

## PEES Power Systems

# Helsinki distributed energy systems



## Overview

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Helsingin Energia's DHC smart city- solution combines CHP, district heating and district cooling in the most energy-efficient way in the world. Valmet will supply an automation system for Helen Ltd's Patola air-to-water heat pump plant and two electric boilers currently being built in Helsinki, Finland. Helsinki Energy Challenge is a global challenge competition that seeks to answer the question: How can we decarbonise the heating of Helsinki, using as little biomass as possible?

Space and domestic hot water heating in Helsinki is currently mostly based on the district heating system. The heat. Ikonen, J., Oct 2025, In: Nuclear Engineering and Design.

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### Introduction of new decentralised renewable heat supply in an existing

Helsinki DH system represents a city-wide system with very efficient, but mainly fossil fuel based heat supply. This makes it a challenging and an interesting case example as an attempt to ...

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### Decentralized District Heating and Cooling system (DHC) Helsinki

Helsingin Energia's DHC smart city-solution combines CHP, district heating and district cooling in the most energy-efficient way in the world. Helsingin Energia is business based and profitable energy ...



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### Carbon neutrality programme

Helsinki's energy platform combines clean electricity, a reliable electricity network and flexible district heating with low-emission customer solutions. The flexibility of Helen's district heating system and ...



## Helsinki's Pilot Activity: Systemic Heat Shift

Helsinki has cold winters necessitating high energy consumption for heating, traditionally reliant on fossil fuels. The pilot activity leverages Helsinki's existing infrastructure, technological capabilities, and ...



## Helen seeking data center partners to connect to Helsinki district

Helen, one of Finland's largest energy companies, has announced its intent to partner with data center operators interested in locating their operations in Helsinki, Finland.

## Valmet's DCS to Boost Energy Market Flexibility at Europe's Largest

Valmet will supply the Valmet Distributed Control System (DCS) to Helen Ltd's Hanasaari electric boiler plant and a thermal accumulator being built in Helsinki, Finland.



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## Helsinki Energy Challenge

Space and domestic hot water heating in Helsinki is currently mostly based on the district heating system. The heat production for the district heat system is based on several energy sources and ...



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## Using a multi-method approach for decision-making about a ...

Distributed energy systems (DESY) are used in many households as an alternative to conventional centralized energy production. While centralized energy production does offer certain advantages, ...



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## Valmet's automation powers Helsinki closer to a clean-energy ...

The mission-critical Valmet Distributed



Control System (DCS) enables flexible and efficient heat production, thereby reducing CO2 emissions and bringing Helsinki, the capital of ...

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## District heating and cooling model for the Finnish capital region

Optimal investment analysis for heat pumps and nuclear heat in decarbonised Helsinki metropolitan district heating system Pursiheimo, E., Lindroos, T. J., Sundell, D., Rämä, M. & Tulkki, V., Jun 2022, ...



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