



A Fenagy CO₂ heat pump being installed in Clapham Park. Photo credit: Hemiko

Fenagy CO₂ Heat Pumps to Decarbonize District Heating in London's Clapham Park

U.K. district heating network designer and operator Hemiko recently positioned a 1.2MW unit and a 1.8MW unit, which will eventually heat 3,500 homes.

Jae O. Haroldsen April 29, 2025 District Heating, Europe, Heat Pumps



At the center of a project to decarbonize London's Clapham Park district heating network are two air-sourced CO₂ (R744) heat pumps – a 1.2MW (341TR) unit and 1.8MW (511TR) unit – produced by the Danish manufacturer [Fenagy](#).

The heat pumps, and two 50,000L (13,200gal) thermal tanks manufactured by the U.K.-based Hartwell Manufacturing, were recently placed into position by British [heating network designer and operator Hemiko](#). The new network remediates and consolidates five heating systems – currently serving roughly 500 homes – into one. In addition, it will eventually deliver heat to more than 3,500 new homes and 16 commercial customers.

Other U.K. companies involved in the project include developer Metropolitan Thames Valley Housing (MTVH), renewable energy solutions provider Pure Renewables and the low-carbon district heating consultant Ener-Vate.

"We are excited to see the project progressing, and we look forward to continuing our collaboration with Pure Renewables and Hemiko over the coming months to get the systems operating and delivering clean energy to the [network]," said Fenagy in a [LinkedIn post](#).

Network design: The heat production for the network will come from two centers – one using electricity and the other gas boilers, Fenagy told [NaturalRefrigerants.com](#).

- EC1, the primary network supply and control center under construction, features two heat pumps, two 50,000L thermal tanks and three 500kW (142TR) electric boilers. The heat pump racks are installed on the ground level, and the evaporators are fitted on the roof.
- EC2, the existing energy center with 15 modular gas boilers producing a heating capacity of 3.8MW (1,080TR) and a 10,000L (2,641gal) thermal tank, will supply heat to EC1 and the network as needed.
- According to Fenagy, the system will provide domestic hot water and space heating through under-floor piping or radiators, with a 70°C (158°F) water design flow and a 40°C (104°F) return.

Funding/development: To support England's transition to low-carbon heating, the U.K. government, under its Green Heat Network Fund, awarded MTVH £3.7 million (\$4.8 million/€4.2 million) for the Clapham Park project.

- Along with refurbishing the existing homes on the network, MTVH plans to build roughly 3,500 new homes, with more than 50% providing "affordable housing" for eligible households based on local incomes and housing prices.
- According to Ener-Vate, the Clapham Park building project, covering 4.2 hectares (10.4 acres), is a [15-year project](#), with the [heating systems in the existing homes](#) already refurbished and over 500 new homes constructed.

Going big: Fenagy has recently supplied large-scale CO₂ heat pumps to decarbonize several European district heating/cooling networks.

- In a [Copenhagen project](#), three of Fenagy's water-to-water CO₂ units – collectively providing 5.2MW (1,478TR) in heating capacity and up to 3.6MW (1,023TR) in cooling capacity – were integrated with an existing 18MW (5,118TR) ammonia (R717)-based district cooling plant to meet the heating demand of roughly 3,000 apartments and the cooling needs of local hospitals, hotels, offices and data centers.
- In Løsnung, Denmark, Fenagy built, installed and commissioned a [7MW \(1,990TR\) CO₂ heat pump system](#) in nine months, replacing a biomass incinerator.

Quotable: "Providing high-quality and affordable homes is at the heart of MTVH's flagship regeneration project at Clapham Park, [which includes] a greener, more sustainable heating network," said Geeta Nanda, Chief Executive at MTVH. "The project will contribute to south London's local economy and community whilst giving residents the chance to have a decent home."

🔗 CO₂ Heatpumps, Ener-Vate, Fenagy, Hemiko, Metropolitan Thames Valley Housing, Pure Renewables, U.K.

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About the author

Jae O. Haroldsen has covered the HVAC&R industry for three years with a focus on natural refrigerants in residential, commercial and industrial applications. With her professional civil engineering background, Jae brings a technical lens to her reporting. As a staff writer for NaturalRefrigerants.com, she covers global policy shifts, emerging technologies and industry trends that are shaping the future of cooling.

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