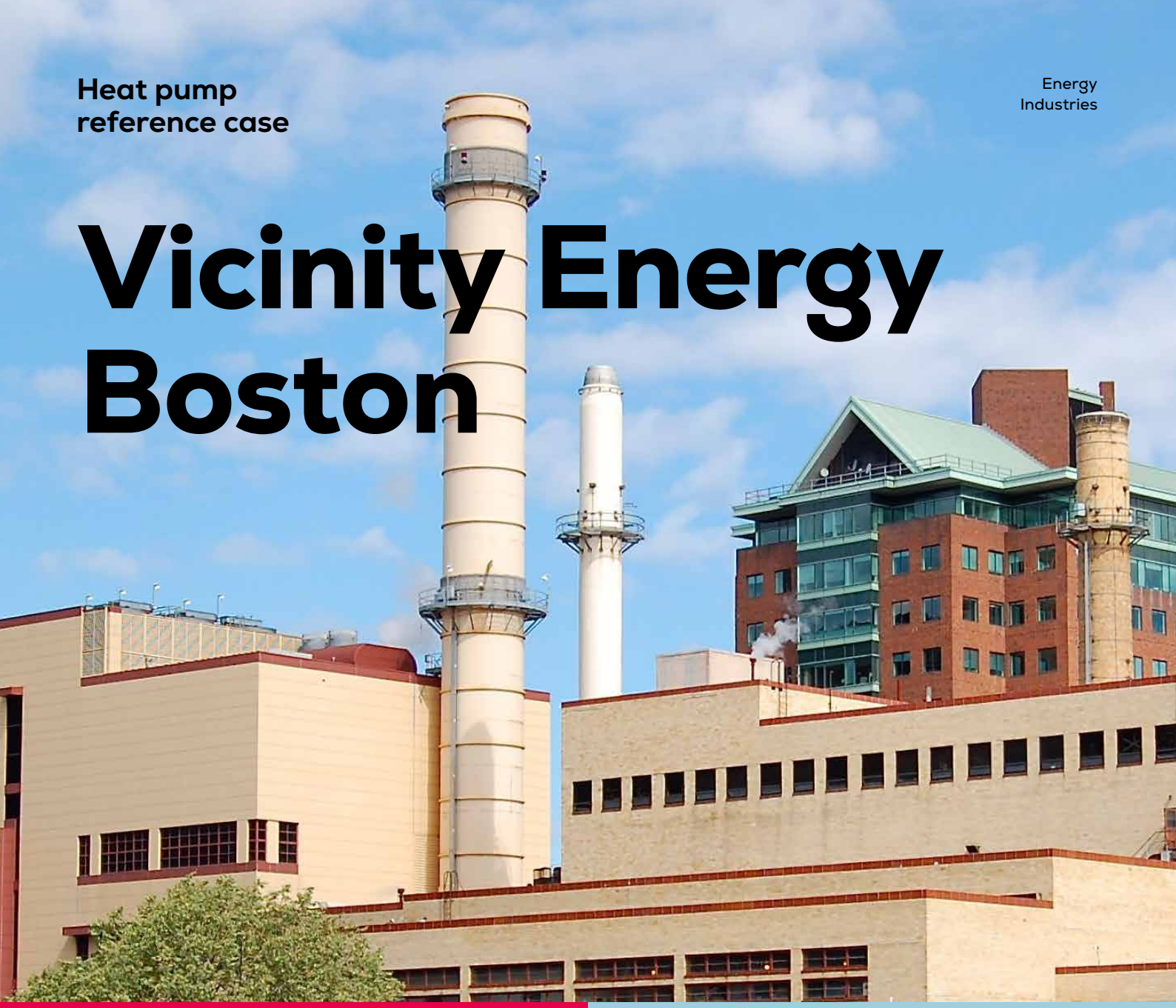
Heat pump
reference case

Energy
Industries

Vicinity Energy Boston



To advance the decarbonization of Boston's district energy network, Everllence is partnering with Vicinity Energy to install a 35 MWth industrial-scale steam heat pump at theKendall Station facility in Cambridge,Massa-chusetts. The project will replace fossil-fueled systems with climate-neutral steam generation sourced from the nearby Charles River.
Once operational, the system is set to become the largest river-source heat pump installation of its kind in the U.S., and a role model for other American cities aiming to electrify their district energy supply.

Key facts

- End customer: Vicinity Energy (USA)
- Application: District energy steam generation for central Boston
- Scope of delivery: One heat pump unit with Everllence compressor system
- Refrigerant: Natural refrigerant)
- Heat source: Charles River
- Heat sink: Steam (high-pressure) for district network
- Heat output: 40 MW
- COP: ~2 (estimated)
- CO_2 savings: 44,000 t p.a.

Everllence

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Project background

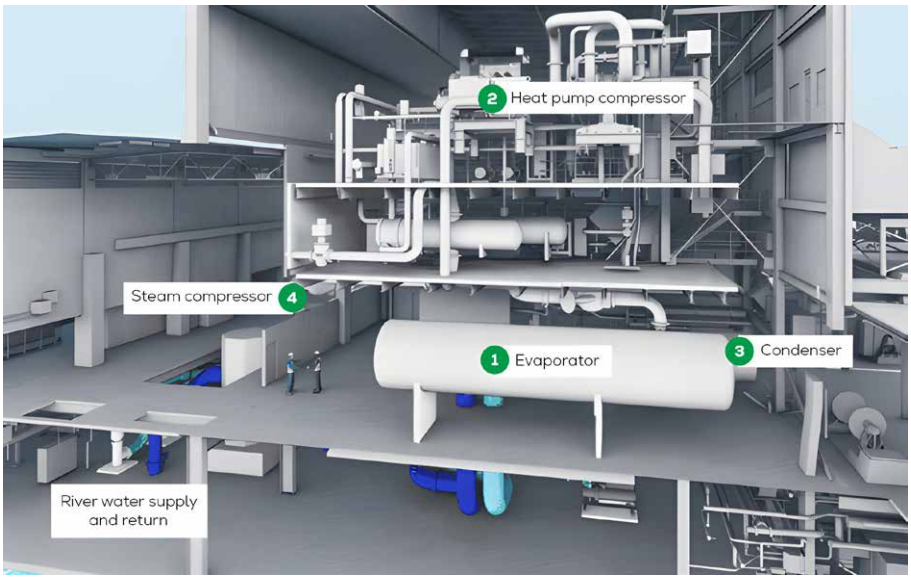
In partnership with Vicinity Energy, Everllence is delivering a 35 MWth steam-generating heat pump system for Kendall Station in Cambridge, Massachusetts. This landmark project supports the decarbonization of Boston's district energy network by replacing fossil-based steam generation with climate-neutral, river-sourced thermal energy. Once operational, the facility will become the largest installation of its kind in the U.S., setting a national benchmark for sustainable urban energy systems.

System integration & application

The Everllence heat pump system will draw thermal energy from the nearby Charles River to produce high-pressure steam – branded as eSteam – which will feed directly into Boston's existing district energy infrastructure. Powered by renewable electricity, the system enables a complete fuel switch while maintaining performance standards. Designed for continuous, industrial-scale operation, the plant will serve commercial buildings, institutions, and critical infrastructure throughout the Boston metropolitan area.

Operational impact & scalability

With a 35 MWth capacity, the steam-generating heat pump system is expected to eliminate substantial CO_2 emissions from the city's thermal energy mix. As demand for carbon-free energy grows, the Kendall Station installation serves as a scalable blueprint for future heat pump integration across U.S. cities. Vicinity's vision of district energy electrification – paired with Everllence's technology – demonstrates how public-private collaboration can drive meaningful climate action at the urban level.



Technical highlights

Heat source	River water from the Charles River
Heat sink temperature	~200 °C steam
Total heating capacity	~35 MW
Annual heat output	Up to 216,000 MWh
Refrigerant	Natural
Technology	Industrial-scale heat pump system for high-pressure steam
Electrical input	Renewable electricity
COP	› 2
Annual CO_2 savings	Up to 30,000 tons

Everllence
86224 Augsburg, Germany
P+ 49 821 322-0
info@everllence.com
www.everllence.com