



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD



TO: Commissioners Brown, Carlson, Barofsky, McRae and Schlossberg
FROM: Frank Lawson, General Manager and Rod Price, Assistant General Manager
DATE: June 7, 2022
SUBJECT: Annual Capital Improvement Plan Assumptions and Priorities
OBJECTIVE: Information

Issue

EWEB's Electric and Water Capital Improvement Plans (CIP) are key elements to the Long-Term Financial Plan (LTFP) process. Details of the 10-year CIPs and the proposed LTFP will be reviewed with the Board in July. In preparation for the detailed July LTFP discussion, this memo will provide an overview of key assumptions, priorities, and risk mitigation that are used to develop the Water and Electric CIPs.

Background

The EWEB capital plans are key components of our Water and Electric LTFP comprising approximately 22 percent of the yearly operating budgets. As EWEB's products and services are asset-intensive, replacement and upkeep of our infrastructure is critical to both the safety and reliability of the delivery of water and electricity to our customers. In addition, the CIPs help forecast the 10-year investments needed to execute our strategic initiatives. When developing the CIPs for Board review, Engineering and Finance use a variety of assumptions around assets and finances which get coordinated using iterative methods to meet community and Board priorities.

This backgrounder will review highlights of the guiding assumptions and priorities used to develop the CIPs. A more in-depth discussion of the assumptions and principles behind the CIP process can be found in the June 1, 2021, Board Backgrounder titled *Capital Plan Assumptions and Principles* ([2021 Capital Plan Memo](#)). This backgrounder will also review the known risks and mitigation tactics to the 10-year CIPs in order to support Board LTFP discussions in July.

Discussion

There are two main interlinked components to establishing the budgets for the 10-year CIPs. First, the total amount of planned investment in a 10-year period and second, the mapping of yearly funding for each year within the 10 years. The yearly mapping of projects helps establish yearly budgets and funding strategies.

Total 10 Year Investment

The total amount of investment is determined by balancing the relationship between capital investments for the mission (reliability) and strategy (affordability and resiliency). To assist with this understanding, EWEB categorizes CIP projects into three main areas:

- **Compulsory:** Projects and Programs which are required and on fixed timelines including regulatory and customer-driven work. Examples include new service connections and the repair or replacement of failed infrastructure.
- **Strategic:** Targeted to strategic plan, future payback, opportunity timelines. Board/Executive driven. Examples include AMI and Second Water Treatment Plant.
- **Risk Based:** Small to medium projects with discretionary timelines. Staff driven, with more projects than available funding typically. These projects are largely driven by reliability and resiliency goals and asset conditions and customer needs. Examples include main upgrades and end of planned life equipment replacement.

In both Water and Electric CIPs, minimum spending is determined by meeting historical Compulsory levels or yearly depreciation rates, which are \$7 MM and \$22 MM respectively. Then Risk Based and Strategic spending are added, as well as a traditional 3% yearly average inflation rate, up to a maximum 10-year totals of 2.5 times 10-year depreciation amount. A final check is made to make sure rate trajectories, as well as other financial metrics like Age of System and Debt Service are not exceeded.

Rate of Yearly Funding

After the ten-year CIP totals are approximated, specific projects and categories are mapped out yearly to meet rate targets, develop budgets, and address financing strategies. Coordinating overall investment and specific timing of investments over the 10-year plan is an iterative process that takes place over several months between Finance and Engineering.

The type of funding for individual projects generally is based on the type and size of project. Smaller projects, including most compulsory work, is funded through rates and fees. Risk Based work is funded using a combination of rates and municipal bonds, while Strategic projects are almost always large and municipal bond funded. Where possible, state and/or federal loans and grants are used to augment these funds.

Current CIPs

In 2021, the Board supported increases in both Water and Electric for the 2022 CIP 10-year totals with the goals to maintain compulsory needs (reliability), meet our approved strategic needs and to increase focus on risk-based work (resiliency).

For the Water Utility, this increased focus on risk-based work includes building a second water treatment facility on the Willamette, AMI meter deployment, replacing five end of life reservoirs and upgrading transmission main systems to address aging infrastructure and increase redundant paths to our reservoirs. The 2022 Water CIP 10-year totals increased approximately \$72 Million from the 2021 CIP of \$244 to \$316 million.

In Electric the increased focus includes AMI deployment, rebuilding five key substations, Carmen-Smith relicensing, and a \$20 million placeholder for Leaburg canal FERC risk mitigation. The 2022 Water CIP increased approximately \$155 Million from the 2021 CIP of \$310 to \$465 million.

Shared services projects include benefit for both Water and Electric and generally split funding between both CIPs by 20% and 80% respectively. In 2021 the 10-year 2022 CIP Shared Services focus includes replacement of our current enterprise business systems (EES) and focus on reducing average age of our vehicle fleet (currently at 16 years) and replacement of end-of-life radio, microwave, and fiber communications infrastructure.

Approved 2021 CIPs meet Board guidelines as summarized in Table 1.

Table 1. 2021 Approved Capital Plan Meets Board Guidelines

	10-year CIP Totals	Ratio of 10-year Budget/Depreciation	Average Yearly Total	Average Yearly Rate Increase
Metric Targets		< 2.5	> yearly deprec, (\$7M and \$22 M)	< 3% avg inflation
Water	\$316,224,000	1.44	\$ 31,622,400	4.86% (Note 1)
Electric	\$456,501,922	2.08	\$ 45,650,192	2.53%

Note 1: water rate increase is 2.57% without second source, which is a strategic choice to exceed the 3% metric

Past Budget vs. Actual Spend Performance of the CIPs

Meeting investment goals is important. By meeting our approved budget, we help maintain our reliability and ability to serve, as well as continuing to collect the right amount of funding through our rates and borrowing, which maintains predictable rate trajectories for our customers. Despite the challenges of planning and executing the many capital projects and programs, our Capital Improvement Plan budgeting and execution since 2016 has been very successful as shown in Table 2.

Table 2. Fiver year CIP Approved Budget vs. Actual Spending Performance

CIP	2016 5-YR Budget for 2017-2021 (Millions)	2016 5-YR Actual 2017-2021 (Millions)	2016 5-YR Budget vs. Actual (percent)	Average Yearly budget vs Actual for 2017-2021
Water (Note 1)	\$76.5	\$80.8	105%	95%
Electric (Note 2)	\$205.8	\$182.0	88%	88%

Note 1: 2016 5-YR approved budget \$145 MM, but in 2017 \$66 MM removed to reflect changes in second source strategy

Note 2: the main source of underspend due to delays in Carmen/Smith relicensing and the canceled CIS project

EWEB’s alignment between budgeting and execution of the CIPs started with the increased coordination and CIP process focus in 2017. Periodic planning and review meetings, involving all Divisions doing projects, and Finance have resulted in ongoing adjustments to spending and budgeting in the CIPs. Also, increased cooperation in the Divisions executing projects, including shared services groups, has resulted in more real time controls on yearly capital spending and elimination of the traditional April Capital “true up”, as well as reducing the CIP planning cycle by about a month.

Pressures facing the current CIP and future LTFP

Since last July, a number of new risks have emerged that potentially impact the scope, schedule, and budgets of the planned capital investments. Following is a brief description of some of the issues EWEB will be facing in the next five-year CIP planning window.

Electric CIP challenges and tactical responses:

- Emergent work - large equipment and system failures, preventing planned risk-based work. Multiple transformer and protection scheme failures over the last 18 months pushing out planned Currin substation replacement. Tactical response includes contracting entire design/build out to a single contractor to help manage loss of EWEB resources during emergencies.
- Material resourcing: shortages, extended lead times and unpredictability are impacting programs like, AMI, cable replacement programs, wildfire and earthquake mitigation. Tactical response includes halting AMI meter deployment, ordering materials with lead times in excess of 2 years, and currently limiting some customer requests to save materials for emergent work.
- Inflation rates higher than CIP assumptions: reduces the buying power of money over 5- or 10-year plans, may reduce overall ability to fund risk-based programs. Tactical response is to increase overall inflation rates from 3% to 5% in the LTFP for the years 2023 and 2024 and adjust CIP for smoothest rate impacts and/or reduce goals/scope.
- Labor shortage in technical fields: Increased capital spending over ten-year period includes increased EWEB staffing. Current key staffing levels not filled, making additional labor resource procurement risky. Tactical response is to work with Workforce Services to fill vacancies with creative approaches to benefits and wages. Creating a two year ramp up of design and construction FTE to enable increased project support in 2025.
- Leaburg Canal outage mitigation uncertainties. Current mitigation estimates are significantly higher than the currently budgeted \$20 Million and depend on Board approved mitigation path and regulatory approvals. Tactical response is to maintain current mitigation budget to fund “quick fix” opportunities and examine financial impacts as details emerge in the next two years per board direction.
- Dam Safety uncertainties: Currently Trail Bridge is operating at reduced capacity and Walterville is being monitored for FERC regulated dam safety issues. While these issues are thought to be slowly evolving risks, there is potential to impact EWEB from reduced generation revenues as well as large Capital improvements to mitigate risks. Tactical response is to maintain current mitigation budget of \$2 million to fund “quick fix” opportunities and examine financial impacts as details emerge in the next two years.
- Electrification growth and related impacts from our Integrated Resource Planning. It is likely that the EWEB Distribution system will need to evolve to support our future energy strategies. Tactical response to budget capital with current assumptions for Distribution in the LTFP and adjust as details and options emerge over the next four years.

Water CIP Challenges and Tactical Responses

- Material resourcing: shortages, extended lead times, unpredictability, impacting programs like, AMI and main replacement target levels. Tactical response includes slowing AMI meter deployment, coordinating closely with City of Eugene projects, and advance ordering materials for EWEB and contractor supplies with lead times in excess of two years.
- Inflation rates higher than CIP assumptions: reduces the buying power of money over 5- or 10-year plans, may reduce overall ability to fund risk-based programs. Tactical response is to increase overall inflation rates from 3% to 5% in the LTFP for the years 2023 and 2024 and adjust CIP for smoothest rate impacts and/or reduce goals/scope.
- Contractor Challenges. EWEB Water Division relies on contracting for most of its large projects. Contractors are experiencing the same uncertainties with materials and labor EWEB is. Tactics are to continue to execute the 5-year CIP budgets and schedules approved in 2021 and adjust plans yearly as challenges with individual projects emerge.

- Building labor resources: Based on historical metrics, increased capital spending for the main replacement program over 10-year period includes increased EWEB staffing. Current planning includes a two year ramp up of FTE to enable increased design/build support in 2024. Tactical response is to work with Workforce Services and Water Division leadership to fill vacancies in a timely manner.
- Second Source on the Willamette: There is some uncertainty of land use and permitting details and how these will impact the final design and schedule of the Willamette treatment plant and related transmission main projects. Tactics are to continue to execute the current Willamette plant budgets and schedules as approved in 2021 and adjust CIP yearly as changes in scope and schedule emerge.

Emerging details to the projects and overall CIPs are addressed in the quarterly reports as well as in the CIP budget process. Key projects and issues to monitor for scope, schedule, and budget impacts:

Electric:

- Currin and substation and transmission upgrades related east service territory
- Carmen Smith Relicensing
- Leaburg Canal outage mitigation
- Potential Dam Safety mitigation at Trail Bridge and Walterville projects
- Wildfire mitigation regulatory requirements and mitigation plans
- Emergent failures that move from risk-based to compulsory projects (Dillard, Prairie, Weyco (IP) service etc...)
- Labor and material pricing and shortages.

Water:

- Willamette river second source treatment plant project
- Reservoir replacement projects
- Water main upgrade program, includes transmission mains related to second source and reservoir replacements

Shared Service projects

- EWEB Enterprise Solutions (EES) – upgrading our business systems
- AMI – water and electric smart meter deployment, delayed part way through the deployment of smart meters
- Communication infrastructure upgrades – fiber and related network electronics, microwave and radio end of life upgrades, communications site hardening.
- Vehicle and related tool availability, lead times are currently over two years.
- HQ and Bertelsen-Roosevelt property plans and schedules.

At the July Board meeting, staff will request concurrence with the proposed CIPs 2022 budget amount, along with the five-year total amount for each utility.

Request Board Action

No action requested, information only to support review of the Water and Electric capital improvement plans.