

AMI Pilot Programs in the PJM Footprint *(as of November 4, 2009)*



Energy Smart Pricing Program Commonwealth Edison (ComEd)

Description: ComEd began a voluntary program with 1,500 households in 2003, using Interval Recording Meters.

Contact Information: Anthony Star, 773-269-4017, astar@cnt.org

Start / End Dates: 2003 to 2006

Program Administrator and Contact Information: Community Energy, 773-269-4017

AMI Solution / Product Used: ABB Interval Recording Meters that ComEd already had deployed were used, read once per month manually.

Evaluation Process and Responsible Parties/Experts: Summit Blue Consulting did a third party evaluation to determine whether energy use changed due to peak pricing. Higher prices were found to result in reduced consumption.

Results and/or Lessons Learned: Over the life of the program, average savings were 10%, with peak reductions of 15-20% in addition to a small conservation effect. The Illinois Legislature passed a law in 2006 requiring that the state's two large utilities offer a residential real-time pricing program, subsidize the cost of advanced meters, and make a Program Manager available to interface with customers.

Next Steps: The "Power Smart Pricing" and "WattSpot" programs have been implemented due to the success of the pilot. The programs were implemented in 2007.

Smart Energy Savers Program Baltimore Gas & Electric (BGE)

Description: The AMI Pilot is a part of the BGE Smart Energy Savers Program, a Vision 2020 initiative. AMI is one of four projects aimed at improving BGE's operational efficiency, reducing customer peak energy demand, and reducing customer energy usage. AMI is foundational to other Vision 2020 initiatives such as Customer Experience, Proactive Customer Notification, Advanced Collection Practices, and more. AMI technologies establish two-way communication between the customers' meters and the BGE back office. This technology enables greater levels of functionality and customer service by providing remote daily meter data and on-demand communication access to the meters.

Contact Information: Mitchell Solkowitz, 410-470-1389, Mitchell.Solkowitz@bge.com

Start / End Dates: November 2007 to November 2008

Sponsor(s) and Contact Information: No external sponsors

AMI Solution / Product Used: Aclara RF, Sensus FlexNet, and Oracle MDM

Evaluation Process and Responsible Parties/Experts: An evaluation process will determine how well the AMI technologies have worked based on manufacturers' specifications. Additionally, the process will determine whether the pilot meets the requirements of BGE and the Maryland Public Service Commission (PSC).

Results and/or Lessons Learned: Results are not yet determined.

Next Steps: The pilot program was completed, and BGE submitted its proposal for a full-scale AMI deployment, installing more than 2 million meters, to the Maryland PSC. BGE was awarded a \$200 million Smart Grid Investment Grant for this deployment and the grant is contingent upon the proposal being approved by the Commission.

PPL Corporation

Description: This initiative is a summertime rate program targeted at residential customers who consume at least 1,000 kWh/month for the four summer months (June through September). A rate rider applies to the normal residential service charge and replaces the existing declining block service charge with flat, cent-per-kWh on-peak and off-peak charges during these four months.

Contact Information: Doug Krall, 610-774-5736, dakrall@pplweb.com

Start / End Dates: June 2002 to October 2010

Sponsor(s) and Contact Information: No outside sponsors

AMI Solution / Product Used: Aclara TWACS

Evaluation Process and Responsible Parties/Experts: Evaluations take place annually; customer surveys were conducted in the initial years.

Results and/or Lessons Learned: Between 60% and 70% of participants have saved money. Additionally, customers involved in the program have consumed 19% of their kWh during the peak, whereas the average customer of the same type has consumed 24% of their kWh during the peak.

A small conservation effect may also exist due to participants having a “green ethic.”

Next Steps: In June 2008, the pilot doubled in size from 300 to 600 participants. In 2010, a year-round version of the program will be offered. In September 2008, PPL filed with the Pennsylvania Public Utility Commission for approval of another TOU pilot for residential customers. This program would offer year-round (summer and non-summer seasons) on-peak and off peak pricing for 1,200 customers.

Philadelphia Electric Company (PECO)

Description: PECO has deployed 2.2 million advanced meters, both for electricity and gas customers in residential and large commercial/industrial customer classes.

Contact Information: David Glenwright, 215-841-6174, david.glenwright@exeloncorp.com

Start / End Dates: The installation project lasted from 1999 to 2003.

Sponsor(s) and Contact Information: PECO, Cellnet, and VSI performed installation.

AMI Solution / Product Used: The Cellnet Fixed Network solution is used for 2.2 million meters. MV-90 and Metretek is used for 3,000 large C&I customers.

Evaluation Process and Responsible Parties/Experts: Cellnet manages the network, performs meter maintenance, and provides data to PECO. All meters are read daily. Additional features include on-demand reads and event processing.

Results and/or Lessons Learned: AMR has been shown to reduce the number of estimated bills, improve the meter to cash cycle, increase revenue, reduce CAIDI and customer call volumes, and increase asset utilization, among others.

Next Steps: PECO is planning to launch an AMI installation. In August 2009, the company filed their plan with the Pennsylvania Public Utility Commission. The plan is to build an AMI and provide meters for 600,000 customers by 2012 and all 1.6 million customers in 10 years. PECO has been awarded a \$200 million federal Smart Grid Investment Grant for part of the cost share of the \$650 million project, and the grant is contingent upon the proposal approval by the Commission.

myPower Pilot Program, PSE&G

Description: The objective of the “myPower” pilot program was to understand the potential for changing the way customers think about energy delivery and consumption via the use of two-way communication technologies. This provided customers with additional consumption information and more flexible pricing options (TOU rates) so that customers could make more informed decisions on energy use. Some pilot customers were provided with in-home energy management technology (Smart

Thermostats) in order for PSE&G to better understand the value it brings to this two-way communication exchange. The pilot included educational materials to help customers understand the energy consumption “cause and effect” relationship.

Contact Information: Susanna Chiu, 973-430-5719, and Fred Lynk, 973-430-8155

Start / End Dates: June 2006 to September 2007

Sponsor(s) and Contact Information: No outside sponsors

AMI Solution / Product Used: Three different AMI solutions were utilized: Power Line Carrier, RF Fixed Network Solution, and a hybrid solution (RF Page combined with the customer’s telephone line).

Evaluation Process and Responsible Parties/Experts: Summit Blue Consulting conducted an executive summary and impact assessment. SRBI conducted customer surveys. PSE&G conducted other analyses (technical, operations, rates and tariff, bill impacts).

Results and/or Lessons Learned:

- “myPower” Pricing participants consistently lowered their energy use in response to price signals across two summers (peak demand reduction of 1.33 kW was observed for those with in-home technology, and 0.32 to 0.43 kW for those without in-home technology).
- During the summer, daily reductions in energy use occurred from 1:00 p.m. to 6:00 p.m. due to on-peak prices associated with the TOU rate.
- During CPP events, customers increased their load reductions during the 1:00 p.m. to 6:00 p.m. period.
- Participants achieved summer period energy savings of 3-4% when compared to the Control Group.
- Technology-enabled customers produced greater reductions in energy use in response to the TOU rates and the CPP events.
- The majority of participants achieved bill savings – 87% of those with in-home technology and 68% of those without in-home technology.
- “myPower” Pricing participants would recommend the program to a friend or relative. The participants believe they saved money, that the program is good for the environment, and that PSE&G should offer more programs similar to myPower.

Next Steps: Key findings from the pilot program will be used to inform the PSE&G AMI business case.

Residential Smart Metering Pilot – PowerCentsDC, Pepco

Description: The District of Columbia Residential Smart Metering Pilot is designed to test three different types of dynamic pricing rates (hourly, CPP, and CP Rebate) coupled with smart thermostat controls. The program’s official name is PowerCentsDC.

Contact Information: Chris King, eMeter Strategic Consulting, 510-435-5189

Start / End Dates: Billing began in July 2008, and the duration is approximately two years.

Sponsor(s) and Contact Information: The Smart Meter Pilot Program Inc. (SMPPPI) is a consortium formed under a Pepco merger settlement agreement and includes Pepco, DC OPC, DC PSC, DC Consumer Utility Board, and International Brotherhood of Electrical Workers.

- SMPPPI: DC PSC Commissioner Rick Morgan, 202-626-5118, serves as Chair
- Pepco: Steve Sunderhauf, 202-872-3507
- DC OPC: Laurence Daniels, 202-727-3071

AMI Solution / Product Used: AMDS/Sensus

Evaluation Process and Responsible Parties/Experts: The SMPPPI Board will select this.

Results and/or Lessons Learned: Pending

Next Steps: Start of billing and selection of evaluation contractor

Delmarva Power (Delmarva)

Description: Delmarva began deploying an advanced metering infrastructure, including 10,000 meters, on April 1, 2009. The deployment is part of Delmarva's "Blue Print for the Future" Plan for demand side management, advanced metering, and energy efficiency. Delmarva would like to accomplish a number of targets, including eliminating meter readers and having the ability to remotely access the meters. Initially, however, the company will be manually reading the meters and accurately measuring the usage of the customers.

Contact Information: Len Veck, 302-454-4839

Start / End Dates: The start date was April 1, 2009, with a project duration of approximately two years.

Sponsor(s) and Contact Information: No sponsors

AMI Solution / Product Used: GE Energy Smart Meters

Evaluation Process and Responsible Parties/Experts: Delmarva will initially evaluate the meters by reading them manually.

Results and/or Lessons Learned: Pending

Next Steps: Deployment of the meters and evaluation of the results

AEP (Indiana & Michigan Power)

Description: Indiana & Michigan Power (I&M) began installing nearly 10,000 General Electric Smart Meters in selected homes and businesses in the City of South Bend, Indiana, during the fall of 2008, with intended full deployment by January 1, 2010. The program will include two programs that have rate options: SMART Shift and SMART Cooling. SMART Shift is a time-of-day rate plan, and SMART Cooling is a

program that includes a smart thermostat that can adjust air conditioners to conserve electricity. The project will be the first deployment of Smart Grid technologies that AEP could implement in model cities across the company's 11-state service territory. AEP and GE Energy, a business unit of General Electric, will pursue the development, integration, and deployment of advanced energy delivery infrastructure and metering technologies. The Indiana Office of Utility Consumer Counselor is also conducting a part in the pilot project.

Contact Information: Kent Curry, 260-425-2119

Start / End Dates: January 2009 to 2010

Sponsor(s) and Contact Information: No sponsors

AMI Solution / Product Used: GE Energy kV2c Meter Equipped (first deployment of this type of meter) with the Silver Spring Networks PowerPoint Network Interface Module

Evaluation Process and Responsible Parties/Experts: I&M plans to do the evaluation with internal resources.

Results and/or Lessons Learned: No customer lessons have been learned as of yet. Some barriers have been faced due to the new technology, but I&M believes that this is because of the novelty of the system. I&M has continued to work with its vendors to overcome technical issues with the meters and the systems. In large part, things have gone pretty well, and I&M is staying on a timetable that is acceptable to everyone.

Next Steps: I&M intends to go live on the distribution model piece of the pilot. The price tariffs are already available to consumers and have been approved by the Indiana Utility Regulatory Commission (IURC). The next step will be a direct load control program. The IURC has approved the load tariff. I&M is in the direct load control phase of the deployment with programmable thermostats installed in interested customers' homes. These thermostats will be able to communicate with appliances in the customers' homes and cycle-up and cycle-down according to the directions given by the programmable thermostats.