MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO:	Commissioners Brown, Mital, Helgeson, Manning and Simpson
FROM:	Erin Erben, Power & Strategic Planning Manager
	Frank Lawson, Power & Strategic Planning Manager (AIC)
	Lisa Atkin, Power & Strategic Planning Supervisor
DATE:	October 25, 2014
SUBJECT:	Q3, 2014 R&D Pilot Programs Quarterly Reporting Summary
OBJECTIVE:	Information Only

Issue

The purpose of this quarterly memorandum is to provide updates on research & development programs, including load management pilots being undertaken by a cross-functional team of EWEB staff. This quarterly reporting period ended September 30, 2014.

Background

Staff continues to research an array of energy efficiency and demand response programs in response to the direction laid out 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. Throughout 2014, as many as seven pilot programs were active, in various stages of planning, design, execution, and analysis. Many of the projects have been the result of collaborative efforts with other regional partners, often with shared funding provisions. Appendix 1 summarizes current status by pilot program, offering additional insight and context to the pilots being undertaken.

Discussion

While efforts continue on a number of pilot programs, the following warrant updates at this time.

Residential Time-of-Use (R-TOU)

For 2014, the implementation of the Residential Time-of-Use (R-TOU) Rate pilot program continues to be the flagship effort that EWEB staff is engaged to investigate the effects of pricing signals within the residential sector. In the third quarter, the R-TOU pilot team completed formal development and training of the meter change-out and billing conversion process, along with troubleshooting of the meter data-to-bill presentment process. Preparation for participant recruitment included a secure query of the EWEB customer database for use by our marketing partner, Lockwood Research, who will officially launch participant recruitment in November.

Meter installations are expected to begin as early as December, extending through February 2015. "Treatment" participants will be placed on the TOU rate once their new TOU meter is installed. "Control" participants will also receive a new TOU meter, but will remain on the current standard

rate for 12 months. After 12 months, control participants will become treatment participants and be placed on the TOU rate.

Previously, the Board expressed interest in participating in an oversample as part of TOU pilot activities. Project team will begin to engage with Board members regarding pilot logistics (getting new meter installed) and communications (terms & conditions) in January 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. As part of this project, EWEB will be developing a roster of industrial customers who will be asked to reduce load for up to 90 minutes six times per month. In return, the customer will be compensated based on meeting this request at a rate of $3 per kW-Month. Most of the funding for this project is being provided by BPA, who is also working with Energy Northwest to develop the dispatching and control platform for the project.

Most of the third quarter was spend developing contracts between the "Aggregation" parties, and some basic contract models for participants. Presently, EWEB has tentative agreement from six customers who are willing to participate. EWEB will spend the fourth quarter engaging these and other customers, with a target "go-live" date for the one-year project in January 2015.

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 , or Frank Lawson at (541)685-7621 or frank.lawson@eweb.org .

Appendix 1: Research & Development Pilot Programs Status

	RESIDENTIAL PROGRAMS		COMMERICAL & INDUSTRIAL PROGRAMS			
	Residential Time Of Use (TOU)	**Carina Water Heater (Phase II)**	**Commercial Aggregation**	**EWEB Water Pumping & Storage**	**Metro Waste Water**	**SnoTemp Cold Storage**
						
Current Stage	Implementation	Pilot Complete	Planning & Design	On hold	Pilot Complete	Pilot Complete
Implementation	Meters have arrived and been tested. Conversion process is developed and tested, with minor refinement of bill presentment. Several EWEB test cases (with employees) are in process.	All pilot sites have been decommissioned.	Cross functional team working to develop DR capability with multiple businesses.	Other systems upgrades and process efficiencies to be realized before pilot program viable.	Possible transition and participation in "Commercial Aggregation" Project	
Evaluation	EM&V plan finalized. Valid data collection methodology being harnessed.	Final Report Completed	Process and impact evaluation template being developed.	No change	Final Report Completed	Report Completed
External	Continued ongoing collaboration with EPRI on pilot design and evaluation. Beginning recruitment process of pilot participants.		BPA incentivized pilot supported by Energy NW. Contract negotiation underway.	No new activity to report.	Final report sent to BPA. Video at www.eweb.org	No new activity to report.
Hypothesis & Findings	Determine how TOU participants can benefit from peak shifting strategies. Evaluation not yet commenced.	The study showed water heater load can be shifted, but the equipment cost is high compared to energy savings.	Determine the feasibility of using multiple loads to attain 2MW of group dispatch.	Demonstrate the ability to use price signals and/or DR incentives to both increase load when extra capacity exists and decrease load during capacity constraints.		
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 will be voluntary.	Approx. 80% of residential customers would be eligible for a water heater control program. Unit savings determined in Evaluation phase.	This would impact C&I entities able to secure a min. dispatch at pre-undetermined signals. Dispatchable impact to be determined in Evaluation phase.	This would impact EWEB facilities only. Unit savings and cost effectiveness to be determined.	With a Commercial TOU in place, approx 10,000 C&I businesses would have accessibility to participate in peak load shifting initiatives.	