MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Mital, Simpson, Helgeson, Manning and Brown

FROM: Erin Erben, Power Resource & Strategic Planning Manager
Megan Capper, Senior Energy Resource Analyst
Jason Heuser, Government and Community Affairs Coordinator

DATE: September 25, 2015

SUBJECT: Regional Policy and Legislative Update

OBJECTIVE: Information

ISSUE

Management provides the Board an update three times a year on our regional policy, legislative activities, and market affairs to provide context for the business environment within which EWEB operates. This update focuses on current Bonneville Power Administration (BPA) activities, regional policy initiatives, and legislation.

BACKGROUND

EWEB engages in regional policy and legislative work with other public and investor-owned utilities and trade associations in the Pacific Northwest as a way to extend our influence. Strategically, our regional work helps us identify external risks in time to respond to them and, where possible, helps shape the outcome of the discussion to result in new laws, regulations and policies impacting our industry and business. EWEB manages its participation and prioritizes this work according to its Business Strategies. More specifically, we:

- Strive to ensure proposed changes allow EWEB flexibility and resilience to better adapt and thrive in preparation for future changes. (BS1)
- Work to increase customer value by focusing on the efforts that enhance value and minimize cost shifts to EWEB. (BS4)
- Increase organizational efficiency by partnering with other trade associations and utilities to maximize our influence where there is alignment and focus on areas where EWEB may have a unique position. (BS5)

DISCUSSION

The following items reflect the current status of key topics in which EWEB has engaged. Each of them has a direct or indirect impact on EWEB's finances and business operations.

BPA Activities

BPA Fiscal Years 2016-2017 Rate Case ("BP-16")

The new BPA rates will be effective October 1, 2015. The final average rate increase among BPA customers for power is 7.1 percent and 4.4 percent for transmission. EWEB's power bill is expected to be an average of 5.5 percent higher and our transmission bill is expected to be 3.7 percent higher compared to the 2014 Rate Case. EWEB intends to recover these BPA related cost increases through a 2.5 percent increase to the electric utility revenue requirement, proposed to be effective February 2016.

The biggest drivers for the power rate increase include costs of debt service, operations and maintenance costs on the aging hydro infrastructure, transmission costs, fish and wildlife program costs, and the loss of Alcoa's industrial load. The biggest drivers for the transmission rate increase are maintenance and replacement of existing transmission assets, compliance obligations, including but not limited to cyber security and reliability obligations.

BPA Long Term Financial Planning

Much concern has been expressed regarding the future market competitiveness of Bonneville power. With the trajectory of their power and transmission rates increasing significantly, BPA is embarking on a stakeholder process to address these concerns. Some of these concerns are not within BPA's control such as the effect of hydro conditions on financial performance but still can be mitigated by risk analysis and planning processes. Other areas that are within BPA's control include financial reserves position, future capital needs, and overall debt structure and management. Administrator Elliot Mainzer has made this effort a top agency priority.

Biennially, BPA conducts a public budgeting process but only 45 percent of those costs are included in that process. Customers are concerned with the other 55 percent that include capital related costs, power purchases, transmission acquisition and ancillary services costs and the future uncertainty around those costs. With only a two year rate certainty, of particular concern are the drivers rising faster than inflation like hydro O&M, increased in fish and wildlife and other BPA internal costs.

In response, BPA is working on a long-term rates forecast model along with a planned budget and program delivery processes. A stakeholder public process called 'BPA Focus 2028' is planned for this fall to address these areas of concern.

BPA Network Load Transmission Service

EWEB uses BPA Network Transmission (NT) service to serve our load, and purchases Point-to-Point Transmission (PTP) for our secondary off-system sales. One of our regional priorities has been to work with BPA to increase accessibility to long term firm transmission (NT) for bringing our resources to load. Last fall BPA agreed to initiate a customer needs assessment. As a result of that survey, BPA has started a year-long project to improve its transmission forecasting, modeling, business practices and systems for accessing available long term transmission. In the future we expect EWEB to have the ability to forecast our future transmission needs to serve load, for BPA to have a mechanism to hold out that capacity, and a mechanism for easy access when needed. We also anticipate greater transparency around NT transmission needs and existing constraints.

Regional Policy Initiatives

NWPP Market Initiative

Members of the Northwest Power Pool (NWPP) have been working on alternative market structures to help integrate renewable resources more efficiently and cost effectively through sharing the benefits of regional diversity and increasing transmission utilization. The primary change would be to create a new intra-hour market that would trade in 15 minute intervals, in addition to the hourly markets that exist currently.

The California ISO has developed a similar market structure that includes PacifiCorp and NV Energy from Nevada. Puget Sound Electric and Arizona Public Service have also committed to participate in the California market and Idaho Power and Portland General Electric are currently evaluating membership. While EWEB will ultimately be bound by the decision of Bonneville Power, we have supported the NWPP effort primarily over governance concerns with the California market. The California market exists for the benefits of the state of California and it would be challenging to promote EWEB's specific interests in that forum. The current NW proposal also aligns well with EWEB's current business practices and would not require investment in additional staffing or software. While these participants have recently stepped out of the Northwest process we continue to work to find a NWPP solution.

Columbia River Treaty

It has been over a year that has passed since the September 2014 milestone that NW Public Power Stakeholders had hoped would unlock progress towards renegotiations with Canada as this was the earliest possible date that the United States could give notice of termination of the Treaty, a key leverage point to bring Canada to the table, the treaty does not have a sunset. Until the treaty is renegotiated the Canadian Entitlement will continue to be lopsided relative actual benefit to NW Ratepayers (EWEB's share of payment to Canada is around $6-8 million annually, when the actual downstream benefit to our ratepayers may be as little as one-tenth of that).

Despite little progress on the surface, a closer look shows promises that a new phase has begun. In August, the State Department transferred a senior officer to Washington, most recently stationed in Chile, and appointed him as a full-time negotiator on the treaty. He has been spending the past month briefing up on all matters large and small relating to the Treaty.

This comes on the heels of increased political pressure from the Pacific NW Congressional Delegation and with the negotiator now in place, the situation in Washington seems primed now for some sort of action to begin, as soon as this fall.

In light of this, Pacific Northwest Utilities have acknowledged that an important tool in our advocacy in Washington DC will be that of possessing independent technical analysis so as not to be overly reliant on analysis solely provided by federal agencies. At this time the necessary resources to accomplish that appear to be coalescing. This topic will be front and center for EWEB representatives attending APPA's National Legislative Rally in Washington DC in March of 2016.

Legislation

Federal "Clean Power Plan" Final Proposed Rule

On August 1st of this year, the US Environmental Protection Agency (EPA) issued the final proposed rule reducing carbon dioxide emissions from the existing electric power generation sector, following up on the proposed rule issued in June 2014. The rule utilizes section 111(d) of the existing Federal Clean Air Act as authority for EPA to set annual interim carbon dioxide intensity targets for individual states. The average effect will be an estimated 30 percent nationwide in carbon dioxide emissions by 2030 for the existing electric power sector. The targets vary state by state and each state will be tasked with submitting its own compliance plan using flexibility afforded them in setting state compliance paths.

EWEB filed comments on the draft rule in 2014 to both US EPA and to Oregon state agencies that will be tasked with developing Oregon's compliance plan. Generally, the EPA's modified final rule proved to be responsive to some of the concerns raised by EWEB and other Oregon stakeholders, including:

1) *Concerns about using a single year baseline in a hydroelectric dominant region* -- EPA modified the rule for hydroelectric regions, throwing out the 2012 baseline (a very good hydro year) and replacing it with a decade long averaged baseline.

2) *Oregon's initial target was one of the most stringent in the nation and improperly undervalued early action and leadership on energy efficiency and renewables* -- Oregon's final goal was made less stringent and now seemingly provides "head room" to meet compliance. Other states with higher carbon dioxide emissions and less early action have seen their goals made more stringent.

3) *The initial compliance year was 2020, when Oregon's largest source of emissions, the Boardman Coal Plant in Eastern Oregon, was not slated to be closed until the end of 2020* -- the first compliance year has now been changed to 2022. This is a coincidence with regard to Oregon's advocacy, and was more likely changed to improve the legal defensibility of the rule, but nonetheless a positive outcome for the state.

4) *Energy Efficiency in Consumer-Owned Utility territory's may not have been allowed for inclusion in state compliance plans without "enforceability" which EPA may have only recognized as mandate like intrusions into local decision-making* -- Energy Efficiency is no longer a primary "building block" of compliance (coal plant efficiency, natural gas substitution, and renewables remain now as a set of three building blocks) and have been removed from the targets assigned by EPA to states, but will still be allowed anyway for compliance purposes. This eliminates pressure on the Oregon legislature to enact new energy efficiency mandates of Oregon COU's.

5) *EWEB's comments strongly implied that compliance obligations should be placed on the owners/operators of fossil fueled generation plants and not generally to load serving entities like EWEB* -- while this matter is largely left still to states to decide this, the rule appears to steer states towards just this approach.

On balance, the final rule is judged by EWEB to be an improvement from the initial proposed rule. However, many outcomes and decision points remain fluid and the formulation of Oregon's state plan is of great importance to actual outcomes that could affect EWEB. EWEB will be closely tracking the progress of the Clean Power Rule and the State Plan and will participate actively at

every step. Oregon's State Plan is due at the end of 2016, or 2017 if Oregon elects to submit as part of a multi-state plan. Some future issues and questions that EWEB will track:

1) Although EWEB may not have any direct compliance obligations, how much risk exposure do we face?

2) If the state issues free "allowances" for greenhouse gas emissions to utilities, what if any amount should EWEB be entitled to?

3) Again, although EWEB may not have any direct compliance obligations, can we have a role as a partner with entities who do have a compliance obligation, i.e. "emission reduction credits trading" for renewables, energy efficiency, or other emission reduction actions?

State Carbon Legislation and Possible Ballot Initiatives

In the 2015 State Legislative Session, multiple bills were introduced to address Global Climate Change and Oregon's role in reducing greenhouse gas emissions. Of these bills, virtually all forms of emissions reduction policies were debated -- carbon tax, carbon cap-and-trade, carbon cap-and-dividend, and simple carbon cap, as well as one-off command-and-control non-market based carbon reduction policies. Many hours of testimony and debate occurred, but ultimately to no avail, the political will to take action on any of these approach simply did not coalesce.

The 2017 State Legislative Session will likely have more of the same, and while the outcome is difficult to predict, public sentiment does seem to be trending towards an enhanced call for action. For starters, after little or no discussion in the last presidential election between Barack Obama and Mitt Romney, Global Climate Change and the EPA's Clean Power Rule have already been topics in the first two Republican Primary Debates. It seems likely the topic will be one of the substantive issues discussed in the remainder of the primaries as well as the 2016 Presidential Election. As a result, the topic will probably also feature more prominently in the next state elections in 2016.

However, there has been word circulating that state environmental interests and clean energy advocates may be gearing up to submit a statewide ballot initiative addressing climate change. Early on, it seemed the initiative might be some iteration of one of the legislative measures considered in 2015. Now though, due to less than convincing polling results, there have been reports that the initiative may be to increase Oregon's Renewable Portfolio Standard from 25 percent to 50 percent. There are many questions about such a proposal that would need to be answered before the impact to EWEB could be discerned and EWEB will be attempting to learn as much and as soon as possible.

MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Mital, Simpson, Brown, Helgeson and Manning

FROM: Erin Erben, Power & Strategic Planning Manager
Monica Shovlin, Public Affairs Supervisor
Mark Tuffo, Project Manager

DATE: September 25, 2015

SUBJECT: R&D Pilot Programs Semi-Annual Summary

OBJECTIVE: Information Only

Issue

The purpose of this semi-annual memorandum is to provide updates on research & development (R&D) programs, including load management pilots being undertaken by a cross-departmental team of EWEB staff. This summary includes activities from Q2 and Q3 2015. The next update will be provided in Q2 2016 for activities from Q4 2015 to end of Q1 2016.

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 project team has completed customer recruitment and installation of the TOU meters as of June 30, 2015, and the study is officially underway. The team continues to focus on quality assurance, customer service and communication as we approach the change of schedule to winter hours on November 1st.

A total of 451 TOU meters have been installed, including 226 customer-volunteers who were randomly assigned to begin on the Power Hours Pricing plan at the time of meter installation (the "treatment" group); the other 225 customer volunteers will begin on the new pricing plan in summer 2016 (the "control" group) per the "recruit and delay" protocol recommended in the study design commissioned from the Electric Power Research Institute (EPRI). Recruitment incentives have been distributed to customers who signed their research agreements within two business days. Incentives included Unique Eugene gift certificates redeemable at a variety of local merchants, one iPad Air grand prize drawing

and five emergency preparedness kits via a drawing of customers who declined to participate in the study, but agreed to take a short "decliner" survey to help us understand obstacles to participation.

A communications plan is in place to engage those customer-volunteers who are on the pricing plan and encourage them to "shift and save." Tactics include a closed Facebook Group where customers and EWEB administrators can share tips and tricks to shift and/or reduce electric consumption, as well as a quarterly e-newsletter.

Two half-time Customer Service Analysts are temporarily assigned to provide support for the study. In addition to a dedicated phone line and email address, the CSAs access an in-house database to record customer interactions and address concerns. For example, CSAs can use the database to perform a "Shadow Bill" calculation – a comparison of the cost of their electricity use on the Power Hours Pricing plan versus the standard tiered residential rate – in addressing high bill concerns from customers. CSAs also may point out or remind participants about the Best Bill Guarantee to retain customer-volunteers.

The database also stores interval meter data for load research. Meter Shop technicians continue to download the interval data every 60 days at customers' homes.

The first evaluation report, focused on the planning phase of the Study will be published in Q4 2015. The team is currently preparing data for summer impact analysis by EPRI and wrapping up analysis of the recruitment process. In addition, team members are documenting lessons learned and applying them to continuously improve processes in real time. Lessons learned from the recruitment process include:

- Need for customer communication to emphasize the importance of direct meter access for EWEB staff, which is heightened by the hands-on process of interval data download;
- The realities of manual meter data management and importance of applying Validation, Estimation and Editing (VEE) rules with tight tolerances (similar to that of an automated Meter Data Management system) when processing energy usage data, while also avoiding excessive error log entries and false errors;
- Need for flexible & adaptable internal processes and procedures – and interdepartmental collaboration – to accommodate customer service and billing control issues in real time (such as customer move-outs on short notice).

Grid Edge Demonstration Project (in development)

Going forward, the R&D team is interested in focusing the last part of this IERP initiative on microgrid and storage technology, to see where it might make sense as a future investment strategy for EWEB. Currently, EWEB is working to secure grant funding for a Grid Edge Demonstration Project that will test renewable energy storage optimization methods to support community resiliency and disaster recovery of critical facilities including electricity, water and communications. EWEB will act as the lead organization, most likely in partnership with another local entity. The grant is being offered by the Oregon Department of Energy and will be administered by Sandia National Lab.

This project can be viewed strategically as a platform to integrate customer or utility-owed distributed generation while providing multiple value streams such as community resiliency/Disaster recovery[1] and

1 The Natural Hazard Mitigation Plan and the Vulnerability Assessment that was completed by the Cities of Eugene and Springfield can be found here: http://www.eugene-or.gov/emergencyplans.

ancillary grid services. In the event of a disaster (earthquake[2], flood, fire, etc.), having multiple local stand-alone renewable power supplies is critical for long term (multi-week to multi-month) sustainability. It is anticipated that the Cascadia subduction zone earthquake could result in a loss of BPA intertie and other critical services for weeks to months. EWEB is looking at our ability to harden background generation infrastructure through the use of local, strategically located microgrid solutions.

The basic project elements include: three critical community infrastructure sites, covering key services such as water, power and communications.

Current Draft Plan for Grant Proposal:

Photovoltaics (PV)	• 75 kW; Existing PV system installed at the Roosevelt Operations Center (ROC) • 50 kW; New PV system added to support telecommunication and water pumping station site (Blanton Heights)
Energy Storage - Battery	• 150 kW / 300 KWh (Li-ion) at ROC for electric utility resiliency • 125 kW/ 250 kWh (Li-ion) at Blanton for water and communications resiliency
Inverter based Interconnection	Building level / 480 V / advanced inverter technology
Software/communication	Control logic and reporting – TBD (Green Energy Corp)

The basic project will explore EWEB's ability to leverage this infrastructure, whose primary purpose would be disaster recover, by extracting additional value streams once installed, including:

- Storing solar energy from an existing PV system
- Peak shifting – daily shift to reduced monthly demand portion of electric bill
- Demand Response
- Power quality improvements (Volt/Var control)
- Frequency control (Primary frequency response, regulation, load following/ramping, and spinning reserve)
- Resiliency – "Black start" capability
- Disaster Preparedness – able to sustain basic level of self-supplied energy indefinitely
- Grid ancillary services – voltage support, regulation services, peak capacity, demand response.

The planned duration of the project is through December 2017. EWEB is preparing a grant proposal for $295,000 in ODOE co-funding of the project. Proposals are due in October 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.

2Cascadia Earthquake covered by the New Yorker: http://www.newyorker.com/magazine/2015/07/20/the-really-big-one

Appendix 1: Active Research & Development Pilot Programs Status

	Residential Time-of-Use ("Power Hours Pricing Study")	Grid Edge Demonstration Project
		
Current Stage	Year one of pilot underway	Under development
Implementation	Recruitment and meter installation are 100% complete. 451 randomly assigned to 226 on TOU pricing plan and 225 to start in about 12 months.	Preparing grant proposals for renewable energy storage optimization project.
Evaluation	First evaluation report, focused on the planning and recruitment phase, to be published in Q4 2015. Also prepping summer usage data for EPRI impact analysis by Q1 2016.	Draft evaluation plan in Q4 2015, if funding secured.
External	Continued ongoing collaboration with EPRI on pilot design and evaluation.	Green Energy Corp and Oregon Department of Energy.
Hypothesis & Findings	Determine how TOU participants can benefit from peak shifting strategies.	Test renewable energy storage optimization including operation and control of PV and battery storage to provide community resiliency/disaster recovery for critical facilities.
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.	EWEB customers would benefit from peak shifting, demand response; Customers, occupants/visitors of Eugene, other public service agencies would benefit from resiliency/disaster recovery of critical services.

MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Mital, Simpson, Helgeson, Manning and Brown

FROM: Mel Damewood, Engineering Manager, Jon Thomas, Planner III

DATE: September 18, 2015

SUBJECT: LTD EmX Project Update

OBJECTIVE: Information Only

Issue

EWEB continues to relocate water and electric infrastructure to accommodate the West Eugene EmX Extension Project. EWEB's partnership with Lane Transit District (LTD) will require utility relocation work well into 2016. The purpose of this memo is to bring the Board up to date as to the status of Water and Electric activity for the LTD EmX Project.

Background

The West Eugene EmX project will extend express bus service from downtown to west Eugene. LTD's project was broken into two Volumes. The western section, defined as Volume 1, extends from Garfield St. to new the terminus on West 11th and Commerce St. The eastern section, known as Volume 2, covers area from the downtown bus station (near 10th and Charnelton St.) to Garfield St.

Discussion

Volume 1

EWEB Water Engineering has completed designs for the relocation of water services, fire hydrants, fire lines and several sections of water main. Construction has begun and is anticipated to be completed by end of 2015. However, recent exploratory excavations found some additional large diameter water main within LTD's excavation limits, which may extend the finish date into 2016. This is still under evaluation but appears likely that additional water main will need to be relocated.

EWEB Electric Engineering has completed relocation designs along W.11th Ave. There is approximately 6,000 feet of trenching required along W.11th to install needed substructure to resolve conflicts when facilities are moved. No construction has started because LTD is still obtaining property/easement acquisitions before EWEB or our contractor can begin construction work. For this reason, the tentative start date for electric relocation has been delayed 5 months since our last Board update; start date is estimated for November 2015. Working west to east, EWEB's estimated work duration is 11 months. Therefore, EWEB is

waiting to execute the contract with Professional Underground Services Inc. (approved by Board in July 2015), and has not issued the Notice to Proceed. EWEB and LTD are communicating well over this issue,

Volume 2

EWEB Water Operations staff have completed nearly all the water service relocations within Volume 2 except for 3 locations where easement acquisitions are delaying remaining work. Water main and hydrant relocations are nearly complete.

EWEB Electric Operations staff continues to coordinate with LTD and their contractor to complete remaining service extensions for bus stations, street lighting, and traffic signals.

LTD has agreed to reimburse EWEB for all costs incurred for the utility relocations and service extensions. The total project cost is estimated near $12 million. LTD continues to be very timely with making payments to EWEB's monthly payment requests.

Project Cost vs Revenue Totals:

	EWEB Costs *	LTD Payment *
Water Relocations	$2,278,857	$2,274,198
Electric Relocations	$852,467	$851,910
Totals	$3,131,324	$3,126,108
EWEB Driven Improvements**	$758,081	$0

** EWEB Costs and LTD payments to EWEB as of the latest billing cycle for work performed through July 31st, 2015. Future billing cycles will remedy variances between costs incurred and LTD reimbursement.*
*** EWEB Driven Improvements that Water Utility elected to perform that were within the boundary of the LTD project but not in conflict with LTD's project; therefore non-reimbursable by LTD. These projects addressed aging infrastructure in need of replacement that made sense to address while completing LTD work in that area.*

Requested Board Action

No action requested. This is an informational item only. Management will be available at the October 6th 2015 Board Meeting. If you have any questions, please call Mel Damewood at 541-685-7145 or email mel.damewood@eweb.org.

MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO:	Commissioners Mital, Simpson, Helgeson, Manning and Brown
FROM:	Mike McCann, Generation Manager and Mel Damewood, Engineering Manager
DATE:	October 6, 2015
SUBJECT:	Status of Carmen Smith Settlement Agreement Revision and Powerhouse Refurbishment Project
OBJECTIVE:	Information Only

Issue

This memo is intended to provide the Board with an informational update regarding the two efforts related to the Carmen-Smith Project. In July, the Board supported Management's recommendation to pursue strategies to renegotiate the Carmen-Smith Settlement Agreement in order to improve the likelihood of the project remaining economic over the license period. This memo also provides an update to the necessary work being completed to refurbish the Carmen Powerhouse.

Background

Since EWEB and 16 other parties signed the Settlement Agreement for the Relicensing of the Carmen-Smith Hydroelectric Project, the economics of the project have deteriorated to the point that reassessment is necessary. The Project value has deteriorated primarily due to falling market price projections for power, though significant changes in estimated costs and ongoing O&M expectations are important as well. Assuming we do not build a fish screen at Trail Bridge Dam and instead give up generation at that plant, the net present value of the project on an expected basis is roughly break even.

In 2008, the total recapitalization project costs for Carmen-Smith Relicensing were originally estimated at $166 million. In 2015, the total recapitalization costs are estimated at $181 million, including $146 million in future expenditures and $35 million already spent. The original implementation schedule anticipated license issuance several years ago and, had that happened, we would likely now be constructing and commissioning the environmental improvements included in that Settlement Agreement and anticipated license.

Delays in license issuance are predominately the result of FERC's response to proposed measures in the Wild and Scenic River Corridor adjacent to the Project boundary. Those delays, combined with very significant concerns about the condition of the power plant, compel us to begin the refurbishment of the Carmen Powerhouse at this time. The powerhouse was built in 1963 and most equipment used there today is as originally installed.

Discussion

Settlement Agreement Renegotiation

Following the July Board meeting, Management submitted, by letter to FERC, three requests. The first request was to stay the issuance of the license for at least six months. This request would provide time to more thoroughly update the project economics and share those results with the Settlement Parties. We also need that time to renegotiate certain aspects of the license that commit EWEB to large, upfront infrastructure expenditures while northwest power markets are currently depressed and market and regulatory aspects are uncertain. We also asked that FERC schedule and conduct a technical conference so that we could share that information with them. Lastly, we requested that FERC assign separated staff to work with us and our Settlement Parties so as to help navigate the renegotiation in a manner that would be also likely meet the regulatory requirements of FERC. In response, FERC first solicited comments regarding the request. Six Settlement Parties submitted comments, all in support of the stay.

On August 28, 2015 FERC granted our request for a stay of license issuance until at least January 31, 2016. FERC also requested that EWEB inform them of our intentions for the Project at that time. FERC declined to schedule a technical conference and also declined to assign separated staff at this time but indicated that they would consider those requests depending on the outcome of the analysis completed by EWEB in the interim and EWEB's intentions for the Project.

Having been granted the stay, Management has assembled a team to renegotiate the Settlement Agreement and an initial meeting with the Settlement Parties took place on September 9th. The Settlement Parties are willing to consider proposed modifications to the Settlement Agreement and are engaged in developing a mutually agreeable solution to the situation. Key aspects of their cooperation appear to be EWEB's willingness to share the economic basis of the situation, our willingness to consider implementation of certain portions of the Settlement Agreement ahead of license implementation, and the strong, longstanding relationships that have been built between EWEB and the Settlement Parties. While we are a long way from a modified agreement, it is promising that the Parties are willing to come to the table for this important discussion.

Going forward, the renegotiation team will set a bi-monthly meeting schedule to pursue specific modifications to the Agreement. The goal of the renegotiation is for EWEB to maintain its commitment to the improved environmental outcomes agreed to in the initial Settlement Agreement but be able to deploy infrastructure or other funding in a more cost effective manner. To be successful, we will likely need to avoid infrastructure such as the fish screen and ladder at Trail Bridge Dam and the bypass pipe in the Carmen Powerhouse. In exchange, we should expect to provide fish passage via other methods at the site or fish passage mitigation elsewhere in the McKenzie or Willamette River basins. We are at the very beginning stages of the renegotiation so these strategies may change significantly before completion.

If successful in a renegotiation of the Settlement Agreement, we will file an amended Settlement Agreement as a modification to our license application. Amending the Settlement Agreement and modifying our license application will trigger the need to update the biological opinions issued by the National Marine Fisheries Service (NMFS) and US Fish & Wildlife Service (USFWS), the 401 water quality certification from Oregon Department of Environmental Quality (DEQ) and the fish passage waiver for Smith Dam from Oregon Department of Fish & Wildlife (ODFW). While the

timeline for those requirements isn't entirely predictable, these actions will likely delay license issuance by the FERC for at least three years. During that period we will focus on refurbishing the powerhouse as well as initiating any early implementation terms agreed to in the amended Settlement Agreement.

Carmen Powerhouse Refurbishment

Because the powerhouse is over 50 years old and equipment is failing, Engineering and Operations Staff have developed a schedule for refurbishment. Much of the equipment procurement requires significant lead time, planning and staging.

Carmen Powerhouse refurbishment is tentatively planned as follows

Powerhouse Engineering Firm Selection:	2015
Construction Manager/General Contractor authorization:	2015
Gantry Crane Renovation:	2016
Turbine Shutoff Valve (TSV) replacement:	2017
Substation Rebuild:	2018
Unit 1 turbine replacement and generator rewind:	2019
Unit 2 turbine replacement and generator rewind:	2020
Ancillary systems repair and replacement:	2021

Powerhouse Engineering Firm Selection

EWEB recently completed a request for proposals (RFP) process for selecting an engineering firm to design the planned improvements at the Carmen powerhouse. Proposals were received from Black and Veatch and HDR. Following proposal reviews and interviews, the evaluation committee selected Black and Veatch. An initial work task will be to assist EWEB in evaluating project financial status and identifying potential cost saving measures. EWEB intends to negotiate a service agreement with Black and Veatch for Board approval in November.

Construction Manager /General Contractor

The planned contracting mechanism for some or all of the powerhouse improvements is via the existing Construction Manager/General Contractor (CM/GC) contract with Wildish Construction that the Board approved on April 5, 2011. Work on pre-construction services was authorized at that time. In November, staff intend to bring to the Board an amendment to authorize moving the CM/GC contract into the construction services phase. Under this phase of the contract, Wildish Construction will solicit bids from specialty contractors; procure materials and equipment; manage subcontractors and suppliers; coordinate construction activities; and assume overall responsibility for work at the powerhouse on a project-by-project basis.

Gantry Crane

The crane at the Carmen Powerhouse is at the end of its useful life and does not function in its current state. Repairing the gantry crane and making it available for subsequent work will eliminate the high cost and schedule risk of renting large mobile cranes for multiple picks. Please see the separate backgrounder and Action Item submitted for the October 6, 2015 Board meeting for additional information on this item.

TSV Replacement

The Carmen Powerhouse has two valves that shut off penstock flow to the turbines. These valves are critical in both the operation of the turbines and to allow inspection and maintenance of the generating equipment. At this time, because the seats of the valves have failed, it is not possible to seal the valves sufficiently to dewater the turbine runners or other pieces of downstream equipment to allow for safe inspection or maintenance work. Assuming the Board approves the construction phase of Wildish's CM/GC contract, their initial work will be to procure the valves based on solicitation to bid currently in process. Board review and approval for TSV procurement is scheduled for November. Having initiated the procurement of the valves, we will commence design and work with Wildish to contract for their installation. We expect that process to take approximately 6 months. Currently Wildish is managing the solicitation for proposals for the turbine shutoff valves procurement under the previously approved preconstruction services contract.

Substation Rebuild

Due to the long lead time for replacement and ongoing performance issues, replacement transformers for the Carmen substation have been purchased. Redesign of the substation and switchgear is expected to begin in 2016, with construction in 2018.

Turbine Runner Replacement and Ancillary Systems Replacement

These projects are in their initial phases and will be included in subsequent Board updates. Due to the age and condition of the equipment, it is likely that staff will need to support emergent repair needs over the next several years.

TBL Assessment

The basis of the Settlement Agreement renegotiation is a fundamental review of the Project's TBL. As written and under current economic conditions, the cost of the Carmen-Smith Relicensing project outweighs the environmental and social benefits. All aspects of the project are being considered in order to reduce costs without materially degrading the environmental and social benefits. This memo has focused primarily on the changes to the Settlement Agreement, but the Carmen Powerhouse and other infrastructure projects related to the operation of Carmen- Smith are also being reviewed for cost savings.

Requested Board Action

None. This memo is for informational purposes only. Please contact Mel Damewood, 541-685-7145 or Mike McCann, 541-685-7379 with questions.