



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

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TO: Commissioners Mital, Simpson, Helgeson, Manning and Brown
FROM: Frank Lawson, Electric Systems Engineering
DATE: October 20, 2015
SUBJECT: Significant Type 2 Project Update/Cost Increase: Holden Creek Substation
OBJECTIVE: Information Only – Gather Feedback Prior to Expenditure/Commitment

Issue

Based on early design work, the Holden Creek Substation cost estimate is being increased from a preliminary placeholder value of \$3 million to \$5.7 million. To date, only design costs totaling \$139,000 have been committed to and no contracts have been awarded. This memo is provided to solicit any comments on the project costs before staff moves forward with further obligations.

Background

The Holden Creek substation project supports EWEB's infrastructure goals of improving asset utilization, and system resiliency. The project will replace the substation at Leaburg, and allow EWEB to de-commission the two aging ("A" and "B") transmission lines between Walterville and Leaburg (16 circuit-miles). Additionally, much of the equipment at the Leaburg substation dates back to the 1940's, including the transformers. By building the Holden Creek Substation approximately ¼ mile west of the Leaburg powerhouse, EWEB will connect generation and local distribution to the BPA transmission lines running between Carmen-Smith and EWEB's Thurston substation in east Springfield. The avoided costs if we build the Holden Creek Substation are estimated at \$8.5-10.5 million for transmission line replacement and \$2.5 million for equipment upgrades at Leaburg, which results in a net investment reduction of \$5.3-7.3 million along with least a \$50,000 annual reduction in transmission line maintenance.

Discussion

The original estimate of \$3 million was an under-projection of cost, Material and equipment costs have increased, with recent similar contracts showing a 20-25% increase over the past year. The original estimate also assumed the re-use of transmission breakers (\$400,000) from the present Leaburg site. However, because the existing site will continue to operate until Holden Creek is commissioned, these breakers will be re-purposed at a later time elsewhere in the EWEB system. Finally, the civil work at the site will require additional grading and structural support including a concrete panel fence for security. The additional cost for the Holden Creek substation will impact the latest approved Electric Capital Improvement Plan by reducing the capital reserve by approximately \$700,000 in 2016 – 2017, and by shifting some resources from other deferred projects during this time period.

TBL Assessment

In addition to the economic advantages mentioned above, the project includes social and environmental benefits. A new substation will remove 11,000 gallons of mineral oil from within 25 feet of the Leaburg tailrace (McKenzie River), and will remove sixteen line-miles of transmission lines through farmland and communities, including over Walterville School. The potential downsides of the project include the roadside impacts (mostly visual) of a substation along Highway 126.

Recommendation

Staff is recommending that EWEB proceed with the final design and construction of the Holden Creek substation for a budgeted cost of \$5.7 million, and a completion date of June 2017, which is the target date for BPA to connect its transmission lines to the Holden Creek substation.

Requested Board Action

No Board action is required. Staff wishes to inform management and the Board of this noteworthy Type 2 project change prior to significant expenditure or commitment, and gather feedback on any conditions to proceed.

If you have any questions, please contact Frank Lawson at (541)685-7621 or frank.lawson@eweb.org.