



# MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

*Rely on us.*

TO: Commissioners Brown, Carlson, Mital, Simpson and Helgeson  
FROM: Mel Damewood, Chief Water Engineering & Operations Officer  
Rod Price, Chief Electric Engineering & Operations Officer  
Matt Barton, Chief Information Officer  
DATE: April 3, 2018  
SUBJECT: Benchmarking and Review of Capital Improvement Plans  
OBJECTIVE: Board Direction

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## **Issue**

At the January Board meeting Commissioner Mital requested proposals from staff to benchmark Capital Plans for the Electric, Water, and Information Services Divisions. This Board Memo serves to define the potential ranges of scope and estimated costs for a benchmark and independent review EWEB's Capital Improvement Plans.

## **Background**

Staff from Water and Electric and Information Services Divisions (IS) met with Commissioner Mital and General Manager Lawson on January 26, 2018, to further define the intent of the request at the January Board meeting. During the meeting, there was general agreement that a periodic independent review of the Capital Improvement Plan (CIP) could vary in the level of effort, with minor reviews every year and more in-depth review every five years or so. There was also general agreement that there is limited time in the current budgeting process to do a high level CIP review, so the plan is to explore options and resources for a leveled effort over a multi-year period.

Staff agreed to initially define, scope and provide budgetary estimates for a basic benchmarking study to compare EWEB's current expenditures in Capital for Water, Electric and Information Services with comparable utilities. Following the preliminary benchmarking review, staff would then explore a more long-term leveled analysis of the Capital Improvement Plans, which would include a look at benchmarks, overall capital program plans and individual project selection. Long-term analysis would be broken down into two levels.

Level 1 is a mid-level benchmarking with review on selected aspects of existing capital expenditures, such as methodologies and prioritizations used to determine main replacement rates, underground cable replacements, and other asset replacement schedules.

Level 2 is a complete review of EWEB’s Master Planning and Capital Improvement Planning processes to determine if spending amounts were appropriate, methodologies were robust, tools and processes were following best practices.

Staff has begun discussions with various independent consulting firms for Level 1 and 2 reviews. For IS, Staff have reached out to Gartner and Info-Tech Research Group to discuss proposals to benchmark Information Services Capital Plan. For Electric, staff reached out to Navigant, an engineering services firm that specializes in reviews and audits for utility risk analysis and regulatory compliance issues. For Water, Staff had informal discussions with various engineering firms to define approaches and needs, and also joined in with the initial discussions with Navigant to foster the goal of continuity in process and approach between Water & Electric CIPs.

## Discussion

### Initial Benchmarking

Simple benchmarking is the lowest-cost alternative. Each operating Division has done exploratory benchmarking internally as part of our normal yearly CIP review process.

For IS, Gartner recommends using IS Spending as a Percentage of Revenue as a method of benchmarking. This metric is an average of all of the industries Gartner serves. This metric includes both O&M and Capital spending. Gartner offered to conduct this service for free.

Table 1. IT Spending as a Percentage of Revenue — Cross-Industry

IT Spending Distribution	Percent of Revenue	IT Investment Profile
Maximum	23.5%	High-Growth/High-IT Automation
Third Quartile	4.6%	Differentiation/Transformation
<b>Average</b>	<b>3.5%</b>	Typical Performers
Median	2.7%	Typical Performers
First Quartile	1.5%	Optimization/Scale
Minimum	0.1%	Emerging Geography/SMB
SMB = small and midsize business.		

Source: Gartner (April 2017)

EWEB’s IS Spending as a Percentage of Revenue was 3.9% in 2016 and 4.5% in 2017.

Water’s low-cost benchmarking would utilize published benchmarking data from the American Water Works Association (AWWA) and seek out like-sized utilities to benchmark common renewal and replacement indicators. Using AWWA benchmarking methodology, this can be an internal review with limited indices. If a more expansive benchmark review is warranted, a consultant could facilitate benchmarking surveys with like-size utilities. Staff has not received an estimate for this work, but assumes it would be in the \$15k -\$25K range.

As an example, AWWA utilizes typical calculations for various system assets that are derived with a basic formula:

$$\text{System Renewal and Replacement \%} = \frac{\text{Total expenditures of amount of funds reserved for R\&R of an Asset Group}}{\text{Total present worth of R\&R needs for that Asset Group}}$$

Results are published in the following manner:

**Aggregate Data for System renewal and replacement of Water Transmission and Distribution**

	Top Quartile	Median	Bottom Quartile	Sample Size
Water Operations	2.1%	0.9%	0.5%	40

Source: Benchmarking Performance Indicators for Water & Wastewater  
2016 Edition, American Water Works Association

For 2016, EWEB Water was 1.4% in the asset category noted above.

For Electric, Staff is using simple benchmarking around historical and yearly capital investment compared to asset depreciation. Staff have some comparable data from APPA, but will complete a limited review from comparable west coast utilities prior to approval of the next 10 year CIP.

From a historical perspective, Staff are using the industry standard Age of System metric, which is reported on our monthly financial reports to the board. This is the ration of the accumulate depreciation to the historical investment.

For 2017, EWEB’s Overall Age of System metric was 56%, which was less than the APPA-recommended maximum of 60%.

For yearly benchmarking, Staff is using the ratio of yearly capital investment to yearly depreciation. For the 2018 CIP budget, the ratio of investment to depreciation was about 1.6, meaning EWEB is investing in assets faster than they are depreciating.

**Level 1 – Capital Project Requirements and Project Practice/Estimate Review**

For IS, The Mid-Range Services proposed to provide a high level overview of capital project requirements and methods used to estimate costs. Project estimate methods would be compared to industry best practices. Since IS is heavily based on the rapidly changing technology industry, Staff is proposing to segregate the IS CIP review from Water and Electric for a more industry based analysis.

*IS Mid-Level Benchmarking - \$100,000 to \$200,000*

For Water and Electric, the approach for reviewing CIP’s would be similar due to the planning, engineering, project and construction management aspects to both capital programs.

The reviewer would conduct the first phase of the capital management process by assessing EWEB’s

current methods for prioritizing its capital projects.

The goal of this phase would focus on improving the as-is state of EWEB's approach while providing robust recommendations for future improvements. This level will also include a strategy for EWEB's management to position the forthcoming improvements of capital management plan to the Board.

Expected Deliverables:

- Preliminary and high-level benchmarking incorporated into Navigant's review of EWEB's existing 10-year capital plan (for July 2018 completion)
  - Recommendations to streamline design and engineering practices that may result non-optimal capital project execution
  - Recommendations for Level 2 improvements, including risk analysis and capital tools.

*Initial Estimated Range of cost for Level 1 Electric and Water is \$100K - \$250K each utility.*

## **Level 2 – Deep Dive on CIP, Review of O&M Activities, and Asset Management**

For IS, the Deep Dive Services proposed to fully understand requirements and data behind the current project estimates in IS's CIP. Identify and benchmark with peer organizations based on EWEB's characteristics and provide specific recommendations for accurate budget estimates.

It is also important to consider the amount of Operations and Maintenance (O&M) budget spent on Information Services for two reasons:

1. Hosted and Cloud systems are not Capitalized under current government accounting standards. As we replace legacy on premise systems with modern cloud systems IS's capital budget should decrease while its O&M budget increases.
2. Over the 10 year period, Information Services will spend more in O&M than Capital.

Staff recommends including O&M spending if the Board moves forward with a benchmarking exercise.

*Deep Dive Benchmarking for IS - \$250,000 to \$400,000*

For Electric and Water, building from Level 1 deliverable, the reviewer will assist EWEB in design, planning, implementing, and executing a long-term capital management program that aligns operational needs, regulatory compliance risks, and maintenance activities with EWEB's capital management program.

The goal of Level 2 is to design, build, and implement risk-informed prioritization into a comprehensive asset management program for both Water & Electric.

*Initial Estimated Cost for Level 2 Review for Water & Electric is \$250K - 500K each utility*

Further details for CIP audits will be brought to the board as part of this year's 10 year CIP review.

**TBL Assessment**

No TBL assessment was conducted for this proposal

**Recommendation**

No recommendation at this time, this Backgrounder is for information only.

**Requested Board Action**

No action for discussion only. Management is seeking Board direction at this time. If you have any questions please contact Mel Damewood, Rod Price or Matt Barton at [first.lastname@eweb.org](mailto:first.lastname@eweb.org).