

MANAGER'S MESSAGE: OVERHEAD AND UNDERGROUND LINES



When it comes to the transmission and distribution of electricity, we often get questions about the two primary methods: overhead power lines and underground power lines. Each method has its own set of advantages and disadvantages, which influence cost, reliability, aesthetics and environmental impact. Let's delve into the differences between overhead

and underground power lines to better understand their respective strengths and limitations.

Overhead power lines

Pros

- Cost-effectiveness:** One of the most significant advantages of overhead power lines is their lower initial installation cost compared to underground lines. The materials used for overhead lines, such as poles, conductors and insulators, are typically less expensive than those required for underground installation.

- Accessibility and maintenance:** Overhead power lines are more accessible for maintenance and repairs, as they are visible and easily reachable. This accessibility translates to faster response times and lower maintenance costs, contributing to overall reliability.

- Scalability:** Overhead power lines offer greater flexibility for expansion and upgrades. Additional wires can be added to existing poles or new poles can be erected without the need for extensive excavation work, making it easier to accommodate growing energy demands.

Cons

- Susceptibility to weather:** Overhead power lines are exposed to the elements and are susceptible to damage from severe weather events, such as storms, high winds and lightning strikes. This vulnerability can lead to power outages and safety hazards for both utility workers and the public.

- Height clearance concerns:** Despite their visibility, overhead power lines pose a risk of accidental contact, particularly when moving tall equipment or large machinery. Farmers must remain vigilant and adhere to

recommended height clearance guidelines to avoid striking power lines, which can result in serious injury, equipment damage and power outages.

Underground power lines

Pros

- Enhanced reliability:** Underground power lines are less susceptible to weather-related outages and external interference, as they are protected from elements, such as wind, ice and falling debris.

Cons

- Higher initial cost:** The primary drawback of underground power lines is their significantly higher upfront installation cost compared to overhead lines. Excavation, trenching and cable-laying processes are labor-intensive and require specialized equipment, increasing project expenses.

- Limited accessibility for maintenance:** Underground power lines are more challenging to access for maintenance and repairs, as they are buried beneath the ground. Locating and accessing faults or damaged cables can be time-consuming and costly, leading to longer outage durations and increased operational challenges.

- Technical challenges:** Underground power lines are subject to technical limitations, such as heat dissipation, cable capacity and voltage regulation. These factors can impact system performance and may require additional engineering considerations during design and installation.

The choice between overhead and underground power lines involves weighing various factors, such as cost and reliability. While overhead lines offer cost-effectiveness and scalability, underground lines provide enhanced reliability, aesthetic improvement and reduced environmental impact.

Ultimately, the selection of the most suitable transmission and distribution method depends on the specific requirements and priorities of each project, community or cooperative. By carefully evaluating these factors and considering long-term implications, stakeholders can make informed decisions to ensure the efficient and sustainable delivery of electricity for generations to come.



Travis Kupper, Co-General Manager/ CEO

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Underground Line Locates

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Officers and Directors

Chair..... Steve Tomac
Vice Chair..... Chad Harrison
Secretary-Treasurer..... Pam Geiger

Directors:

Mark Doll, Rodney Froelich,
Bob J. Leingang, Ryan Petrick,
Kathy Tokach, Casey Wells

Co-General Managers/CEOs:

Travis Kupper
Jason Bentz

Touchstone Energy® Cooperative 





Mor-Gran-Sou Electric members elect board directors at annual meeting

Mor-Gran-Sou Electric Cooperative members gathered on a new date at a new location for the cooperative's annual meeting. This year's meeting was held, June 13 in Mandan at Mor-Gran-Sou Electric's Mandan Service Center. Before the business meeting, members enjoyed a complimentary meal, various activities and booths. Entertainment included The Bluestems from Elgin and the Bismarck Larks mascots.

Mor-Gran-Sou Electric Chairman Steve Tomac welcomed and thanked members for attending the annual meeting. The membership voted to fill the board positions with Steve Tomac, St. Anthony, At-Large; Kathy Tokach, St. Anthony, Morton County; and Chad Harrison, Fort Yates, Sioux County.

The board of directors, co-general managers and staff wish to thank our members for participating in the annual meeting of the membership and look forward to meeting your electrical needs in the future.

Mark your calendar for Co-op Day at the State Fair!

Experience KX/Co-op Day at the N.D. State Fair on July 24 in Minot. As a valued member, we are pleased to extend exclusive benefits to enhance your experience.

By attending the North Dakota State Fair on July 24, you gain access to a special offer on gate admission, where you can save \$1 off the regular price. Additionally, maximize the thrills of the carnival rides with a \$5 discount on daily unlimited-ride wristbands and \$1 off admission to the ranch rodeo.

You're also invited to join us for a free pancake breakfast from 7:30 to 9:30 a.m. and ice cream social under the KX/Co-op tent from 1:30 to 2:30 p.m.

To secure your tickets and take advantage of these offers, simply reach out to our dedicated team at the office. Give us a call today at 701-597-3301, 701-663-0297 or 1-800-750-8212 and allow us to facilitate a memorable experience for you at the N.D. State Fair.



HAVEN'T CASHED YOUR CAPITAL CREDIT CHECK?



PLEASE CALL THE OFFICE BEFORE DOING SO!

A FULL LIST OF UNCLAIMED CAPITAL CREDITS WILL BE PUBLISHED IN THE AUGUST ISSUE OF *NORTH DAKOTA LIVING*.