

# NORTH ITASCA ELECTRIC



A Touchstone Energy® Cooperative 

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## North Itasca Electric Cooperative Program Guide 2018



## **Vision**

To be a progressive safe and reliable cooperative trusted by our members.

## **Mission**

Delivering value to our members and communities by providing safe reliable and progressive energy and other services.

## **Values Statement**

North Itasca Electric Cooperative values honesty, integrity and high ethical standards. We are accountable to our members and committed to our communities.

## Introduction

The purpose of this guide book is to help North Itasca Electric Cooperative Member-Owners understand all the programs and services available to them.

The programs outlined in this booklet are designed to keep the cost of energy at the lowest rates possible while providing reliable energy and services to all.

State and Federal mandates require that all electric suppliers promote energy efficiency programs and North Itasca Electric does just that through load management programs, energy star appliances, rebates and incentives. Our Load Management programs reduces the need for producing or purchasing additional power at higher rates keeping the cost to you the member-owner low as possible. This reduction in energy also reduces the amount of coal used which reduces the amount of harmful emissions from entering the atmosphere and protects our environment. "This is a goal we all should work toward, because it is the right thing to do".

Renewable energy sources are being developed everywhere we look. These resources do not come without a price. State and Federal mandates require that more energy needs to be produced from wind, solar, biomass, (any source other than coal) which we have relied upon for so many years. These renewable energy sources are more expensive and North Itasca Electric is working with, and in support of NRECA (National Rural Electric Cooperative Association) which works with legislation on our behalf.

At your homes, electricity is 100% efficient and reliable keeping our homes free from harmful emissions and at the same time, reducing our heating costs through load management programs.

Design information and calculations in this booklet only provide rough estimates of heat loss/gain calculations for buildings. Every structure has its own characteristics, varying from the number and types of doors and windows, to the type and amount of insulation installed. Even the direction in which the structure faces affects heat lose/gain's. It is best to consult an expert when designing a home's heating and cooling requirements. Many contractors along with North Itasca Electric can do this for you.

North Itasca Electric Cooperative works hard for you the member-owner, looking at every area where we can keep energy costs at their lowest and still supply reliable energy.

# Applying for a Load Management Program

You can go to our website: northitascaelectric.com and download an application form or stop by the office and pick one up.

Many times, the contractor will work with the member sizing and supplying the equipment needed for the job, but sometimes the home owner will do the work in which North Itasca Electric can purchase and supply the members what they need. In either case, a Load Management application form needs to be filled out to receive the equipment needed for metering.

## Call - Gopher State One

Before you dig, call Gopher State at 1-800-252-1166. They will contact all area utilities to determine the locations of utility owned underground cables, lines and pipes. **Keep in mind, only utility owned lines will be marked**, Member need to be cautious of their own: electric, gas or what every line they may have underground. Any line between the main meter and structure being supplied with power is the member's responsibility.

## Electrical inspections required

**State law requires that all electrical work must be inspected. Electrical Contractors will submit an electrical application for your job, but if you're doing the work yourself, you must submit a request for inspection to:**

Minnesota Department of Labor and Industry, 443 Lafayette Road N., St. Paul, MN 55155  
Phone: (651) 284-5005 or 1-800-DIAL-DLI (1-800-342-5354); TTY: (651) 297-4198 **or on line at: <http://www.dli.mn.gov/CCLD/ElectricalHomeownerForms.asp>**

### Electrical inspectors:

<u>County</u>	<u>Inspector</u>	<u>Telephone Number</u>
Itasca County	Steve Bartlett 7:00am – 8:30am	218-591-1616
Koochiching county	Curt Collier 7:00am – 8:30am	218-966-5070
Beltrami County	Mark Smythe 7:00am – 8:30am	218-751-0487

## Energy saving tips for new and existing structures.

Whether you're building new or remodeling, you should not only consider the materials inside the structure to save energy, the outdoor environment also plays a role in energy efficiency.

Windows facing south will save on heating costs by taking advantage of the sun in the winter months, but keep in mind that the same sunlight will cause additional heat gain during the summer. Much of a structure's heat loss and solar gain comes through the windows and glass doors.

Planting evergreen trees on the north side of the structure decreases winter wind exposure while deciduous trees on the west side maximizes summer shading. Trees planted by east windows will also have some beneficial effects, but not as much as the south and west sides.

Building codes don't only look at structural aspects, but also energy efficiencies. In older structures, it's a good idea to have an energy evaluation done. Older structures are not as air tight and R value requirements were less than that of today. There are things that can be done to increase older home efficiencies, and the list below shows some of them.

- Insulate the basement walls.
- Make sure rim joists are well insulated.
- Proper vapor barrier between interior surface and insulation is very important to stop air leakage and moisture problems.
- New homes require walls to have an R-19 value and ceilings R-38 minimums. New technologies enable older homes to add R values to walls without removing sheetrock and attic's can be filled with blown insulation increasing R values as well.
- Make sure all your windows and doors are sealed tight. Clear caulking arounds trim work will stop air leaks.
- Electrical outlets on exterior walls can be sealed with outlet gaskets and or caulked.
- Are your windows single pane? You may want to replace them with double pane. If not possible, install plastic over them to prevent drafts.

For more information on energy tips, contact us and or see websites like: [www.energystar.gov](http://www.energystar.gov), [www.vbrighteridea.com](http://www.vbrighteridea.com), [www.touchstoneenergy.com](http://www.touchstoneenergy.com) to name a few.

## Load Management Programs available:

**Storage Water Heating:** 4.7 cents per kWh.

This program requires a minimum of a 100-gallon capacity water heater/s with an efficiency rating of 90%. Water is heated for 8 hours per day during night time hours of 11:00 pm to 7:00 am +/- 1 hour. Weekends and holidays, power is provided from 11:00 pm until 3:00 pm +/- 1 hour the following day.

**Interruptible Water Heating:** (Program closed to new installations) 7 cents per kWh.

These water heaters are interrupted when energy prices are high and controlled up to 8 hours. A 50-gallon (minimum) tank is required to be on the program. Predefined control generally occurs Monday – Friday.

**Space Heating:** 4.7 cents per kWh.

Program requires pex tubing, electric mats or cables to be a minimum of 12” below the top of concrete slab to be heated for 8 hours at night from approximately (11:00 pm to 7:00 am +/- 1 hour).

**Storage Space Heating with Individual Steffes Room Units:** 4.7 cents per kWh.

Bricks are heated for 8 hours at night from approximately (11:00 pm to 7:00 am +/- 1 hour).

**Storage Space Heating with Steffes Whole House Brick Furnace:** 4.7 cents per kWh.

Bricks are heated 8 hours at night from approximately (11:00 pm to 7:00 am +/- 1 hour).

**Dual Fuel Space Heating:** 5.65 cents per kWh

The electric portion of the heating system serves as the primary heat source with propane or fuel oil as a back-up system. Back-up heat sources must be capable of providing 100% of the home's heating requirements.

**Controlled Air Source Heat Pumps (heating):** .5.65 cents per kWh.

Propane or fuel oil backup is required and can provide 100% of the home's heating requirements. (Ductless systems do not qualify)

**Controlled Air Source Heat Pumps (Cooling):** 5.65 cents per kWh.

Program cycles system on 15 Min. off 15 Min. Maximum control periods of 6 hours per occurrence. (Members on Northome substation will not be controlled). (Ductless systems do not qualify)

**Ground Source Heat Pumps (Heating):** Eligible for General Service or Dual Fuel rates. With a qualifying backup system of propane or fuel oil, the dual fuel rate of 6.15 cents per kWh applies.

**Ground Source Heat Pumps (Cooling):**

Controlled every 15 minutes during the control periods; 15 Minutes, ON, 15 Minutes OFF with a Maximum control period of 6 hours per occurrence. Load control applies only if heating is also controlled. (Members on Northome substation will not be controlled).

**Cycled Air Conditioning:**

Member receives a \$7.00 credit on their electric bill during the months of June, July and August. Central Air conditioners requires a load management receiver mounted for controlling. A/C will be cycled ON 15 minutes OFF 15 minutes for a maximum of 6 hours. Minnkota Electric does not control A/C. This program is not available to members on the Northome substation.

# Propane vs. Electric; off-peak and Dual Fuel

## Propane

91500 Btu's per gallon (propane)

26.817 kWh's per gallon (propane)

## Fuel Oil

138500 Btu's per gallon (fuel oil)

40.59 kWh's per gallon (fuel oil)

### Propane price

Price / Gal.	100 %	95%	90%	85%	80%
\$1.00	\$1.00	\$1.05	\$1.10	\$1.15	\$1.20
\$1.10	\$1.10	\$1.16	\$1.21	\$1.27	\$1.32
\$1.20	\$1.20	\$1.26	\$1.32	\$1.38	\$1.44
\$1.30	\$1.30	\$1.37	\$1.43	\$1.50	\$1.56
\$1.40	\$1.40	\$1.47	\$1.54	\$1.61	\$1.68
\$1.50	\$1.50	\$1.58	\$1.65	\$1.73	\$1.80
\$1.60	\$1.60	\$1.68	\$1.76	\$1.84	\$1.92
\$1.70	\$1.70	\$1.79	\$1.87	\$1.96	\$2.04
\$1.80	\$1.80	\$1.89	\$1.98	\$2.07	\$2.16

### Fuel oil

Price / Gal.	100%	95%	90%	85%	80%
\$2.00	\$2.00	\$2.10	\$2.20	\$2.30	\$2.40
\$2.10	\$2.10	\$2.21	\$2.31	\$2.42	\$2.52
\$2.20	\$2.20	\$2.31	\$2.42	\$2.53	\$2.64
\$2.30	\$2.30	\$2.42	\$2.53	\$2.65	\$2.76
\$2.40	\$2.40	\$2.52	\$2.64	\$2.76	\$2.88
\$2.50	\$2.50	\$2.63	\$2.75	\$2.88	\$3.00
\$2.60	\$2.60	\$2.73	\$2.86	\$2.99	\$3.12

### Storage heat / Water 0.047

efficiencies	100 %	95%	90%	85%	80%
Propane	\$1.20	\$1.26	\$1.32	\$1.38	\$1.44
100% Electric 26.817 kWh's	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26
Savings / gallon	\$0.06	\$0.00	\$0.06	\$0.12	\$0.18
Fuel oil 138500 Btu's	\$2.00	\$2.10	\$2.20	\$2.30	\$2.40
100% Electric 40.59 kWh's	\$1.26	\$1.26	\$1.26	\$1.26	\$1.26
Savings / gallon	\$0.74	\$0.84	\$0.94	\$1.04	\$1.14

### Dual Fuel Heating .0565

efficiencies	100%	95%	90%	85%	80%
Propane	\$1.20	\$1.26	\$1.32	\$1.38	\$1.44
100% Electric 26.817 kWh's	\$1.51	\$1.51	\$1.51	\$1.51	\$1.51
Savings / gallon	-	-\$0.25	-\$0.19	-\$0.13	-\$0.07
	\$0.31				
efficiency	100%	95%	90%	85%	80%
100% Electric 40.59 kWh's	\$1.51	\$1.51	\$1.51	\$1.51	\$1.51
Savings / gallon	-	-\$0.25	-\$0.19	-\$0.13	-\$0.07
	\$0.31				

# Residential Water Heating Program

## Storage Water Heating:

- Electricity is sold for 4.7 cents per kWh.
- Electricity is supplied to the water heater for 8 hours each night, typically from 11:00 PM to 7:00 AM +/- 1 hour. Weekends and Holidays 11:00 PM until 3:00 PM +/- 1 hour the following day.
- \$400 rebate for off peak storage water in new construction.
- \$400 rebate for converting from General service to Storage.
- \$600 rebate for converting fossil fuels to off-peak storage.

Program requires water heater to have a storage capacity of 100 gallons or more and an energy rating of 90%.

## Under review

### Interruptible Water Heating (IWH)

- Interruptible water heating - 7 cents per kWh. These water heaters are interrupted when energy prices are high and controlled up to eight hours. A minimum of 50-gallon tank is required to be on the program.

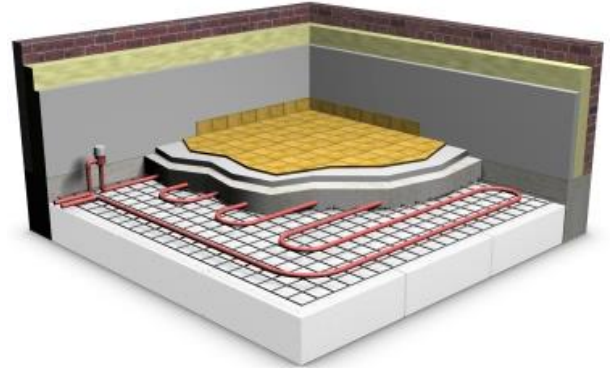




# Residential Space Heating Program

## Storage Heating with Floor Slab:

- Electricity is sold for 4.7 cents per kWh.
- Electricity is supplied to a boiler or electric mats for 8 hours each night. Power is typically on from around 11:00 PM to 7:00 AM +/- 1 hour.
- Storage capacity of the slab must be equivalent to the heating requirements of the room unless a secondary non-electric heat source is used.
  - An exception is radiant floor warming that is not intended to heat the entire room.
- The stored heat radiates from the slab throughout the day until recharged the next night.
- To have enough stored heat, a typical slab heating system will need to have the tubing or electric mats placed in a minimum of 8" of sand or 12 inches below the top of the concrete slab. The boiler or electric mats will need to be sized slightly more than twice the calculated heat loss of the building in order to saturate the slab with enough energy to last 16 hours when the sand and slab will be recharged again for the following day.



## Storage Heating with Steffes room units and furnaces

- Electricity is sold for 4.7 cents per kWh.
- Electricity is supplied to the Steffes units for 8 hours each night. Power is typically on from around 11:00 PM to 7:00 AM +/- 1 hour.
- Storage capacity of the room units must be equivalent to the heating requirements of the space being heated unless a secondary non-electric heat source is used.
- Stored heat from the bricks within the units is delivered to the space as needed throughout the day and recharged again each night.
- In order to have enough heat stored for 16 hours of OFF time, a typical room unit will need to be sized slightly more than twice the calculated heat loss of the room.
- Room storage units are filled with bricks that can be heated from 500 to 1300 degrees each night.
- Forced-air furnaces can be used in conjunction with an air-source heat pump to obtain even lower operating costs.



Charging temperatures vary with outside weather conditions to provide comfortable heat without wasting energy.



**Rebates:** \$50.00 per KW of connected loads.

Great River Energy Control: [www.greatriverenergy.com](http://www.greatriverenergy.com)  
11:00 PM to 7:00 AM +/- 1 hour.

Minnkota's control: [www.beltramielectric.com](http://www.beltramielectric.com) and PBT  
channel 301

Most likely from 7:00AM – 12:00 (5hrs) and 5:00PM to 11:00PM (6hrs).

For more information on Steffes furnaces or Room units,  
See [www.steffes.com](http://www.steffes.com) or  
[www.heatforlessnow.com](http://www.heatforlessnow.com)

## Dual Fuel Space Heating:

### Dual Fuel Space Heating:

- Electricity is sold for 5.65 cents per kWh
- Electric heat and a thermostatically controlled fossil fuel heat source is required to qualify for this program. The electric heat must be wired as the primary heating source and be able to supply over 50% of the heating for the entire home.
- The non-electric heating source must be able to provide 100% of the home's heating requirements.
- Wood does NOT qualify as a backup heat source! Gas fireplaces may qualify if they are thermostatically controlled and are able to provide 100% of the heating load.
- Load control can occur during no specific time periods and can last for a few hours up to 12 hours max. There is a good possibility of power being shut off when the temperature drops rapidly or in the negative numbers.
- A fully automated thermostatically controlled backup system is essential to maintain comfort.
- Electric baseboard, plenum heaters, electric furnaces and boilers, are all good choices for the program.



## Air Source Heat Pump

Air-Source Heat Pumps are basically air-conditioning units with a couple extra components that allow it to run in reverse to heat the home in addition to cooling it.

In conjunction with the Dual Fuel, they can be part of other dual fuel heating equipment are standalone units without other equipment used to heat the home.

Electricity is sold for 5.65 cents per kWh.

These units' work will during the shoulder months: October, November, March and April, but lose efficiencies with temperatures dropping below 20 degrees. Being that load control is unlikely because they only run in warmer temperatures above 20 degrees', they still may be control when system peck periods occur. During these peak periods, the power to the heat pump is turned off and a backup heat source is required.



There are no specific times load control may occur, but can up to 12 hours during the winter months; during the summer, up to 6 hours at a time. North Itasca Electric does not know when the control periods will occur, but they are listed on the Great River Energy's website each day.

Heat pump (with or without plenum heaters) requires a thermostatically controlled fossil fuel heat source to qualify for the program. The electric heat must be wired as the primary heat source, and can supply over 50% of the homes heating requirements to qualify for the Dual Fuel program. The non-electric heat source must also be able to provide 100% of the homes heating requirements.

Wood heat does **NOT** qualify as a backup heat source. Gas fireplaces may qualify if it is thermostatically controlled and able to provide 100% of the homes heating requirements. It is recommended that a propane furnace with a plenum heater would be installed which would function as an air handler as well to circulate the air.

Storage furnaces and properly sized storage slab heating systems are the only electric heating options that can be used as a backup system with the Dual Fuel rate without having a fossil fuel back-up system.

### **Rebates:**

If equipment is installed by a QI (quality installation) contractor, rebates apply.

\$480.00 - 14.5 SEER

\$580.00 - 15 SEER

\$630.00 - 16 SEER and up

# Ground Source Heat Pump

## Heating:

Ground source heat pumps are the most energy efficient means of heating and cooling.

Only needs 25% to 30% of the energy that a standard heating and cooling system would need.

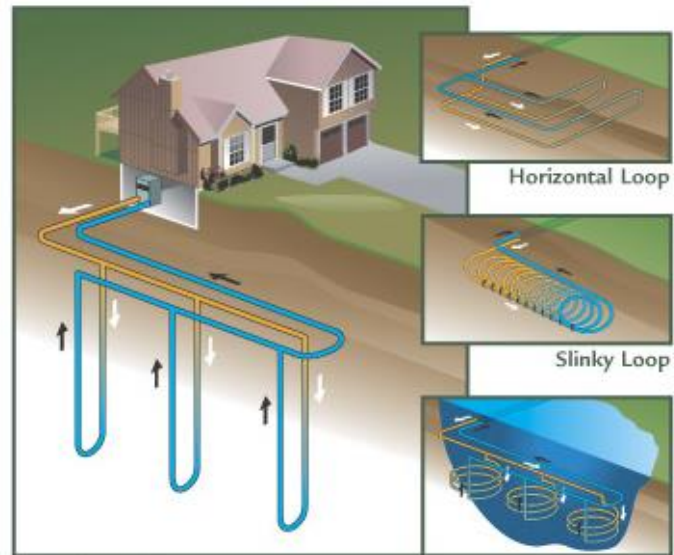
With a qualifying backup system, your Heat Pump can be placed on the Dual Fuel rate of 5.65 cents. At 300% to 400% efficiencies, this equates to paying 1.8 to 1.4 cents per kWh depending on equipment installed.

## How does it save energy?

Ground temperatures maintain a constant 45 to 50 degrees' year around below frost line. Instead of raising temperature from -30 degree to +70, (100-degree difference), you only need to raise heating temperatures from +50 to +70 degrees' a (20 degree) difference.

## Cooling:

If heat pump is placed on the dual fuel program, "Cycled Air Conditioning" would also be controlled at the Dual fuel rate. Northome Substation is not controlled during summer months.



## Cycled Cooling:

- Electricity is sold for 5.65 cents per kWh for ASHP only.
- CAC (Central Air Conditioners) remain on the general service panel and receive a \$7.00 per month credit.
- Electricity is available for air conditioning except during peak periods. During peak periods, the units are cycled ON and OFF every 15 minute. Cycling could continue up to 6 hours per occurrence or up to 200 hours per year.
- Ductless Equipment does not qualify for a load control program.
- If installing Central Air Conditioning, please consider installing an Air Source Heat Pump. They not only cool the home in the summer months, but will heat it during shoulder months with high efficiencies. Some heat pumps are 300% efficient and are also allowed on the Dual Fuel program reducing heating cost even further.



### Note:

Cycled cooling is not available to those on the Northome substation. Minnkota Power does not have a Cycled Air Conditioning program.

## General Service Rates:

North Itasca Electric's general service rates. During the months of June, July and August, rates are 2 cents per kWh higher. The standard monthly base charge is 43.00.

2018 Rates (Mar - May / Sept-Dec.)		700 kWh usage	1500 kWh usage	2000 kWh usage
Base Charge		46.00	\$46.00	\$46.00
Energy	0.1249	\$87.43	\$187.35	\$249.80
Sales Tax	.06875	\$9.17	\$16.04	\$20.34
Monthly Cost		\$142.60	\$249.39	\$316.14

2018 Rates (Jun - Aug)		700 kWh usage	1500 kWh usage	2000 kWh usage
Base Charge		\$46.00	\$46.00	\$46.00
Energy	0.1449	\$101.43	\$217.35	\$289.80
Sales Tax	.06875	\$10.14	\$18.11	\$23.09
Monthly Cost		\$157.67	\$281.46	\$358.89

### Load Control Rate Summary

- 4.7 ¢ per kWh - Storage Water Heating
- 4.7 ¢ per kWh - Storage Space Heating
- 4.7 ¢ per kWh - Pool Heating
- 4.7 ¢ per kWh - Electric Vehicles.
- 5.65 ¢ per kWh - Dual Fuel Heating
- 5.65 ¢ per kWh - All central air source heat pumps.
- 7.0 ¢ per kWh - Interruptible Water Heating. (program closed to new installations)
- 7.0 ¢ per kWh - Limited Dual Fuel and Breathe Easy Water (Programs Closed)
- \$7.00 credit - Cycled Cooling - June, July and August

#### For control period information:

Members on Bigfork, Wirt, Jessie Lake, and Evenson substations:  
[www.greatriverenergy.com](http://www.greatriverenergy.com)

Members on Northome substation:

[www.beltramielectric.com](http://www.beltramielectric.com)

PBTv channel 301

## Load Management Installation Requirements

Complete a request for electrical inspection affidavit and mail it to Minnesota State Board of electricity. Forms are available from the Minnesota Department of Labor and Industry's website, [http://www.electricity.state.mn.us/pdf/eli\\_rei\\_homeowner\\_form.pdf](http://www.electricity.state.mn.us/pdf/eli_rei_homeowner_form.pdf), an electrical contractor or from North Itasca Electric Cooperative.

### Great River Energy load control receiver

- The load management sub meter socket should be mounted between 24" and 60" above grade. This is necessary for maintaining meter and radio receiver. North Itasca Electric uses subtractive sub-metering. Power supplied to the radio receiver must come from the top lugs of the meter socket.
- All load management equipment must be connected to the bottom lugs of the meter socket.



### Red and Black wires

Provide power to the radio receiver by connecting 240-volt uninterruptible power to the top lugs of meter socket.

### Blue wires:

Used to control electric heat and air-conditioning equipment. They are connected to a normally closed relay with contacts that can have a maximum of 120 VAC, 5 amp resistive loads. A control signal will open the contacts to turn off power to the electric heating or cooling equipment. The normally closed configuration of the contacts ensures that the member has power to his/her heating or cooling equipment should the receiver fail.

### Orange wires:

Used to controlling electric water heaters and/or sometimes storage heating equipment. These wires are connected to a normally closed relay with contacts that can have a maximum of 240 VAC, 30 Amp Resistive Load. A control signal will open the contacts to turn off power to the equipment. The normally closed configuration of the contacts ensures that the member has power to the equipment should the radio receiver fail.

### Contractor/Owner responsibilities:

Contractor/owner is responsible for installing load management controls and metering equipment (except for the meter itself) according to state electrical codes.

Meters will be installed upon completion of system install, testing and inspections by both North Itasca Electric and state electrical inspector. North Itasca Electric will install the meter once the system is fully installed, inspected and properly controlled with a backup system fully operational where applicable.





# Load Management Installation Requirements (continued)

## Minnkota's load control ripple controller

Looking at the ripple controller to the right, you will see three hand written code numbers. These codes tell the ripple controller which program you're on and open and closes the relay below them. One can see by looking at the relays if the system is being controlled by the switches on the relays if they are up or down. (UP) on, (DN) off. Between the first and second relay, you will see an indicator light which will flash green when signals are being received from Minnkota Power.

For wiring diagrams to install the ripple controller, contact North Itasca Electric.



## When do control periods take place?

Storage Heat and Storage Water control is as stated above in the program information. Dual Fuel, Air Conditioning and interruptible water heating – we do not know from day to day until control times are announced by the Great River Energy and Minnkota Power Cooperatives.

Great River Energy

Control periods: [www.greatriverenergy.com](http://www.greatriverenergy.com)

Minnkota Power Cooperative

Control periods: [www.beltramiellectric.com](http://www.beltramiellectric.com) and PBTv channel 301

Most likely from 7:00am – 12:00 noon (5 hrs) and 5:00pm -11:00pm (6 hrs).

# **Home Energy Evaluations and Heat Loss Calculations**

## **Energy Evaluations**

North Itasca Electric can help you evaluate your energy use. If you would like assistance, call Jerry Loney and ask for an energy evaluation.

## **Heat Loss Calculations**

North Itasca Electric provides heat loss calculations and design assistance to members installing electric heat. If you are undecided what to use, North Itasca can help. Provide a print or sketch of your home with information on dimensions, location in reference to North, insulation type, type of windows and doors, and we would be happy to help you in your decision.

## **Design rules of thumb:**

The design rules below are intended for informational purposes only. They are based on new home construction using the latest technologies and standards. One should have a heat loss calculation done by a professional to ensure a proper system is designed.

### **Electric boilers:**

If you are looking for just a little additional warmth, figure 6 watts per square foot.

If you are looking for 100% space heating on our Dual Fuel program, figure 9 watts per square foot.

If you are looking for 100% space heating with Storage program figure 15 to 17 watts per square foot.

### **Plenum Heaters:**

Plenum heaters can be sized using 8 to 10 watts per square foot (with 8' ceilings)

Use 15 kW models in structures 1500-2000 square feet.

Use 20 kW models in structures 2000-2500 square feet.

A minimum air flow of 1000 CFM's is needed for a 15 kW plenum heaters with proper ductwork installed and about 10 registers.

A minimum air flow of 1200 CFM's is needed for 20 kW plenum heaters with proper ductwork installed and about 12 registers.

### **Steffes Furnace:**

The sizing of brick storage units receiving 8 hours of charge each day:

#### **Square foot Method:**

Basements:

Square feet x 8' ceiling x 1.5 = Btu's

First floor:

Square feet x 8' ceiling x 2.4 = Btu's

#### **Cubic foot method:**

2.4 Btu's heat loss / Cubic foot for the upper level and 1.5 Btu's heat loss / cubic foot for the basement.

#### **Home on slab or crawl space:**

2.9 Btu heat loss / cubic foot for all areas.

# 2018 Rebates

## Residential

- **Lighting:**
  - LED light bulbs – receive \$2.00 per bulb.
  - LED yard light - \$30.00
  - Bulb recycling - free
- **Appliances:**
- **Refrigerator** - \$75.00 when upgrading refrigerator / freezer, or just recycling old working one. (Recycling receipt required) \$25.00 with energy star dehumidifier.
- **Ground Source Heat Pumps** – Receive \$400.00 per ton based on equipment size.
- **Central Air conditioning**- Receive \$50 for installing Central Air Conditioning equipment based on SEER rating installed by a contractor certified through Great River Energy's QI (Quality Installation) certification training program.
- **Air Source Heat Pumps** – Receive \$330.00 - \$630.00 for installing Air Source Heat Pump equipment based on SEER rating installed by a contractor certified through Great River Energy's QI (Quality Installation) certification training program. (Load Control rate allowed with backup). Ductless systems do not qualify
- **Electrically Commentated Motors (ECM)** – receive \$100.00 rebates.
- **Storage Space Heating** – Receive \$50.00 per kW on homes heated with the off-peak storage program.
- **Storage water heating** – Receive \$400.00 for new construction or converting from 4 hour breathe easy program. 100-gallon tank required (85 with mixing valve). Receive \$600 when converting from propane to storage water heating. \$500.00 when installing a heat pump water heater. (50-gallon tank or larger required).
- **Other rebates**
  - \$400.00 – pool A.S.H.P.
  - \$200.00 – variable speed pump
  - \$25.00 – A/C tune up

## Commercial accounts

Contact North Itasca electric Cooperative

### HVAC Contractors

Company	City	phone	Cell Phone	GRE Certified	Service
Cozy Air Htg & Plumbing	Marcell	218-832-3246		Yes	Yes
Marcell Plumbing & Heating	Marcell	218-832-3500	218-743-6354		
Five Star Mechanical	Effie	218-743-6145	218-244-2137	Yes	Yes
Norton's Heating & Cooling Inc.	Bemidji	218-444-1533	218-766-8607	Yes	Yes
Cyclone Furnace & duct	Bovey	218-326-2333			Yes
Midwest Heating & Cooling LLC	Bovey	218-245-1385		Yes	Yes
Apsire Heating & Control, Inc.	Cohasset	218-256-7778		Yes	Yes
Coatsworth Construction	Cohasset	218-326-7966		Yes	Yes
Mr. Furnance	Cohasset	218-328-6145		Yes	Yes
Pincherry Heating	Cohasset	218-328-5909			oil only
Ability Furnace	Deer River	218-246-2634		Yes	
Deer River Plg & Htg	Deer River	218-246-2294		Yes	
Quality Refrigeration & Heating	Deer River	218-246-2731		Yes	Yes/O.T.
A & A Plg & Htg	Grand Rapids	218-327-4962		Yes	Yes
ASAP Heating & AC	Grand Rapids	218-969-1871			Yes
Brown's Heating & A/C Service	Grand Rapids	218-326-1078		Yes	yes
C & D Heating	Grand Rapids	218-326-2429	218-244-6881		Yes
Centsible Heating	Grand Rapids	218-326-5297			Yes
Comfort Heating & AC	Grand Rapids	218-244-5987			Yes
Danielson Heating & Cooling, LLC	Grand Rapids	218-244-5447		Yes	Yes
Houg Plbg & Htg	Grand Rapids	218-326-1007	218-259-1712		
Lewis Refrigeration, Htg & AC	Grand Rapids	218-327-9330			
True North Heating and cooling (Ryan Bluntach)	Grand Rapids	218-360-0961	218-259-9196	Yes	Yes
Marek Heating	Grand Rapids	218-259-1262			Yes
Northern Air Plbg & Htg	Grand Rapids	218-327-9361		Yes	Yes
Pioneer Plg & Htg	Grand Rapids	218-244-1607			Yes
Rapids Plumbing & Htg	Grand Rapids	218-326-0073			Yes
RC's AC / Heating	Grand Rapids	218-326-9705	218-259-1807	Yes	Yes

### Electrical Contractors

Company	City	phone	Cell Phone
21 Century Electronic	Cohasset	218-326-0521	218-259-2100
Benham Electric	Cohasset	218-999-7688	
Benham Electric	Deer River	218-246-9435	218-244-0651
Evans Electric	Deer River	218-246-2603	
Goggleye Electric	Deer River	218-246-8064	218-244-3216
True North Electric	Deer River	218-246-2619	218-244-3494
A to Z Electric	Marble	218-256-1652	
Current Electric	Grand Rapids	218-327-0849	
Rick's Electric & Data Inc.	Grand Rapids	218-326-6309	218-244-8540
Erlandson Electric	Grand Rapids	218-259-0896	218-259-0896
Gene's Electric	Grand Rapids	218-326-5885	
Hopkins Electric	Grand Rapids	218-326-2554	
Mr. Electric	Grand Rapids	218-327-0557	218-556-3029
Pioneer Electric	Grand Rapids	218-327-4806	
Pokegamma Electric	Grand Rapids	218-326-6290	
Venture Electric	Grand Rapids	218-259-8098	
Walters Electric	Grand rapids	218-328-5938	218-244-4729
API Electrical	Hibbing	218-263-3658	
C.T.E. Electric	Hibbing	218-262-3384	
Hart Electric	Hibbing	218-262-5087	218-966-6402
IRC Electrical Contracting	Hibbing	218-262-6365	218-969-0994
Reliable Electric of Hibbing	Hibbing	218-969-8811	fax 262-3054
Williams Electric	Squaw Lake	218-659-4216	218-244-6037

# Wellspring

## Wellspring Application



### **Your Personal Opportunity to Support Wind & Solar Power!**

The Wellspring program provides co-op members with an easy, affordable and meaningful way to support sustainable energy in their communities. By empowering members to buy energy from renewable sources, this program enables you to offset your conventional energy use and take pride in helping promote renewable energy development in the state of Minnesota. Small acts can make a big impact. As more members support the program, more opportunities arise to generate power from renewable sources. Together, we can power the future.

### **Yes! I want to participate in the wellspring Renewable energy program**

Please indicate the number of 100 Kilowatt-hour wellspring blocks "Wind and or Solar" you wish to purchase each month. Each block for wind energy is \$2.00 and for solar \$4.00 each to invest in the environment and the future of renewable energy.

\_\_\_\_ (100 kilowatt-hour blocks per month) for Wind energy.

\_\_\_\_ (100 kilowatt-hour blocks per month) for Solar energy.

I understand that my commitment is for one year and will continue on an annual basis until I notify North Itasca Electric Co-op., Inc. in writing to end my participation in the Wellspring Program.

Name: \_\_\_\_\_ Account Number: \_\_\_\_\_

Address: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Other Phone: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_





# North Itasca Electric Cooperative Inc.

301 Main Ave. P.O. Box 227 Bigfork MN, 56628  
218-743-3131. (800) 762-4048. 218-743-3644 Fax

## Load Management application form 2017

To be eligible for a Load management program, one must complete this form and comply to the terms stated below:

- Unless installed by a licensed electrician, all electrical wiring must be inspected by a state electrical inspector prior to the installation of a sub meter.
- Members are responsible for the installation of all load management equipment and wiring. The installation must comply to the National Electric Code.
- Violations of load management policies may result in the removal from the program.
- Must have an adequately sized backup heat source for the appropriate program.
- North Itasca Electric will furnish and maintain load management equipment.
- Electrical energy consumed by the load management sub meter will be billed at the current load management rate. These rates are subject to change at any time upon board approval.
- North Itasca Electric reserves the right to inspect and test load management equipment at any time.
- If North Itasca Electric needs to make a second trip due to an incomplete installation, a \$50.00 charge may apply.

### Load Management Program desired

#### Check Load Control Programs desired:

Storage Water  Storage Heating  Dual Fuel Heating  Cycled cooling

#### Backup system:

Fuel Oil  Propane  Wood (Not Allowed)

#### Equipment and size installed:

KW Water Heater (100 gal.)  KW Boiler  KW Plenum Heater  KW

Steffes Room Unit  KW, Steffes furnace  KW, Air Source Heat Pump  Tons,

geothermal heat pump  tons, Baseboard  KW, other heating Equipment  KW

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Location address: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Phone: \_\_\_\_\_



# Electric Heating Sales Tax Exemption Certificate

North Itasca Electric Co-op., Inc.  
PO Box 227  
Bigfork MN 56628-0227

This is to certify that the main source of heat for my home (more than 50 percent) is furnished by permanently installed electric heating equipment (not portable) and I, therefore, am eligible for the electric heating sales tax exemption as provided by Minnesota State Law.

**This is for the billing months of November through April only.**

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Account Number

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Map Number

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Meter Number

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Please Print Member Name

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Member Signature & Date