



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Mital, Simpson, Brown, Helgeson and Manning
FROM: Erin Erben, Power & Strategic Planning Manager
DATE: March 27, 2015
SUBJECT: R&D Pilot Programs Semi Annual Summary
OBJECTIVE: Information Only

Issue

The purpose of this now semi-annual memorandum is to provide updates on research & development programs, including load management pilots being undertaken by a cross-departmental team of EWEB staff. This summary includes activities from Q4 2014 to end of Q1 2015. Additional summaries will be provided in Q2 and Q4 2015.

Background

Staff continues to research an array of energy efficiency and demand response programs as directed in EWEB's updated IERP and strategic plan. The proposed programs are also intended to better position EWEB to assist customers with bill saving opportunities in the future. Appendix 1 summarizes current status by pilot program.

Discussion

Following are updates on active pilots:

Residential Time-of-Use (R-TOU) / "Power Hours Pricing Study"

The implementation of the Residential Time-of-Use (R-TOU) Rate pilot, also known as the Power Hours Pricing Study, remains the primary focus of EWEB's R&D team. This pilot is the first investigation of the effects of pricing signals within the residential sector and their ability to change customer behavior. The R-TOU pilot team continues its work to fill the recruitment sample, complete the installation of the TOU meters, and maintain the highest level of quality assurance on the transition of customer bills from the current standard tiered rate to TOU rate.

At this time, 75% of the sample has been recruited. To complete the sample, the team addressed several factors that contributed to a longer-than-anticipated initial recruitment phase: college football season and end-of-year holidays negatively affected weekend recruitment phone calls; there were some unanticipated data integrity issues introduced by our initial recruitment contractor; and we experienced a low conversion rate of customers willing to sign our initial terms & conditions agreement for participation. Effective early April 2015, a new recruitment contractor will begin filling the remaining sample set of approximately 150 customers. The RTOU team has developed a more detailed advance letter to potential customer-participants, and revised the terms and conditions document into a more customer-friendly research agreement to help improve conversion rates.

The EWEB Meter Shop has been very responsive to supporting the study timeline as to addressing customer facing issues. They have completed extensive testing, documentation, and troubleshooting exercises throughout the past few months. In addition, the meter techs are also downloading the interval

data every 45 to 60 days. The billing data is still being collected by the Meter Readers. The interval data is being stored in the Study database, which is providing invaluable firsthand experience to EWEB's near future meter data management (MDM) development efforts.

Finally, the customer billing system has been modified to accommodate the study with the help of the Meter Shop and Billing Control. This has been no small effort to define and thoroughly test this process without subjecting customers to billing adjustments. 100% of all initial Study bills are being reviewed for accuracy and/ or presentation issues. Initial data indicates that most customers are shifting and saving on "Power Hours Pricing."

The revised timeline for achieving a full sample of 450 customers is early May, with all meters installed by early June. The Study officially begins once all meters are installed. The first evaluation report, focused on the planning phase of the Study will be published in Q2 2015.

Commercial & Industrial Demand Response (DR) Aggregation Demonstration Project

The "Aggregation" pilot project extends the successful concepts of the Metropolitan Wastewater pilot program, designed to provide signals to industrial customers to temporarily reduce load, by expanding the approach and studying the accumulated effect of multiple customers shedding load.

This Commercial Demand Response (DR) Aggregator Pilot is a regional demand response program that was anticipated to come online in February 2015, and then tested for one year with a possible one-year extension. EWEB worked with Energy Northwest (EN) and other public utilities in Idaho and Washington, and the Bonneville Power Administration (BPA) to develop a program that could shift between 25 and 35 megawatts of power off of the transmission grid up to six times per month with the help of participating utility customers. Such customers under consideration were industrial or large commercial operations that were willing and able to reduce their electric demand on short notice (i.e., within ten minutes). **EWEB intended to participate; however, due to BPA budget constraints and timelines, EWEB and EN mutually agreed to cancel the contract.**

There will be an evaluation report regarding the activities associated with this pilot published in Q2 2015.




Lessons Learned:

1. This was a large and complex project with multiple external and internal stakeholders and many potential contracts. The more people and organizations that are involved, the more slowly processes move forward.
2. The metering and telecommunication equipment and integration costs came in 400% over the original vendor phone quotes. These higher than expected costs fundamentally changed the direction of the pilot. EWEB lost valuable time by not moving contracts forward during the cost overrun negotiation period.
3. This project illustrates the importance of allowing more time for planning and contract review. In addition, the necessary technology (e.g. load control/ telecom modules, DRACS) was also not available within constrained timeline determined by BPA. So, project calendars should include adequate time for technology delivery and testing.

Requested Board Action

No action is required from the Board at this time. For additional questions or comments, please contact Erin Erben at (541)685-7615 or erin.erben@eweb.org.

Appendix 1: Active Research & Development Pilot Programs Status

	Residential Time-of-Use ("Power Hours Pricing Study")	Commercial Aggregation	Placeholder
			
Current Stage	Recruitment/ Meter Installation	Not Proceeding	TBD
Implementation	Recruitment and meter installation are 75% complete.	Per summary, pilot not proceeding.	TBD
Evaluation	First evaluation report, focused on the planning and recruitment phase will be published in Q2 2015. Data being collected currently.	Formal evaluation and lessons learned to be published Q2 2015.	TBD
External	New 3 rd party recruitment contractor will begin mid April. Continued ongoing collaboration with EPRI on pilot design and evaluation.	Per summary, pilot not proceeding.	TBD
Hypothesis & Findings	Determine how TOU participants can benefit from peak shifting strategies.	Determine the feasibility of using multiple loads to attain 2MW of group dispatch.	TBD
Eligible Population and/or Unit Savings	100% of the 78,000 residential customers would be eligible for a residential TOU rate. Unit savings to be determined in Evaluation phase. Participation in the pilot is voluntary.	This would impact C&I entities able to secure a min. dispatch at pre-undetermined signals. Dispatchable impact to be determined in Evaluation phase.	TBD