



NOTICE OF THE ANNUAL MEETING

OF THE MEMBERS OF THE
WASHINGTON ISLAND ELECTRIC COOPERATIVE, INC.



The Annual Meeting of the members of the above named Cooperative will be held in the gymnasium of the Community Center on Washington Island, WI at 10:00 a.m. on **SATURDAY, SEPTEMBER 30, 2023** to take action upon the following matters:

1. Roll Call for Quorum
2. Reports from the Secretary
3. Reading and Approval of Unapproved Minutes of Previous Meeting
4. Reports of Directors, Officers, Committees
5. New Business
6. Questions and Answers
7. Drawing of Door Prizes
8. Adjournment
9. Lunch

Note that the Financials and Items of Interest will be published on the Cooperative's website www.wiecoop.com and will also be available at the meeting.

**1157 Main Road • Washington Island, WI 54246
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FIBER UPDATES AND SMALL CELL PROGRESS

INITIAL GRANT AREA NEARING COMPLETION

We have had Karcz here the bulk of the summer and it has paid off. In the initial grant area, we have only a few drops left to run and a bit of backbone that can't be done until we do some additional tree removal. Quantum has been working on the cases on the line and the NIDs (grey boxes) that are located at the meter as well as in homes.

Michels has returned and started in Area 03 of the map you have seen in other issues of this magazine. There are spots in this area where trimming will be required, but there are also spots where they can make quick progress. They ran nearly 5,000 feet of strand the first day they were here.

This might be a good spot to discuss the process and what it takes to get you connected. It is easy to think that we just run fiber to the home, stick it in a window, and you magically have a connection. The process we are going through, however, is something more akin to the initial building of the electric system.

The first step is to hang strand from pole to pole. This strand is a steel cable. It will hang anywhere from 1 to 3 feet

under the neutral (bottom wire). Prior to running this strand, we need to consider clearance, pole loading and condition, and whether the path is clear. This strand is also bonded to the pole grounds along the way. Clearance over roads needs to be 15 feet 6 inches at the lowest point of the sag in the line, preferably higher if possible. In some cases, this requires a pole extension or a new pole. Off the road we can be as low as 9 feet 6 inches, but we prefer to be as close to that 15 feet 6 inches height as we can.

This is not possible in some places without major system modification. Back when the lines in many places were run, some of the spans between poles were laid out significantly longer than we would ever do now. This causes the conductors to sag and forces us to hang the strand even lower on the pole to make sure conductors do not end up contacting what is effectively a ground wire during snow or ice conditions or just as they naturally expand and contract on a normal day. In some cases, while we are within that 9 feet 6 inch height restriction, we know that at some point we are going to need to either add

Fiber Work at Schoolhouse Beach—(1) Trenching in underground power and fiber to the Schoolhouse Beach small cell/EV charger site. Obviously no shortage of beach stone here in the woods! (2) Mike fills in the trench after the conduit is laid at Schoolhouse Beach. (3) Schoolhouse Beach restrooms are visible in the background as the trench along the edge of the parking area is filled. (4) Power conduit (black) and fiber conduit (red) installed and being covered. Again, no shortage of rocks here. (5) Mike begins trenching on Washington Harbor Drive to reach Schoolhouse Beach.





a pole in the middle of the run or attempt to increase the height of the existing poles with an extension or a replacement.

Once strand is run, then the backbone or distribution fiber needs to be run and lashed to the strand. If you look closely, you will see small stainless steel wires spiraling around the fiber and strand holding them together. Backbone fiber runs to splitter cabinets and is (in our case) 96F, which means that it contains 96 glass strands. At the splitter cabinet, each of these 96 fibers can potentially be split into 32 fibers each. Not all 96 are split, however, as we have spares, dark fiber, and fiber that is reserved for possible future uses.

From the splitter cabinet, distribution fiber—which, depending on the number of locations served, might be 96F, 48F, or 24F—radiates out to the members who were engineered to be served from that splitter cabinet. This might mean backtracking on the line that the backbone fiber was lashed to.

At each of these locations there is significant splicing activity that has to occur and, in some cases, where distribution has to continue down a road but also turn a corner to go down an adjoining road, additional splicing must occur.

Individual members are fed from the distribution fiber out of what is called an “A” splice case. There can be as few as one person served or as many as 11 on our system. From each engineered “A” splice case location, individual drops to the meter location need to be run. We try to keep the drop length less than the 1,500 feet; however there are cases where it is necessarily more. The drop will also be lashed to the strand unless it is under the secondary triplex (which is insulated) to

your home and then we use a wedge clamp and hook and it is self-supporting.

Once all the drops are run from an “A” splice case location they need to be spliced at the case and then at the NID, and then the light is tested all the way through the system and splitter cabinet back to the cooperative. At this point we are then ready to schedule the in-home work if a member wishes to subscribe. This can be complicated one more time if your

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meter service is on a pole-fed underground to the home. We will need to trench in conduit to get the fiber connection to your home, and this can take additional time.

As you know, once we are to the house, every home is different and we are running

fiber to the desired location (within reason) inside the home. Sometimes this is a 10-minute process, and sometimes it can take several hours.

This whole process is relatively complex, and splicing at the “A” case cannot be accomplished unless the splice cases connecting distribution runs are finished prior.

In the middle of all of this we have to consider the dark fiber and spares.

As you can see, just getting the fiber to your meter is not the end of the process. We are making good progress and, at the time of this writing have something approaching 250 NIDS connected and nearly 200 members connected. The



goal, if you remember, is to have the NIDs for the 314 people in the initial grant done by the end of summer and it certainly seems that we will attain that goal, with many more fiber lines and drops waiting to be spliced into the second grant area.

So long as we are talking about splicing, if you have been down to Schoolhouse Beach you may have noticed the black stripe of blacktop across the road. We installed a piece of 10-inch conduit under the road (the same conduit we buried under the lake bottom for the submarine cable) as a sleeve to bring power and fiber to the location close to the public restrooms. In the coming few weeks additional work will occur to install a pole for the Cellcom small cell that will serve the beach and really most of Washington Harbor. At this location, there will be not only the small cell, but a night sky compliant light, an emergency telephone, public WiFi that with luck will



It's a tight squeeze through the cedar trees.

have good range throughout the park, and one of our EV chargers. We are working with the Town on this project and it will provide handicap parking close to the restrooms as well.

An additional four locations in “dead” areas are on the engineering drawing board for Celcom and we will work with them on that as well. Each of these areas requires six of the dark fibers earlier mentioned. The end result will be a significant improvement in service for anyone in the area (with some limitations due to tree foliage).

Sometime in the near future, you will see the wind generator at the cooperative (what we call the seagull killer or weathervane) replaced with a small cell installation that will further improve service. This already-in-place 80-foot tower will improve service for a large portion of the Island’s interior (again, with some limitations due to tree foliage). This is another way that the fiber project will benefit the community.

ECONOMIC INTERRUPTION AND RATES

From June 26 through the date of this writing (August 16), we have had 137 hours of economic interruption where we were forced to buy power through a very volatile MISO market. There have been no crazy circumstances or equipment outages at a generation level that we can attribute this to other than the transition from stable generation sources. This is not a good indicator of stable pricing to come. For reference, during the Texas incident in the February cold snap of 2021, there were 164 hours of interruption. We are approaching Texas and winter is not here yet.

We are planning to write more about this in the October issue of this magazine, but one thing is certain: energy prices and demand charges are not going down. Our July wholesale bill from WE/WPS was over \$80,000. Prices go volatile like this when energy supplies are unable to keep up with demand and this is an indication that rolling blackouts could be in our future. When you hear or read about energy supply issues and the potential for our lights to go out, believe them. At this point, wind and solar are more of a problem creating grid instability than they are the solution.

More to come, but consider this short note a warning to brace yourselves! We are working hard to hold the line, but demand charges keep increasing both at a wholesale and transmission level and at a certain point they all have to be passed off to the member (in our case) or the consumer in the case of other utility models.



Note that we are also setting up public Wi-Fi spots along the way. We have installed public Wi-Fi at the Visitor Center and the community center (the library is not hooked up yet because of silly state BadgerNet issues so the “good Wi-Fi” is ours) that is called “WI Public Access.” We set up service at the Legion Hall with the public Wi-Fi called “Honor Our Veterans.” In some cases, we will limit the times that the Wi-Fi is available to prevent congestion. For instance, the Legion Wi-Fi is available during the day only. We will probably limit the Wi-Fi availability at Schoolhouse Beach to park hours. In the future, as we get there, other public locations will be fired up and our plan is to eventually work to get these locations listed on the Island map.

Robert Cornell, Manager

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Hours: Monday–Friday, 9 a.m.–5 p.m.

