

PowerLines

A monthly publication for member/owners of Eastern Illini Electric Cooperative

January 2015

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Scholarships available

The 2015 Youth to Washington Scholarship Contest awards two graduating seniors each a \$1,000 college scholarship and an expenses-paid trip to Washington, D.C.

Scholarship applications for the 2015 Youth to Washington scholarship contest are due January 31, 2015. More information, rules, and the application are available on our website at www.eiec.coop.



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A Touchstone Energy® Cooperative 

A year in review

Strong kWh sales highlight a solid 2014.

Welcome to 2015! Didn't it seem like the year 2014 went by too quickly? It certainly did for me. 2014 was an interesting year for your cooperative.

As my first year as your President/CEO concludes, I'd like to thank you for welcoming me to the cooperative family.

The weather was a bit unusual, given the brutally cold winter in January through March, and then the mild summer, followed by a moist fall and cold November.

But, we should expect this, as it is Illinois - if you do not like the weather, just wait five minutes, it will change!

Mainly due to the weather, our sales were above budgeted levels. Combined with our ability to manage expenses, your cooperative's net margins were much better than we had anticipated in our forecasted budget.

The Board of Directors are pleased to

inform you they have decided to return a portion of these 2014 operating margins to you immediately in the form of a bill credit.

The credit is on this month's electric bill, and is based on your December kWh use. Your credit amount can be found on the "PCA" line of the bill.

Also, for the October 2014 usage, we collected approximately \$76,000 less through the PCA than we were billed for wholesale power. The combination of these bill credits total nearly \$500,000. This is money that we are happy to return right back to you.

The Board also approved other items to provide financial flexibility for future years in the case of lower than forecasted sales (due to weather),

unbudgeted expenses, such as widespread storm damage (like ice storms or tornados), or other extraordinary expenses.

We look forward to continuing to serve you in 2015!

Happy New Year,

Bob Hunzinger



MESSAGE FROM THE PRESIDENT

 Providing value for your electric dollar

Based mainly on strong kilowatt-hour sales due to the weather, we ended 2014 with more revenue than we had budgeted. We'd like to return some of that money right back to you. Check the "PCA" line on this month's bill for your credit.

This is one more simple way that we are looking out for you - and your wallet!

Home heating: electricity vs propane

According to the U.S. Department of Energy, heating and cooling account for nearly half of the energy use in a typical U.S. home, making it the largest energy expense. While few people enjoy spending money on home heating fuels, consumers are willing to pay for comfort in the form of heat.

In these colder months when the temperatures dip and the need to heat your home rises, it makes sense when trying to determine the most economical heating method to evaluate the cost per unit of heat. This is referred to as a British thermal unit (Btu).

Evaluating cost per unit of heat for propane and electricity

The Btu content per gallon of propane is 91,500 Btu. The Btu content for electricity is 3,413 Btu per kilowatt-hour (kWh). It takes 26.8 kWh to equal the Btu content of one gallon of propane.

Using the U.S. Energy Information Administration's table on residential propane and electricity rates for November 2014, \$2.40 per gallon, excluding taxes, and 13.01 cents per kWh, we arrive at the following calculation:
 $26.8 \text{ kWh} \times 13.01\text{¢} = \3.49

If we used only Btu content to determine the best energy source for home heating, it would appear that propane is less costly than electricity if the price for propane is below \$3.49 per gallon.

Comparing usable heat costs

While we may have determined the cost of the actual heat content, what matters even more is the cost of the usable heat (warmth). A low-efficiency propane furnace may have an efficiency rating of 80 percent, and a high-efficiency propane furnace may have an efficiency rating of 95 percent. Let's

assume we have a 90 percent efficient propane furnace. That means 10 percent of the Btus are not converted to useable heat (warmth). Here is the math:

$$91,500 \text{ Btu} - 10\% \text{ Btu loss} = 82,350 \text{ Btu}$$

So now it only requires 24 kWh to equal the delivered Btu content of propane.

$$24 \text{ kWh} \times 13.01\text{¢} = \$3.12$$

Electric heat is 100 percent efficient

What may surprise most consumers is that the least efficient electric heating system delivers 100 percent efficient heat. Yes, electric resistance heat (i.e., space heaters, baseboard heating) is 100 percent energy efficient. Every single Btu in a kilowatt-hour is delivered as usable heat. So if you are paying more than \$3.12 per gallon of propane for a 90 percent efficient propane furnace, it would be cheaper to use electric resistance heat.

Pumping up efficiency

There are even more efficient electric heating systems called heat pumps. An air-source heat pump is at least 250 percent energy efficient. How is it so efficient?

In the heating mode, heat pumps do not use electric energy to create heat; they use it to pump heat into your home through a reversal of the refrigeration process. If you have central air conditioning, you have already experienced this process in reverse

when your unit pumps heat out of your home in the summer.

If you have ever stood next to the outdoor components you know the air conditioning system is exhausting very hot air. In winter, it simply does the opposite, moving heat into your home. Air source heat pumps are equipped with some type of auxiliary heat for those times when temperatures are near freezing or dip below. The typical back-up is in the form of electric resistance heat strips, but there is also a dual fuel propane option.

In calculating the Btu's per kilowatt hour for a heat pump we use this formula:
 $3413 \text{ Btu} \times 250\% = 8532 \text{ Btu}$

This means that it only takes 9.65 kilowatts using an air source heat pump to deliver the same amount of warmth as a 90 percent efficient propane furnace.

$$9.65 \text{ kWh} \times 13.01 = \$1.25$$

The price of propane would need to drop to \$1.25 per gallon to breakeven with the cost of home heating using an air source heat pump. Efficiency increases even more sharply when looking at the 400+ percent efficiencies of a geothermal heat pump. With geothermal, that brings the comparable price of propane all the way down to \$0.78!

$$6.03 \text{ kWh} \times 13.01 = 78 \text{ cents}$$

Energy Efficiency Tip of the Month



They're out of sight, but don't forget about your air ducts. Taking care of them can save money and energy. Check ducts for air leaks. Take care of minor sealing jobs with heat-approved tape, especially in attics and in vented crawl spaces. Call the pros for major ductwork repairs.

Source: U.S. Department of Energy

Providing reliable energy facts – regardless of fuel type

At Eastern Illini, we believe it is our responsibility to provide you with reliable energy facts regardless of fuel type so you can get the most from your energy dollars. Please contact us at 800-824-5102 for more information or to speak with one of our energy advisors.

Geared up for safety

Can you imagine working a job that requires you to lift heavy equipment and perform detailed tasks near deadly high voltage? Now imagine doing this 40 feet in the air, and sometimes, in extreme weather. This is the life of a lineman.

These brave men and women answer when called – and they do so to ensure that you are provided with safe, reliable electric service. But how do they stay safe when working in these conditions? Eastern Illini’s linemen are required to wear personal protective equipment (PPE) at all times when on the job to keep them safe.

Let’s take a look at a lineman’s PPE:

Fire resistant (FR) clothing

While our linemen do everything possible to prevent them, unexpected fires can happen. Fires typically occur with an arc flash – an explosion that results from a low-impedance connection to a ground phase in an electrical system. FR clothing will self-extinguish, thus reducing injury due to burn.

Insulated gloves

Linemen must wear insulated rubber gloves when working on any type of electrical line. These gloves provide protection against electrical shock and burn, and are tested at 30,000 volts. Protective gloves, usually made of leather, are worn over the insulated gloves to protect the rubber from punctures and cuts.

Hard hat

No matter how tough or “hardheaded” our linemen are, they still need protection. Insulated hard hats are worn at all times to protect them from blows and falling objects.

Steel toed boots

These heavy-duty boots are typically 16 inches tall and designed with extra support in mind. The height of the boot shields linemen from gouges, and serrated heels provide a better grip when climbing poles. The steel toe provides sturdier support and protects from objects that could potentially pierce the feet.

Safety goggles

Linemen must wear protective goggles or glasses, whether working on

electrical lines or clearing rights-of-way. This protects them from loose debris and other hazards.

These items make up a lineman’s basic PPE. While working on electrical lines, they also may be required to wear equipment belts, tool pouches, safety straps and other types of equipment. A lineman’s gear usually weighs about 50 pounds – that’s a lot of extra weight when working in hazardous conditions.

So, the next time you see a lineman – be sure to thank him or her for keeping the lights on. But more importantly, thank them for the hard – and often times dangerous – work they do, day in and day out.

Eastern Illini apprentice lineman Nick Wilhoit demonstrates pole climbing techniques during a recent Lineman Rodeo in Springfield. Linemen like Nick take great pride in maintaining our electric system for you.



The results are in!

Eastern Illini Electric Co-op is a local cooperative that is owned by you – our member/owners. Each year we send out a simple one-page survey designed to help us determine how we are performing and identify any areas that need improvement. We want each of you to have an opportunity to express your opinion.

In the first set of questions, we asked you to rate us on a scale from one (not at all satisfied) to 10 (very satisfied). We scored at least a nine in 10 of the 13 categories. THANK YOU! Some of those categories included “providing excellent customer service” (9.3), “friendly and courteous employees” (9.5), “community involvement

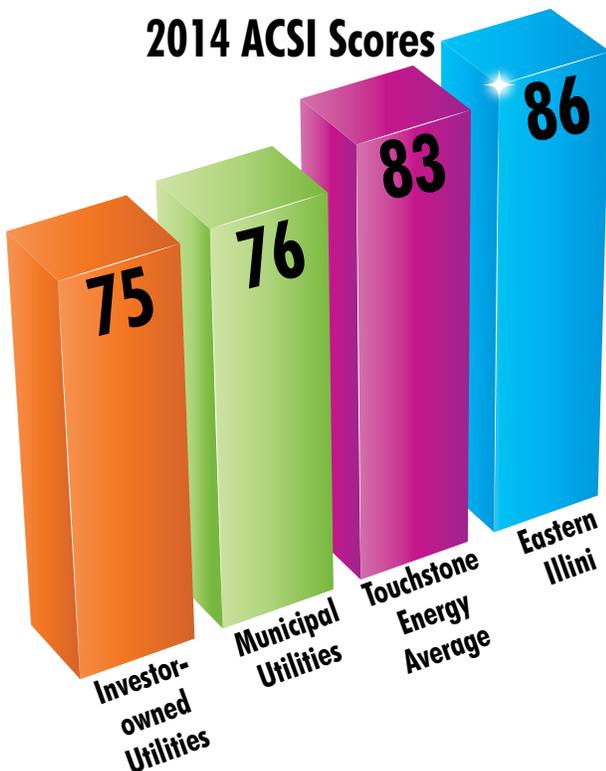
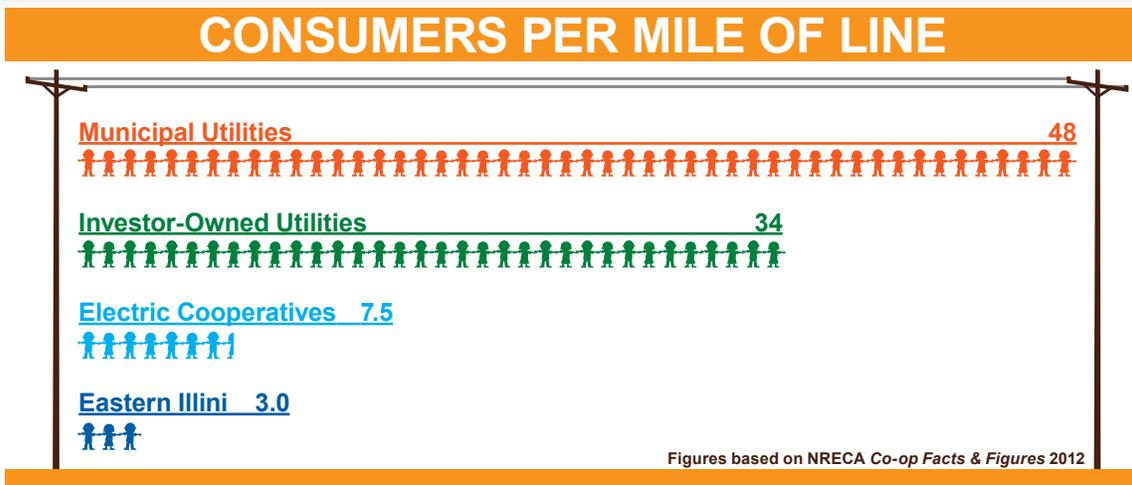
and support” (9.0), and “restoring power quickly after an outage” (9.1).

We were a bit lower in two similar categories: “charging reasonable rates” (7.8) and “delivering good value for the money” (8.3). We know our rates are higher than we’d like them to be. The main reason is our incredibly low density - or meters per mile of line. Ours is among the lowest in the country (see the chart below for a comparison).

That’s one of the reasons we work so hard to control our expenses wherever we can. Next, we asked the four questions that make up the American Customer

Satisfaction Index (ACSI). The ACSI Benchmark for Energy Utilities provides energy utilities with a reliable set of metrics and benchmarking capabilities in relation to the largest investor-owned, municipal, and cooperative utilities in the United States. **Based on the results of the ACSI questions, we earned a score of 86.**

We will continue to work hard to earn your quality scores. But it’s really much more than that. The scores are just a byproduct of our willingness to serve you. It’s a job we take seriously. We’re your local, member-owned connection to powerful solutions, and we’re always on for you!



How do you view your relationship with Eastern Illini?

