For many folks, the use of solar panels to generate electricity is a recent technological development. When I think of photovoltaic (PV) solar panels, images of early NASA vehicles in outer space immediately come to mind. Indeed, America’s first permanent satellite, Explorer I, was powered by PV panels in 1958.

However, the use of solar energy dates back to 1767 when a Swiss scientist named Horace-Benedict de Saussure built an insulated, glass-faced box, generating temperatures of up to 230 degrees from sunlight. His invention was dubbed the “solar oven.”

Fast-forward to today, and nearly everyone is aware of solar. Yet, PV has remained one of the most expensive forms of electricity. People always ask why this is the case when the fuel is “free.” It’s because the equipment is expensive, and the sun doesn’t always shine. While equipment prices have dropped dramatically, the output of commercially available panels ranges from 5 to 19 percent (15 percent is common) of the theoretical limit, assuming there were never clouds and the sun was at high noon 24 hours a day.

So, is solar electricity right for you? The short answer is, “It depends.” How’s that for an ambiguous answer? But it truly does depend on a number of factors. The first thing you should consider is why you want to go solar. If it is for backup power in an emergency, stop here. PV systems are tied to the grid for safety reasons. When the power goes out, the PV array shuts down. If it is for environmental reasons, read on.

Your next step is to decide what makes the most sense for your home. Here are a few things you need to consider. A south-facing roof is typically the preferred direction for the placement of solar panels. Do trees shade the roof at any time? Next to darkness, shade is the natural enemy of solar panels. Is your roof structure capable of accepting the weight of the panels and any other load, say wind and snow? Are there any neighborhood or local regulations prohibiting solar panels?

Now to the nitty gritty. Grab your electric bills from the past year and see how many kilowatt hours (kWh) your home has used. The typical American home PV system produces 5 kWh per hour. How much of your home’s annual use can be covered?

Continued on page 2.
Is solar power right for you?

Continued from page 1.

Then comes the cost. The 5 kWh system has an average cost of $24,650 before any incentives. The most common incentive is a 30 percent tax credit from the Federal Government. Then there are savings in reduced energy use costs. Calculations have shown paybacks between seven and 15 years.

If the cost of the system is too steep, you might be able to sign a contract with a solar company who will install the system at no cost but take all the incentives and charge a monthly fee.

If you decide to talk to a contractor, be sure to check references. Increased interest in solar has spawned a large number of sellers who have little knowledge in PV installations. Let the buyer beware is the rule to obey here.

Tom Tate writes on cooperative issues for the National Rural Electric Cooperative Association, the Arlington, Va.-based service arm of the nation’s 900-plus consumer-owned, not-for-profit electric cooperatives.

The Oklahoma Association of Electric Cooperatives (OAEC) presented awards to two NWEC employees during its annual meeting held on April 13 in Oklahoma City. Mike Hagy, safety and loss control committee chair, presented Adam Parker (left) and Jacob Collier (right) with their Journeyman Lineman certificates.

March 2015 Operating Report

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<thead>
<tr>
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<th>2014</th>
<th>2015</th>
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<tbody>
<tr>
<td>Revenue - Billing</td>
<td>2,936,731</td>
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<td>Cost of Power</td>
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<td>Density per Mile</td>
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<td>Average Member KWH</td>
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Help manage your energy costs

In today’s technology-driven world, everything relies on electricity—computers, plasma televisions, DVD systems, cell phone chargers, laptops, video games. Consumers’ demand for electricity continues to increase while the supply of electricity is becoming more and more scarce. Energy efficiency can help head off the need for new generation and curb greenhouse gas emissions.

That’s why we’re asking our members to join the Peak Shaver program. The Peak Shaver program is an effort to help members become energy aware and lower their power bills by using energy more efficiently and by reducing the energy consumed during peak periods when prices are higher. The demand for electricity is greater in the hot summer months from June 20 to September 20 between 2:30-7:30 p.m.

To meet the demand for power needed at peak times, electric suppliers must produce the power themselves or purchase it on the market. Consequently, the costs are greater during peak time when demand is high. These higher costs are reflected in the power cost adjustment applied to the monthly bill for NWEC and its members.

Here’s how the program works. When NWEC determines a peak situation exists, participating members will be notified by phone message, e-mail or text message. Members will be asked to help conserve energy by turning off lights or appliances that are not needed. (491400001)

Participating members will also be asked to adjust their thermostats a few degrees, delay the use of major appliances such as ovens, dishwashers, washing machines, clothes dryers and postpone hot water usage during these peak hours.

Stop by our Woodward office at 2925 Williams Avenue and sign up to be a Peak Shaver. You can also visit our Website at www.nweckok.coop or call the member services department at 580.256.7425 to sign up today.

Using electricity wisely and controlling use during peak times will save money, maintain reliability and help the environment.

Four simple ways to be a Peak Shaver

► Turn your air conditioner thermostat up by three degrees between 2:30 and 7:30 p.m.
► Wait until after 7:30 p.m. to start the dishwasher, clothes washer or dryer.
► Use the outdoor grill for cooking instead of the broiler or oven in your stove.
► Minimize the use of hot water between the hours of 2:30-7:30 p.m.

Hidden account number contest

Last month’s hidden account numbers went unclaimed. They belonged to Ralph Ehrlich and Terry Peach.

For those of you who aren’t familiar with the contest, this is how it works. We have hidden two account numbers somewhere in the articles in this newsletter. The numbers will always be enclosed in parentheses and will look similar to this example (XXXXXX).

If you recognize your account number, all you have to do is give us a call on or before the 8th of the current month and we’ll give you a credit on your bill for the amount stated.

This month’s numbers are worth $50 each. Happy hunting!

Country cooking

Touchdown Taco Dip

1 (16 ounce) container sour cream
1 (8 ounce) package shredded Cheddar cheese
1 (4 ounce) can chopped green chilies
1/2 (4 ounce) can chopped black olives, drained
1 (1 ounce) package taco seasoning

Place the sour cream, Cheddar cheese, chopped green chilies, black olives, and taco seasoning into a bowl, and stir to combine.

Serve with your favorite tortilla chips.

Yield: 10 servings
Stay connected by updating your contact information

In the utility business, we know rough weather will occur, and sometimes power outages simply can’t be avoided. But did you know there are steps you can take to ensure your electricity is restored as quickly and safely as possible? By keeping your contact information up to date, you can take full advantage of the services Northwestern Electric offers.

To report an outage, you can use our outage texting service, smart phone app, website or call us. No matter which method you choose, we use the phone number you provide to link your service address to our outage management system. Our automated system recognizes your phone number and can determine the particular service address from which you are reporting an outage.

But remember—this only works if your current phone number is linked to your address. Please take a moment to fill out the form and return to us to make sure you’re up to date. Help us keep you connected.

Powering safely with generators during an outage

One of the great things about the modern American electric grid is that power almost always flows when we need it. Given our dependence on electricity, it’s understandable why portable generators are popular when the power goes out and stays out for a while.

But generators can cause more harm than good if not used properly. We want to give you a few safety tips to protect yourself and our linemen who are working to restore your power.

First, never, ever plug a portable generator directly into one of your home’s outlets—unless you have had a double throw switch installed at your home. If you don’t have a double throw switch, power provided by the generator can backfeed along power lines, which can electrocute a lineman working on those lines.

In addition, portable generators create carbon monoxide, the odorless, colorless gas that can quickly be deadly if the generator isn’t exhausted outside. Attached garages with an open door don’t count—the carbon monoxide can still seep indoors and poison inhabitants. Generators must go outside in a dry area, which might mean you’ll need to rig a canopy to protect it from precipitation at a safe distance from your home’s windows, doors, and vents. How far is a safe distance? Even 15 feet can be too close.

Make sure you plug appliances directly into the generator using heavy-duty, outdoor-rated extension cords, but don’t overload it. Follow the manufacturer’s instructions for maximum load. Shut off the generator before refueling, or a fire could start—and it’s a good idea to have a fully charged fire extinguisher nearby, just in case.

Another thing to keep in mind is making sure you have a properly sized generator to handle your power generation needs during an outage. While there is no substitute for having a certified electrician perform an inspection and calculate everything for you, Northwestern Electric has a brochure that can help you get started in the right direction.

Safety is a top priority at Northwestern Electric for our employees and members alike. Contact us at 580.256.7425 or 800.375.7423 if you’d like to learn more about how to properly size, install and use a portable generator. (3983001)