



Grand Canyon State Electric
Cooperative Association, Inc.



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Your Touchstone Energy Cooperatives

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

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Re: *Electric Cooperatives' Comments on the Generic Docket for the Investigation of
Smart Metering; Docket No. E-00000C-11-0328*

Dear Sir/Madam:

The following comments on the Arizona Corporation Commission's Generic Docket For the Investigation of Smart Metering ("SM") 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"). The Cooperatives' will address the issues raised in the September 8, 2011 Open Meeting on Smart Metering and the October 12, 2011 Staff Meeting.

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 rulemaking 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”) and more recently Advanced Meter Infrastructure (“AMI”) for over a decade because of the benefits and cost savings to their members. These comments address the types of meters installed by the Cooperatives, the benefits provided by each, the claims of adverse health and security impacts associated with smart meters and the consequences of implementing an opt-out policy within areas served by Cooperatives.

With the exception of the AEPCO, SWTC and Graham, each cooperative listed above has attached a summary of its SM program and installations to these comments. AEPCO, SWTC and Graham have not provided this summary because they have not installed any SM at customer locations. Finally, the Cooperatives will address the issues associated with an opt-out policy.

Types of Meters

The Cooperatives have installed either AMR (one-way communication) or AMI (two-way communication) equipment. Either type communicates customer usage, meter ID number and voltage information.

AMI typically uses either a power line carrier (“PLC or wire”) technology which sends a signal along the wire that supplies power to the location or a wireless technology using radio frequency (“RF”).

The majority of AMI that has been installed to date in Cooperative service territories has been PLC with two-way communication. Mohave, Sulphur and Trico use this technology. (Please refer to the AMI summaries for each cooperative attached to these comments for a more detailed explanation.)

Navopache uses a wireless Elster meter that is similar to that used by Arizona Public Service.

Duncan has installed AMR that is read by a meter reader using a handheld device.

While the majority of Trico’s AMI meters use PLC technology, Trico also uses some AMI with cellular communication for Time of Use (“TOU”) and Bi-Directional Net Metering due to the volume and/or frequency of information that must be transmitted.

Benefits of AMI

The benefits of AMI were discussed in detail at the September 8 Open Meeting. These benefits have not been disputed and may be summarized as follows:

- AMI lowers meter reading cost, with fewer meter readers and the elimination of vehicle and equipment costs.
- Improves meter reading accuracy
- Faster responses to outages
- Confirms power restoration
- Helps deter power theft
- Monitors the system and can help spot potential problems before they cause an outage
- Allows remote meter connection, remote disconnection, off-cycle reads, and conflict resolution between substation switching operations during customer billing periods
- Allows customers to monitor and control electric usage, while providing flexibility in service options like TOU, prepaid metering, and net metering

The aforementioned benefits will not be available if the Cooperatives cannot use AMI.

Information Transmitted From and To a Meter

Comments received by the Commission reflect significant customer misunderstanding on the privacy impacts from this technology. The few comments received from the Cooperatives' members represent a misunderstanding on how the meters work. In most cases, once the Cooperatives' have explained how and what information is transmitted, the members who have inquired do not object. Regardless of the type of meter or communication technology, the only information that the Cooperatives' AMI sends out is the meter identification and usage data that may be sent out monthly, daily or hourly depending on the member/customer's rate schedule billing requirements. The Cooperatives' AMI will also transmit critical voltage information in

order to monitor and ensure voltage quality. No personal customer information is sent from or to the meter. All information received or sent via RF is encrypted and password protected. The Cooperatives' AMI does not have the capability to communicate with any appliance in the home nor does the AMI have the capability to transmit appliance usage information back to the cooperative's office. In any event, each of the Cooperatives has extensive programs in place to protect the security and confidentiality of customer data, consistent with ACC Rules and the FTC's Red Flag Rules.

Customer Notice Given Prior to Smart Meter Installation

The Cooperatives provide notice to their members by including new metering information in their newsletters, bill inserts, notification letters, brochures, websites and press releases.

Adverse Health Perceptions

It was evident from customer comments provided at the September 8 Open Meeting that some customers have health concerns associated with RF and PLC used in metering. It should be noted that the Cooperatives have received only a few inquiries regarding the health impacts of SM. As stated above, AMI that uses PLC does not use RF to transmit information. Consequently, there can be no RF related health impacts associated with AMI that uses PLC communications.

There have been no proven health impacts associated with the use of PLC. PLC configurations have been in use by utilities for decades without adverse health impacts or customer complaints.

Trico began installing Hunt /Landis & Gyr Technology T1 PLC meters with one-way communication in early 2000. In 2002, Trico started installing the second generation of Hunt T2 meters, with two-way PLC communication. To date, over 32,000 of the Hunt T2 meters are deployed on residential customer's homes in Trico's service area. Trico has been deploying AMR for over 10 years and currently has only 4,000 meters left to change out. Since 2000, Trico has only had a few inquires concerning claims of adverse health effects relating to its meters. The majority of these inquires have been resolved by Trico providing the customer information regarding AMI.

The California Council on Science and Technology ("CCST") is a non-profit organization established in 1988 at the request of the California State Government and sponsored by the major public and private postsecondary institutions of California and affiliate federal laboratories in conjunction with leading private-sector firms. CCST has conducted a study on the use of RF in SM and published the study findings in January 2011. CCST published the following key report findings:

1. Wireless smart meters when properly installed result in much smaller radio frequency levels than 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 household electronic devices and smart meters.
4. Not enough is currently known about from potential non-thermal impacts of RF emissions to identify or recommend additional standards for such impacts.

Thus, the CCST study demonstrates that the type of metering used by Navopache, Duncan and Trico does not pose health impacts greater than other household appliances or cell phones. Trico has been installing Smart Sync Cell Based Technology since 2005. These meters are presently used for more complicated rate structures such as TOU and Net Metering. Approximately 3,500 are deployed in Trico's service area with a minimum number of complaints. Navopache has installed 8,000 Elster AMI meters with two-way RF communications since 2005 and has only recently received a few written complaints which were copies of a letter available on the Internet.

Opt-out Policy Issues

The Cooperatives are concerned that the Commission is considering an opt-out policy primarily due to APS customers' perceptions regarding the risks associated with RF provided during the September 8, 2011 Open Meeting and letters received from APS customers prior to that date. The Cooperatives do not believe the letters received prior to or the public comments received at this Open Meeting are representative of the Cooperatives' service areas. Given the length of time that AMI has been deployed in the Cooperatives' service areas and the associated cost savings and other benefits, the Cooperatives believe only a few customers in their service territories do not support AMI (collectively approximately 40 complaints reported out of the

Cooperative's total of 200,000 members). The few complaints that have been received reflect the growing web-based misinformation regarding perceived health or privacy issues.

As demonstrated by the CCST report, AMI/AMR that uses RF communication configurations pose no health risks to customers that are greater than any other home appliances or cell phones. AMI that uses PLC technology cannot pose health risks. Consequently, the Cooperatives' believe that an opt-out policy for AMI/AMR due to perceived health risks is unwarranted.

Finally, as no personal customer information is transmitted from the meters, the Cooperatives believe there is no basis for customers to refuse SM for data privacy/security reasons. As discussed by Commissioners at the Staff Meeting held on October 12, 2011, the Cooperatives are supportive of the Commission working with interested parties to develop a policy statement regarding the type of information that can be collected by meters. The Cooperatives support the development of a policy statement to reassure all customers that only certain information can be collected by meters.

One of the largest issues associated with an opt-out policy is the cost. The Cooperatives serve members in large, rural service areas that are geographically diverse. Allowing a few customers to opt-out from AMI in the Cooperatives' service areas can impose significant costs on a per-meter basis (such as hiring new meter readers, finding, maintaining, testing and training employees on older/obsolete meters, traveling to and from potentially remote areas in a large service area and manually entering meter reads into billing system).

The Cooperatives, with the encouragement of state and federal regulators, have made substantial investment in AMI technology in order to improve the quality of and lower the cost of service for all members. A good portion of the benefits/cost savings associated with remote reading and integrated billing systems that result from AMI could be lost if an opt-out policy were adopted.

For example, Trico has only 3 remaining employees assigned to meter reading related activities such as connects and reconnects, meter exchanges etc. Assuming additional meter readers would need to be hired to implement an opt-out policy, meter reading costs would increase by approximately forty-five thousand dollars (\$45,000) for each new meter reader's salary and benefits, not including vehicle and other related meter reading expenses. These additional expenses will be difficult to forecast given that they are directly related to the number of customers who opt-out, and the dispersed nature of Cooperative service territories.

Another issue associated with an opt-out policy is who pays the cost discussed above. The Cooperatives believe that customers who choose not to take advantage of the lower cost of reading smart meters should pay the additional expenses associate with manual reads. It is unreasonable to charge these additional costs to all customers. All costs associated with an opt-out policy should be paid through a monthly charge by those customers who opt-out.

Finally, because virtually all of the major manufacturers in the industry have switched production to smart meter technology, there is a dwindling supply of older electromechanical meters. At some point in the not too distant future, the only electromechanical meters that will be available will be expensive refurbished ones, on a limited basis.

Conclusions

Since 2000, the Cooperatives have been installing AMR and AMI using PLC communications. Since 2005, Cooperatives have been installing AMI with RF communications. The meters do not transmit confidential customer data. There are no credible findings of adverse health effects associated with either PLC or RF technologies utilized by the Cooperatives. Given the CCST key report findings that demonstrate a lack of health effects associated with AMI, the minimal volume of customer complaints and the potential significant cost increase that could result even if only a few customers opt-out, the Cooperatives do not believe an opt-out policy is warranted.

The Commission should consider the Cooperatives' comments on opt-out policies. The Cooperatives 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. Due to the large service areas, a good portion of the benefits/cost savings associated with remote reading and integrated billing systems that result from the Cooperatives' AMI could be lost due to an opt-out policy.

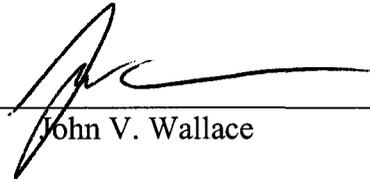
We urge the Commission to consider the Cooperatives' comments and reject an opt-out policy, at least as it relates to Cooperatives and develop a policy statement relating to the type of information that can be gathered by AMI and AMR.

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Sincerely,

GRAND CANYON STATE ELECTRIC
COOPERATIVE ASSOCIATION

By



John V. Wallace

Original and thirteen (13) copies of
Electric Cooperatives' Comments
filed this 24th day of October, 2011,
with:

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

Duncan Valley Electric Cooperative Summary of AMR Meter Deployment

Meter Specifications

Type of Meter: AMR with one-way Radio Frequency Communication

No. of AMR Meters Installed: 500

No. of AMR Meters that Remain to be Installed: 1,500

Overview

Duncan Valley uses an Centron C1SR Itron meter. The meter only tracks and transmits kWh and has the ability to detect meter tampering. The meter transmits on a radio frequency that is 902-948 MHz. The Itron meters only transmit information once a month when the meter is read.

Mohave Electric Cooperative Summary of AMI Meter Deployment

Meter Specifications

Type of Meter: AMI with two-way Power Line Carrier ("PLC") Communication

No. of AMI Meters Installed: 14,500

No. of AMI Meters that Remain to be Installed: 10,500

Overview

Mohave's Smart Grid implementation plan was initiated in 2010 with installation of communication infrastructure and enhanced data communication equipment placed at substations and Mohave's Call Center. Mohave's Advanced Metering Infrastructure (AMI) and meters communicate using a wired system through the power lines. No wireless meters are installed. The AMI Meters replace "old" meters which emitted a wireless signal. Mohave's use of a wired Smart Grid technology is eliminating radio emissions that were associated with the older style meters.

Mohave's AMI Meters will collect and transmit aggregate usage for billing, similar to the data that is collected with existing meters, but different only in the way that the data is received. The AMI Meters do not collect any other information from the home or business, nor do they communicate with appliances in the home or transmit privacy or personal data.

Enhanced data communication provided by Smart Grid project will help Mohave manage its system operations more effectively. In the future it may also help members have more choices on how they manage their own energy usage.

Project implementation and status

Mohave's Smart Grid project includes exchanging 25,000 meters, which began in November 2010. The first phase of meter exchanges was completed in March 2011, with approximately 14,240 residential meters and 230 commercial meters exchanged.

Mohave is currently installing substation monitoring equipment. Phase two of meter exchanges will begin in November 2011 and continue until a total of 25,000 meters are installed.

Future phases will be scheduled into the work plan until the majority of Mohave member meters are exchanged. Mohave anticipates beginning the final meter deployment in late 2012. Deployment of future meter exchanges is conditioned on the expansion of the communication infrastructure. The early phases of deployment used the existing infrastructure with the later deployment predicated on new communication expansion.

Navopache Electric Cooperative Summary of AMI Meter Deployment

Meter Specifications

Type of Meter: Elster AMI with two-way Radio Frequency Communication

No. of AMI Meters Installed: 8,000

No. of AMI Meters that Remain to be Installed: 32,000

Overview

Navopache started installing the Elster REX meters at Sunrise Ski Area in October 2005 to provide remote readings during the winter months. In December 2007 a pilot project of approximately 500 Elster REX meters were installed in a residential area. The Elster system uses wireless radio frequency communications for the meters to "talk" to a Gatekeeper (Collector) meter. The Gatekeeper is connected to a telephone line which Navopache's metering system software dials into to download the meter readings from the Gatekeeper. Multiple Gatekeepers are installed throughout the system to communicate to all of the installed meters since the radio signal has a limited transmit distance. The system is capable of remote reads, remote disconnect, outage detection, meter tampering, and voltage reads.

At the present time Navopache has approximately 8,000 Elster REX and REX2 meters installed and 12 Gatekeepers. Of the 8,000 meters installed approximately 1,000 have disconnects installed in the meters to allow Navopache to remotely disconnect and reconnect those members.

By the end of 2011 Navopache will have approximately 12,900 Elster AMI meters installed. The present plan is to install a minimum of 5,000 Elster AMI meters per year until all meters (approximately 40,000) are replaced.

Navopache generally reads the Gatekeepers four times per day and reads each billing cycle once per month. During the reads the only information received is the meter ID and usage readings. The meter ID is tied to the member's account number in Navopache's Customer Information System. Navopache uses the system to read kWh, kW, TOU quantities, and Net-Metering.

Sulphur Springs Valley Electric Cooperative Summary of Smart Meter Deployment

Meter Specifications

Types of Smart Meters: Beginning in 2002, SSVEC started replacing older mechanical meters with Hunt Technologies Turtle System electronic meters under SSVEC's Automated Meter Reading (AMR) project. These meters can communicate from the meter to the substation. The AMR project plan was to install 18,000 meters and install the necessary equipment in the substations in our rural territory over a period of 6 years. In 2006, Landis+Gyr purchased Hunt Technologies and developed a bi-directional meter platform for utilities deploying two-way advanced metering infrastructure system. Specifically, these meters have the added capability of two-way communication: the ability to communicate from the meter to the substation and from the substation to the meter. In 2008, SSVEC began deploying these Landis+Gyr TS2 meters under its Advanced Metering Infrastructure (AMI) project in the less-rural Sierra Vista and immediate-surrounding territory.

In short, SSVEC uses Landis+Gyr TS2 meters with the AMI project with two-way Power Line Carrier ("PLC") Communication and TS1 meters with the AMR project with one-way PLC Communications.

No. of AMI Smart Meters Installed: 24,858

No. of AMI Smart Meters that Remain to be Installed: approximately 3,200

No. of AMR Smart Meters Installed: 24,709

Overview

- 1) SSVEC's AMR project is using a first-generation smart meter. It is slow speed power line carrier technology and half the system is one-way communication only. We will have two-way communication only in the SV area. So opting out of the AMR meter is not feasible for economic reasons.
- 2) SSVEC is at the end of a multi-year AMR build out. We started long before the "Smart Meter" became a buzz word.
- 3) As part of the Smart Grid grant we are looking at some "Smart Meter" technologies but they would be voluntary on the part of the members.

There is a great deal of concern and miscommunication regarding "Smart Meters". SSVEC does not use "Smart Meters" that use spread spectrum as the communications method, which are at the "center" of the controversy.

SSVEC's meters currently use a method of communication known as power line carrier, or PLC. PLC is a system for carrying data on a conductor which is also being used for supplying electrical power to our member's home. SSVEC's meters typically use a carrier wave between 20 and 200 kHz (http://en.wikipedia.org/wiki/Power_Line_Carrier) and do not operate in the radio frequency (RF) range. Therefore, there is no exposure to radio frequencies transmitted wirelessly within SSVEC residential

meters. The meter simply transmits a meter reading every 24 to 27 hours to the substations for billing purposes. The interval is determined by the time needed for the low frequency signal to transmit the data from the meter to the substation.

The billing data we capture is not sold to anyone and is not shared with anyone outside the Cooperative without the Members permission. The data is primarily used for billing, high bill research, and system load studies. For system load studies all personal identifiers are removed from the data.

The installation of AMR was to lower meter reading cost to maintain the rates as low as possible.

Future Projects Under Consideration

As part of the Smart Grid project, SSVEC is investigating expanding the current irrigation load control system to include load management of customers A/C units. The radio control system, which has been in use since 1995, uses a tone burst encoding via our licensed VHF voice two way radio frequency. The load management program will be completely voluntary and the customer will be fully informed on how we will be controlling their equipment.

Trico Electric Cooperative Summary of Smart Meter Deployment

Meter Specifications

Type of Smart Meters: AMI with two-way Power Line Carrier ("PLC") Communication and AMI with Cellular Communications and AMR Meters

No. of AMI Smart Meters with PLC Communications Installed: 32,000

No. of AMI Smart Meters with Cellular Installed: 3,500

No. of Smart Meters That Remain to be Installed: 4,000

Overview

Trico starting installing Hunt /Landis & Gyr Technology T1 PLC with one-way communication in early 2000. In 2002, Trico started installing the second generation of Hunt T2 , with two-way PLC communication. To date, over 32,000 of the Hunt T2 are deployed on residential customers homes in Trico's service area. Trico has been deploying AMR for over 10 years and currently has only 4,000 meters left to change out.

PLC technology uses Trico distribution lines to transmit packets of data for a KWH read daily. The reads are extracted by billing cycle into our billing system and meter data management system.

T2 technology is capable of remote read no truck roll or drive by, outage detection, theft detection, helps identify events on our distribution lines.

Trico does not use these meters for load control, remote disconnect or pre-pay, but the technology is capable.

Smart Synch meters are cell based and are used for TOU and Net Metering, these meters are real time data collection, capable of interval data, remote disc, outage and pre pay. Trico currently uses the interval data feature only.

Intervals are brought into Trico's Meter Data Management system and are made available to our members thru Trico's Customer Self-Serve. Trico's members voluntarily choose to sign up for Customer Self-Serve in which they can view and pay their Trico bill, look at their usage data, runs graphs, benchmark changes. This data is attached to the members unique individual account number and meter number. Customers create passwords and can view only their account.