

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE REVIEW OF)
IDAHO POWER COMPANY'S PHASE ONE) CASE NO. IPC-E-06-1
AMR IMPLEMENTATION STATUS)
REPORT) ORDER NO. 30102
)

On December 30, 2005, Idaho Power Company (Company, Idaho Power) filed its Phase One AMR Implementation Status Report (Report), as required by Order No. 29362, Case No. IPC-E-02-12. The Commission previously directed Idaho Power to collaboratively develop and submit a Phase One Advanced Meter Reading (AMR) Implementation Plan to replace current residential meters with advanced meters in selected service areas by December 2003. *Id.* The Company was also directed to complete Phase One AMR installation by December 31, 2004, and file an AMR Phase One Implementation Status Report by the end of 2005. *Id.*

On January 26, 2006, the Commission ordered the use of Modified Procedure and requested comments regarding the Company's Report. Order No. 29959. Comments were filed by Commission Staff, the Demand Response and Advanced Metering Coalition (DRAM), and Distribution Control Systems, Inc. (DCSI). The Company filed reply comments. With this Order we accept the Company's Phase One AMR Implementation Status Report as filed on December 30, 2005. As more fully set forth below, we also grant the Company an additional one-year period in which to work to resolve technical issues and assess further AMR deployment.

THE COMPANY'S REPORT

According to the Executive Summary of the Report, the Phase One AMR Project (Project) consisted of the implementation and evaluation of AMR technology for approximately 23,500 customers in the Company's Emmett and McCall operating areas. In addition to the AMR technology and infrastructure that included the meters, substation technology, and AMR software, the Company installed a Meter Data Management System (MDMS), which is required for validating the data and providing the data for billing purposes, and an Internet-based data presentment software system (Nexus), which makes usage data available to customers via the Company's web site. Idaho Power offered two programs: time-variant pricing and A/C cool credit program, in the Emmett area during the summer of 2005.

According to the Report, the Project included the installation of three separate but related systems, as no single system or vendor was able to provide all the functionality to meet the objective of the Project. This required Idaho Power to evaluate multiple vendors and build the necessary interfaces between systems to meet the functionality requirements. The systems installed are: (1) Two-Way Automated Communication System (TWACS®) AMR Power Line Carrier System, (2) Itron EE Meter Data Management System, and (3) Nexus Energy Software.

The TWACS® AMR system, consisting of software and physical equipment in the field, is the meter data collection system. TWACS uses two-way communications via power line carrier technology to retrieve meter-reading data. The TWACS® system is a multi-tiered technology that uses specific TWACS® meter modules, substation equipment, a communication network, and software to operate the system. The Itron EE Meter Data Management System was implemented in order to provide the validating, editing, and estimating (VEE) function for the hourly interval consumption data retrieved by TWACS® and converting this interval data into billing data for time-variant pricing programs. The TWACS® system is not designed to provide these functions. Nexus Energy Software is an Internet-based software system used for data presentment in which customers can access their AMR hourly energy use data through a web site. The total projected Phase One Project cost is \$6,859,424.

The Report provides the Project scope as well as an assessment of: the three installed systems; customer feedback on AMR; time-variant pricing; TWACS® load control functionality; other AMR-enhanced features; and Project costs and benefits. The Report also provides the Company's conclusions or "lessons learned" during the course of the Project as well as an analysis of future AMR deployments and the Company's proposed "next steps."

COMMENTS

Commission Staff – Staff reviewed the Company's AMR Report and filed comments on April 25, 2006. Staff reported that it is apparent that there were many difficulties encountered during the first phase of implementation. The difficulties centered on the complex technical infrastructure required and the inability for a single AMR system vendor to fulfill the Company's needs. This resulted in a small percentage of customers not being converted to AMR meters, problems with billings for time-of-use customers, and a possible setback in further AMR implementation. The Company has set forth an aggressive one-year resolution period in which it will work with its vendors to address the technical problems from Phase One. Also, this would

allow the technology to mature further and provide Idaho Power representatives the opportunity to re-assess their needs with new information. Following the one-year period the Company proposes to resume the competitive bidding process for vendors and conduct a thorough financial cost/benefit analysis of AMR.

Staff reported that the Company had to coordinate between multiple firms to achieve its AMR goals, as no single vendor could provide the necessary functionality on its own. This required a level of coordination that may have hindered the success of Phase One. As stated above, the AMR infrastructure installed during Phase One consisted of three separate systems that were necessary to facilitate and evaluate the Company's objectives: (1) the meter data collection system, consisting of the meter itself and the Two-Way Automated Communication System (TWACS®) used to relay consumption data; (2) the Meter Data Management System (MDMS) needed for validating, editing, and estimating the accumulated meter data along with aggregating billing data for time-variant pricing participants; and (3) the Nexus Energy Software used to present data for AMR customers to view via the Internet. Staff's comments reviewed each of these three infrastructure components as well as the problems encountered by each during Phase One. Staff also reviewed the Company's cost/benefit analysis concluding that it would like to see more effort put forth by the Company to identify the benefits of AMR.

Some problems identified by the Company and discussed by Staff include: installation and/or compatibility problems which resulted in 643 customers that were not converted to AMR meters; operational problems with retrieving data; lack of an MDMS system that meets the needs of the Company, which severely limits the expanding of time-variant pricing programs; lack of use by customers of the Internet-based (Nexus) access to usage data; and the identification and quantification of costs and benefits.

Staff Recommendation – Staff continues to believe there are benefits to AMR deployment and the pricing programs AMR can facilitate. However, Staff does recognize there are issues to be resolved before the Company can successfully launch the technology on a larger scale. Consequently, Staff supports the one-year period requested by the Company to address the problems from Phase One. Staff recommends that the Company provide a report to the Commission no later than May 1, 2007 detailing the efforts made toward problem resolution and its next steps for further AMR deployment. The report should specifically address the MDMS software, solutions to the single-phase substation issue, assessment of which ancillary services

can and cannot be supported by its AMR system, and the other issues outlined in the Company's initial Report. The additional year will provide an opportunity to test and evaluate software upgrades to the MDMS system, conduct more extensive analysis of potential benefits and costs, gain more experience with time-of-use pricing, and address the many other issues noted in the Company's initial Report. It will also allow AMR technology some additional time to develop.

Staff recommends that the Commission accept the Company's Phase One AMR Implementation Status Report as filed on December 30, 2005. Staff also recommends, as stated above, that the Commission grant a one-year period in which the Company can work to resolve its technical issues and assess further AMR deployment. Staff also recommends that the Company work closely with Staff and file a new report detailing the advances that have been made in resolving problems from Phase One, and provide its assessment of how it will proceed with AMR deployment. The new report should be filed no later than May 1, 2007, so the Commission can offer its input regarding continuation of AMR deployment.

DRAM (Demand Response and Advanced Metering Coalition) – DRAM states that it is a national organization focused on education and outreach on demand response and its enabling technologies and products. DRAM notes that with regard to the time-of-day pricing program the ratio between peak and off-peak prices was too small. DRAM also notes that, with regard to AMR implementation, because the costs and benefits reported are not reflective of an expanded deployment, the Commission should review a full-scale business case prior to reaching any policy conclusions for further AMR deployment. DRAM states that although pilots can play an essential role in phasing-in advanced metering and demand response they do not always yield a direct and clear understanding of all of the benefits that would occur via a full AMI deployment. Pilots can be inherently inefficient due to the small scale of the deployment and the significant efforts that are required to set up and integrate systems. DRAM states that for the best assessment of costs and benefits, a full-scale business case is warranted. DRAM suggests that Idaho Power as well as the Commission continue to monitor technology development and results from other jurisdictions.

Distribution Control Systems, Inc. (DCSI) – DCSI is the vendor that Idaho Power utilized to provide the Two-Way Automated Communication System (TWACS®) used to relay consumption data from the meter. DCSI's comments consist of responses to specific statements from Idaho Power's Report. DCSI states that technological development of its extended memory

(XM) module and its Multiple Input Receiver Assembly (MIRA), both of which were not available during Phase One, each address specific concerns/problems noted by Idaho Power. DCSI also addresses several other specific “problems” identified by Idaho Power in its Report such as: limitations on bandwidth capabilities; an overheating and replacement issue regarding 480-volt meters; and variable speed drive (VSD) meter failures.

With regard to cost, DCSI states, although Idaho Power only provided its actual Phase One costs, DCSI did provide pricing figures to Idaho Power for a full system-wide implementation. DCSI reports upon its review of nationwide pilots versus system-wide implementation the differences between pilot costs and full scale deployment cost can be drastically different, and DCSI believes a full scale rollout would result in a substantially lower “per point” cost than what Idaho Power experienced in Phase One.

Idaho Power’s Reply Comments – The Company submitted reply comments directly responding to specific statements from Staff’s comments. The Company provided additional information and/or clarifications regarding: (1) single-phase substations; (2) extended memory modules; (3) server capacity; (4) on-demand readings; (5) Meter Data Management Systems (MDMS); (6) Nexus software and usage; (7) consulting services; and (8) the population density of the testing area.

The Company states that it supports Staff’s recommendation that the Company file a report by May 1, 2007, detailing the advances that have been made in resolving issues encountered during Phase One. The Company states that it commits to continue working closely with Staff as it pursues its strategy for determining its future AMR policy, and will continue testing and evaluating AMR functionality during 2006 and will work with its vendors to address the technical issues encountered during Phase One. The Company states that during the first half of 2007 the Company plans to conduct a competitive bidding process that will include new Request for Proposals to multiple vendors. An in-depth financial analysis of AMR is planned during the second half of 2007 using varied scenarios of cost options and benefit possibilities.

COMMISSION DISCUSSION AND FINDINGS

After review of the record in this case, including the comments and the Company’s Report, we continue to find that Idaho Power should be working toward the implementation of AMR technology as soon as possible. *See* Order No. 29362. As we have previously stated, “the potential benefits of advanced metering to ratepayers and the Company are too great to delay

AMR implementation indefinitely.” *Id.* However, we recognize that some of the problems and difficulties identified by the Company with the Phase One implementation may benefit from some additional time to allow the Company to work collaboratively with the vendors to resolve issues. We note that the Company’s two time-of-use energy pricing pilot programs utilizing the AMR infrastructure were previously continued for an additional year to run through April 1, 2007. Order No. 30037. While we continue to find that AMR implementation should continue to move forward, we also grant the Company’s request for an additional one-year in which to work to resolve technical issues and assess further AMR deployment.

We recognize that AMR technology is relatively new and is evolving. To this end, the additional one-year time period may allow some of the processes involved to mature sufficiently to resolve some of the problems encountered in Phase One implementation. We note that information and experience gained from the large-scale implementation of this technology in other jurisdictions such as Pennsylvania and California may benefit Idaho Power and its vendors in working out the implementation problems encountered in Phase One. Additionally, the Energy Policy Act of 2005 directs us to consider the adoption of standards and the implementation issues regarding time based metering and communication, net metering, and other issues that are directly related to this AMR technology infrastructure. Thus, we find the additional one-year to be a prudent and reasonable approach that will allow additional time to resolve the technical issues encountered, and provide additional data to evaluate implementation on a larger scale.

We direct the Company to file a report no later than May 1, 2007, detailing the progress made on resolving each issue identified in its December 30, 2005 Report. The report should not only detail the advances made in resolving problems from Phase One, but also provide an assessment of how the Company will proceed with AMR deployment, including an implementation time line and a more extensive analysis of potential benefits and costs.

CONCLUSIONS OF LAW

The Idaho Public Utilities Commission has jurisdiction over Idaho Power Company, an electric public utility, and the issues presented in this matter pursuant to Title 61 of Idaho Code, including *Idaho Code* §§ 61-104, 61-119, 61-129, 61-302, 61-336, 61-501, 61-503, and 61-624.

ORDER

IT IS HEREBY ORDERED that the Commission accepts Idaho Power Company's Phase One AMR Implementation Status Report filed on December 30, 2005.

IT IS FURTHER ORDERED that the Company is granted an additional one-year period in which to work to resolve technical issues and assess further AMR deployment. The Company shall file an updated status report, as discussed above, no later than May 1, 2007.

THIS IS A FINAL ORDER. Any person interested in this Order may petition for reconsideration within twenty-one (21) days of the service date of this Order with regard to any matter decided in this Order. Within seven (7) days after any person has petitioned for reconsideration, any other person may cross-petition for reconsideration. See *Idaho Code* § 61-626.

DONE by Order of the Idaho Public Utilities Commission at Boise, Idaho this 13th day of July 2006.



PAUL KJELLANDER, PRESIDENT

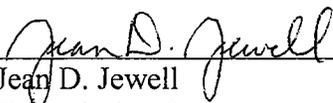


MARSHA H. SMITH, COMMISSIONER



DENNIS S. HANSEN, COMMISSIONER

ATTEST:



Jean D. Jewell
Commission Secretary

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