



## MEMORANDUM

To: Members of the Electric Utility Commission

From: Jerry Hernandez, Manager, Austin Energy Electric Service Delivery

Date: March 17, 2011

Subject: Meter Implementation Project

### **Executive Summary**

Austin Energy began a meter implementation effort (the Project) aimed at replacing approximately three quarters of its meter base from legacy electromechanical meters to 2-way smart meters. The remaining one-fourth had already been exchanged for 1-way smart meters back in 2002. The first implementation was targeted at multi-family residences (i.e. apartment complexes) to stem the large volume of customer service and field work that resulted from the influx and exit of the large college student transient population. The service territory implementation is complete and now all AE electric meters are automated except a small number of ERCOT settlement and industrial high end meters. The Project implementation not only replaced its remaining legacy meters but was also coupled with the installation of a meshed communications network to provide for an AMI 2-way system. Austin Energy encountered few customer complaints during the Project receiving approximately 3.8% customer calls about their meter exchange and only 231 requests for meter accuracy testing. The average number of received reads is greater than 98.6% of all automated meters. The total cost of the Project was \$25.5M and included project management, call center services, customer out-reach and education, installation contract services, communications network upgrade and meters.

### **Project Detail**

Initial efforts were targeted at development of a comprehensive and integrated marketing and information plan with the specific purpose in mind to over communicate. The plan consisted of focus groups, mail outs, door hangers, Energy Plus AE Customer Newsletter articles, newspaper articles, and informational sections on AE's Web Page. This plan also included a "special" call center created to assist with the Project related calls. The customer service representatives for this center were specially trained in field implementation procedures, the exchange process, new meter functionality as well as how to manage escalation calls. In this way, rather than having a script to read, call center representatives were truly knowledgeable and able to communicate smoothly with both the customers and field crews. These customer service professionals were available Monday through Friday from 7:00 am to 6:00 pm with dedicated phone lines to answer all customer and field crew calls related to the Project.

Austin Energy established a cross functional team to manage the Project consisting of Complex Metering, Revenue Measurement, Market and Load Research, Information Technology and Telecommunications, AE's AMR vendor and installation contractor. The team met formally on a weekly basis but communications and collaboration were a daily occurrence.

Field meter exchanges were performed by a qualified meter installation service contractor overseen by AE staff. The contract technicians received advanced training in applicable AE design criteria procedures and safety practices. Exchanges were monitored and documented on a daily as well as per individual installer basis for accuracy and tracking purposes. The communications system upgrade was performed by AE Substation Engineering and Construction and GIS workgroup in partnership with our AMR vendor.

### **Project Improvements**

The 2-way automated meter reading (AMR) network serves approximately three fourths of Austin Energy's service territory or approximately 304,500 meters. The legacy AMR network that was installed in 2002 is only a 1-way automated meter reading system and serves the remaining one quarter of AE's customers (approximately 110,000 meters).

The AMR meter data collected will be used for monthly billing as well as to provide enhanced asset management, meter installation planning and logistics, advanced billing and billing determinants (power factor, TOU, real time pricing, interval data, load profile, etc.), remote connect/disconnect automation, flexible and consolidated customer billing (pay-as-you go, pre pay, etc.) and billing periods (continuous, consolidated, flexible billing periods), theft, diversion and tamper detection as well as information for advanced load and rate research.

AE is now able to collect interval data (IDR) for all commercial customers and a statistically significant number of residential customers enhancing rate structure design and optimizing the effectiveness and evaluation of new and existing EE, Renewable Energy, GB, and DR programs.

In addition, load profile (five to fifteen minute IDR data) can now be collected on all commercial customers and approximately 1000-2000 residential customers. Data is utilized to provide energy usage profile for industrial and commercial customers and in the development of more effective DR, EE and GB programs.

Collection of IDR data makes available the consumer information and awareness necessary to participate in retail electricity markets and near real time access to interval data enables new energy products and services.

The collected AMI system data will also be used in conjunction with Austin Energy's outage and distribution management systems to enhance situational awareness, distribution level modeling and load flow analyses for operational as well as support system design and planning, facilitate outage restoration and restoration verification and allow for enhanced customer communications.

A related PowerPoint presentation is attached.

---

# *Austin Energy Meter Implementation Update*

*Jerry Hernandez*

*Manager, Electric Service Delivery  
Austin Energy*

*March 17, 2011*



# Keys to Success

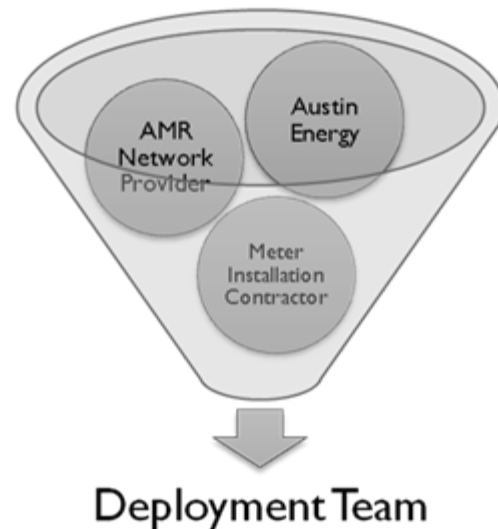
---

- Market plan - Over communication
- Dedicated Service Center
- Dedicated cross functional Project Team
- Prior meter implementation experience



# Meter Implementation Team

- Established internal cross functional inter-departmental AMR team
- Established a Deployment Team to install the meters
  - Austin Energy
  - Landis+Gyr
  - (AMR network provider)
  - Texas Meter Devices
  - (Meter Installation Contractor)
- Last year spent on “clean up”
  - Meter communications issues
  - Revising Austin Energy’s business processes
  - Training employees on new meters, meter capabilities and data now available



# Customer Communication Plan

---

- Focus Groups
- Direct Mail – Post cards
- Door hangers
- Energy Plus AE Customer Newsletter
- Newspaper – Editorial
- Frequently Asked Questions Flyer
- Web Page



# Customer Communication Service

---

- A “special” Call center was created to assist with the calls. They were called the “Cross Dock” team. They were trained by expanding their knowledge of the utility, from a field perspective. Trained to manage escalation calls
- Dedicated customer service professionals
  - > Available Monday – Friday from 7:00 a.m. – 6:00 p.m.
  - > Dedicated phone line
- Rather than having a script to read; call center representatives were truly knowledgeable and able to communicate smoothly with both the customers and field crew.



# Direct Customer Contact

## AUSTIN ENERGY IS COMING TO CHANGE YOUR METER!

*In the next few weeks,* we will be in your neighborhood to replace your electric meter with a state-of-the-art automated meter at no additional charge to you.

These new meters have many advantages. You will find them accurate and easy to read. In the foreseeable future, we will introduce new features like:

- remote reads
- faster outage response
- greater meter accuracy
- new billing options
- new payment options
- energy management options



Questions? Please visit [www.austinenenergy.com](http://www.austinenenergy.com) or call 972-7540.

## AUSTIN ENERGY VIENE A ¡CAMBIAR SU MEDIDOR!

*En las próximas semanas,* estaremos en su vecindad para cambiar su medidor eléctrico con un medidor automatizado de lo mejor, sin costo de su parte.

Estos nuevos medidores tienen muchas ventajas. Son precisos y fáciles de leer. En un futuro cercano, introduciremos nuevas características como:

- lecturas por control remoto
- atención rápida a interrupciones
- mayor precisión en el medidor
- nuevas opciones de cuenta
- nuevas opciones de pago
- opciones de manejo de energía

¿Preguntas? Visite [www.austinenenergy.com](http://www.austinenenergy.com) o llame 972-7540.

## Austin Energy

has made a change for the better!

Today, we successfully replaced your mechanical meter with a state-of-the-art automated meter at no additional cost to you.



### You can expect:

- ⊕ **To Reset Your Electronic Devices:** computers, televisions, clocks, alarms & sprinkler systems.
- ⊕ **A Few More Visits** from meter readers while we complete our automated meter deployment system.
- ⊕ **To Receive A Bill** with two readings: one from the old meter and one from the new one.

### You can look forward to:

- ⊕ **Faster Outage Response:** With two-way outage information, we will be able to respond more quickly and provide you with more accurate information about outages.
- ⊕ **Remote Meter Reading:** Your backyard will be free of meter readers. Note: We will be checking our new meters periodically to make sure they are functioning properly. (Older meters are still read manually.)
- ⊕ **Greater Accuracy:** With remote reads, the chances for human error are reduced. With few moving parts, the new meters are extremely accurate and reliable.

When all of the meters are installed systemwide, we will be introducing new options for billing, payment and energy management.

Questions? Please visit us at [www.austinenenergy.com](http://www.austinenenergy.com) or call 972-7540.

We hope you enjoy this service improvement.





# Customer Education

*Coming soon*  
TO YOUR NEIGHBORHOOD.

Two-way automated electric meters



A technician in a tan shirt, blue jeans, and a white hard hat is standing outdoors. He is holding a handheld electronic device in his right hand and a clipboard in his left. He is looking at the device. In the background, there is a white van with the Austin Energy logo on its side. To the left, there is a grey electrical meter mounted on a wall. The technician has a black bag slung over his shoulder.

**AUSTIN ENERGY**

What difference will it make at your house?



# Walking customers through the steps



## Roger Duncan Named Interim GM



Roger Duncan has been named interim General Manager of Austin Energy. Mr. Duncan assumes GM responsibilities with the departure of Juan Guza, who is the new General Manager of the Pedernales Electric Cooperative. Mr. Guza led Austin Energy for six years. Mr. Duncan, who has more than two decades of experience in City government, including two terms as an Austin City Council Member from 1981 to 1985, has served as Austin Energy Deputy General Manager since 2004. He has had responsibility for overseeing Austin Energy's nationally recognized energy efficiency, Green Building and renewable energy program, as well as the utility's on-site generation program, strategic planning, governmental relations and air quality.

Mr. Duncan joined Austin Energy in 1998 as Vice President in charge of conservation, renewables and environmental policy.

## Austin Energy Unit First In Country To Earn Certification

The Austin Energy division responsible for the construction, maintenance and operation of Austin's electric system has become the first of any utility in the nation to earn ISO 9001 registration.

ISO (International Organization for Standardization) 9000 is a series of international quality standards designed to ensure that all activities related to providing and delivering a product or service are appropriately quality assured. To earn the registration, applicants must develop a Quality Management System that reflects standards of performance for every major task, in this case, related to building, maintaining and repairing the electric system.

Auditors from the National Standards Authority of Ireland (NSAI), the worldwide entity that administers the ISO quality management program, issued the registration on January 3, 2008. The certification followed a rigorous four-day review in December of the Electric Service Delivery Quality Management System by NSAI auditors. The ISO auditors noted that procedures and written work instructions have been implemented for more than 530 work activities.

Approximately 250,000 companies worldwide, including 25,000 in the U.S., are certified in the ISO 9000 series. Austin Energy transmission and distribution work units, however, are the first of any utility in the country to be so certified.



## All Customers To Receive Automated Meters

Austin Energy replaced approximately 127,000 meters with automated meters in 2003. Upgrades to the current automated meter-reading network are in testing now. When these tests are successfully complete, Austin Energy will begin replacing the remaining 260,000 residential and commercial mechanical meters with automated meters. This activity could begin as early as March 2008, and will continue throughout 2008.

Once installation of automated meters is ready to begin, customers will receive notification in various forms to let you know approximately when crews will be in your area to exchange your meter. In advance of installations, please make sure shrubbery or other obstacles do not block your meter. Obstructions that prevent a meter change out will have to be cleared.

Automated meters eliminate the need for manual meter reads. Instead, the meters signal consumption totals to computers via radio waves. Automated meters also improve reliability because they signal outages. Without automated meters, utilities do not know when a house or business is without power, in most instances, unless the customer calls in the outage. Automated meters also lay the foundation needed to increase service offerings to customers. This could include customer selected billing rates, time-of-day pricing of electricity use and programs that help customers reduce their energy use.



## Automated Meters Rolling Out

Installation of automated meters for all Austin Energy customers will accelerate this month. This means that on average, about 1,400 meter changes will occur daily in residential areas. Automated meter installations for Austin Energy business customers will begin in volume early next year. Total meters to be exchanged: about 270,000, with all installations to be completed by summer 2009.

Residential customers receive a post card several weeks in advance alerting them to the change-out. The change-out involves replacing their current electro-mechanical meter with a new solid-state automated one. The exchange takes only a few minutes, and afterward, a door hanger is placed indicating the new meter has been installed. When a meter is inaccessible due to a locked gate or other reason, a door hanger is left with a telephone number for the customer to call to set an installation appointment.

Automated meters transmit meter reads via radio waves and will eventually eliminate the need for monthly manual reads. Once all the new meters have been installed, one of the first service enhancements will be their capability to signal the Austin Energy control center when they experience a power outage. Currently, customers must call to report power outages, because the older meters have no signaling capability.

## Planning For The Future

As part of the ongoing planning for future generations needs, Austin Energy has unveiled a proposed energy plan that would require building or recouping the output of an additional 1,000 megawatts.



## Automated Meters Update

The rollout of automated meters to all Austin Energy customers is progressing well. About 90,000 meters have been installed since April—about 1,000 meters each day, with the goal of doubling that number by January. All installations are expected to be completed by early summer 2009. The new meters transmit meter readings via radio waves, eliminating the need for manual reads.

Residential customers receive a post card a few weeks in advance of their meter installation. Workers knock on the door before installing the new meter. If no one is at home, a green door hanger is left indicating the change-out occurred.

If the meter cannot be exchanged due to a dog, locked gate or other reason, a red door hanger is left with a number to call to arrange for an installation.

## System Reliability The Best Ever

The number of power outages per customer and the average length of outages for the Austin Energy electric system during the fiscal year that ended September 30th was the lowest since standardized outage reporting to the Public Utility Commission began in the mid-1990s.

The number of outages per customer (called the System Average Interruption Frequency Index or SAIFI) was 46.48 minutes. Both measures are far below electric utility industry averages nationwide.

The excellent performance of the Austin Energy electric system is due to increased maintenance over recent years as well as system upgrades. It is also due to the excellent response time by Austin Energy crews when power outages occur.

Another important factor has also been a year of reduced storm activity. For instance, a key measure of storm activity is lightning, and 2008 will rank among the lowest for Austin. January through mid-November, the Austin area had 2,670 cloud-to-ground lightning flashes. Last year over the same period, there were 4,600 and the average since 2000 has been more than 4,000 per year.

## Offsetting The Need For A Power Plant

Energy efficiency improvements made by customers participating in the Austin Energy Power Save Program and Austin Energy Green Building will reduce peak energy demand by almost 62 megawatts (MW) in the coming year, reducing day-to-day energy use by 105 million kilowatt-hours (kWh).

The reductions almost match last year's record as Austin Energy matches toward a 2020 goal of offsetting the need for a 700 MW power plant through its energy saving programs.

More than 103,000 Austin Energy residential customers and 615 businesses participated in the programs during the fiscal year that ended September 30, 2008. The resulting energy savings will reduce electric bills of the groups by more than \$12 million annually. They will also reduce carbon dioxide (CO<sub>2</sub>) emissions by more than 86,000 tons and nitrogen oxide (NO<sub>x</sub>), a pollutant that helps form smog, by almost 60 tons each year. Energy efficiency is also the least expensive way to meet new electric demand. Austin Energy efficiency programs cost the utility about \$350 per kilowatt (kW) of energy saved. Building a new natural gas-fueled power plant would cost approximately \$700 per kW.



Season's Greetings from the City of Austin



# News Media

---

**AUSTIN, Texas (KXAN)** -- If you are an [Austin Energy](#) customer, then starting Thursday your electric meter became a "smart" one. Crews spent the day installing smart electric meters throughout the city. The advanced meter will replace the old manually read ones.

The new meter can better measure your usage, eliminate the need for crews to get into your backyard for readings and send a message to Austin Energy when there is a power outage.

"Today, when your lights go out, you need to give us a call to let us know that," said Cheryl Mele of Austin Energy. "What we envision in the future is that we're going to get a response from this new system, and it's going to tell us, 'Your lights are out.' We're going to get that call passed on to our system operators, and be able to dispatch a crew and respond to that outage a little bit quicker than waiting on you to call."

Additional features will allow Austin Energy to turn off and reinstate service without sending out a crew.

## **Austin Energy Brings Two-Way Meter Technology To Austin**

In the coming months, Austin Energy will be in your neighborhood to replace your electric meters with state-of-the-art automated meters. The new meters will offer many advantages in the future, including remote reads, faster outage response and more billing and payment options. The new two-way meter system will be the largest of its kind in the country. Look for notification in the mail before the meters are changed out. Installers will wear an Austin Energy badge, and will knock on the door before they attempt to change the meters.

You can expect a temporary disruption to your electric service for a few minutes during the meter exchange. You will need to reset your electronic devices, such as clocks, alarms and sprinkler systems.



# Meter Implementation Timeline

---

- **March 2008** - Meter Exchange & Customer Call Center was developed
- **April 2008** - Meter installation began
- **May 2008** - Community outreach increased due to large number of installations
- **August 2009** - Mass Deployment completed (98% installed)



# Current Meter Population

---

AE meters installed:

- 110,000 – 1 way (residential and commercial)
- 304,500 – 2 way (residential and commercial)
- 23,000 – 2 way with Home Area Network (HAN) capabilities
- 20,000 – 2 way with remote connect/disconnect



# Meter Installation Statistics

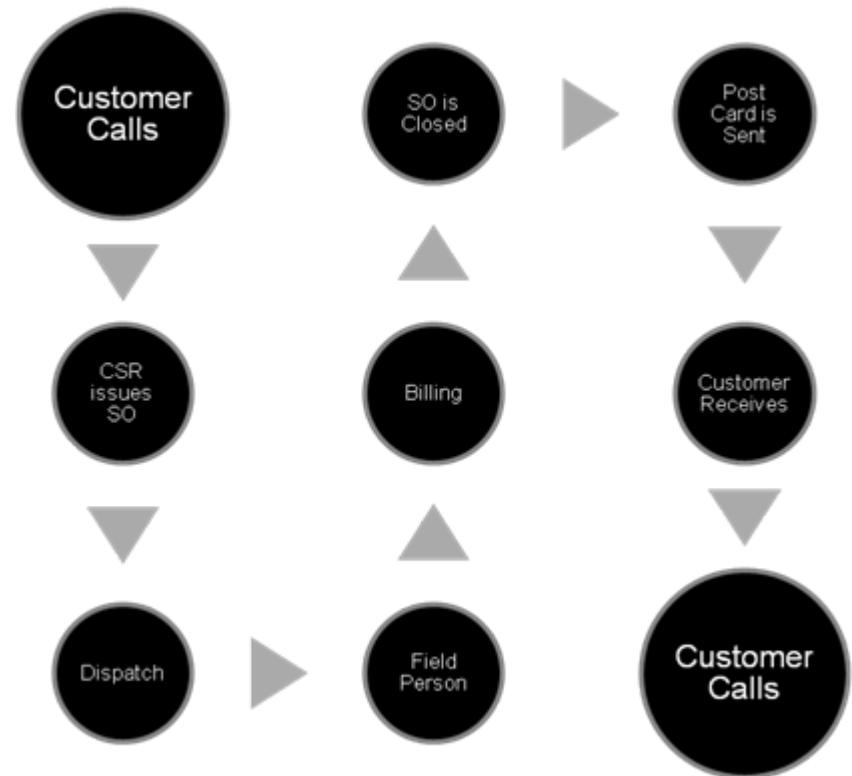
---

- Mass meter exchange of 340,000+ meters
- Project duration of approximately 2 years
- Few customer complaints – 3.8% customer calls about exchange; only 231 requests for accuracy test
- Average number of received reads greater than 98.6%
- Average number of stales (no billing read) = 110/day (0.55%)



# Old Process to Obtain Customer Requested Read

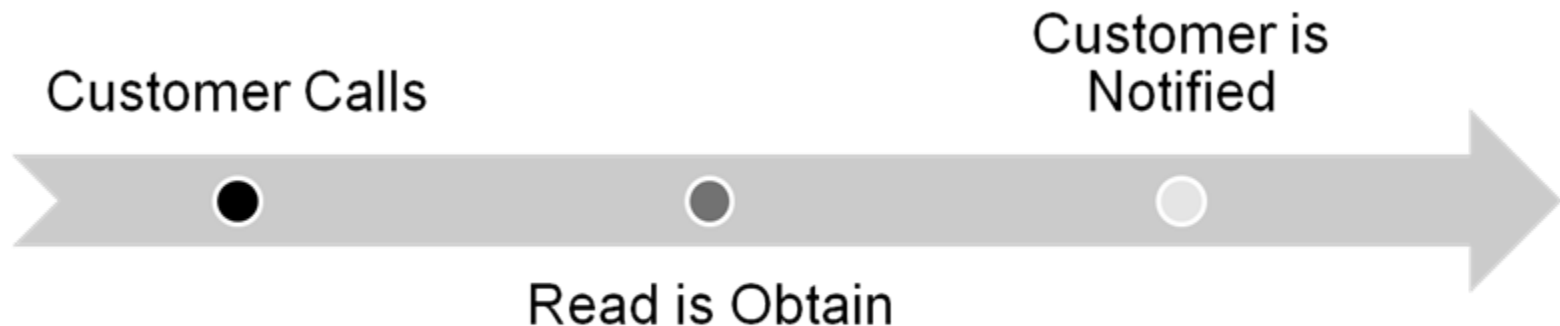
- Monthly KWH – Residential
- Service Order to roll truck to obtain new read
- Customer would have to call back in five business days or wait for postcard to get results



# New Process to Obtain Customer Read

---

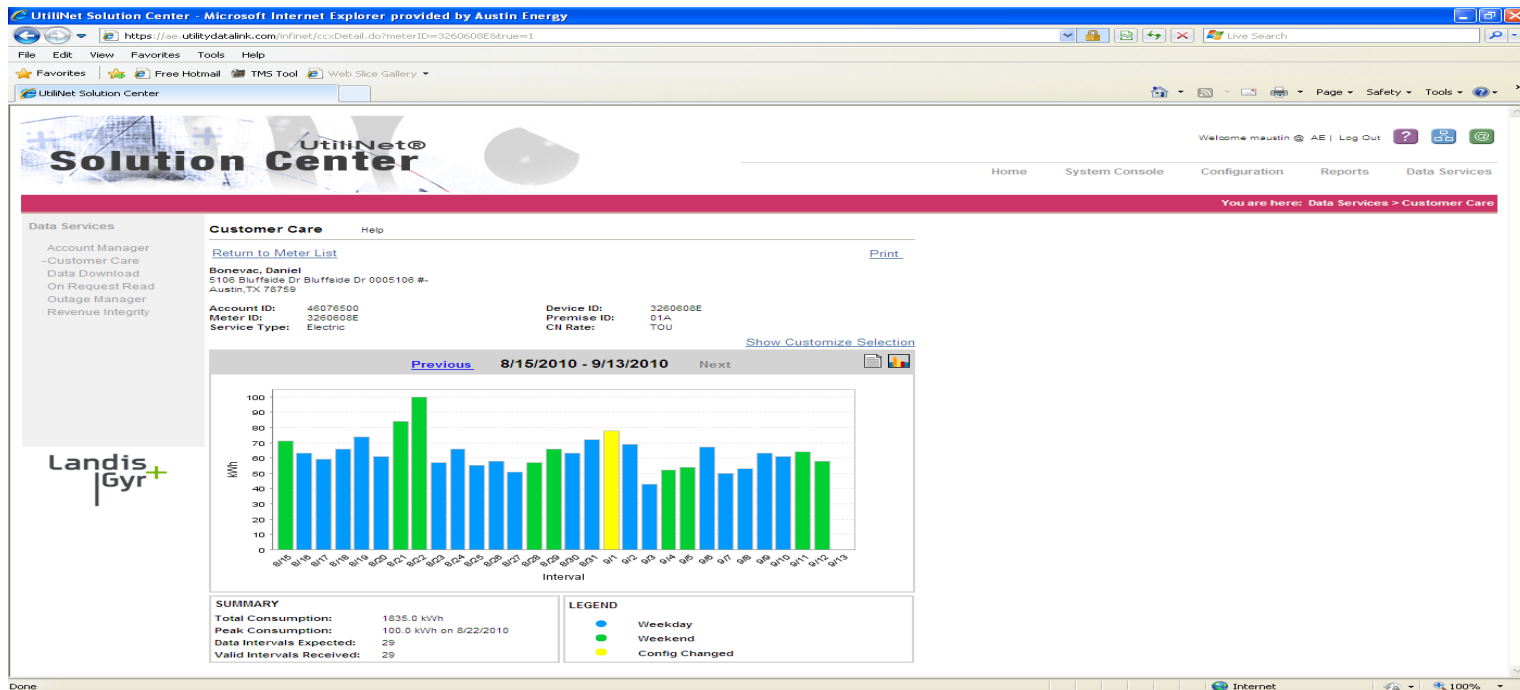
- Daily (sometimes hourly) KWH
- On Request Read – check Data Base for last night's read or request meter for real-time read
- Customer Service Representative can respond to customer within two minutes





# New Meter Customer Service Functionality

- Auto-disconnect and auto-reconnect on some customers
- Customer Service Representatives can see customer daily data
- Customer Service Representatives can see 35-day use trends in table or graph format



# Meter Implementation Improvements

---

- Days to minutes reduction in turn-around time to answer customer questions and potential re-bill
- Reduced costs associated with not rolling trucks for Service Order
- Decreased CO<sub>2</sub> pollutants
- Minimized manual meter reading costs
- Current Diversion and Power Outage identification through data files and reports

# Addressing Meter Accuracy



## MEMORANDUM

### Pay Your Utility Bill Online

More than 23,000 City of Austin utility customers pay their utility bill online each month through the City's Electronic Fund Transfer (EFT) program.

Sign-up is easy and once enrolled, a draft on your bank account occurs automatically to pay your utility bill each month on its payment due date. This gives you ample time to receive and review your utility bill first. In addition, this means a customer no longer has to write or mail checks nor be concerned about ever being late with their payment.

The program is now three years old and works well. In fact, about one-third of the 400,000 City of Austin utility customers pay their utility bill online either through the City's EFT program, by using their bank's online payment services or by making payments at Customer Service centers at grocery stores accepting City of Austin utility bill payments. Those payments are delivered to the City electronically.

To sign up for EFT, visit [www.austinenrg.com](http://www.austinenrg.com) or call the City of Austin utility Customer Service Center at 494-9400.

### Energy Audits Find 86 Percent Of Homes For Sale With Excessive Duct Leakage



A majority of homes receiving energy audits to comply with a new City ordinance are leaking excessive levels of cooling and heating into their attics from leaky duct systems, and on average, need an additional 6 inches of attic insulation. Of the first 400 energy audits received by Austin Energy, 86 percent of the homes have ducts leaking in excess of the 10 percent considered acceptable for energy efficiency. The homes average a 22 percent leak rate — though there were homes with double or triple the average. One audited home was leaking 81 percent of air conditioning and heating into the attic. The duct system in another was leaking so badly the testing equipment could not produce a reading.

Effective June 1, 2009, energy audits are required for homes for sale located within the City of Austin that are 10 years old or older and receive electricity from Austin Energy. There are several exemptions from the ordinance — for instance, homes that have undergone energy-efficiency improvements during the last 10 years or those in various legal proceedings that involve transfer of the property, such as foreclosure or a divorce settlement. Potential home sellers can use an online tool at [www.austinenrg.com/go/ECAD](http://www.austinenrg.com/go/ECAD) to determine whether the audit is required for their home, or to get additional information on the ordinance.

The 400 homes as a group are wasting 778,000 kilowatt-hours of electricity annually, or \$77,800 in energy costs due to leaking ducts and insufficient attic insulation. Meanwhile, Austin Energy, Texas Gas Service and federal tax credits are available to help pay for many energy efficiency improvements. Visit [www.austinenrg.com](http://www.austinenrg.com) for additional information on energy-efficiency programs and details on the Energy Conservation and Audit Disclosure (ECAD) ordinance.



### Automated Meters Accurate and Durable

Austin Energy is providing all of its 400,000 customers with new solid-state automated meters. The new meters have more computing power than PCs had 5-10 years ago and are very accurate. They replace meters that are 20-30 years old.

As the old meters come in from the field, Austin Energy is testing about one of every ten. A small number of old meters were found to be running slow. A customer with an old meter that was running slow

may notice an increase in electric usage once their new state-of-the-art meter is installed. This is because the new meter is correctly recording all power used.

Anytime an Austin Energy customer feels their meter, old or new, is not recording usage properly, they should call the utility Customer Service Center at 494-9400 or e-mail [custinfo@austinenrg.com](mailto:custinfo@austinenrg.com) to have their account reviewed. If needed, Austin Energy will send out a technician to test any meter, old or new, to assist the process.

TO: Mayor and Council Members

CC: Marc A. Ott, City Manager

FROM: Robert D. Goode, Interim General Manager, Austin Energy

DATE: April 2, 2010

SUBJECT: Smart Meter Accuracy

#### Smart Meter Accuracy

Recently, there have been media reports regarding large numbers of complaints from electric utility customers in areas of Texas and the nation, questioning the accuracy of recently installed smart meters. The Texas Public Utility Commission last week indicated it will initiate independent testing of automated meters installed in the Houston area. Austin Energy is now completing the installation of automated meters to all of its customers. The utility has not experienced a significant number of customer complaints. We believe this is due to the communications and follow-up we have maintained throughout our installation program.

#### Austin Energy Smart Meter Installation program

Austin Energy initiated a pilot project in 2001 to evaluate the then new automated meter technology. The utility installed (1-way) automated meter read (AMR) meters at apartment buildings throughout Austin, 110,000 of which are still installed. In 2008, Austin Energy began the second phase of its smart meter program to exchange the remaining 300,000 customer meters with (2<sup>nd</sup> generation-2-way) AMR meters. The AMR meters communicate daily meter reads over the air via radio signals.

Automated meters have now been installed for all but about 3,000 Austin Energy customers. The exchange of remaining meters requires set appointments with each customer. All remaining exchanges should be completed within the next 45 days. Meter readers are reading the remaining 3,000 electrical meters to be exchanged. Water meters throughout Austin must also be read manually each month.



# Addressing Meter Accuracy

Memorandum  
RE: Smart Meter Accuracy  
Page 2 of 3

**Communications Process.** Austin Energy implemented a thorough communications process in advance of and during installation of the automated meters. This included advance information in utility bills, advertising in the Austin American Statesman and press releases. It also included a systematic process to alert each customer through the following:

- A post card was mailed to each customer indicating the general time frame within which their meter would be replaced, along with details on the exchange process (change-out takes a few minutes);
- Installers knocked on the door of each residence at the time of the exchange to alert homeowners their installation was about to occur. Homeowners could ask for (and some did) a rescheduling, which was provided.
- After change-out, installers left a door hanger indicating the exchange had occurred, how the automated meters work and advantages of the new technology.
- If installation crews could not exchange a meter for any reason, they left a separate door hanger requesting that customer call to set an appointment for their meter exchange.

Austin Energy provided extra training within its Call Center so that representatives could answer customer questions about the new AMR meters. A dedicated Call Center group was also established to help set up and coordinate change-out appointments and to answer questions or address any customer concerns regarding the new meters.

**Accuracy of Meters.** Austin Energy required its meter vendor to test 100% of the automated meters for accuracy, and to provide electronic copies of test results. Austin Energy also conducts in-house accuracy tests of a random sample of 10% of all new meters before installations occur. All testing is in accordance with the metering standards and accuracy requirements used by all Electric Utilities as set by American National Standards Institute C12.1.

In addition, Austin Energy has been testing the accuracy of a sample of removed meters. If the old meters (many of which are 20 years old or older) were still accurate, customers should not see any difference in billed electric use. If the old meters had begun slowing down over time, after meters were exchanged, customers could see higher consumption recorded, and therefore higher bills with the new more accurate automated meters.

Austin Energy tested 7% (approximately 20,000) of the meters replaced by AMR meters, and found that more than 97% of the removed meters still met the accuracy level required by ANSI C12 standards. Approximately 2.2% (430) of the meters tested

Memorandum  
RE: Smart Meter Accuracy  
Page 3 of 3

were running slow. In those situations, customers could see an increase in electric usage due to the more accurate, automated meter.

**Customer Complaints.** Despite the magnitude of this project, Austin Energy has not received a significant number of calls relating to the new automated meters. Customers who question the amount of power for which they have been billed can request the accuracy of their meter be checked. Austin Energy sends a technician out to perform the testing, performed to industry standards.

Austin Energy has reviewed customer call logs and associated service orders, and found that, in the past 2 years while the AMR meters were being exchanged, 10,743 (3.8%) of customers whose meters were being exchanged called with questions about the new meters or high consumption. After talking with AE CSRs, only 231 requested meter accuracy tests. Out of the 231 meters tested, 25 were exchanged.



---

**QUESTIONS?**