



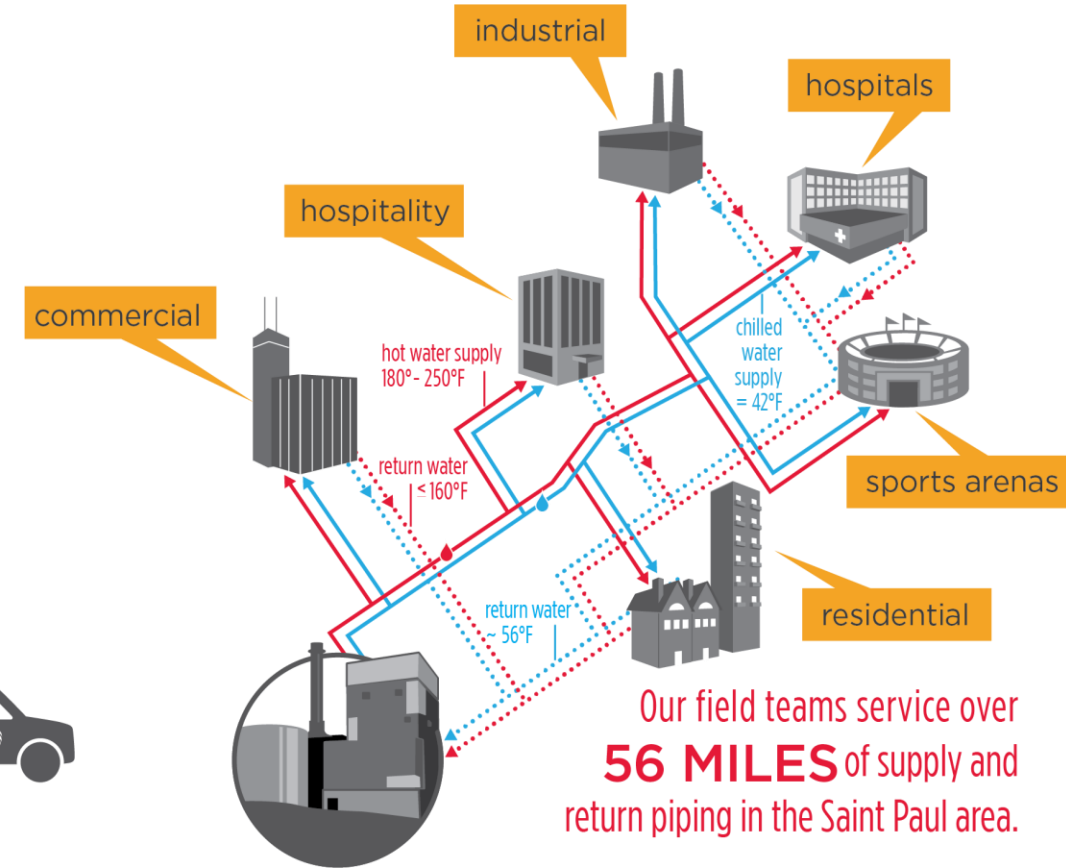
DISTRICT ENERGY
ST. PAUL™

Data Center Waste Heat Recovery

City of Saint Paul Policy Committee Meeting
July 8, 2026

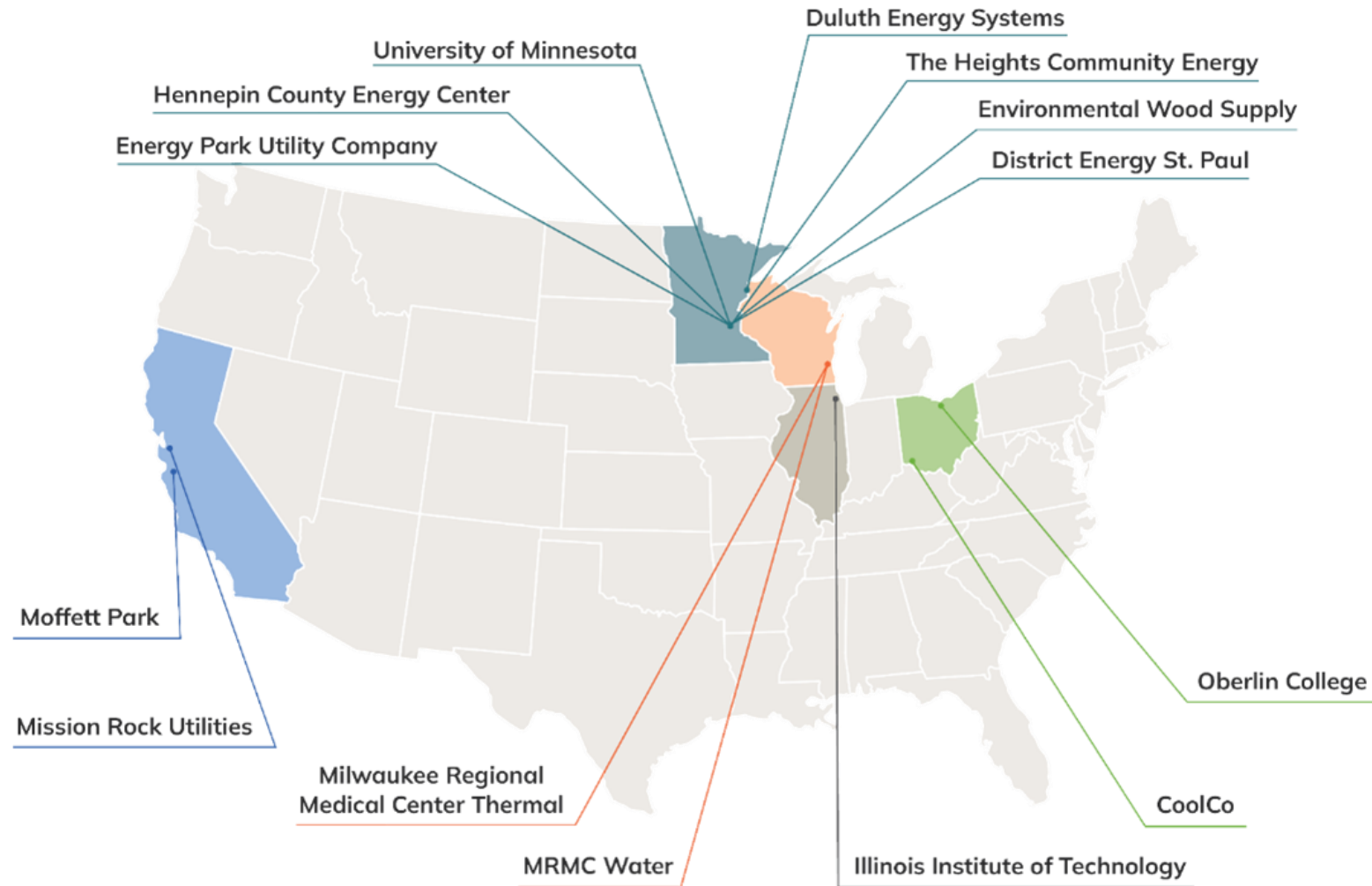
District Energy St. Paul

- 501(c)3 non-profit utility
- Public-private partnership
- Serving Saint Paul for over 40 years
- North America's largest hot water network
- Experienced in waste heat integration (Clean Heat St. Paul, St. Paul Cogeneration, Solar Thermal, etc.)
- 1993, 2010, and 2021 International District Energy Association "System of the Year" Awards and a 2013 International Energy Agency Global Climate Award



Ever-Green Energy

- Wholly-owned subsidiary of District Energy St. Paul
- Mission-based focus on the advancement of sustainable energy systems across North America
- Leveraging decades of **operations, planning, and engineering** experience to develop and advance smart and sustainable **community and campus energy systems**.



Not All Data Centers Are the Same

HYPERSCALE DATA CENTERS

100+ MW

500,000 sq ft – 2M+ sq. ft or more

100-500+ acres

- Owned by tech giants (Amazon, Google, Microsoft)
- Serves to train AI
- Located in suburban/rural areas
- More discussion regarding electric grid strains

URBAN INFILL DATA CENTERS

<50 MW

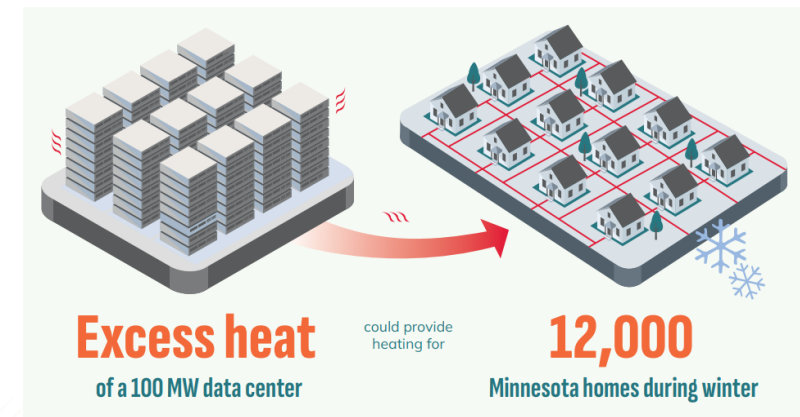
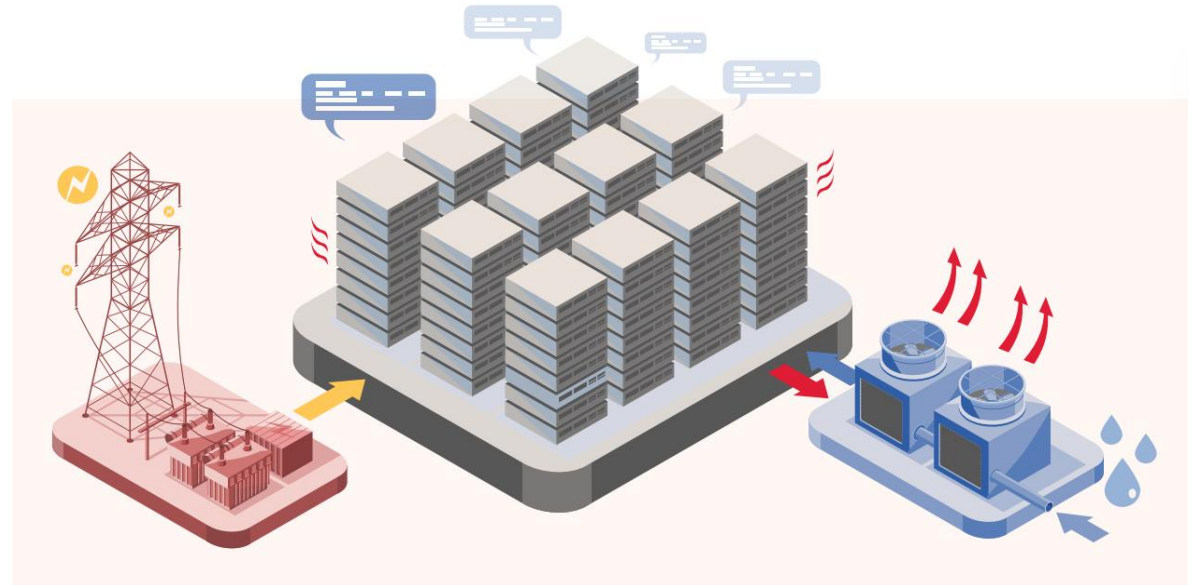
10,000-100,000 sq. Ft.

Often pursue existing buildings

- Mission-driven data center developers
- Local influences: hospitals, banks, higher education, government, etc
- Possible building repurposing
- Waste heat capture
- Often sized for electricity supply availability
- Downtown St. Paul advantage: closer to District Energy St. Paul network

Data Center Heat Recovery

1. Heat Generated: 100% of electricity is converted to heat
2. Heat Captured: Instead of expelling, heat is captured via heat exchangers
3. Heat Pump Amplifies: Upgrades heat to district heating temperatures (if needed)
4. District Energy Delivers: Captured heat flows through district energy's network delivering low- to zero-carbon thermal energy
5. Replacement of fossil fuel combustion



Saint Paul's Unique Advantage & Benefits

- Over 500 buildings receive low-carbon heating
- Data center waste heat reuse reduces District Energy St. Paul's fossil fuel use
- Our scale and footprint offers flexibility to be site-agnostic. We can work with developers at various sites to identify the best opportunities for St. Paul
- Potential cooling customer for District Energy St. Paul, benefiting all cooling customers in St. Paul
- Reduces air pollution, improving community health
- Data centers' energy consumption reduces if connected to District Energy St. Paul
- City gains a local heat source to enhance resilience



Community Benefits

Lower Emissions

Heat recovery replaces fossil fuel combustion with zero- or low-carbon heat, reducing greenhouse gas emissions and improving air quality.

Rate Stability

A locally sourced, fixed-cost heat supply reduces exposure to natural gas price volatility and supply chain disruptions.

Grid Reliability

Every unit of heat recovered is an electron freed for other uses, helping stabilize the regional grid amid growing AI-driven electricity demand.

Economic Development

Urban infill data centers activate vacant properties, create local jobs, and generate tax base while providing community energy benefits.

Climate Leadership

Saint Paul becomes a national model for integrating the data economy with community energy systems and clean heat transition goals.

Regulatory Alignment

Supports Minnesota's clean heat objectives, positioning Saint Paul ahead of emerging state policy on thermal energy networks and data center waste heat.



THANK YOU



DISTRICT ENERGY
ST. PAUL™