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Harnessing heat from data centers for reuse in district heating

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A global social technology company is revolutionizing municipal heating by transforming data center waste heat into a valuable resource. Its data center campus in Odense, Denmark, continues to meet Europe's growing demand for services. Leveraging Munters' cutting-edge cooling and heat recovery technologies, the social technology giant captures and transfers heat from server halls to a central heat pump facility, repurposing it as municipal heating provided free of charge to nearly 7,000 homes.

Driving energy efficiency through heat reuse

Data center operators across Europe are increasingly embracing heat reuse, and Munters is at the forefront of this trend, converting waste heat into valuable energy for local communities. In one of the world's largest heat reuse projects, a leading social technology company utilizes Munters Oasis™ Indirect Evaporative Cooling (IEC) systems, removing heat from its facility while maintaining optimal indoor conditions. This system cuts energy consumption by up to 80% compared to traditional cooling methods, showcasing its exceptional efficiency.

Powered entirely by renewable energy, the data center minimizes waste and aligns with the company's strict policies on resilience, efficiency, and sustainability. This approach ensures that the facility meets Europe's increasingly stringent environmental regulations while delivering significant energy savings and reducing its carbon footprint.

"As new European regulations require data centers to capture more waste heat, we'll see increased urban planning around these facilities. Heat can't be transported far without significant loss, so ideal candidates for reuse include hospitals. With larger installations like Odense, we can provide energy to large towns," says Craig MacFadyen, Director of Offer Strategy & Portfolio Management at Munters.

How Munters supports the Odense data center

- Captures heat: Efficiently transform waste heat into valuable energy
- Optimizes energy use: Reduce overall consumption with cutting-edge cooling systems and lower operating costs
- Enhances sustainability: Supply energy to local communities, cutting emissions and reducing dependence on traditional energy sources

Maximizing heat recovery and sustainability

The Oasis IEC captures the heat, which is transferred to a water loop and directed to a municipal heat pump facility. The water temperature is raised there to levels suitable for district heating, contributing to local energy needs. The tech company reuses the heat recovered to provide up to 100,000 MWh of energy a year to warm 7,000 homes and businesses in Odense.

MacFadyen notes that the social technology company, like others dependent on data center operations, is fully committed to sustainability.

"They are at the forefront of energy efficiency," he adds. "We share that vision at Munters and are always pushing the boundaries of innovation to maximize performance."

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