

Northwestern
Rural Electric
Cooperative
Association, Inc.

Your Touchstone Energy® Cooperative 



One of 14 electric
cooperatives serving
Pennsylvania and
New Jersey

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Mary Mulligan-Haines, Editor

FROM THE MANAGER & CEO

The cooperative difference in 'interesting times'



by Michael D. Tirpak
General Manager & CEO

THE ANCIENT Chinese proverb and curse states: "May you live in interesting times." It seems to accurately predict our current lives in the early 21st century. Global warming, terrorism, drugs, health care and politics are just a few of the many hot-button issues we live with every day. Just focus on the energy issues and we have: oil and gas

costs, electric generation fuels (coal, nuclear, wind, hydro and solar options), electric transmission lines (overloaded lines and building new ones), greenhouse gases and the costs of global warming legislation.

How can the cooperative model make a difference?

The first way the cooperative model can make a difference is on our focus — our members. Northwestern REC has about 20,000 members (residential, industrial, commercial and governmental), who are also the owners of the cooperative. We do not make decisions that are best for stockholders like the investor-owned utilities, but instead are focused on the members we serve in our local service territory. You will find an article in this month's *Penn Lines* that reports on a recent survey done with our membership that compares us with industry benchmarks. I am very happy with the results of this survey and I am glad to see that our co-op's efforts are appreciated by our membership. Our focus will not waver!

A second way the cooperative model can make a difference is by working with other cooperative organizations to give us a stronger voice in the major issues of the day. Our Pennsylvania Rural Electric

Association (PREA) and the National Rural Electric Cooperative Association (NRECA) help us magnify our positions on legislative issues that directly relate to our primary focus — our membership. We fight for clean, safe, reliable, available and affordable electricity options for our future with a voice of over 900 electric co-ops across the country that represent 40 million rural people in 47 states. We represent about 12 percent of the U.S. population and we can make a difference when we work together.

A third way the cooperative model can make a difference is by giving our members the tools to manage their electric/energy use in the most efficient and cost-effective manner. An article in this month's *Penn Lines* reports on an exciting new tool on our website that helps members model their home and better understand the amount of energy they use to heat, cook, light and entertain in their home. None of us can afford to waste energy in today's environment. This new interactive service also has the ability to help you estimate your personal carbon footprint in your home world, which will be increasingly important to many of us as we face a carbon-constrained future.

I feel very fortunate to be working for a rural electric cooperative as we progress through some very interesting times in the electric utility business. We will continue to keep the focus on our rural membership and attempt to find the best answers for the many challenges we face. Now on the subject of presidential politics, well — don't even get me started! ☀

Michael D. Tirpak
General Manager & CEO

Efficient living

THE NEXT TIME YOU GO shopping for a new appliance, you might be drawn to the one with the lowest price tag. Smart shoppers will go a step further



and check out the operating costs over the life of the appliance.

According to the U.S. Department of Energy, different models of refrigerators with the same storage space can vary noticeably in the amount of electricity they use. As a result, you may actually save money by buying the more expensive, yet more energy-efficient, model.

Even if two models look the same from the outside, the features on the inside can make a difference in your monthly utility bills. Most of the differences are in the motors, compressors, pumps, valves, gaskets and seals, or in electronic sensors.

You can learn about the energy efficiency of an appliance through the yellow-and-black Energy Guide label on the appliance. Some appliances also feature the Energy Star logo, which means the appliance uses considerably less energy than a model without the Energy Star rating.

You also can make your present appliance more energy efficient by doing the following:

- ▶ Move your refrigerator away from the stove, dishwasher or

heat vents. Vacuum the coils periodically to reduce dirt buildup. Check the doors for air leaks and defrost the freezer when more than one-quarter of an inch of ice builds up.

- ▶ Use pots that fit the size of your stove burners and use lids on your pots and pans so you can cook your food at a lower temperature.
- ▶ Make sure the water level on your washer is the correct setting for the amount of clothes you are washing.
- ▶ Clean your clothes dryer filters after each use.
- ▶ Wash clothes in cold or warm water.
- ▶ Check to see that the temperature on your water heater is set to 120 degrees.
- ▶ Replace your furnace filter monthly.

If you do purchase a new refrigerator, don't move the old one to the garage. Moving the old energy-hogging fridge to the unheated garage will only make it more inefficient and increase your bill rather than reduce the bill.

By purchasing energy-efficient appliances and using them properly, you can save each month on your energy bill. Check out Northwestern REC's website for more ideas to save energy. Go to www.northwesternrec.coop and the Home Energy Calculator will help you. ☀



Your Co-op rates above average

Northwestern REC is among the top-scoring utilities in customer satisfaction as rated by the American Customer Satisfaction Index. With a score of 83, 11 points higher than the industry average, your co-op is outpacing many other utilities, including the top investor-owned utility scoring 80, when it comes to customer satisfaction. Likewise, the local investor-owned utility scored 73.

So what does this mean? The American Customer Satisfaction Index (ACSI), established in 1994 through a partnership of the University of Michigan, the American Society for Quality (ASQ) and the international consulting firm, CFI Group, provides a uniform and independent measure of consumer experience with 190 of the leading corporations in America. ACSI tracks trends in customer satisfaction and has proven to be a powerful economic indicator for companies, industry trade associations and government agencies.

We look at the ACSI as a "scorecard" to help us evaluate ourselves, through an independent source, to see how we are performing and where our members feel we need to improve. While we scored very well, areas that there was a larger gap than we would like to see between what members want and what they feel we deliver include: Handling Problems, Helping Members Manage Energy, Providing a Good Value and Providing Reliable Service.

All four of these areas are things that we strive to achieve on a daily basis, and this survey helps cement the fact that these issues are the driving force behind our service to members every day. We are very proud of our employees and the service they provide to members. This quality of service is seen in our ACSI score today and we remain committed to the co-op values and achieving higher scores tomorrow!

New load management system on horizon

Technology has come a long way since we first began installing the current load management system approximately 25 years ago. Over 9,500 members participate in our current program by letting the co-op control their water heater or their heating system. By doing so, we are able to provide members with a valuable service, as well as save significantly in our power costs. If you have read or heard about the "smart meters" that legislators have been discussing across the country, you can be pleased to know that your co-op is ahead of the curve! This new technology offers a

wide variety of benefits for the co-op as a whole, as well as individual members.

The load management system has enabled the co-op to save over \$14 million in power costs. This savings is passed on to all members, as well as to participating members, in the form of FREE water heaters and 24/7 service. As you might imagine, after 25 years, the equipment is in need of replacement and new technology improvements have been tested and are ready for implementation.

In addition to managing and controlling our power costs just as we have done for the past 25 years, the new

AMI system (advanced metering infrastructure) will empower us all to do more and do it more efficiently.

During 2008, Northwestern REC employees will begin installing equipment at our substations that will provide the network to communicate to each meter from our office.

This concept is very similar to how we communicate with each load control receiver (LCR) today. During 2008, co-op employees also will begin to replace the LCRs and meters at member homes, which will provide the ability to do load control and read member meters remotely. This phase-in will

be done one substation at a time. All members will be notified when we will begin work in their area.

Listed here are some highlights of the potential uses of this new AMI system. Many of them will not only help reduce operating costs and improve efficiencies in daily co-op activities, but also will enable members to take more control over their energy costs. Watch upcoming *Penn Lines* articles each month for a detailed explanation. This month, we will simply review some new terms you will begin to hear us talk about and show you what some of the new equipment will look like.

"I am enough of an artist to draw freely upon my imagination. Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world."

— Albert Einstein

Billing and member service features

- ▶ Remote meter reading
- ▶ Remote disconnect/reconnect capability
- ▶ Theft and meter-tampering notification
- ▶ Real time information on use patterns to help development of future rate options
- ▶ Outage detection and notification
- ▶ Prepay meter option



TWACS IHD
(In-home display)

Engineering and operations

- ▶ Transformer loading assessment
- ▶ System planning and work plan evaluation
- ▶ Voltage monitoring and evaluation
- ▶ Blink count evaluation

Energy management and demand response

- ▶ Time-of-use information (TOU)
- ▶ Critical peak pricing (CPP)
- ▶ Meter accuracy improvement
- ▶ Smart thermostat

THE OLD

Load Control Receiver (LCR)
Controlled Load Management System (CLMS)
Programmable Thermostat



THE NEW

Demand Response Unit (DRU)
Advanced Metering Infrastructure (AMI)
Programmable Control Thermostat
In-Home Display (IHD)
ZigBee Enabled Device
Home Area Network (HAN)



Demand Response Unit (DRU)

New Terms

Demand Response Unit (DRU): This device will take the place of the current LCRs that are either on member water heaters, heating systems or three-gang meters.

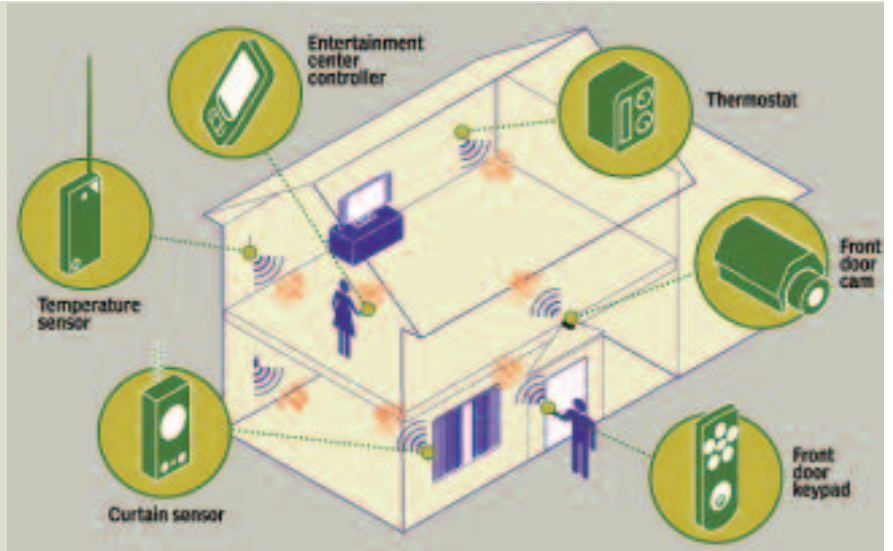
Advanced Metering Infrastructure (AMI): The communications hardware, software, associated system and data management software that create a two-way network between advanced meters, meter modules and utility business systems.


Programmable Control Thermostat: A thermostat that is capable of controlling and monitoring other appliances in the home – such as heating/cooling equipment, lights, pool pumps, etc. This type of technology will enable your co-op to offer much more flexible time-of-use (TOU) rates.

In-Home Display (IHD): The TWACS IHD receives messages, alerts, billing and account-status information directly to members. Messages can be sent directly to members aiding in more cost-effective communications, as well as enabling members to make informed decisions regarding use.

ZigBee Enabled Device: ZigBee is the name of a specification for a suite of high-level communication protocols using small, low-power digital radios based on the IEEE 802.15.4 standard for wireless personal area networks (WPANs), such as wireless headphones connecting with cell phones via short-range radio. The technology is intended to be simpler and cheaper than other WPANs, such as Bluetooth. ZigBee is targeted at radio-frequency (RF) applications, which require a low data rate, long battery life and secure networking. It is anticipated that within the next few years, all new appliances will be sold with this option to provide wireless home automation.

Home Area Network (HAN): As shown above, right, future development will enable various appliances to talk to each other to enable your home to be managed no matter where you are. For example, your thermostat can receive a message from your DRU that we are experiencing a peak use time. The thermostat would then talk to each appliance (washer, dryer, heating/cooling system, lighting, pool pump, etc.) and tell them how to adjust operation during this peak.

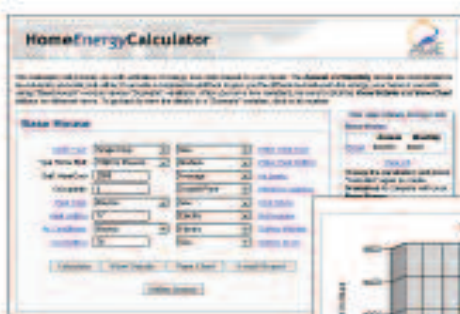




Home Energy Calculator



home energy use costs at your fingertips

Try Our New Online Home Energy Cost & Savings Calculator



- Estimate your home's monthly and annual energy costs

- See how much changes to your home will save
- View charts showing where your energy dollars are going

FREE on our website:

www.northwesternrec.coop