to change the existing district heating model towards a more sustainable one, providing technological and financial solutions. The meeting was full of fruitful discussions, workshops, and constructive planning of the first important steps! Many thanks to the whole <u>Creara, Energy Experts</u> team who did an amazing job in inspiring the discussions and organizing everything excellently.





PROJECT CONSORTIUM

The consortium in this project consists of eight partners from seven different European countries, specifically Spain, Italy, Poland, Lithuania, Germany, Slovakia, and Bulgaria. The profiles of partner organizations include universities, technical research centres, energy agencies and institutes, investment firms, energy consultancies and experts in management, communication, and dissemination. All consortium partners possess the necessary experience to develop the investment plans and support them efficiently, described in further detail below:

CREARA, the project's Coordinator, is a Spanish company that offers specialised consulting and engineering services in energy efficiency, renewable energy, and energy retailing. As part of similar past projects, CREARA has gained deep knowledge on how to develop methodologies for strategic planning and feasibility studies for heating systems in buildings. It will be leading also key tasks such as the selection of the most relevant investment plans' beneficiaries, the establishment of local stakeholder communities, the creation of prefeasibility studies, the development of partnerships and synergies.

Europroject is a consultancy company from Bulgaria that focuses on supporting research centres, universities, and other stakeholders to better cooperate in innovative projects and has experience in EU funded projects related to climate change, energy, biotech, and environment.

The Polish National Energy Conservation Agency (KAPE) provides expertise in the market, technical and financial assessment, the selection process for participants in Poland, the financial and investment planning, the establishment of a stakeholder community in the country, and the creation of prefeasibility studies.

GNE is a high impact investment company focused on providing financing for the built environment and advisory and financing solutions for home and building renovation to public and private programme managers. GNE Finance has also actively collaborated and participated in European projects focusing on district heating networks, as well as various financial solutions for building renovations and district-level infrastructure services.

The University of Genoa (UniGe): The university's Division of Thermal and Energy Systems will support the analysis of thermal systems for each location by developing ad-hoc calculation model approaches. UniGe will also support the monitoring and evaluation of the specific project's KPIs, as well as for assessing the overall environmental, social, and economic impacts of the project.

The Lithuanian Energy Institute (LEI) will contribute to lead the definition of the support scope for each participant (e.g., timeline, objectives, possible solutions), as well as participate in selecting the applicants for investment plan support and establishing the stakeholder community in Lithuania.

The Slovak University of Technology in Bratislava (STUBA) will actively support the definition of the possible technological solutions, will participate in the selection of candidates in Slovakia for investment plan support during the call for applications stage, in the establishment of the Slovak stakeholder community, and in supervising the initiation of the investment plans in Slovakia.

The University of Naples Parthenope (UniPARTH) will lead the analysis of thermal systems for each location by developing ad-hoc calculation models. UniPARTH will also lead the monitoring and evaluation of the specific project's KPIs, as well as the assessing of the overall environmental, social, and economic impacts of the project.

More about the consortium

AMBASSADORS COMMUNITY

Inspire action and accelerate the strategic heating and cooling planning and implementation across Europe!

Build stronger impactful partnerships with people and organizations around you who also care about the transition to green energy!

Our EU co-funded project Low2HighDH (Developing methodologies for the integration of low-grade energy sources into high-temperature district heating networks) is looking for Ambassadors from different cultural and professional backgrounds to join our Ambassadors Community. It is envisaged as a group of organizations walking on the same path towards accelerating strategic heating and cooling planning and implementation across Europe and would support boosting the project's dissemination and engagement of the district heating sector by spreading the word to EU regions and municipalities and impacting as many stakeholders as possible.

About the Ambassadors role:

The Ambassador Community will further ensure the large-scale replication of the plans. In addition, the Exploitation Events and dialogues will provide the opportunity for public and private actors to uptake the project's results.

These Benefits are waiting for you as an Ambassador:

Online promotion and visibility on EU level

• Online presentation of you/your company, official appreciation and outreach via Low2HighDH website and social media channels(LinkedIn/Twitter (X)/Facebook/YouTube), Newsletters, Press Releases and national and European events

• **Reputation Boost** - You can present your role as Ambassador of an EU co-funded project as valuable contribution to the public. The Low2HighDH Ambassador badge will be provided for the press, your website, your social media channels, etc.

• **First-hand information and invitation to events** – enjoy our easy, short and up to date information on this important topic and never miss an interesting event.

Participation in exclusive exchanges with peers and sharing of DHC policy developments.

Priority when accessing the support facility.

If you consider this a good proposal, please send an email to David Pérez Navarro, Coordinator of the project and Chairman at <u>Creara,Energy Experts</u> at <u>dpn@creara.es</u> and to me, Lazarina Dimitrova, Project and Communication Manager for Low2HighDHproject at <u>lazarina.dimitrova@europroject.bg</u>.

EVENTS

Since the beginning of 2024 the project partners have been participating in a lot of events promoting the project scope and objectives.

Which was the biggest one our project was presented at?

The 16th European Economic Congress (Europejski Kongres Gospodarczy) (EEC), of course!

It took place on 7-9 May 2024at the International Congress Centre in Katowice, Poland. This is the most prestigious and largest economic event in this part of Europe, bringing together thousands of experts in different spheres shaping the future direction and transformation of enterprises and energy systems.

The congress excitement is still on!

sectors.

Thanks to our partner KAPE, the whole consortium became a part of such an important and largescale event!

"The Green Deal and the Future of Heat Supply" - the 32nd conference HEATING 2024

In February 2024 the 32nd edition of the international conference VYKUROVANIE 2024 (HEATING 2024) was held with a main topic "The Green Deal and the Future of Heat Supply". The conference programme was divided into 5 parts - Energy, Progressive Heat Production, Alternative Energy Sources, Automation in Heating and Energy Services. 95 speakers participated in 13 lecture sections. The conference was attended by 450 experts from the field of heating, district heating and energy

Each member of the project team from Slovakia had a role at the conference: Professor Dušan Petráš, PhD. from the Department of Building Services, Faculty of Civil Engineering, Slovak University of Technology in Bratislava was the expert guarantor of the conference, Associate Professor Michal Krajčík, PhD. was a member of the preparatory committee and Ms. Martina Mudrá gave a lecture entitled - International project on district heating - Low2High District Heating in the session District Heating Systems and Heat Transfer Stations. She presented the main topic of the project, the key objectives and the content of the work packages.

As the conference was also attended by experts in the field of district heating, expert interviews were conducted to help the project team gain a deeper understanding of the barriers to the integration of renewable energy sources into district heating systems, how current energy policies and regulations support or obstruct the integration of renewable energy sources into district heating systems, and what the main financial challenges are.

NEWS

New European legislation on local heating and cooling plans: is this the moment we kick out fossil fuels?

https://dbdh.dk/new-european-legislation-on-local-heating-and-cooling-plans-is-this-the-moment-

we-kick-out-fossil-fuels/

The obligation to develop local heating and cooling plans has been agreed upon in Brussels in a very general way, with few details about how exactly it should be done. That means that how the directive is translated into national law will enormously influence what the final plans will look like.

Will they be concrete plans based on the technological clarity of existing, trusted technologies like heat pumps and district heating? Or will they be technologically neutral plans based on fairy tales that one day there might be enough biomethane or that green hydrogen might one day be cheap and plentiful?

Art. 25. 6 of the Recast Energy Efficiency Directive, which covers local heating and cooling planning, obliges member states to "support regional and local authorities to the utmost extent possible ... including financial and technical support schemes." It also requires member states to "ensure that heating and cooling plans are aligned with other local climate, energy, and environment planning requirements to avoid administrative burden for local and regional authorities and to encourage the effective implementation of the plans."

That last bit is particularly key. Making plans is good. But bringing those plans to life is what really matters.

That is why Energy Cities has put together an online tracker of national heating and cooling policies to shine a light on which countries are doing well and which countries need to step up their game in the challenge of decarbonising heat. You can find the tracker at <u>https://energy-cities.eu/local-heating-and-cooling-plan/</u>

What should be in local heating and cooling plans?

- An estimate, mapping, and strategy for increased energy efficiency (via low-temperature district heating readiness, high efficiency cogeneration, waste heat recovery, renewable energy in heating and energy for cooling in an area)
- Analysis of heating and cooling appliances in buildings, including area-specific energy efficiency measures targeting worst performing buildings and vulnerable households
- A plan to finance the implementation of policies and measures
 A trajectory to achieve the goals of the plans in line with climate neutrality and a framework for monitoring progress.

What did the EU ever do for us?

The EU's green deal includes many complementary measures to local heating and cooling plans that also need to be considered. National governments must plan to phase out fossil fuel boilers by 2040 (leaving the door open for biomethane and hydrogen boilers). Minimum energy performance standards were introduced, which are supposed to target the worst-performing buildings first.

There is the mandatory use of waste heat from data centres, an installation level cost-benefit analysis for other waste heat producers, and a non-binding target to increase the share of energy from renewable sources and waste heat in district heating by 2.2 %/year from 2021 to 2030.

So, is this the moment we kick out fossil fuels?

This is still an open question. Because so many of the challenges remain in the hands of national EU governments, it seems clear that different countries will move at different speeds. But there is so much that can be learned from the front-running countries to transform the laggards into leaders themselves.

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