EXISTING TRANSMISSION LINE STRUCTURES

34.5KV

Single-circuit
Gingles-Mellen (W3606)

Single-circuit
Mellen-Ironwood (W3607)
with Distribution Underbuild

Single-circuit
Mellen-Ironwood (W3607)
**TERMS TO KNOW**

**Conductor:** A wire made up of multiple aluminum strands around a steel core that together carry electricity. A bundled conductor is two or more conductors connected to increase the capacity of a transmission line.

**Circuit:** A continuous electrical path along which electricity can flow from a source, like a power plant, to where it is used, like a home. A transmission circuit consists of three phases with each phase on a separate set of conductors.

**Double circuit:** Two sets of independent circuits with each circuit made up of three sets of conductors.

**Phase:** One element of a transmission circuit that has a distinct voltage and current. Each phase has maximum and minimum voltage peaks at different times than the other phases.

**Single circuit:** A circuit on the same structure with three conductors.

**Shield wire:** A wire connected directly to the top of a transmission structure to protect conductors from a direct lightning strike, minimizing the possibility of power outages.

**Structures:** Towers or poles that support transmission lines.

**Insulator:** An object made of a material, such as glass, porcelain or composite polymer that is a poor conductor of electricity. Insulators are used to attach conductors to the transmission structure and to prevent a short circuit from happening between the conductor and the structure.

**Right-of-way:** Land area legally acquired for a specific purpose, such as the placement of transmission facilities and for maintenance access.
PROPOSED TRANSMISSION LINE STRUCTURES
SINGLE-CIRCUIT 115kV

- Braced horizontal post insulators
- Davit arms with i-string suspension insulators
- H-frame with i-string suspension insulators
- Braced horizontal post insulators with Distribution Underbuild
EXISTING TRANSMISSION LINE STRUCTURES

88KV AND 115KV

Single-circuit 88kV line
Bay Front-Norrie (W3351)

Single-circuit 115kV line
Gingles-Ironwood (W3316)

Single-circuit 88kV line
Bay Front-Norrie (W3351)
PROJECT TIMELINE

2019-2020 – Routing Evaluation/Public Outreach
2021-2022 – WI PSC Routing/Permitting Process
2023-2024 – Design and Easement Procurement
2025-2026 – Construction Phase
2027-2028 – Restoration/Project Closeout
PROPOSED TRANSMISSION LINE STRUCTURES
MULTI-CIRCUIT 115 kV-88 kV

Double-circuit Davit arms with vee-string suspension insulators

Triple-circuit with 34.5kV Underbuild

Quad-circuit with 34.5kV and Distribution Underbuild