



Runestone Electric
A S S O C I A T I O N



Contractor's Guide



Scan the
QR code to access
this guide and more on
runestoneelectric.com

Text #REACContractor to 22300

To sign up for contractor notifications

320-762-1121 • 800-473-1722 • rea@runestoneelectric.com
6839 Power Lane SW, Alexandria, MN 56308

Storage Water Heating

How it Works

Runestone Electric Association's Energy Wise® water heating program uses electricity efficiently to save you money.

Storage water heater will heat from 10:00 PM until 6:00 AM daily. If you have a large family or use large quantities of hot water, we can program your controller to heat for a few hours in the afternoon at no additional charge. This program is for residential and agricultural use. Interest-free payment plans available. Price includes a controller and sales tax.

Installation is not included.

Cost

General Service Rate

Suggested Retail:

\$2,300.00

- 1,225.00 Discount

\$1,075.00 REA price

Off-peak Electric Heat Rate

Suggested Retail:

\$2,300.00

- 975.00 Discount

\$1,325.00 REA price

Warranty

Residential Warranty: Storage waters sold by REA and enrolled in an off-peak program come with a lifetime warranty* against leaking. In addition, the elements and thermostat are warranted for six years. Labor warranties offered for all qualified manufacturer claims.

**Manufacturer warranty is only valid for original owner. 10 year leak warranty for subsequent owners*

Commercial Warranty: Please contact REA for details. Labor reimbursement is available for qualifying events.

Payment Plans

Payment plans are available for water heaters and are as follows:

General Service:

\$268.75 for 4 months

Off Peak:

\$265 for 5 months

Storage Water Heater Installation

Storage water heater installation checklist:

- ☐ Check that the lower element disconnect is unlocked. *To see if the water heater is unlocked, simply check the position of the switch. See photos below.*
- ☐ REA controller installed
Required for labor reimbursement



The lower element disconnect in the OFF position. (To the right)



The lower element disconnect in the ON position. (To the left)

Storage Water Heater Warranty

Warranty Claim Checklist

Warranty through REA

- ☐ Call REA (800-473-1722) to start warranty claim
- ☐ Photo of leak or failure required
- ☐ Provide Marathon sticker to REA

Things to remember...

- » HTP and Marathon water heaters have a lifetime leak warranty for the ORIGINAL purchaser
- » HTP and Marathon water heaters have a 10 year leak warranty from date of install for subsequent owners
- » The water heater key is the same for Marathons and HTPs and can be obtained from the REA office

Aquanta Water Heater Controller

Aquanta is the smart water heater timer that easily connects to your Cellular or WiFi for maximum convenience and cost savings.

Cost Savings

- » Smart control of thermostat and heat cycling
- » Energy savings suggestions
- » Weekly & monthly usage data comparison

Convenience, Comfort and Safety

- » See how much hot water is available
- » Remote turn on/off and scheduling capability
- » Automatic overheating shutoff



Installation
Directions



Aquanta
FAQs



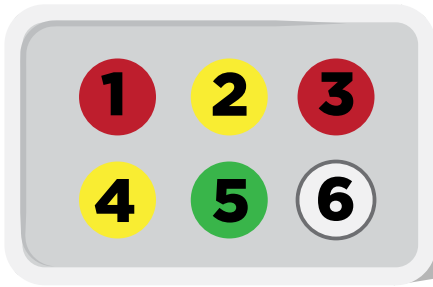
LED and Audible Indications

LED Color	Indication
Green	Normal operation with AC power applied to the hot water cylinder
Red	AC power is not being applied to the hot water cylinder
Aqua, Blue, Purple	Intelligent Mode Operations: Aqua - AC Power OFF Blue or Purple - AC Power ON
LED Blinking	Wi-Fi or Internet connection to the server is not available

Download the
Aquanta App!



Legacy Radio Receiver Diagram



REA Radio Receiver



1. Function One: Upper left RED light is the water heater.
2. Function Two: Upper middle YELLOW light is typically for Dual Fuel appliances
3. Function Three: Upper right RED light is typically for REA use.
4. Function Four: Lower right YELLOW light is typically for REA use.
5. Function Five: Lower middle GREEN light indicates power to the box.
6. Function Six: not used

When the light is ON, the appliance is turned OFF.

Note: Anytime power is interrupted to the unit, the radio receiver is programmed with a “cold load pickup” for about a 5 minute period. Once power is restored to the receiver, the connected loads will not be allowed to run during that 5 minute period. See the video on runestoneelectric.com or see the video by scanning the code below.



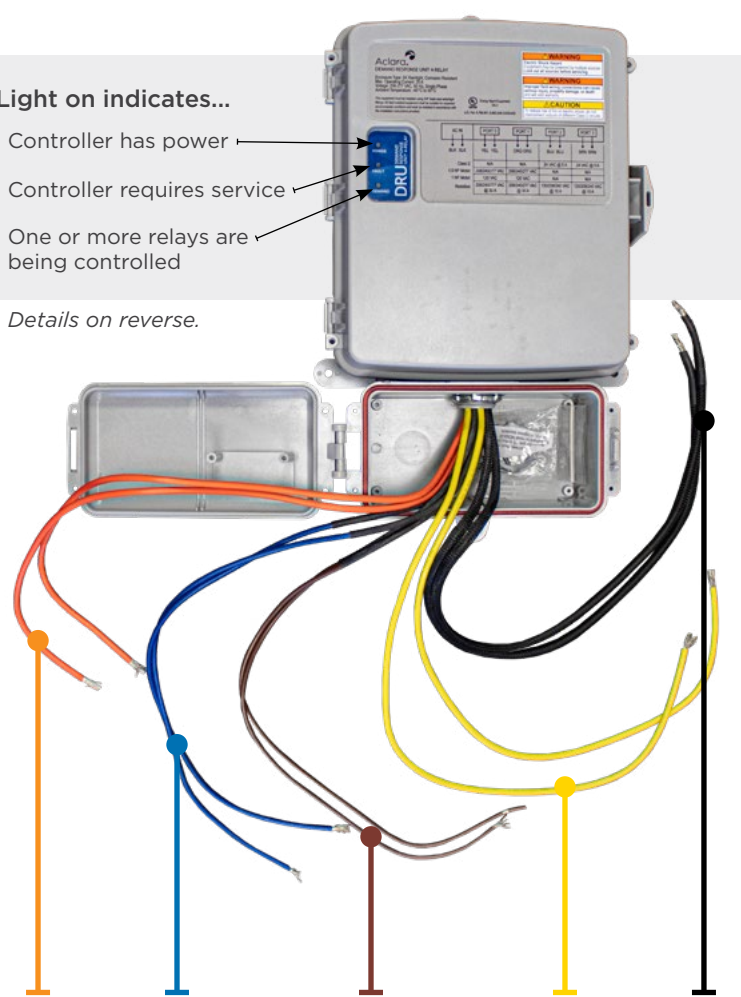
Scan the QR code to watch the legacy radio receiver tutorial.

Aclara DRU Quick Guide

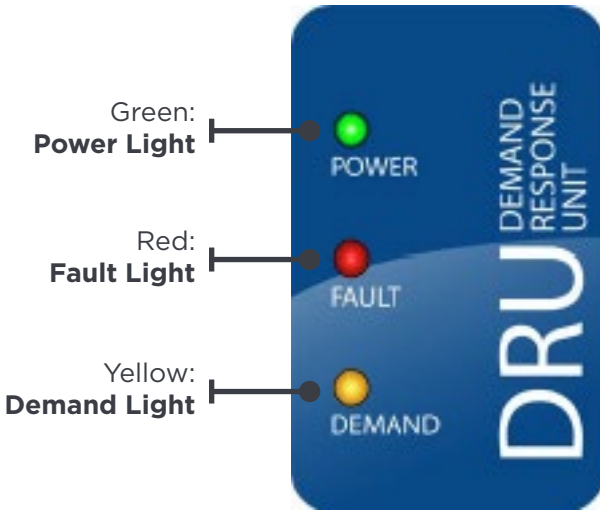
Light on indicates...

- Controller has power
- Controller requires service
- One or more relays are being controlled

Details on reverse.

- 
- The diagram shows the Aclara DRU device with its terminal block open, revealing internal wiring. Five colored lines with dots at the bottom represent the wiring colors: Orange, Blue, Brown, Yellow, and Black. Each line is connected to a specific terminal on the device. The Orange line is connected to the Water Heater terminal. The Blue line is connected to the Primary Off-Peak Heating Relay #1 terminal. The Brown line is connected to the Secondary Off-Peak Heating Relay #2 terminal. The Yellow line is connected to the Spare 30 Amp Contact terminal. The Black line is connected to the 240V Power terminal.
- Orange:** Water Heater
 - Blue:** Primary Off-Peak Heating Relay #1
 - Brown:** Secondary Off-Peak Heating Relay #2
 - Yellow:** Spare 30 Amp Contact
 - Black:** 240V Power

DRU Status Guide



Green Power Light

On: 240 V Present

Red Fault Light

Steady On:

Under frequency/
under voltage

Flashing Steady:

Incorrect wiring
detected

Yellow Demand Light

On: Control (see *below*)

Off: No control

Flashing Patterns for Demand Light

Flashing Pattern	Indication
1 Flash	Port 0 Controlled (Yellow)
2 Flash	Port 1 Controlled (Orange)
3 Flash	Port 2 Controlled (Blue)
4 Flash	Port 3 Controlled (Brown)

Note: Anytime power is interrupted to the unit, the radio receiver is programmed with a “cold load pickup” for about a 15 minute period. Once power is restored to the receiver, the connected loads will not be allowed to run during that 15 minute period.

Dual Fuel Installation Requirements

CT or Sub Metering

- » Off-peak systems require the installation of a subtractive meter or a separate service (dual metering).
- » Subtractive metering and radio receivers must be mounted outside the home or other building and mounted at a height of 5-6 feet. (Eye level)
- » A subtractive meter must be energized from a dedicated 20 amp circuit. Exception: If powered from water heater circuit, a power disconnect is required to isolate the water heater. This allows the receiver to have uninterrupted power.

Dual Metering

- » If dual metering originates from a meter pedestal, call REA to determine whether it is necessary to add an additional meter socket or provide CT metering at the transformer. All loads approaching 200 amp and larger will be CT metered.
- » If dual metering originates at an overhead service (pole), the contractor will pick up the meter socket from REA and install the overhead loop. An REA crew will make the overhead connections and install the meter after notification that the service is ready to be energized.
- » Cycled air conditioners and water heater only systems are not metered on the off-peak rate, if no controlled space heat or heat pump installed.

Rates

ETS (Electric Thermal Storage)	4.69¢/kWh
Must be primary heating system	
Dual Fuel	
<i>electric plenum heater, electric boiler, air source heat pump, and baseboard heat</i>	
Automatic back-up system	6.04¢/kWh
Without automatic back-up (<i>Not open to new participants</i>)	6.34¢/kWh
Air Source Heat Pump	
<i>Without complimentary dual fuel system</i>	
Automatic back-up.....	7.24¢/kWh
Unoccupied Space (Garage/Shop)	
No backup, 15 kW minimum	7.85¢/kWh

Rebates

Electric Vehicle Rebates

\$250 Rebate for qualifying uncontrolled EV chargers	\$250
\$500 Rebate for qualifying controlled EV chargers	\$500

Heating And Cooling Rebates

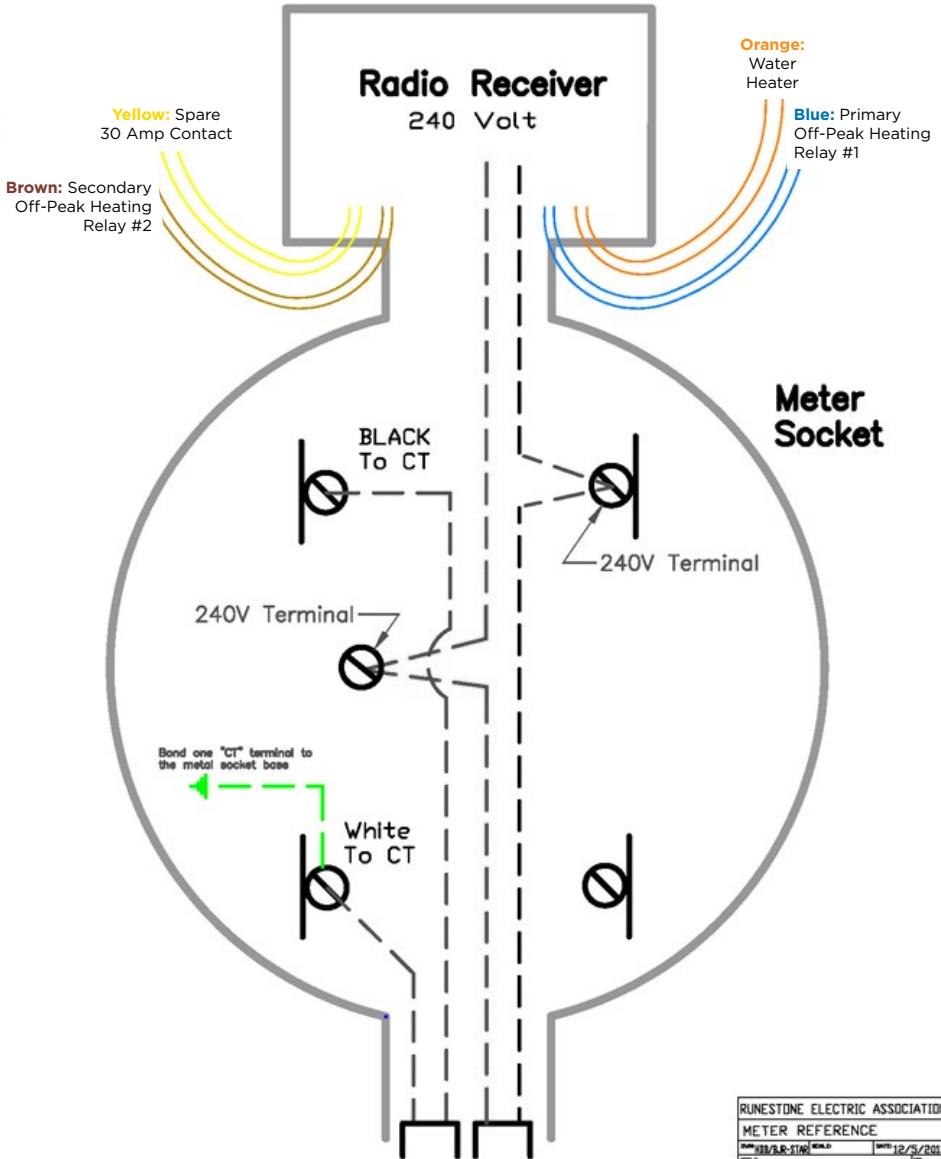
Electric Thermal Storage (ETS)	\$50/kw (\$5,000 Max)
Air Source Heat Pump	
• > HSPF ² 7.5 or greater	\$500
• > CEE Tier 1 (Path A or B) (Quality Installation Required)	\$900
Ductless Air Source Heat Pump (mini split)	\$200
Air Conditioner 14.5+ SEER	\$50
Geothermal Heat Pump	\$400
Air Conditioning Tune-up	\$25
Electronically Commutated Motor (ECM)	\$25
Smart Thermostat	\$25



Scan the QR code
to explore REA's
current rates and rebates.

CT Metering

Typical CT Metering Connections



CT Metering

If sub-metering is used at the house, CT metering is usually the simplest and least cost way to meter off-peak loads. REA will provide a 5-terminal meter socket, and a load controller/receiver. The electrical contractor will provide the CT (200:5) and install the entire off-peak system.

There are two different methods for running off-peak loads through the CT.

240-volt loads-

1. Run 1 phase through the CT twice. All circuits run through the CT must be the same phase and passing through the same direction.
- OR
2. Run both phases through once and in opposite directions. All circuits must be in phase with each other.
3. 120v loads require only 1 pass through the CT to meter accurately.

Maintaining a constant power source (240volts) for the meter socket and radio receiver is critical. If power is provided from a shared circuit (i.e. water heater) additional steps are needed to maintain an uninterrupted supply. Adding a disconnect to isolate the water heater circuit will be needed where the water heater is shut off for periods of time. This is to avoid loss of power to the submeter restricting our ability to record off peak usage, moving the off peak heat usage to the general service rate.

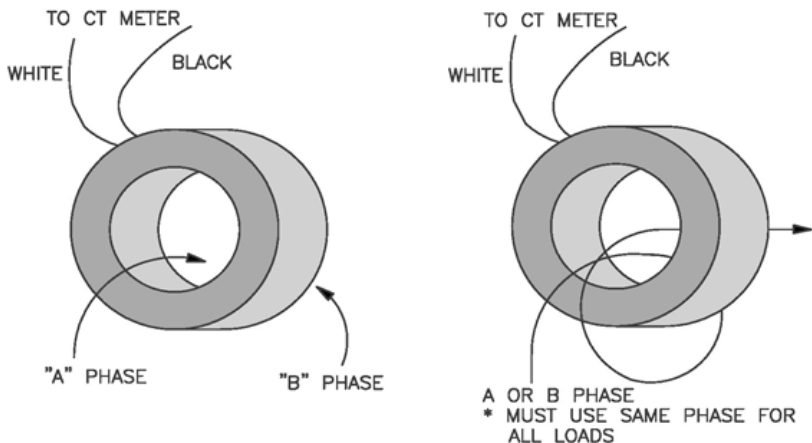
The following wire gauge must be used:

#14 wire - 10 feet

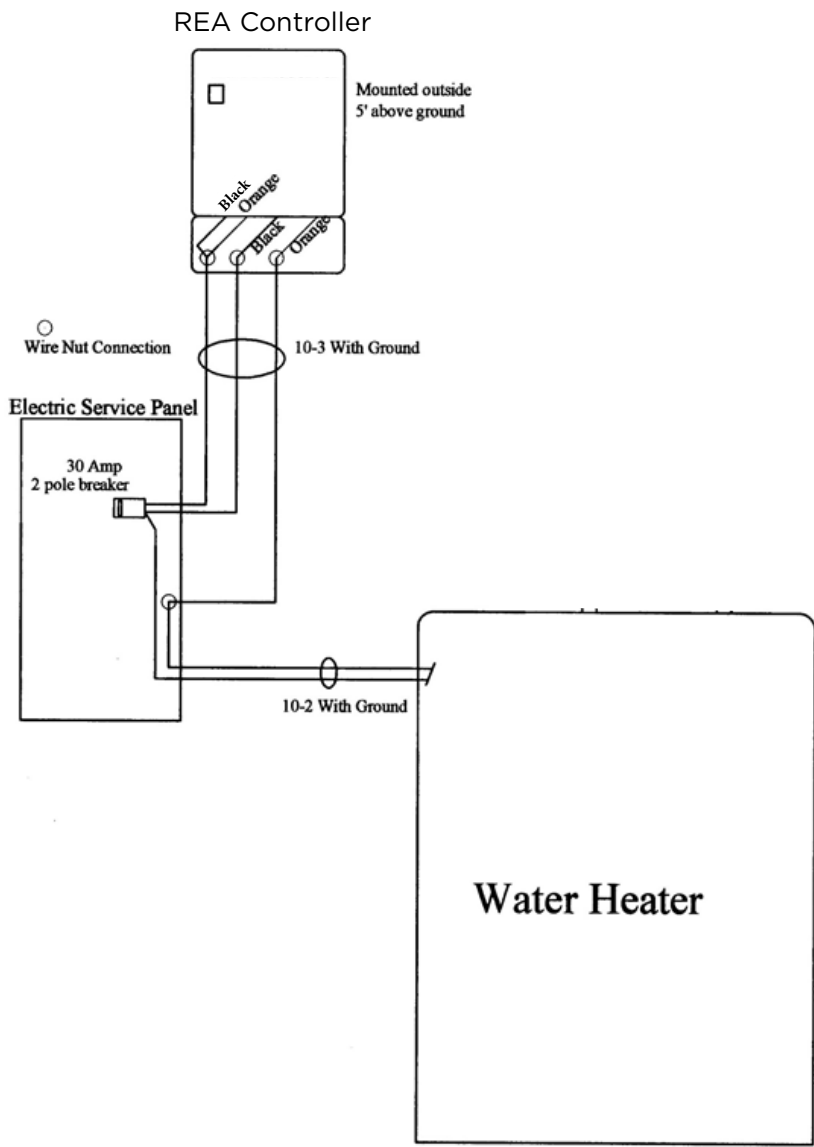
#12 wire - 16 feet

#10 wire - 23 feet

CT METERING

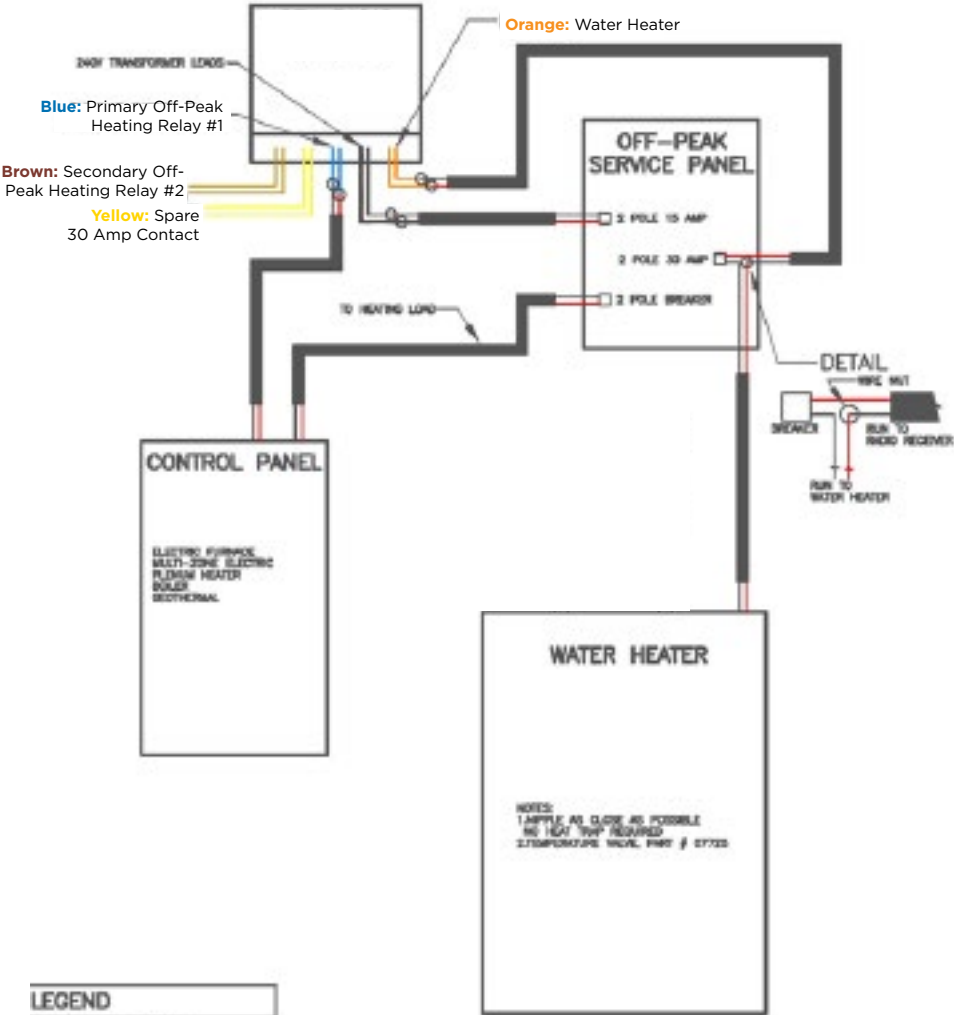


Storage Water Heater Diagram



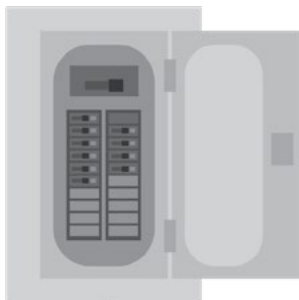
Dual Meter Installation Diagram

REA Controller



Electric Vehicle (EV) Off-Peak

In-Home Breaker



Install the branch circuit for your EV charger passing through a 100 amp meter socket in route to your EV Service Equipment (EVSE) as illustrated to the left.

Disconnect Meter & Socket



EV Charger



Installation Highlights

- REA provided 100 amp meter socket.
- Meter socket must be installed on the EXTERIOR of the home at a height of 5-6 feet (eye level).
- Contact REA to install meter
- Meter is equipt with built in disconnect to interrupt 240 V power to the EVSE during control periods (6 am-1 pm and 3 pm-10 pm Daily)



Scan for more EV tools,
rate, and rebates

New Construction

Steps for Applying for New Service

Below are the steps the member will need to take to apply for a new construction. It's best to get this process started early.

1. Complete Application:

Member will need to complete an application. The following information will need to be provided:

- a. Primary members Name, billing address, phone, email
- b. Additional name on the account - optional
- c. Primary members Social Security Number for Identity check
(required by RUS)
- d. Type of service - Home, Shed, Seasonal, garage, etc
- e. Parcel or Tax number of property
- f. Address of property - if address has been assigned
- g. Approximate square footage of building - if applicable
- h. Heat Source - if applicable
- i. Electricians Name

2. Upon applying, there are two scenarios that could take place:

If REA construction is needed

(Ex: transformer set, poles, meter pedestal, meter socket)

1. Staking engineer stakes the new construction which will be completed by REA
2. Minimum half payment due (including connection fee) before REA construction starts
3. REA completes construction
4. Monthly fixed meter fee starts billing
5. Members Electrician makes connection into the meter socket
6. Balance due if not already paid in full.
7. Members electrician sends Affidavit to power@runestoneelectric.com
8. Once Affidavit is received and Electrician has called the REA office to let us know they are ready for a meter, REA will install meter and energize the lines

If Meter socket is already in place.

1. Member pays full connection fee
2. Monthly fixed meter fee starts billing
3. Members electrician makes connection in the meter socket
4. Members electrician sends Affidavit to power@runestoneelectric.com
5. Once Affidavit is received and Electrician has called the REA office to let us know they are ready for a meter, REA will install meter and energize the lines

New Construction

Considerations for New Service

- » Final transformer location defined by REA staking engineer, must be brought within 2-3 inches of final grade before the equipment is installed. This includes driveway final grade.
- » REA requires service entrance conductors be terminated on the load side of all Class 200 meter sockets as well as the service disconnect prior to scheduling REA to energize the service.
- » Every effort must be made to provide a load calculation including all general use loads and off peak equipment for accurate transformer sizing.
- » Additional trips to increase the size of the transformer after the initial installation may result in additional charges to the member.
- » No member equipment may be placed on REA provided poles or meter pedestals.
- » If an estimate of construction costs has been given assuming construction in a normal construction season, and the customer delays construction outside the normal construction season, winter construction charges will apply in addition to the original estimate
These additional costs reflect the additional labor caused due to construction in inclement conditions, such as frost, mud, snow and ice This charge shall be based on actual cost of direct labor, overhead, transportation and material. The winter charges may apply to all underground construction installed after November 1, and on or before May 1, depending on actual field conditions. The Operations and Engineering Department will determine the date after which winter charges are applied to all underground construction.
- » No structure may be built within 15 feet of the REA overhead or underground service in accordance with the easement definition

Member Charges

All new services are assessed a **\$550 connection fee** with **\$3.50(single Phase) charged per foot for additional extension.**

New Construction

Metering (Most Common)

Metering configurations offered:

» **200 amp single phase service**

Underground and overhead services

Class 200 meter and lever Bypass meter socket provided by Runestone Electric.

320 Amp meter sockets are allowed but must be supplied by the homeowner.

» **Services requiring more than 2 sets of secondary conductors will be evaluated for CT metering. Call the office for more information.**

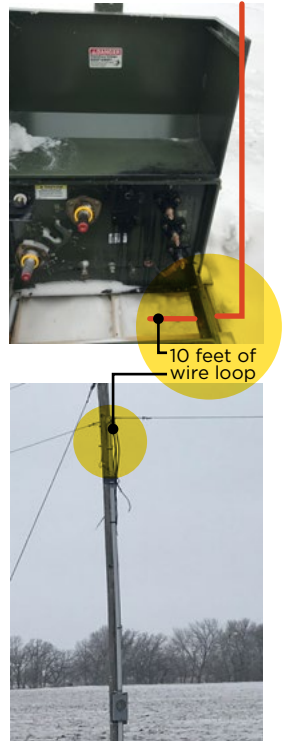
Member must bring service entrance to the transformer location leaving (10) ft of wire loop for termination.

» **3 phase services**

All three phase services require CT Metering. *Contact REA's Operation Department for your installation requirements.*

Generally, CT cabinet (supplied by member) required when more than 2 sets of service entrance conductors are needed.

Runestone will provide CT's for the installation.



Other Services offered by REA for New Construction

» **Steffes Heating Equipment**

REA is a distributor of Steffes storage heating equipment. Contractor support and incentives are available. Financing available Contact REA for more details.

» **Standby Generators**

REA will install and service Briggs & Stratton Standby Generators. Financing available. Call for more info.

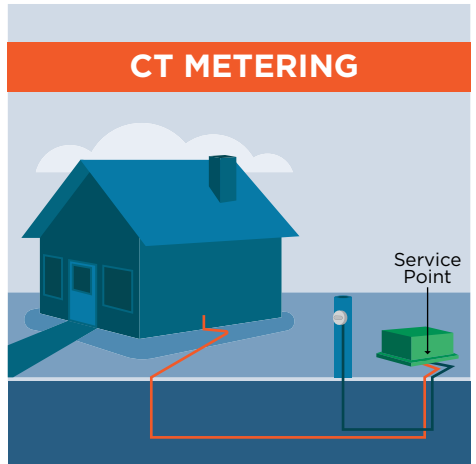
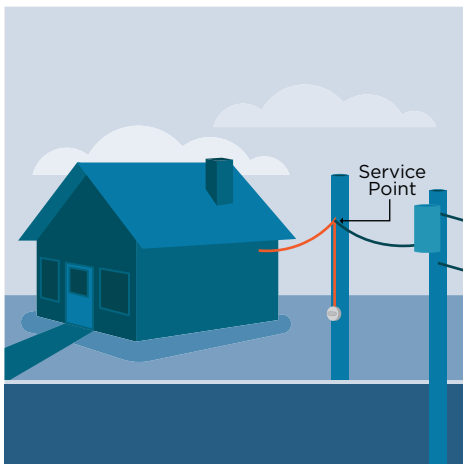
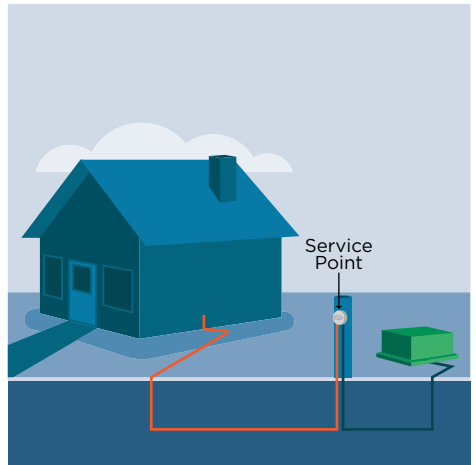
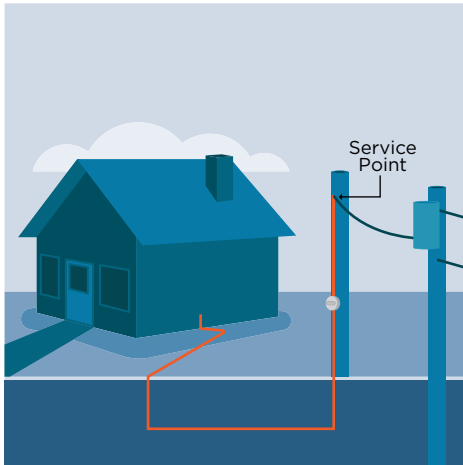
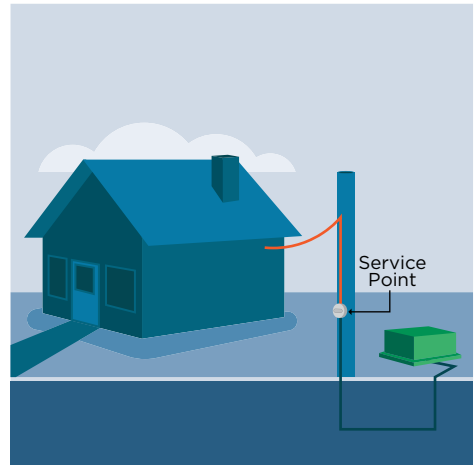
REA Service Standards

Member's Wire:

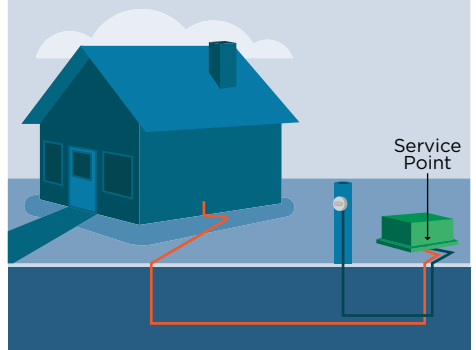
The bright red line marks the member's wire. The homeowner is responsible for installing and maintaining this portion of the system.

Runestone's Wire:

The dark blue lines mark to co-op's system. This represents equipment REA maintains and repairs.



CT METERING



50/50 Ad Program

REA offers a “50-50” Advertising Program. This program is designed to provide additional funds to advertising budgets. By simply including the REA logo in print ads or mentioning REA in radio ads, we will reimburse contractors 50% of the cost of the ad(s) up to \$500 per year.

Qualifying ads promoting electric heating and cooling programs:

- Heat pumps (air source & geothermal)
- In-floor electric heating
- Electric furnace options
- Electric plenum heaters
- Storage heat units
- Central air conditioner/heat pump tune-ups
- Storage water heaters

Print ad qualifications:

- Ad must promote an electric heating or cooling option or REA program
- REA logo must appear in ad (available upon request)
- Have advertising sales representative fax (320-763-4941) or email (sue.lundeen@runestoneelectric.com) a copy of the ad to the REA office prior to running the ad

Radio ad qualifications:

- Must include “...Off-peak rates and rebates from Runestone Electric Association...” or “...AC tune-up rebate from Runestone Electric Association”
- Have advertising sales representative fax (320-763-4941) or email (sue.lundeen@runestoneelectric.com) a copy of the ad to the REA office prior to running the ad

Funds Available:

- Up to \$500 per contractor per calendar year

For more information:

Contact Sue Lundeen

Phone: 320-762-1121 or 800-473-1722

Fax: 320-763-4149

Email: sue.lundeen@runestoneelectric.com

50/50 Ad Program

Example Radio Ads:

30 Second Ad:

Save money and increase the efficiency in your home. Contact your local (Insert company name) Heating and Air Conditioning for a free quote on an air-source heat pump. It does the work of an air condition but also provides electric heat during mild temperatures. You could save hundreds on a new heat pump with off-peak rates and rebates from Runestone Electric Association. (Insert Company Name) Keeping your family comfortable for over 60 years. North Nokomis. Alexandria. (Insert Company Website).com

30 Second Ad:

“Heat your home for less with the help of (Insert Company Name) Heating & Air Conditioning, (Insert Preferred HVAC Brand) and REA’s off-peak rates and rebates. Install a plenum heater into your existing furnace or into a new high efficiency (Insert Preferred HVAC Brand) furnace and reduce your heating costs. (Insert Company Name) Heating & Air Conditioning can help you find the heating system that fits your lifestyle and budget. Call your local (Insert Preferred HVAC Brand) dealer, (Insert Company Name) Heating & Air Conditioning, 763-6636 or visit (Insert Company Website).com. Keeping your family comfortable for over fifty years.”

15 Second Ad:

This weather update is brought to you by (Insert Company Name) Plumbing Heating and Cooling. Time to clean and tune your heating and cooling units. With AC tune-up rebates from Runestone Electric Association. (Insert Company Name) Plumbing Heating and Cooling, call today.

Renewable Energy

Member Owned Generation (Distributed Generation)

Runestone Electric Association will help interconnect member owned electric generation equipment with our system. Safety and the safety of our employees is of the utmost importance, therefore all interconnection applications are contingent on the equipment and interconnection obtaining certification from a State of Minnesota licensed state electrical inspector. Advanced planning is required and it is highly recommended that you contact us at the beginning of your planning process to assist with your project. We are utilizing Nova Power Portal for the interconnection process of Distributed Energy Resources for our members. Please follow the link below to browse interconnection information, track the status of projects, and learn more about installing your own renewable energy system.



To get started, please visit:
www.novapowerportal.com
or scan the code to the left:

Wellspring

Runestone Electric Association cares about maintaining a healthy environment for our generation and those to come. Our power supplier Great River Energy is constantly looking for ways to bring you a variety of clean energy options, such as our Wellspring® Renewable Energy program. Wellspring Energy allows our members to ensure the energy they consume comes from a renewable source like the wind or sun. You can purchase a kilowatt-hour (kWh) of wind power by adding only .02¢ to REA's current electric rate, or purchase a kilowatt-hour (kWh) of solar power by adding only 2¢ to REA's current electric rate. Wellspring can be purchased in blocks of 100 kWhs by contacting the office.



Runestone Electric
ASSOCIATION

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