



# WINTER ELECTRIC BILLS

With rates increasing in January and with the onset of true winter, we thought it might be a good idea to discuss electric heaters and high bills. Things are a bit different now that everyone is on a monthly bill cycle and issues show up sooner, but in the past, when some of our seasonal members received their bill after the winter months, it was sometimes a “heart in the throat” moment. We have heard on many occasions, “There is no way I could have used that much electricity when I am not even there!”

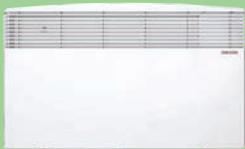
We have had members forget that they had contractors come in the house for a couple weeks (or more) during the winter, leading to increased bills. We have had members tell us that they only have the heater on in the bathroom to prevent freezing, not realizing that the bathroom door was open and that little heater was trying to heat the whole house. We have had members with what we call “rogue thermostats” where they thought the temperature was set to a lower point than it actually was. We have even had situations where a door was not secured and it blew open, so the heater was not only trying to heat the house, but the outside as well.

There is nothing wrong with having someone check your house once in a while when you are in warmer climates. With the move to monthly billing, these

Continued on following page

## TYPES OF SPACE HEATERS

### CONVECTION



#### PROS

- Capable of heating an entire room for an extended time.
- Cost efficient.
- Cool-to-the-touch housing.

#### CONS

- Quick heat loss.
- Physical objects can block heat transfer.
- Mainly sends heat up to the ceiling.

### RADIANT/INFRARED



#### PROS

- Physical objects do not block heat.
- Heat lasts even when the heater is turned off.
- Cool-to-the-touch housing.

#### CONS

- Heavy.
- One-directional heat.
- Needs physical objects to absorb the heat transfer. Fewer objects mean less heat.

### CERAMIC



#### PROS

- Compact and lightweight.
- Instant heat and heat oscillation.
- Heat still radiates after being turned off.

#### CONS

- Does not heat large spaces.
- Takes longer to heat up a room.
- Physical objects can block heat transfer.

### OIL-FILLED



#### PROS

- Does not have to continuously run to provide heat.
- Heat lasts even when the heater is turned off.

#### CONS

- Cannot control the speed of the heat.
- The housing reaches hot temperatures.
- Does not heat large spaces.

### FAN-FORCED



#### PROS

- Compact and lightweight.
- Instant heat and heat oscillation.
- Cool-to-the-touch housing.

#### CONS

- Does not heat large spaces.
- Heat immediately stops being transferred after the heater is turned off.
- Physical objects can block heat transfer.

### MICATHERMIC



#### PROS

- Lightweight and portable.
- Instant heat.
- Silent operation.

#### CONS

- Does not heat large spaces.
- The design collects significant amounts of dust.
- Mainly sends heat up to the ceiling.

Source: Pioneer Utility Resources

issues will be caught much sooner, but having someone check can reduce this risk even more.

Keep in mind that the refrigerator you left plugged in—you know, the one with the half stick of butter and bottle of ketchup in it—uses, on average, 205 kilowatt hours per month. At \$0.14 per kwh, that equates to \$28.70. That television that you left plugged in? The one that is waiting for you to pick up the remote and push a button even though you are out of state? It will use up to \$2.50 per month of electricity just sitting there.

Some of us who are here during the winter months might like to use a space heater to supplement and direct heat. It is important to understand that, just because it is small, doesn't mean it won't pack a punch on your bill. The average space heater is around 1,500 watts. This means for every hour it is on, it will add \$0.21 to your bill. It doesn't seem like a lot, but a space heater used four hours a day, every day, even for the short month of February will add nearly \$24 to your electric bill. Certainly worth it if your feet are cold, but still a sometimes-unexpected adder!

While we are talking about space heaters, a couple of important safety precautions: according to the Consumer Product Safety Commission, space heaters cause more than 25,000 residential fires and more than 6,000 Americans receive hospital care due to burns from space heaters. Follow the safety tips at right when you use a space heater.

*feeling chilled?*

## HEAT YOUR SPACE SAFELY



- Ensure that your space heater has tip-over protection so that it shuts off if it is knocked over.
- Avoid using a space heater, if possible, in high traffic areas.
- Do not leave a space heater running unattended.
- Ensure that the cord is in good condition and that it is plugged into a circuit that is adequately protected and not overloaded with other items.

## PLANNED OUTAGES AND CONTINUING WORK

By the time you read this, some of the work discussed may have already occurred. We noted in our January pages some of the issues that we had during the storms. We noted that we had made a temporary connection to the new underground along Lobdell Point Road in order to get the north part of Green Bay Road back up after the storm took down the lines crossing Arni's Swamp.

We have since finished the final pole riser work on the new pole that was installed at the corner of Green Bay Road and Bay Point Road, and after we relocate the recloser that protects that stretch of line, we will be transferring the north part of Green Bay Road over to be fed from this riser. Prior to this, we will disconnect the temporary connection made at the riser on Gordon Court. This will allow us to then feed the remaining overhead on Lobdell Point Road as well as the south part of Green Bay Road as originally planned from this riser. While things are still frozen, we will then make

*We have talked about supply chain issues as they relate to the fiber project and, unfortunately, the electric side of the business is most definitely not immune.*

the trek into the swamp, remove poles, and wind up downed wire.

In addition, there are several places where we will need to be very aggressive with tree trimming, and while we know that this is not the favorite subject of many of our members, we think they would much rather have their lights (and heat) stay on during a winter. This will be done in addition to and perhaps in conjunction with our partnered work with the town crew.

We have talked about supply chain issues as they relate to the fiber

project and, unfortunately, the electric side of the business is most definitely not immune. Our biggest issues right now are secondary (600v) wire and transformers. We ordered 3000 feet of cable in conduit back in March of last year and have been told we will be lucky if they start manufacturing it by the end of January.

Typically, when our inventory of transformers starts to get low, we will order a semi-load of them (which is generally around 40) and when the semi unloads the new or rebuilt transformers here, we load the take downs on to be returned. Insanely, rebuilt transformers are running almost double the cost of new, and orders of both new and rebuilt have roughly six months' lead time, with prices subject to escalation should material costs be higher at the time of actual production. We are ordering a bit ahead of our usual inventory level because of this concern, but this is not the only supply item that is delayed.



# WORK WITH QUANTUM AND NRTC CONTINUES

**A**t the time of this writing, we still have no word on the NTIA grant. We also have not made much progress with WE/WPS and the make ready costs on the mainland. As in the past though, this is not slowing us down.

NRTC has now completed the engineering and rapid design of the system for the entire Island. We are waiting on a final bill of materials so that we can be prepared, should we get the NTIA grant, to minimize delay in material procurement (see the supply chain commentary on the opposite page).

Quantum personnel have been working on not only the headend, but also on wiring anchor institutions. To date, we have completed the Visitor Center, the Trueblood Theater, the archives, the town office, the fire station, the police station, and the town shop. While working in the Community Center we have provisioned for the clinic, the dentist, the optometrist and audiologist while also doing preparatory wiring in the library. The library (and Door County) has a contract with Badgernet, which will not be going away until early 2023, but so long as we were crawling around in the ceiling, we wanted to get as much prep work done as possible.

Still on the docket are the Art and Nature Center, Bethel Church, the Island Exchange, the airport, and



Pat Keehan guides Mike Jorgenson in the cooperative's new (used – grant procured) skid steer with trenching attachment for installation of conduit to get fiber feeds in and out of the cooperative. This machine will have multitudes of uses well beyond the fiber project. The common comment has been, "Why didn't we have one of these years ago!"

various museums. The recreation center and school are sizeable projects and, while on the docket, will require discussion with their respective boards prior to completion.

With these anchor institutions, as

part of the grant we have been awarded, we are essentially getting everything ready so when the fiber (and the light it carries) reaches them, it is a simple matter of plugging in.

In addition to this work, hardware installation on poles on Green Bay Road and its various tributaries is complete and by the time you read this we hope to have messenger strand hung from the hardware. This strand is what the fiber will be supported by. We will also, where possible, begin running actual drops to the homes. Obviously, we will be limited at those homes that have underground service, but we can make progress on the overhead ones. At each home, adjacent to your meter, we will be installing a NID (network interface device). This is similar to the small box that your current phone is connected to and is pictured at left. This is where the fiber will be terminated at your home.

## Network Interface Device (NID)

These NIDs are smaller than your meter socket.

If you have an underground service, we will need to discuss with you where this is placed. It is preferable that it be outside the home; however, under certain circumstances it may be necessary that it be inside or on a pole prior to the home.

If you have a concern about the location/placement of this box, please contact us. Every home and business will eventually have one.





# QUANTUM PC SERVICES CREW WORKING FOR YOU

We have mentioned Quantum numerous times since we started the fiber project and we thought, since they are going to be out and about, and possibly in your yard, that it would be good to publish pictures of the crew. The only member of the crew we do not have a photo of (and we will rectify that at some point) is Chris Wilson, who has so far done the majority of the anchor institution work. Working along with him has been Clinton and Pat.

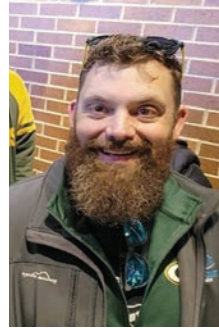
While this is not the entire crew, these are the people that you will likely be seeing over the next few months as we continue to make progress (and yes, we are going with the informal headshots rather than the uptight suit and tie).

We have been extremely pleased with the work this crew has done (and we are certain we will see others as well). If you are interested, you can check out Quantum's Facebook page and website at <https://quantumpc.com/>.

With all the work that is currently being done and with the future connectivity improvements, you might want to consider having the Quantum crew take a look at your home or business to see if there are things they can help you with.



Nathan Drager,  
President and  
Founder of Quantum



Zak Hirn,  
Project Manager



Joel Asher,  
Network Engineer



Mike Schmalig,  
Fiber Optic Engineer



Pat Keehan



Clinton Triplett



Matt Vandervoort



Kolin Hunsader

## CONTRACTOR HIGHLIGHTS

Over the years, your cooperative has worked with many outside contractors. As you can imagine, with only four employees, this is a necessity. In addition, it is difficult to have expertise in everything that we deal with (an ex being a has-been and a spurt being a drip under pressure—hence, expert). With the fiber project well underway, you will see a fair amount

of the same folks coming in to help. Much as we did in the article above, we hope to begin highlighting some of the contractors. This way you will recognize them when they are here and know why they are here. Some of those we hope to include are Karcz Utility Services, Fabick Cat, Utility Sales and Service, SD Meyer, and others.

### Robert Cornell, Manager

1157 Main Road, Washington Island, WI 54246  
920-847-2541  
info@wiecoop.com  
Hours: Monday–Friday, 9 a.m.–5 p.m.

