



# MEMORANDUM

EUGENE WATER & ELECTRIC BOARD



TO: Commissioners Carlson, Barofsky, McRae, Schlossberg, and Brown

FROM: Frank Lawson, CEO and General Manager; Rod Price, Assistant General Manager, Utility Operations; Deborah Hart, Chief Financial Officer

DATE: July 5, 2023 (July 11, 2023, Board Meeting)

SUBJECT: 2024 Integrated Capital & Financial Plans

OBJECTIVE: Direction on 2024 Integrated Capital & Financial Plans

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## Issue

Board Policy SD6 and Oregon Statutes require that staff annually prepare balanced Electric and Water Utility budgets for Board approval by the end of the calendar year. To prepare budgets, Management is seeking Board direction and/or concurrence on the strategic and operational priorities, business and economic forecast assumptions, capital investment plans, and Long-Term Financial Plans (LTFPs) used to develop the upcoming year’s proposed budgets and resulting customer pricing schedules (rates).

## Background

Through a variety of means, Management receives direction consistent with Board Policy BL-4, which states the *“Board shall identify and define those results or conditions that are acceptable and not acceptable to the Board and communicate them in the form of establishing policy and approval of Strategic Plans, Long-Term Financial Plans, Capital Improvement Plans, annual budgets and goals”*.

At the July Meeting, Management will collaborate with the Board to ensure a common understanding of the economic assumptions, desired operational and strategic outcomes, and proposed capital investments used to forecast the long-term financial results. If the assumptions and plans are consistent with Board direction and maintaining financial forecasts within Board policy, Management will use the information to develop the following year’s budgets.

Prior to year-end, as budgets are developed consistent with the Board direction received, Management will analyze customer rates, including the total revenue requirement to develop and propose customer rates.

Apart from the Bonneville Power Administration (BPA) Power Rate Adjustment, rate increase “pass throughs”, as provided in *SD10 Power Cost Recovery Policies*, in November and December EWEB will provide at least two public Rate Hearings prior to the implementation of new customer rates. Typically, final budgets and rates are approved by the Board at the December Board Meeting.

## **Discussion**

Management herein presents the strategic and operational guidance, business, and economic forecast assumptions, proposed capital improvement plans, and resulting long-term financial and rate impacts for both the Water and Electric Utilities for your consideration, feedback, and direction. Through previous policies and direction, Management considers the following as prerequisites to the development of strategic guidance, assumptions, and plans.

- Investments shall be consistent with EWEB's strategic plan, including the specific actions associated with the fulfillment of the plan.
- Actions and results shall support the values of safety, reliability, affordability, environmental stewardship, and community.
- Financial policies, including key metrics of Working Capital Days Cash and Debt Service Coverage shall remain within Board policy.
- Financial reserves levels and replenishment requirements, including Capital Reserves and Rate Stabilization Reserves, shall remain within Board Policy.
- EWEB shall mitigate against electric wholesale market risk, weather fluctuations, and consumption pattern changes using conservative budget assumptions, establishing Contribution Margin Risk Factors, and adherence to Board Policy SD8, Power Risk Management Policies.

## ***Strategic and Operational Guidance***

Over the past several years, Commissioners have provided direction on the strategic and operational priorities. As a basis for this year's investment and financial planning, Management needs Board concurrence to use the following strategic and operational priorities and/or outcomes as guidance:

- Water Investment Priorities - For reliability and resiliency, EWEB needs to scope and construct a treatment plant on the Willamette River, while simultaneously restoring the McKenzie watershed. By taking a comprehensive "source to tap" approach to water quality and reliability and given that significant investments have been made over the past decade at the Hayden Bridge Treatment Plant, EWEB's infrastructure replacement priority is strengthening base-level water storage and transmission.
- Electric Investment Priorities - With significant electricity delivery infrastructure installed in the 1960s and 1970s, EWEB needs to attenuate and manage the "ballooning" need to replace this concurrently aging equipment while maintaining reliability and increasing resiliency to potentially disruptive events. We will target yearly investment rates of 2.0 to 2.5 times the annual depreciation rate to maintain the Electric Age of System, the percentage of fully depreciated electric assets, below the Board target of 60%. As of 2022, the Age of System metric was 58%. Electricity investments will be managed by prioritizing high-customer-impact assets and those systems that increase resiliency to community-critical locations. In addition, ongoing investment in upgrading equipment and structures as well as meeting license requirements for Carmen-Smith operations remain a priority. Investment begins for Leaburg near-term risk reduction measures as required by FERC and the pre-funding of Leaburg decommissioning. Investment ramps back up early in the plan to complete Advanced Meter Infrastructure (AMI) deployment in 2024 and starts up again in 2028 to begin the first round of replacements.

- Shared Organizational Investment Priorities – EWEB is replacing legacy information systems through the EWEB Enterprise Solutions (EES) project with Finance and Customer system replacements underway. In addition, with the purchase of the property on Bertelsen, we will invest in developing this property in phases to expand our equipment and materials storage and construct a secondary access to the Roosevelt Operations Center.
- Customer Care -The customer care methodology provides financial assistance sufficient to move anticipated participating limited-income households out from below the threshold of utility “burdened”, which is defined as those spending 6% or more of household income on EWEB services. EWEB currently reaches approximately 5% of the customer base, which is consistent with a survey of other utilities. The methodology and estimated budget are updated annually with the average bill amount to ensure that customer assistance funds are pacing with rate increases.

The Board has previously provided guidance on rates as follows:

- Customer Rate Increases – Acceptable long-term “Revenue Requirement” increases (excluding Type 3 Major Strategic Programs) shall be benchmarked to inflationary forecasts. Where possible, rate increases are smoothed over multi-year periods. The smoothing of rates mitigates a single-year rate impact by pre-funding and/or utilizing reserves to fund large capital projects while minimizing impacts to customers.

Given persistent inflationary pressures in the past year and recent Federal Reserve actions, 2024 is anticipated to be higher at 2.0% - 2.5%, with long run inflation forecasts closer to the Fed’s 2.0% annual inflation target. Modeling for the 10-year compounded inflation rate forecast assumes between 20.1% - 28.0%. Both the Electric and Water utilities are challenged, even when excluding the decommissioning of Leaburg for the Electric Utility and a second source treatment plant for the Water Utility. The drivers of rate pressure can be broken down into five primary areas and are as follows:

- Large Non-Routine Base-level Water Storage and Transmission Investments and Timing: The Water Utility capital plan includes investments of approximately \$90 million, in base level reservoirs and transmission intended to rehabilitate an aging storage system. While overall project totals remain about the same, the transfer of \$15 million into the first 5 years created early rate pressures that compound throughout the LTFP period.
- Water Consumption Forecast Update/Reduction: After completing an analysis of 7 years of the most recent historical consumption data, the demand forecast has been adjusted downward to align with the trend of slowing growth in consumption. Although the Water Master Plan updated demand will not be available until early 2024, based on existing water use, it appears growth in water demand will be less than predicted in the 2015 Master Plan.
- Shared Services: Labor and O&M additions to support compliance, Resiliency work, Emergency Management, as well as temporary staffing for the contact center and meter reading in anticipation of EWEB Enterprise Solutions go-live and completion of meter mass deployment.
- Water-Specific Workforce: Labor additions in the Water Division to support increasing Capital work including AMI deployment (limited duration), pumping and storage projects, and second source construction, as well as increasing O&M work in customer support and the water quality laboratory.

- Inflationary Pressures: Labor, O&M, and Capital spending are not immune to the current global inflationary pressures. In some cases, scarcity pressures within the utility sector are more severe than in the general economy. Though pressure from supply chain disruptions has been gradually easing, the economy is still experiencing upward price pressures. For example, over the last two years iron pipe has increased 50% and distribution transformers have increased 50-85%. While not all materials rose at such a high rate, inflation was widely felt with laptops rising by 16 %, traffic control by 16%, and power poles by 30%. The labor markets, particularly utility specific positions, continue to remain tight with high demand for specialty-skilled workers putting pressure on wages. Contract labor increases and MAPT market survey updates of approximately 10%, resulted in 3-4% average wage adjustments over the amount budgeted for 2023.
- Previously Experienced Inflation: Realized 2023 inflation, driven by the issues described in the previous paragraph, is being absorbed in our forward-looking forecast.

### ***Business and Economic Forecast Assumptions***

The assumptions used to create forecasts and budgets influence the overall outlook of the financial plans. As a basis for this year’s investment and financial planning, Management needs Board concurrence to use the following economic assumptions and/or outcomes as guidance:

#### General Assumptions

- Labor Cost Escalation – Fully loaded costs are indexed to a combination of inflation factors and expected labor market comparators.
- Non-Labor Operations and Maintenance (O&M) Escalation – 2024 is escalated at 3.0%, and longer-range inflation is modeled at 2.0%.
- Capital Escalation – 2024 and 2025 are escalated at 5.0%, and longer-range inflation is modeled at 3.0%.

#### Water-Specific Assumptions

- Water Consumption and Customer Growth assumptions were adjusted down to align with analysis indicating slowing pace for increases in these areas.
- The Water Utility consumption forecast is conservatively planned at 95% of the five-year average to account for year-by-year variability.

#### Electric-Specific Assumptions

- BPA power costs are a significant portion of the Electric Utility’s budget and therefore are separately identified in the rate trajectory. As allowed under EWEB Policy SD10, the Electric Long-Term Financial Plan currently assumes 6% BPA rates increases, which correspond with 2.5% EWEB pass through rate increases every other year, including an increase effective October 2023. The actual rate increases for EWEB customers will depend on the final rates from BPA that are expected the summer of 2023 and would be incorporated in EWEB’s rate trajectory with 2024 changes.
- Capital and O&M costs for Leaburg decommissioning are included in the Capital and Long-term Financial Plans. Following Board direction received in May, prefunding for Leaburg decommissioning costs is modeled in the LTFP summary presentation.
- The Electric Utility scenario assumes base retail load levels as well as growth at pre-pandemic

levels. The plan assumes any growth is offset with conservation. Results of the electrification analysis indicate future load growth from the transportation sector. In the LTFP, conservatism is used, modeling a lower than Integrated Resource Plan base case consumer electric vehicle adoption rate.

Complete rosters of assumptions for both the Water and Electric Utilities' Long-Term Financial Plans are included on Attachments 1 and 2.

### **Capital Improvement Plans (CIPs)**

Based on the strategic and operational guidance, and general business and economic forecast assumptions highlighted above, the Water and Electric Utilities' CIPs are presented for the Board's consideration, feedback, and potential concurrence.

As presented in previous Board Meetings, projects within the Water and Electric CIPs can be categorized into *Compulsory*, *Strategic Projects/Programs*, or *Risk-Based/Opportunity* Improvement Projects.

- *Compulsory*: compliance required work, obligation to serve (new connections) and emergent/emergency replacements to maintain or restore service. This work typically has a definite timeline or schedule need.
- *Risk-Based*: planned work driven by equipment condition or opportunity for efficiency with coincident projects with other agencies. Work that does not have a definite timeline, however in general the longer it is delayed the higher the risk of failure or that it will become compulsory. This work is prioritized around Strategic and Compulsory initiatives and generally exceeds funding and resource capability on a yearly basis.
- *Strategic*: work that is driven by board or GM direction to meet an emerging risk, or opportunity for the future. This work is typically high community, resource or regional/industry trend driven and is transformative in nature. Examples are AMI, EES, Carmen-Smith, and Second Source.

Additionally, Board Policy also defines different categories of Capital work into Type 1, 2, and 3. These categories define scale of work scope, schedule, and budget to ensure that reporting requirements to the board are meant for higher cost and impact projects.

- *Type 1*: typically comprised of Compulsory and Risk-Based work and budgets are made from many smaller to medium sized projects to make a program. Targeted for maintaining age of system and meeting customer and compliance obligations as well as funding shared (IT) and support functions (Fleet, Facilities) to ensure business continuity.
- *Type 2*: projects with a defined start and end that are strategic in nature that typically are larger than \$1 million. Board Policy EL-1 requires staff report project progress to the board on a quarterly basis.
- *Type 3*: multi-year large construction projects that are discretely funded (generally pre-funded or bond funded) and involve large scale multimillion dollar supply or rehabilitation.

By collaborating with the Board on strategic issues and values, along with developing mutual understanding of assumptions, goals, and performance metrics, the following water and electric capital improvement plans are presented to achieve the organization's strategic and operational priorities as presented earlier.

## Water Capital Improvement Plan (CIP)

The 2024-2033 Water Capital Improvement Plan is included as Attachment 5. The Water utility ten-year CIP totals approximately \$342 million and is categorized as shown in the figure below for next year's budget, the next five years, and the full ten (10) year perspective. The proposed CIP includes higher rates of inflation for the first 2 years to reflect the current construction climate. Other than this change, the water investments are similar to prior year plans, both with respect to projects and amount.

While the proposed ten-year CIP total is similar to last years, the first five years of the plan is approximately \$15MM higher. This is due to a combination of changes including:

- Second Source Treatment Plant: (\$18MM higher) With the proposed CIP, the entire second source project entered the first five years, last year one year of the project was in year six.
- Reservoirs: (\$11MM less) With the completion of E. 40<sup>th</sup> in 2023, the expenditures for base level reservoirs drop. There are higher costs projected in 2024 in this area with the construction of the Shasta 975 reservoirs.
- Transmission Pipelines: (\$7MM higher) This increase is primarily related to revised estimates for our large pipeline projects due to recent bid results.
- Information Technology: (\$3MM higher) As the EES project scope was developed, the near-term expenditures for this project increased.
- AMI: (\$2MM less) With the projected completion of AMI in the near term, one less year of expenditures are included in the plan.

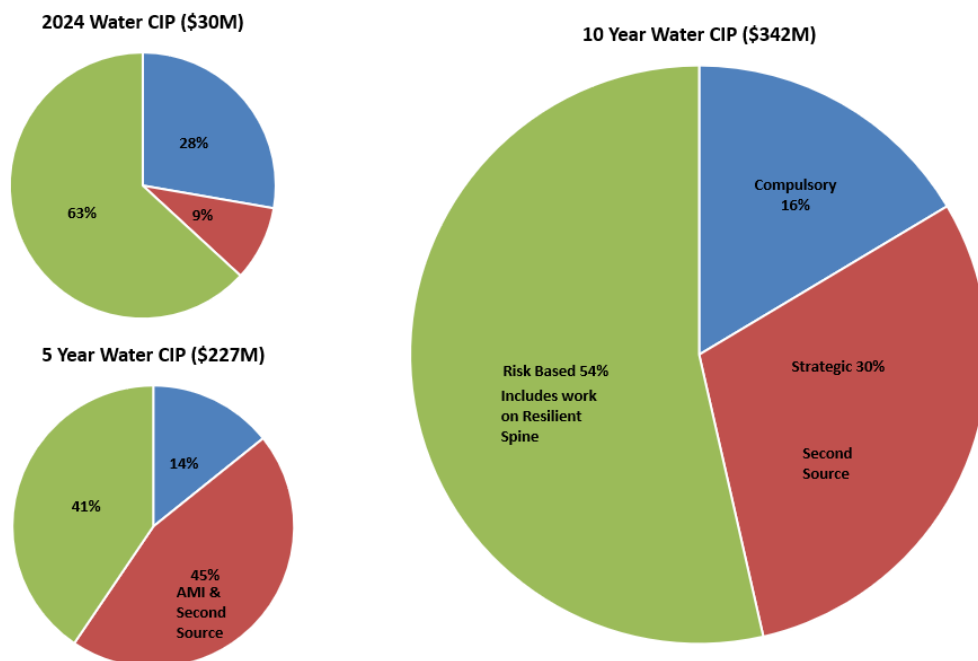


Figure: Water CIP Spending by Category (2024, First 5 years, 10 years)

A summary of planned projects/programs in each of the three categories is presented below followed by specifics on what is included in the Five Year and 2024 CIPs.

### ***Water Compulsory***

The Water CIP includes the following Compulsory work:

- Customer work for new services and development
- Pipeline replacements where conflicts exist with City of Eugene street projects
- Replacement of failed critical infrastructure
- Projects necessary to meet regulatory requirements or to maintain compliance

The percentage of the CIP that is compulsory is higher in 2024 primarily due to the inclusion of the second phase of the Hilyard transmission main to serve the new base level reservoirs on E. 40<sup>th</sup> Ave in this category. While transmission mains would normally be considered a Risk-Based improvement, this transmission main and the E. 40<sup>th</sup> reservoirs are considered compulsory as they allow for College Hill Reservoir to be taken offline, as required by the Oregon Health Authority.

### ***Water Strategic Projects***

The strategic portion of the CIP includes the completion of work on both the distributed (neighborhood) emergency water distribution sites along with AMI deployment. Both projects are anticipated to end in 2024.

In addition, the Second Source Willamette Treatment project is anticipated to be under construction by 2026 and comprises a majority of the Strategic Category in the 2024-2033 capital plan. The project includes a new water treatment plant and river intake on the Willamette River with a capacity to meet our current minimum demand. The plant will be robust with features to allow daily operations and continue operations following a seismic event. Transmission main work to connect to the EWEB distribution system is included in the project scope. Approximately \$98 million is associated with this project in the capital plan.

### ***Water Risk-Based/Opportunity Projects***

Approximately half of the projects in the ten-year CIP are considered “Risk Based”, typically associated with reliability and resiliency enhancements.

The Risk-Based category includes the Water Utility projects to improve its “Resilient Spine”. This work, largely driven by Master Planning efforts, in the last five years has transitioned from work at the Hayden Bridge Intakes and Filtration Plant to base level reservoirs and transmission system upgrades. The storage tanks at East 40<sup>th</sup> will be complete by year end and in the next ten years the CIP includes new seismically robust water reservoirs at College Hill, Hawkins, and Santa Clara, new transmission lines in South Eugene and interconnecting our river crossings, and improvements to the Knickerbocker Bridge pipe river crossing.

Water main replacements has increased significantly within the ten-year capital planning period. Over the last fifteen years EWEB has focused on our resilient spine (treatment plant moving to reservoirs and transmission pipelines), keeping main replacement work at a modest level. Recently, an increase in our benchmark indicators i.e., leaks per mile has been observed, now exceeding the national American Water Works Association (AWWA) average for this benchmark. To address this trend, EWEB is increasing planned expenditures on main replacement work over the next ten years

by about 75%. Approximately \$60 million is associated with this effort in the ten-year capital plan. Consistent with past/present practice, this main replacement work will be coordinated with the City of Eugene street work to the extent possible.

**2024-2028 Water Projects**

The 2024-2033 Water CIP includes a forecasted 2024 budget of \$30 million. In the first five years of the CIP, water investments total \$227 million, or 66% of the total plan. The higher first five years is due to the Second Source Project occurring within this time frame and the inflationary increases mentioned. A roster of noteworthy projects is presented below.

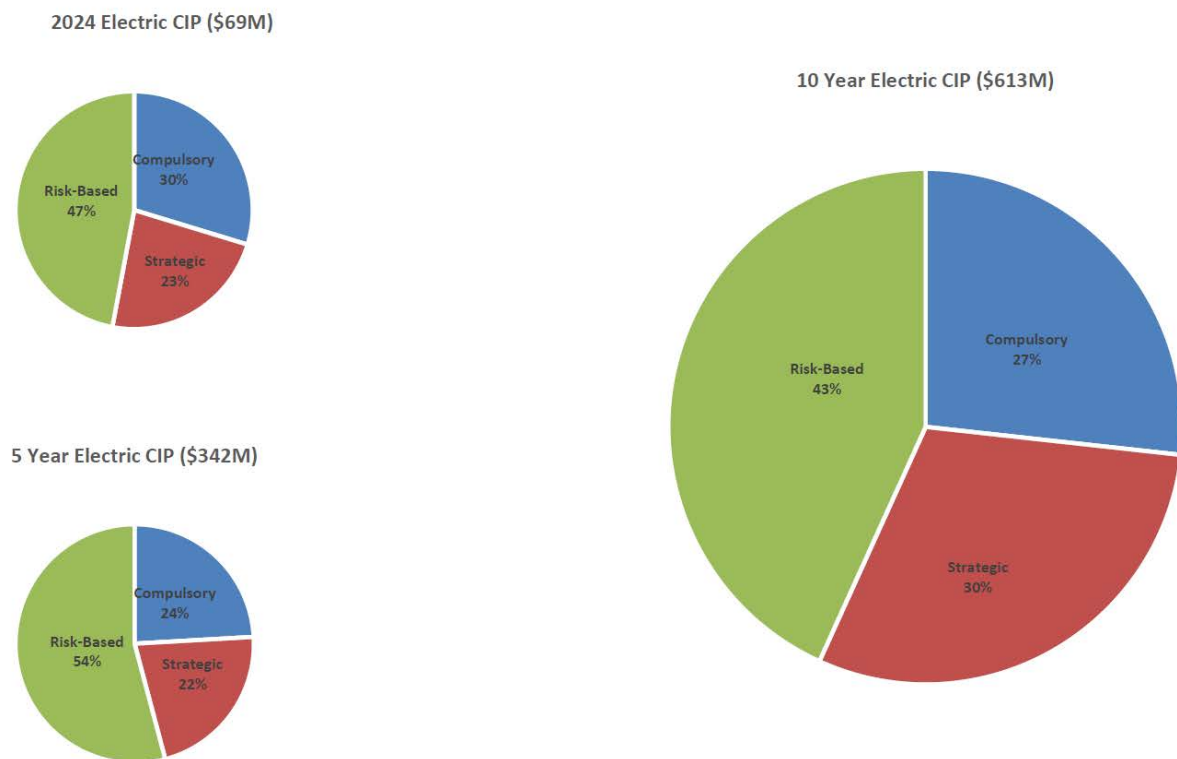
*Table: Noteworthy Near-Term Water Investments*

<b>Year (Start)</b>	<b>Project</b>	<b>Driver/Reason/Outcome</b>	<b>CIP Cost</b>
2019	Advanced Metering Infrastructure & Systems	System Optimization	\$1.5MM
2022	Second Source Water Treatment Plant	Reliability/Resiliency	\$98MM
2023	Hilyard Street Transmission Main	Reliability/Resiliency	\$5.5MM
2023	Shasta 975 Reservoir Replacement	Reliability/Resiliency	\$2MM
2024	HQ-Knickerbocker Transmission Main Phase 3	Resiliency	\$6.5MM
2024	College Hill Reservoir Replacement	Reliability/Resiliency	\$23MM
2026	Alder Street Transmission Main Upgrade	System Optimization	\$3.5MM
2027	Hayden Bridge Transmission Main Replacements	Reliability/Resiliency	\$3MM



## Electric Capital Improvement Plan (CIP)

The 2024-2033 Electric Capital Improvement Plan is included as Attachment 6. The Electric utility ten-year CIP totals approximately \$613 million and is categorized as shown in the figure below for next year's budget, the next five years, and the full ten (10) year perspective. The Electric investments are focused on the renewal and replacement of aged infrastructure as well as strategic modernization and resiliency related work. The goals of the capital programs within the plan are to maintain reliability and limit customer impacts for long lead time substation and underground feeder cable failures in future years, to execute emergency preparedness initiatives related to seismic events and wildfires and leverage new technologies to reduce system downtime for outages through modernization and automation.



**Figure: Electric CIP Spending by Category (2024, First 5 years, 10 years)**

### ***Electric Compulsory Work***

The Electric CIP includes the following Compulsory work:

- Customer work for new services and development
- Powerline replacements where conflicts exist with City of Eugene street projects
- Replacement of failed critical infrastructure on an emergent basis or as found via inspections and per historical trends
- Projects necessary to meet regulatory requirements or to maintain compliance such as PUC (poles, cross arms, clearances, etc.)
- Generation project improvements required by the Federal Energy Regulatory Commission (FERC) including Carmen-Smith and Leaburg Canal Mitigation

### ***Electric Strategic Projects***

Electric strategic projects are focused on *Maintaining Reliability and Increasing Resiliency* of the power supply and delivery customers rely on. This includes completion of the AMI project in 2024 with anticipated easing of supply constraints as indicated by the meter vendor.

A major portion of the plan includes replacement of aging critical infrastructure across the system as well as reconfiguration of supply systems to EWEB's most critical loads. This includes a program of projects in the first 5 years of the plan to reconfigure EWEB's connection to the East of I-5 system which supplies the Upriver service territory, International Paper (IP) Plant, Hayden Bridge Water Plant, and tie-in of Carmen-Smith with the EWEB system. A design study evaluating options is underway and expected to be completed Q4 2023. Also included is the rehabilitation of the IP Cogeneration generator and turbine. This section of the system also includes multiple connections to BPA which will ensure robust supply paths from the bulk electric system.

A major driver to the overall 10-year expenditures are the Leaburg Canal Repair alternatives that are in the development phase. The plan has accounted for interim risk reduction measures that are needed to ensure safe conveyance of stormwater until the overall decommissioning work is fully designed and executed. Currently, \$2 million is planned for 2024 and an additional \$58 million over the 10-year period. The plan will be updated as the alternatives are refined.

### ***Electric Risk-Based/Opportunity Projects***

Just under half of the projects in the 2024-2033 CIP are considered "Risk Based", associated with reliability and resiliency enhancements due to the age of system and emerging risks to the electric system such as the Subduction Zone Earthquake and Wildfire.

The Risk-Based category includes the Electric Utility projects to improve its "Resilient Spine" as well as replacements due to end of life of equipment based on condition, age, and customer impact. The CIP reflects the investments needed to address the aging "bubble" of infrastructure installed in the 1960s and 1970s. This work is largely driven by reliability impacts trending towards unfavorable as seen by an increase in equipment failures, including transmission, distribution, substation, and communications assets. As electric system asset age increases and likelihood of failure and end-of life increases, the proposed level of investment is required to renew these assets to avoid customer impact in the form of unplanned outages.

The risk-based category within the capital plan focuses on age of system replacement and new technology modernization mainly in the form of equipment replacement for cable, breakers, transformers, and other critical equipment. Substation rebuilds over the course of the plan ensures reliable delivery of power for substations that are nearing end of life. These substation projects are prioritized with a risk-based method which considers probability of failure (equipment condition, age), customer impact (number of customers and criticality of load – system, community, restoration) and considers known constraints to complete the work (permits, system outage limitations, environmental/property issues, etc.).

### ***Electric 2024-2028 Projects***

The Electric 2024-2033 CIP includes a forecasted 2024 budget of \$74.4 million. In the first 5 years of the CIP, electric investments total \$385 million, or 52% of the total plan, including the following roster of noteworthy projects.

***Table: Noteworthy Near-Term Electric Investments***

<b>Year (Start)</b>	<b>Project</b>	<b>Driver/Reason/Outcome</b>	<b>CIP Cost</b>
2018	Advanced Metering Deployment	Resiliency/Modernization	\$3.4MM
2022	Currin Substation Rebuild	Reliability/Resiliency	\$10MM
2024	Jessen Substation Rebuild	Reliability/Resiliency	\$8MM
2024	Thurston Substation Expansion and Walterville Substation Reconfiguration	Resiliency	\$13.5MM
2024	IP Plant Renewal (major rebuild work 2027 & 2028)	Reliability	\$11.8MM
2024-2028	Leaburg Canal Risk Mitigation	Compulsory/Strategic	\$38MM
2024-2028	Carmen-Smith Project	Compulsory/Reliability	\$70MM
2026	Cal Young Substation Rebuild	Reliability	\$6MM
2027	Hayden Bridge Substation Rebuild	Reliability	\$20MM

#### Shared Service Capital Improvement Plan (CIP)

The proposed capital plan contains investments in several services used across both the Water and Electric utilities. Shared Service Strategic investments including EWEB Enterprise Solutions (EES); the upgrades to our Information Technology infrastructure and software to replace our current business systems. Also included are Risk-Based investments to maintain our vehicle fleet and investments in our communications infrastructure to maintain radio and fiber communication paths and electronics. Phased development of the Bertelsen Property Operations expansion is included in each year of the plan beginning in 2024.

## ***Budget and Long-Term Financial Outcomes***

Consistent with the strategic and operational guidance, and business and economic forecast assumptions, EWEB Management has presented the resulting investment plan totaling approximately \$956 million over 10 years. The Water and Electric utility's plans include bond funding throughout the planning horizon of \$149 million and \$198 million, respectively.

### Water

Based on the previously stated strategic and operational guidance, business, and economic forecast assumptions, and a ten-year capital investment plan of \$341 million, including a second Willamette water treatment plant, key water financial metrics remain within board policy through 2033 with a 10-year compounded rate increase of 83.19%, equivalent to 6.25% per year. Because of heavy mid-2020's investment and cash flow needs, \$4.1 million and \$3.2 million of rate stabilization funds are forecasted to be utilized in 2024 and 2025, respectively. The initial 6 year's rate increases are steeper than the latter 4 years of the plan. Removing the second Willamette water treatment plant, the 10-year capital investment decreases to \$243 million, and the rate trajectory falls to 57.77%, equivalent to 4.67% per year.

The Water Long-Term Financial Plan outcome is included in Attachment 1, and the impact of capital investments including a water treatment plant and the Watershed Recovery Fee on our water comparator position is shown in Attachment 3.

### Electric

Based on the previously stated strategic and operational guidance, business, and economic forecast assumptions, and a ten-year capital investment plan of \$615 million, key electric financial metrics remain within board policy through 2033 with a 10-year compounded rate increase of 49.61%, equivalent to 4.11% per year. The first 2 year's rate increases are steeper than the latter 8 years of the plan. Pre-funding for Leaburg decommissioning is included in the rate increases in the first four (4) years of the plan, compounding to approximately 8.2%.

The Electric Long-Term Financial Plan outcome is included in Attachment 2.

## **Recommendation**

Management recommends the Board direct staff to prepare the 2024 budgets for O&M and Capital using the assumptions set forth herein, which includes an overall 2024 revenue requirement increase of 7.75% for the Electric Utility and 8.25% for the Water Utility.

## **Requested Board Action**

Management is not requesting Board action at the July 11<sup>th</sup> meeting. However, Management is requesting that the Board provide direction on the strategic and operational guidance, business and economic forecast assumptions, and ten-year capital investment plans to be used in the development of the 2024 Budget and resulting upcoming rate proposals.

Attachments

- Attachment 1 – Summary of Water Utility LTFP Revenue Requirement Assumptions and Outcomes
- Attachment 2 – Summary of Electric Utility LTFP Revenue Requirement Assumptions and Outcomes
- Attachment 3 – Average Bill Comparison
- Attachment 4 – Median Household Income (MHI) %
- Attachment 5 – Water CIP 2024-2033
- Attachment 6 – Electric CIP 2024-2033

### Summary of Water LTFP Revenue Requirement Assumptions and Outcomes (000's omitted)

Yellow = within 10% of target

<u>Key Metrics</u> (Dollars in \$000,s)	<u>Target</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	
Reserves & Cash		\$28,700	\$19,300	\$20,200	\$19,000	\$19,000	\$20,300	\$22,500	\$25,400	\$27,800	\$30,600	
AWS Reserve Balance		\$900										
Meter Reserve		\$300	\$800	\$1,400	\$2,000	\$2,500	\$3,100	\$3,600	\$4,200	\$4,800	\$5,300	
Total Cash Reserves	\$13,680	\$29,900	\$20,100	\$21,600	\$21,000	\$21,500	\$23,400	\$26,100	\$29,600	\$32,600	\$35,900	
DSC	2.00-2.50	2.66	2.87	3.47	2.21	2.40	2.01	2.05	2.18	2.01	2.02	
Days Cash	> 150 days	358	233	266	239	234	227	242	260	269	286	
Annual Capital Investment		\$30,200	\$38,900	\$59,900	\$48,200	\$48,800	\$23,800	\$23,900	\$23,700	\$18,900	\$24,400	\$340,700
Bond Funding				\$75,900		\$50,200			\$23,100			
Rate Stabilization Reserves Funding		\$4,100	\$3,200									
	<u>10 Year Compound</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	
General Rate Increase		5.75%	6.00%	6.00%	6.00%	5.50%	5.50%	3.50%	3.25%	3.25%	2.00%	
Second Source Increase		2.50%	2.50%	2.50%	2.50%	3.00%	3.00%					
Average Impact Resulting from Change in Revenue Requirement	83.19%	8.25%	8.50%	8.50%	8.50%	8.50%	8.50%	3.50%	3.25%	3.25%	2.00%	

#### Key Assumptions

- Consumption approximately of 7.8 million kgal
- Contribution margin risk tolerance of \$2.3 million which represents 95% of the 5-year consumption average
- Annual revenue requirement without second source increases at 57.77% compounded over the next 10 years
- Contributions of \$280,000 to AMI reserve in 2024 and \$560,000 starting 2025 based on 20 year estimated life
- Bond issuance: \$76 million in 2026, \$50 million in 2028, and \$23 million in 2031

### Summary of Electric LTFP Revenue Requirement Assumptions and Outcomes (000's omitted)

Yellow = within 10% of target

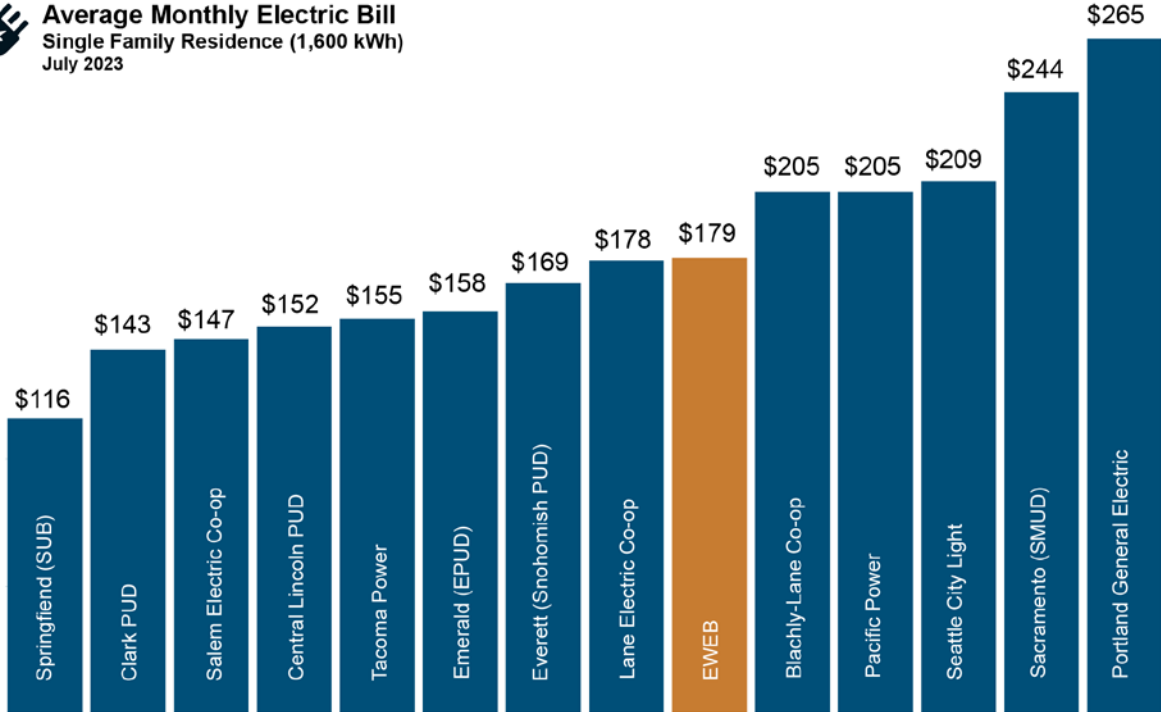
Key Metrics (Dollars in \$000,s)	Target	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Reserves and Cash		\$121,800	\$105,400	\$107,300	\$112,200	\$106,900	\$114,400	\$120,600	\$121,800	\$122,800	\$123,100	
Meter Reserve		\$4,000	\$5,000	\$6,000	\$7,000	\$5,000	\$3,000	\$1,000				
Leaburg Reserve		\$4,200	\$10,600	\$11,700	\$9,800	\$17,100	\$23,600	\$23,400	\$19,200	\$15,200	\$9,900	
Total Cash Reserves	\$100,720	\$126,000	\$116,000	\$119,000	\$122,000	\$124,000	\$138,000	\$144,000	\$141,000	\$138,000	\$133,000	
Debt Service Coverage Ratio	1.75	3.92	3.23	3.20	3.29	2.63	2.98	2.67	2.11	1.87	1.75	
Days Cash	>150 Days	199	180	188	196	191	203	199	185	169	154	
												Total
Annual Capital Investment		\$70,000	\$75,000	\$62,000	\$73,000	\$63,000	\$61,000	\$60,000	\$55,000	\$48,000	\$48,000	\$615,000
Bond Funding		\$65,000			\$64,000			\$69,000				
Rate Stabilization Reserves Funding		\$9,000	\$8,000									
Revenue Requirement Assumptions	10 Year Compound	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
General Rate Increase		1.25%	5.25%	0.25%	2.50%	1.00%	3.50%	1.00%	3.25%	0.25%	2.50%	
Leaburg Prefunding		4.00%	2.00%	1.00%	1.00%							
BPA Increase		2.50%		2.50%		2.50%		2.50%		2.50%		
Average Impact Resulting from Change in Revenue Requirement	49.61%	7.75%	7.25%	3.75%	3.50%	3.50%	3.50%	3.50%	3.25%	2.75%	2.50%	

#### Key Assumptions

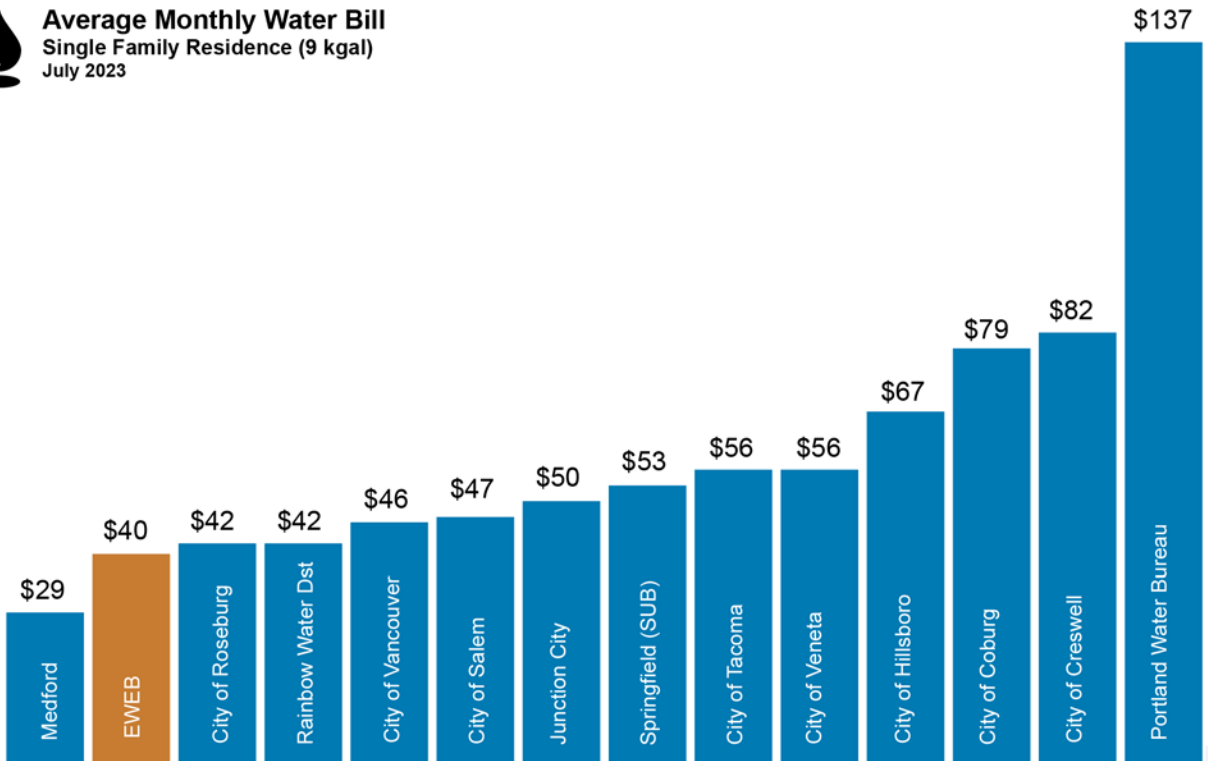
- 2024 Retail load approximately the same as 2023 budget - 2.4 million MWh's
- Electrification load approximately 14 thousand MWh's in 2024 increasing to 145 thousand MWh's in 2033
- Contribution margin risk tolerance of \$15.5 million which represents 90% generation. Similar contribution margin risk tolerance through 2028, expected conditions 2029-2033
- BPA rate increase of 6% assumed in October of 2023, 2025, 2027, 2029, 2031, and 2033 which translates to 2.5% for EWEB customer-owners
- \$86/MWh melded mid-market price curve in 2024 decreasing to \$83/MWh in 2033
- Environmental Commodities represent roughly \$4 million of wholesale revenue
- Rate increases for Leaburg funding and project costs are included in the financial plan through 2033
- Bond issuance: \$65 million in 2024, \$64 million in 2027, and \$69 million in 2030 funding capital work
- Use of \$18 million of Rate Stabilization Reserve funds for capital work in years 2024 and 2025
- \$1.0 million per year contribution to meter replacement reserve starting 2021 based on 12-year estimated life and the funds begin to draw down in 2028, at which point we no longer contribute to the fund



**Average Monthly Electric Bill**  
Single Family Residence (1,600 kWh)  
July 2023



**Average Monthly Water Bill**  
Single Family Residence (9 kgal)  
July 2023





## **Background**

The source of each comparator's Median Household Income (MHI) is from the United States Census Bureau website. The methodology uses the following data :

- Monthly water and electric bill at average residential consumption
- Annual bill at same level of use
- Median household income (in 2021 dollars)

Currently there is no national standard for what affordable percent (%) of MHI value is or is not.

Consideration must be given to financial sustainability of the utility as a whole in addition to affordability of price. Setting artificially lower prices may produce financial constraints to reinvesting in the system and eventually harm public health through poor product quality and service.

To address the limited income customer-owner bill impact, EWEB has maintained a Customer Care program for many years that provides assistance for bill payment and weatherization programs.

Included below are the combined average water and electric bills for residential customers in Eugene, Portland, Medford, Salem, Vancouver, Tacoma and Seattle.

Average consumption is based on 7 kgal of water and 1,050 kWh of electricity respectively. The average is annualized and compared as a percentage of MHI.

## **Findings**

City	Water 7 kgal	Electric 1050 kWh	Monthly	Annual	Median Household Income (in 2021 dollars)	%
<b>Eugene</b>	36.06	125.56	161.62	1,939.44	\$ 55,776	<b>3.48%</b>
<b>Portland</b>	119.68	177.17	296.85	3,562.20	\$ 78,476	<b>4.54%</b>
<b>Medford</b>	25.74	135.57	161.31	1,935.72	\$ 57,424	<b>3.37%</b>
<b>Salem</b>	39.30	104.80	144.10	1,729.20	\$ 62,185	<b>2.78%</b>
<b>Vancouver</b>	38.43	97.68	136.11	1,633.32	\$ 67,462	<b>2.42%</b>
<b>Tacoma</b>	49.30	109.34	158.64	1,903.68	\$ 69,956	<b>2.72%</b>
<b>Seattle</b>	76.04	137.31	213.35	2,560.20	\$ 105,391	<b>2.43%</b>

Water Capital Improvement Plan: 2024-2033

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	5 Year Total 2024-2028	5 Year Total 2029-2033	10 Year Total
<b>Type 1 - General Capital (rate funded)</b>													
Source - Intake and Hayden Bridge	\$ 1,076,000	\$ 1,295,000	\$ 426,000	\$ 439,000	\$ 693,000	\$ 714,000	\$ 735,000	\$ 757,000	\$ 780,000	\$ 803,000	\$ 3,929,000	\$ 3,789,000	\$ 7,718,000
Distribution - Pump Stations & Reservoirs	\$ 987,000	\$ 816,000	\$ 727,000	\$ 749,000	\$ 771,000	\$ 794,000	\$ 818,000	\$ 843,000	\$ 868,000	\$ 894,000	\$ 4,050,000	\$ 4,217,000	\$ 8,267,000
Distribution - Pipelines	\$ 5,229,000	\$ 5,490,000	\$ 6,223,000	\$ 6,410,000	\$ 6,602,000	\$ 7,420,000	\$ 7,643,000	\$ 7,872,000	\$ 8,108,000	\$ 8,352,000	\$ 29,954,000	\$ 39,395,000	\$ 69,349,000
Distribution - Services & Meters	\$ 1,575,000	\$ 1,654,000	\$ 1,703,000	\$ 1,754,000	\$ 1,807,000	\$ 1,861,000	\$ 1,917,000	\$ 1,975,000	\$ 2,034,000	\$ 2,095,000	\$ 8,493,000	\$ 9,882,000	\$ 18,375,000
Distribution - Post AMI Meter Replacements/Upgrades	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	\$ 1,750,000	\$ 1,750,000	\$ 3,500,000
Information Technology	\$ 1,019,000	\$ 2,033,000	\$ 1,525,000	\$ 1,190,000	\$ 861,000	\$ 1,088,000	\$ 1,941,000	\$ 1,271,000	\$ 1,205,000	\$ 707,000	\$ 6,628,000	\$ 6,212,000	\$ 12,840,000
Buildings & Land	\$ 70,000	\$ 77,000	\$ 61,000	\$ 161,000	\$ 37,000	\$ 51,000	\$ 156,000	\$ 41,000	\$ 41,000	\$ 41,000	\$ 406,000	\$ 330,000	\$ 736,000
Fleet	\$ 850,000	\$ 705,000	\$ 735,000	\$ 760,000	\$ 790,000	\$ 826,000	\$ 865,000	\$ 910,000	\$ 960,000	\$ 910,000	\$ 3,840,000	\$ 4,471,000	\$ 8,311,000
<b>Total Type 1 Expenditures</b>	<b>\$ 11,156,000</b>	<b>\$ 12,420,000</b>	<b>\$ 11,750,000</b>	<b>\$ 11,813,000</b>	<b>\$ 11,911,000</b>	<b>\$ 13,104,000</b>	<b>\$ 14,425,000</b>	<b>\$ 14,019,000</b>	<b>\$ 14,346,000</b>	<b>\$ 14,152,000</b>	<b>\$ 59,050,000</b>	<b>\$ 70,046,000</b>	<b>\$ 129,096,000</b>
<b>Type 2 - Rehabilitation &amp; Expansion Projects (rate &amp; bond funded)</b>													
<u>Rate Funded Type 2 Projects</u>													
Information Technology	\$ 2,216,000	\$ 1,970,000	\$ 1,477,000	\$ 492,000	\$ 492,000	\$ 492,000	\$ 492,000	\$ 492,000	\$ 492,000	\$ 492,000	\$ 6,647,000	\$ 2,460,000	\$ 9,107,000
	\$ -	\$ -	\$ 985,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 985,000	\$ -	\$ 985,000
<b>Subtotal - Rate Funded Projects</b>	<b>\$ 2,216,000</b>	<b>\$ 1,970,000</b>	<b>\$ 2,462,000</b>	<b>\$ 492,000</b>	<b>\$ 492,000</b>	<b>\$ 492,000</b>	<b>\$ 492,000</b>	<b>\$ 492,000</b>	<b>\$ 492,000</b>	<b>\$ 492,000</b>	<b>\$ 7,632,000</b>	<b>\$ 2,460,000</b>	<b>\$ 10,092,000</b>
<u>Bond Eligible Type 2 Projects</u>													
Source - Intake and Hayden Bridge	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,241,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,241,000	\$ 1,241,000
Distribution - Pump Stations & Reservoirs	\$ 5,250,000	\$ 10,253,000	\$ 11,583,000	\$ 3,509,000	\$ 1,807,000	\$ 8,686,000	\$ 8,947,000	\$ 9,215,000	\$ 4,068,000	\$ 9,776,000	\$ 32,402,000	\$ 40,692,000	\$ 73,094,000
Distribution - Pipelines	\$ 6,510,000	\$ 5,513,000	\$ 5,678,000	\$ 2,924,000	\$ 4,217,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24,842,000	\$ -	\$ 24,842,000
Advanced Meters (Water)	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000	\$ -	\$ 1,500,000
Buildings and Land	\$ 985,000	\$ 985,000	\$ 985,000	\$ 246,000	\$ 246,000	\$ 246,000	\$ -	\$ -	\$ -	\$ -	\$ 3,447,000	\$ 246,000	\$ 3,693,000
<b>Subtotal - Bond Eligible Projects</b>	<b>\$ 14,245,000</b>	<b>\$ 16,751,000</b>	<b>\$ 18,246,000</b>	<b>\$ 6,679,000</b>	<b>\$ 6,270,000</b>	<b>\$ 10,173,000</b>	<b>\$ 8,947,000</b>	<b>\$ 9,215,000</b>	<b>\$ 4,068,000</b>	<b>\$ 9,776,000</b>	<b>\$ 62,191,000</b>	<b>\$ 42,179,000</b>	<b>\$ 104,370,000</b>
<b>Total Type 2 Expenditures</b>	<b>\$ 16,461,000</b>	<b>\$ 18,721,000</b>	<b>\$ 20,708,000</b>	<b>\$ 7,171,000</b>	<b>\$ 6,762,000</b>	<b>\$ 10,665,000</b>	<b>\$ 9,439,000</b>	<b>\$ 9,707,000</b>	<b>\$ 4,560,000</b>	<b>\$ 10,268,000</b>	<b>\$ 69,823,000</b>	<b>\$ 44,639,000</b>	<b>\$ 114,462,000</b>
<b>Type 3 - Strategic Projects &amp; Programs (bond funded)</b>													
Emergency Water Supply	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Second Source Treatment Plant	\$ 2,625,000	\$ 7,718,000	\$ 28,389,000	\$ 29,241,000	\$ 30,118,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 98,091,000	\$ -	\$ 98,091,000
<b>Total Type 3 Expenditures</b>	<b>\$ 2,625,000</b>	<b>\$ 7,718,000</b>	<b>\$ 28,389,000</b>	<b>\$ 29,241,000</b>	<b>\$ 30,118,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 98,091,000</b>	<b>\$ -</b>	<b>\$ 98,091,000</b>
<b>Total Expenditures</b>	<b>\$ 30,242,000</b>	<b>\$ 38,859,000</b>	<b>\$ 60,847,000</b>	<b>\$ 48,225,000</b>	<b>\$ 48,791,000</b>	<b>\$ 23,769,000</b>	<b>\$ 23,864,000</b>	<b>\$ 23,726,000</b>	<b>\$ 18,906,000</b>	<b>\$ 24,420,000</b>	<b>\$ 226,964,000</b>	<b>\$ 114,685,000</b>	<b>\$ 341,649,000</b>

Electric Capital Improvement Plan: 2024-2033

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	5-Year Total 2024-2028	5-Year Total 2029-2033	10-Year Total
<b>Type 1 - General Capital</b>													
Electric Infrastructure - Generation	\$1,937,250	\$2,001,038	\$3,452,148	\$1,040,982	\$1,252,921	\$1,104,377	\$1,009,699	\$1,039,990	\$1,071,189	\$1,103,325	\$9,684,338	\$5,328,580	\$15,012,918
Customer-Driven Capital Expense	\$3,018,750	\$2,353,838	\$2,424,453	\$2,497,186	\$2,572,102	\$2,649,265	\$2,728,743	\$2,810,605	\$2,894,923	\$2,981,771	\$12,866,328	\$14,065,307	\$26,931,635
Electric Infrastructure - Transmission & Distribution	\$8,948,625	\$10,790,719	\$11,704,372	\$15,827,599	\$12,959,297	\$14,154,644	\$13,492,898	\$14,950,839	\$13,636,648	\$14,045,747	\$60,230,611	\$70,280,776	\$130,511,387
Downtown Distribution Network	\$1,198,050	\$1,368,203	\$1,420,604	\$1,140,401	\$1,174,613	\$1,209,852	\$862,717	\$1,007,079	\$949,155	\$977,630	\$6,301,871	\$5,006,433	\$11,308,304
Telecom Fiber - EWEB Driven	\$157,500	\$165,375	\$170,336	\$140,357	\$144,568	\$148,905	\$153,372	\$157,973	\$162,712	\$167,594	\$778,136	\$790,556	\$1,568,692
Telecom - Radio	\$341,250	\$113,558	\$120,371	\$371,946	\$0	\$0	\$0	\$131,644	\$0	\$0	\$947,125	\$131,644	\$1,078,769
Precapitalized AMI Meter Capital subtotal (post-deployment)	\$0	\$0	\$0	\$0	\$1,807,097	\$1,861,310	\$1,917,150	\$1,974,664	\$2,033,904	\$2,094,921	\$1,807,097	\$9,881,949	\$11,689,046
Information Services (IS) - Shared & Electric	\$4,039,000	\$8,499,000	\$6,282,000	\$4,486,000	\$4,335,000	\$5,045,000	\$8,122,000	\$7,625,000	\$5,267,000	\$4,346,000	\$27,641,000	\$30,405,000	\$58,046,000
General Plant - Buildings & Land	\$232,888	\$268,986	\$218,286	\$594,948	\$142,511	\$199,175	\$633,106	\$170,325	\$175,434	\$180,697	\$1,457,619	\$1,358,737	\$2,816,356
General Plant - Fleet	\$2,789,850	\$2,690,100	\$1,998,612	\$2,924,106	\$3,011,829	\$1,520,070	\$1,612,962	\$1,711,375	\$1,814,242	\$1,868,670	\$13,414,496	\$8,527,319	\$21,941,815
<b>Total Type 1 Expenditures</b>	<b>\$22,663,163</b>	<b>\$28,250,815</b>	<b>\$27,791,182</b>	<b>\$29,023,525</b>	<b>\$27,399,937</b>	<b>\$27,892,598</b>	<b>\$30,532,647</b>	<b>\$31,579,494</b>	<b>\$28,005,208</b>	<b>\$27,766,354</b>	<b>\$135,128,622</b>	<b>\$145,776,301</b>	<b>\$280,904,923</b>
<b>Type 2 - Rehabilitation &amp; Expansion Projects</b>													
Distribution Resiliency Upgrades	\$1,617,000	\$1,697,850	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,314,850	\$0	\$3,314,850
Advanced Meters (Electric)	\$3,961,440	\$565,583	\$582,550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,109,572	\$0	\$5,109,572
Generation - Type 2 Strategic Project(s)	\$3,045,000	\$6,725,250	\$11,015,078	\$17,661,598	\$14,456,778	\$4,591,232	\$7,029,548	\$5,923,992	\$1,898,310	\$279,323	\$52,903,704	\$19,722,405	\$72,626,109
Electric T & D - Type 2 Strategic Project(s)	\$2,100,000	\$10,473,750	\$7,949,025	\$10,526,780	\$7,830,755	\$16,131,355	\$14,698,146	\$15,139,091	\$15,593,263	\$18,155,982	\$38,880,310	\$79,717,837	\$118,598,147
IS - Type 2 Strategic Projects Total	\$9,006,228	\$6,877,483	\$5,312,856	\$1,824,080	\$1,878,803	\$7,384,190	\$1,993,222	\$2,053,019	\$2,114,609	\$2,178,047	\$24,899,450	\$15,723,087	\$40,622,537
Buildings & Land - Type 2 Strategic Project(s) Total	\$3,274,992	\$3,438,742	\$3,541,904	\$912,040	\$939,401	\$967,583	\$0	\$0	\$0	\$0	\$12,107,079	\$967,583	\$13,074,663
<b>Type 2 Capital Expenditures</b>	<b>\$23,004,660</b>	<b>\$29,778,657</b>	<b>\$28,401,412</b>	<b>\$30,924,499</b>	<b>\$25,105,737</b>	<b>\$29,074,360</b>	<b>\$23,720,916</b>	<b>\$23,116,101</b>	<b>\$19,606,183</b>	<b>\$20,613,352</b>	<b>\$137,214,966</b>	<b>\$116,130,913</b>	<b>\$253,345,879</b>
<b>Type 1 + Type 2 Rate-Funded Capital Expenditures</b>	<b>\$45,667,823</b>	<b>\$58,029,472</b>	<b>\$56,192,594</b>	<b>\$59,948,024</b>	<b>\$52,505,675</b>	<b>\$56,966,958</b>	<b>\$54,253,563</b>	<b>\$54,695,595</b>	<b>\$47,611,391</b>	<b>\$48,379,707</b>	<b>\$272,343,588</b>	<b>\$261,907,214</b>	<b>\$534,250,801</b>
<b>Type 3 - Strategic Projects &amp; Programs</b>													
Carmen-Smith Expenditures	\$24,255,000	\$16,890,300	\$5,462,116	\$12,749,101	\$10,384,786	\$3,970,795	\$ 5,368,019	\$0	\$0	\$0	\$69,741,302	9,338,814	79,080,116
<b>Total Expenditures</b>	<b>\$69,922,823</b>	<b>\$74,919,772</b>	<b>\$61,654,710</b>	<b>\$72,697,124</b>	<b>\$62,890,460</b>	<b>\$60,937,753</b>	<b>\$59,621,582</b>	<b>\$54,695,595</b>	<b>\$47,611,391</b>	<b>\$48,379,707</b>	<b>\$342,084,890</b>	<b>271,246,027</b>	<b>613,330,917</b>

Note: Inflation of 5% 2024 & 2025; 3% after