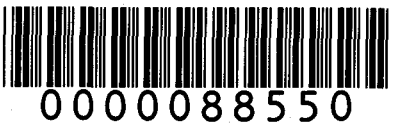
APS



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September 10, 2008

Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

RE: SEPTEMBER 2008 AMI PLAN BIANNUAL ACC REPORT
DECISION NO. 68112
DOCKET NO. E-01345A-03-0775 and E-01345A-04-0657

Dear Sir or Madam:

Pursuant to Paragraph 32(e) of the Proposed Settlement Agreement attached to Decision No. 68112:

> "For the next six years, APS shall provide the Commission with biannual reports related to the status of the remote meter reading pilot and implementation plan. The reports shall provide a description of the meter reading technology being implemented, APS' plan for implementation, the number and type of customers involved in the pilot program, the cost associated with implementation, and the operational efficiencies associated with implementation."

Attached please find the the September 2008 AMI Biannual ACC Report.

If you should have any questions regarding the information contained herein, please call Mr. David Rumolo at 602-250-3933.

Sincerely,

Susan Casady

Susan Casady

SC/dst

Attachments

Cc: Brian Bozzo
Barbara Keene

Arizona Public Service
AMI Plan Biannual ACC Report
September 2008

Introduction

Decision No. 68112 (Proposed Settlement Agreement, paragraph 32(e)) requires Arizona Public Service (APS) to provide the Commission with biannual reports through 2011 related to the status of APS' remote meter reading implementation. This report provides a description of the meter reading technology being installed, APS' plan for implementation, the number and type of customers involved in the program, and the costs and operational efficiencies associated with implementation. This is the sixth biannual filing addressing the status of the Advanced Metering Infrastructure (AMI) Plan and the progress since March 2008.

Overview

Since the last biannual report, APS has proceeded with its remote metering project. The number of customers with AMI smart meters has increased, and APS continues to install AMI meters both within and outside of metro Phoenix. AMI meters are now installed in thirty different cities and towns within APS service territory, including Yuma, Prescott Valley, and Flagstaff. Elster Electricity LLC has acquired PowerOneData Inc, the vendor that provided 160,000 meters for the APS Smart Meter initiative. APS has awarded a contract to Elster for an additional 800,000 smart meters for residential, commercial and industrial customers. The Elster AMI System complements the current PowerOneData (P1D) AMI system that APS has installed. APS also signed a contract with Aclara to implement their Energy Vision® Meter Data Management System (MDMS). The Energy Vision® product will be the system of record for all AMI interval usage data and be a catalyst to support a number of future programs that exploit the APS investment in AMI.

Project Status

At the end of August, APS has installed approximately 46,000 additional P1D smart meters since the March 2008 report was filed. The installation of meters has continued at a pace of approximately 7,700 meters per month bringing the total P1D AMI meters to 154,000. In addition, APS successfully completed a remote firmware upgrade to more than 100,000 P1D meters. The ability to remotely upgrade firmware continues to be a critical requirement of an AMI system.

APS and Elster are currently in the process of integrating the new Elster EnergyAxis® System into the APS Customer Information System (CIS). APS plans to initiate the deployment of Elster AMI smart meters after integration is complete. Subsequent work is also underway to integrate both the P1D and Elster AMI systems with the Aclara MDMS.

Over the last six months, APS has continued to utilize AMI meters to resolve meter reading access issues as part of the Access Improvement Plan (AIP) approved by the Commission in May, 2007. As of August 31st, more than 1,450 meter reading access issues have been resolved through the use of AMI technology. As APS moves toward

the larger deployment of AMI meters over the next four years, the majority of meter reading access issues will be resolved.

Meter Data Management System (MDMS):

APS signed a contract with Aclara to install its Energy Vision® MDMS product. APS is completing the initial requirements phase of the project, implementation plan and a schedule for a long-term MDMS solution. The MDMS will provide the foundation to support future integrations with APS AMI systems. Energy Vision® will be the system of record for all interval usage data at APS. APS will also be installing the Aclara Bill Prism® product, which will integrate with aps.com and empower customers to make more informed choices regarding the way they use and manage their electricity. APS is evaluating additional features such as revenue protection analysis, distribution asset optimization, and forecasting tools.

Elster Metering:

APS' smart meter program uses the EnergyAxis® System, which has advanced features such as remote connect/disconnect, voltage monitoring, outage notification and both residential and commercial bidirectional meters. The Elster AMI system is very similar to the P1D system. Both systems build a self configuring and self healing wireless communications network among the meters using a 900 MHz RF radio. A self-configuring and healing network requires no manual configuration. When a meter is installed or loses its communication path, the network automatically identifies the situation and creates a new communication path between the meter and APS. The Elster communication network design uses a mesh technology allowing each node meter to hop from one to another to reach a "collector" meter. As its name implies, the collector meter collects information from each of its node meters and provides the data to the APS system through a cellular connection. This meshing approach allows an Elster collector to service up to 1,000 node meters, thus reducing cellular costs to APS for communications with the AMI meters.

The integration of the Elster technologies with the MDMS system will allow APS customers to monitor energy usage and enable APS to identify and correct service interruptions more quickly while providing efficiencies in APS meter reading, billing and customer service operations.

Deployment Plan

The majority of the multi-unit residential housing complexes in the Phoenix metropolitan area have now been converted to AMI meters. This focus has provided significant value in reduction of field trips. During the last six months, the AMI system has remotely processed approximately 59, 000 service orders.

Due to the introduction of AMI meters in residential neighborhoods other than multi-family housing and the use of AMI to address access issues, the P1D hub to client ratio has reduced to approximately 29:1. This means that for each installed hub meter, there are approximately 29 client meters installed. In addition, the shift in deployment to single family detached homes increases the amount of time necessary to install each meter. In

order to compensate for the reduction in meter density and maintain a steady installation rate, APS has increased the size of the installation team.

APS plans to install approximately 150,000 new Elster meters in the first twelve months of deployment. This number will increase after the successful implementation of the MDMS. By the end of 2012, APS intends to have deployed an additional 800,000 meters.

Costs

This project consists of four main cost components; meters, monthly cellular communications, meter installation & administration, and interface development.

Meters:

The average per meter cost through August, 2008 was $93.57.

Communications:

APS has a contract with KORE Wireless to provide cellular service that allows the meters to communicate with APS through the Cingular cellular network. The effect of reducing the client to hub ratio slightly increased the communications cost per meter. Through July, the monthly per meter communication cost was approximately $0.19. This compares with the current monthly cost per meter read of approximately $0.95 using the meter reading workforce.

Meter Installation / Administration:

The AMI field operations team has installed approximately 46,000 meters in the last six months at an average installation cost per installed meter of approximately $11.86. When deployment progressed from high density multi-unit complexes to single family homes the cost per installation increased based on lower density and access issues.

Integration:

Over the last six months APS' integration focus has been a parallel endeavor of AMI and MDMS, which includes enhancements to existing AMI systems, a short-term integration plan for a second AMI system and the requirements phase for the MDMS. Milestones achieved include:

- Initiated development and design phase of a short-term integration for the Elster EnergyAxis® System. The solution will enable APS to bill from Elster meters.
- Completed requirements gathering for the initial phase of a long-term solution of the MDMS including extensive architectural discussions to ensure optimal design of infrastructure. APS has spent approximately $247,000 on integration in the last six months.

Operational Efficiencies

The ability to read and program meters remotely provides immediate operational efficiencies as well as offering the potential to significantly reduce the cost of implementing new rate designs. The table below shows the number of field visits eliminated during the last six months for customers with AMI meters. Field visits include transfers of service, name changes, meter exchanges for rate changes, and read verifies.

YYYY/MM	Transfer of Service	Rate Change & Verify	Total
2008/03	7,184	720	7,904
2008/04	7,613	826	8,439
2008/05	8,687	1,132	9,819
2008/06	9,448	1,386	10,834
2008/07	8,911	2,339	11,250
2008/08	9,395	1,269	10,664
Total	51,238	7,672	58,910

Fewer field trips result in reduced fuel consumption, fewer emissions and conceivably a reduction in vehicular accidents or other safety-related events.

Summary

Since the March 2008 report, APS has installed approximately 46,000 new AMI smart meters. Additionally, APS has continued to utilize AMI meters to resolve meter reading access issues as part of the Access Improvement Plan (AIP).

In May 2008, APS awarded a contract to Elster Electricity LLC for an additional 800,000 AMI smart meters for residential, commercial and industrial customers. APS initiated the development and design phase of a short-term integration for the Elster EnergyAxis® System and to install 150,000 new Elster meters within twelve months. The Elster EnergyAxis® System has advanced features such as remote connect/disconnect capability, voltage monitoring to improve power quality, outage notification and both residential and commercial bidirectional meters to support net metering needs.

APS also signed a contract with Aclara to implement their Energy Vision® Meter Data Management System (MDMS). In addition, Aclara's Bill Prism® product will empower customers to make more informed choices regarding their energy use through aps.com.

In conclusion, APS is continuing its AMI project by implementing a system to manage AMI meter data from the current meter reading systems and provide an interface for any future AMI systems.

The next report will be submitted in March, 2009.