



# MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

*Rely on us.*

TO: Commissioners Helgeson, Brown, Mital, Simpson and Carlson  
FROM: Mel Damewood, Chief Engineering & Operations Officer  
DATE: February 23, 2017  
SUBJECT: EL1 Capital Report for Q4 2016 (Year End).  
OBJECTIVE: Information Only

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## Issue

As per EWEB's EL1 Financial Policy that was approved on February 4, 2014, EWEB staff has prepared and attached the 2016 Q4 (Year End) EL1 Capital Reports for Electric, Water, and Shared Services for the Board.

## Background

According to Financial Policy EL1:

Throughout the year, staff will provide the Board with quarterly financial reports that compare actual results with budget. Additionally, staff will provide the Board with quarterly updates for all current year projects on the Capital Improvement Plans. General Capital Renewal and Replacement projects (Type I) will be reported by category (e.g., substations, shared IT infrastructure, transmission & distribution mains). Infrastructure Rehabilitation & Expansion (Type II) and Strategic Projects (Type III) will be reported individually. Type II and III projects are further defined as those that are projected to be greater than \$1 million for the life of the project.

Management has attached three reports, Water, Electric and Shared Services Capital Q4 results for the Board's review.

## Discussion

### Water

Water had \$15,057,000 budgeted for capital in 2016 (Adjusted from April 19<sup>th</sup> True up) of which \$13,573,000 of the capital budget was directed towards Type I, II and III water facilities projects. The remainder was housed in Shared Services capital work attributed to the Water Utility.

Water had an excellent year in completed planned work in 2016. Type I work achieved 90% overall spending, with the bulk of the underspending in main work that did not get completed due to unexpected LTD EmX work in 2016. Type II Capital expended 98% of budget, primarily influenced

by completing the Hayden Bridge South Filter Rebuilds and hitting the mark on budget vs. actual expenditures for that project in 2016. Combined Type I and II capital work performance for expenditures was at 93%.

Type III capital work, solely the Willamette Treatment Plant and Intake work, progressed significantly in pre-design work. The bulk of the underspending for that project was the result of continued property acquisition efforts that have not yet been completed.

Overall, due to the factors above, Water expended 85% of capital budget for Type I, II, and III work.

## **Electric**

Electric had \$39,355,000 budgeted for capital in 2016 (Adjusted from April 19<sup>th</sup> True up) of which \$32,751,000 of the capital budget was directed towards Type I, II and III electric facilities projects. The remainder was housed in Shared Services capital work attributed to the Electric Utility.

In 2016, Type I electric capital expended 86% of budget. Generation Type I work underspent due to focus of resources on the Carmen Smith Powerhouse project, and Electric Distribution Type I work being slowed due to the LTD EmX project. Type I substation work overspent slightly due to emergent work in 2016.

For Type II work, the electric capital performance was only 54% of expenditures. Largely impacted by the Holden Creek Substation which was planned for construction in 2016, but was delayed significantly due to FERC licensing amendment process. Significant underspending on the Downtown Secondary Network also occurred in 2016, however, equipment purchased for work in 2016 on the project was pre-capitalized upon procurements, so the actual expenditures are not fully accounted for because of cost tracking issues. The good news is that we now have 3 fully functioning Roll Gates at Leaburg, with Roll Gate #3 completion occurring in November 2016.

For Type III Capital, solely the Carmen Smith Powerhouse project, lagged in overall expenditures compared to 2016 budget, however expenditures are picking up pace due to work being conducted by our engineering consultant and turbine shut off valve (TSV) procurements and ancillary projects associated with the TSV project timing.

Year end results of total expenditures vs. budget for Type I, II and III electric capital was 67%, excluding Shared Services.

## **Shared Services**

Shared Service had \$8,088,000 (rounded) budgeted for capital in 2016 (Adjusted from April 19<sup>th</sup> True up) of which \$1,484,000 was attributed to the Water Utility and \$6,604,000 for the Electric Utility.

For Type I capital, expenditures were 53% of overall budget, with IS Type I work underspent due to retooling of IS resources and approach on projects. Facilities also underspent, primarily due to the delay in the HQ elevator work, and that contract was recently approved at the February 2017 Board meeting. Fleet had a slight underspend due to deferrals in purchases.

Type II capital expenditures, Shared Services only spent 49% of budget. This was due primarily to the non-spending of capital funds for the CIS project. AMI project made progress on its communication network in 2016, however the project also slightly underspent.

Overall, Shared Services performance of Budget vs. actual expenditures was 52%

### **Summary of Performance in 2016**

As Management reflects on performance of capital work in 2016, Water performed the highest with 85% of expected project expenditures and work completed. Less the impacts of property issues delaying a large purchase, the performance of project expected completions deserves a high rating. Also, given the performance and level of capital consistently coming in at a high level over the past few years, management concludes that the amounts that are being budgeted for Type I and II work, are at appropriate levels and should continue its trajectory to renew and replace water infrastructure.

For Electric, with an overall spending in Type I and II work being at 86% and 54% respectively, additional scrutiny of capital spending for electric should be applied. Given the impacts of the LTD EmX work that consumed a large amount of resources in 2016, the scrutiny should be applied to budgeting less for Type I work when such “outside” projects demand EWEB resources. Type II work was largely impacted due to regulatory delays and the planning/execution of the downtown network projects. Given the Electric Master Plan will be completed in 2017, this should shed additional light to priorities and levels of continued capital spending for the next 10-year Capital Improvement Plan.

For Shared Services, Management is applying changes to IS resources to improve performance on IT related projects that seem to be delayed or deferred due to project complexity. We are only in the first year of this adjustment so Management is confident that changes now being made will show results in the near future. Spending only 52% of overall budget, scrutiny is being applied to overall project structure and competency within the overall utility to bring projects such as AMI and CIS in line with overall goals.

For Type III projects, Management is aware of the long term (over 5 years) and flashy expenditures of the projects as they progress. Keeping the awareness of overall project estimates and schedule at this juncture for Carmen and the Willamette Treatment Plant is key at this juncture of both these legacy projects.

### **Recommendation and Action**

This is an information item only, no action required. If you have any questions or wish to make comments on the reports please contact Mel Damewood a 541-685-7145 or email at [mel.damewood@eweb.org](mailto:mel.damewood@eweb.org)

Attachments:

Water Q4 2016 Capital EL1 Report  
Electric Q4 2016 Capital EL1 Report  
Shared Services Q4 2016 EL1 Report

# Capital "EL1" Report: Electric, 2016 -Q4

<b>Type 1 - General Capital</b>				Note - Changes from previous report(s) are in <b>BOLD</b>									
Capital Category	2016 thru Q4			Status/Comments									
	Budget	YTD Actual	Year-End Projection										
Electric Infrastructure - Generation	\$916,000 (Note 2)	\$578,436	\$750,000	● Public safety cable at Leaburg Lake, fish ladder/screen improvements, and WV pond modifications complete. Other miscellaneous Type 1 improvements at LB-WV and Carmen-Smith progressing slightly slower than anticipated (ZINNIKER)									
Electric Infrastructure - Substations	\$1,500,000	\$1,849,383	\$1,782,000	● Planned work was completed on schedule in 2016, and budget targets on an individual project basis were achieved. Emergent substation work resulted in an overall variance of \$349k. Major drivers include: Spring Creek Sound Wall installation, Bethel SF6 Breaker Replacement, Weyco 1 Switch Replacements, Relay Testing equipment purchases and Electric share of Thurston Substation Expansion property. (NICE)									
Electric Infrastructure - Telecom	\$150,000	\$396,707	\$369,000	● Anticipated EWEB-driven Telecom spending was just over 50% of anticipated (\$79k of budgeted \$150k) . Of the \$396k expenditures shown, \$317k is customer reimbursable. The year end actuals includes design phase work for the ROC communication tower. (NICE)									
Electric Infrastructure - Transmission & Distribution	\$8,350,000	\$6,581,510 (1)	\$7,200,000	● PUC and basic compliance work is slightly behind of estimated pace YTD, partially due to ongoing work on LTD EmX. Customer-Driven Capital is behind pace for the year. See Note 1. (FRASER)									
<b>Type 2 Rehabilitation &amp; Expansion Projects</b>				2016 thru Q4			Project Total			Schedule			Status/Comments
Project	Budget	YTD Actual	Year-End Projection	Initial Plan	To-Date Actual	Project-End Projection	Start	Initial Planned Completion	Projected Completion				
Leaburg Dam Roll Gate Hoists	\$1,570,000	\$1,396,692	\$1,720,000	\$5,150,000	\$6,754,378	\$7,359,000	Jul-2012	Nov-2014	Apr-2017	● Substantial completion for RG2 attained in February 2015, substantial completion for RG1 attained in November 2015, and substantial completion for RG3 attained in November 2016. Final payments to contractors pending punch list completion, expected by the end of Q1 2017. (ZINNIKER)			
LTD EmX Project (Electric)	\$6,175,000	\$4,060,493	\$4,850,000	\$5,700,000	\$5,410,309	\$6,500,000	Sep-2013	---	Nov-2016	● All known relocation work required to accommodate EmX is complete. Project remains open to allow some vault and facility adjustments as LTD contractor completes work near EWEB utilities.			
Upriver Re-Configuration/Holden Ck. Substation	\$1,500,000 (Note 2)	\$463,962	\$1,250,000	\$3,000,000	\$578,927	\$5,800,000	Jan-2014	Oct-2015	Oct-2017	● FERC license amendment processes have resulted in a delay in construction (originally scheduled for summer 2016). Major equipment procurements are in progress. Transformers were expected to be delivered by 2016 year end, however testing was redone by the manufacturer due to non-performance and delivery delayed until 2017 Q1 (not critical path delay). All other major equipment will arrive Q2/Q3 and is planned for arrival prior to site construction. Site construction is scheduled for spring through fall of 2017 following FERC approval to license amendment reflecting substation addition. FERC has begun the approval process, with the amendment currently out for public comment. Energizing of the substation is planned for Q4 of 2017. (NICE)			
Downtown Distribution Network	\$2,000,000 (Note 2)	\$119,240	\$350,000	\$15,000,000	\$4,706,385	\$20,000,000	Sep-2010	Dec-2015	Dec-2019	● Hospital spot network work progressing as planned. Hospital 480V network re-configuration and arc-flash isolation are scheduled for November 2016. All this work is required independent of Radial versus Network decision. See Note 1. (FRASER)			
<b>Type 3 - Strategic Projects &amp; Programs</b>				2016 thru Q4			Project Total			Schedule			Status/Comments
Project	Budget	YTD Actual	Year-End Projection	Initial Plan	To-Date Actual	Project-End Projection	Start	Initial Planned Completion	Projected Completion				
Carmen Smith License Implementation	\$10,590,000	\$6,397,215	\$7,000,000	\$135,000,000	\$44,258,371	\$181,000,000	May-2009	Dec-2021	Dec-2025	● 2016 Amended and Restated Settlement Agreement executed and submitted to the FERC following Board authorization on November 1st, 2016. Project NPV projections are improved based on reduced capital costs and despite declining forward power pricing forecasts. Carmen gantry crane construction substantially completed in December 2016. Turbine shut-off valve procurement remains on schedule for delivery Spring 2017, installation design completed December 2016. Heavy plant upgrade planning and design efforts continue. Fish passage detailed options analysis in the contracting phase. (ZINNIKER/BOYLE)			
<b>Total Electric Capital (Excluding Shared Services)</b>	<b>\$32,751,000</b>	<b>\$21,843,638</b>		<b>67%</b>									

These categories match the Capital Improvement Plans (CIPs) submitted by Water & Electric.

Type 1 - General Capital is budgeted Year-by-Year for recurring capital expenditures from January through December. Type 1 Capital includes categorized collections of projects of less than \$1 million. Typical examples include "pole replacements" as part of Transmission & Distribution. This work typically involves many small projects that up to \$1.2-\$1.7 million per year.

Type 2 projects have "discrete" scopes, schedules (launch through completion), and cost over \$1MM during the project life.

Note(s) 1. Distribution transformers and network protectors are being capitalized when received in inventory, therefore some projects in T&D and Downtown network are understated.

2. Budget amounts are adjusted to reflect changes presented to the Board on April 19, 2016.

### Water Capital Projects Quarterly Status Report 2016-Q4

**Type 1 - General Capital**

Project	2016			Status/Comments
	Budget	YTD Actual	Year-End Projection	
Source - Water Intakes & Filtration Plant	\$312,000	\$96,000	\$80,000	● Includes treatment trailer equipment and beginning work on SCADA upgrade.. Budget originally included painting of intakes but this work was moved to O&M.
Mains - Replacements, Improvements, & Trans.	\$4,213,000	\$3,845,000	\$4,381,000	● Underage in Main Improvements this year.
Services and Meters	\$1,703,000	\$1,724,000	\$1,700,000	● Includes both new services and meters as well as replacement of existing service lines
Pump Stations	\$1,322,000	\$1,134,000	\$1,200,000	● Bulk of work is new Shasta 1150 pump station and emergent work at Santa Clara.
Reservoirs	\$33,000	\$20,000	\$20,000	● Only minor work completed this year.

*These categories will match the Capital Improvement Plans (CIPs) submitted by Water & Electric.*

*Type 1 - General Capital is budgeted Year-by-Year for recurring capital expenditures from January through December. Typical Type 1 Capital includes categorized collections of projects of less than \$1 million.*

*Typical examples include "main replacements". This work typically involves dozens of jobs that add up to \$3-\$3.5 million per year.*

**Type 2 Rehabilitation & Expansion Projects**

Project	2016			Project Total			Schedule			Status/Comments
	Budget	YTD Actual	Year-End Projection	Initial Plan	To-Date Actual	Project-End Projection	Start	Initial Planned Completion	Projected Completion	
Hayden Bridge Filter S1-S6 Upgrades	\$3,513,000	\$3,567,000	\$3,700,000	\$7,713,000	\$8,476,690	\$8,610,000	2011	YE-2017	Q4-2016	● Upgrade of Filters N1-N6 Complete. Upgrade of Filters S1-S6 95% complete at year end. Seismic upgrades added costs for S1-S6. (Initial Plan - 2011 CIP)
Hayden Bridge Seismic Upgrades	\$0	\$0	\$0	\$1,215,529	\$1,117,067	\$1,760,000	2014	YE-2015	YE-2018	● Phase 1 (Basins and Filters) is complete. Phase 2 (Headhouse) deferred to 2017-2018. Phase 1 costs more expensive than anticipated. (Initial Plan - 2013 CIP)
Distribution System Scada/PLC Upgrades	\$309,000	\$161,000	\$225,000	\$3,079,780	\$478,109	\$1,970,000	2013	YE-2016	YE-2019	● Multi-Year upgrade project. Completed Crest System. Currently working on Shasta and Willamette system. (Initial Plan 2013 CIP)
Hayden Bridge Standby Power Improvements	\$213,000	\$10,000	\$50,000	\$1,728,000	\$25,666	\$1,660,000	2015	YE-2017	YE-2017	● Completed preliminary design. Currently in design for Hayden Bridge. Developing sizing criteria for power loads for new HB disinfection system (a 2017-18 Project) delayed 2016 work (Initial Plan - 2015 CIP)
LTD EMX	\$140,000	\$342,000	\$370,000	\$0	\$2,959,862	\$2,990,000	2014	YE-2015	Q4-2016	● 2016 work turned out to be more than anticipated. Water work complete at year end. This work is reimbursable.

**Type 3 - Strategic Projects & Programs**

Project	2016			Project Total			Schedule			Status/Comments
	Budget	YTD Actual	Year-End Projection	Initial Plan	To-Date Actual	Project-End Projection	Start	Initial Planned Completion	Projected Completion	
Alternative Water Supply	\$1,815,000	\$580,000	\$500,000	Varied from \$52M to \$120M	\$880,000	\$70,000,000	2014 with Planning	YE-2021	YE-2021	● Property purchase pushed to 2017 due to both land use issues and schedule for condemnation. Currently in preliminary design for Filtration Plant and Related Facilities. Yellow due to property issues.

Total Water Capital (Excluding Shared Services)	\$13,573,000	\$11,479,000	\$12,226,000	85%	year end actual to budget
Total Type 1 and Type 2 Water Capital (Excluding Shared Services)	\$11,758,000	\$10,899,000	\$11,726,000	93%	year end actual to budget

Management Notes: Water will slightly underspend in Type 1 projects this year, slightly more EmX work than anticipated has impacted some work on Type 1. Type 2 projects are tracking well with Hayden Bridge Filter nearing completion. Purchase of property for the new Water Treatment Plant has been delayed to 2017 which affects 2016 capital spending. Discounting this Type 3 Project, year ended with approximately 93% of expended budget spent for Type 1 and Type 2 Water Capital, excluding Shared Services.

## Capital "EL1" Report: Shared Services, 2016-Q4

<b>Type 1 - General Capital</b>		2016 - Q4			Note - Changes from previous report(s) are in <b>BOLD</b>					
Capital Category	Budget	YTD Actual	Year-End Projection	Status/Comments						
General Plant - Information Technology (I.T.)	\$1,328,913	<b>\$432,401</b>	\$700,000	●	Commvault Project complete and under budget. Staff turnover results in lower capital project execution, potential for roll-over funds in 2017. (Barton)					
General Plant - Buildings & Land Management	\$559,744	<b>\$270,193</b>	\$350,000	●	EWEB HQ HVAC System is complete, final close-out documents received. Final invoice paid and closed out. Staff recreated the HQ elevator Contracts to make use of state contracts. Bid in early 2017 and roll over of unspent 2016 funds. Elevator Contracts approved by Board in Feb 2017. Yellow due to schedule. (Damewood)					
General Plant - Electric & Water Fleet Capital	\$1,722,124	<b>\$1,306,400</b>	\$1,250,000	●	Water and electric deferring some vehicle purchases until next year. Anticipate roll over of some funds from 2016 to 2017 to cover deferred purchases. In process of re-assessing vehicle replacement capital program. (Damewood)					

*In the future, these categories will match the Capital Improvement Plans (CIPs) submitted by Water & Electric.*

*Type 1 - General Capital is budgeted Year-by-Year for recurring capital expenditures from January through December. Type 1 Capital includes categorized collections of projects of less than \$1 million. Typical examples include "pole replacements" as part of Transmission & Distribution. This work typically involves many small projects that add up to \$1.2-\$1.7 million per year.*

*Type 2 projects have "discrete" scopes, schedules (launch through completion), and cost over \$1MM during the project life.*

  

<b>Type 2 Rehabilitation &amp; Expansion Projects</b>		2016 - Q3			Project Total			Schedule			Status/Comments
Project	Budget	YTD Actual	Year-End Projection	Initial Plan	To-Date Actual	Project-End Projection	Start	Initial Planned Completion	Projected Completion		
AMI Information Technology & Integration	\$2,977,005	<b>\$2,209,111</b>	\$2,977,005	\$6,475,700	<b>\$3,057,687</b>	\$6,475,700	May-2015	Dec-2017	May-2018	● Multiple field trials are now well underway. Staff is preparing to expand both residential and commercial field trials, with a target end date of field trials at Aug. 2017. Including maintenance change outs, total number of smart meters deployed is ~500.	
Customer Information System (CIS) Replacement	<b>\$1,500,049</b>	<b>\$0</b>	<b>\$1,250,000</b>	\$9.7M	<b>\$0</b>	\$9.7M	Sep-2016	Aug-2018	<b>mid to late-2019</b>	● Estimated start of capital spending is not expected to start until late 2017. Finalizing vendor selection and contract negotiations (O&M expenses) are expected to take until mid-2017. This is a 6 month delay over earlier projections, impacted needs for additional due diligence prior to final vendor selection.	

  

<b>Total Shared Services Capital (This Report)</b>	<b>\$8,087,835</b>	<b>\$4,218,105</b>	<b>\$6,527,005</b>	<b>52%</b>
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Note(s) 1. Financials are based on year-end un-audited reporting. Any substantial adjustments during the year-end audit will be noted on the next EL-1 Report.

Management Notes: Delays are causing large underruns for the IT Type 1 and CIS Replacement projects, but Management is confident that recalibrating and re-organizing these areas is needed for long term success. Other type 1 projects are being managed with deferrals to manage costs and scope. AMI, Fleet and Buildings are moving forward with slight schedule issues. Overall performance spending was at 52%.