

# Nemadji Trail Energy Center



# WELCOME, *neighbors!*

We're glad you're here.

**The purpose of today's meeting is to:**



Learn about the  
Nemadji Trail  
Energy Center  
project



Connect with our  
project team



Ask questions



[NemadjiTrailEnergyCenter.com](http://NemadjiTrailEnergyCenter.com)

# Nemadji Trail Energy Center



## A unique collaboration

### PLANNING FOR THE FUTURE

This is a jointly owned project among three energy providers headquartered in the Upper Midwest, all providing safe, reliable and affordable power every day.



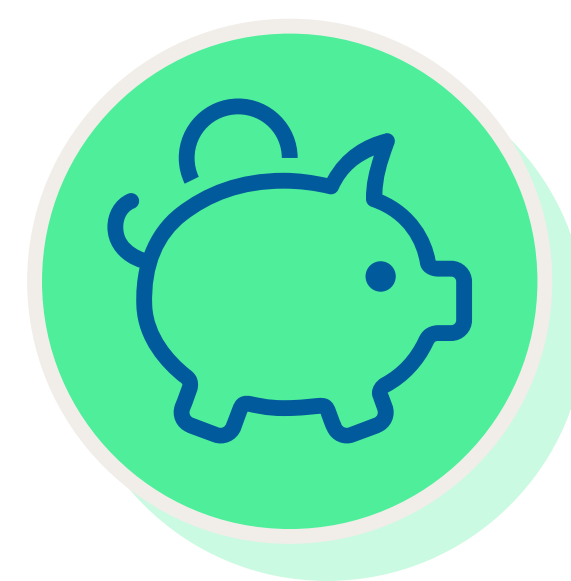
### OUR SHARED GOALS



Providing safe and reliable energy



Supporting renewable energy resources and reducing carbon



Maintaining affordability

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# Nemadji Trail Energy Center



## Why is natural gas needed?

This ability supports the clean energy transition.

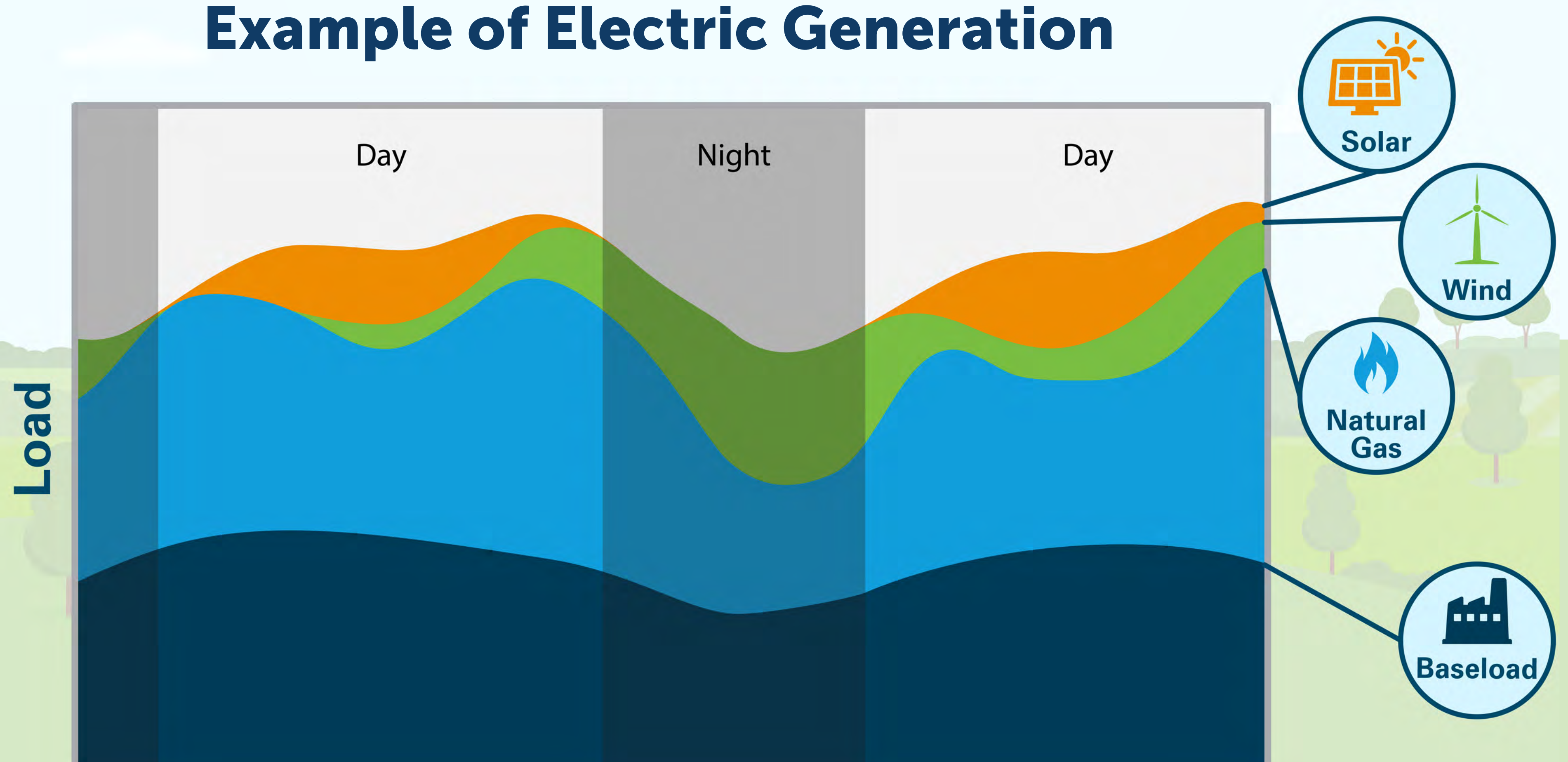
### RELIABLE ELECTRICITY

The Nemadji Trail Energy Center will provide the region with reliable electricity when renewable energy resources like **wind** and **solar** are not available.

### FLEXIBLE ELECTRICITY

**Natural gas** provides a quick start up when renewables are unavailable, and back down when renewables are available.

#### Example of Electric Generation



Typical energy load and generation sources over 24-hour cycles



# Nemadji Trail Energy Center



## How will the facility work?

This state-of-the-art facility will safely generate electricity to maintain reliable service when renewable energy resources – like solar and wind – are not available.

### **NATURAL GAS ENERGY**

A supply line carries natural gas fuel to the facility. Inside the facility, natural gas is used to rapidly spin a turbine and generate electricity.

1

2

3

### **STEAM ENERGY**

The facility recovers heat from the first turbine and uses it to create steam that powers a second turbine, generating more electricity.

### **DELIVERING ELECTRICITY**

Energy from both turbines flow to a transformer and is delivered through the electric grid to power homes and businesses.

*Safety is a top priority among the utilities. Nemadji Trail Energy Center will work closely with local, state, and federal regulators to maintain the highest safety and environmental compliance standards.*

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# Nemadji Trail Energy Center



## Nemadji Trail Energy Center renderings

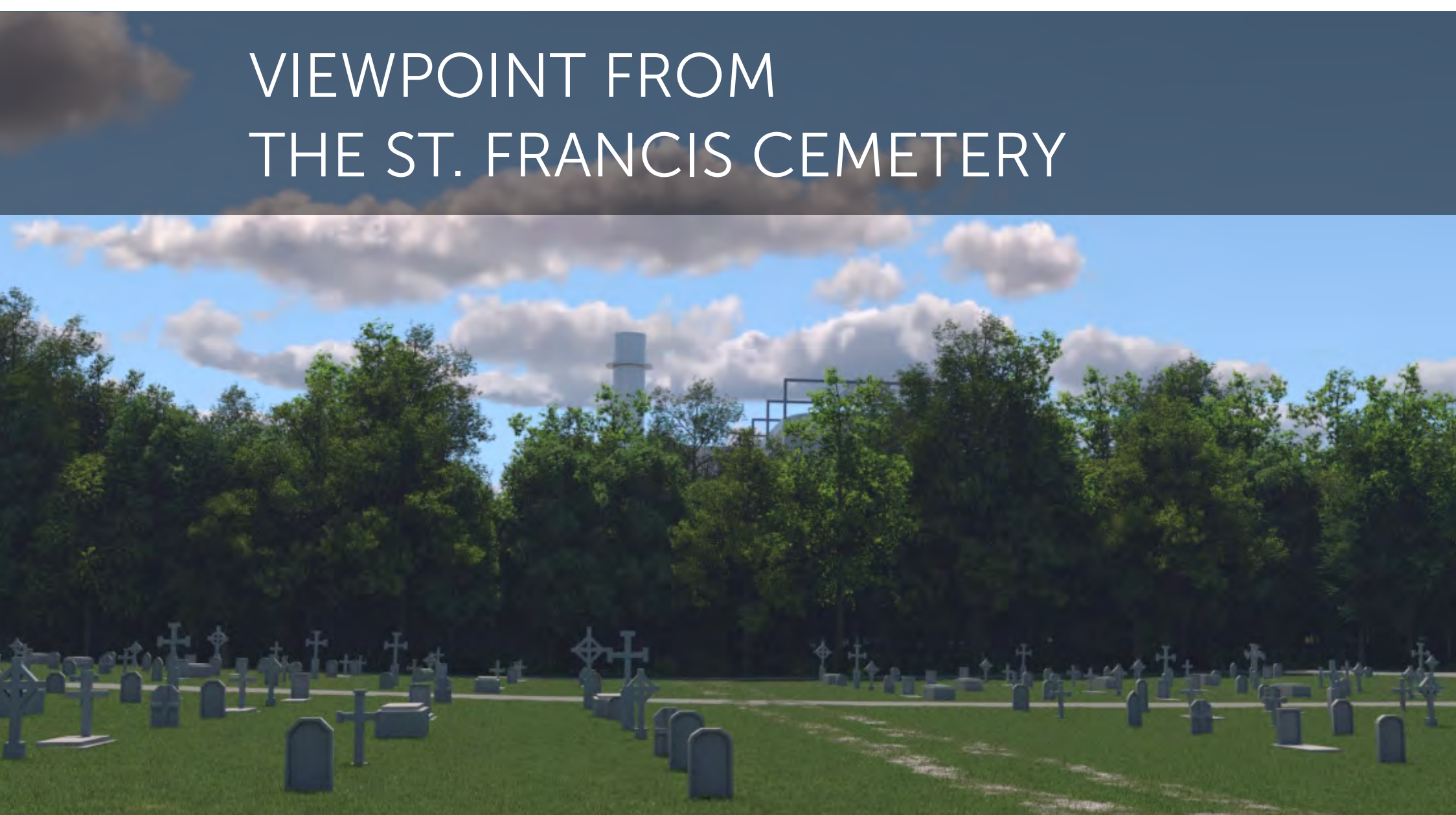
AERIAL VIEWPOINT FROM NORTHWEST OF FACILITY



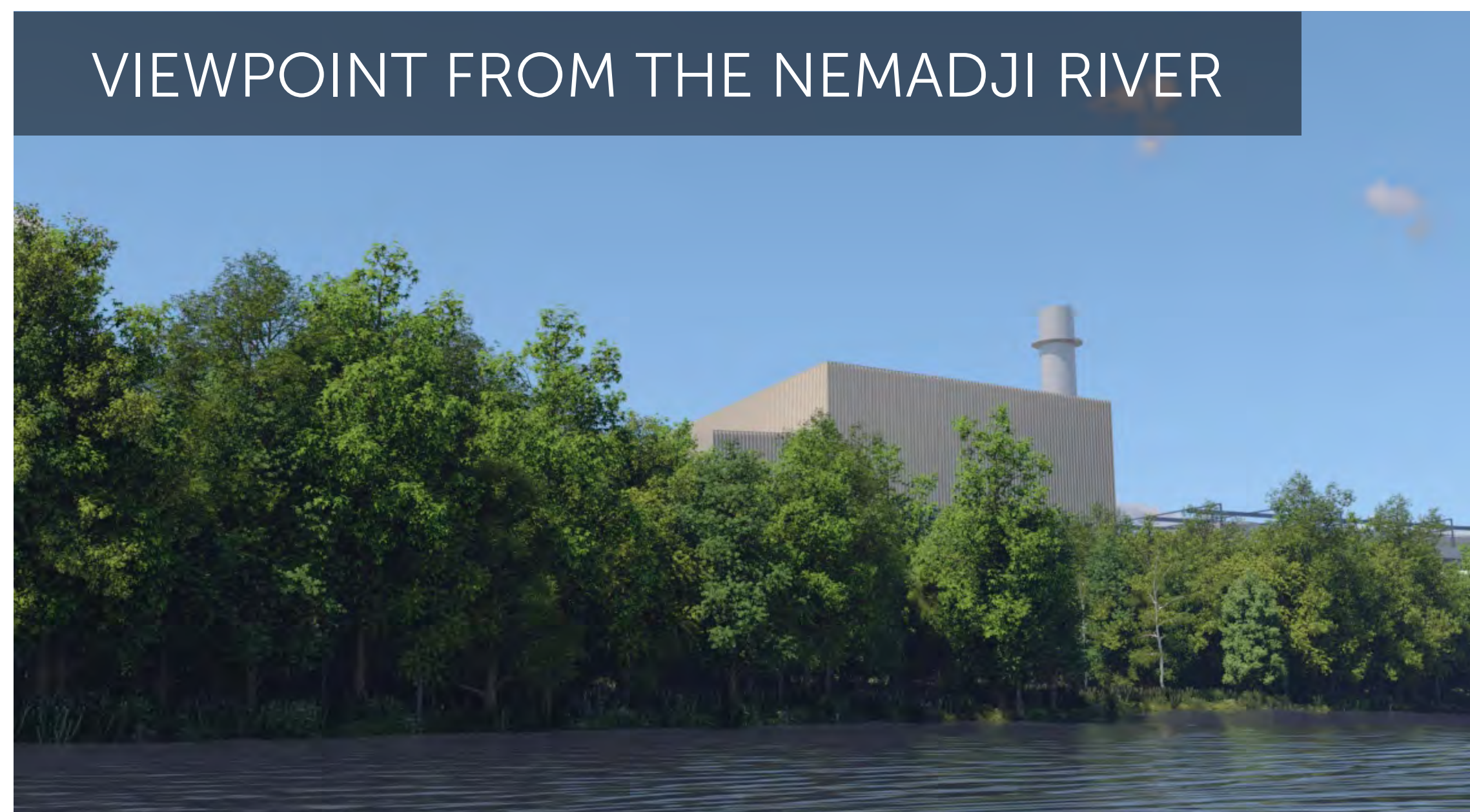
VIEWPOINT FROM 31ST AVENUE



VIEWPOINT FROM THE ST. FRANCIS CEMETERY



VIEWPOINT FROM THE NEMADJI RIVER





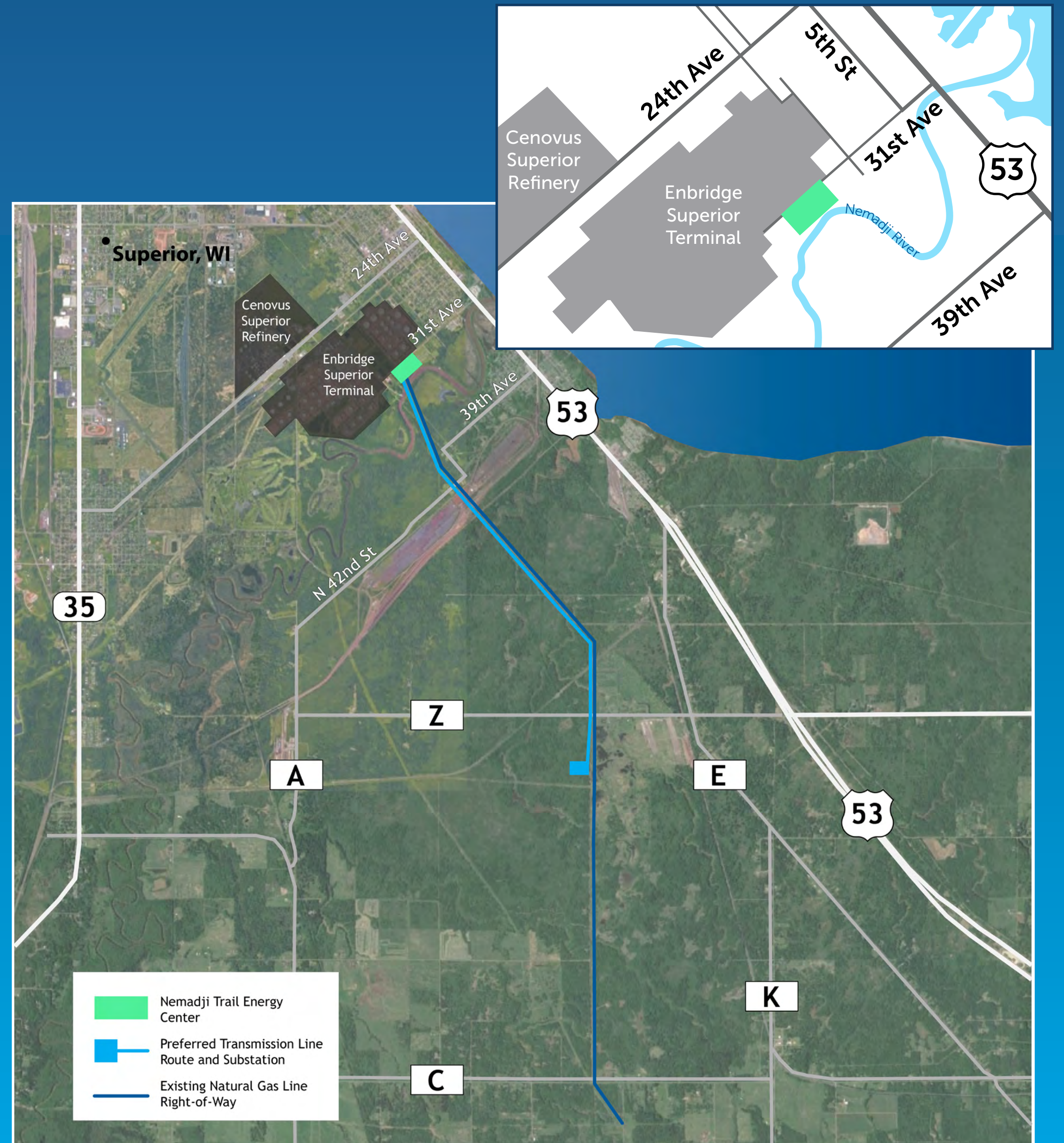
# Nemadji Trail Energy Center



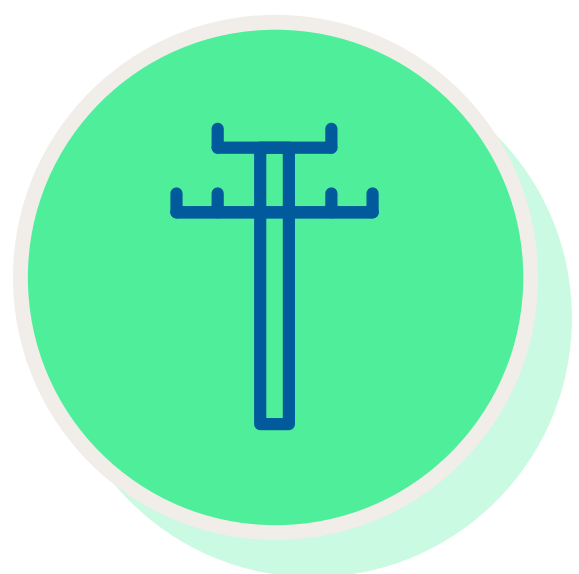
## Why was this location selected?

### Key reasons the Superior location is the best site for the Nemadji Trail Energy Center:

- Neighboring existing industries
- Access to existing gas and grid infrastructure
- Affirmed by the extensive regulatory review process
- Support regional grid reliability

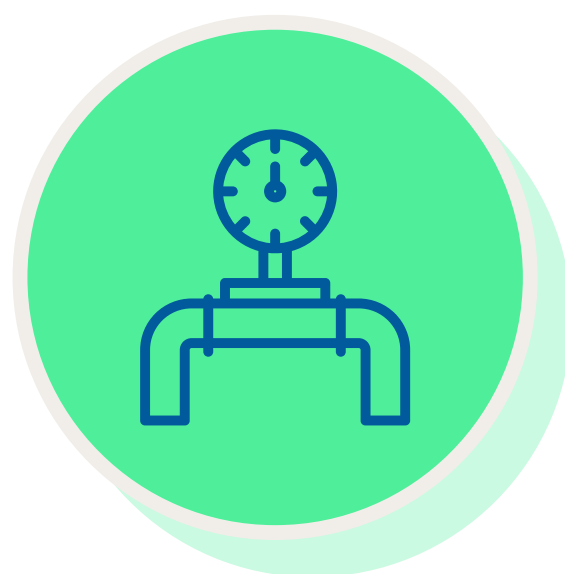


**Additional components associated with the project will aid in the generation and distribution of electricity.**



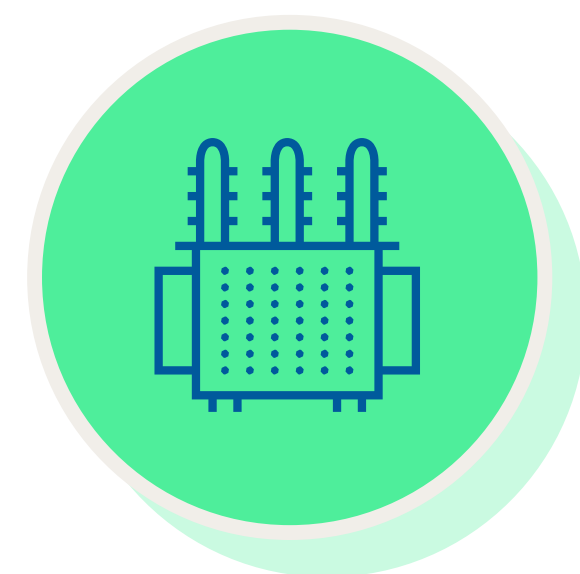
#### **TRANSMISSION LINE**

Approximately four-mile 345kV transmission line parallel to existing right-of-way.



#### **NATURAL GAS PIPELINE**

Approximately seven-mile natural gas pipeline using existing right-of-way.



#### **SUBSTATION**

Approximately 4.3-acre substation associated with the transmission line.



# Nemadji Trail Energy Center



## Responsive to community concerns

### **HYDROGEN**

The turbine selected for the Nemadji Trail Energy Center project will burn natural gas and have the capability to burn up to 30% hydrogen.

### **WATER USAGE**

The facility will use an efficient air-cooled heat exchanger that requires much less water usage than other technologies.

The facility's water needs will be met by the existing municipal water system. No new wells or surface water withdrawals will be needed.

### **FUEL OIL**

The Nemadji Trail Energy Center will use natural gas. There are no plans to use fuel (diesel) oil to generate electricity.

### **LIGHTING**

The facility will have exterior lighting for safety and security. All outdoor light fixtures will be fully shielded and directed downward to minimize light visible from adjacent properties. The trees being added to the property will also help minimize light visibility.

### **WETLANDS**

The Nemadji Trail Energy Center has been designed to minimize its impact on wetland and water resources. The construction of the Nemadji Trail Energy Center will not result in a loss of wetlands in Wisconsin, due to a mitigation plan that would replace any impacted wetlands with additional wetland resources.

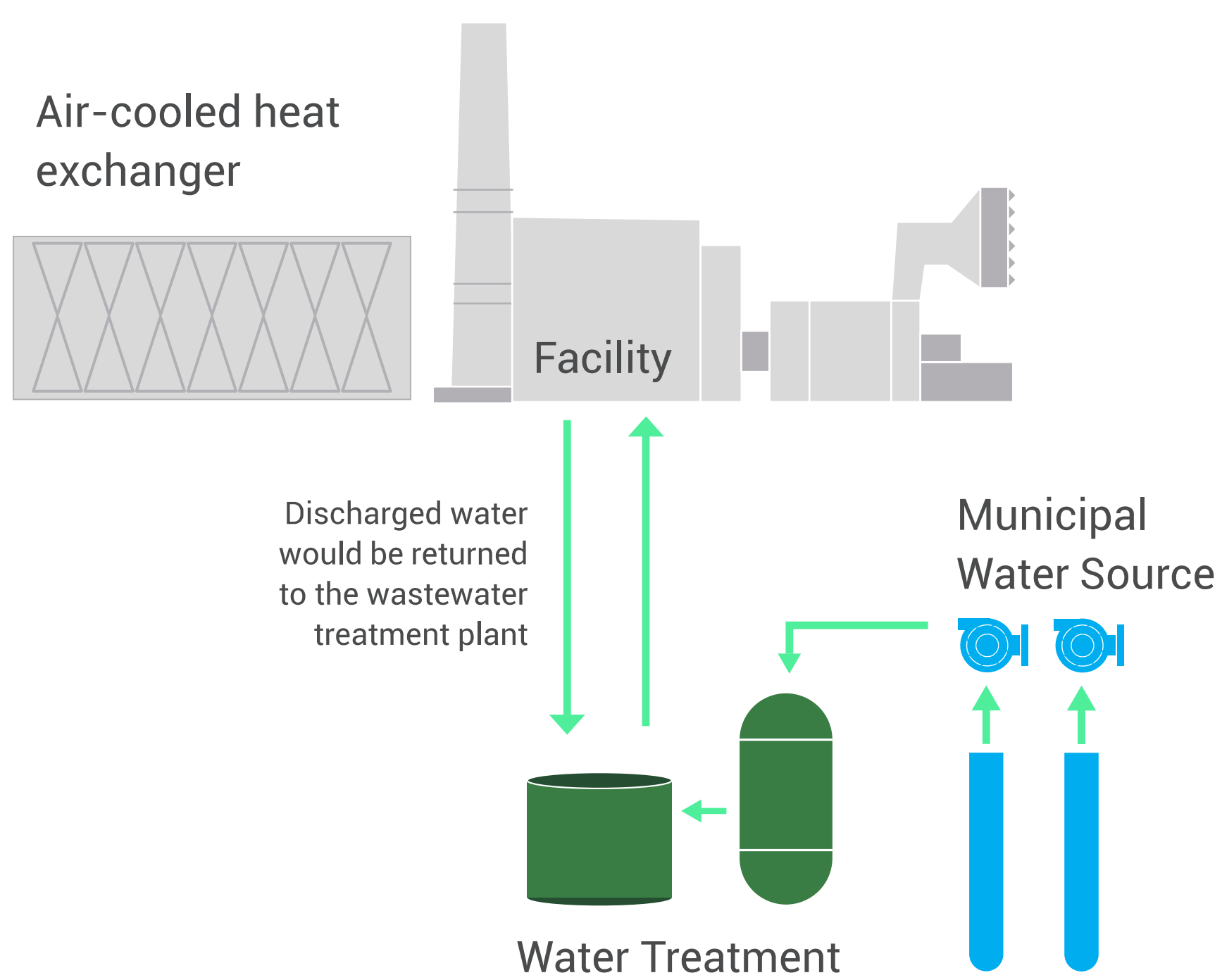
### **VEGETATIVE BUFFER**

Vegetative buffers will be used to reduce visual impacts to adjacent properties.

# Nemadji Trail Energy Center



## Environmental considerations

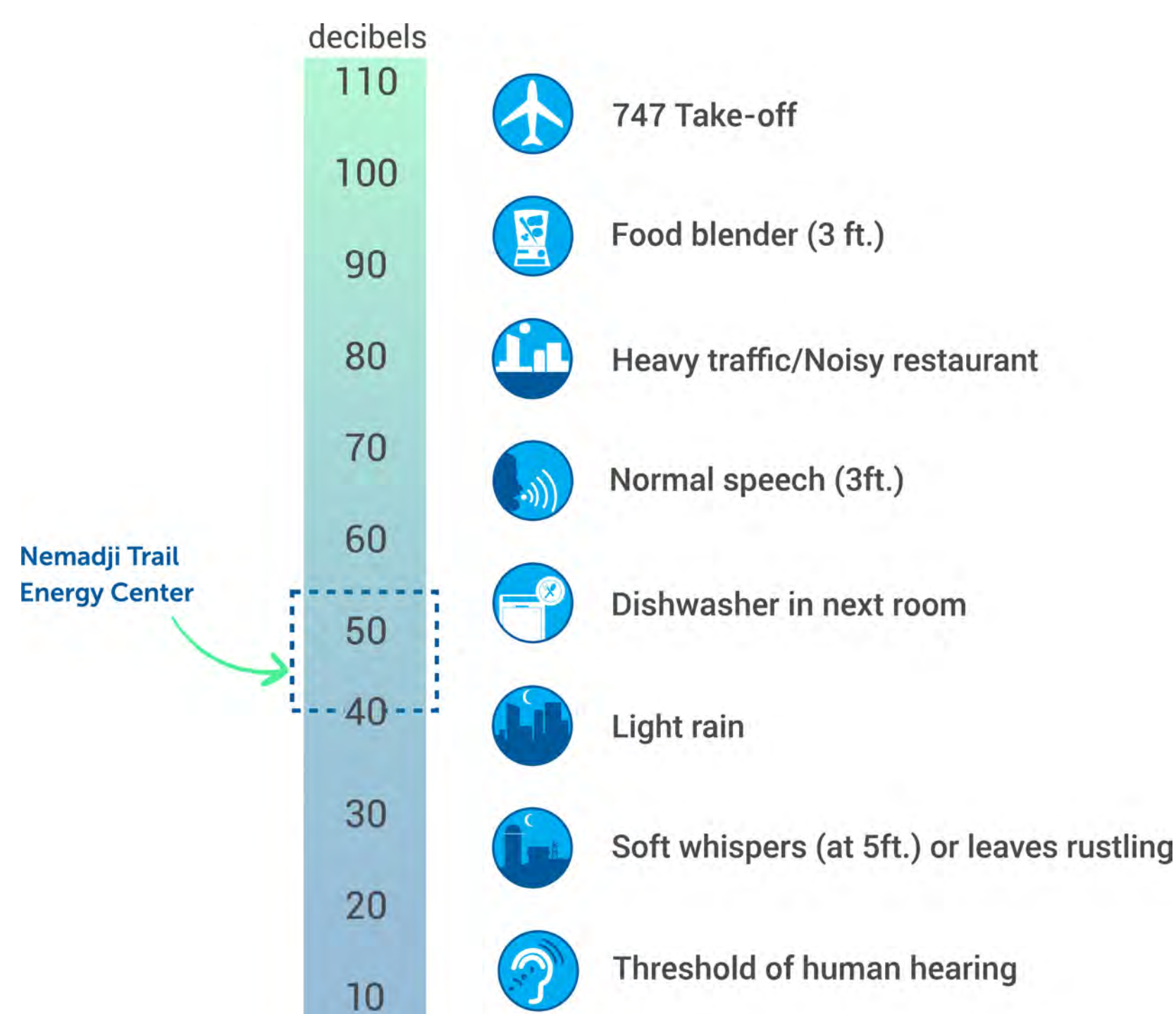


### AIR QUALITY

- The Nemadji Trail Energy Center will lead to emission reductions as this efficient plant will displace higher-emitting fossil fuel plants, and allow more renewable energy sources because of its flexibility.
- The facility will not cause or contribute to significant adverse ambient air quality impacts. The facility has obtained all regulatory emission permits and approvals.
- The Nemadji Trail Energy Center will be built with state-of-the-art emission control equipment.

### NOISE

Noise levels from the facility to the adjacent neighborhood are expected to be between 40 and 55 decibels. This is significantly quieter than the landfill that was recently approved by the Superior City Council.



### WATER

The facility's water needs will be met by the existing municipal water system. No new wells or surface water withdrawals will be needed.



# Nemadji Trail Energy Center

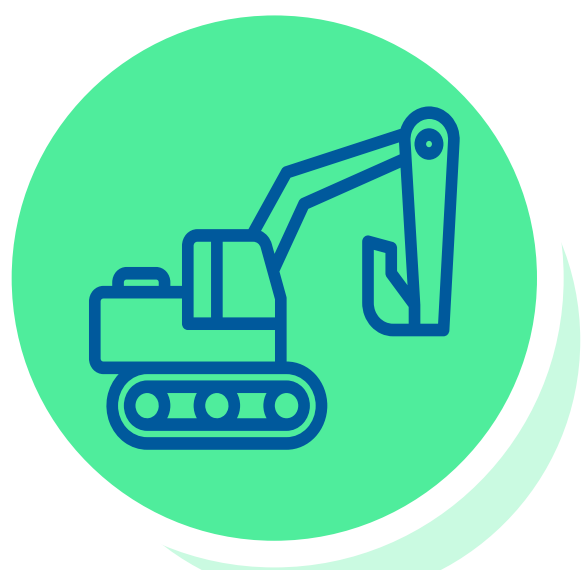


## Project schedule



### 2017-2024

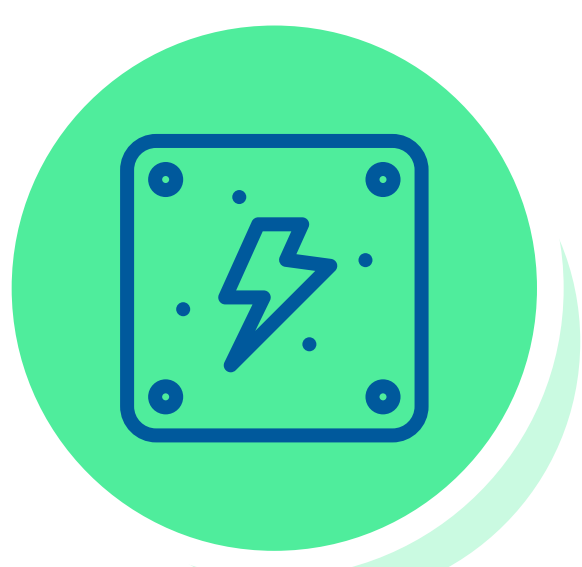
Regulatory Review and Approval



### 2024-2027\*

Construction and Commissioning

- Bid Process
- Contract Negotiation
- Letting (*Award Contract*)
- Pre-Construction Activities (*Surveying, Vegetation Clearing, Site Grading*)
- Construction
- Testing and Commissioning



### 2028\*

Operational and Delivering Energy to the Grid

*\*Pending regulatory approval.*



# Nemadji Trail Energy Center



## Benefits

One of the largest private investments in Douglas County.



Reduces carbon, supports renewables and ensures reliability.



Creates 350 jobs during peak construction and up to 25 full-time permanent jobs.



Approximately \$1 million in local tax benefit, annually.