



HOMEPAGE

www.enerstar.com | A monthly newsletter for co-op members of EnerStar Electric Cooperative

What do the Declaration of Independence and electric cooperatives

When Benjamin Franklin signed the Declaration of Independence, he is credited with saying, “We must, indeed, all hang together, or most assuredly we shall all hang separately.” That recognition of the need to work together may also be why Franklin, in 1752, founded the first successful cooperative in the United States, the Philadelphia Contributionship for the Insurance of Houses from Loss by Fire, which still operates today.

The principles behind the Declaration of Independence that form the basis of American democracy also form the basis of cooperatives. A cooperative is owned and democratically controlled by the people who use its services. Each member has one vote regardless of their stake; that is, some members can not buy more control than anyone else. This stands in stark contrast to investor-owned businesses where only shareholders have a vote in how the business is run; and even among shareholders, some have more votes than others depending on their shares of stock.

The Declaration of Independence declared the equality of rights of its citizens and that people had the right to organize to secure their futures when their rights were



infringed upon. At the time the Declaration was written, democracy was a pretty untested idea – but the founders of our country were determined to make it work.

So when you celebrate the many liberties and rights we enjoy with our families and friends this year, think about those principles that inspired our Founding Fathers. They also inspired the pioneers who established electric cooperatives – folks who were determined to

provide safe, reliable, and affordable power to secure the futures of rural communities.

EnerStar Electric Cooperative has always operated under the principles of democracy, and we are dedicated to fulfilling that promise as we serve members today and in the future.

Source: U.S. National Archives & Records Administration

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Serving the Illinois counties of Edgar, Clark, Vermilion, Douglas and Coles.

Is solar power right for you?

For many folks, the use of solar panels to generate electricity is a recent technological development.

But the use of solar energy actually 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 reasons¹. When the power goes out, the PV array shuts down. If it is for environmental reasons, read on.

Your next step is to contact EnerStar’s Tim Haddix to discuss your plan. He can help you decide what makes the most sense for your home. A south-facing roof is typically the preferred direction for the placement of solar panels² although units mounted on the ground are gaining in popularity. 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. EnerStar can assist with this task. The typical American home PV system produces 5 kWh per hour. How much of your home’s annual use can be covered?

Then comes the cost. The 5 kWh system has an average cost over \$20,000 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 and the potential benefit of any electricity sold back to EnerStar. Calculations have shown paybacks between seven and 15 years.

If you want more information, call Haddix at 800-6335-4145, extension 117 or via email at thaddix@enerstar.com.



Will Solar Panels Work for You?

- Solar panels work best when your roof faces south.
- If your roof receives a fair amount of shade, solar panels are not a good option for renewable energy.
- Your roof must be able to support the weight of solar panels, plus the weight of other loads, such as wind and snow.

There are many factors to consider before installing solar panels on your roof, so talk to the energy experts at your local electric co-op first.

America's Electric Cooperatives

¹ To provide power during an outage you need batteries to store the electricity, plus advanced controls that will safely allow your system to island or supply power only to your home. Such systems are usually equal to the cost of the PV system itself.

² Recent research is showing western facing roofs might be better choices for generation during peak demand hours. <http://costofsolar.com/best-direction-to-face-solar-panels-south-or-west/>

Invest in efficiency and watch your savings grow

It is the middle of the summer, temperatures are rising and so are your electric bills. It might be time to make a big investment, an investment in energy efficiency.

Making your home more energy efficient is still one of the safest investments you can make. Try employing these energy saving measures to collect major returns on your investments:

- Install a programmable thermostat
- Install a hot water heater “blanket”
- Change your shower heads
- Upgrade appliances like your clothes washer or your refrigerator
- Replace old windows with energy efficient ones
- Install water efficient toilets

Making all of these changes at once could be difficult – if not impossible – but investing in just one of these measures can yield a significant return on your investment.

For example, installing a new, energy efficient clothes washer can yield around a 24 percent return on investment. Do your research, and make sure you are purchasing the right size appliances. A small, energy efficient washer will save you money, but if you have a larger family, having to do multiple loads could negate your energy savings.

Multiple energy efficient upgrades will help you save no matter where you live or what time of year it is, but upgrading to efficient home cooling systems will help lower energy costs significantly during the hotter months of the year.

Six percent of American energy

consumption goes toward space cooling and it costs \$11 billion per year for homeowners to power their air conditioners. You can reduce your energy use by 20 to 50 percent when you upgrade to energy efficient home cooling unit. One option is to install a split unit air conditioner and heating unit –they can be more expensive, but they are highly efficient, especially in homes without ductwork. Another option is to invest in an ENERGY STAR approved air conditioning unit, which can be 15 percent more efficient than a standard unit.

If buying a new cooling unit isn’t in the cards for you this summer, no need to worry! Replacing appliances isn’t the only way to lower energy costs, one of the most important energy efficient improvements to make during the hot summer months is air sealing and insulating. By adding insulation in attics, floors over crawl spaces and accessible basement rim joints, you can reduce your heating and cooling costs by an average of 15 percent (and it could lower your overall energy costs by an average of 11 percent!).

You can also lower your air conditioners energy consumption by between 5 and 15 percent by cleaning your air ducts. You can install energy efficient window treatments, which can reduce energy costs by around 10 percent. Or, you can simply turn on a ceiling fan, which will allow you to raise your thermostat temperature by four degrees, without impacting your comfort.

Investing in any of these energy efficient improvements will keep you cool in the summer, warm in the winter and will make significant changes to your energy bills. So do yourself, and your wallet, a favor and invest in a more energy efficient home!

Sources: Energy.gov, EnergyStar.gov, NRDC.gov

home COOLING

A few facts about home COOLING

6% The percentage of the average household's energy use that goes to space cooling.

20% → 50% You can reduce air conditioning energy use by 20-50% by switching to high-efficiency air conditioners and taking other actions to lower your home cooling costs.

2/3 of all U.S. homes have air conditioners.

\$11 BILLION The amount it costs homeowners every year to power their air conditioners.

Energy Efficiency Tip of the Month

By cleaning your air conditioner's air ducts, you can lower your energy consumption by between 5 and 15 percent.

Source: energy.gov

The power of American independence

Celebrating July 4th and declaring our energy independence

Fireworks and flags. Cookouts and cold drinks. The Fourth of July is a festive day on which we celebrate our nation's independence with family and friends. Typically, this is not a day of quiet reflection. While we spend a lot of energy having fun, if we give any thought about our forbearers and their determined efforts to bring about our nation's independence, it's fleeting.

An independent spirit is a part of our DNA

However, it is worth reflecting that this uniquely American spirit of independence remains part of our collective DNA more than 200 years after the independent nation of the United States was formed and the Declaration of Independence was crafted. And this sense of independence has served us well. For example, more than 70 years ago, an independent streak inspired groups of farmers across America's countryside to band together and improve their quality of life. Aside from President Franklin Roosevelt's promise of federal aid in the form of low-interest loans and engineering expertise, rural Americans had little help in bringing electricity to their homes. So, they did it themselves by pulling together and working cooperatively – a shining example of American determination and ingenuity.

For the past 40-plus years, nearly every president since Richard Nixon, during the time of the Arab oil embargo, has talked about the goal of U.S. energy independence – reducing our reliance on imported oil and other forms of foreign energy. Today, while we still have a ways to go, we are closer to that goal than ever before. We are exporting more gas and importing less foreign fuel than in recent memory. American ingenuity in the form of new technology and

innovation is opening up more options and spurring greater efficiency across all forms of energy. According to the Energy Information Agency, energy expenditures as a share of gross domestic product (GDP) are forecast at 6.2 percent in 2015, their lowest level since 2002, reflecting both lower oil prices and ongoing increases in energy efficiency.

The road to energy independence

Consumers have an important role to play in the road to energy independence. They don't have to wait for Democrats and Republicans to agree or environmentalists and fossil fuel advocates to reach consensus on a path to energy independence. Consumers can play a part in moving us toward national energy independence by taking action in simple, practical ways – insulating and caulking around windows, doors and electrical outlets; washing clothes in cold water instead of hot; replacing air filters; installing a programmable thermostat; and using more energy efficient appliances and home heating and cooling systems. Efficiency efforts can cut costs for individual households, but the collective benefit to our country is even greater.

If we all work together to achieve

increased energy efficiency and reduce our overall energy consumption, we can make even more progress on our road toward energy independence. At EnerStar Electric Cooperative, we want to be a resource for you in this effort. We can provide energy-saving tips tailored for your unique household needs.

Electric co-ops provide renewable energy resources

In addition, EnerStar, along with other electric co-ops across the country, have been actively engaged in promoting renewable energy resources like wind, solar and biomass (including landfill gas and livestock waste). Today, nearly 95 percent of the nation's 900-plus electric co-ops provide electricity produced by renewable sources, all playing a key role in powering rural America while fostering our nation's energy independence.

Recent advances in technology are transforming how we make and move electricity, and over time, these changes will greatly improve not only the efficiency but the reliability of electric power. So this Fourth of July, as you gaze up at the fireworks lighting up the night sky, reflect on the enduring spirit of independence that is integral to our American character.

**Our office will be
closed Friday,
July 3rd
in observance of
Independence Day**

