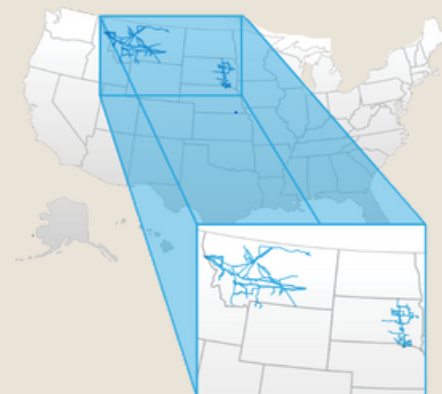


## Advanced Conductor Reliability using Steel Cores

NorthWestern Energy is a regional utility provider that powers communities across the northern United States, delivering reliable electricity to households, businesses, and industries in western Montana and eastern South Dakota. Serving approximately 750,000 customers, the company maintains a complex and expansive infrastructure of generation, transmission, and distribution systems.



### Project

In 2021, NorthWestern Energy upgraded a 20-mile section of a 100-kV line between Great Falls and Two Dot with ACSS/TW/MA5 conductor with ultra high-strength steel. The nationally recognized project used annealed aluminum for higher conductivity and trapezoidal wires to pack more aluminum in the same diameter. Designed in part for wildfire prevention, the reduced sag and modern steel structures help lower fire risk in this heavily wooded, wildfire-prone area.



### Results

The ACSS/TW conductor also improves efficiency, delivering greater value to both the utility and ratepayers. Estimates show that replacing the entire 105-mile line could yield up to \$440,000 in annual savings. The project has since been cited by state regulators as a case for offering greater incentives for utilities in Montana to adopt advanced conductor technologies.

### Bekaert's Solution

Bekaert Energy & Utility Solutions supports projects like NorthWestern Energy's Great Falls-Two Dot upgrade by providing ultra high-strength, corrosion-resistant steel for ACSS/TW/MA5 conductors. This advanced material increases capacity, reduces sag, and improves reliability under extreme conditions, helping utilities achieve greater efficiency, safety, and long-term resilience.

[Read our WhitePaper](#)

### Exemplary Projects

Year	Project Name	Project Type	Conductor Used	Voltage Level	Line Length	Project Purpose
2021	Great Falls- Two Dot	Rebuild	ACSS/TW/MA5	100 kV	20 Miles	Capacity and Reliability

[bekaert.com/acss](https://bekaert.com/acss)

**Idaho National Laboratory. (December 2023).**

"Advanced Conductor Scan Report (Report No. INL/RPT-23-75873 R10)." Department of Energy. 23-50856\_R10\_-AdvConductorszScan ProjectReport-1.pdf (inl.gov)

