

SEPTEMBER 2025 - N.1 |

ALPHA NEWSLETTER

ADVANCING 5TH-GENERATION DISTRICT HEATING AND COOLING NETWORKS IN ALPINE SPACE

Buildings consume 42% of EU energy, with heating and cooling accounting for a major portion. Alpine countries have set ambitious net-zero targets for heating and cooling to combat climate change in our vulnerable macro-region. However, the adoption of optimal solutions, such as heat pumps and renewable energy systems, is lagging in the Alpine Space. ALPHA addresses this issue by enhancing implementation capacities. The project designs pathways for decarbonising the Alpine heating, cooling, and building sectors. It also paves the way for an enabling policy and financing framework for the Alpine macro-region.

THE PROJECT

Priority 2

Carbon-neutral and resource sensitive Alpine region

S. O. 2.1

Promoting energy efficiency and reducing greenhouse gas emissions

ERDF
1.548,342 €

Duration
Sept 2024
August 2027



www.alpine-space.eu/project/alpha/

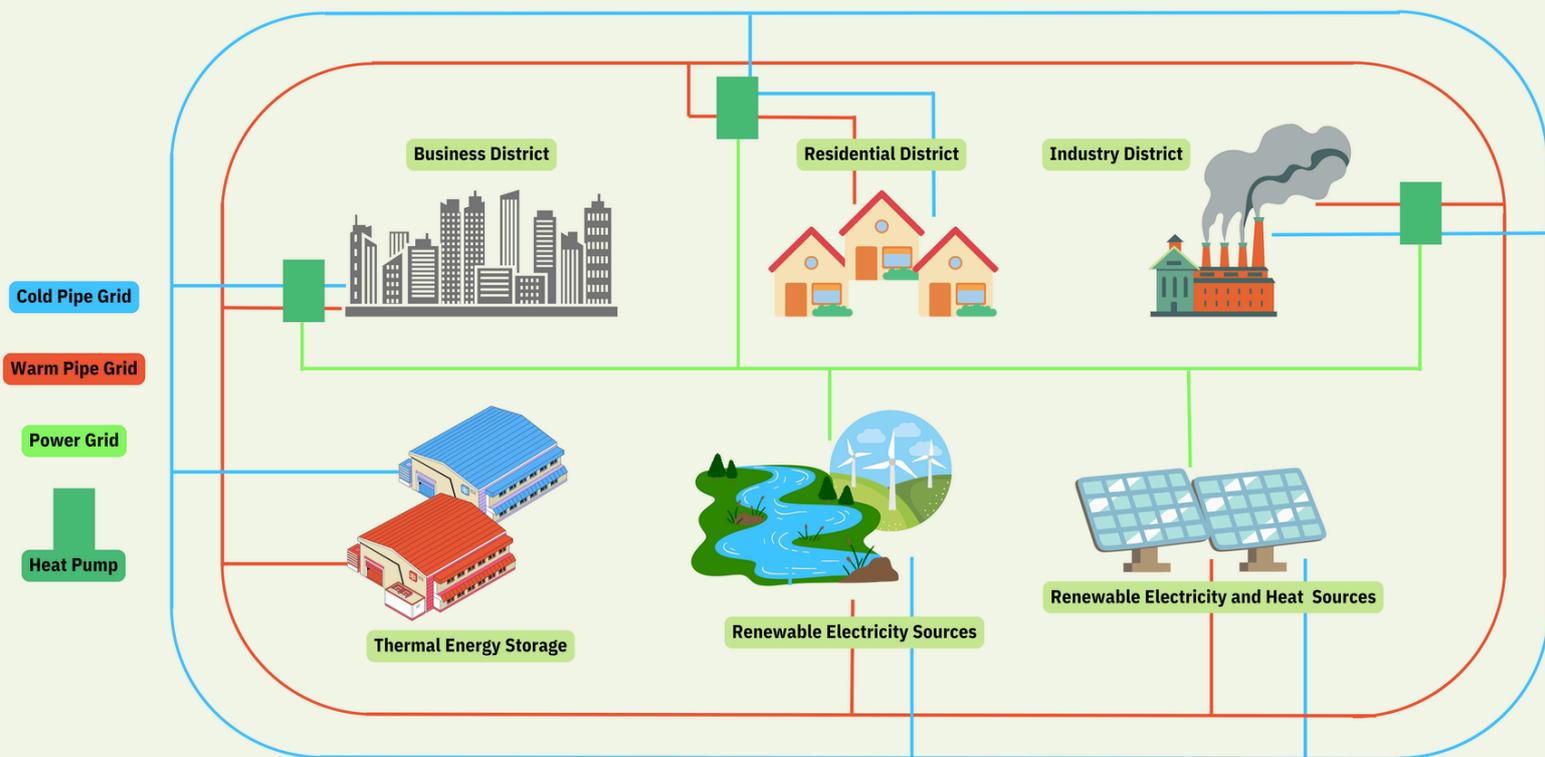


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A new generation Technology

5GDHC systems operate through low-temperature networks that minimise energy losses and allow bi-directional energy flow, enabling end-users to both receive and supply energy based on demand. These systems contribute to climate change mitigation by reducing greenhouse gas emissions, enhancing energy system efficiency, supporting the transition to sustainable energy models, and fostering innovative business opportunities. Examples include the use of thermal energy storage to balance supply and demand or uninsulated pipelines to further reduce energy losses.

The 5GDHC System

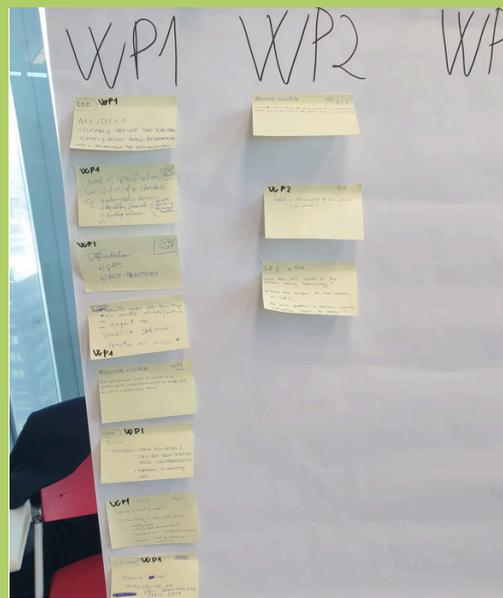


ALPHA Main Goals



- Simplify and accelerate the adoption of 5GDHC technologies
- Implement a common decarbonisation plan across selected pilot territories
- Closing the energy loop
- Using low-grade sources for low-grade demand
- Decentralised and demand-driven energy supply
- Local sources as a priority

ALPHA Project Meetings, from Milan to Vienna



Vienna Study Visit - 3th - 5th June 2025

The ALPHA project partners gathered in Vienna at the beginning of June—not only an opportunity to review the progress of the work, but also a chance to experience the innovations of 5GDHC technology firsthand. Discover more:

- [ALPHA meeting: Austria and Vienna's efforts toward a sustainable future](#)
- [Village im Dritten: from a former railway yard into a vibrant residential neighborhood](#)
- [Roots energy: a cutting-edge approach to sustainable building modernization](#)
- [Retrofitting for the future: the Smart City Baumgarten case study in Vienna](#)

Timeline of ALPHA project

Mapping existing needs and emerging business opportunities for H&C SMEs and service providers

Establishing Local Working Groups (LWGs) and developing Heating and Cooling (H&C) profiles for pilot sites

We Are Here

Jointly developing a Decision-Making Support Methodology to guide up-to-date H&C networks' rollout, addressing all necessary steps

Develop a transalpine strategy to accelerate the adoption of modern H&C/5GDHC networks, and promote SME opportunities

Focus on regulatory gaps and best practices in 5GDHC

Just over six months after its launch, the ALPHA project produced its first documents, the result of the partners' work, in dialogue with policymakers and stakeholders.

[Read the article here!](#)

Next Step: Germany

The next project meeting will take place on December 4–5, 2025, in Munich, Germany. We will keep you updated.

For more info send an email to: alpha.alpine.space2023@gmail.com

