



# 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

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## 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.