



Grand Canyon State Electric
Cooperative Association, Inc.

Your Touchstone Energy® Cooperatives



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May 15, 2012

AZ CORP COMMISSION
DOCKETED Arizona Corporation Commission

DOCKETED

MAY 15 2012

Docket Control
Arizona Corporation Commission
1200 W. Washington St.
Phoenix, AZ 85007

DOCKETED BY

Re: *Electric Cooperatives' Customer Education Programs on AMI/AMR Metering;*
Docket No. E-00000C-11-0328

Dear Sir/Madam:

The following comments on the Cooperatives' customer education programs on AMI/AMR meters are provided by Arizona Electric Power Cooperative, Inc. ("AEPSCO"); Southwest Transmission Cooperative, Inc.; Duncan Valley Electric Cooperative, Inc. ("Duncan"); Graham County Electric Cooperative, Inc. ("Graham"); Mohave Electric Cooperative, Inc. ("Mohave"); Navopache Electric Cooperative, Inc. ("Navopache"); Trico Electric Cooperative, Inc. ("Trico") and Sulphur Springs Valley Electric Cooperative, Inc. ("Sulphur") (collectively, "the Cooperatives").

These comments represent the consensus position of the Cooperatives; however, individual cooperatives may supplement these comments and reserve the right, individually and collectively, to provide comments and positions on any of the issues or proposed rule changes in this docket as they deem appropriate to address their unique circumstances.

Background

Cooperatives, with the encouragement of federal and state regulators, have been installing Automatic Meter Reading (“AMR”) devices and more recently Advanced Meter Infrastructure (“AMI”) devices for over a decade because of the benefits and cost savings to their members. All AMR/AMI meters historically and currently produce electric quantity and quality data and do not collect personal data beyond the utility meter. These comments will briefly discuss each cooperative’s historical and on-going customer education efforts on AMI/AMR meters. Each cooperative that has deployed AMR/AMI meters has attached their specific customer education efforts to these comments. The Cooperatives believe that the few complaints/concerns they have received from their members are a direct result of their customer education efforts.

Customer Education Programs on AMI/AMR Meters

Each cooperative has developed and implemented a member education program regarding AMI/AMR metering. Generally, these education programs have included AMI/AMR articles in newsletters, web-site education and Q&A regarding AMI, AMI presentations and booths at cooperative annual meetings, press releases, bill inserts, separate mailed letters and community discussions.

For example, Trico and Sulphur began deploying AMI/AMR metering in the 2000 through 2005 timeframe. Their customer education efforts also so began during that time period. Trico currently has installed 32,000 AMI meters and only has 4,000 meters left to change-out. Trico

began educating its customers about AMR meters by publishing articles in its December 1998 and July 1999 editions of its Livewire publication that is sent to all of its members. Trico also sent letters regarding AMR to all of its customers in June of 1999. Trico has published two additional articles in its Livewire publication in the July 2005 edition and in the May 2012 edition. Trico has also posted a question and answer AMI/AMR article on their website. (Please Refer to Trico's AMI/AMR education program that is attached to these comments).

Sulphur began educating its customers regarding AMR meters by sending notices in 2003 to all customers. As of the first quarter of 2012, all of Sulphur's members have an AMI/AMR meter. From 2003 to the completion of the project in the first quarter of 2012, two to three weeks before the AMI/AMR meter was installed, Sulphur has sent a AMI/AMR meter notice to the affected customers. Sulphur continues to post a question and answer AMI/AMR article on their website. (Please refer to Sulphur's AMI/AMR education program that is attached to these comments).

Mohave developed and began immediate implementation of its member education program on AMI metering in June 2010, and began meter exchanges in November 2010. Mohave's member education efforts are ongoing. During the June through October 2010 timeframe, Mohave prepared for the first phase of meter exchanges and placed an AMI Q&A on its website, published a press release, sent letters and bill inserts to members, left behind information for members who had questions about AMI meter installation and held community meetings on AMI meters. Four additional member meetings are scheduled for the summer of 2012. Mohave currently has 31,000 AMI meters installed, or 89% completed. The remaining 4,000 meters will

be installed by the end of 2012. (Please refer to Mohave's AMI education program that is attached to these comments).

Navopache has installed approximately 12,000 AMI meters which is approximately 30% of its meters. Navopache has published AMI articles in the November 2011 and May 2012 editions of its hiLites publication that is sent to all of its members. Navopache will also be publishing an AMI article in the next two editions of hiLites as well as publishing a news release in its local newspaper. NEC will be sending a letter to each customer before the installation of an AMI meter. Navopache has also posted a question and answer AMI/AMR article on their website. Navopache will be holding public meetings on AMI in each of its districts. (Please Refer to Navopache's AMI/AMR education program that is attached to these comments).

Duncan currently has approximately 530 electric and 93 gas AMR meters in Arizona. Duncan has included an article concerning AMR metering in its November of 2010 Currents publication that is mailed to all of its customers. Duncan has also added an AMR question and answer section to its website in May of 2012. (Please refer to Duncan's AMR education program that is attached to these comments).

Since the March 23, 2012 ACC Open Meeting, the Cooperatives' have renewed their AMI education efforts by updating and placing AMI education on their websites and some cooperatives sending out bill inserts and mailings and including AMI articles in their news letters.

Conclusions

Since 2000, the Cooperatives have been installing AMR and AMI using Power Line Carrier (“PLC”) communications and installing AMI with RF communications and have been encouraged by state and federal regulators to make AMI investments to improve the quality of and lower the cost of service for all members. .

We urge the Commission to consider the Cooperatives’ AMI/AMR customer education programs that have directly resulted in limiting the number of customer complaints that the Cooperatives have received regarding AMI/AMR meters in the past as well as in this current docket.

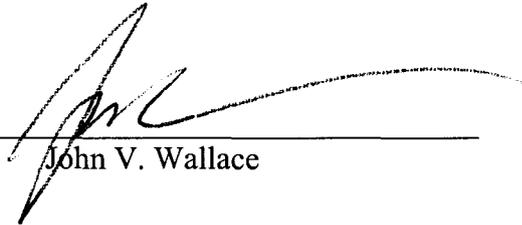
Given the misunderstanding and misinformation that is evident from the public comments in this docket, the Cooperatives believe the Commission should be focusing on an AMI/AMR customer education program similar to what has been implemented by the Cooperatives rather than focusing on an opt-out policy.

Docket Control
May 15, 2012
Page 6

Sincerely,

GRAND CANYON STATE ELECTRIC
COOPERATIVE ASSOCIATION

By



John V. Wallace

Original and thirteen (13) copies of
Electric Cooperatives' Comments
filed this 15th day of May, 2012,
with:

DOCKET CONTROL
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

TRICO ELECTRIC COOPERATIVE, INC.
AMR/AMI EDUCATIONAL INFORMATION SUMMARY

For over 10 years Trico Electric Cooperative, Inc. (Trico) has provided information and education to its Members related to Automated Meter Reading /Automated Metering Infrastructure (AMR/AMI). Some of the material provided includes the following:

- **Trico Website** - Includes frequently asked questions, information regarding current programs and direction on who to contact for assistance, attached web page excerpt.
- **Handout Pamphlets** - At events such as town halls and Member meetings, as well as at our offices, Trico provides pamphlets to Members with information regarding its AMR/AMI programs, attached.
- **Door Hangers** - Trico leaves two door hanger informational documents on each home when an AMR/AMI meter is installed, attached.
- **Trico Livewire Publication** - Trico has included a number of articles in its Livewire Publication over the last 10 plus years. The attached articles were included in December 1998, July 1999, January 2005, and May 2012.
- **Letters to Members** - Trico provided letters to each of its Members when it began its AMR/AMI program back in 1999, sample letter attached. Letters have also been sent to individual Members with questions.
- **Member Services Phone Information** - Trico Member Services provides verbal information on a daily basis when Members call in with questions regarding AMR/AMI and will mail or email documents directly to the Member as requested. Member Services directs any questions that they cannot answer to the experts in that area.
- **Town Hall and Member Meetings** – Trico provides information regarding AMR/AMI at community meetings throughout each year, including a metering booth setup at each Trico annual meeting.

TRICO ELECTRIC COOPERATIVE, INC.
AMR/AMI DEPLOYMENT HISTORY

Trico began its Automated Meter Reading /Automated Metering Infrastructure (AMR/AMI) deployment over 10 years ago. The majority of Trico's system currently has AMR/AMI, only approximately 4,000 of the old electro mechanical meters remain out of over 40,000 total meters in our service territory.

Trico started installing Hunt/Landis & Gyr Power Line Carrier (PLC) Technology one way communication in early 2000. In 2002 Trico started installing the second generation of Hunt/Landis & Gyr meters, which are two way PLC and to date there are over 33,000 deployed on residential members. In 2005, Trico started installing Smart Synch Cell Based Technology; these meters are presently used for more complicated rate structures, for example time of use, net metering, and commercial accounts. Trico has approximately 3,500 Smart Synch's deployed in our service area.

The PLC technology uses Trico's distribution power lines to transmit data for a daily energy (kWh) reading; the daily reads are imported into our meter data management system, then reads are extracted at the time of each billing cycle and imported into our billing system. Trico's PLC technology is capable of a remote reading; no truck roll or drive by is needed. The PLC technology also has outage detection, theft detection, and help to identify events on our distribution power lines. Trico does not currently use these meters for load control, remote disconnect, or pre-pay.

The cell based Smart Synch meters are capable of data collection up to 15 minute bi-directional interval data. The Smart Synch meter has the capability of remote disconnect, outage detection and pre pay metering, but we currently only utilize the interval data feature.

The data is imported into our meter data management system on a daily basis and made available to our members thru Trico's Customer Self-Serve. Our members voluntarily choose to sign up for Customer Self-Serve allowing them to view and pay their Trico bill, look at their daily usage, view graphs , and benchmark changes to their residence. This data is attached to the members unique individual account number and meter number. The members must create a log in and password unique to their account and the information is kept protected and confidential.

Search...

Mobile Version

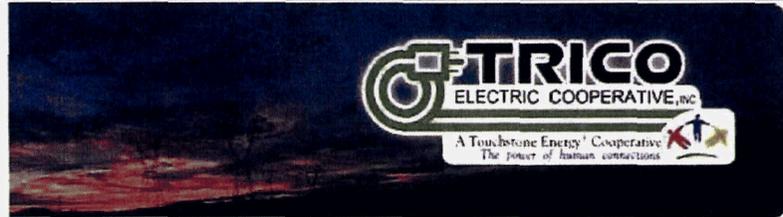
8600 W. Tangerine Road Marana, AZ 85658 Tel (520) 744-2944 Fax (520) 744-2329



Not registered for E-Bill?
Click here to get started

Submit

[Trico Outage Notification](#)



Main Menu

Job Openings

Home

- Your Bill
- Operation Round-Up
- Home Energy Savings
- Co-op Connections Card
- Safety & Outages
- High-Speed Internet
- Digital Phone
- New Members
- New Service Checklist
- Automated Meters and TREAD

Commercial

Community

Renewable Energy

About Trico

Trico TV

News

MAY 15 05.15.2012 15:00 - 18:00
Market
Marana Farmer's

MAY 17 05.17.2012 18:00 - 19:00
Series
Oro Valley Concert

Livewire Newsletter

Name

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Trico Quick Clicks

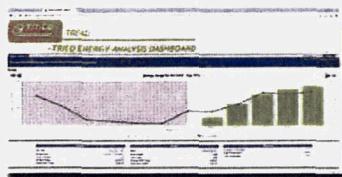


Trico On-Line Trading Post is a



Automated Meters & TREAD

Automated Meters and TREAD



Manage your daily electric use with TREAD

The Trico Energy Analysis Dashboard (TREAD) gives Trico Members with T1/T2 and Smart Synch meters the ability to monitor their daily usage.

To access TREAD, log in to the E-bill system. (If you're not already an E-bill customer, you can sign-up!) Once you're logged in to E-bill, click on the TREAD icon. Here you can view your daily electric usage and billings. Need help? Click on the 'Help' button in the upper right corner.

Note: You must use Google Chrome or Google Chrome frame for Internet Explorer 6, 7, and 8 on Windows 7 / Vista / XP SP2 or higher in order access the TREAD system. Mac users can use Safari, Firefox or Google Chrome browsers for Mac.

Still need help? Call us at 744-2944, ext. 1380, or email treadhelp@trico.coop.

About Trico's Meters

Back in the day, the standard electrical meter was mechanical, with spinning wheels and gears. Today, meters are electronic, helping you to monitor your electric usage on a daily and sometimes even minute-by-minute basis.

People have a lot of questions about these automated meters, so we've put together this FAQ.

When did Trico start installing automated meters?

Trico launched a pilot metering program in 1999. The program utilized automated meters with one-way power line carrier (PLC) technology. The pilot program was very successful and, since that time, Trico has been replacing traditional meters with new, automated meters.

In 2005, automated meters utilizing cellular technology were introduced. These meters enable Trico to better serve customers who have more complicated rate structures.

Trico is in the last phase of a 10-year project to replace the old meters with the new, automated ones. Today, roughly 36,000 of Trico's 40,000 meters are the new, automated meters.

Why are the traditional meters being replaced with automated meters?

Automated meters enable customers to see exactly when they're using energy in their home or business. This enables them to better manage their energy bills.

Automated meters also help Trico contain costs. Since these meters give Trico the ability to read meters and reconnect service remotely, Trico doesn't have to dispatch crews to the field as often. And this helps to keep Trico's operating expenses in check. It also helps Trico to reduce its carbon footprint since fewer trucks on the road means reduced fuel consumption and emissions.

What are the benefits of an automated meter?

Put simply, automated meters put customers in control of their energy usage. These meters provide an amazing amount of information, from how much

free service offered to Trico's Members.

 Contact UsContact Trico. ➤

 Trico Livewire ➤

 Key Accounts Newsletter" ➤

 Calendar ➤

 Co-op Connections CardSave money with the Co-op Connections Card! It's a free program for all Trico customers! ➤

What types of automated meters does Trico Use?

energy a home or business is using, to exactly when that energy is being used. And once you know when you use energy, you can identify ways to save energy and cut your electric bill.

There are other benefits, too:

Improved reliability: Automated meters show outage locations so repairs can be made quickly.

Enhanced customer service: Through remote capabilities Trico can provide faster meter reading, fewer truck rolls and fewer estimated bills.

Greater privacy: Automated meters can be read remotely, meaning meter readers no longer have to enter your property. However, Trico will still need occasional access for testing and maintenance.

Trico's automated meters use two types of two-way technology: power line carrier and cellular.

Most of Trico's automated meters use power line carrier (PLC) technology. These meters use Trico's electric distribution lines to collect the readings.

Trico also uses some automated meters with cellular technology. These meters use secure cellular networks to collect readings. This is the same technology you have in your mobile phone.

Do the Trico meters use radios to transmit the meter reading signal?

No. The vast majority of Trico's automated meters transmit data thru our power lines (i.e., PLC). These meters do not emit any radio frequency.

Will my Trico account and usage information remain secure and confidential?

Yes. Trico complies with federal and state laws regarding privacy, protection and disclosure of personal information. Our meters and the associated communications systems are encrypted and equipped with security features to prevent unauthorized access. Trico collects energy usage information only for the purpose of billing, and does not share customer information with third parties.

Do Trico's meters collect any information on my appliance usage?

No. Trico's meters are not tracking or monitoring individual appliance usage.

Will the co-op continue to do service inspections?

Yes. Routine inspections of all meters and services will continue.

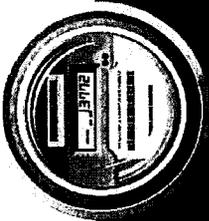
How can I access my meter data?

While Trico will continue to read and bill you on monthly basis, you have the ability to monitor your energy usage on a daily basis thru the Trico Energy Analysis Dashboard (TREAD) system on E-Bill. Go to <https://ebill.trico.org/css/logon.do> to log in.

Have more questions?

Contact our Metering Service Group at (520) 744-2944, ext. 1338.

2012 FINAL PHASE



Trico is upgrading
our electric system

We are investing in new equipment,
including new meters, that will help
us operate more efficiently, improve
reliability, and serve you better.

WHAT TO EXPECT

When your meter is installed, you will need to
reset electronic devices such as digital clocks.

On your next month's bill there will be two
readings: one from the old meter and one
from the new meter.

To find out when we are installing meters
in your neighborhood and for more
information about the new meters,
visit our website at
www.trico.coop

SOMETHING NEW
to help us
SERVE YOU BETTER

We're installing new meters to improve
efficiency and reliability for our members

By investing in new technologies
to improve service your
cooperative is looking out for you.

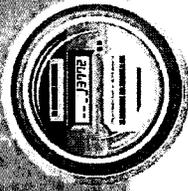
Questions?

You can find more information
on our website at
www.trico.coop.

Or call (520) 744-2944.



After the installation, you can expect...

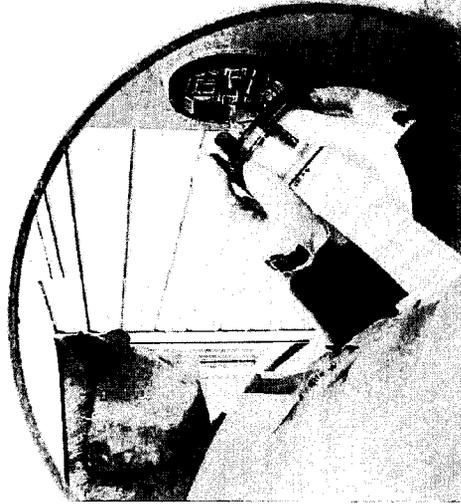


Increased efficiency

Operating more efficiently helps us keep costs down for our members.

With data from the meters coming to our offices, we will be able to **read your meter remotely**. Remote meter reading and remote reconnects mean co-op employees will spend less time on the road.

Older systems are less efficient at distributing power. Now, information coming from the new meters will allow us to monitor the system in near real-time and **correct problems and inefficiencies**.



Increased reliability

New tools for diagnosing problems and disruptions help us improve reliability for our members.

With more detailed information about what is happening in the field, we will be able to **respond faster** to outages: the new meters tell us when and where there is an outage or disturbance.

With more data we can also **improve power quality** by reducing the number of spikes, blinks and surges.

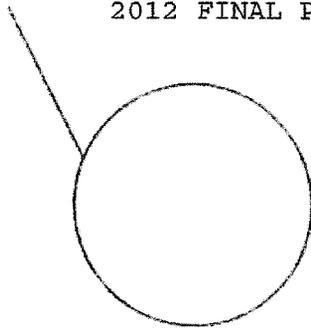
More data enables us to provide **more accurate information about outages** and restoration times.



New tools to help keep electric bills affordable

New meters mean more information about how you are using electricity. We can help you diagnose problems leading to high energy bills.

2012 FINAL PHASE



SOMETHING NEW

to help us

SERVE YOU BETTER

We're installing automated meters to improve **efficiency** and **reliability** for our members.

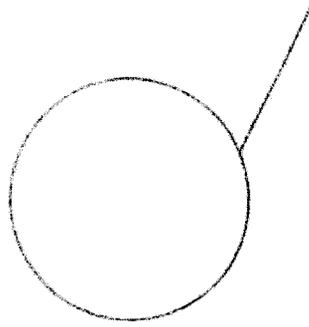


What to expect

Today you will need to **reset your electronic devices:** the power was out for a few minutes so you will need to reset electronic devices such as digital clocks.

This month your **bill will have two readings:** one from the old meter and one from the new meter.





SOMETHING NEW

to help us

SERVE YOU BETTER

We're installing automated meters to improve **efficiency** and **reliability** for our members.

We want to serve you better. With these new meters, we will be able to:

- respond faster to outages: the two-way meters tell us when and where there is an outage.
- provide more accurate information about outages and restoration times.
- increase efficiency – our employees will spend less time on the road reading meters and hunting down outages.



By upgrading our equipment and installing new meters with two-way communication we can improve reliability, keep costs down and serve you better. You can look forward to new services in the future.

Questions? You can find more information on our website www.trico.coop. Or call (520) 744-2944.



The TRICO Livewire

OFFICIAL PUBLICATION OF TRICO ELECTRIC COOPERATIVE, INC.

December 1998

A Touchstone Energy™ Partner



Trico Member Advisory Council members and new employees recently toured Arizona Electric Power's Apache Station Generating Plant and Corporate headquarters. The group learned how the power that Trico distributes is generated. Many thanks to AEPCO for a great tour and a tasty lunch!

Correction

There was a typographical error in last month in the Notice for Nominations by Petition. The Copy in Section 3 should have read: "The incumbent directors of these districts whose terms will expire at the meeting are L. Nick Buckelew, District 3 (Three Points area), and John R. (Jack) Reesy, District 6 (Green Valley, Corona, Vail)." We apologize for any confusion the error may have caused.

See page 3 for information about Trico's 1999 Washington Youth Tour

Trico Holiday Office Closed

New Years Day
 Memorial Day
 Independence Day
 Labor Day
 Thanksgiving Day
 Day After Thanksgiving
 Christmas Day



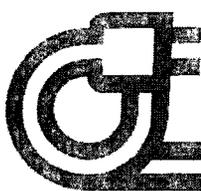
Members at SaddleBrooke help themselves to coffee and cookies before visiting with Trico board and staff. 2682400

District Coffees Explain Consumer Choice

In October and November Trico visited nine locations in its service territory to meet with its members for coffee and informal conversation. Trico staff and board members were on hand to answer any questions its customer/owners might have. Topics of discussion ranged from deregulation and consumer choice, to how the cooperative plans to maintain and improve power quality in the future through implementing new technology and building the system. We were delighted by how well the events were received, and truly enjoyed this opportunity to get to know our members better.

Turtles to help Trico Win Meter Reading Race

In a world where faster is generally considered better, the old story about the Tortoise and the Hare is often forgotten. Even today, however, slow and steady sometimes wins the race. Such is the case with the Turtle Automatic Meter Reading / Energy Management System. These special meters automatically read and report the kilowatt hours a consumer has used, plus peak and minimum demand usage. The Turtle moves slowly, taking over 24 hours to report the information it gathers back to the cooperative, but there is no need for the process to be faster. Trico is using this new technology for meter reading in remote areas, saving many hours for our meter reading crew. We all know that time is money, so the new technology also helps us run our operation more economically.



The TRICO Livewire

OFFICIAL PUBLICATION OF TRICO ELECTRIC COOPERATIVE, INC.

July 1999

A Touchstone Energy® Partner



Power outages result from summer storms. Know what to do!

To ensure your safety and help us better serve you during a power outage, below are some helpful tips to follow during this year's stormy season.

- ♦ Determine if the problem is in your house or in our lines. Check your circuit breakers by turning them off and then back on.

- ♦ Report the outage to Trico immediately at 744-2944. You will need:

(1) the phone number and account number of the consumer without power.

(2) Any information which may help crews locate and repair the problem.

- ♦ Turn off all appliances, such as TVs, microwaves and computers to minimize damage if lightning strikes.

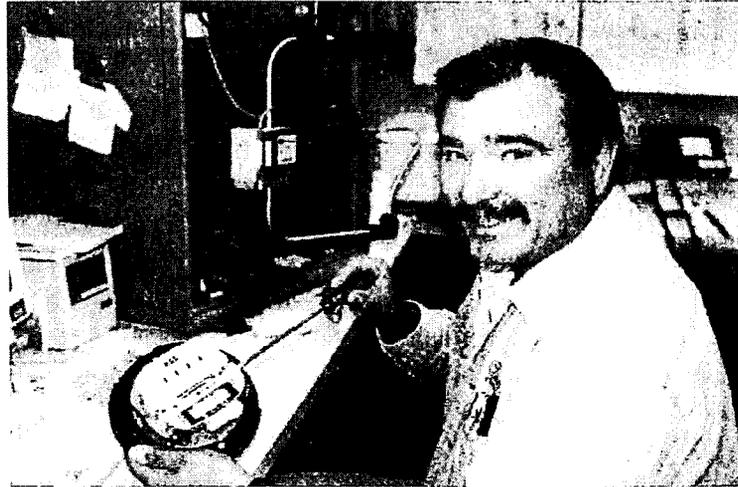
- ♦ Do not go near downed power lines! Report them immediately to Trico, the sheriff or 911.

- ♦ Do not hook up a generator to your service unless you have the correct equipment or a transfer switch inspected by an electrician **and inspected by Trico.** Generators without transfer switches will allow power to flow out to the lines where it can be a deadly hazard for line maintenance crews. 1254901

Trico Holidays - Office Closed

New Years Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Day After Thanksgiving
Christmas Day

Has your electric meter been replaced by a Turtle?



Dan Gonzales, meter tester, performs a calibration check on a Turtle™ Automated Meter.

As technology continues to move at the speed of light, Trico has a program that involves using a product that moves at a much slower pace, a turtle's speed to be exact.

The Turtle™ Automated Meter Reading System (AMR) is a meter reading system that uses low frequency power line carriers to transmit meter information/data over long distances to a substation receiver. The receiver then relays the information to our Trico office. The meter transmits the daily data over a long period of time (approximately 24 hours). There are several advantages to using the Turtle™ AMR:

1. Since it is a slow transmission, more data can be sent along the frequency.
2. It is useful in the more rural areas where long distances are involved.
3. It is very cost effective - less power is needed to generate/send the data.
4. Human resources can then be focused in highly populated areas while Turtles are concentrated in more rural areas.
5. Tampering can be reduced; Turtles are equipped with tamper devices.
6. It could also help reduce outage time.

The Turtle™ Meter Reading System was originally developed with help from an NRECA research program, and it works best along rural lines. Trico Electric Cooperative began a pilot test of this program in the Three Points area late last year. The program has since been expanded into the Marana area as well. By midsummer, the target time for completion of the program, a total of 1000 meters will have been installed in selective sections of Three Points and Marana.

An energy efficient electric heat pump could make your home more comfortable this summer. An ERC Loan could help you pay for it. Call 744-2944 ext. 1343 for details.

The TRICO Livewire

OFFICIAL PUBLICATION OF TRICO ELECTRIC COOPERATIVE, INC.

A Touchstone Energy® Cooperative



January 2005

Visit our website at www.trico.coop

Turtles Save Trico Time and \$\$



Photo by Johnny Kaercher
Apprentice Meter Technician Scott Plum
and Meter Reader Julie Hogan display Turtle™ meters.

About five years ago Trico began testing and installing Turtle™ meters with the goal of starting an automated meter reading (AMR) program in the future. Contingent upon budget approval for 2005, we will begin the AMR program this month. The program is slated to take five years with the projected completion date by the end of 2009. By that time, every Trico customer will have an automated Turtle™ meter.

These meters automatically transmit electric usage information through Trico's power lines to a substation receiver. The receiver then relays the information to Trico's office. The meters transmit the daily data over a 24-hour period.

Substation equipment needed to receive the data being sent by the meters will be installed over the first year and a half of the program.

Our meter readers will begin changing out meters this month as they do their normal routes. So, each month some old meters will be changed out for new automated meters. Also, all new services will be set up with the automated Turtle™ meters. Until the substation equipment is operational, we'll continue to do manual meter reads of all services. When our system is fully automated it will still be necessary to go to members' homes and businesses periodically to check meters

for safety issues, general maintenance and regulated sample testing.

The Turtle™ automated meter reading system has many advantages. First and foremost is cost savings. Having automated meters means we won't have to increase our meter reading staff to accommodate growth. In fact, Trico eventually plans to phase out its meter reading positions. This does not mean that our current meter readers will be losing their jobs. Instead they will be trained and transitioned into other positions.

Other benefits of the automated meter reading system are:

- helping to improve tamper-detection
- helping with reliability issues - for load studies to help with planning in-system improvements
- helping us troubleshoot for maintenance on the lines, transformers, etc. thus helping us be more proactive to potential problems on our lines and system
- helping track blinks and outages

Upgrading our metering system will take time. We have over 30,000 Trico members and eventually each one will have a new Turtle™ meter. If you don't already have a Turtle™ meter, you will be getting one. It will take a while, so please be patient with us as we work to bring better, quicker and more reliable service to you, our members.

Trico Holidays -
Office Closed
New Year's Day
Memorial Day

1304

Happy New Year!

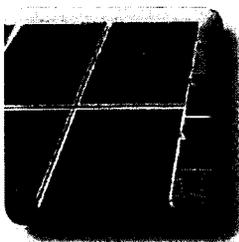
We have hidden three account numbers in this newsletter. Find



**Vincent Nitido,
Trico CEO and General
Manager**

**“You can monitor
your energy usage
on a daily or even
hourly basis.”**

1337401



Sun Farm savings

The Trico Sun Farm produced 43,625 kWh in March, saving Trico Members more than \$1,800.

Own part of the Sun Farm!
Go to www.trico.coop, or call 744-2944, ext. 1524.

Automated meters, SmartHub apps help you make smart energy choices

When I started work, I got my first cell phone. It was approximately the same size and weight as a brick and it cost 25 cents a minute to use it.

Flashforward to today and we have cell phones with more advanced technology than the NASA computers used to put men on the moon. And it all fits in the palm of your hand.

Times change and technologies evolve. This is certainly true at Trico.

Back in the day, the standard electrical meter was mechanical, with spinning wheels and gears. Today, meters are electronic, helping you to monitor your electric usage on a daily and sometimes even minute-by-minute basis.

These automated meters help Trico read meters remotely, reconnect service remotely and locate outages more quickly and precisely. This not only helps Trico provide better service and improve reliability, it also helps Trico to cut costs and keep rates in check.

Trico has been utilizing these more sophisticated meters for many years and, in the coming months, we hope to get the entire Trico system on smart meters.

These meters make it easy for you to see exactly how much energy you're using and when you're using it. While Trico will continue to read your meter and bill you on a monthly basis, you have the ability, via the Trico Energy Analysis Dashboard (TREAD) system on E-Bill, to monitor your energy usage on a daily or even hourly basis. And that can help you better manage your energy usage and your Trico bill.

Trico's meters utilize a variety of technologies, including cellular technology and Power Line Carrier (PLC). What does that mean?

Meters using cellular technology are exactly what you think they are -- data from the meter is transmitted to Trico using the same type of system your cell phone uses. PLC meters send data back to Trico over the power lines.

Some folks have raised concerns about these technologies; specifically, they're worried that their personal data could be compromised or used in a manner that infringes on their privacy.

It's important to note that Trico only receives your total electrical usage. As such, Trico cannot 'see' individual household devices or monitor individual activities. Furthermore, we take our Member's personal information very, very seriously. Trico abides by stringent policies protecting the privacy and security of your electric usage data and will never share Member information with third-parties.

Trico will continue to read your meter once a month and to bill you once a month. The enhanced meter reading features are simply a benefit to you as a Trico Member.

Another exciting development at Trico is the introduction of SmartHub, an app for your smartphone and tablet device that enables you to monitor your Trico account anywhere, anytime. Go to www.trico.coop to learn more about SmartHub. Visit the Apple App Store or Android Marketplace to download the free app.

Automated meters, on-the-go access to your account -- these are just a few of the ways Trico is improving service and reliability while keeping costs down.

If you have questions, please don't hesitate to call me at 744-2944, ext. 1307. Or, email vnitido@trico.coop.

Template Letter

Sent to all Trico Electric Cooperative, Inc. Members in 1999 on Trico Letterhead

Trico Electric Cooperative, Inc. (Trico) is off to a great start introducing Automated Meter Reading equipment to our members. You have been part of a successful pilot program that proved to us that this technology is highly reliable and necessary to provide you with the most modern equipment available.

You were selected to participate in a program that helps Trico become a leader in meter-reading technology. Trico has installed one of the newest AMR devices at your service site. An AMR or Automatic Meter Reading device is a method of communicating remotely with a meter to extract data information. This is done through radio signal, telephone line, cellular connection, satellite or the actual power line.

This data may be extracted hourly, daily and/or monthly, including with it important information about the distribution network. The AMR will automatically retrieve and transmit your meter data information back to Trico. This is done without the need to dispatch a meter reader directly to your service location for each reading. However, this will not eliminate Trico's obligation to insure the integrity of each electric service.

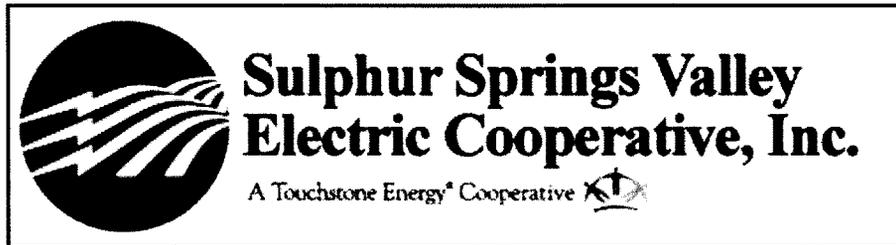
Why would Trico want to implement this new technology?

- AMR's lower meter reading costs of accessing difficult to reach services that are frequently estimated or services that need disconnects and reconnects.
- AMR's provide a safety measure... meter readers would no longer need to read services where there is an unfriendly dog or where the meter is inaccessible because of a locked gate.
- AMR's detect meter tampering, therefore reducing power theft.
- AMR's increase efficient customer service. Meters can be read anytime of the month.
- AMR's provide the utility with valuable load information for scheduling power. This will be necessary with the adoption of competition.

We certainly hope you are as excited as we are about having you join in our efforts to offer you the newest in meter reading technology. If you have any questions about this program, please feel free to call, we'll be happy to share more information.

We look forward to the opportunity to better serve you.

Sincerely,
TRICO ELECTRIC COOPERATIVE, INC.



Meeting the energy needs of Southern Arizona!

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[Home](#) » [SSVEC Meter Information](#)

SSVEC Meter Information

WHAT KINDS/TYPES OF METERS DOES SSVEC USE?

SSVEC uses Automated Meter Reading (AMR) and Automated Meter Infrastructure (AMI) meters. These meters collect meter readings via the electric lines that provide electricity to your home or structure.

HOW DO THE AMR/AMI METERS WORK?

Our meters are commonly referred to as “power line carriers” (PLC). These meters measure the amount of electricity going into your home or business and send the readings through the power line to SSVEC, hence the name “power line carrier.”

WHAT IS THE DIFFERENCE BETWEEN AMR AND AMI METERS?

AMR meters work best in rural areas where the distance from the home or business to the substation is long. AMI meters work best in urban areas where there is a high density of meters.

WHEN AND WHY DID SSVEC DECIDE TO USE AMR/AMI METERS?

During 2000-2002, SSVEC conducted an extensive study of automated meter reading technologies and the accuracy and cost effectiveness to use these types of meters versus the old mechanical meters and manual meter reading. The results of these studies were clear-cut. Based on the decreased costs to read the meters, increased efficiency, and system improvements, the SSVEC Board of Directors

voted to test the AMR/AMI meters and the testing began in 2002. Based on the success of the tests, the board voted to install AMR/AMI meters on all SSVEC electric services.

There is a considerable cost savings. With the installation of the AMR/AMI meters, we have eliminated the manual meter reading process and expenses and assigned those personnel to other areas and duties in the company. Also, we no longer have the added costs of maintenance and repairs of the meter readers' vehicles and automated meter readings considerably reduce some of the other "field trips" previously made to manually read mechanical meters. In short, changing to the AMR/AMI meters assists SSVEC in keeping its rates as low as possible.

In addition, the AMR/AMI meters assist SSVEC in maintaining the quality of power we are providing. Automated meters recognize and alert us to power line quality issues, allowing us to be proactive and repair problems quicker and make needed repairs to small problems before they become larger ones. In short, these meters make our entire system more reliable and lessen outage times.

ARE THESE METERS LIKE THE ONES WE HAVE HEARD ABOUT THAT ARE BEING USED IN CALIFORNIA AND OTHER STATES THAT HAVE CREATED SOME CONTROVERSY?

Absolutely not!! The meters in California and elsewhere that have created some controversy use a radio frequency and then broadcast those readings to a collector point tower and then to the utility.

DO THE SSVEC AMR/AMI METERS USE RADIOS TO TRANSMIT THE METER READING SIGNAL?

No. The SSVEC meters use a power line to carry or send readings.

DO THE SSVEC METERS COLLECT ANY INFORMATION ON MY APPLIANCE USAGE?

No. The SSVEC AMR/AMI meters cannot track or record individual appliance usage. Instead, our meters only record the whole house total usage just like the old mechanical meters did.

DO THE AMR/AMI METERS COLLECT OR TRANSMIT ANY PERSONAL INFORMATION?

No. The SSVEC AMR/AMI meters do not transmit personally identifiable information over our power lines.

ARE THERE ANY HEALTH ISSUES ASSOCIATED WITH THE SSVEC AMI/AMR METERS?

No. Remember, the SSVEC AMR/AMI meters simply send a reading across the same electric line that provides electricity to your home.

CAN THE AMR/AMI METERS PERFORM LOAD SHAVING OR SHEDDING?

No. The SSVEC meters do not have the ability to perform load shaving or load shedding.

HOW MANY AMR/AMI METERS HAS SSVEC INSTALLED?

SSVEC has recently completed installing automated meters on all of our members' electric services. So, now more than 52,000 cooperative meters are AMR/AMI meters.

DID SSVEC NOTIFY ITS MEMBERS OF THE SWITCH FROM MECHANICAL METERS TO THE NEW AMR/AMI METERS?

Yes. SSVEC mailed letters to all our members following the successful testing of the automated meter reading project. Again, based on the decreased costs, increased efficiency and system improvements, SSVEC wanted to inform members of the results, and that we would be changing out over the next several years its old mechanical meters for the new AMR/AMI power line carrier meters. This letter can be found below.

In addition, prior to actual change-out of the meters per area, SSVEC sent another letter to our members. This letter can also be found below.



Sulphur Springs Valley Electric Cooperative, Inc.
A Touchstone Energy[®] Cooperative 

Dear Member:

During 2000-2002, SSVEC conducted an extensive study of automated meter reading (AMR) technologies and the accuracy and cost effectiveness to use these systems versus manual meter reading. The results of these studies convinced the SSVEC Board of Directors to test this product. Based on the success of this test, the Board voted to install 750 single phase AMR meters during 2002.

The AMR system that SSVEC has chosen involves meters with an accuracy level exceeding the standards mandated by the Arizona Corporation Commission. This system will automatically send your meter reading to our office via the power line. The AMR system will not only save SSVEC money and keep our rates stable, but it can also detect potential trouble spots in our distribution system, which will allow us to maintain and repair situations or problems, thus reducing outages.



Sulphur Springs Valley Electric Cooperative, Inc.

A Touchstone Energy® Cooperative 

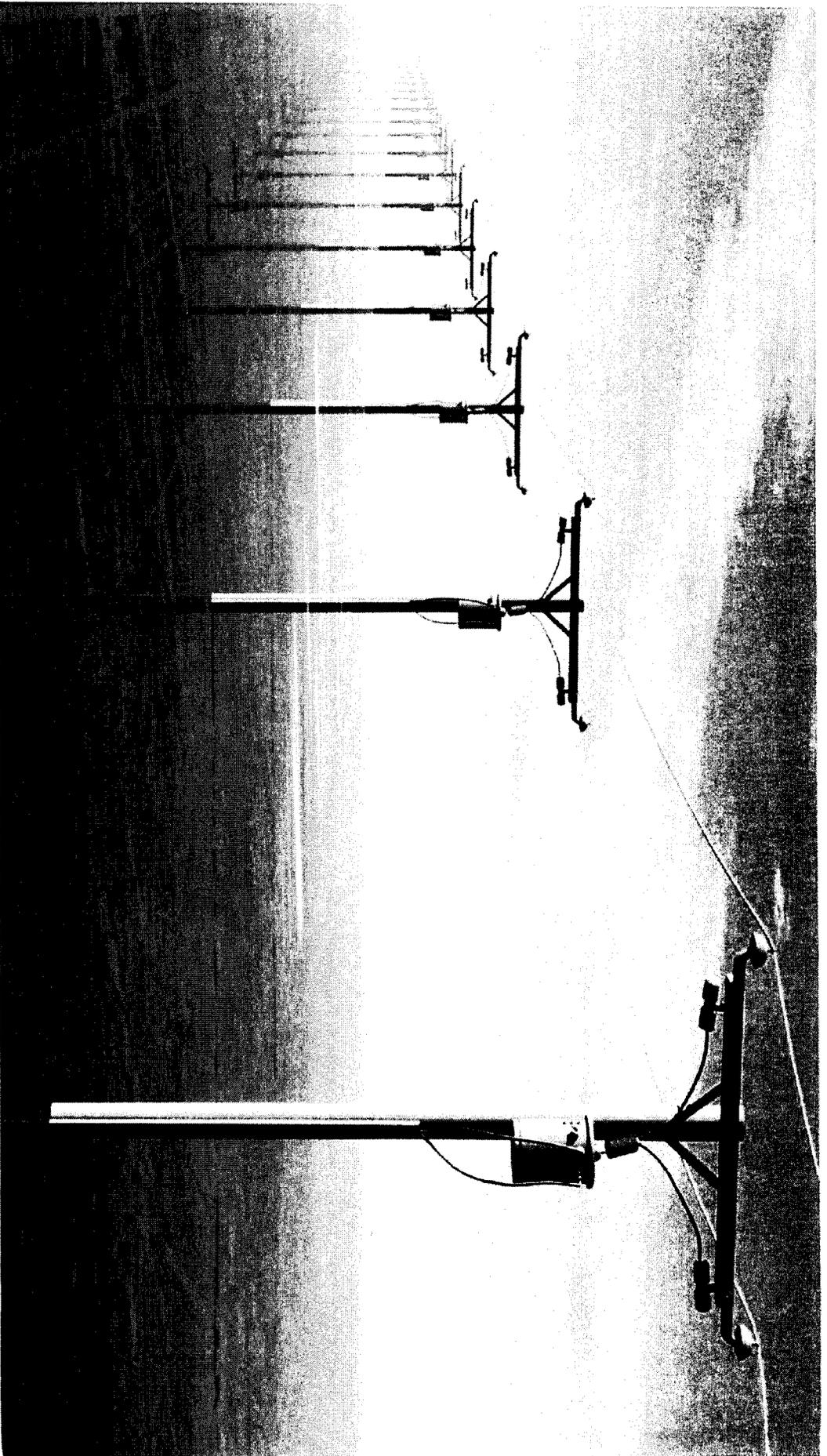
Dear Member:

As technology advances, SSVEC continues to upgrade to equipment and products that allow for better and more cost effective methods of doing business. Currently, and for the next few months, SSVEC will be in your area replacing your current meter with a new AMR (automated meter reading) meter. In order to change out the meters, our meter readers will need access to the meter. If your meter is not easily accessible, we will be contacting you to arrange a suitable day and time for the change-out. Safety procedures require that we throw the main breaker to the off position when removing and installing a meter, so you will experience a brief (approximately 30 seconds) interruption in electric service during the change out.

- [Site Map](#)
- [Privacy Policy](#)

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[Silverwoo Design, LLC](#)



MOHAVE ELECTRIC COOPERATIVE

Mohave Electric Cooperative

AMI Meter Exchange

Member Communications Program

May 27, 2010 to present

May 27, 2010

Initial Communication Planning

Meeting

Action Item: Develop Communication Plan and Schedule in conjunction with November 1 start date for meter exchanges.

June 10, 2010

Communication Plan ready and implementation in progress.

✓	Monthly- In Progress	Monthly Newsletter
✓	1-Sep	FAQs
✓	September 15-30, 2010	MEC Employee Assembly/ Department Meetings
✓	By Oct 1 with Updates by Substation	MEC Website
✓	1-Oct	Press Release:
✓	1-Oct	Billing Communication (insert in bill)
✓	1-Oct	Separate Letter Mailout
✓	1-Oct	Law Enforcement Notification
✓	1-Oct	Leave Behind
✓	1-Oct	Authorization Letter for Install Contractors
✓	1-Oct	Name Badges for Install Contractors
✓	Material ready By Oct 1 - Ongoing	Community talks by MEC Mgt



CURRENTS

Connecting our Community! JUNE 2010

IMPROVING OUR FUTURE

Fresh, new look for mohaveelectric.com

Mohave Electric's newly improved and more contemporary website is now available with features that will allow members the opportunity to access information quickly and easily. Members will be able to retrieve forms online, view energy efficiency tips and programs, submit questions online and access our monthly Currents Newsletter. The two-phase project has been launched with a new design and format.

The 2nd phase of the project with expected completion in fall 2010, will incorporate member account information into the site allowing more convenience and flexibility for member account access including online bill payment. Not only are we always looking for ways to help our members use energy more efficiently, we are also looking for ways for members to manage their usage more conveniently and more effectively. Stayed tuned for more information.

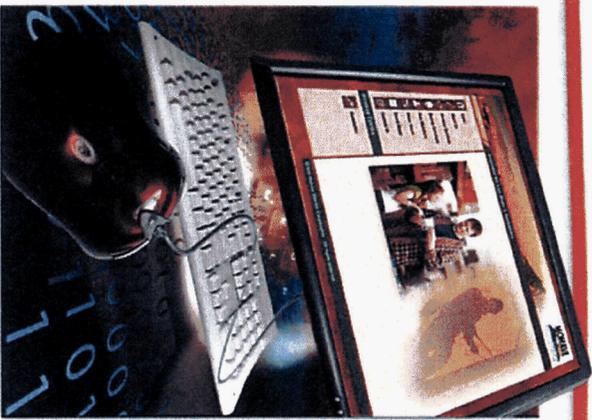
You asked. We listened.

Beginning September 2010, Mohave Electric will also be updating our billing process with a new and improved billing statement. New features will be incorporated into the statement giving members more information about their energy usage.

The new statements will include detail for the current month as well as previous month's detail. A yearly graph will display monthly usage so members can compare their overall usage at a glance.

Smart Grid Technology

The first step toward a better future has begun. Thanks to an ARRA Grant from the U.S.



Department of Energy, Mohave Electric is moving forward with plans for Smart Grid improvements. Communication infrastructure for the Smart Grid project will begin this summer laying the foundation for a two-way flow of information between the co-op's system and its call center.

The project is a long-term endeavor that will improve system reliability by providing more accurate data and eventually may include enhanced services to members.

Smart Grid Technology implementation is expected to bring six million dollars of additional economic development activity to our local community.

Watch for more news about Mohave's website, improved member account information, and Smart Grid.

June 2010
Newsletter article
mailed as bill insert

THE SMART GRID: AN INTRODUCTION.

What is Smart Grid?... Smart Grid is a modernization of the nation's network of energy generation, transmission, and distribution systems that delivers electricity to consumers. America's electric power infrastructure has served us well for many decades, but is now reaching its limitations. Smart Grid will help power companies continue to deliver the level of service and reliability we've come to expect.

Full implementation will evolve over time; however, many positive steps are being taken today. Each utility, including investor-owned, cooperative, or public, has its own implementation plan depending on the provider's size and location, existing infrastructure, and available resources.

Mohave's Smart Grid will use enhanced data, communication, and digital technology for improved energy management which allows Mohave to operate more efficiently due to the precise data it provides. Consumers may not fully be aware of the benefits but J. Tyler Carlson, Mohave Electric CEO explains, "Smart Grid gives us the data to help our system operate more efficiently and effectively on behalf of our members." Managing operations and maintenance costs effectively helps keep costs down. Communication provided by the system allows optimized power flows, reduced loss, maximization of resources, and faster response to outages. This will benefit members indirectly.

It may be difficult for members to envision the Smart Grid's ultimate value during its building phase but an improvement in the billing process will be evident in September. The new customer information system will give members access to detailed account data allowing an active role in managing their energy usage. Enhanced features for members will include our new billing system featuring electronic billing. Bill paying will be easier and more convenient. Consumers want to have as many tools and choices as possible to manage their energy usage and energy bills. Mohave's first step in improving member services begins with the synergy of Smart Grid and the Customer Information System. More enhanced services may be available in the future.

Will Mohave's Smart Grid improvements and plans raise rates? No. An ARRA Grant from the U.S. Department of Energy has substantially reduced Mohave's investment, making it possible to move forward with our Smart Grid technology and implementation.

Mohave's Smart Grid improvements are an investment in the future that will take place as a long term process. The first step in the installation of Smart Grid, is laying the foundation of the communication infrastructure and the groundwork for an intelligent monitoring system that provides faster and more accurate system information. Mohave's Smart Grid improvements will begin this summer. Keep your eyes open for future progress and updates.



“The Smart Grid: An Introduction”

July 2010

Bill insert

September 2010

- Newsletter article mailed as bill insert
- Employee meetings
- MEC Website
 - FAQ's
 - AMI meter brochure
 - News Releases on Smart Grid and AMI meters
 - Meter exchange schedule
- Ongoing meetings with various community organizations and groups

September 2010

CURRENTS SEPTEMBER 2010



In partnership with the Bullhead City Police and Fire Departments, Mohave Electric Cooperative joined forces with thousands of communities nationwide for "America's Night Out Against Crime."

The evening was an opportunity for the community to support law enforcement officers and fire fighters in their efforts to fight crime.

More than 200 area residents enjoyed the 12th annual National Night Out Block Party hosted by Mohave at our Customer Service Office on August 3, 2010. Tyler Carlson, Mohave CEO said, "We are proud to join

forces to strengthen police and community partnerships in crime prevention and drug awareness. Children enjoyed face painting with "Shelley the Clown," collected goodies from numerous NNO participants and learned important safety messages from police and fire department personnel. We appreciate the support of the many, generous local businesses that demonstrated their community spirit by donating door prizes for this event to promote awareness, safety and neighborhood unity.



Helping Members Use Energy Wisely!



Mohave's Smart Grid implementation is in motion with the installation of new communication infrastructure. Smart Grid will use enhanced data, communication, and digital technology for improved energy management allowing Mohave to operate more efficiently.

The co-op's call center has been modernized to accommodate the equipment necessary to process the enhanced data. Smart Grid will provide. This will allow the call center to process information more expeditiously.

Tyler Carlson, CEO explains, "Smart Grid will give us the data to help our system operate more efficiently. Managing operations and maintenance costs effectively helps keep costs down and that helps members."

Communication provided by the system allows optimized power flows, reduced loss, maximization of resources, and faster response to outages.

Visit our website at www.mohaveelectric.com for Smart Grid updates.



ABOUT US MEMBERS SERVICES ENERGY SOLUTIONS COMMUNITY BOARD ROOM E-BILL CUSTOMER SERVICE

SMART GRID

- SMARTER BILLING
- SMARTER GRID
- SMARTER CUSTOMER SERVICE
- SMARTER ENERGY MANAGEMENT
- SMARTER SAFETY



AMI DIGITAL METER

Tracking technology to save you money

With Smart Grid, you can enjoy the benefits of a smarter grid. Smart Grid will give you the data to help our system operate more efficiently. Managing operations and maintenance costs effectively helps keep costs down and that helps members.

Communication provided by the system allows optimized power flows, reduced loss, maximization of resources, and faster response to outages.

Attachment	Rate
Mohave Electric Smart Grid 2010/2011	\$1.22 per kWh
Smart Grid Threat from Smart Meters	\$23.75 per kWh
Smart Meter Report	\$0.05 per kWh

Form letter from YouTube

MEC received a few of these and responded to members with accurate information

Use the letter below to forbid smart meter installation (or modify the letter to demand the meter be removed).

From:

Energy Customer's Name

Street Address

City State Zip

To:

Energy Provider

Street Address

City State Zip

Date of letter

NOTICE OF NO CONSENT TO TRESPASS AND SURVEILLANCE, NOTICE OF LIABILITY

Dear (Energy Provider) and all agents, officers, employees, contractors and interested parties,

Dear (Energy Provider) and all agents, officers, employees, contractors and interested parties,

If you intend to install a "Smart Meter" or any activity monitoring device at the above address, you and all other parties are hereby denied consent for installation and use of all such devices on the above property. Installation and use of any activity monitoring device is hereby refused and prohibited.

Informed consent is legally required for installation of any surveillance device and any device that will collect and transmit private and personal data to undisclosed and unauthorized parties for undisclosed and unauthorized purposes. Authorization for sharing of personal and private information may only be given by the originator and subject of that information. That authorization is hereby denied and refused with regard to the above property and all its occupants. "Smart Meters" and digital meters violate the law and cause endangerment to residents by the following factors:

1. They individually identify electrical devices inside the home and record when they are operated causing invasion of privacy.
2. They monitor household activity and occupancy in violation of rights and domestic security.
3. They transmit wireless signals which may be intercepted by unauthorized and unknown parties. Those signals can be used to monitor behavior and occupancy and they can be used by criminals to aid criminal activity against the occupants.
4. Data about occupant's daily habits and activities are collected, recorded and stored in permanent databases which are accessed by parties not authorized or invited to know and share that private data by those who's activities were recorded.

5. Those with access to the smart meter databases can review a permanent history of household activities complete with calendar and time-of-day metrics to gain a highly invasive and detailed view of the lives of the occupants.
6. Those databases may be shared with, or fall into the hands of criminals, blackmailers, corrupt law enforcement, private hackers of wireless transmissions, power company employees, and other unidentified parties who may act against the interests of the occupants under metered surveillance.
7. "Smart Meters" are, by definition, surveillance devices which violate Federal and State wiretapping laws by recording and storing databases of private and personal activities and behaviors without the consent or knowledge of those people who are monitored.
8. It is possible for example, with analysis of certain "Smart Meter" data, for unauthorized and distant parties to determine medical conditions, sexual activities, physical locations of persons within the home, vacancy patterns and personal information and habits of the occupants.
9. Your company has not adequately disclosed the particular recording and transmission capabilities of the smart meter, or the extent of the data that will be recorded, stored and shared, or the purposes to which the data will and will not be put.
10. Electromagnetic and Radio Frequency energy contamination from smart meters exceeds allowable safe and healthful limits for domestic environments as determined by the EPA and other scientific programs.

I forbid, refuse and deny consent of any installation and use of any monitoring, eavesdropping, and surveillance devices on my property, my place of residence and my place of occupancy. That applies to and includes "Smart Meters" and activity monitoring devices of any and all kinds. Any attempt to install any such device directed at me, other occupants, my property or residence will constitute trespass, stalking, wiretapping and unlawful surveillance and endangerment of health and safety; all prohibited and punishable by law through criminal and civil complaints. All persons, government agencies and private organizations responsible for installing or operating monitoring devices directed at or recording my activities, which I have not specifically authorized in writing, will be fully liable for a fee of \$100,000.00 for any violations, intrusions, harm or negative consequences caused or made possible by those devices whether those negative consequences are provided by "law" or not.

This is legal notice. After this delivery the liabilities listed above may not be denied or avoided by parties named and implied in this notice. Civil Servant immunities and protections do not apply to the installation of smart meters due to the criminal violations they represent.

Notice to principal is notice to agent and notice to agent is notice to principal.
All rights reserved.

Signature

What are the questions and concerns about AMI meters?

- Does the meter see inside my home?
- Can the meter turn off my air conditioner?
- I have concerns about RF and wireless emissions.

Overcoming Misinformation

- Does the meter see inside my home?

No, the meter collects only aggregate energy consumption.

- Can the meter turn off my air conditioner?

No, the meter can not control appliances

- I have concerns about RF and wireless emissions

MEC's AMI meters are NOT wireless. The meter reading is communicated over the power line, or hard wired, and there are no RF emissions.

How do we respond to questions?



Customer Service Manager answers questions
about AMI Meters

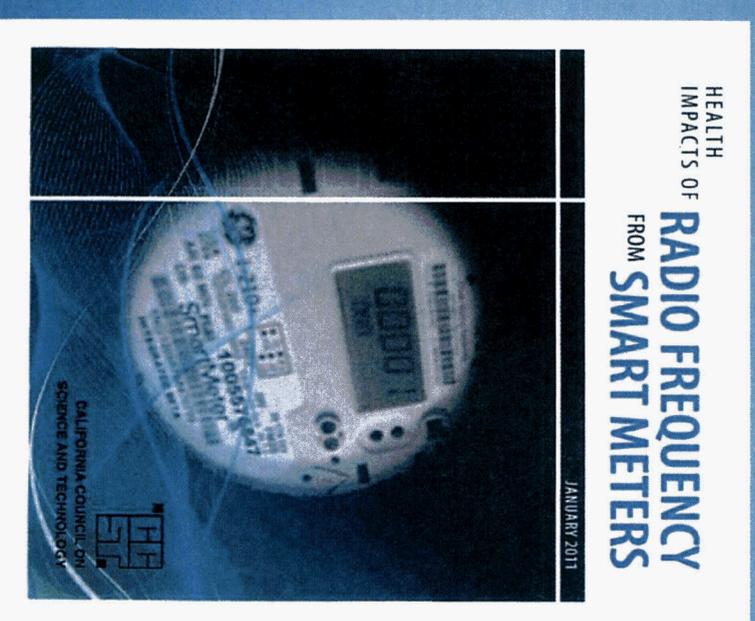
How do we respond to questions?



Operations Supervisor meets with members at their home

How do we respond to questions?

- Information provided on website
 - FAQ's
 - Reports on Smart Meter
 - California Council on Science and Technology
 - Utilities Telecom Council



<http://ccst.us/publications/2011/2011smart.php>

How do we respond to questions?

The CCST Smart Meter Project Team suggests alternative configurations such as wired where wireless meters are a concern to consumers

Health Impacts of Radio Frequency from Smart Meters
Response to Assembly Members Huffman and Monning

California Council on Science and Technology
January 2011

KEY REPORT FINDINGS

1. Wireless smart meters, when installed and properly maintained, result in much smaller levels of radio frequency (RF) exposure than many existing common household electronic devices, particularly cell phones and microwave ovens.
2. The current FCC standard provides an adequate factor of safety against known thermally induced health impacts of existing common household electronic devices and smart meters.
3. To date, scientific studies have not identified or confirmed negative health effects from potential non-thermal impacts of RF emissions such as those produced by existing common household electronic devices and smart meters.
4. Not enough is currently known about potential non-thermal impacts of radio frequency emissions to identify or recommend additional standards for such impacts

OTHER CONSIDERATIONS

Smart electricity meters are a key enabling technology for a "smart grid" that is expected to become increasingly clean, efficient, reliable, and safe at a potentially lower cost to the consumer. The CCST Smart Meter Project Team offers the following for further consideration by policy makers, regulators and the utilities. We appreciate that each of these considerations would likely require a cost/benefit analysis. However, we feel they should be considered as the overall cumulative exposure to RF emissions in our environment continues to expand.

1. As wireless technologies of all types increase in usage, it will be important to: (a) continue to quantitatively assess the levels of RF emissions from common household devices and smart meters to which the public may be exposed; and (b) continue to investigate potential thermal and non-thermal impacts of such RF emissions on human health.
2. Consumers should be provided with clearly understood information about the radiofrequency emissions of all devices that emit RF including smart meters. Such information should include intensity of output, duration and frequency of output, and, in the cases of the smart meter, pattern of sending and receiving transmissions to and from all sources.
3. The California Public Utilities Commission should consider doing an independent review of the deployment of smart meters to determine if they are installed and operating consistent with the information provided to the consumer.
4. Consideration could be given to alternative smart meter configurations (such as wired) in those cases where wireless meters continue to be a concern to consumers.



How do we respond to questions? With a letter



Dear Member:

For a number of reasons there are questions being asked about the type of electric meters being used today, to help deliver more efficient energy to members. MEC understands the concern of members for the potential for any type of new equipment to invade privacy and either transmit control signals beyond the meter and into the home, or collect detailed usage information from within the home back through the meter.

Please understand that the new MEC digital AMI meters do not collect any additional member energy information different from the existing meters or metering system that are already in place, the new meters are just more efficient. They are not designed to be capable presently nor in the future of monitoring specific appliance or equipment consumption of any type in the members' residence. The MEC system was designed and selected in part to prevent this intrusive monitoring from occurring or being able to occur. The meters and the installed support AMI system as designed and constructed simply will not and cannot be made to monitor, collect or control what any member does with its electricity inside the home.

The system does everything your existing meter does with two exceptions, it no longer transmits the information wirelessly and instead uses a wired system to send the meter reading of electric usage to MEC, and the system allows remote meter reading just of electric usage from a larger distance than the existing meters. Our web site provides information about issues and safety regarding wireless transmission from an independent California study if you are interested in further information on this issue.

Remote meter reading is an important component of future cost savings and efficiencies for the Cooperative, and ultimately for the members. The technology also provides the infrastructure for cost reducing rate programs required by the Arizona Corporation Commission (ACC), and often requested by members. These cost reducing rate programs are optional to the members, but are dependent on the new technology. Prevention of the implementation of the digital AMI system will result in additional costs to MEC, and ultimately for the members. It is quite possible, and most probable, that any 'opt out' program for individual members will include assigning all or a portion of those additional costs to the member preventing implementation or opting out. It is MEC's contention that the costs for prevention of implementing the technology be borne by the members demanding such.

It is also important to note that the existing metering infrastructure and meters are becoming obsolete, parts and repair are being phased out by the vendors, and vendors are producing new versions of the old-type meters. We will be faced with replacing existing meters with new technology in any case.

Mohave's Smart Meters do not use wireless technology. Instead the meters communicate by way of a wired front wireless system through the power lines. In fact, for Mohave members, the new meters actually reduce radio emissions. The January 2011 study on smart meters performed by the California Council on Science and Technology (CCST) demonstrates that there is no proven causal connection between the RFs produced by radio based AMI systems and health. MEC wired technology decision was based partially on this conclusion. Please visit our website at www.mohaveelectric.com to view reports and studies on smart meter systems.

We hope that this is a sufficient response and an affirmation that Mohave Electric does take all health concerns, plus preserving the integrity of your property and your right to privacy very seriously.

Sincerely,
MOHAVE ELECTRIC COOPERATIVE, INC.

In nearly every case,
after talking with the
member, they were
comfortable that their
questions and
concerns were based
on misinformation and
there was no longer an
issue with exchanging
their meter

ORIGINAL

Jennifer Ybarra

0000130675

E-01750A-11-0136

From: Joe Anderson
Sent: Friday, September 23, 2011 8:35 AM
To: Newman-Allen
Subject: Electric rate increases

September 23, 2011

Corporation Commissioners Newman,

My name is Joe Anderson and I live in the Mohave Electric Cooperative service area and have been for the past 34 years. Even though I do not like it, I understand the Cooperatives current rate increase proposal and the reasons for it. There are a couple issues that I would like to address, one of which is directly related to this issue.

I do not agree with placing fixed costs into the energy rate. I believe that fixed costs need to be de-coupled and added to all Coop members equally because that would be fairer. It appears that the majority of Mohave Electric Coop's shortfall right now is in the operations budget, which is directly related to the fixed costs. Please make these costs, collected under the Customer Charge, be equal to all members/users.

My other concern is that about the negative publicity that is going around about smart meters. Do people not realize that similar technology meters have been attached to their gas meters years ago and most people are already connected to utilities via phone line or cable and/or internet? Why all of a sudden a big problem with another utility moving forward in technology?

Allowing people to 'opt out' of this progressing system would only sustain current operations, which due to the increases in costs, would increase costs overall. Those costs would have to be absorbed, not just by them but by all members, which again would not be fair. Please research this issue more to see the true reality before allowing people to be steered to an uneducated and more expensive way of doing business.

Thank you for your considerations in these matters.

Sincerely,
Joe Anderson

Arizona Corporation Commission
DOCKETED

OCT 24 2011

DOCKETED BY
MVA

DOCKET CONTROL
AZ CORPORATION COMMISSION
OCT 24 10 22 AM '11
RECEIVED

Members support
AMI meters

October 3, 2011

ORIGINAL

0000130309

Corporation Commissioners,

My name is Greg Raymond and I live in the Mohave Electric Cooperative service area. Even though I do not like it, I understand the Cooperatives current rate increase proposal and the reasons for it. There are a couple issues that I would like to address, one of which is directly related to this issue.

I do not agree with placing fixed costs into the energy rate. I believe that fixed costs need to be de-coupled and added to all Coop members equally because that would be fairer, hence the coop concept. It appears that the majority of Mohave Electric Coop's shortfall right now is in its operations budget, which is directly related to the fixed costs. Please make these costs, collected under the Customer Charge, be equal to all members/users. The electricity is there for all to use and connect to, please don't place the burden of these costs on a use based system, the more you use the more you pay, for these operational costs, these costs should be shared equally amongst all users.

My other concern is that about the negative publicity that is going around about smart meters. Do people not realize that similar technology meters have been attached to their gas meters years ago and most people are already connected to utilities via phone line or cable and/or internet? Why all of a sudden a big problem with another utility moving forward in technology? The electrical system of this country needs to modernize and get into the tech game, smart meters do this. I can now watch my daily usage and adjust it need be because of smart meter technology. Please do not allow a few paranoid people disrupt the deployment of this wonderful technology.

Allowing people to 'opt out' of this progressing system would only sustain current operations, which due to the increases in costs, would increase costs overall. Those costs would have to be absorbed, not just by them but by all members, which again would not be fair. Please research this issue more to see the true reality before allowing people to be steered to an uneducated and more expensive way of doing business.

Thank you for your considerations in these matters. Should you like to discuss this further please feel free to call me [REDACTED]

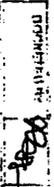
Sincerely,

Greg Raymond

Arizona Corporation Commission

DOCKETED

OCT 5 2011



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AZ CORP COMMISSION
DOCKET CONTROL

Letter of Support

June 2011

Membership Annual Meeting

- Display table (meter and brochures)
- Opportunity to talk to members about AMI Meters and answer questions



CEO Presentation at Annual Meeting provided opportunity to answer questions about AMI meters



August/September 2011

Town Hall Meetings on rate filing provided an opportunity for CEO to answer questions about AMI Meters.

- August 16 - River Valley HS – Mohave Valley
- August 18 - Mohave HS – Bullhead City
- August 25 - Mohave Community College - Bullhead City
- September 21 – Cedar Hills Elementary – Kingman

October 2011- present Phase 2

Ongoing notification of meter exchange
working areas published in local newspaper

MEC continues installing new meters

CONTINUED

BULLHEAD CITY — Mohave Electric Cooperative crews are installing new Advanced Metering Infrastructure meters in Bullhead City and Fort Mohave.

Merer technicians will be working in the following areas for approximately four weeks:

- West of Highway 95 from Sterling Road, south to Aztec Road in Fort Mohave.
- South from Aztec Road to Boundary Cone Road on both sides of Highway 95 in Fort Mohave.
- Scattered installations throughout Bullhead City

The meter technicians will be in vehicles marked with the Mohave Electric Cooperative logo and will have photo ID. They will knock on your door to let you know that they are there to install your new meter, but you do not need to be present for the meter change.

The meter technician will not need access to your home or business other than to the electric meter location. Anyone asking to come into your home, or without Mohave Electric authorized credentials, should be reported to law enforcement.

For updates on Mohave's Smart Grid, visit www.mohaveelectric.com and click the Smart Grid button.

October 2011 – present

Phase 2 Meter Exchanges

Notification by phone call delivered 3 -7 days before exchange.

This is an important message from Mohave Electric Cooperative about your new electric meter. Mohave Electric is in the process of replacing old, dial mechanical meters with new digital meters. We will be working in your area during the next two weeks.

When we change the meter, your power will be briefly interrupted, but will be restored in a matter of minutes. Meter technicians will have ID authorizing them as employees for Mohave Electric. If you have any questions about this process, please call Mohave Electric at 928-763-1100.



Day of Meter Exchange

Meter technician
knocks on door to
notify member that
he is there to
exchange the meter



October 2011

News story on local TV station informs members about meter exchanges



MEC Website ongoing updates

- FAQ's
- AMI meter brochure
- News releases on Smart Grid and AMI meters
- Meter exchange schedule

The screenshot shows the Mohave Electric Cooperative website. At the top left is the Mohave logo with the tagline "Electric Cooperation". Below the logo is a navigation menu with links: ABOUT US, MEMBER SERVICES, ENERGY SOLUTIONS, COMMUNITY, BOARD ROOM, E-BILL, and CUSTOMERS. A search bar is located at the top right. The main content area features a "News and Events" section with the following items:

- February 23, 2012: CO-OP WINS TOUCHER COPPER THEFT LAWS
- February 26, 2012: CO-OPS URGE MEMBERS TO VOTE
- January 23, 2012: MOHAVE ELECTRIC COOPERATIVE SEACHES WILDESTONE

Below the news section is a "Quick links" list: CO-OP CONNECTIONS, WI-POWER®, HOOPER DAM ALLOCATION, SMART GRID/AMI DIGITAL SERVICES, and Biz2Landmark E203. A large blue banner for "Wi-Power® Internet + Phone Service" is prominent, stating it is now available to Mohave Electric Cooperative's members and highlighting "KEEP AFFORDABLE RELIABLE" with a starburst graphic. A red arrow points to a link in the banner that says "Click on the Wi-Power Quick link for more information". To the left of the banner is a "Healthy Savings Discounts" section with icons for various services and a "More Savings in 2012 with Your Co-Op Connections Card" section. The bottom of the page contains a "CONTACT US" section with a phone number and a "SEARCH" button.

May 2012

- 31,000 meters installed
- Full meter exchange of 35,000 meters expected by December 2012

Ongoing

Member Education Program

MEC's program is proactive and responsive to provide information, educate and familiarize members about AMI.

Future District and Annual Member Meetings

- June 18 – Mohave Valley
- June 19 – Bullhead City
- June 20 – Fort Mohave
- June 22 – Mohave Valley

NEC AMI Education Plan Summary

Navopache Electric Cooperative has identified several tools that we use to educate our members about our AMI system. Below is a listing of those tools.

Website – currently in use

Navopache has a page on our website dedicated to AMI. Members are able to find information and resources that help them understand the AMI system. Attached is a print out of the webpage.

hiLites - Ongoing

hiLites is Navopache's monthly newsletter that is delivered to all members. Attached is the hiLites articles that we have used in the past, and the ones we have prepared for the next few months.

Newspaper – Ongoing

Navopache has a press release ready to deliver to our local newspaper, the White Mountain Independent. Navopache, also, will offer an in-depth interview to WMI.

Letters to Members - Ongoing

Navopache has prepared a letter to send to members prior to installing new meters in their area. A sample letter is attached.

Public Meetings - Ongoing

Navopache will hold public meetings for each District.

WEBSITE

NEC is currently expanding its Advanced Metering Infrastructure (AMI) program. We are exchanging existing meters with newer digital meters manufactured by the Elster American Meter Company.

AMI provides remote communication capabilities, which allows us to remotely read meters. We receive the same billing information we always have. Your meter number and a meter reading are transmitted via a radio signal to our office. The RF exposure is extremely low; even lower than a cell phone or microwave. And, our meters only transmit for 1.5 seconds every 4 hours (a total of 9 seconds per day).



Benefits of Advanced Metering Infrastructure:

Improved EFFICIENCY: With remote meter reading and reconnection, we can save members time and money. It also provides more accurate meter readings no matter the weather, and more consistent billing periods.

Improved RELIABILITY: AMI helps locate and respond to outages faster; it also provides data for use to improve power quality.

Improved AFFORDABILITY: Operating more efficiently helps minimize costs. We can also use the new data to help our members find solutions to their billing questions.

History

Frequently Asked Questions

No Health Threat From Smart Meters

EPRI Case Study

Is RF Exposure Safe?

Elster EnergyAxis

If you have additional questions about AMI, you can contact a Customer Service Representative at 928-368-5118,

HISTORY OF AMI DEVELOPMENT AT NAVOPACHE ELECTRIC COOPERATIVE

The development of the microprocessor and personal computing availability has touched all of our lives and changed forever the way that we do business at almost every level of our society. It would be difficult to identify any business sector that has not embraced digital technology and high speed communications to improve its specific business functions. The experience of the electric power industry is a prime example of the positive impact that the development of electronic capabilities has had in the workplace. Only the creation of the REA itself in 1935 by the FDR Administration to bring electricity to our rural countryside can compare with the improvement in our quality of life that electronics in the electric industry have made possible.

The adoption of electronic technology and high speed communications in the electric industry is now under scrutiny for the perceived invasion of privacy and detrimental health impacts on humans that these devices are falsely accused of. The 25-year history of implementing electronic metering systems at Navopache Electric Cooperative (NEC) and independent comprehensive scientific studies, disprove both of the claims being made against the technology which has become known as Advance Metering Infrastructure or AMI.

NEC began investigating the benefits of implementing technology to its members in the early 1980's. C. Mac Eddy, NEC General Manager from 1976-1989 had only one motivation that drove his desire to analyze the impact of technology on electric utility operations – to reduce the cost of service to cooperative members.

NEC followed the example of telephone companies in those days whereby you could make a phone call late at night at a greatly reduced cost from a daytime phone call. Why wouldn't this work for electricity use as well? Our systems were similar in that usage was much greater during the daytime hours than late at night, leading to inefficiency.

If there were a way to encourage members to shift their electric usage to "off-peak" times, we could lower the cost of a kilowatt hour during those time periods without increasing power costs to the cooperative from its power supplier.

In reality, by adding electric usage to traditionally low use time periods would actually lower the incremental cost of a kilowatt to the cooperative at the wholesale level. NEC members would save on their individual monthly power bill while the cooperative would save on its wholesale power bill by increasing the efficiency of the power system.

The efficiency of an electric power system is measured by its load factor which compares average usage to maximum usage for any given time period. The higher the differential between the two quantities results in a lower load factor and lower efficiency. By encouraging electric usage at low use time periods so as to "even out" electric usage throughout a 24-hour period, load factor, or efficiency, is increased and costs are reduced.

$$\frac{\text{Average Demand}}{\text{Maximum Demand}} = \text{Load Factor}$$

NEC began experimenting with the first electronic meters developed for residential users by General Electric in the mid-1980's. The meters were equipped with a microprocessor and a time clock to be able to separate kWh usage by time periods of the day. The functionality was essential to move forward with the development of "off-peak" or "Time-Of-Use", (Time of Use) electricity rates.

The meters displayed kWh usage during different time periods of the day in a digital format, replacing the mechanical dials that meter readers previously relied upon for the total kWh consumption, regardless of when power was used. All kWh's, regardless of when they were used, were priced the same in the days of electro-mechanical meters.

NEC received permission from the Arizona Corporation Commission, (ACC), to implement Time of Use rates on an experimental basis in 1986. Based upon a financial analysis of revenue received from residential usage, we priced the off-peak kWh usage at one-half of the cost of a kWh on-peak. It became clear very soon that NEC members who volunteered for the off-peak rates were shifting their usage to off-peak times, using more energy on a monthly basis while spending less. The load factor of the NEC power system began to improve and our members began saving money on their electric costs. In 1988 NEC applied for and received a permanent "Time-Of-Use" rate tariff from the ACC.

In the meantime, electric utilities were appealing to meter manufacturers for more functionality in their electronic meters. If we were recording kWh usage in real time, it seemed that a Time of Use meter could develop a continuous load curve which would provide information proved invaluable in identifying when peak demands on the NEC power system were likely to occur. Knowing this, we could identify those times of the day which could be designated off-peak. Additionally, the usage data provided by the Time of Use meter helped solve billing inquiries as member could see exactly how much and when they were using electricity in their home.

NEC designed off-peak rate time periods to be from 9:00 pm until 7:00 am and from 1:00 pm until 4:00 pm, Monday through Saturday. All day Sunday was designated off-peak as well. These hours equated to 60% of the total time that electricity was priced at half-price, providing a tremendous savings to NEC residential members.

With the success of TOU rates, we turned our attention to developing programs which could maximize the benefits to members. We know that electric home heating is the single largest use of electricity in most member households and considered more expensive than other forms of energy for this purpose. How could we change this reality?

NEC learned of a product called and Electric Thermal Storage heater, a system designed much like a water heater in that a similar element heated high-density bricks which provided heat evenly and quietly throughout a room. Could we equip these heaters with a time-clock so that they would only operate during the off-peak time periods? Of course we could, and we did.

We purchased an ETS heater and installed it at our headquarters to test its operation. We installed a time on it and connected a TOU meter to it to record the electric usage of the heater. Our test proved that the ETS heater could provide home heating with electricity at half the price. We launched a program to market ETS heaters to our membership and it was an overwhelming success. Today, ETS heating accounts for 25% of the total NEC electric usage, all of which occurs during the off-peak time periods of the day at great savings to our members. The NEC load factor continues to improve and our members save more money on their electric costs.

Next on our radar was the second largest electric user in the average home: the water heater. Could a water heater that only came on during off-peak times provide enough hot water to meet the demands of an average household? The answer was yes in most cases, with careful planning by the household. For those times when additional hot water is needed, the time clocks that were provided were equipped with an over-ride function that would allow the water heater to operate on demand, regardless of the time of day.

As these developments are taking place, NEC is constantly appealing to meter manufacturers to expand the functionality of their TOU meters. We were developing a load control system through the meter by using separate timers; could a meter be equipped with a load control switch activated by the time clock in the meter? Yes, and it was. External timers were no longer necessary with this development. The meter could control an individual load, or when connected to an enclosure of relays provided by NEC, control multiple loads automatically.

NEC also appealed to the ETS heater manufacturer to develop an on-board timing system for its electric heaters in response to the growing acceptance of off-peak electric rates in the industry. The manufacturer did so, recognizing that they could fill a newly developing niche market with electric utilities that were offering off-peak electricity rates.

During this same time period, meter manufacturers began to add on-board communication capabilities to their meters, recognizing that physically reading meters was a significant operational cost to utilities. NEC embraced this technology as well and started installing these types of meters on its large commercial loads where accuracy of meter reads is extremely important. NEC used various radio frequencies and cell phones through the 1990's to read these meters without a physical meter read and the associated costs.

By implementing cost effective technology such as TOU meters, ETS heating systems, high speed communications and end-use load control programs, NEC has provided its members with products and services which improve the quality of life for everyone. None of these programs would be reality without the development of NEC's AMI system over the last 25 years.

NEC has had the capability to create a load curve of member usage for many years and have never experienced a complaint that the data retrieved constituted an invasion of privacy. On the contrary, the data retrieved from a TOU meter is limited to only those quantities and values required to accurately prepare a members monthly invoice. Meter data has never been used by NEC for any other reason other than to provide superior customer service and operational system planning.

Likewise, NEC has remotely interrogated electronic meters through various high speed communications mediums since the late 1980's without having any negative health impacts reported by anyone. NEC urges its members to visit our website, www.navopache.org, to review scientific studies by the Electric Power Research Institute, (EPRI), and the Utilities Telecom Council, (UTC), which provide conclusive evidence that there are no health risks associated with reading meters via a radio frequency. The amount of power required to transmit meter data is thousands of times less than many electronic devices found in all of our homes. The duration of power transmission by the TOU meters in use at NEC is 1.5 seconds per hour, while many of our household electronic devices operate on a continuous basis, utilizing radio frequencies to transmit and receive data.

The technologies used to develop an AMI system are the very same technologies which make doing our business on-line from home possible nowadays. Would we give up that convenience? Would we rather stand in line at the bank, or use the internet to save time and money? Would we rather write checks and buy stamps to send in our monthly payments, or do it from home via the internet?

The technologies used to develop an AMI system are the very same technologies which allow an Emergency Medical Technician to transmit a victim's vital signs and symptoms from an accident scene to doctors at a hospital. This capability greatly improves a patient's emergency treatment and prepares the hospital to ensure that the right resources are available upon the patient's arrival. These technologies save critical time and in many cases are the difference between life and death.

NEC believes that the benefits of developing its AMI system have been proven over the years to provide superior customer service, to save money for our members and the cooperative, and to provide information to improve the reliability and efficiency of our power system. NEC has never experienced any complaints of personal privacy invasion or of negative health impacts since its implementation of its AMI system. NEC welcomes any questions regarding these issues and will respond in a professional and timely manner to any inquiry it receives.

FREQUENTLY ASKED QUESTIONS

What is AMI?

Advanced metering infrastructure (AMI) is the installation of electronic multifunction electric watt hour meters equipped with communications capabilities, hard-wired or wireless, which allows the remote acquisition of meter data for billing functions, system operational and planning data, and customer service assistance.

What is Project AMI?

NEC is upgrading our current metering system to provide our members with a technology-enhanced method of reading member usage for billing purposes. The new meters offer features that will provide you with a better understanding of your electrical consumption so that you may make more informed decisions regarding your usage. The meters provide NEC with important diagnostics that will help increase power quality thus optimizing the electrical system. Increased diagnostic data improves productivity by pinpointing outages while providing a cost control method for operational expenses.

How much is Project AMI going to cost me?

There are no additional costs to our members. Cost of metering services is included in the monthly customer service charge.

Why doesn't NEC continue to use its existing automatic metering system?

NEC has utilized the benefits of remotely gathering reading data for 30 years. As with any technology, the utility industry has experienced a significant improvement in collecting energy consumption data.

What are the enhancements to automatic meter reading?

Current System: With our current remote meter reading system, NEC continues to undergo the unnecessary expense of driving within a short proximity of the meter to collect billable reads. The data transmitted from these meters is limited to strictly an on demand reading used to determine usage from one billing period to the next.

AMI System: AMI creates a truly automatic reading process. Usage data is now transmitted directly to our office using a combination of Radio Frequency (RF) and phone lines.

How is this going to benefit me?

Knowledge: One reading, once a month does not provide a member a clear picture of energy consumed over a billing period. Project AMI provides NEC's members tools for becoming a knowledgeable end-user. Until now, the ability to answer members billing questions in regards to increased usage has required cooperative personnel to install very costly equipment at the member's residence. With AMI, all NEC members that have an AMI meter installed will directly benefit from the energy awareness data that is available.

Outage Management: AMI meters assist NEC with the ability to locate isolated outages at a meter level. Without AMI, NEC is dependent on member contact to locate isolated outage incidents on the system.

Cost Control: Metering advancement allows NEC to reduce vehicle expenses, unnecessary man-hours identifying outages and administration costs associated with metering data and billing. This cost control benefit lowers operational expenses across the board. As a not-for-profit electrical cooperative, all NEC members financially benefit.

Accuracy: Transmission of reading data removes human error from the equation, thus increasing the accuracy and efficiency of generating member billings and identifying system faulty points.

Consistency: Elimination of the restrictions of gathering billing reads to regular business hours. This enhancement allows consistency with statement dates and payment due dates while permitting uniformity to your billing time-period.

Power Theft: Although power theft is currently kept to a minimum due to procedures that NEC currently has in place, AMI meters offer the ability to identify potential related incidents more effectively and within a shorter time period thus saving members from undergoing this unfortunate expense created by dishonest individuals.

Privacy: Members with AMI meters will no longer require NEC staff to visit their property to obtain readings.

Convenience: Scheduling a service connection may be done in a more efficient fashion. The time restraints and drive time of NEC staff manually connecting an existing service is greatly reduced due to the added benefit of remote communication.

When will NEC exchange my meter?

The deployment of Project AMI affects members within NEC's territory through a systematic approach that follows a current internal system of locality. Prior to upgrading the meter, NEC will use our current member information to contact you. If you do not believe that NEC has updated contact information, please call 928-368-5118 so that we may update your records.

May I request that my meter be installed sooner?

Unfortunately, we do not have the ability to accommodate member requests for an early installation. NEC is exchanging the meters in the most efficient way possible.

How many visits will it take to install the new meters?

Under normal circumstances it should only take one visit.

Will there be any interruption during the installation?

Electric service interruption is minimal. Although the interruption is brief, you may need

to reset the clocks in your home.

What type of information is being transmitted?

Only meter numbers, energy usage readings, and diagnostic information will be transmitted through encrypted signals. *Personal data will not be transmitted so your information will remain private and secure, as it always has.*

Is the metering network secure?

NEC considers privacy and security a top priority. We treat each member's personal information and data as confidential. NEC will only share member data with the member of record or to whom the member of record provides written permission. The Information Technology (IT) security controls NEC utilizes reflect energy industry best practices. They are designed to provide a very high level of assurance that our systems cannot be compromised.

How do I know that my meter is measuring accurately?

NEC meters are tested at the manufacturer and then a sample is tested again by NEC before they are installed. Meter accuracy is mandated by the Arizona Corporation Commission, and NEC submits annual meter test reports in accordance with ACC regulations.

How will my billing be affected by the meter exchange?

There is no charge for upgrading your meter. The first month following the meter exchange, members will receive a bill with two readings: one for the old meter and one for the new meter.

Will more Time-of-Use options become available with the new meters?

Yes. Time-of-Use billing currently depends on the meter keeping track of on and off peak usage. With the new metering system, Time-of-Use schedules are programmed into most residential meters at time of install. Using this method, NEC billing representatives have the ability to evaluate actual on-peak and off-peak consumption to determine with certainty if a member will benefit from the cost saving time-of-use rate.

Do NEC AMI Meters control appliances within the customer's home?

The only appliances controlled are those that the member voluntarily opted to have controlled, such as Electric Thermal Storage (ETS) heaters. Control of these appliances can be performed by the meter or by a separate device purchased by the member.

Can I opt out of receiving a new meter?

NEC does not offer an opt-out program.

How do the meters transmit information?

A communication device is embedded in each meter that communicates data to collection equipment located at various points throughout the NEC service territory.

AMI meters use the same FCC-approved frequencies that have been used for many years in devices such as baby monitors, portable phones, remote controlled toys and medical monitors.

Communication between the AMI meter and data collection points will be transferred over the 900 MHz spectrum with transmitter power output of 0.25 watts of power, for 1.5 seconds every 4 hours for a total of 9 seconds per day, with a technology known as Radio Frequency (RF). The transfer of data gathered at various collection points is then uploaded daily.

How much RF power is emitted from the meters?

The meters that NEC has selected for Project AMI have a transmitter power output of 0.25 watts of power, for 1.5 seconds every 4 hours for a total of 9 seconds per day.

In comparison:

	Transmitter power*	Antenna gain	Typical distance	Power density	Typical exposure times
Cellular phone	600 mW	1	1 cm	48 mW/cm ²	Continuously when in use
Cordless phone (handset)	20 mW	1	1 cm	1.6 mW/cm ²	Continuously when in use
EnergyAxis meters (close proximity)	250 mW	1	61 cm (2 ft)	0.02 mW/cm ²	1.5 seconds every 4 hours
WiFi access point or NIC	100 mW	1	30.5 cm (1 ft)	0.008 mW/cm ²	Nearly continuously when in use
EnergyAxis meters (typical proximity)	250 mW	0.5	305 cm (10 ft)	0.0001 mW/cm ²	1.5 seconds every 4 hours

*May be higher depending on the specific device

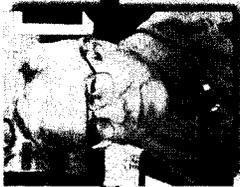
(Taken from the RF Safety and the EnergyAxis System document available on our website)

Are there any potential health concerns with the radio frequency (RF) signals?

Several national studies have been made on low-power RF transmissions that AMI uses, but no negative health impacts have been found. The AMI system NEC deploys meets all applicable FCC requirements.

Misinformation regarding AMI meter program

The automated meters used by NEC are not surveillance devices. The technology we employ allows the meter to transmit any usage data via radio frequency in order for us to correctly bill the member and ensure that there is a consistent supply of power to the home. The technology does not allow other data to be transmitted or recorded. The meters do not have the ability to restrict the usage of electricity by the member.



Automated Metering Infrastructure

by Dave Plumb, Chief Executive Officer

Navopache Electric Cooperative will be installing 5,000 or so Automated Metering Infrastructure (AMI) meters in our service territory for each of the next 4-5 years. To date, we have about 8,000 installed in the system. Because there is a great deal of misinformation on the Internet and from other sources regarding AMI meters, I want to provide Navopache members with accurate information regarding the meters we use.

Navopache uses a meter made by Elster which communicates via a radio signal. Some information members have read or heard suggests these radio signals constitute a health hazard. That is incorrect. The Elster meter emits a very weak radio frequency (RF) field. The natural or background RF field of the earth is 8.7 times greater. The RF field from the human body is 20 times greater (yes, you and all other humans emit RF energy). That microwave oven you use to reheat your coffee has an RF field over 300 times that of the AMI meter. Finally, the cell phone you and I carry emits an RF field over 12,000 times that of our meter (and we put that field up against our heads). All of these fields, however, are less than the allowable field determined to be safe by the Federal Communications Commission.

Other concerns have been expressed regarding privacy issues. Some of the misinformation available would have you believe that, by installing an AMI meter, Navopache can tell which appliances you are using, in which rooms you have lights on, even (incredibly) what your sexual activities are. These claims are not just false, they are nonsense. The Elster meter Navopache is installing records your total kWh usage, as electric meters have always done. The only difference is, Navopache doesn't have to send a meter reader to read the usage, since the meter transmits that information. The only other information Navopache gets from the meter is an indication that there is voltage at the meter or, in other words, that you have power at your home or business. This can be of special significance if you are away when your service is interrupted, such as by a tree taking down your service line or the fuse blowing on the transformer serving you. We can see your outage, investigate the cause, and fix the problem before you even know you had a problem. This can also let us know if someone tampers with your meter.

In summary, the Elster meters Navopache is installing in our system are safe, tell us exactly what our meters have always told us about you (ie, how many kWh you use), and can help us restore service when you have an outage.



Veterans Day is the U.S. holiday honoring military veterans. It commemorates the anniversary of the signing of the armistice that ended World War I and was originally celebrated, and still is in some countries, as Armistice Day. The armistice was signed the 11th hour on the 11th day of the 11th month in 1918. U.S. President Woodrow Wilson first proclaimed an Armistice Day for November 11, 1919.

NEC offices will be closed in observance of Veteran's Day, Friday, November 11, 2011. Office hours for the rest of the week will be as follows: Area offices will be open Monday through Thursday, 7am-12pm and 1pm -3:30pm. The Lakeside office will be open Monday through Thursday 7 am - 6 pm.

Thanksgiving is a U.S. holiday that began in 1621 celebrating the great abundance of the harvest season. It is traditionally a time for family and friends to gather, reflect, be grateful, and feast! President Franklin D. Roosevelt signed a bill into law making Thanksgiving a national holiday on the fourth Thursday in November.

NEC will be closed in observance of the Thanksgiving holiday, Thursday and Friday, November 24th and 25th. Office hours for the rest of the week will be as follows: Area offices will be open Monday through Wednesday, 7am-12pm and 1pm -3:30pm. The Lakeside office will be open Monday through Wednesday 7 am - 6 pm.

Keep current on
outage information!

FOLLOW US AT:

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follow us on
twitter



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The Cost of Power

by Chuck Moore, CEO



As you may be aware of, NEC management has been negotiating a new Power Sales Agreement (PSA) with our power supplier, Public Service Company of New Mexico (PNM), since early 2009. Negotiations have been ongoing to obtain the best possible PSA at a reasonable cost to our members. Since July 2009, NEC has experienced three increases in our base rate (demand and energy) totaling approximately 31%. PNM continues to request higher rates than the NEC management considers reasonable therefore, negotiations continue. While these negotiations have been working towards a settlement, PNM filed a rate with the Federal Energy Regulatory Commission (FERC) that will increase our present purchased power base rate by approximately 53%. This new rate filing went into effect April 14, 2012 and will impact our purchased power costs passed through to the members. Once NEC and PNM settle on a reasonable rate structure, which we anticipate to be less than the rate filed at FERC, NEC will request a refund with interest. Any amounts refunded will be credited back to our members. NEC's management and Board are determined to obtain the best possible cost of power and the commitment of a long term power supply to meet the needs of our members into the future.

NEC Members Support SHARE

Since 2010, NEC members have supported Project SHARE to the tune of \$44,000! That means that in the past 2 years, \$44,000 was available to help our neighbors pay their energy bill when they are experiencing a financial emergency. One seven zero two one four. Project SHARE (Service to Help Arizonans with Relief on Energy) is a program through the Salvation Army. It is designed to help people in a financial emergency, such as unexpected medical bills, loss of job, or death in the family, pay their energy bill. NEC members can choose to have a monthly contribution added to their bill earmarked for SHARE. NEC collects the contributions from our members, and sends them to the Salvation Army. While Project SHARE is a statewide program, historically, the amount used in the NEC service territory has been proportionate to the amount donated by NEC members. Thank you NEC members for stepping up to help those in need.

Navopache Electric Cooperative is proud to announce Project AMR

As your electric utility provider, NEC continually strives to provide you, our members, a safe, reliable electric distribution system. Project AMR will take our commitment to you to the next level. AMR stands for Automated Meter Reading. This safe, dependable technology is one that large, highly congested metropolitan communities have benefited from for many years. As with all technologies, the cost effectiveness, dependability and efficiency of AMR has improved to the point that now residents of our beloved White Mountains will be able to gain the same advantages. Within the next few months NEC will be reaching out to our members to both inform and expound on the exciting benefits this project has to offer.

New Meters to Help Us Serve You Better

NEC is installing *additional automated meters*

Navopache Electric Cooperative, (NEC), is expanding the installation of its Automated Metering Infrastructure system (AMI), to increase the efficiency and reliability of our electric system. NEC began using digital electronic meters in the late 1980's to support "time-of-use" electricity rates and demand side management programs, such as the electric thermal storage, (ETS), heating programs, both money saving options for our members.

The biggest change if you're getting an automated meter? With the new automated meters, NEC will be able to read meters remotely and securely from the co-op's headquarters. Expanding our AMI system to allow remote meter reading will save us time and money.

In addition to reducing operational costs, the new meters, which can communicate with co-op headquarters, will help improve the reliability of our system. The new technology will allow us to detect problems quicker and to determine outage locations more precisely. In some cases, we will be able to fix the problem before members know their power has been out.

The meters, which provide periodic information about power use will help members understand when they are using electricity. With this information, NEC customer service representatives will be able to provide more accurate and timely information to help members address billing inquiries.

The installation of additional automated meters to complete the cooperative's AMI system is on-going. To view additional information about the meters, members can visit our website at www.navopache.org.

NEC has a long history of investing in cost effective new technology to improve efficiency and reliability for its members. The installation of and AMI system will accomplish these goals while continuing to control the costs of our electric service into the future.

New Meters to Improve Reliability and Efficiency

Expansion of NEC's AMI system continues. As NEC Meter Technicians replace existing meters with the new digital Elster American Metering Company meters, here is what you can expect:

The impact of the installation is minimal. Co-op members can expect to lose power for a few minutes on the day of the installation. In addition, the next bill will show two meter readings: one from the old meter and one from the new meter.

The new automated meters from Elster will enable the cooperative to perform several functions remotely, such as reading meters and reconnecting power.

Other benefits from the meters include:

- Faster response to outages
- More efficient power distribution, helping us keep costs down for members
- Fewer outages
- Improved power quality (fewer spikes blinks and surges)
- More accurate information about outages and restoration times
- More information about your daily power use
- Better detection of power theft

Navopache Electric Cooperative is a member-owned, not-for-profit utility. NEC is looking out for its members by investing in new technology to improve efficiency and reliability.

Future hiLites article #3

Benefits of Advanced Metering Infrastructure:

Improved efficiency

Navopache Electric Cooperative is working to keep costs down by investing in efficiency. With new meters the co-op can read meters remotely, reconnect remotely and locate outages more quickly and precisely. Remote meter reading and improved outage management can save the co-op money, a savings that will benefit all members.

Improved reliability

AMI helps the co-op identify the location of outages and respond more rapidly to restore power.

Improved power quality

With more information coming from the meters, NEC can monitor the system better and improve power quality.

No more estimated bills or self-reads

New meters improve the accuracy of meter reading. AMI eliminates the need for estimated reads due to weather or shortages of man-power.

Improved customer service

The additional data from AMI can help us work with members to find solutions to their billing questions.

For more information about NEC's Advanced Metering Infrastructure, visit us on the web at www.navopache.org or call us at 928-368-5118.

Press Release

For Immediate Release: DATE
Press Contact: YOUR NAME

Navopache Electric Cooperative Announces New Meters to Improve Reliability and Efficiency

Lakeside, AZ – Navopache Electric Cooperative, (NEC), is expanding its Automated Metering Infrastructure system, (AMI), throughout its service territory to improve the reliability and efficiency of the existing electric distribution system.

Since the late 1980's, NEC has used automated electronic meters to support "time-of-use" electricity rates which save members fifty percent on electricity during "off-peak" time periods of the day.

In 2002, NEC began installing communications modules to existing electro-mechanical meters. That program allows NEC to read meters electronically with a hand-held device from a distance, improving accuracy and reducing the time required to physically read some of the co-op's 40,000 meters.

The new automated meters from Elster American Meter Company will support both time-of-use rates and remote communications capabilities for reading all residential meters. There have been nearly 1.4 million of Elster automated meters installed over recent years by the major electric utilities in Arizona who are developing AMI systems.

Other benefits from the meters include:

- Fewer outages
- Faster response to outages
- Improved power quality
- More accurate information about outages and restoration times
- Information about your daily power use
- Earlier detection of power theft

The impact of the meter change is minimal. Co-op members can expect to lose power for just a few minutes on the day of the installation.

Navopache Electric Cooperative is a member-owned, not-for-profit utility. NEC has a long history of investing in cost effective new technology to improve efficiency and reliability for its members. For more information, please contact NEC Customer Service at 928-368-5118, or visit us on the web at www.navopache.org.

Member Letter

Dear Member,

Navopache Electric Cooperative is currently expanding its Advanced Metering Infrastructure (AMI) program.

AMI provides remote communication capabilities, which allows us to remotely read meters. We receive the same billing information we always have. Your meter number and a meter reading are transmitted via a radio signal to our office. The RF exposure is extremely low; even lower than a cell phone or microwave. And, our meters only transmit for 1.5 seconds every 4 hours (a total of 9 seconds per day).

The new Elster American Metering Company meters will be remotely read and reconnected, which saves time and money. It also provides more accurate meter readings and more consistent billing periods. The AMI project will help locate and respond to outages faster which will improve our reliability. Operating more efficiently helps minimize costs. All of which are good for Navopache and our members.

Over the next month, Navopache crews will be in your area, exchanging existing meters with a new Elster American Metering Company meter. Meter Technicians will be in a Navopache vehicle and will carry ID. You will have a brief interruption in power when the Technicians remove the existing meter.

If you have any questions, please contact Customer Service at 928-368-5118. There is also additional information posted on our website at www.navopache.org.

Thank you,

Navopache Electric Cooperative

Automated Meter Reading

Technology proven, efficient, accurate and cost-effective

For several years, Duncan Valley Electric Cooperative has used various types of automated meter reading technology to help control the rising costs of meter reading.

The technology allows a utility to read your meter from a distance without even entering your property.

AMR systems provide a number of benefits. They:

- Reduce the number of miles driven to collect meter readings.
- Reduce the time it takes to read meters.
- Reduce the need to open gates and access members yards.
- Reduce safety hazard exposures for employees who have to deal with over-protective dogs or debris-strewn premises.
- Reduce errors that can occur in manual meter reading and data entry.

DVEC currently uses a Federal Communications Commission-approved electronic read transmitter (ERT) installed with the meter.

The ERT securely transmits meter data periodically. A hand-held computer with a built-in radio is able to receive the secure signal data and store it in its internal memory.

Here are a few frequently asked questions about AMR technology.

Has this technology been used before?

Yes. Meters equipped with radio modules is a proven technology being used by utilities throughout the world.

Can I still read my meter?

Yes. The cooperative's AMR meters will continue to have a display that will show your total energy usage. You can find your usage by calculating the difference between two readings you obtain at different times.

Will you ever need to access my meter?

Yes. DVEC will need periodic access to verify readings and inspect, monitor and maintain the meter and other equipment on member's premises, even though monthly access for meter reading will not be necessary.

Is my account information secure?

Yes. Personal information is not transmitted during the AMR process. Each ERT has a unique identification number that identifies its specific meter. The technology only transmits the meter reading and the meter number for the home or business. The information is matched to our customer database in our office in a secure setting.



A Step-By-Step Look at the Process

- ▶ A state-of-the-art electronic meter with an electronic read transmitter is installed at your home or business. For gas meters, an ERT is attached to the meter.
- ▶ As the meter reader drives through your neighborhood, a hand-held computer with a radio receiver can read your meter from the street. There is no need to access your premises each month.
- ▶ When our meter reader returns to the office, the meter data is transferred to our billing system and matched up to your account.
- ▶ Your monthly utility bill is generated with the information from the billing system.

Does the meter transmitter interfere with my cordless phone, television or other electronic devices?

No. The radio transmission operates in compliance with FCC regulations to avoid interference with other electronic devices. AMR devices

transmit at a power level of less than one watt. The technology does not interfere with televisions, radios, stereo equipment, garage door openers, wireless Internet connections or other electronic devices commonly found in a home or a business. ■


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Advanced Metering Technology FAQ

For several years, Duncan Valley Electric Cooperative has used automated meter reading technology to help control the rising costs of meter reading. The technology allows a utility to read your meter from a distance without even entering your property. Our AMR system provides a number of benefits. It:

- Reduces the number of miles driven to collect meter readings.
- Reduces the time it takes to read meters.
- Reduces the need to open gates and access members yards.
- Reduces safety hazard exposures for employees who have to deal with over-protective dogs or debris-strewn premises.
- Reduces errors that can occur in manual meter reading and data entry.

DVEC currently uses a Federal Communications Commission-approved electronic read transmitter (ERT) installed with the meter.

The ERT securely transmits meter data when prompted by a proprietary hand-held computer. The hand-held computer is able to receive the secure signal data and store it in its internal memory. When the meter reader returns to the office, the meter reading data is transferred to our billing system, and bills are calculated based upon the obtained meter readings.



Here are a few frequently asked questions about AMR technology.

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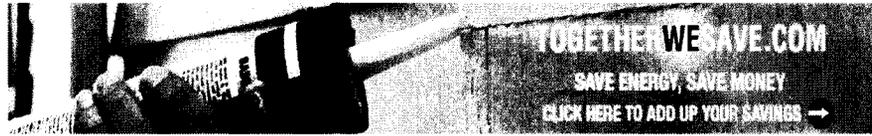
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