

A newsletter from the Arrowhead Electric Cooperative, Inc.

The High Line

By Line

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A Touchstone Energy® Cooperative 

Understanding “Smart Grid”

It's become one of the most popular terms used in many discussions and speeches today: ‘Smart Grid’. It's been touted as an idea that will save vast amounts of money and change our lives, businesses, and economy forever. It's been referenced as a necessity to bring our system of delivering electricity into the modern ages. Yet in all the uses of this seemingly everyday household term, many people are still asking, “What does it really mean?”

Truth is, if you ask a dozen utilities to define it, I would be surprised if you heard two answers alike. The origins of Smart Grid are found in the most recent update to the PURPA (Public Utility Regulatory Policies Act) standard, which had its birth in 1978. It is a national standard for utilities with well-meant intentions to promote energy conservation during another energy crisis. The standard was updated in 2007 when the President signed the Energy Independence and Security Act (EISA). Four new standards were added to PURPA, including two that contain this now very popular term, Smart Grid.

However, Smart Grid was never clearly defined in the EISA; nowhere in the standards can one find a definitive writing on what it really means. Thus the door was opened for a lot of use and misuse of the terminology by people who found it to be a good platform from which to get the nation's attention.

Our electric system today

Our electric system today is a complex and well-designed system with a history of solid reliability and

service. When a switch is flipped, it's rare the lights don't work. But the system also needs to grow as the demand for electricity grows. Either that, or people will be forced to use less electricity, and advocates of that idea are beginning to speak out.

Arrowhead Electric is a leader in offering load management programs that offer customers reduced rates to use electricity during off-peak times. During peak times, some loads are controlled and electric demand reduced. Participation is strictly voluntary and rewarded through low off-peak rates.

Enter ‘Smart Grid’

With the advent of automated meter reading (AMR), where meter data is transmitted back to the utility through a communication system, meters no longer have to be manually read, either by the customer or meter-readers. With advancements in technology, AMR is evolving into Advanced Metering Infrastructures (AMI) which also provides for automated outage detection, power quality monitoring, and energy usage profiling.

This technology enables utilities to monitor energy usage on a real-time basis. If you can read the meter more frequently Arrowhead can provide different rates for different times of the day. Called time-of-use rates, it's really a form of load management, similar to Arrowhead's historical off-peak program.

Under this idea, rates would reflect actual energy costs that change in real time throughout the day, depending on the source and cost of power. Customers would know this

pricing through displays in their homes and businesses, enabled by AMI. They then decide if they want to use energy or not. Manufacturing plants might make different business decisions; homeowners might change their lifestyles, all depending on energy prices at the time. This technology requires the member to take control of the usage. The utility does not do this.

The idea is to encourage people to become more aware of energy use, and to hopefully use energy more conservatively. If they decide to use energy during peak times, they'd pay a much higher price. It's unknown at this time how customers may be using time-of-use rates. There are some people and political leaders who believe such rate structures should be mandatory so people will be more energy-conscious and even penalize large users of energy.

Other Smart Grid aspects

The 2007 EISA also requires utilities to consider other forms of automation that “improve reliability, security, and performance for societal benefit”. However those technologies are not defined in the standard and left to the utility to develop, analyze, and evaluate. Herein lays an important difference for the members of Arrowhead Electric.

Private investor-owned utilities may be required by utility regulators to install technologies which make their systems ‘smart’ even though they may not be able to justify the costs. By the EISA act, utilities are allowed to

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Watt Savings – Win up to \$500!

June 1, 2009 – May 31, 2010

Starting June 1, 2009 Arrowhead Electric members will have an opportunity to earn credits on their electric bill. The new contest entitled, “Watt Savings” aims to change the energy consumption behavior of our membership. Reducing energy consumption is a common message amongst utility companies, politicians and conservation groups. Now, Arrowhead Electric Cooperative will pay you to conserve electricity! To participate, call, e-mail or stop in our office to register for the contest. As a contest participant you are not obligated to do anything but to try and consume less energy. Here is

how the program works and what you’ll earn by conserving energy. First, sign-up. Next, Arrowhead Electric will monitor your electric consumption for each seasonal quarter (Summer, Fall, Winter & Spring). After each seasonal quarter you’ll see a credit on your electric bill based on the amount of energy you consumed when compared to your prior three-year seasonal average. Earned credits start at \$12 by reducing your usage by at least 5%. Reducing your usage by 8% earns you \$20, and a reduction of 12% or more will earn you \$30 for the seasonal quarter! Not to mention you’re electric bill will be less because you consumed fewer kilowatt hours (kWh’s)!

At the end of the contest period (May 31, 2010) the grand “Watt Savers” will be awarded a \$500, \$250 and \$100 prize respectively. As all contests, certain rules and restrictions apply. Arrowhead Electric Cooperative reserves the right not to apply credits to any member’s electric bill if electric consumption was reduced for means that were unintended (i.e. you went on a month long vacation to the Bahamas). For complete details, please call, e-mail or stop by our office. Remember, you **MUST** sign-up to be eligible for any credits.

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To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights,

Right of way clearing continues in the Clearwater Lake area. The crew will then be moving to Fireplace Road, Moose Ridge and Washout Rd in the Poplar Lake area.

1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider, employer, and lender.

Strawberry Pretzel Squares

Ingredients:

- 2 cups finely crushed pretzels
- 1/2 cup sugar, divided
- 2/3 cup butter or margarine, melted
- 1-1/2 pkg. (8 oz. each) PHILADELPHIA Cream Cheese, softened
- 2 Tbsp. milk
- 1 cup thawed COOL WHIP Whipped Topping
- 2 cups boiling water
- 1 pkg. (6 oz.) JELL-O Strawberry Flavor Gelatin
- 1-1/2 cups cold water
- 1 qt. (4 cups) strawberries, sliced

Directions:

HEAT oven to 350°F.

MIX pretzel crumbs, 1/4 cup sugar and butter. Press onto bottom of 13x9-inch pan. Bake 10 min. Cool.

BEAT cream cheese, remaining sugar and milk until blended. Stir in COOL WHIP; spread over crust. Refrigerate.

ADD boiling water to gelatin mix in large bowl; stir 2 min. until completely dissolved. Stir in cold water. Refrigerate 1-1/2 hours or until thickened (spoon drawn through leaves definite impression). Stir in strawberries; spoon over cream cheese layer. Refrigerate 3 hours or until firm.



Clothesline's make cents!

Typical electric clothes washers and dryers generate 5 pounds of CO₂ per washer/dryer cycle. After the refrigerator and washing machine, the clothes dryer is typically the third most energy sapping appliance in the home. The best way to save energy and money to dry your clothes is to hang them on a clothesline. By using a clothesline instead of your dryer, you can save 1,016 pounds of CO₂ annually.

Not only does it save money, but it cuts down on CO₂ use as well. Let's look to see what kind of impact letting our garments air dry on a clothesline has.

Cost/load (electric):	\$.35
CO ₂ /load (electric):	5.6 lbs.
Loads/year for a family:	365
Cost of a clothesline:	\$ 5-10
\$ saving/year (1/2 loads air dried):	\$63.88
lbs CO₂ saved/year (1/2 loads air dried):	1016 lbs.

So there you have it, throw your weekly washing to the wind and you can drop a couple of 10-spots in your pocket without feeling the pinch.

Reminder: Operation Round Up Applications are Due by May 22nd.

The deadline to apply for Operation Roundup funds is May 22nd. The Arrowhead Electric Trust Board will meet later in May to review the applications. Funds will be distributed at Arrowhead Electrical Cooperative's Annual Meeting on June 13, 2009.

Arrowhead grant applications can be obtained online at www.aecimn.com. For further information contact Georgene Daubanton, Arrowhead's Operations Administrative Assistant at 218-663-7239 or 800-864-3744.



Green surge protector saves energy & dough

It's better for the environment and your wallet to completely turn off your high-draw equipment such as your HDTV and the rest of your home theater rig rather than leaving them in standby mode. Hooking them all into Belkin's Conserve Surge Protector, which can shut down six of its eight spaced outlets all at once with a giant remote on-off switch, will save you the problem of shutting down each box one-by-one.

That giant toggle remote in the picture can control up to six Conserve Surge Protector, and has

a sticky strip on the back to let you mount it anywhere convenient. A Belkin's demonstrator, claims her utility bill dropped from \$50 to \$35 in the first month that she used it, and that most folks would realize a 20 percent savings if they completely shut off their gear rather than leaving them on standby. You'll be able to start your savings in May when the outlet strip hits stores, and you should make up the \$50 cost in a couple of months if that 20 percent figure is accurate.

Rebate Information:

Below are the current rebate offers through AECI.

- CFL Bulbs
- Energy Star Appliances
- Ground Source & Air Source Heat Pumps
- Energy Star Air Conditioners
- Water Heaters
- Storage Space Heating

Simply submit a copy of your invoice to our office!

Special 2009 Rebate offers:

- Gaskets
- Water Heater Blanket
- Power Strips
- Pipe Insulation
- Retractable Clothes Line
- Water Saver Shower Head
- Door Sweeps
- Expanding Foam
- Indoor Shrink Wrap
- Programmable Thermostat

Visit our website at www.aecimn.com for the necessary forms.



WHY GOD MADE MOMS

Answers given by 2nd grade school children to the following questions:

What ingredients are mothers made of?

1. God makes mothers out of clouds and angel hair and everything nice in the world and one dab of mean.
2. They had to get their start from men's bones. Then they mostly use string, I think.

Who's the boss at your house?

1. Mom doesn't want to be boss, but she has to because dad's such a goof ball.
2. Mom. You can tell by room inspection. She sees the stuff under the bed.
3. I guess mom is, but only because she has a lot more to do than dad.

What's the difference between moms and dads?

1. Moms work at work and work at home and dads just go to work at work.
2. Moms know how to talk to teachers without scaring them.
3. Dads are taller and stronger, but moms have all the real power 'cause that's who you got to ask if you want to sleep over at your friends.
4. Moms have magic, they make you feel better without medicine.

What would it take to make your mom perfect?

1. On the inside she's already perfect. Outside, I think some kind of plastic surgery.
2. Diet. You know, her hair. I'd diet, maybe blue.

If you could change one thing about your mom, what would it be?

1. She has this weird thing about me keeping my room clean. I'd get rid of that.
2. I'd make my mom smarter. Then she would know it was my sister who did it not me.
3. I would like for her to get rid of those invisible eyes on the back of her head.

Arrowhead Electric will be closed Monday, May 25th to observe Memorial Day.

Understanding "Smart Grid" (continued from page 1)

pass those costs on to their customers, whether the customers want to use that technology or not.

As a cooperative member, you are not subject to such actions (unless a federal law would change the standards into a national mandate). Your member-elected board of directors will decide if such technologies are beneficial for Arrowhead members, and if so to what extent the cooperative should invest in them and how they should be funded.

Smart Grid limitations

Arrowhead Electric Cooperative is in the process of evaluating new AMI technology for its members. We are also upgrading substations automating technology every year.

Arrowhead invests in technology as we justify the costs and benefits to our members. While many of the technologies that are envisioned in the Smart Grid terminology will work, some are difficult to justify and likely will not be able to provide all that's being promised of them. Few argue the need to increase the nation's electric system capacity with improved technology, but it must be done in ways that are affordable and within reason.

**Make plans to attend
Arrowhead Electric Cooperative's
36th Annual Meeting.
Saturday, June 13th
At St. John's Catholic Church
In the Fellowship Hall
Breakfast served at 8:30a.m.
Meeting begins at 10:00a.m.**

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Cooperative Board Meeting Last
Thursday of each month @ 9:00 a.m.

