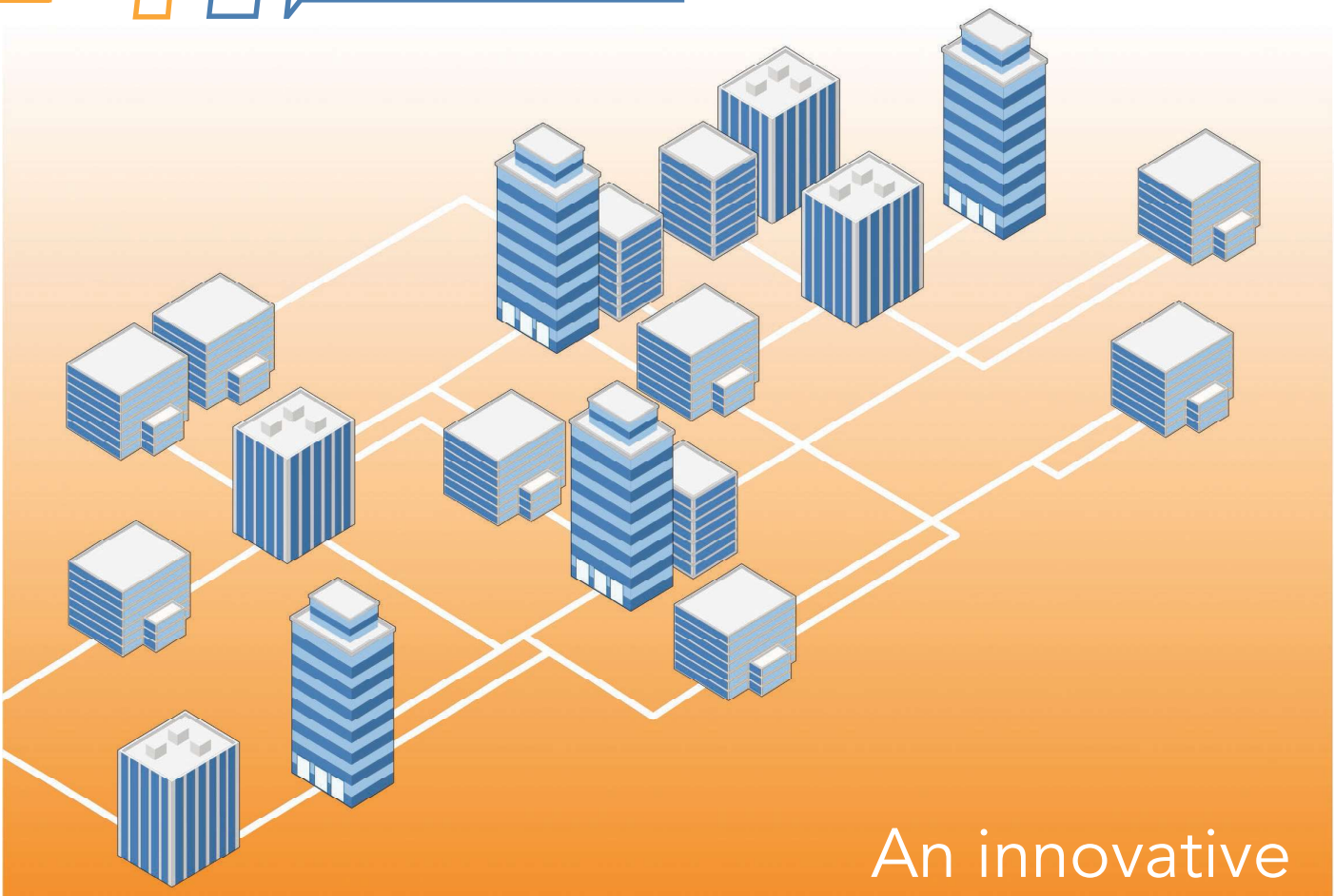
STORM
DISTRICT ENERGY CONTROLLER



An innovative DHC networks' **controller** for enhanced **district energy efficiency**

The STORM project tackles **energy efficiency at district level**. It aims to demonstrate that, thanks to a smart **District Heating & Cooling (DHC) networks' controller, energy savings** can reach **up to 30%**. In that perspective, the project partners will develop a controller based on **self-learning algorithms.**

The developed controller will enable to maximize the use of **waste heat** and **renewable energy sources** in DHC networks. It will be implemented in **2 pilot sites**, Mijnwater BV in Heerlen (NL) and Rottne in Växjö (SE), where the resulting energetic, economic and environmental benefits will be assessed.

Through replication, dissemination and education efforts, the project outcomes will be transferred to several stakeholders across the EU, and will thus contribute to a **wider deployment of DHC networks at the EU level.**

info@storm-dhc.eu **storm-dhc.eu**

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OBJECTIVES

- To develop an intelligent controller for DHC networks;
- To integrate multiple efficient generation sources in the DHC network, including renewable energy sources, waste heat and storage systems;
- To demonstrate the developed controller in two existing DHC networks;
- To quantify the energetic, economic and environmental benefits of the controller;
- To investigate exploitation opportunities of the newly developed technology to facilitate its market uptake;
- To develop innovative business models required for the large-scale roll-out of the controller at reduced costs;
- To increase awareness on the need to control DHC networks in a smart way.

DEMONSTRATION SITES

Mijnwater BV sites in Heerlen, the Netherlands

In the Heerlen district, flooded mine galleries act as renewable energy sources and provide a total of 500,000 m² floor area connected to a low temperature district heating and cooling network. The purpose of the STORM project is to develop a controller for the hybrid energy system, in which underground storage systems can be integrated, in order to go towards an energetically self-sufficient district.

Växjö Energi district heating system in Rottne, Sweden

The second largest high temperature distribution network in Rottne, Växjö makes up about 10,300 metres with a total volume of about 64 m³. The production is based on two bio-fuel boilers, complemented with a traditional oil boiler. The purpose of the project is to minimize the oil usage and optimize the operational behaviour of the bio-fuel boilers.

Credits: DHC+ Technology Platform

Coordinator: Johan Desmedt, Energyville/VITO

Contact: info@storm-dhc.eu

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