CASE STUDY

New 115kV Lines and Substation Project

BACKGROUND

The Hibbing Public Utilities (HPU) celebrated its 100th anniversary in 1995. HPU owns and operates a cogeneration power plant for the citizens of Hibbing, which provides both steam and electricity for distribution to its service area. The Utility also furnishes water and natural gas services to the City of Hibbing proper, Kitzville, and Kelly Lake. Over the last year, the City of Hibbing used more than 110 million kilowatt-hours of electricity which is distributed over 96 miles of power lines. Through direct participation in the MISO Market, HPU has the direct ability to supplement Hibbing's electrical service or sell excess power generation. HPU also participates in Commercial Electric Power Grant rebates and the Residential Electric Energy Analysis. The main objective of this project was to become the transmission owner.

CHALLENGE

HPU is expanding its services to the city of Hibbing and surrounding areas, with the load forecast expected to reach 500 MVA by 2030. A key challenge is establishing a foothold in the transmission sector, as HPU has no prior experience designing or managing projects of this scale. The interconnection at the 115 kV GRE Keewatin Substation on one end and Minnesota Power's 115 kV lines on the other adds complexity, requiring meticulous planning and coordination. Engaging stakeholders and the local community is crucial, especially in a town that has not experienced significant infrastructure changes in a long time.

SOLUTION

EPE approached this project with a collaborative partnership mindset to support HPU in achieving its goals. A highly experienced project team specializing in turnkey EPC projects was deployed to manage the entire EPC contract on behalf of HPU. This included project management, interface coordination with other utilities, planning, financial oversight, contract management—including negotiations of the "PC" subcontract—and engineering. The engineering scope covered civil, electrical, mechanical, and control & protection design, detailing from the 30% design phase through Issued for Construction (IFC) for both the transmission line and substation.

CLIENT

HPU HIBBING PUBLIC UTILITIES

TYPE

Publicly-Owned Utility (POU)

SECTOR

Transmission Utilities

ISO

MISO

LINE OF BUSINESS

Owner's Engineer

SERVICES PROVIDED

- Project Management
- Interconnection application to GRE and Minnesota Power
- Detail design green field T-lines and 115kV substation
- Financial Oversight
- Contract Management
- Stakeholder Engagement

LOCATION

Hibbing, MN

COMPLETED DATES

November 2024- June 2027

REFERENCE

Luke Peterson
(218) 262-7759
Luke.Peterson@hpuc.com

ELECTRIC POWER ENGINEERS

Delivering Energy Intelligence