



Ammonia Heat Pump Improves Efficiency Fourfold for Markham District Energy Project



CIMCO installed a 4 MW ammonia heat pump at a district energy plant in Ontario, Canada that is expected to reduce greenhouse gas emissions by nearly 4,500 tonnes.

Markham District Energy Quick Facts

- Buildings served: 215
- Area served: 11 million ft² (1.02 million m²)
- Heat pump size: 4 MW (1,132 TR)
- Refrigerant used: Ammonia (R717)

Guided by its vision to build healthy and sustainable communities, the city of Markham in Ontario is actively working to decarbonize buildings through its upgraded District Energy System. CIMCO's 4 MW (1,132 TR) ammonia heat pump is driving this work by replacing existing natural gas boilers and managing the system's heating and cooling needs with a clean energy alternative.

The upgraded system provides heating and cooling to an area of over 50 km (31 miles) of residential, commercial, and industrial buildings. The new heat pump also captures the waste heat generated from the continuous supply of chilled water to data centers and hospitals, elevating its temperatures before feeding it to the community heating loop. This saves additional energy.

"This ammonia heat pump is a game-changer in the industry, boasting nearly four times more energy efficiency than a gas boiler and removing tonnes of greenhouse gases in the process of heating and cooling over 8,500 residents and offices," explains David Fauser, Director of Sales and Marketing at CIMCO.

"CIMCO is thrilled to be a part of the solution to the net-zero challenge that communities are facing, and to contribute our expertise to help them reach their sustainability goals," said Fauser. "This is the future of energy, and we're excited to be leading the way."