

## December 2018 Share Package

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## New Technology Increases Efficiency, Aids Environment

**Q:** We are thinking of switching from a furnace to a heat pump for our home and buying an electric vehicle. Is that environmentally beneficial?

**A:** How to heat your home and fuel your transportation needs are among the most important environmental decisions you can make.

There are a number of changes happening in the energy sector that make electricity cleaner.

Decades ago, coal was the preferred fuel for electricity generation. As investments in environmental upgrades took hold, the energy industry increased the use of low-sulfur coal and found ways to clean the coal and burn it more efficiently. Scrubbers were installed in coal plants to reduce sulfur emissions, but natural gas turbines were still considered environmentally preferable to coal plants.

In 1990, utilities depended on coal to generate more than half of their electricity. By 2016, that dropped to less than one-third.

In recent years, solar and wind generation have taken off and now provide more than 8 percent of utility energy generation. Public utilities have installed solar at a record pace, with solar capacity growing more than four times since 2015. They have pioneered solar programs where consumers subscribe to a community project—a large array is much less costly per kilowatt than smaller rooftop projects.

The environmental impacts of electricity depend on where you live and where your electric utility buys electricity. Many utilities publish this information on their website or in annual reports on the sources of electric generation. Some include information on carbon emissions.

With all that in the back of your mind, let's get to the decisions you are

looking to make: home heating and vehicle purchase.

A heat pump is a good option. Heat pumps are about 1.5 times more efficient than they were in the 1970s and function better in colder temperatures. They take care of your cooling needs as well, and can do so with about half the energy they required in 1990.

The best choice for home heating and cooling depends largely on the climate where you live. In more extreme climates, you will need more heating or cooling capacity, and can justify splurging for a more energy-efficient model.

As our energy supply becomes cleaner, electric vehicles are becoming a better environmental choice across the country. The environmental advantage depends on how electricity is generated in different locations.

The fuel cost of an electric vehicle is, on average, half as much per mile as a gasoline vehicle. Electric vehicles generally require less maintenance, but the batteries eventually need to be replaced. Battery costs are dropping, but potential buyers should note this will still be a hefty bill. Electric vehicles cost more up front than their gas counterparts, but the cost is coming down with every new model.

As you make your decision on a heating system and new vehicle, remember there are other things you can do to reduce the environmental impact of your energy use.

- Insulate and seal air leaks.
- Set the thermostat a little cooler in the winter and warmer in the summer.
- Check with your utility to see if it offers a community solar program or additional energy-saving tips. ■

*This column was co-written by Pat Keegan and Brad Thiessen of Collaborative Efficiency. For more information on energy efficiency, visit [www.collaborativeefficiency.com/energytips](http://www.collaborativeefficiency.com/energytips).*



The network of electric vehicle charging stations is growing rapidly.



Community solar projects allow consumers to invest in solar power at a lower per-kilowatt-hour rate than smaller rooftop solar installations.

Photo by Dan Husted, Lake Region Electric Cooperative



To ask a question, send an email to **Patrick Keegan** at [energytips@collaborativeefficiency.com](mailto:energytips@collaborativeefficiency.com).

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## Wood-Burning Fireplaces an Option for Emergency Heat



**Decorative airtight doors on this heat-circulating fireplace improve efficiency and reduce air loss.**

Photo by Kozy Heat



**This fireplace draws in outdoor air to improve heated air circulation.**

Photo by James Dulley



To ask a question, write to **James Dulley**, Energy Report, 6906 Royalgreen Dr., Cincinnati, OH, 45244, or go to [www.dulley.com](http://www.dulley.com).

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**Q:** *We want an efficient wood-burning fireplace/insert for extra heat and emergencies. Our old masonry fireplace seems to chill the house. What should we look for?*

**A:** It is not just your imagination. Using an open masonry fireplace can cool your house and result in higher overall heating costs. Heated indoor air is drawn into the fireplace opening and lost up the chimney. This draws cold outdoor air into your house through windows, doors and gap.

You may feel comfortable by the fireplace, but your heat pump or furnace can run up to 10 percent more to warm the rest of the house.

I do not recommend using an open fireplace during very cold weather, but if you really like the ambiance of a fire, close all the doors to that room and crack open a window. Some heated air will still be lost up the chimney from the rest of the house, but most of this air will be drawn in the open window. The loss is not as severe during mild weather because the outdoor air leaking in is not as cold.

Burning firewood to heat your home is called biomass heating and it may qualify for some local tax credits. Biomass includes cord firewood, wood pellets, corn, switch grass, peanut shells and cherry pits. It can be burned in a variety of heating appliances. Fireplaces, wood and pellet stoves are most common. If you plan to burn corn, be sure to get a model with a firepot designed to handle corn's unique burning characteristics.

Every efficient wood-burning fireplace or insert has tight-sealing glass doors to minimize the loss of already-heated room air. Some fireplace models can be safely operated with the glass doors opened and just a screen covering the opening. Do not burn it this way often because too much indoor air is lost.

There are many sizes and styles available. A 42-inch wide, EPA-certified wood-burning fireplace can produce from 8,000 to 60,000 British thermal

units an hour depending on how much wood is in the firebox. The overall efficiency can be as high as 77 percent. A fireplace this size can handle logs up to 22 inches long.

If you decide on a fireplace, you must decide between a zero-clearance and a masonry fireplace. If your old fireplace is large, you may be able to fit a new insert inside of it, saving hundreds of dollars. If you plan to install a fireplace somewhere else, installing a zero-clearance model is best. These use a double-walled design with insulation to be safely placed against wood wall studs.

A heating-circulating type of fireplace is a must for the best efficiency and more heated air output. Many designs operate without a fan and rely on natural flow of room air around the superhot firebox. As the air gets hot, it becomes less dense and naturally flows out into the room through an upper vent. This pulls cooler room air in a lower inlet to be heated.

For more heat output and better control of the flow of heated air, install an optional blower kit. The better ones have thermostats and variable-speed controls for the best comfort. Select one with at least 100 cubic feet per minute air flow. Each fireplace manufacturer offers its own specially designed blower kit. A blower kit can usually be added by the homeowner after the fireplace is installed.

For the greatest efficiency and fewest drafts indoors, install an outdoor combustion air kit with the fireplace. Make this decision before you install the fireplace because a duct has to run to it to bring in the outdoor air. Installation is simpler with a raised hearth design.

Another efficient option is an airtight insert. These provide the longest burn time and maximum heat output. They typically are not as stylish as other fireplaces, but they provide much better control over the heat output and combustion air used. For air quality considerations, select one that is EPA certified. Pellet and catalytic cord firewood models typically produce the least particulate matter. ■

# Baby, It's Cold Outside

*Cold temperatures can significantly increase power bills*



**Sarah Johnson** is customer relations and services manager at Clatskanie PUD in Clatskanie, Oregon.

Winter months provide happy family celebrations, but they also bring cold weather and extended hours of darkness, which can lead to larger electric bills. As temperatures plummet and the hours of daylight grow shorter, we use more electricity to heat and illuminate our homes.

Just a few degrees difference outside can increase your bill. If there is a large difference, such as when the temperatures dip down into the teens at night, you will see a significant increase in your bill. Remember that even though your heating system temperature control may be set to the same degree setting, the system works much harder to heat your home when temperatures outside are colder. Your heating system may be running constantly to generate heat and circulate the warm air to keep your family comfortable.

A 15-degree drop in the outside temperature for several days in a row will cause a large increase in the amount of electricity used in your home. If you have an energy-efficient heat pump, most of the year it will run at a much lower cost. But when temperatures dip below freezing, the heat pump relies on the auxiliary heat system to maintain a comfortable temperature. The auxiliary system, whether it runs on fossil fuel or electric resistance heat, can add significantly to your home heating costs.

Unlike other items or services we buy, our electric bill arrives a month or more after we have used the service. We may not remember all the things electricity provided for us during the time period that bill covers. We open our winter bills and are shocked at the difference, especially if it has been a mild fall and then it gets cold all of a sudden.

It is important to consider all the things that can result in additional energy use, such as having company over, cooking large meals, being indoors more during the day, additional lighting for the holiday season, new electronic toys that need to be plugged in to charge, having the kids home all day during winter break and using more hot water for showers and cooking.

Ease the effects of winter bills with a few easy steps.

- Change the filter on your heating system regularly.
- Seal air leaks.

- Install a programmable or smart thermostat and lower the temperature. Each degree you lower your thermostat, you can save you up to 2 percent on your heating bill.
- Lower the temperature even more when you are away or asleep, but keep your house at least 55 degrees at all times to prevent pipes from freezing and to avoid moisture problems.

Be cautious of products advertised as a miracle to lower your electric bill. Some space heater companies claim to produce more heat with the same amount of wattage as other space heaters, and others say they can lower your heating costs by 50 percent. There is usually a catch. Space heaters traditionally use a lot of power. Using one even on a low heat setting will negatively affect your bill.

Unfortunately, there is no miracle cure for home heating. You can make your home more energy efficient through things such as weatherization programs for insulation and windows, and smart thermostats that can be controlled from your phone or tablet.

Most utilities also provide energy-efficiency professionals to come to your home for free energy audits or high-use inquiries to help identify the high-energy-use items and behaviors. There are also various websites you may use, including your public power utility, for self-help energy evaluation.

Some of the frustration that comes with receiving a high bill might be a consumer's inability to pay due to a hardship or circumstance in their life. Please use your utility representatives as a resource for information and assistance. Most public power utilities have energy assistance programs to help consumers—Clatskanie PUD's is Share the Warmth.

Your utility representatives can also help you understand your monthly use history, protect you from scams and set up payment arrangements, if needed.

Your public power utility is there for you. It is a positive community partner and advocate for your efficient electrical use. Take advantage of all the resources your utility has to offer. When you receive a larger-than-expected electric bill, take a moment to think about all the things that were powered by that electricity a month ago. You may have received way more value in services than you realized. ■

# Energy Choice Initiative Defeated

*Majority of Nevada voters reverse 2016 decision to amend state constitution*



**Dave Lutrell** is general manager at Lincoln County Power District No. 1 in Pioche, Nevada.

Choice. Everyone wants it. So why would it not be a good idea to be able to choose who you buy your electric energy from?

That was the question recently asked of Nevada voters. In 2016, a few large businesses developed a proposition and funded a campaign to create energy choice through a ballot initiative that would have amended the Nevada Constitution. The explanation that accompanied the initiative suggested competition would result in lower rates. The ballot question passed by a large margin in the 2016 general election. Fortunately in Nevada, propositions to amend the constitution must be approved twice by the electorate.

Energy choice, sometimes called retail choice, is not a new concept. It was a popular idea in the late 1990s. Fourteen states actually restructured their electric utility sectors to provide some version of complete or limited choice. States such as Nevada, California, Montana and others started down the path but pulled back when it became apparent that without proper structure and regulatory oversight, the new energy providers could take advantage of consumers

The reason a few businesses in Nevada pushed the concept again in 2016 was clear: In states that have some form of choice, large businesses that buy significant amounts of power can wield that purchasing power to negotiate lower rates. It also became clear that residential consumers and small businesses in those states usually don't benefit. In fact, data from the U.S. Energy Administration shows the average rate for residential consumers in states with choice are significantly higher than states with the traditional utility model.

Some states with choice are now considering returning to the traditional utility model. Massachusetts Attorney General Maura Healey recently asked for the end of the retail market in her state because of deceptive sales tactics, saying, "competitive supply has been a really bad deal for individual residential ratepayers."

Nationally, the number of people buying energy from retail energy providers has declined from the peak in 2014.

Outside of the metropolitan areas, most of Nevada is served by electric cooperatives, municipal utilities and power districts. These public power

utilities do not profit from the sale of energy. They were created by and for the people they serve. Decisions regarding energy supply and services offered are made locally by their elected boards.

The proposed constitutional amendment to mandate energy choice for all Nevadans could have prevented public power utilities from selling energy, limited local decision making, and ultimately increased rates for average consumers.

As the general manager of a public power utility in Nevada, I was embarrassed by the outcome of the 2016 vote. It was clear we had not done enough to communicate with our consumers and members about the real impact of energy choice. Using our statewide association as a point of coordination, most public power utilities in Nevada worked hard to educate their consumers and members. Hundreds of meetings were held with town boards, city councils, county commissions, social groups, church groups, service organizations, trade associations, business groups and farm bureaus.

The message was simple: By our very nature, public power provides choice through locally elected boards and offers lower rates than the national average from for-profit retail energy providers. From the feedback at these meetings, it was evident that many people we serve had forgotten what makes public power utilities different and special.

Through educational efforts by public power utilities and many others, the November 6, 2018, general election in Nevada was a complete reversal of the previous results. Sixty-seven percent of the electorate voted against the energy choice initiative. Areas served by public power utilities saw as high as 91 percent voting against the proposition. These results were an affirmation of the value of public power.

Many have watched the events unfold in Nevada these past few years and wondered if a resurgence of 1990s retail choice wave was going to sweep the nation again. We hope the 2018 outcome in Nevada has derailed the movement. But, as with so many things, it is likely to resurface in a state near you. By definition, Ruralite readers are served by a public power utility. When someone proposes retail choice again, get the facts, which show that it does not deliver on its promises for areas served by public power. ■

## Committed to Their Communities

*Publicly owned utilities are invested in improving the lives of those they serve*

Compiled by Pam Blair

In big ways and small, the public power family makes a difference in local communities. Your electric utility and the employees who work there have a stake in the community because they live there, too. Here are just a few of the ways member-owned utilities contribute.

**Alaska Village Electric Cooperative, Anchorage, Alaska.** AVEC provides grave-drilling services in Bethel and reflective trail markers to show dangerous areas to avoid.

**Barrow Utilities and Electric Cooperative Inc., Barrow, Alaska.** BUECI donates \$70,000 annually to support athletic, scholastic, cultural and safety activities. It sends high school students to the annual Idaho Consumer-Owned Utility Association Youth Rally for a week of leadership and utility education. The co-op's gas crew digs about 30 graves a year for community members. BUECI also sponsors local radio programming.

**Blachly-Lane Electric Cooperative, Junction City, Oregon.** Employees installed scoreboard posts and lights at Triangle Lake School; repaired a faulty underground cable at Junction City High School; installed lights and replaced poles at Elmira High School football and baseball stadiums; presented safety trailer demonstrations at Oaklea Middle and Territorial Elementary schools; and participate in a high school career fair.

**Central Electric Cooperative, Redmond, Oregon.** CEC and its employees support more than 50 organizations and causes, including childhood health and development, veterans' outreach and food banks. More than 1,000 people viewed the 66 high-voltage safety demonstrations held at the Deschutes County Fair. CEC awarded \$10,000 in continuing education scholarships and sponsored two Korean War veterans on Honor Flight.

**Clatskanie PUD, Clatskanie, Oregon.** Employees and board members donated \$3,800 to local food banks. The crew



Many electric co-ops—including Lane Electric—support 4-H and FFA youth livestock auctions.

Photo courtesy of Lane Electric

installs Christmas decorations in Clatskanie and Rainier. The PUD sponsors the Share the Warmth energy assistance fund to help customers in need.

**Columbia Basin Electric Cooperative, Heppner, Oregon.** CBEC donates to the Heppner Booster Club Auction Benefit Dinner, the Ione Education Foundation, the Condon Scholarship Foundation, local 4-H chapters and FFA clubs. Employees volunteer for the rural fire department, coach junior high football and high school softball, and serve on the cemetery board.

**Coos-Curry Electric Cooperative, Port Orford, Oregon.** CCEC plans and hosts a one-day camp for first- and second-graders covering bike and pedestrian safety, electrical safety, fire safety and how to call 911 in an emergency. Interoffice competitions help raise food and other items. The co-op decorates a tree for auction and donates proceeds to a charity. Employees watered plants and flowers in public spaces in Port Orford during the summer.

**Hood River Electric Cooperative, Odell, Oregon.** HREC donated funds to help



Linemen from Harney Electric based in Hines, Oregon, helped install a new sign for Crane schools.

Photo courtesy of Harney Electric



**AVEC donates to many community-wide spring cleanups every year, including this one in Andreafski, Alaska.**

Photo courtesy of Andreafski IGAP

Wy'east Middle School's seventh-grade First Lego League robotics team, "The Pink Fluffy Unicorns," travel to compete in the World Festival. Employees and directors donate funds and time to the Hood River County Fair, the FFA "Pass the Pig" fundraiser, Hood River Valley High School's Project Graduation, the Oregon Burn Center, the National Child Safety Program, Boy Scouts of America, Lions Follies and Pig Bowl—The Dalles.

**Lane Electric Cooperative, Eugene, Oregon.** LEC donated more than \$20,000 to local schools, athletic programs and other community events. It donated beef bought from the Lane County 4-H Livestock Auction to food banks.

**Lassen Municipal Utility District, Susanville, California.** LMUD hangs Blue Star banners along Main Street, provides high-voltage safety demonstrations to schools, and puts up Christmas decorations for Susanville and Westwood.

**Midstate Electric Cooperative, La Pine, Oregon.** Heritage Park received a make-over thanks to a \$10,000 grant from MEC's Operation Round Up program, in partnership with Mid Oregon Credit Union. The co-op donated more than \$45,000 to various community projects.

**Northern Lights Inc., Sagle, Idaho.** Through Operation Round-up, NLI's Community Trust funds local food banks, fire departments, schools and

community-based organizations. NLI sponsors blood drives every year.

**Parkland Light & Water Co., Tacoma, Washington.** Employees donate to Winterfest, a jacket and toy drive for children from families struggling to make ends meet. PL&W participates in Touch-a-Truck, where kids can get up close with big vehicles, and the Garfield Days Street Fair, providing utility awareness.

**Plumas-Sierra Rural Electric Cooperative, Portola, California.** PSREC sponsors youth and Christmas stocking programs for children. Employees buy, cook and serve food at community dinners; participate in Adopt-A-Highway cleanups; and host food, toy and coat drives.

**Surprise Valley Electrification, Alturas, California.** Employees donate food and prepare Christmas gift baskets for families in need. SVE donates staff time and equipment to put up decorations and community banners, replace lights and install playground equipment.

**Tanner Electric Cooperative, North Bend, Washington.** TEC offers five scholarships: three to graduating seniors, one to an accredited lineman college and one to NRECA's Youth Tour. Staff donates time and equipment to put up banners, replace lights, set up the town's Christmas tree, provide energy assistance through its round-up program, sponsor youth sports programs and present electrical



**During the holidays, Columbia Basin Electric Cooperative, based in Heppner, Oregon, participates in community light parades. In exchange for their help decorating floats, the cooperative contributes money to local youth groups.**

Photo courtesy of Columbia Basin Electric

safety awareness programs.

**Tillamook PUD, Tillamook, Oregon.** The PUD awarded \$75,000 in grants to nonprofits for economic development projects. Each year, employees and their family members assemble food and gift baskets for 18 families in need and donate \$1,500 to \$2,500 to a school district to help children in need.

**Umatilla Electric Cooperative, Hermiston, Oregon.** Employees serve on the Chamber of Commerce and donate turkeys to the annual Kat Country drive.

**Wasco Electric Cooperative, The Dalles, Oregon.** WEC buys 4-H animals at county fairs and annually provides community economic grants totaling \$7,500. ■

*You have a voice in the operation of your Cooperative*

Umatilla Electric is a member-owned and locally controlled cooperative. The Board of Directors makes business and policy decisions for the membership and sets the direction of UEC. To ensure strong local leadership, members elect directors, on a rotating basis, from each of seven districts.

## Director Terms Expiring

**Lee Docken**

District 1  
(Boardman area)

**Jeff Wenholz**

District 2  
(Irrigon Area)

## Timeline of Election

### October 2018

UEC's Board of Directors appoint nominating committees for the elections scheduled in April 2019.

### Jan. 1, 2019

Each nominating committee will recommend, no later than Jan. 1, candidates who are qualified to serve as a director for their district. (See details at right.)

### Jan. 31, 2019

Nominations for a director's position may be made by petition, if filed at the cooperative no later than Jan. 31, 2019. (See details at right.)

### April 20, 2019

In late March, ballots will be mailed to district members who are qualified to vote. Ballots must be returned by the UEC Annual Meeting on April 20, 2019, to be counted.

## Board of Directors Election Process Begins



## Who Qualifies to Run for Office?

Any person who meets the following qualifications is eligible to serve as a Director of Umatilla Electric Cooperative. To qualify, applicants must:

- Be a bona fide resident in Umatilla Electric's service territory and reside in the district he or she wishes to represent. While either party of a jointly held membership may serve as a director, the position cannot be shared by two people at the same time.
- Not be employed by, or financially interested in, a business selling energy or supplies to Umatilla Electric.
- Not the incumbent of, or a candidate for, an elected public office with a paid salary.

## Two Options to Qualify for the Ballot

### NOMINATIONS BY COMMITTEE

Each committee will recommend candidates who are qualified to serve as a director for their district. **Call UEC at 541-564-4388 if you wish to be considered by the committees.**

#### District 1

Doug Pope  
Mike Slankard  
[To Be Determined]

#### District 2

Don Eppenbaugh  
Bob Byrd  
Wes Wise

### NOMINATIONS BY PETITION

Nominations for a director's position may be made by petition if filed at the cooperative no later than Jan. 31, 2019. Petitions must include the candidate's name, voting district and required 25 valid signatures. **Call UEC at 541-564-4388 for further information and a blank petition form.**

## Questions?

If you have questions about the election process, please contact Katrina Ward at Umatilla Electric at 541-564-4388 for information.

# Scholarships Available

A black graduation cap with a gold tassel and a rolled-up diploma tied with a red ribbon are positioned to the left of the main title.

Umatilla Electric is offering the following scholarships for the 2019-2020 school year:

## ACADEMIC

Twelve \$2,500 scholarships are available for members of UEC and/or their dependent children who are enrolled or planning to enroll in a full-time graduate or undergraduate program at a two- or four-year college. Apply online at: [www.oregonstudentaid.gov](http://www.oregonstudentaid.gov).

## ELECTRICAL ENGINEERING

A \$5,000 scholarship is administered to a college student who has completed their freshman year and is interested in pursuing a degree in Electrical Engineering-Power Systems. Apply online at [www.oregonstudentaid.gov](http://www.oregonstudentaid.gov).

## LINEMAN TRADE

A \$2,500 scholarship is available to members and/or applicants whose parent or guardian is an active member, and are interested in the Line Construction trade and will be attending an accredited Line College. Go to: [UmatillaElectric.com](http://UmatillaElectric.com) to download the application.

**For more information visit our offices in Hermiston or Boardman or our website: [UmatillaElectric.com](http://UmatillaElectric.com).**

**You can also call us at 541-567-6414 or OSAC at 1-800-452-8807.**

## Apply Today! **Deadline is March 1, 2019**

A large group of graduates in green gowns and caps are celebrating at a graduation ceremony, with many caps being tossed into the air. The scene is set outdoors with trees in the background.

**UEC wants to help make college accessible to our young members. We hope you apply. For more information visit our offices in Hermiston or Boardman or our website: [UmatillaElectric.com](http://UmatillaElectric.com).**



## Frequently Asked Questions About Increased Winter Usage

Every year, when the first winter bills come out, we receive countless phone calls from unhappy members wanting to know why their bills are so high. Unless there has been a rate increase, which there hasn't, we have done nothing different. In many cases, the members have done nothing different, but Old Man Winter has a way of changing things. The key is to educate yourself on exactly how much energy your various appliances use. There are so many sources to help you do this, but in the meantime, here are a few answers that may help.

### Should the usage be this high when I wasn't even home?

Yes it could be... maybe even higher! Unless you turned your *water heater* off at the breakers, the two largest electric consumers you have could still be going 24 hours a day, 7 days a week. All other electronics and appliances pale in comparison to the wattage of your *furnace* or base board heat and your water heater. Consider this, if you heat with wood or pellets when you're home and turn your furnace on when you're away, your electric bill when you're gone could even be higher than it is when you're home! If you are gone more than two days at a time, you will save money by turning your water heater off at the breakers.

### I heat with wood and set my thermostat low so it shouldn't hardly come on at all, right?

When you consider we have had nights of freezing temperatures since the middle of last month, your heater is working much more often than you think. The wee hours of the morning is when the temperature is reaching its lowest, and your fire's dying down. Thank goodness for back-up heat, but it's definitely spinning your meter. Your electric furnace will make your meter spin faster than anything else you have in your home. Consider investing in a heat pump and make that meter spin half as fast!



### My thermostat has been set at 70 since July and I haven't touched it. There's no reason my usage should be higher.

This is a comment we receive every winter. Naturally, when it's 70 degrees or higher outside, there is no reason for any heat to come on. When it's 28 degrees outside, and the thermostat is set at 70, your heater will run until that indoor thermostat is satisfied. It has very little to do with what you're doing inside, and everything to do with what's going on outside.

### Are those portable space heaters pretty economical?

They can be. Instead of using a 15,000 watt furnace to heat the whole house, use a few 1,500 watt heaters to "zonally" heat only the rooms you live in. When shopping for a portable space heater, keep one thing in mind... Regardless of the cost or size and shape of the heater, the amount of heat you'll get from a watt of electricity is consistent. In other words, a particular 1,500 watt "miracle" heater will produce exactly the same amount of heat as any other 1,500 watt heater. So pay \$400 for the heater the celebrity gets paid to endorse, or pay \$40 at a local retail store and get the same amount of heat. Oh, and if the unit claims "Uses 1/3 less energy than the other heaters.", it's because it's only 1,000 watts. It's not a lie, they just aren't telling the whole story.

### What else can I do about my high usage?

Ask for help! We have tons of information in the office and online at [www.dec.coop](http://www.dec.coop) to help you determine where your usage is coming from and how you can control it. Our low electric rates are great, some of the lowest in the country, but that doesn't matter unless you are cutting out the waste, using your energy more efficiently and ultimately keeping your usage low.



[www.dec.coop](http://www.dec.coop)  
541•673•6616

# Winter Prep: Protect Your Home When You are Away

By Courtney Cobb

If you are heading south for the winter, there are several things you can do to protect your vacant home.

Regardless of the time of year, Central Electric Cooperative cannot guarantee your power will not be interrupted. This is especially so during winter due to storms' potential impacts on our system.

Even when service is restored in your neighborhood, a lingering issue with your individual service or a tripped circuit in your electrical panel could mean your power is out while everyone else is back in service.

These simple steps can help you protect your home:

- **Make sure someone periodically checks on your home.** Whether it's a neighbor, a friend or a hired company, it's always a good idea to have someone check your house frequently. They might spot small issues before they become big problems.

- **Protect your plumbing.** If you are not renting

your house, consider turning off the water. You can turn off the main water supply to your home and open all faucets to drain them. Leave at least one faucet open to allow air and excess water to drain. If you are unsure how to winterize your plumbing, a licensed plumber can help you.

- **Protect your water heater.** Turn off the water heater or lower the temperature to save money. If you have turned it off, consider emptying the tank. You can also protect the unit by insulating the water lines.

- **Keep the heat on.** Set the temperature to at least 55 degrees or higher to help prevent pipes from bursting or creating other temperature-related damage to your structure.

- **Have your heating system checked.** It is recommended you do this every year. Before you leave, have a licensed professional inspect and service your system.

- **Turn off and blow out sprinkler systems and outside faucets.** This will help

prevent them from freezing, and will save you money and headaches come spring.

- **Turn off your gas line.** This can help prevent a gas leak or other gas-related incidents.

- **Clean out your fridge and freezer.** We are all guilty of leaving things behind in refrigerators or freezers. However, if the power goes out and these appliances go days without power, the food will spoil. The best idea is to unplug the refrigerator and freezer, wipe them down and keep the doors open slightly to prevent mildew growth.

- **Close the fireplace flue.** This prevents critters such as squirrels and birds from entering your home.

- **Hire a snow removal service.** It is winter, and Central Oregon can see some high snowfall amounts. A local company can remove snow from your driveway and walkway.

## Smart Technology

Technology is rapidly changing the function of home appliances, from lighting to



window blinds to heating. Even when you are away, thanks to technology you can monitor or change your preferences via a computer or your smartphone. Here are some tools you could take advantage of with your vacation home:

- **Smart thermostats.** A



smart thermostat is a great tool for any vacation home. It can help you save energy, and you can auto-schedule your preferences. Many newer models also give you the ability to check and adjust temperatures from your cellphone.

- **Signup for CEC SmartHub.** SmartHub gives

members easy access to view and monitor daily use, as well as make payments or make changes to their account.

- **Smart water heaters.** There is a variety of models on the market that allow homeowners to control temperature settings, turn the unit on or off, program vacation

settings. Track consumption. Some systems have moisture sensors on the outside of the tank and will notify the homeowner if there is a leak.

Keeping tabs on your empty home is especially important during winter, but it is a good idea regardless of the time of year. ■

**Don't let winter weather needlessly increase your electric bill. Follow these tips to protect your home and reduce your energy use in the winter.**



Above, the Crow High School Band performs for veterans at Lane Electric. Below, almost 60 veterans joined the LEC board and staff for lunch; a flag greeted guests.

## Veterans Lunch Features High School Band

By Lindsey McCarthy

Lane Electric Cooperative hosted nearly 60 veterans at its second annual veterans lunch on November 8. The co-op acknowledged directors, employees and members who served in the armed forces.

Crow High School's nine-piece band performed the National Anthem and other patriotic music. Immediately after, the band departed for Washington, D.C., to play in the Parade of Heroes. Nominated for this honor by an anonymous veteran, the band was the only group selected from Oregon.

"Performing in the Parade of Heroes at our nation's capital is a tremendous honor, and we are taking the responsibility very seriously," says Band Director Pat Dixon, whose father was a veteran. "The Crow High School Band is very small but they play at the highest level, always elevating to the demands of the music."

The Crow community

helped raise more than \$15,000 for the band's trip.

"The fact that this opportunity is bringing some positive attention to a small school district and a small music program is truly remarkable," Pat says.

Lunch guests heard from Dr. John LeBow, founder of Veterans Legacy in Alma. The nonprofit provides integrated treatment to address medical and psychological needs of veterans, with an emphasis on therapeutic agriculture.

LEC Credit & Member Services Supervisor Julie Stephens envisioned the lunch last year after learning Veterans Legacy is in the co-op's service territory.

"Many of my family members are veterans, so it's important to me that we honor and recognize those in our community who have served our country," Julie says. "I'm thankful that Lane Electric has given us the opportunity to show our support through this event." ■



If you are a veteran and were not notified of this event, please contact us at 541-484-1151 so we can include you next year. Thank you.

## Goodbye Drop Box, Hello Kiosk!

Due to increasing safety concerns, Blachly-Lane said goodbye to its drop box. In its place is a payment kiosk near the front door of its headquarters.

The kiosk allows members to securely pay their bills around the clock, 365 days a year. The kiosk works much like an ATM, and accepts cash, check and credit card payments.

Your bills come with a bar code that contains your account information. The kiosk scans the code, making payments quick and easy. Simply follow the prompts, and you will be done in no time. To pay by check, insert your check in the scanner. The machine will read it, and the check will be returned to you.

The kiosk is not a drop box. Please don't drop your payment. You must follow the prompts for your payment to be credited to your account. Payments not placed in a designated payment slot will not be credited to a members account in a timely manner.

Our member service representatives are happy to help you with the kiosk during business hours, and say members are pleased with how simple the kiosk is to use.

The kiosk joins our many other ways to pay your electric bill. Choose a method that makes your life simple.

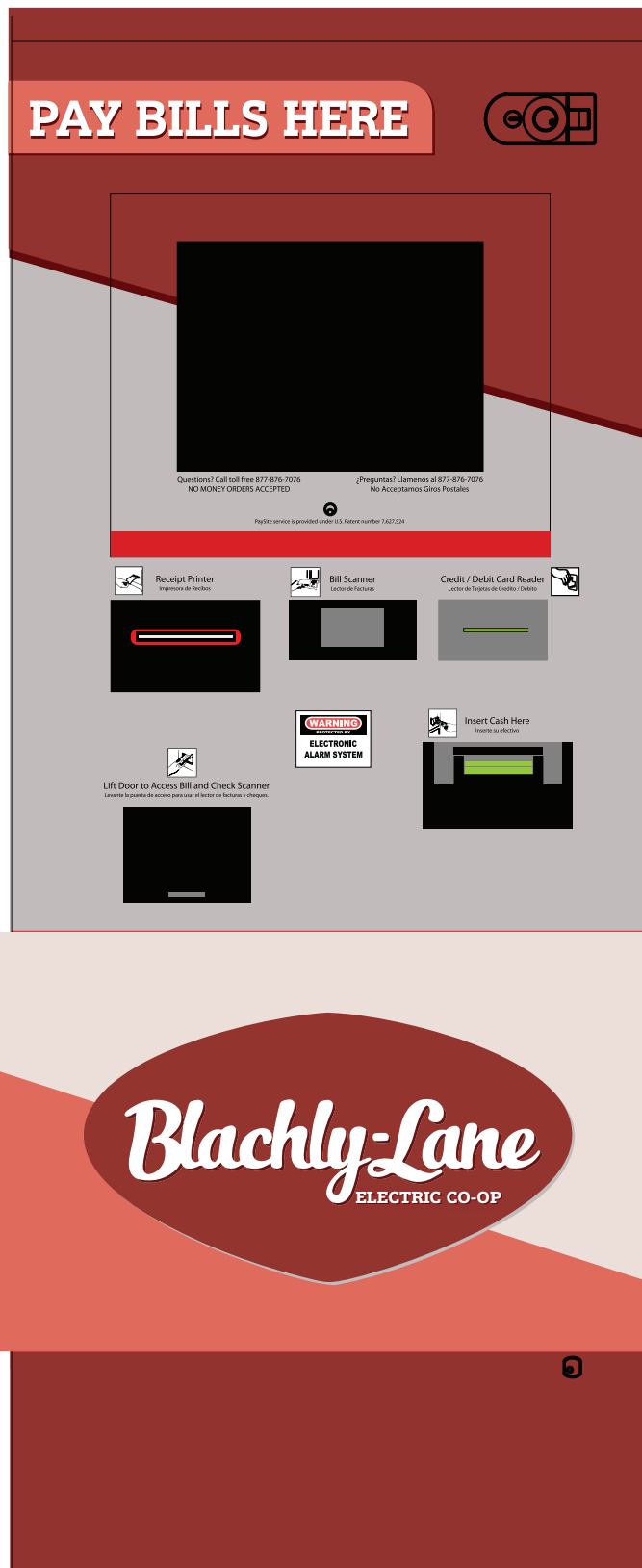
- **Pay by phone.** Call

1-844-209-7163. Members may pay by phone 24 hours a day, seven days a week. Have your Blachly-Lane account number ready when calling.

- **SmartHub online account management system.** Members can check energy use, manage accounts and securely pay bills from a computer or mobile device. Access SmartHub from the BLEC website homepage View & Pay Your Bill buttons or, if you prefer, download the SmartHub iOS app for iPhone or iPad or the SmartHub for Android app for Android devices.

- **Auto-Pay** automatically deducts your electric bill payment from your checking account, Visa or Mastercard debit or credit card on the 20th of each month. Sign up for Auto-Pay in one of three ways: Call our secure pay-by-phone line at 1-844-209-7163; log in to SmartHub; or use our Auto-Pay authorization form. Return the completed form to our office with your voided check. Please note, the Auto-Pay form is only for checking and savings accounts. Members who set up Auto-Pay with a Visa or Mastercard must use our secure pay-by-phone line at 1-844-209-7163 or SmartHub. ■

*The Auto-Pay program takes one billing cycle to begin the automatic payment process.*





Rain is most often associated with hydropower, but snowpack keeps hydro facilities going strong during dryer months.

Photo by Freepik

## Snowpack: From Powder to Power

When you think of electricity being generated from hydroelectric dams, you might first picture rushing rivers that spin giant turbines. The story actually begins on snowcapped mountains.

Hydropower is the conversion of flowing water into electricity. It is considered a renewable energy source, which means its fuel is replenished by nature—more specifically, the water cycle.

The water that drives the Northwest's hydroelectric generators comes from rain and snow farther upstream that falls within the Columbia River Basin, which is a vast area that begins in the Rocky Mountains of British Columbia and flows down through most of Washington, Oregon, Idaho and Western Montana.

Rain helps keep the rivers flowing in the winter and spring, but it is the melting snow that carries us through the dry summer months. The amount of snow that accumulates high in the mountains is called snowpack. It is vital to the energy needs of the Northwest and is highly variable from year to year.

Knowing how much water is held in

the snowpack any given year is critical to ensure enough fuel is available to meet the region's demands. Hydropower operators daily monitor the snowpack, temperature, precipitation, storms and droughts, as well as wind and solar energy outputs. This information helps them plan for near and long-term energy availability for the Northwest.

Monitoring snowpack and streamflow requires collaboration from multiple agencies and teams. The U.S. Department of Agriculture, Natural Resources Conservation Service and National Water and Climate Center monitor the snowpack at 300 mountain sites across Oregon and Washington. This data is available online in near real-time. The Bonneville Power Administration funds dozens of streamflow gages to help monitor river levels, and several temperature and precipitation sensors in remote locations where snowpack is particularly important for hydropower generation.

Snowpack is monitored either by manually sampling the snow with an aluminum tube and weighing it or by

automated remote stations equipped with a device called a snow pillow. A snow pillow looks like a trampoline hooked up to sensors to weigh the snow. The automated stations also measure other weather conditions such as temperature, wind speed, relative humidity and precipitation.

Forecasting the volume of streamflow from snowpack levels is critical and challenging. Not only does the depth of the snowpack vary year to year, the rate at which it melts fluctuates. Warming winter temperatures mean more precipitation will fall as rain instead of snow, making the snowpack and streamflow more variable from year to year.

Summer flows depend on water in storage reservoirs. Following dry winters with little snowpack, it may be difficult to refill the reservoirs, and there may not always be enough water to meet all demands on the system. The region's hydropower operators work together to make the best use of storage reservoirs and maximize the power output to maintain reliability across the Northwest. ■

## Capital Credits Represent Co-op Ownership

*Refunds totalling \$9.3 million were issued before the Holidays*

By the end of November, GVEA returned \$9.3 million in capital credits to members who had service with the cooperative in 1993 (and earlier) and/or 2017. These funds, known as capital credits, were returned to GVEA members based on their electric service purchases.

One of the cooperative advantages is that GVEA provides its members with “at cost” service. Other utilities, such as investor-owned utilities, maximize their profits from their customers to pay dividends to their stockholders. At GVEA, there is no stock purchased or sold—our members are the owners of the business.

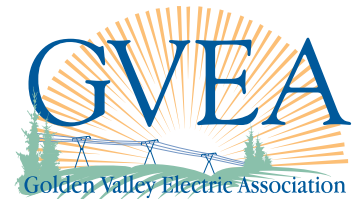
Because GVEA is a not-for-profit cooperative, any margins at the end of the year are allocated to members. These are called capital credits.

While the credits are assigned to members each year, they are retained by the co-op for a period of 25 years. During this period, the capital credits are reinvested in the system for projects and maintenance such as building substations or replacing power poles or lines.

Retirement of capital credits is not automatic. GVEA’s Board of Directors must specifically authorize each retirement after considering the financial impact to the co-op. When capital credits are retired, GVEA issues a refund to you.

Members whose refunds were greater than \$100 received a check. Members with refunds of less than \$100 saw a credit adjustment on their November bills. Former members will receive checks if balances exceed \$25.

For more information about capital credits and a list of frequently asked questions, visit GVEA’s website: [www.gvea.com/resources/capitalcredits](http://www.gvea.com/resources/capitalcredits). ■



452-1151 • 1-800-770-GVEA • [www.gvea.com](http://www.gvea.com)





*Recognition and respect still hard to come by for Shoshone*

**For more than 70 years, Pauline Esteves has worked to get the Timbisha Shoshone homeland recognized as sovereign nation.**

Photos by Jeff Scheid

## The Long Struggle for Death Valley's Sacred Lands

By John M. Glionna

Pauline Esteves recalls growing up in the sacred place known as Death Valley. Her father was a hardworking stonemason, and she took after him.

The three dozen Timbisha Shoshone tribal members lived in a rough-hewn community they called The Village. Life was good, people took care of their own on land their ancestors had claimed eons ago.

Then the outsiders came.

In 1933, President Franklin Roosevelt established Death Valley National Monument in the heart of the Timbisha Shoshone homeland, showing aside the region's original inhabitants, along with their historic status and beliefs.

Today, the white-haired Esteves is 93 and lives in a government-issued mobile



**The relationship between the federal government and the tribe is still evolving.**

home not far from the park's Furnace Creek Visitor Center. On a warm autumn day, she sits beneath paintings of two soaring eagles and talks about the fretful past.

The residents here call her Grandmother.

Sometimes, Esteves gets tired just thinking about the seven decades of protest and hardship that it took her and others to convince the U.S. Government to heed the tribe's claims to be recognized as a sovereign nation and have a say over their land.

There are battles still to be fought, but the Timbisha Shoshone now have 314 acres here to call their own, land albeit located right in the middle of one of the most popular federal parks in America.

Often, it feels like a fish-bowl life.

Tourists have driven into the village without regard for privacy, wielding their cameras, pitching their tents. "It upset us," Esteves recalls. "This is our homeland. We didn't want tourists lurking in the background, taking pictures of us."

When the outsiders first arrived, Esteves says, the hordes jostled to peer into the Ubehebe Crater, a large volcanic impression 600 feet deep and a half-mile across, not knowing that the landscape played an integral role in the Timbisha Shoshone's creation story. The native god Coyote brought the people here and while he put down his basket and slept, the people crept out and spread around Death Valley.

But none of the tourists cared about that, until Esteves stepped up.

"As our leader, Pauline had to educate outsiders as to who we were and how we wanted to be treated," says Barbara Durham, the Tribal Historic Preservation Officer. "It was a never-ending job."

Park Service people were

a greater concern. They all wore uniforms, which tribal elders had always warned to be wary of, after unsavory experiences with the U.S. Army. The elders were afraid to confront the uniforms, largely because of their poor English skills.

The children were told to stay out of their way, but that proved impossible, because the people wearing the uniforms had an agenda.

“They restricted us from going to places we considered sacred. We weren’t allowed to pick up rocks,” Esteves says. “They moved us from place to place, and every time we got comfortable they made us move again, because they had plans for the land.”

It soon became clear that tribal members weren’t welcome on their own land.

“They wanted to keep us hidden, tucked away,” Durham says. “They didn’t want us to be seen by the tourists. They called us eyesores, sad-looking people.”

Eventually, the Timbisha Shoshone claimed a hard-won victory.

In 2000, President Bill Clinton signed the Timbisha Shoshone Homeland Act, which ended seven decades of tribal dispossession – offering the tribe a land base, a legal stake and co-management rights to the land they had always worshipped.

To celebrate, the tribe held a party inside Timbisha Village, where a handmade stone tomahawk and arrows were given to outsiders who assisted in the fight.

Esteves was there that day,



**“We’ve got to work for the future, not just today,” says Pauline.**

little knowing that it would take another six years to convince the park service to abide by the new law.

Nearly two decades later, U.S. park officials acknowledge that their relationship with the tribe is still evolving. “They definitely were here first,” says spokeswoman Abby Wines. “At this point, the parks staff is very proud of our relationship with the tribe.”

But she admits that wrongs were committed in the past.

“When the park was formed, many expected that the people who lived here would move out,” Wines recalls. “It was like ‘Hey, this place is too special for you to live here.’ It was in context of what went on at many other national parks.”

Even with some victories behind her, Esteves still is not letting her guard down.

“I have heard that there are still some old hardliners within the park service who believe we should be here,” she says. “But the new people are working with us.”

Now, Esteves and the handful of Timbisha Shoshone who remain in the park are looking to the future. They have taken a political stand against the creation of the Yucca Mountain waste repository, believing the nuclear fallout would pollute the groundwater and ruin their homeland.

But there are other, more immediate, battles.

Esteves worries that tribal language and culture is dying and for years has taught classes in the Timbisha Shoshone tongue as well as cultural practices such as basket weaving. She would also like to replace the boxy manufactured units used by most of

the tribe with more traditional adobe housing.

These days, tribal members meet once a month with park officials to push their agendas in the joint cooperative management agreements. They would like to see more traditional native customs used in such areas as park cleanup and caring for Death Valley’s mature piñon trees.

“I was taught that what has happened in the past has happened, good or bad,” Esteves says. “We’ve got to work for the future, not just for today. Our young people need to step forward.”

But as long as she’s still around, Pauline Esteves also still wants a say as to what happens to her Timbisha Shoshone tribe.

“We have to remain active,” she says. “It’s our responsibility not only to our elders, but to the land itself.” ■

# Winter Takes its Toll on Utility Workers

By Michael Rovito

The icy grip of winter comes on fast and stays long in the 49th state. Hardy Alaskans endure it all—from subzero temperatures to foot upon foot of snow, to long periods of darkness. While those who live outside the state might bristle at the extreme nature of Alaska’s winters, residents of The Last Frontier generally see it as another unique aspect of living here.

Behind the scenes, Alaska’s electric utilities work to ensure reliable power is delivered to customers so they can stay warm, keep the lights on and carry on with their lives regardless of the weather outside. And while the Lower 48 can have its own weather challenges, Alaska’s weather extremes are unique, in part because of their regularity.

This is true in the 56 communities that get their power from Alaska Village Electric Cooperative. The co-op, which has the largest retail service area in the world, contains some of the most winter-impacted communities in the state—all except one are off the road system. But that does not keep AVEC from making sure its customers have power.

AVEC Public Relations Officer Amy Murphy has detailed the hardships of co-op workers in past issues of Ruralite. Tales of 60-below-zero temperatures, even worse wind chills and snow drifts to the roofs of houses make for chilling reading. The harrowing tales coming from those who work in the field might make readers appreciate their fireplace and furnace even more.

“It’s not uncommon for our employees to get a call about problems with a residential service and they end up walking or riding over the snow-covered home while looking for their service entrance,” Amy says.

From digging out a power plant entrance, to hauling gear on a sled by hand to a worksite, AVEC employees always have to keep the weather conditions in the back of their mind while the job at hand is in front of them.

The word cold is synonymous with most places in Alaska, and for those residents at the top of the state, it’s a way of life nearly year-round. That is why Barrow Utilities and Electric Cooperative General Manager Ben Frantz has to remain vigilant to how the temperature affects his system.

To prepare for the onslaught of a North Slope winter, Ben’s utility tries to complete necessary maintenance work before extreme cold makes it uncomfortable—and possibly dangerous—to do so.

“We try to have all our turbine generator change-outs done,” Ben says, describing one of many routine tasks, along with gear timing and other mechanical jobs, that take place pre-winter.

Of course, safety also is a concern during winter, most notably for slips and falls on icy surfaces. But these factors do not



Jud Billing digs out the entrance at AVEC’s power plant in Hooper Bay after a storm.

mean winter is all bad for a utility like Barrow. In fact, the colder temperatures can prove advantageous for utility work.

“When the ground freezes deep, it’s more beneficial when we have to address breaks or leaks because it provides a more solid work area,” Ben says.

The ground in most parts of Alaska begins freezing in October and does not usually thaw until May—or later. And while the frozen ground can be beneficial for some utility activities, it puts a sever damper on others.

At Copper Valley Electric Association, Travis Million, the manager of power generation, spends a lot of time just before freeze-up ensuring as much work as possible is complete.

“We work hard to complete projects and new service/extension requests before the ground freezes,” Travis says. “This time of year always has a rush on wrapping up projects. Typically, once the ground freezes, projects are put on hold until the ground thaws again. It becomes much too difficult and time consuming to try and dig up the frozen ground.”

Travis says much of the summer work performed on the distribution and transmission lines is largely in preparation for the next winter. Activities such as dealing with bothersome trees or other impediments in the right of way are important pre-winter tasks that make a utility worker’s winter job a lot easier.

Alaskans are a hardy bunch, and winter is a way of life. Years of practice have helped utilities adapt to the struggles of a long, cold winter, and utility customers benefit from this.

The life of a utility employee—be they a lineman, maintenance worker or administrator—takes on new challenges in winter. To customers it may seem like a yeoman’s struggle to keep the lights on, but ask someone from a utility and they will say it is just another day at the office. ■

## Use Energy Wisely

# Gift-Giving Ideas to Help the Environment

*As you celebrate the holiday season, consider how your presents could benefit the world by creating less trash and using less electricity*



Baked goods are green gifts that will be consumed, leaving little trash behind.

Holiday gift-giving is heart-warming, full of surprises and fun. It also creates 1 million tons of waste between Thanksgiving and New Year's.

Why not consider giving presents that use less energy and create less trash? Here are a few suggestions:

- Give energy-efficient small appliances for the kitchen or grooming.
- Stuff stockings with compact fluorescent or LED bulbs.
- Look for clothes and products made from recycled materials.
- Bestow blankets, sweaters or scarves that help hold down heating costs.
- Create a handmade gift, such as a basket of baked goods or fruit, a collection of your family's favorite recipes, a DVD of family members sharing their favorite stories, or a wreath strung with holly and pine cones.
- Buy something you know the recipient will use: tickets to a ballgame or concert, a gift certificate to a restaurant or grocery/retail store, or a membership to a health club.

As you celebrate the season of joy and giving, give and use wisely. Who knows how far the benefits will spread? ■

## Two Ways to 'Green' Your Holiday Gift List

Even if you are dreaming of a white Christmas, you still can help everyone on your gift list enjoy a green holiday. Chances are you will buy electronic gifts for at least some of your friends and family members this season. Do them and the environment a favor by choosing energy-efficient and eco-friendly models. Here are two ways to "green" your holiday gift list:

- ▶ Buy electronic products that come with the Energy Star label. The label means the item is more energy efficient than typical models. Replacing an inefficient old gadget with an energy-saving alternative can save more than 25 billion pounds of greenhouse gas emissions and save your friends money on their electric bills.
- ▶ The Design for the Environment label will help you choose gifts that are safer both for the recipient and the environment. Products sporting the DfE label are made with fewer harmful chemicals. Consumers who chose DfE-labeled products last year cut the use of those chemicals by more than 750 million pounds.



**Interested in avoiding most deposits and fees, monitoring and self-managing your electricity consumption, and buying energy when it fits your budget? Consider EREC's PrePaid Electric Service. Call (850) 675-4521 for more information or to sign up.**

## A Word About Water

# Conservation Applies in Winter, Too

*Simple tips will help you use less water and energy—and save money*

You might think of water conservation as a concern most relevant during summer, when you water lawns, fill swimming pools, wash cars and irrigate crops.

While your water use may spike during warmer months, those seasonal activities are not the biggest consumers of water in an average American household.

Everyday activities account for most of the water an average household uses.

Consider these year-round facts from the U.S. Geological Survey, as reported on the TXU Energy website:

- Flushing the toilet uses 1.2 to 1.6 gallons a flush for newer toilets, and 3 gallons for older styles, making the toilet the top way Americans use water.
- Washing a single load of clothes uses about 25 gallons of water if you have a newer machine and 40 gallons if your machine is older.
- Washing your hands or face and shaving your legs takes about 1 gallon of water for each activity.
- Brushing your teeth uses less than

1 gallon, but only if you turn off the tap while you brush.

- Washing dishes by hand takes 4 gallons a minute. By machine, it is about 20 gallons a load.

Many of those activities—washing your hands, dishes and clothes, for example—also require electricity to heat the water.

Conserving water and conserving energy go hand in hand.

Here are easy actions you can take to conserve water and energy this winter:

- Use an online water-use calculator to see how much water your family uses.
- Use less hot water. Heating water can account for about a quarter of the electric bill for homes with electric water heaters. Wash clothes in cold water when possible. Use cold water to brush your teeth, and warm water with soap for hand washing. Turn off the tap while brushing.
- Use your dishwasher, rather than washing by hand. If you spend just 10 minutes washing dishes by hand, you will use 40 gallons of hot water. Running the dishwasher uses half that amount.
- Install low-flow showerheads. Showering accounts for nearly 17 percent of residential indoor water use—up to 40 gallons a day for an average family. Switching to a low-flow showerhead could save you 2,900 gallons of water a year and the energy needed to heat it.
- If you are remodeling, upgrade old toilets to modern low-flush toilets. If you are not in a position to replace older toilets, improve their efficiency with a simple—and old—trick. Place a brick in the tank. The brick displaces about half a gallon of water, reducing the amount needed per flush with minimal—if any—effect on the toilet's flushing power.

Conserving water and energy is good for the environment and your wallet any time of year. Simple steps can help your family do both, regardless of the season. ■



**Conserve water by using your dishwasher rather than handwashing dishes.**

Photo courtesy of U.S. Department of Agriculture

## Keep It Safe

# Invite Safety Home for the Holidays

*Before visitors arrive, take time to properly prepare*

It is easy to get caught up in the hectic pace of holiday entertaining: cookies to bake, decorations to hang, presents to wrap. But don't overlook safety during the rush. The winter holiday period marks peak time for home fires and preventable injuries.

The good news: It is not difficult to make your home ready to safely host all of your favorite holiday activities. The Electrical Safety Foundation International recommends these tips:

- Take time out from your party

preparations to test your smoke and carbon monoxide alarms. They should be installed on every level of the home and outside each sleeping area. Smoke alarms also should be located inside each bedroom.

- Discuss your family fire escape plan with overnight guests.

- Arrange your holiday decorations to avoid overloading electrical outlets with too many lights, cords or appliances. Inspect all decorations, cords and outlets for damage before use. Keep electrical cords out of doorways and high-traffic areas where they pose a tripping hazard. Do not damage cords by pinching them or attaching them with staples or nails.

- Keep young visitors safe by preparing your home before they arrive. If your home is not already childproof, install tamper-resistant receptacles or use safety covers on all unused electrical outlets. Put away small items, such as buttons, coins and jewelry, which are choking hazards. Store breakables, candles, matches and other potentially dangerous items in inaccessible or locked areas out of reach. Use safety gates at the top and bottom of stairs to keep babies and toddlers safe.

- Safety does not stop when the party starts. Keep decorations, gifts and other combustibles at least 3 feet from heat sources or open flame.

- Never leave the kitchen when something is cooking.

- Make sure children are supervised at all times in the kitchen and anywhere space heaters, candles or fireplaces are being used.

- Turn off and unplug all decorations before leaving home or turning in for the night.

Remember that a safe and happy holiday remains the best gift you can give friends and family. ■



Keep Christmas merry by making sure your home is childproof before young visitors arrive.

## Home Automation Gives Consumers Control

By Derrill Holly

Home automation systems are placing the power of control in the hands of cooperative members, but many questions remain about the best ways to use them to save money and energy.

“Most smart home technology is about comfort and convenience,” says Brian Sloboda, program and product line manager for the National Rural Electric Cooperative Association. “Consumers interested in saving money on monthly energy purchases should look at internet-connected thermostats first.

“Around half of all thermostats sold today are smart thermostats. These devices can learn your preferences and adjust the thermostat when you are not home. These devices have the potential to reduce air conditioning energy consumption by 10 percent. During winter months, the thermostats could

save 7 percent on energy used to heat the home.”

Brian has watched home automation systems evolve. He is particularly interested in identifying ways to enhance efficiency and potential savings for co-op members.

“Laundry, dishwashing and water heating can be set to occur outside of your co-op’s peak demand periods, which typically are during weekday business hours,” says Brian.

NRECA is working with one of the Department of Energy’s national laboratories on a demonstration project examining energy-saving options that could time shift some activities, but actual cost savings for the consumer is likely to be limited, Brian says.

“Pool pumps, dishwashers, thermostats and car chargers can learn their owners’ behavior and then communicate with the utility so the data can be used for demand response,” Brian explains. “The goal of the work by the

lab is to determine if a system like this can be implemented without inconveniencing the consumer, providing energy demand savings to the utility.”

### Finding Value in Energy Savings

Security system notifications and thermostat controls that adapt to home automation are among the most popular options. But some consumers are tackling other tasks in ways that could help them save or manage energy use.

“There are different kinds of smart when it comes to smart appliances and devices,” says Peter May-Ostendorf, an energy technology consultant to NRECA and principal researcher at Xergy Consulting, which specializes in emerging technologies for energy savings in buildings, including homes. “For some, smart simply means ‘we connected this thing to the network,’ which adds minimal value to the consumer. In other products, smart means there is some intelligence either built into the product or connected via the cloud that enables a taste of artificial intelligence.”

Not every product using artificial intelligence is designed to save energy. In many instances, energy use is secondary to convenience or connectivity features.

“Most smart devices have nothing to do with energy use, grid management or other resource conservation, like saving water,” says Peter. “Generally, the benefits—dollar

savings to the consumer—have not been proven, with the exception of smart thermostats, grid-connected water heaters and similar devices.”

### Making Connections

According to the Environmental Protection Agency, interest in connected or smart appliances is trending upward among consumers. Manufacturers are responding with a growing list of products.

“If you are thinking of purchasing a smart appliance or thermostat, look for one that is Energy Star-certified with connected functionality,” EPA officials suggest. “Those that meet our criteria are designed to encourage interoperability and offer the following features: low energy use, energy use reporting and consumer ownership of all data.”

Besides smart thermostats, available products include room air conditioners, refrigerators and freezers, laundry equipment, lightbulbs and fixtures, and power strips.

“While owning a smart product doesn’t automatically save you energy, if you are smart about using them, they can make a significant difference in your home,” EPA officials say.

Making the investment pay off could require lifestyle changes. Dashboards accessible from computers or tablets, and apps available for smartphones can help.

“I don’t think many people want infinite control over dozens of appliances and



Today, more than **4,000 smart devices** are available to consumers.

A recent international survey asked people how they are using smart home assistants.

**65%** check weather and news, and play music  
**6%** control lighting, televisions and other appliances



# GET SMART ABOUT ENERGY SAVINGS

“Smart” devices and appliances save time and offer convenience – but not all save energy. The guide below shows how several trendy smart home technologies stack up when it comes to energy savings.

## Smart Energy Savers



- Thermostats
- Washing machines and dryers
- Dishwashers
- EV charging stations
- Pool pumps
- Air conditioners
- Light bulbs and fixtures
- Power strips



## Just Smart

- Virtual assistants (like Amazon’s Alexa or Apple HomeKit)
- Smart locks
- Smart alarms
- Smart video security cameras

systems in their homes,” says Spencer Sator, president and CEO of Crimson Consulting, another NRECA energy-efficiency adviser. “What we really want is ‘set it and forget it’ features that we don’t have to actively manage. The best

devices get installed, adjusted and the consumer can walk away and still potentially save some energy.”

Spencer says consumers are looking for simplicity, which is feeding the popularity of virtual assistant technologies,

such as Amazon’s Alexa and Echo, Google Assistant and Apple HomeKit. Other companies—including Samsung, Logitech and Wink—offer home-management hubs and platforms designed to help manage connected technology.

Convenience and programming simplicity are among the most important factors fueling consumer acceptance of what Spencer describes as “home ecosystem” products. Home security controls—including locks, alarm systems and lighting—are also popular features.

“We’re seeing adoption of the technology not necessarily for energy-saving reasons, but for life-enhancing applications, including some that help elderly consumers maintain independence in their homes,” says Spencer.

Energy advisers universally agree that controlling devices from various manufacturers that perform different functions with a single system enhances the value of home automation systems.

### Command and Control

The challenge for consumers: deciding which features meet their expectations and justify the added investment in automation, and how well various products work together under management of a particular hub device or app.

“This is still the Wild West, from a technology value perspective,” Spencer says. “When you consider available options and actual performance of the devices available, some gadgets perform well and can save

consumers money and energy, while others don’t measure up to the hype.”

With more than 900 manufacturers marketing about 4,100 connected devices, voice command technology is seen as one way to avoid collections of various remotes that typically wind up cast aside in favor of multifunction control devices.

“The Jetsons-like experience—where your Fitbit recognizes you’re awake, tells the coffee to brew, queues up your morning news on a smart speaker, ramps up the heating setpoint—isn’t really happening,” says Peter, of Exergy Consulting. “People have thought that Alexa or Google Home might be the answer, but do we all really want to talk to our home, Star Trek style, to accomplish basic tasks?”

Smart speaker technology is primarily used to answer questions, check the weather, get news updates or play music. According to a survey conducted in five major industrialized nations, including the United States, 65 percent of those asked cited those functions, while only 6 percent reported using the technology to control lighting, televisions or other connected devices.

“No one wants a hodgepodge of technologies that can’t communicate with each other,” Spencer says, adding that the necessary hubs and powered interfaces to connect the devices could actually boost overall energy use. “The technology isn’t very smart if devices can’t work together.” ■