



Powering Possibilities

SMART DEVICES AND SMART HOMES

BY ALANTHA GARRISON || ENERGY USE SPECIALIST

The world today is a much different place than when I was a kid. Homes today have so many more items than previous generations, and some can talk to each other. We had intercoms in all of the rooms in the house I grew up in, which was pretty fancy back in the 1980s. I remember the see-through telephone my sisters had in their bedroom, then the cordless phone that allowed you to walk around your house while on the phone.

We now all have cell phones and the power to connect with anyone, anywhere, at any time; get an answer to any question that we ask as soon as we want; and access pretty much any information we might need from the World Wide Web. You can ask Alexa to reorder items you need or play a movie you want to watch. And we can now connect with devices in our homes that can be programmed, monitored and controlled remotely via our cell phones, and automatically make changes to how certain items in our homes run. Our homes are now smart because devices inside of them can learn from us and modify our electrical items' energy use to match our behaviors.

Smart thermostats are automated devices that are designed to learn your routines and change temperature settings on the thermostat for your heating system in response. Over time they can help reduce energy use and heating costs while maximizing energy efficiency and maintaining comfort in your home. You must have Wi-Fi access at your home or business to use these thermostats properly. Typical annual savings is shown to be about 10 to 12 percent on the heating portion of your bill, which can be significant here with the cold winter temperatures we experience.

When you're leaving your home for the day, you might forget to turn the heat down. Instead of manually turning the heat down or relying on a standard programmable thermostat, smart thermostats store information about the time you normally leave and the temperature you set on the thermostat and adjusts accordingly. You can override any temperature setting you see if it's not to your preference, and the thermostat will learn from this.

Many of these devices have a motion sensor, so if movement is detected, they may turn on even if it's during a time when no one is normally at home. The greatest value that most people find from these devices is the ability to check the temperature on the thermostat when they're not home. If it's not where they want it, they can manually adjust the temperature down, right from their phone. If you're running late coming home and want to program the heat to come on at a later time, you can do it.

Of course, during a much colder winter you might not realize

any cost savings despite using a smart thermostat. If a major change in your habits occur and you keep the thermostat set to a higher temperature for longer periods of time, this can also offset savings. These thermostats work best for central heating systems, such as a furnace, and are not recommended for use with baseboard heaters.

Smart water heater controllers are also now available to help reduce energy use from water heating, specifically during times when the water heater is not being used. These devices take more work to install than a smart thermostat, and a plumber may be required to help drain the tank and install the sensor into the water tank. Once these are installed and the device connects with Wi-Fi, you can see the temperature and the amount of water in the tank.

You can set the water heater to remain off during certain times, such as when you're away on vacation for an extended period or for your typical work day. If you see that the temperature of the water in the tank gets too low during a time when the water heater is programmed to be off, you can override the setting and have the water heater turn on to heat the water to the current programmed temperature. Conversely, if you are delayed returning home and do not need the water heater to turn on for several more hours, you can turn it off remotely until you know you'll be closer to home.

These devices work well with time-of-use rates and can be controlled by a utility. This can help the utility reduce the total demand on the system during peak hours, which occurs on Gunnison County Electric Association's system from 5 to 10 p.m., Monday through Saturday. Forty-six percent of GCEA's entire power bill comes from this demand, so big cost savings and energy use reduction could be realized with proper control of water heaters during peak times.

The last smart device I want to mention is the smart power strip. Here in America, we waste as much energy in one year from the use of standby power from electronics as the entire continent of Australia; about 5 to 10 percent of all of the energy used in a home per year comes from standby power consumption. You may have heard of this energy use as phantom draw or energy vampires since it's a small amount of energy but is in use all the time. Pretty much any electronic that can be controlled by a remote control, like a television, computer or printer, uses energy even when they are



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turned off. You can tell because there's a small light that stays on even when the electronic is turned off. Traditional power strips are great because with the flip of the switch, all of the electronics turn off. But there are some electronics, like Dish Network®, modems and routers, that you may not want to turn off.

Smart power strips can help you overcome this issue because they allow certain outlets to remain on all the time while the others are automatically turned off completely when they are not in use, reducing the standby power draw. They can save energy in a couple of different ways, from turning off equipment that's on but is not in use after a certain amount of time or automatically turning

everything off when the device detects that items are in standby mode. One manufacturer of a smart power strip, Embertec USA LLC, conducted field trials in homes and found that the average energy savings per year from using the smart power strip was 486 kilowatt-hours, or \$61.88 at GCEA's residential rate of \$0.12732 per kWh.

Smart devices are becoming popular these days and studies demonstrate the energy savings. With any smart device you might consider purchasing, ensure that it's UL® listed, meets all safety requirements for your equipment and is installed and used properly according to the manufacturer's instructions.



**SEPTEMBER
CO-OP CALENDAR**

GCEA'S GUNNISON & CRESTED BUTTE OFFICES
WILL BE CLOSED ON MONDAY, SEPTEMBER 3,
IN OBSERVENCE OF THE LABOR DAY HOLIDAY.
REGULAR OFFICE HOURS WILL RESUME ON
TUESDAY, SEPTEMBER 4 AT 8 AM.

EMPLOYEE ANNIVERSARIES

RON COPENHAVER,
ENGINEERING TECHNICIAN II — 18 YEARS

CHRISTOPHER SCHODORF
SYSTEM ADMINISTRATOR — 13 YEARS

BRIAN MUTH
ENGINEERING TECHNICIAN II — 12 YEARS



**FALL ENERGY SAVINGS –
A LITTLE CAN GO A LONG WAY**

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DID YOU KNOW AN ENERGY AUDIT CAN BE THE FIRST STEP TO
INCREASING COMFORT OF YOUR HOME? INFRARED IMAGE
ANALYSIS CAN HELP YOU IDENTIFY AREAS OF AIR INFILTRATION.
LEARN WHAT YOU CAN DO TO SAVE ENERGY AND MONEY!

TIPS TO HELP YOU SAVE ENERGY ON YOUR HEATING BILLS:

- ADD WEATHER STRIPPING AND INSULATION TO ATTIC HATCHES
- ADD INSULATION TO YOUR ATTIC
- SEAL AND CAULK AROUND WINDOWS AND DOOR FRAMES WITH A WATERBASED ALL-ACRYLIC OR SILICONIZED ACRYLIC CAULK; DO NOT USE EXPANDING FOAM AROUND WINDOWS
- IF UNINSULATED, AIR SEAL AND INSULATE RIM JOISTS IN CRAWL SPACES WITH SPRAY FOAM INSULATION
- IF UNINSULATED, ADD RIGID FOAM BOARD TO CRAWL SPACE WALLS
- SEAL ALL PENETRATIONS FROM THE CRAWL SPACE TO THE LIVING AREA OF YOUR HOME WITH EXPANDING FOAM
- ADD OR REPLACE WEATHER STRIPPING ON DOORS AND WINDOWS WITH DURABLE VINYL WEATHER STRIPPING

**FOR MORE INFORMATION, PLEASE CONTACT GCEA,
AT 641-3520 OR VISIT WWW.GCEA.COOP.**



BE ON THE HUNT FOR SAFETY

Wearing a bright orange vest, keeping your finger off the trigger until you're ready to shoot and only pointing at your target are some of the safety measures associated with hunting. Electrical safety should be added to the list.

Never shoot near or toward power lines, power poles, transformers or substations. A stray bullet could not only damage equipment, potentially interrupting electric service, but could also be deadly to the shooter. Damage to the

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OPERATION ROUND-UP

College tuition keeps rising every year, and it gets harder and harder for families to pay for it. Luckily, Gunnison County Electric Association members have an opportunity to support the educational funds of youth in the service territory by participating in Operation Round-Up®.

HOW IT WORKS*

Members who volunteer to take part in the program will have their monthly electric bill rounded up to the next highest dollar.

For example, if your monthly bill was \$52.30, you would pay \$53. The extra 70 cents goes into a special account. Once you are signed up, GCEA will automatically round up the bill each month. Every little bit helps students with college expenses.

**Members are not required to participate, but GCEA would greatly appreciate this generous donation to the scholarship fund. These donations are not tax deductible.*

OPERATION ROUND-UP® ENROLLMENT FORM

Yes! I wish to contribute* to Operation Round-Up®. Please add the amount to my monthly electric bill. I understand I may stop my contribution at any time.

____ Round up my electric bill to the next highest dollar.

____ I wish to make an additional monthly contribution of \$ _____.

Please print

Name: _____

Account Number: _____

Address: _____

City, State, ZIP: _____

Email: _____

Phone Number: _____

Signature: _____

Please send completed form to: Gunnison County Electric Association | Attn.: Billing | P.O. Box 180 | Gunnison, CO 81230

**Not tax deductible.*

BE ON THE HUNT FOR SAFETY THIS FALL

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conductor could drop the line to the ground, causing a threat of electrocution to those nearby.

Safe Electricity urges hunters to follow these safety tips while hunting:

- Familiarize yourself with the location of power lines and equipment on land where you shoot.
- Be especially careful in wooded areas where power lines may not be as visible.
- Take notice of warning signs and keep clear of electrical equipment.
- Do not place deer stands on utility poles or climb poles. Energized lines and equipment on the poles can

conduct electricity to anyone who comes in contact with them.

- Do not place decoys on power lines or other utility equipment. Anything attached to a pole, except for utility equipment, is an obstruction and poses a serious hazard to utility workers.

Don't force linemen to hunt for problems you have created in a hunting area. Sometimes damage isn't noticed for several weeks or months, or unless an outage occurs. Keep yourself and your utility safe this hunting season.

For more electrical safety tips, visit www.SafeElectricity.org.

GUNNISON COUNTY ELECTRIC ASSOCIATION EXPERIENCES STRONG GROWTH IN ITS GREEN POWER PROGRAM – AIMS HIGHER!

Gunnison County Electric Association has more than doubled green power subscriptions by kilowatt-hour over the past year. Last year, the town of Crested Butte chose to offset 100 percent of its electricity consumption through GCEA's Green Power program and challenged others to follow its lead. Members with large and small accounts have risen to the challenge.

GCEA recently set a goal of providing 50 percent renewable energy to its members by 2030. To meet this goal, GCEA will rely on three sources: the renewable energy it gets in its wholesale power supply (30 percent and growing), local renewable projects (three under development) and voluntary member participation in GCEA's Green Power program (currently 8.6 percent). GCEA is also asking its members to help it reach 10 percent participation in its Green Power program by the end of this year.

Three local renewable projects have been approved by the GCEA Board of Directors to help meet the goal. With these projects, we can meet the desires of members who want local renewables, as well as those for whom cost is the primary concern. The three projects are: two 0.5-megawatt solar arrays and an expansion of our community solar garden.

Except for two small, existing local projects, GCEA's current power supply comes from Tri-State Generation and Transmission Association. Tri-State has significantly increased the amount of renewable energy in its portfolio, and now more than 30 percent of the power it provides to member systems like GCEA comes from a diverse mix of renewable resources.

GCEA is now offering three green power choices including a 130 percent offset option in its Green Power Plus Club. With this option, members can choose to make a greater contribution to community efforts to reduce greenhouse emissions. Members who enroll in the Green Power Plus Club will be billed an additional \$0.0012 per kilowatt-hour used.

The Green 100 Club provides 100 percent offset with a 70/30 split. A 70 percent

renewable offset is provided to supplement the 30 percent already included in GCEA's power supply from Tri-State. Members choosing this option pay an additional \$0.00084 per kWh used.

GCEA continues to offer 100-kWh blocks of green power for the Green Choice Club at 12 cents per 100 kWh block.

When you sign up for one of the Green Power Club programs you will receive a reusable tote and green power sticker. Visit the Gunnison or Crested Butte offices to sign up today.

GCEA has also introduced a new feature to its Green Power program. Twenty-five percent of the amount members pay for green power now goes into a fund to help finance local renewable projects in the future. Participation in the Green Power program helps meet GCEA's goal of 50 percent renewable energy by 2030 in two ways: by increasing the amount of renewable energy attributes provided through the voluntary Green Power program and by facilitating the development of local renewable energy projects.

GREEN POWER CLUB

GUNNISON COUNTY ELECTRIC ASSOCIATION MEMBERS, DID YOU KNOW THAT 30% OF YOUR POWER NOW COMES FROM RENEWABLE RESOURCES SUPPLIED BY TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION?

JOIN ONE OF THE FOLLOWING THREE GREEN POWER PROGRAMS!

GREEN POWER PLUS
100% OFFSET + 30% FROM TRI-STATE = 130% OFFSET OPTION

GREEN 100
70% OFFSET + 30% FROM TRI-STATE = 100% OFFSET OPTION

GREEN CHOICE
12 CENTS PER 100 KWH BLOCK PER MONTH

Please print: Name: _____ Account Number: _____
Address: _____ City, State, Zip: _____
Email: _____ Phone Number: _____
Signature: _____

25% OF WHAT YOU PAY FOR GREEN POWER WILL GO INTO A LOCAL RENEWABLE FUND TO HELP FINANCE LOCAL RENEWABLE PROJECTS IN THE FUTURE.



“Like us” on Facebook

Check out our Facebook page for events at GCEA, energy efficiency tips, safety tips and so much more. “Like us” at Gunnison County Electric Association.