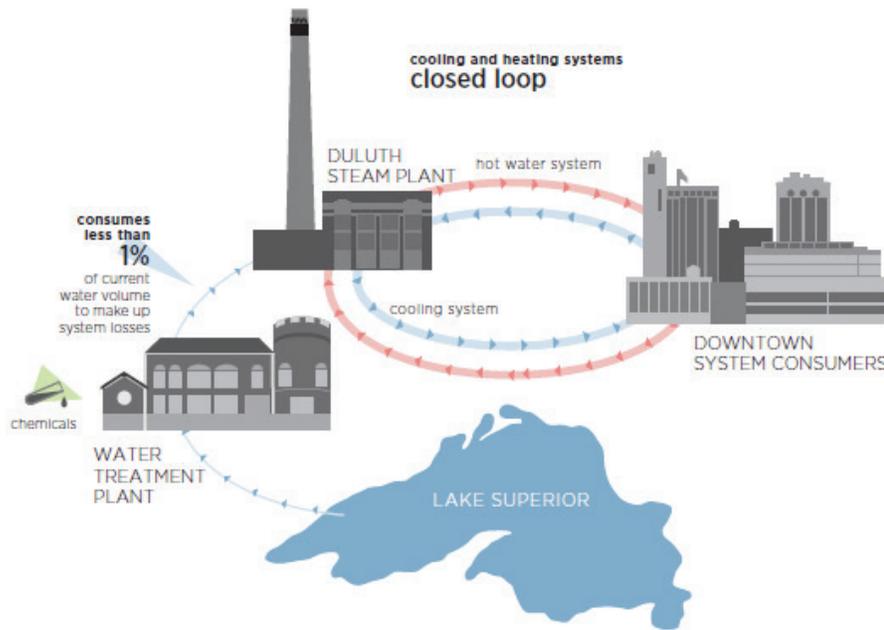


Duluth's Energy Transformation

Duluth is advancing a grand vision for its energy system that would place it among the country's most forward-looking cities. Duluth has made its energy future a priority and has seized opportunities to work within the community, with its utilities, and in collaboration with experts from around the country to integrate state-of-the-art technology and international best practices for an efficient, cost-effective, and environmentally advanced system.

Together with the City of Duluth, state, and local leadership, we can make Duluth's transformative vision for its energy future a reality.

Vision for Transformation



- Reduced water consumption
- Reduced energy consumption
- Reduced chemical consumption
- Reduced greenhouse gas emissions
- Reduced water and sewer treatment costs
- Increased capacity for future growth

The Time is Now

- Now is the time to modernize this 83 year-old steam system, while Superior Street and local utilities are being renovated starting in 2017.
- Investing in state-of-the-art energy infrastructure is the key to bringing renewables, efficiency, financial savings and stability, and a flexible energy system that will serve the community for years to come.
- This is a once-in-a-lifetime opportunity.

Key Elements of the Vision

- Critical upgrades to the City's existing district heating and cooling systems – switching from steam to more efficient hot water and creating additional opportunities for proven technologies such as waste heat recovery and combined heat and power.
- Helping Duluth building owners meet high standards for energy efficiency.
- Integration of renewable energy that supports the local forest industry.

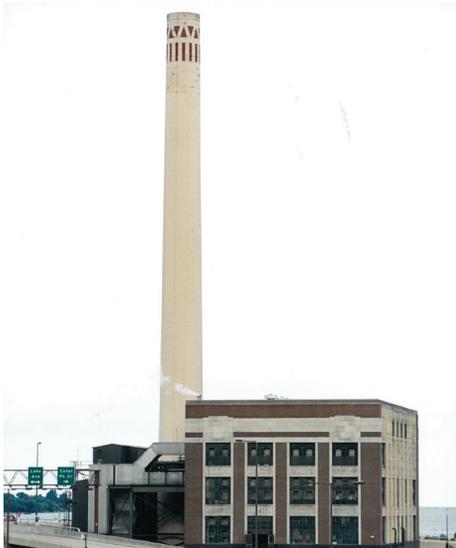


“Local leadership is the key to community energy transformations like the one poised to move forward in Duluth. Cities that lead the way in global energy advancements have all started with district energy infrastructure and used this to achieve economic and environmental goals.”

Ken Smith, CEO, Ever-Green Energy

“The City of Duluth is driving this energy transformation in partnership with Ever-Green Energy Duluth and our community district energy system. We continue to lead and drive this effort and will make it a priority to take advantage of this once-in-a-generation opportunity to make Duluth a showcase for energy solutions.”

Don Ness, Mayor, Duluth, MN



Duluth's community energy plant



Hot water district heating



Biomass integration

How does this get done?

- Several elements of the grand plan are already in place. These elements help establish the infrastructure upon which this energy transformation will be built. The 2017 Superior Street reconstruction is an incredible opportunity to install hot water infrastructure.
- Leadership and commitment from local and state government officials.
- Partnerships at the local and state level.
- Leverage existing grants from the MN Department of Agriculture NextGen program and grants from the Northland and the McKnight Foundations.
- Work closely with local utilities.

Broad Community Appeal

Led by the City of Duluth and Ever-Green Energy, this project has engaged experts and supporters from within and beyond Duluth, including state commissioners, city councilors, and executives from the business, energy, environmental communities who believe in Duluth's grand energy vision.

What is needed to advance this energy transformation?

\$25 million up-front investment, matched with local resources, to install the infrastructure opportunistically in conjunction with the Superior Street reconstruction. Additional investments in the short-term would help increase system efficiency and reduce fossil fuel usage, which is important to reaching the energy vision for Duluth. After this up-front investment, the system becomes self-sustaining as was the case with the successful system in Saint Paul. Initial capital infusion is critical to getting the process started.



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Contact

Nina Axelson, 651-925-8147
nina.axelson@ever-greenenergy.com