

OVERHEAD & UNDERGROUND POWER LINES

Learn the pros & cons

There are two methods of installing the power lines that carry electricity to your home, overhead and underground. Taylor Electric members sometimes ask why we use one versus the other, or more to the point, why all power lines are not installed using the underground construction method. Isn't one method better than the other? These are great questions, and the answer is that each method has its place.

Overhead line construction starts with the setting of utility poles. Poles can be set in nearly any type of terrain, even rocky. In the case of heavy rock, special equipment is used to auger out the hole. If placement occurs in boggy or wet terrain, many techniques are available to set poles securely. Once the poles are in place, wires can be strung and then equipment—like transformers, fuses and reclosers—are installed. Power can now flow.

Underground line construction requires digging a trench that is deep enough to keep the lines well away from surface activities. Where the terrain is extremely rocky, underground lines may not be an option. Next, wires are laid in the trench directly or placed in conduits for protection. The trench is filled in, and the surface is restored to its original condition. Padmount transformers and additional equipment are installed as needed, now the system is ready to deliver electricity.

The graphic to the right explains the pros and cons of overhead and underground construction.

—cooperative.com-Straight Talk Alert

OVERHEAD & UNDERGROUND POWER LINES THE PROS AND CONS

OVERHEAD

PROS

- Lower cost
- Quicker construction
- Easier to spot damage and faults
- Less expensive to repair and upgrade
- Can be built in any terrain
- Any voltage can be placed overhead

CONS

- Susceptible to wind, ice and snow
- More vulnerable to damage from trees and vegetation, which requires right of way trimming
- Vulnerable to blinks when animals and branches contact lines
- Susceptible to damage from vehicle collisions
- Less attractive

Photo: Artur Pokusin

UNDERGROUND

PROS

- Not vulnerable to damage from tree branches
- Does not interfere with views
- No right of way (tree trimming) required
- Less susceptible to damage from vehicle collisions
- Not impacted by wind, ice and snow
- Less vulnerable to blinks when animals and branches contact lines

CONS

- More expensive to build
- Susceptible to flooding
- Difficult to locate faults
- Expensive to repair
- Fed by overhead lines at some point, making the lines vulnerable to outages and interruptions
- Limitations on voltages that can be buried underground
- Can be vulnerable to dig-ins



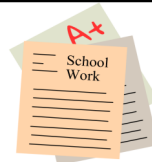
Mark your calendar
and plan to attend
Taylor Electric's
Member Appreciation
Day on Thursday,
October 6th from
11:00 am—2:00 pm at
the Stetsonville Community Center.

Board Report – July 2016

- Approved June disbursements totaling \$719,205.61, reviewed credit card charges, accepted 13 new member applications, and May construction in the amount of \$118,953.03
- Reviewed financial results through June 30, 2016 with year-to-date showing a margin of \$107,483. There were 38 outages in June, with 65 total for the year, totaling 3.78 hours per member of outage time. Two of the outages in June were due to the transmission system, and another 11 were due to “extreme storm” conditions. Excluding transmission and extreme storm outages, outage times have averaged only 0.21 hours per member year-to-date.
- The Board reviewed Dairyland Power Cooperative financial data. Then Director Tesch gave a report on the July Dairyland Board meeting which included: Margins are \$1.3 Million ahead of budget; Dairyland is burning coal at the JPM generating station, at a market loss, but needs to in order to make room for contracted coal deliveries at the plant, or face paying penalties under the delivery contract which be an even bigger loss.
- Early retirement payment to one estate was approved at the net present value of \$112.68.
- Directors Waldhart, Henrichs, and Zenner, along with CEO Schaefer, and Lineman/Meter Technician Brandon Ahrens will attend the Emerging Energy Issue Summit in Stevens Point in August.
- The member complaint log was reviewed and several issues discussed.
- Directors commented on the WECA District 1 meeting. WECA and Cooperative Network have separated, with WECA relocating to new office space in Madison. Dues payments will need to be advanced to WECA to help meet startup capital needs.
- Director Waldhart commented briefly on the WECA Legislative Committee meeting with discussion of: reduced price for the WEC News magazine; pursuing ACRE membership growth; positive reviews from Washington DC legislative conference in May; and a review of upcoming Wisconsin legislative issues affecting electric co-ops.
- Director Hallgren discussed the July 11th safety meeting which was an in-the-field visit to a jobsite where the line crew was replacing an underground line. It was noted that all safety policies and procedures were being followed by the employees.
- The CEO evaluation was discussed with input provided by all board members.
- The Board and Management were presented the results of the recently completed Cost of Service Study (COSS). Paula Feuerbacher and Bill Edwards, Rate Consultants for the Taylor Electric’s lender, National Rural Utilities Cooperative Finance Corporation (CFC), made the presentation. The purpose of the COSS is to allocate costs to the customer classes served, and to verify that the rates recover those costs – their opinion was that the current rates are doing that. However, it was suggested that the most appropriate

method of cost recovery would be with 3-part rates, recovering related costs through a monthly customer charge, a demand charge related to the “fixed costs”, and an energy charge for the variable usage. Current rates rely on the energy charge to recover a lot of the fixed costs, which can cause a financial shortfall during times of conservation and decreasing kilowatt-hour sales.

- The date for updating the Cooperative’s Strategic Planning was set. Steve Kettler, CFC, will be facilitating.
- The Board requested doing several member visits after the board meeting in August.
- The Member Appreciation event has been scheduled for Thursday, October 6, 2016 to be held at the Stetsonville Centennial Community Center.



**School is back in session.
Please drive safely and
watch for children!!**



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