

TWO ISLANDS 115 KV PROJECT



EnergyForward

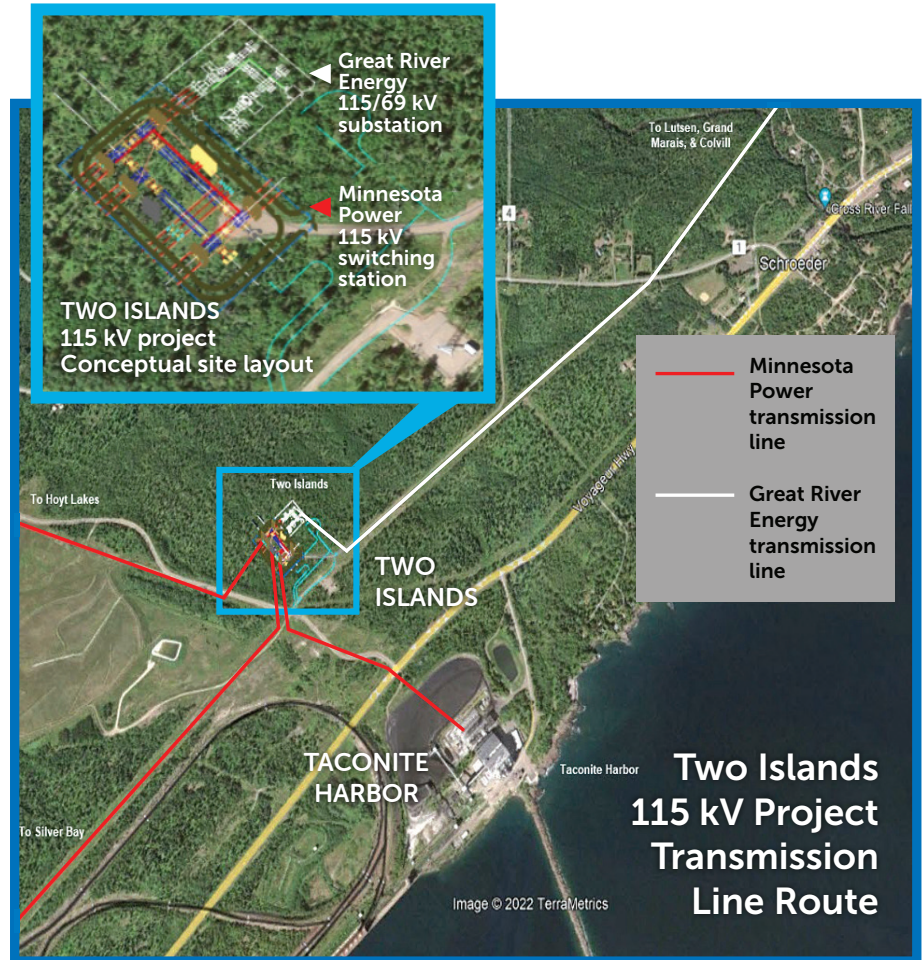


WHAT IS THE TWO ISLANDS 115 KV PROJECT?

Minnesota Power, in partnership with Great River Energy, is replacing the existing Taconite Harbor Substation in Schroeder, Minnesota. Minnesota Power is constructing a new 115 kV switching station and Great River Energy is constructing an adjacent 115/69 kV substation. The Two Islands project, approximately 0.5 miles northwest of the existing Taconite Harbor Substation, will enhance reliability on Minnesota Power's networked transmission system.

Less than one mile of new 115 kV transmission line construction is necessary to tie Two Islands into existing transmission lines in the area which connect to Hoyt Lakes, Silver Bay, and Colvill, Minnesota. A 115 kV transmission line connection will remain between Two Islands and the existing Taconite Harbor Substation. Project construction will begin in 2022 and continue through 2024.

Minnesota Power invests in projects like Two Islands as part of its EnergyForward strategy to replace aging infrastructure, support integration of more renewable resources, and safely and reliably deliver energy.



WHAT ARE THE PROJECT BENEFITS?

Construction of the Two Islands substation and 115 kV transmission line will:

- Enhance reliability for the area.
- Establish a modern site design.
- Provide additional redundancy for the load-serving 115/69 kV system.
- Add voltage support for Minnesota Power's networked transmission system in the form of one or more capacitor banks.

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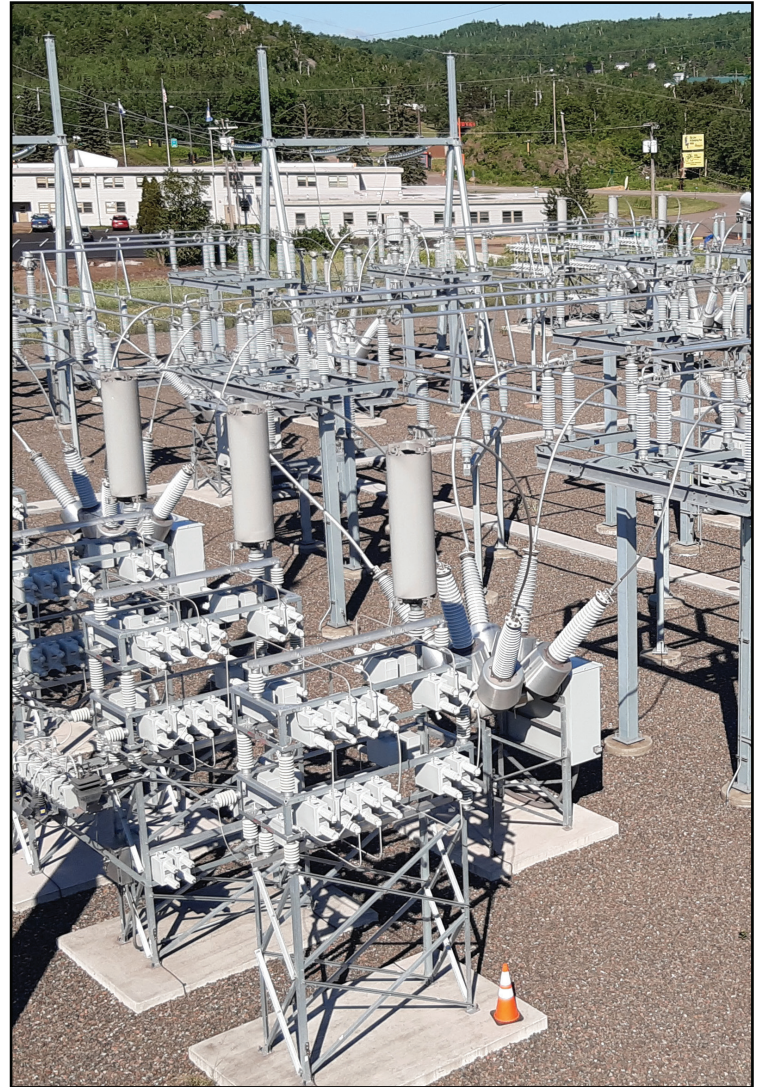
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WHY IS THE TWO ISLAND 115 KV PROJECT NEEDED?

The Taconite Harbor Substation was built in the mid-1900s as a connection between Taconite Harbor generation and taconite plant operations in the Hoyt Lakes area. The Taconite Harbor generators have been idle since 2016, but the substation remains an important hub in Minnesota Power's transmission system. This hub ties a transmission line from Duluth to transmission lines from Hoyt Lakes and also connects to Great River Energy's radial 69 kV system serving all customers along Minnesota's North Shore northeast of Taconite Harbor.

An analysis of the Taconite Harbor Substation identified several concerns related to age, safety and condition. They include end-of-life assets in the substation yard, including structures, foundations, and electrical apparatus; compact design of the site means maintenance work requires a full bus outage to de-energize the equipment for safer working conditions; and an extended full bus outage poses an unacceptable level of risk of service interruption for customers.



The new Two Islands switching station will be similar in design to the North Shore switching station pictured here.

Questions? Contact:

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