Capital "EL1" Report: Electric, 2017 -Q2

Note - Changes from previous report(s) are in **BOLD**

Type 1 - General Capital

Capital Category	2017 thru Q2 Budget	2017 thru Q2 YTD Actual	2017 thru Q2 Year-End Projection	Status/Comments
Electric Infrastructure - Generation	**$1,196,000 (Note 2)**	**$381,616**	**$850,000**	**Capital work began in Q2 during the planned outages. Seismic early warning system installations completed at Leaburg and Carmen. Debris boom installs at Leaburg Lake and Smith Reservoir targeted for late 2017. Emergent capital work at Stone Creek (triggered by failed generator relay) more than offset by LB-WV capital deferred to compensate. - ZINNIKER**
Electric Infrastructure - Substations	**$1,781,000**	**$573,426**	**$1,895,000**	**Type 1 Projects currently tracking on planned schedule. Bertelsen 115kV breaker and swich replacement is approximately 50% complete. Remainder of R&R projects are short duration and do not require extended substation outages (comm upgrades, 15kV Breaker replacements, battery replacements, etc.). - NICE**
Electric Infrastructure - Telecom	**$250,000**	**$72,243**	**$200,000**	**Consists of EWEB driven and Customer Driven work. Currently tracking below expected trajectory. -NICE**
Electric Infrastructure - Transmission & Distribution	**$7,065,000**	**$3,799,494 (1)**	**$7,065,000**	**Budget on track. - Fraser**

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.

Type 2 Rehabilitation & Expansion Projects

Project	2017 thru Q2 Budget	2017 thru Q2 YTD Actual	2017 thru Q2 Year-End Projection	Project Total Initial Plan	Project Total To-Date Actual	Project Total Project-End Projection	Schedule Start	Schedule Initial Planned Completion	Schedule Projected Completion	Status/Comments
Leaburg Dam Roll Gate Hoists	**$0**	**$54,753**	**$175,000**	$5,150,000	**$6,342,888**	$7,000,000	Jul-2012	Nov-2014	Oct-2018	**All three hoist systems released for full automatic operation in Q1. Final payments to contractors pending punch list completion, expected by the end of Q3 2017. Potential repair of worn gate teeth under investigation for 2018 implementation. ZINNIKER**
Downtown Fiber Network	**$600,000**	**$69,253**	**$600,000**	**$2,100,000**	**$69,253**	**$2,100,000**	**Mar-2017**	**Dec-2018**	**Dec-2018**	**Crews have begun installing fiber conduit for the Downtown Network. City of Eugene has received grant award. - NICE**
Weyerhauser Property Purchase	**$1,250,000**	**$27,113**	**$1,300,000**	**$1,250,000**	**$122,047**	**$1,300,000**	**Jul-2016**	**Dec-2016**	**Feb-2018**	**Property purchase delayed due to issues with leasee and current Owner. Funds will be allocated to escrow and full acquisition expected to take place in early 2018. This land is for the purpose of the future Thurston Substation reconfiguration and source protection; with surplus property being liquidated. -NICE**
Upriver Re-Configuration/Holden Ck. Substation	**$4,582,000 (Note 2)**	**$1,022,999**	**$4,857,000**	$3,000,000	**$1,550,073**	**$5,830,000**	Jan-2014	Oct-2015	**Feb-2018**	**Major procurement contracts have been completed. Transformers have been delivered, switchgear is scheduled for delivery in September 2017. Other major components (steel structures, bus, instrument transformers, etc.) have been ordered and will be arriving to site coordinated with construction activities.. Groundwork is in progress with equipment foundations starting in the next two weeks. The substation construction is expected to be complete in late October 2017, with EWEB crews finishing final wiring, testing and commissioning through January 2018. Final details for the BPA connection are being completed and energization of the substation is planned for June 2018, following completion of BPA design and construction activities. $400k overage for 2017 is due to full payment to BPA for the design and execution of interconnection is being pre-paid per their process. This was originally planned to be paid for in early 2018. - NICE**
Downtown Distribution Network	**$1,000,000 (Note 2)**	**$547,800**	**$990,000**	$15,000,000	**$266,570**	$20,000,000	Sep-2010	Dec-2015	**Dec-2028**	**Total shown includes Pre-capped materials ($405,300 in network protectors). Downtown Network protector replacements have been completed in 2017 at vaults Lane County Building, and Hilton. Replacements at US Bank and Hult Center to occur remainder of year. Engineering is currently in planning phase for remaining work developing preliminary design, scope, schedule and budget for priority of cable replacements, system modeling and configuration and communication and automation upgrades. Development of electrical model and update of GIS mapping is currently in progress. - NICE**
Grid Edge Demonstration Project	**$837,000 (Note 2)**	**$16,106**	**$200,000**	$1,200,000	**$143,455**	**$700,000**	**May-2016**	**Jun-2017**	**Sep-2018**	**Project direction finalized to include an installation at ROC and one at Sheldon High School in 2018, with additional 5 schools in next 5 years. Design-build RFP advertisement scheduled to be completed mid August with award in mid October to manufacturer and integrator. Procurement and delivery of materials scheduled by year end with installation and commissioning planned for Q1 of 2018. Totals do not include $262k of grant funding which will be reimbursed at major milestones and completion. - NICE**

Type 3 - Strategic Projects & Programs	2017 thru Q2			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	$11,700,000	**$2,718,708**	**$7,750,000**	$135,000,000	**$40,579,864**	$129,500,000	May-2009	Dec-2021	Dec-2025	The Project End Projection has been updated to reflect the 2016 Settlement Agreement that has been filed with the FERC. Staff has completed and filed the revisions to the FERC exhibits and the Biological Assessment will be submitted by the end of July. We expect the license to be issued no earlier than 2018. Implementation of 5-year plan to address aging infrastructure at Carmen Powerhouse underway. Delivery of the turbine shutoff valves was delayed by the manufacturer until early July. Replacement of the valves is now scheduled to begin in May 2018 with intent to complete by the end of October 2018. There are no other changes to the schedule. (ZINNIKER, BOYLE)
Total Electric Capital (Excluding Shared Services)	**$30,261,000**	**$9,283,511**	**$25,882,000**	**86%**						

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 and approved by the Board on April 4, 2017 (April True Up)

Management Notes: The Electric Capital Budget Q2 overall expenditure rate is lower than expected, 31% rather than 50%. Year end results of total expenditures vs. budget is at 86% excluding Shared Services, due to Carmen TSV delay. Type I expenditures predicted year end is at100% of budget, with about 48% spent through Q2. Type II spending ended at 22% of Q2 of expected, but projected expenditures year end at 103%. Q2 spending is low due to most projects and materials are completed in late Q3 and into Q4. For example, Holden Creek Substation, Downtown Network, Thurston land purchase and Downtown fiber will all have big expenditures in Q4. Spending was delayed on the micro-grid project as we paused to determine best direction, so spending on the Downtown Network will be increased. Carmen Smith spending is at 23% and year end projection is expected to be at 66% of budget due to the delay in the delivery of the TSV valves. The delay and carryover of money into 2018 was detailed in the 2018 CIP budget presentation. Q3 work will increase at Carmen as outage become available.

Water Capital Projects Quarterly Status Report
2017-Q2

Type 1 - General Capital

Project	2017 Budget	2017 YTD Actual	2017 Year-End Projection	Status/Comments
Source - Water Intakes & Filtration Plant	$1,030,000	$513,000	$1,000,000	Largest item is solids improvement project. Also included are costs for treatment trailer equipment, a SCADA/Historian upgrade and close out work for the South Filter Upgrade.
Mains - Replacements, Improvements, & Trans.	$4,378,000	$1,813,000	$4,500,000	Largest componet in this area is main replacements. This item is tracking well so far. Cost reporting does lag however, so we will be watching this number closely
Services and Meters	$1,803,000	$1,132,000	$2,000,000	Includes both new services and meters as well as replacement of existing service lines. Running high - will monitor as year progresses
Pump Stations	$1,236,000	$306,000	$700,000	Work this year includes Upgrades at Santa Clara and Laurel Hill Pump Stations, a new Crenshaw Pump Station (reimbursable) and work on a new City View 1150 Pump Station. Scaling back Laurel Hill significantly is dropping year end projections.
Reservoirs	$103,000	$4,000	$50,000	2017 work includes new hatch/vent and ladder at Crest 800 Reservoir

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 "main replacements". This work typically involves dozens of jobs that add up to $3.5-4.5 million per year.

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

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Type 3 projects are large strategic programs with long term impacts.

Type 2 Rehabilitation & Expansion Projects

Project	2017			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 Disinfection System Replacement	$700,000	$16,500	$500,000	$3,645,000	$16,500	$3,680,000	2017	YE-2018	YE-2018	Replacement of gas chlorine system with on-site liquid hypochlorite system. Project currently in design. (Initial Plan - 2015 CIP)
Hayden Bridge Seismic Upgrades	$515,000	$74,000	$350,000	$1,215,529	$1,191,067	$1,570,000	2014	YE-2015	Q1-2018	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	$412,000	$100,000	$400,000	$3,079,780	$581,109	$1,300,000	2013	YE-2016	YE-2019	Multi-Year upgrade project. Completed Crest System. Currently working on Dillard and Willamette systems. Project complexities and staffing limitations are affecting schedule (Initial Plan 2013 CIP)
Hayden Bridge Standby Power Improvements	$1,030,000	$28,000	$700,000	$1,728,000	$54,666	$1,030,000	2015	YE-2017	Q1-2018	Currently in design phase. Will be prepurchaseing two generators, one for Hayden Bridge Plant and one for Intakes. Delays in design process may construction and electrical work into next spring. (Initial Plan - 2015 CIP)
Hawkins Reservoir Improvements	$300,000	$9,000	$300,000	$2,067,000	$9,000	$2,290,000	2014	YE-2018	Q2-2019	Structural evaluations in process results of of which could affect scope. Any scope increase should by known in early third quarter. (Initial Plan 2016 CIP)

Type 3 - Strategic Projects & Programs

Project	2017			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	
Second Source of Supply	$1,830,000	$1,598,000	$1,700,000	Varied from $52M to $120M	$2,478,000	$67,000,000	2014 with Planning	YE-2021	YE-2021	Project is currently being reconsidered and will likely be deferred to out years of the ten year CIP.

Total Water Capital (Excluding Shared Services)	$13,337,000	$5,593,500	$12,200,000	91%	year end projection to budget
Type 1, 2 Capital (Excluding Shared Services)	$11,507,000	$3,995,500	$10,500,000	91%	year end projection to budget

Management Notes: Overall Water's Type 1 projects are tracking well. Our largest item in this area, Main Replacements is at approximately 50% of budget spent. Costs do lag in the reporting system however, so we will need to watch this area closely. On the Water Type 2 projects, we are tracking low in the first quarter. This year is different than last in that in 2016 there were numerous large construction projects occurring over the entire year. The first part of this year numerous projects are in the design phase hence the low year to date actual. Spending will increase significantly later in the year as construction begins on several projects. Type 3 projects - marked red for EL1 report due to project deferral. This project is Gray on operational dashboard, but from an EL1 capital perspective, it is red (Scope, schedule, budget expectations). Overall, water has $13,337,000 budgeted for capital in 2017 (adjusted for the April True-Up) and anticipates spending 95% of that amount. Engineering's target is attain at least 90% expenditures of the capital budget amounts.

Capital "EL1" Report: Shared Services, 2017-Q2

Note - Changes from previous report(s) are in **BOLD**

Type 1 - General Capital

Capital Category	2017- Q2 Budget	2017- Q2 YTD Actual	2017- Q2 Year-End Projection	Status/Comments	
General Plant - Information Technology (I.T.)	$685,355	$709,186	**$766,000**		**Capital overage due to SAN Replacement. IS continued to execute on capital projects already in the Project Portfolio. Examples include; increase IS Capabilities at Hayden Bridge and Integration Software (Barton)**
General Plant - Buildings & Land Management	$1,322,000	$137,197	**$615,000**		**Elevator Contracts approved by Board in Feb 2017 Contract for elevator upgrade has been issued to Kone. All materials will be onsite and HQ North Building elevator completed by end of year. HQ main building elevators completed in 2018. Upgrade of HQ Fire Alarm System has been cancelled (reduction of $422,000). ROC Comm Tower construction tasks are expected to be completed in end of Sept/early Oct, currently 100% design done and in procurement process. (Morgenstern/Wolfe)**
General Plant - Electric& Water Fleet Capital	$610,000	$172,899	**$260,000**		**Fleet recently rolled back in April True up - due to changes in strategy of fleet. ($500,000 for Electric, $110,000 for Water) remaining procurements are moving forward for 2017. (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.

Type 2 Rehabilitation & Expansion Projects

Project	2017 - Q2 Budget	2017 - Q2 YTD Actual	2017 - Q2 Year-End Projection	Project Total Initial Plan	Project Total To-Date Actual	Project Total Project-End Projection	Schedule Start	Schedule Initial Planned Completion	Schedule Projected Completion	Status/Comments	
AMI Information Technology & Integration	$1,986,697	$1,870,539	**$2,200,000**	$6,475,700	**$4,902,446**	**$6,475,700**	May-2015	Dec-2017	May-2018		**Project continues into transition from capital construction to operations. Software integration work continues through this summer. (Armstead)**
Customer Information System (CIS) Replacement	$1,500,000	$0	**$1,080,000**	$9.7M	**$0**	**$10,400,000**	Sep-2016	Aug-2018	mid to late-2019		**Project is in contract negotiation phase currently. This project is expected to transition to execution phase by early fall. (Armstead)**

Total Shared Services Capital (This Report) **$6,104,052** **$2,889,821** **$4,921,000** **80.62%**

Note(s) 1) April 2017 true-up budget numbers are reflected as Budget, as approved by Board on April 4, 2017.

Management Notes: Type I IT Projects are on track and on schedule. This is good news since in the past these projects have lagged for various reasons. As per the April True Up, Fleet Capital was reduced significantly due to a re-assessment of future fleet needs and strategy. AMI is progressing forward in current Opt In Strategy. Projected spending is in the 82% range for end of year, largely driven by the cancelation of HQ Fire Alarm System Upgrade and the shift to O&M from Capital by Facilities.

MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Helgeson, Brown, Mital, Simpson and Carlson

FROM: Jeannine Parisi, Community and Local Government Relations; Monica Shovlin, Communications, Research and Marketing Supervisor.

DATE: August 1, 2017

SUBJECT: Electric Pricing Redesign Committee Update

OBJECTIVE: Information Only

Issue

In February, Management proposed conducting a comprehensive review of electric pricing reform options with the assistance of a customer committee. The Board agreed to a basic scope of work and committee selection process at this meeting. This is a progress update on the ad hoc Pricing Committee's work.

Background

Until recently, electric utilities have relied almost entirely on consumption-based charges where the more electricity used, the higher the bill. Over time, additional flat fees were added to the bill to begin to recover some of the fixed costs of providing service to each customer. Even so, these 'facility' or 'basic' charges were a small portion of the bill, typically $5-$10 per month.

Overall electricity use is declining, despite population growth. Contributing factors include more efficient building systems and appliances, fuel-switching to gas and renewable energy, and loss of large industrial load. Weather, the predominant driver of residential electricity demand, is more erratic, creating fluctuations (and deficits) in revenues. At the same time, the cost to maintain and modernize an aging electric infrastructure is increasing.

EWEB has begun to more closely align its pricing to reflect the true costs of doing business, raising the basic charge on residential bills while reducing volumetric charges. While the approach is revenue neutral to EWEB, such changes impact customers differently. Questions of equity, commitment to energy conservation, and impacts to limited income customers were some of the concerns raised under a 2015 proposal to raise EWEB's basic charge to $30/month.

Before pursuing further pricing reforms, the Board requested Management to test pricing options with customers to determine which solutions, if any, would garner more acceptance. A customer committee was formed to enable a full discussion about the different pricing options, and the values, preferences and tradeoffs in play. The committee would also provide independent advice on the rate of change for pricing reform implementation. Management also proposed supplementing the committee's input with other customer research, such as surveys or focus groups and an open house.

Discussion
After the February Board discussion, committee recruitment began and a facilitator was hired to support the meeting process.

Ad Hoc Pricing Committee Membership

Name	Relevant Background or Interests	Appointed By
Steve Jole	HACSA Energy Program Mgr	John Brown
Keith Appleby	Limited Income/Equity	Steve Mital
Mary Walston	4-J School Board/Former IERP member	Sonya Carlson
Doug Campoli	Arcimoto Chief Financial Officer	John Simpson
Rick Johnson	Communications	Dick Helgeson
Catherine Roner-Reiter	UO Law Student	Staff
Gary Rayor	PV Customer/former city councilor	Staff
Beth Goodman	Eco Northwest Planner	Staff

*Staff appointee to represent senior/fixed income customer segment resigned after first meeting.

The committee met five times, with the first meeting providing context for the committee's work:

- The changing electric utility landscape is straining our long-term financial stability, and
- Pricing redesign is one of several strategies underway to respond to these changes.

While there is no perfect pricing solution, an ideal default pricing design would meet these goals:

- Better align pricing with the true cost of doing business
- Promote equity by reducing subsidies between customers
- Be transparent and simple for customers to understand
- Facilitate customer fuel choices and usage decisions (e.g. solar, electric vehicles)
- Provide financial sustainability and prepare the utility for the future

The main pricing reforms discussed were removing tiers, increasing the basic charge to recover all customer costs, and developing a residential demand charge to replace the volumetric delivery charge. Staff emphasized that pricing redesign is revenue-neutral to the utility, but such structural changes have positive and negative financial impacts across different customer groups.

Over the next several meetings, the committee helped evaluate redesign options using four residential customer personas (differentiated by average monthly electricity usage) to test the bill impacts to different customer types:

1. *Ed the Energy Expert* – couple in high efficiency home (475 kWh with natural gas and solar)
2. *Thrifty Thelma* – single, fixed income all-electric apartment dweller (900 kWh)
3. *The EUG* – typical family of four, all electric home (1700 kWh)
4. *Super Users* – students/young adults in large, older rental house (2600 kWh)

At the fourth meeting, Management shared a general philosophy for pricing redesign stemming from a few fundamental economic principles:

- Electricity is a necessary product for the good of society and is provided most efficiently via a natural monopoly. As the provider of a product without market competition, EWEB has an obligation to serve all customers equitably, and be ready to meet their highest demand.
- Trends including more self-generation, fuel-switching and greater efficiency are leading to fewer customers sharing the costs to operate and maintain a system that is built for maximum demand. This scenario risks fracturing the social pact where electricity is provided to all customers in the most equitable and cost-efficient way.

Management's restructuring preferences were presented as follows:

1. Customer-related costs are recovered in a fixed charge
2. Generation and energy-related costs remain variable to ensure EWEB makes wise investment decisions
3. Grid access costs are shared by all users via a capacity and/or a time-based cost recovery approach
4. Social equity considerations are addressed directly through programs, not pricing.

At the last meeting, six redesign scenarios, plus the current residential pricing scheme, were presented for evaluation. The panel ranked each scenario according to how well it met the utility's pricing redesign goals, recognizing that all options had tradeoffs among the goals. Analysis of the responses is now underway (and one member's input is outstanding). As a general observation, the committee favored less disruptive solutions until we can offer more dynamic, voluntary options, such as Time of Use pricing, so pricing reform offers a value proposition to our customers.

Recommended Next Steps

Management will be drafting a preliminary residential pricing recommendation, as well as an implementation schedule, consistent with the feedback received from the committee. Additional opportunities for customer input is helpful to gather broader community feedback on acceptance/understanding, preferences and tradeoffs and messaging. Some planned activities to refine the preliminary recommendation include:

- Customer Open House: Tentatively scheduled September 20
- City Club Presentation: Friday, October 13

The ad hoc committee will be invited to review a refined pricing recommendation following these two outreach efforts in preparation for the November Board meeting. For message clarity around the affordability initiative and its impact on 2018 prices, it is anticipated that any redesign changes the Board wishes to pursue would not occur until 2019. This timeline would also allow staff to conduct additional customer research, such as focus groups, if desired.

Requested Board Action

None at this time.

M E M O R A N D U M

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Helgeson, Brown, Mital, Simpson, and Carlson

FROM: Sue Fahey, Chief Financial Officer; Aaron Balmer, Interim Accounting Supervisor

DATE: July 21, 2017

SUBJECT: Electric Utility Revenue Bonds Preliminary Official Statement

OBJECTIVE: Information Only

Issue

The Eugene City Council has approved issuing Electric Utility Revenue Bonds to finance capital improvements primarily related to the Carmen-Smith Hydroelectric Project. The Board authorized the sale of bonds at its July 11, 2017 meeting via Resolution No. 1718. One of the requirements prior to issuing bonds is to prepare and circulate an Official Statement. A draft Preliminary Official Statement (POS) will be sent to the rating agencies prior to the week of August 14th when EWEB's rating agency presentations are scheduled. The current 2017 draft Electric POS is provided for your information. Pricing of the Series 2017 Electric Bonds is anticipated to occur in September.

Background

At the June 6, 2017 Board meeting, Commissioners approved Resolution No. 1712 requesting City Council action on the issuance and sale of Electric Utility System Revenue Bonds, Series 2017. The City Council adopted Resolution No. 5201 at its June 26, 2017 meeting which authorized the sale of bonds not to exceed $80 million for financing improvements relating to the relicensing of Carmen-Smith Hydroelectric Project. Costs of issuance are to be paid from bond proceeds.

Recommendation/Requested Board Action

No action is requested at this time.

This Preliminary Official Statement and the information contained herein are subject to completion, revision and amendment without notice. Under no circumstances shall this Preliminary Official Statement constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of these bonds in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction.

PRELIMINARY OFFICIAL STATEMENT DATED _________, 2017

NEW ISSUE
BOOK-ENTRY ONLY

Moody's Rating: Applied For
S&P Global Rating: Applied For
Fitch Rating: Applied For
See "UNDERWRITING AND LEGAL INFORMATION—Ratings."

In the opinion of Bond Counsel, under existing federal law and assuming compliance with applicable requirements of the Internal Revenue Code of 1986, as amended (the "Code"), that must be satisfied subsequent to the issue date of the Series 2017 Bonds, interest on the Series 2017 Bonds is excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the alternative minimum tax applicable to individuals. However, while interest on the Series 2017 Bonds also is not an item of tax preference for purposes of the alternative minimum tax applicable to corporations, interest on the Series 2017 Bonds received by corporations is taken into account in the computation of adjusted current earnings for purposes of the alternative minimum tax applicable to corporations, interest on the Series 2017 Bonds received by certain S corporations may be subject to tax, and interest on the Series 2017 Bonds received by foreign corporations with United States branches may be subject to a foreign branch profits tax. Receipt of interest on the Series 2017 Bonds may have other federal tax consequences for certain taxpayers. Bond Counsel is also of the opinion that interest on the Series 2017 Bonds is exempt from State of Oregon personal income taxes. See "TAX MATTERS."

CITY OF EUGENE, OREGON

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ELECTRIC UTILITY SYSTEM REVENUE BONDS, SERIES 2017

DATED: Date of Delivery **DUE: August 1, as shown on the inside cover**

The City of Eugene, Oregon Electric Utility System Revenue Bonds, Series 2017 (the "Series 2017 Bonds") will be issued by the City of Eugene, Oregon (the "City"), acting by and through the Eugene Water & Electric Board ("EWEB"), as fully registered bonds and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). Individual purchases of ownership interests in the Series 2017 Bonds will be made in book-entry form only, in the principal amount of $5,000 or any integral multiple thereof. Purchasers of such ownership interests will not receive physical delivery of bond certificates. Principal of and interest on the Series 2017 Bonds are payable directly to DTC by U.S. Bank National Association, Portland, Oregon, as Trustee and Bond Registrar. Principal is payable on August 1 of the years set forth on the inside cover page. Interest is payable at the rates as shown on the inside cover page on February 1, 2018, and semiannually thereafter on August 1 and February 1 of each year. Upon receipt, DTC is obligated to remit principal and interest to DTC's participants for subsequent disbursement to the purchasers of ownership interests in the Series 2017 Bonds. See Appendix E—"BOOK-ENTRY SYSTEM."

The Series 2017 Bonds are subject to redemption at the option of EWEB prior to maturity as described herein. See "DESCRIPTION OF THE SERIES 2017 BONDS—Redemption Provisions."

MATURITY SCHEDULE — SEE INSIDE COVER

The Series 2017 Bonds are being issued to provide funds to finance the licensing, design, construction installation and equipping of certain capital improvements relating to the relicensing of the Carmen-Smith Hydroelectric Project and other projects described in the Electric Capital Improvement Plan, to fund a deposit to the Reserve Account, if necessary, and to pay costs of issuance of the Series 2017 Bonds. See "PURPOSE AND APPLICATION OF BOND PROCEEDS."

The Series 2017 Bonds are special obligations of the City, payable solely from the Revenues of the City's Electric System, after paying Operating Expenses, and other funds pledged therefor by the Bond Resolution (as defined in "INTRODUCTION"). See Appendix A—"COPY OF THE BOND RESOLUTION." The Series 2017 Bonds are not general obligations of the State of Oregon or any political subdivision thereof. Neither the full faith and credit nor the taxing power of the City is pledged to the payment of the Series 2017 Bonds. The Series 2017 Bonds are issued on a parity of lien on Revenues with $158,195,000 in aggregate principal amount of the City's outstanding Electric System revenue bonds (the "Outstanding Bonds"). Additional Bonds payable on a parity with the Outstanding Bonds and the Series 2017 Bonds may be issued subject to certain limitations. EWEB has pledged that it will not issue any additional bonds which are secured by a lien on the Revenues that is superior to the lien on the Outstanding Bonds and the Series 2017 Bonds. See "SECURITY FOR THE BONDS."

This cover page contains certain information for quick reference only. It is not a summary. Investors must read the entire Official Statement to obtain information essential to the making of an informed investment decision.

The Series 2017 Bonds are offered when, as and if issued, subject to receipt by the Underwriter of the final approving legal opinion of Foster Pepper PLLC, Bond Counsel and Disclosure Counsel, and certain other conditions. Certain legal matters will be passed upon for the Underwriter by its counsel, Pacifica Law Group LLP, Seattle, Washington. The Series 2017 Bonds are expected to be delivered on or about September __, 2017 (the "Date of Delivery"), through the facilities of DTC in New York, New York by Fast Automated Securities Transfer.

RBC Capital Markets

* Preliminary, subject to change.

CITY OF EUGENE, OREGON

$__________*
ELECTRIC UTILITY SYSTEM REVENUE BONDS, SERIES 2017

Due August 1*	Amount*	Interest Rate	Yield	Price	CUSIP No.**

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* Preliminary, subject to change.
** The CUSIP data herein is provided by CUSIP Global Services, managed on behalf of the America Bankers Association by S&P Global Market Intelligence. The CUSIP numbers are not intended to create a database and do not serve in any way as a substitute for CUSIP service. CUSIP numbers have been assigned by an independent company not affiliated with the City or EWEB and are provided solely for convenience and reference. The CUSIP numbers for a specific maturity are subject to change after the issuance of the Series 2017 Bonds. The City, EWEB and the Underwriter are not responsible for the accuracy of the CUSIP numbers.

EUGENE WATER & ELECTRIC BOARD
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BOARD OF COMMISSIONERS

Dick Helgeson	President
John Brown	Vice President
Sonya Carlson	Commissioner
Steve Mital	Commissioner
John Simpson	Commissioner

ADMINISTRATIVE MANAGEMENT

Frank Lawson	General Manager/Secretary
Susan Fahey	Chief Financial Officer/Treasurer
Rodney Price	Chief Electric Engineering & Operations Officer
Mike McCann	Interim Chief Energy Officer
Susan Eicher	Accounting Supervisor/Assistant Treasurer

GENERAL COUNSEL

Luvaas Cobb Law
Eugene, Oregon

SPECIAL COUNSEL

Cable Huston LLP
Portland, Oregon

Law Offices of Jeremy D. Weinstein
Walnut Creek, California

BOND AND DISCLOSURE COUNSEL

Foster Pepper PLLC
Seattle, Washington

FINANCIAL ADVISOR

Piper Jaffray & Co.
Seattle, Washington

TRUSTEE

U.S. Bank National Association
Portland, Oregon

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* The EWEB website is not part of this Official Statement and investors should not rely on information presented in the EWEB website in determining whether to purchase the Series 2017 Bonds. This inactive textual reference to the EWEB website is not a hyperlink and does not incorporate the EWEB website by reference.

The information within this Official Statement has been compiled from official and other sources considered reliable and, while not guaranteed as to accuracy, is believed by EWEB to be correct as of its date. The City and EWEB make no representation regarding the accuracy or completeness of the information in Appendix E—"BOOK-ENTRY SYSTEM," which has been obtained from DTC's website, or regarding the Underwriter. The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made by use of this Official Statement shall, under any circumstances, create any implication that there has been no change in the affairs of the City or EWEB since the date hereof.

Information on website addresses set forth in this Official Statement is not incorporated into this Official Statement and cannot be relied upon to be accurate as of the date of this Official Statement, nor can any such information be relied upon in making investment decisions regarding the Series 2017 Bonds.

No dealer, broker, salesperson, or other person has been authorized by the City, EWEB or the Underwriter to give any information or to make any representations with respect to the Series 2017 Bonds other than those contained in this Official Statement and, if given or made, such information or representations must not be relied upon as having been authorized by the City, EWEB or the Underwriter. This Official Statement does not constitute an offer to sell or a solicitation of an offer to buy, nor shall there be any sale of the Series 2017 Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale.

The Underwriter has provided the following sentence for inclusion in this Official Statement. The Underwriter has reviewed the information in this Official Statement in accordance with, and as part of, its responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriter does not guarantee the accuracy or completeness of such information.

In connection with this offering, the Underwriter may over allot or effect transactions which stabilize or maintain the market price of the Series 2017 Bonds at levels above that which might otherwise prevail in the open market. Such stabilizing, if commenced, may be discontinued or recommenced at any time without prior notice to any person.

In connection with its report on the audited financial statements of EWEB (see Appendix B), Moss Adams LLP has provided the following language for inclusion in this Official Statement. "Moss Adams LLP has not been engaged to perform and has not performed, since the date of its report included herein, any procedures on the financial statements addressed in that report. Moss Adams LLP also has not performed any procedures relating to this Official Statement."

The Series 2017 Bonds have not been registered under the Securities Act of 1933, as amended, and the Bond Resolution has not been qualified under the Trust Indenture Act of 1939, as amended, in reliance upon exemptions contained in such acts. The Series 2017 Bonds have not been recommended by any federal or state securities commission or regulatory authority. Furthermore, the foregoing authorities have not confirmed the accuracy or determined the adequacy of this document. Any representation to the contrary may be a criminal offense.

The presentation of certain information, including tables of receipts from revenues, is intended to show recent historic information and is not intended to indicate future or continuing trends in the financial position or other affairs of the City or EWEB. No representation is made that past experience, as it might be shown by such financial and other information, will necessarily continue or be repeated in the future.

Certain statements contained in this Official Statement do not reflect historical facts, but rather are forecasts and "forward-looking statements." No assurance can be given that the future results discussed herein will be achieved, and actual results may differ materially from the forecasts described herein. In this respect, the words "estimate," "forecast," "project," "anticipate," "expect," "intend," "believe" and other similar expressions are intended to identify forward-looking statements. The forward-looking statements in this Official Statement are subject to risks and uncertainties that could cause actual results to differ materially from those expressed in or implied by such statements. All estimates, projections, forecasts, assumptions and other forward-looking statements are expressly qualified in their entirety by the cautionary statements set forth in this Official Statement. These forward-looking statements speak only as of the date they were prepared. The City and EWEB specifically disclaim any obligation to update any forward-looking statements to reflect occurrences or unanticipated events or circumstances after the date of this Official Statement, except as otherwise expressly provided in "CONTINUING DISCLOSURE."

The order and placement of materials in this Official Statement, including the Appendices, are not to be deemed to be a determination of relevance, materiality or importance, and this Official Statement, including the Appendices, must be considered in its entirety. The offering of the Series 2017 Bonds is made only by means of this entire Official Statement.

This Preliminary Official Statement, as of its date, is in a form "deemed final" by EWEB for purposes of Securities and Exchange Commission Rule 15c2-12(b)(1) but is subject to revision, amendment, and completion in a final Official Statement which will be available within seven business days of the sale date.

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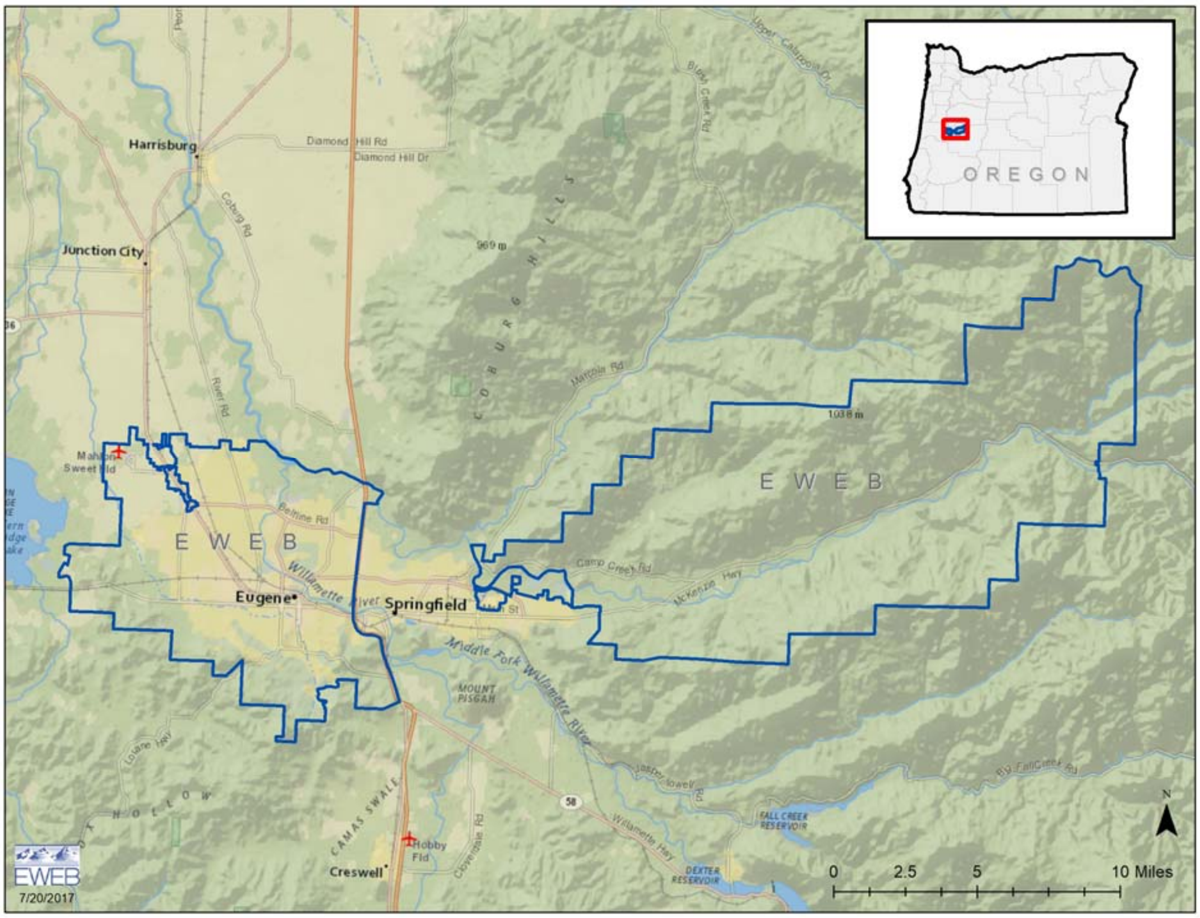
EUGENE WATER & ELECTRIC BOARD SERVICE TERRITORY



OFFICIAL STATEMENT

CITY OF EUGENE, OREGON

$_________*
ELECTRIC UTILITY SYSTEM REVENUE BONDS, SERIES 2017

INTRODUCTION

The Eugene Water & Electric Board (the "Board" or "EWEB"), chartered by the City of Eugene, Oregon (the "City" or "Eugene"), furnishes this Official Statement in connection with the offering of $_______* principal amount of Electric Utility System Revenue Bonds, Series 2017 (the "Series 2017 Bonds").

This Official Statement, which includes the cover page, inside cover page and appendices hereto, sets forth information concerning the Series 2017 Bonds, the City, EWEB and the City's electric utility properties, rights and assets of EWEB (the "Electric System").

The Series 2017 Bonds are issued pursuant to the laws of the State of Oregon (the "State"), the Charter of the City, the Amended and Restated Bond Resolution No. 1624 adopted by the Board of Commissioners of EWEB on August 2, 2016 (the "Bond Resolution"), Resolution No. 1712 adopted by the Board of Commissioners of EWEB on June 6, 2017, Resolution No. 5201 adopted by the City Council on June 26, 2017, and Supplemental Resolution No. 1718 adopted by the Board of Commissioners of EWEB on July 11, 2017 (the "Supplemental Resolution"). The Bond Resolution and Supplemental Resolution are referred to herein as the "Resolution." Effective in August 2017, the Bond Resolution amended and restated the Master Resolution adopted on June 16, 1986. The Series 2017 Bonds are being issued under the authority of Oregon Revised Statutes ("ORS") Sections 287A.150 *et seq*. Unless the context shall clearly indicate that another meaning is intended, certain capitalized words and phrases used in this Official Statement have the meanings as defined in the Bond Resolution. See Appendix A—"COPY OF THE BOND RESOLUTION."

The Series 2017 Bonds are secured by a pledge of the Revenues of the Electric System, after payment of Operating Expenses, and other sources as described herein under "SECURITY FOR THE BONDS." The Series 2017 Bonds are issued on a parity of lien on Revenues of the Electric System with the following Electric System revenue bonds (together, the "Outstanding Bonds"):

- Electric Utility System Revenue and Refunding Bonds, Series 2011A, outstanding in the principal amount of $7,035,000 (the "Series 2011A Bonds");
- Electric Utility System Revenue Refunding Bonds, Series 2011B (Federally Taxable), outstanding in the principal amount of $5,375,000 (the "Series 2011B Bonds");
- Electric Utility System Revenue and Refunding Bonds, Series 2012, outstanding in the principal amount of $34,030,000 (the "Series 2012 Bonds");
- Electric Utility System Revenue Refunding Bonds, Series 2016A, outstanding in the principal amount of $92,510,000 (the "Series 2016A Bonds"); and
- Electric Utility System Revenue Refunding Bonds, Series 2016B (Federally Taxable), outstanding in the principal amount of $19,245,000 (the "Series 2016B Bonds").

EWEB has pledged in the Bond Resolution that it will not issue any indebtedness that is secured by a lien on the Net Revenue of the Electric System that is superior to the lien of the Outstanding Bonds and the Series 2017 Bonds.

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* Preliminary, subject to change.

EWEB reserves the right in the Bond Resolution to issue additional bonds on a parity with the Bonds and the Series 2017 Bonds (the "Additional Bonds"), subject to certain limitations described herein under "SECURITY FOR THE BONDS—Issuance of Additional Bonds." The Outstanding Bonds, the Series 2017 Bonds and any Additional Bonds are collectively referred to herein as the "Bonds."

PURPOSE AND APPLICATION OF BOND PROCEEDS

Purpose

Proceeds of the Series 2017 Bonds will be used to finance the licensing, design, construction installation and equipping of certain capital improvements relating to the relicensing of the Carmen-Smith Hydroelectric Project and other projects described in the Electric Capital Improvement Plan (the "Project"), [fund the Reserve Account] and pay the costs of issuance of the Series 2017 Bonds.

Sources and Uses of Funds

The following table shows the sources and uses of the Series 2017 Bond proceeds:

SOURCES OF FUNDS	
Principal Amount of the Series 2017 Bonds	$
[Net] Original Issue Premium/(Discount)	
Total Sources of Funds	$
USES OF FUNDS	
Deposit to Series 2017 Project Fund	$
[Deposit to Reserve Account	]
Underwriter's Discount and Issuance Costs(1)	
Total Uses of Funds	$

(1) Issuance costs include legal fees, financial advisor fee, ratings fees, Trustee fee, and other costs incurred in connection with the issuance of the Series 2017 Bonds.

DESCRIPTION OF THE SERIES 2017 BONDS

General

The Series 2017 Bonds will be issued in the form of fully registered bonds in the denomination of $5,000 or any integral multiple thereof within a single maturity, will be dated their date of delivery, and will mature on August 1 in the years and in the amounts set forth on the inside cover page of this Official Statement.

The Series 2017 Bonds will bear interest from their date at the rates set forth on the inside cover page of this Official Statement. Interest will be calculated on the basis of a 360-day year consisting of twelve 30-day months, and is payable commencing February 1, 2018, and semiannually thereafter on each February 1 and August 1 to the date of maturity of the Series 2017 Bonds or prior redemption thereof.

Registration and Bond Registrar

U.S. Bank National Association will act as initial Trustee and Bond Registrar with respect to the Series 2017 Bonds. Under the Bond Resolution, EWEB has the option to hold the Bond Fund and not have a Trustee. The Bond Registrar shall keep, or cause to be kept, sufficient books for the registration and transfer of the Series 2017 Bonds, which shall be open to inspection by the Board at all times.

Bond Register; Transfer and Exchange. The Bond Register shall contain the name and mailing address of each Bondholder and the principal amount and number of each Bond held by each Bondholder. A Bond surrendered to the Bond Registrar may be exchanged for a Bond or Bonds in any authorized denomination of an equal aggregate principal amount and of the same Series, interest rate and maturity. Any exchange or transfer shall be without cost to the Bondholder or transferee. The Bond Registrar shall not be obligated to exchange any Bond or transfer ownership during the period between the applicable record date and the next upcoming interest payment or redemption date. Record Date means in the case of each interest payment date, the Bond Registrar's close of business on the 15th day of the month immediately preceding such interest payment date, and, with respect to redemption of a Series 2017 Bond prior to its maturity, the Bond Registrar's close of business on the date on which the Bond Registrar sends the notice of redemption in accordance with the Bond Resolution.

Book-Entry System. The Series 2017 Bonds will be issued as fully registered bonds and will be issued initially in the name of Cede & Co., as registered owner and nominee of The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository for the Series 2017 Bonds. Individual purchases may be made in book-entry form only as described under Appendix E—"BOOK-ENTRY SYSTEM." Purchasers will not receive certificates representing their interest in the Series 2017 Bonds purchased. So long as Cede & Co. is the registered owner of the Series 2017 Bonds, as nominee of DTC, references herein to the "registered owners" or "bondholders" will mean Cede & Co. and will not mean the "beneficial owners" of the Series 2017 Bonds. In this Official Statement, the term "beneficial owner" will mean the person for whom a DTC participant acquires an interest in the Series 2017 Bonds. For information about DTC and its book-entry system, see Appendix E—"BOOK-ENTRY SYSTEM." The City and EWEB make no representation as to the accuracy or completeness of the information in Appendix E provided by DTC. Purchasers of the Series 2017 Bonds should confirm this information with DTC or its broker-dealer participants.

Redemption Provisions

Optional Redemption. The Series 2017 Bonds maturing in the years 20__ through 20__, inclusive, are not subject to redemption prior to their stated maturity dates. The Series 2017 Bonds maturing on and after August 1, 20__, are subject to redemption at the option of EWEB prior to their stated maturity dates at any time on or after ____________, 20__, as a whole or in part (within one or more maturities selected by EWEB), at a price equal to the stated principal amount to be redeemed plus accrued interest, if any, to the date fixed for redemption.

[*Mandatory Redemption*. If not previously redeemed as described above, the Series 2017 Bonds maturing on August 1, 20__ (which are Term Bonds), are subject to mandatory sinking fund redemption, in part and by lot within a maturity as determined by DTC or the Trustee, on August 1 in the years and amounts set forth below, at the price of 100% of the principal amount thereof, together with the interest accrued thereon to the date fixed for redemption.

20__ Term Bonds

Year	Amount*
	$
(1)	

(1) Maturity

If a Term Bond is redeemed under the optional redemption provisions, defeased or purchased by EWEB and surrendered for cancellation, the principal amount of the Term Bond so redeemed, defeased or purchased (irrespective of its actual redemption or purchase price) is to be credited against one or more scheduled mandatory redemption installments for that Term Bond. EWEB is to determine the manner in which the credit is to be allocated and is to notify the Trustee in writing of its allocation prior to the earliest mandatory redemption date for that Term Bond for which notice of redemption has not already been given.]

Partial Redemption of any Bond. If fewer than all of the Series 2017 Bonds are to be redeemed at the option of EWEB, EWEB shall select the maturities to be redeemed. If fewer than all of the Series 2017 Bonds of a maturity are to be redeemed, DTC shall select Series 2017 Bonds registered in the name of the DTC to be redeemed in accordance with the Blanket Letter of Representations from EWEB to DTC (the "Letter of Representations"), and the Bond Registrar shall select all other Series 2017 Bonds to be redeemed randomly in such manner as the Bond

Registrar shall determine. All or a portion of the principal amount of any Series 2017 Bond that is to be redeemed may be redeemed in any authorized denomination. If less than all of the outstanding principal amount of any Series 2017 Bond is redeemed, upon surrender of that Series 2017 Bond to the Bond Registrar, there shall be issued to the Bondholder, without charge, a new Series 2017 Bond (or Series 2017 Bonds, at the option of the Bondholder) of the same series, maturity and interest rate in any authorized denomination in the aggregate principal amount to remain outstanding.

Notice of Redemption (Book-Entry). So long as the Series 2017 Bonds are in book-entry only form, the Bond Registrar shall notify DTC of an early redemption no fewer than 20 calendar days nor more than 60 calendar days prior to the date fixed for redemption, and shall provide such information as required by the Letter of Representations.

Notice of Redemption (No Book-Entry). During any period in which the Series 2017 Bonds are not in book-entry only form, unless waived by any Bondholder of the Series 2017 Bonds to be redeemed, official notice of any redemption of Series 2017 Bonds shall be given by the Bond Registrar on behalf of EWEB by mailing a copy of an official redemption notice by first class mail, postage prepaid, no fewer than 20 calendar days nor more than 60 calendar days prior to the date fixed for redemption, to the Bondholders of the Series 2017 Bonds to be redeemed at the address shown on the Bond Register or at such other address as is furnished in writing by such Bondholder to the Bond Registrar.

Conditional Notice; Rescission of Redemption. Any notice of optional redemption may state that the optional redemption is conditional upon receipt by the Bond Registrar of money sufficient to pay the redemption price of such Series 2017 Bonds or upon the satisfaction of any other condition, and/or that such notice may be rescinded upon the occurrence of any other event, and any conditional notice so given may be rescinded at any time before payment of such redemption price if any such condition so specified is not satisfied or if any such other event occurs. Notice of such rescission or of the failure of any such condition shall be given by the Bond Registrar to affected Bondholders as promptly as practicable upon the failure of such condition or the occurrence of such other event. Any notice of optional redemption that is so rescinded shall be of no effect, and each Series 2017 Bond for which a notice of optional redemption has been rescinded shall remain outstanding.

Effect of Redemption. Interest on each Series 2017 Bond called for redemption shall cease to accrue on the date fixed for redemption, unless either the notice of optional redemption is rescinded as set forth above, or money sufficient to effect such redemption is not on deposit in the Bond Fund or in an escrow account established to refund or defease the Series 2017 Bonds.

Purchase of Series 2017 Bonds. EWEB reserves the right to purchase any or all of the Series 2017 Bonds offered to EWEB at any time at any price acceptable to EWEB plus accrued interest to the date of purchase.

Defeasance of the Series 2017 Bonds

In the event EWEB issues refunding bonds pursuant to the laws of the State or has money available from any other lawful source to pay the principal of and interest on the Series 2017 Bonds or such portion thereof included in a refunding or defeasance plan as the same become due and payable and to refund or defease such then Outstanding Series 2017 Bonds and to pay the costs of refunding, and shall have: (a) irrevocably set aside in a special fund (hereinafter called the "escrow account") for and pledged to such payment and refunding or defeasance money and/or noncallable Acquired Obligations sufficient in amount, together with known earned income from the investments thereof, to make such payments and to accomplish the refunding or defeasance as scheduled; (b) delivered a report of a firm of independent certified public accountants, or in the case of a gross funded current refunding, a certificate of the underwriter or financial advisor, verifying the sufficiency of the funds deposited to the escrow account; (c) filed with the escrow agent an opinion of nationally recognized bond counsel that the proposed defeasance will not cause interest on the defeased Series 2017 Bonds to be includable in gross income under the Internal Revenue Code of 1986, as amended; and (d) made irrevocable provision for redemption of such Series 2017 Bonds, then in that case all right and interest of the Bondholders of the Series 2017 Bonds to be so retired or refunded in the covenants of the Bond Resolution, in the Revenues and in funds and accounts obligated to the payment of such Series 2017 Bonds shall thereafter cease and become void, except that such Bondholders shall have the right to receive payment of the principal of and interest on the defeased Series 2017 Bonds from the escrow account and, in the event the funds in the escrow account are not available for such payment, shall have the right to receive payment of the principal of, premium, if any, and interest on the defeased Series 2017 Bonds from the Revenues without any priority of lien or charge against those Revenues, funds and accounts or covenants with respect thereto except to be paid therefrom. After the establishment and full funding of such escrow account, EWEB may then apply any money in other funds or accounts established for the payment or redemption of the defeased Series 2017 Bonds to such lawful purposes as it shall determine, subject only to the rights of the Bondholders of any other Series 2017 Bonds then outstanding. Any money remaining in the escrow account after payment in full of all Series 2017 Bonds to be paid therefrom shall be deposited in the Power Revenue Fund.

Any Series 2017 Bonds that have been defeased shall not be considered Outstanding and shall not be included for any purpose in determining compliance with any provision of the Bond Resolution.

SECURITY FOR THE BONDS

Pledge of Net Revenue

The Series 2017 Bonds are payable solely from and secured by a pledge of the Revenues of the Electric System after paying Operating Expenses. The Series 2017 Bonds are payable on a parity with the Outstanding Bonds and any Additional Bonds hereafter issued. All Bonds shall be equally and ratably payable and secured without priority. Revenues means all income (including investment income except as excluded below), receipts, revenues, connection charges and Tax Credit Subsidy Payments received by EWEB through the ownership and/or operation of the Electric System, including, but not limited to, any income derived by EWEB through the ownership and operation of any facilities that may be purchased, constructed or otherwise acquired and operated by EWEB as a separate utility system, which income is available after meeting all requirements of the obligations of such separate system and is paid into the Power Revenue Fund. Revenues shall not include bond proceeds, grants, gifts, investment income or other money restricted to a particular purpose inconsistent with its use for the payment of debt service, including investment income derived pursuant to a plan of debt refunding or defeasance unless and until paid into the Power Revenue Fund. Currently, EWEB has no separate electric utility system. Operating Expenses include all operation and maintenance expenses included in EWEB's annual financial statements (except as described in the next sentence) and include, without limiting the generality of the foregoing, (i) costs of purchased power, (ii) all Contract Resource Obligations upon satisfaction of the requirements of set forth below under the heading "Contract Resource Obligations," (iii) payments by EWEB for services rendered to the electric utility by other systems of EWEB, and (iv) taxes paid to third parties. Operating Expenses do not include any extraordinary, nonrecurring expenses, any non-cash pension expenses, any non-cash expenses related to the marking to market of financial or energy-related contracts, any costs or expenses for new construction, interest, amortization, replacements or renewals, any allowance for depreciation or any taxes or payments in lieu of taxes upon the properties or earnings of the Electric System. See Appendix A – "COPY OF THE BOND RESOLUTION."

Pursuant to ORS 287A.310, the pledge of the Revenues made by EWEB is valid and binding from the time of the adoption of the Bond Resolution. ORS 287A.310 permits municipalities to pledge revenues to secure its bonds and provides that the lien created by a pledge is valid and binding from the time the pledge is made without filing or any other act and the lien of the pledge is superior to and has priority over all other claims and liens except as expressly provided in an operative document.

The Series 2017 Bonds do not constitute general obligations of the State or any political subdivision thereof, including the City, for the payment of which ad valorem taxes are required to be levied and are not to be considered as indebtedness within any constitutional, statutory or Charter limitation on the amount of indebtedness which the City may incur. Neither the full faith and credit nor the taxing power of the City is pledged to the payment of the Series 2017 Bonds.

Covenants to Secure the Bonds

Rates. EWEB has covenanted in the Bond Resolution that it will establish, maintain and collect rates and charges for electric energy and other facilities, services and commodities sold, furnished or supplied by EWEB which will be nondiscriminatory and adequate to provide Revenues sufficient for the payment of the principal of and interest on the Bonds and all payments which EWEB is obligated to set aside in the Bond Fund or to make as reimbursements under a Reserve Account Instrument, Operating Expenses, and all necessary repairs, replacements and renewals of the Electric System, for the working capital necessary for the operation thereof and for the payment of any and all amounts which EWEB may now or hereafter become obligated to pay from Revenues.

Coverage. EWEB shall establish, maintain and collect rates and charges which shall be adequate to provide, in each Fiscal Year, Net Revenues, together with any transfers from the Rate Stabilization Account, in an amount equal to at least 1.00 times the Annual Debt Service on all Outstanding Bonds and the Series 2017 Bonds (the "Coverage Requirement"). Within 60 days after the end of each Fiscal Year, EWEB covenants to determine whether it complied with the preceding sentence.

Failure to collect Net Revenues sufficient to comply with the Coverage Requirement shall not constitute an Event of Default if: (i) within 30 days after it discovers noncompliance, EWEB employs a Professional Utility Consultant which recommends changes in EWEB's rates; (ii) within 120 days after employment, the Professional Utility Consultant recommends rate changes which are estimated by the Professional Utility Consultant to produce Revenues sufficient (once the rates recommended by the Professional Utility Consultant have been imposed by EWEB) to comply with the Coverage Requirement in the Fiscal Year in which the recommendation is made; and (iii) within 45 days after it receives the Professional Utility Consultant's recommendations, EWEB imposes rates at least as high as those recommended by such Professional Utility Consultant.

Restrictions on Contracting Obligations Secured by Revenues. Except as provided under the heading "Contract Resource Obligations" below, EWEB shall not create any other special fund for the payment of revenue bonds or other revenue obligations, or issue any bonds or other obligations or create any additional indebtedness that will rank prior to the charge and lien on the Revenues to secure the payment of the Bonds.

Not to Sell Electric System. EWEB shall not sell or otherwise dispose of all of the properties of the Electric System, unless simultaneously with such sale or other disposition provision is made for the payment into the Bond Fund sufficient to pay the principal of and interest on all Bonds then Outstanding. EWEB shall not sell or otherwise dispose of any part of the properties of the Electric System having a value greater than 5% of the total value of all properties of the Electric System (unless the same are no longer used, useful or necessary in the operation of the Electric System) unless provision is made for payment into the Bond Fund of an amount which will be in at least the same proportion to the amount of the Bonds then Outstanding that the Net Revenues from the portion of the properties of the Electric System sold or disposed of that is available for debt service on such Bonds Outstanding for the 12 months preceding such sale or disposition bears to the Net Revenues available for such debt service for the same period. Unless deposited in the Bond Fund as directed above or to make up any deficiency in that fund, the proceeds of any sale or disposition of a portion of the properties of the Electric System shall be paid into the Power Revenue Fund, and shall, at the option of EWEB, be used for repairs, renewals, replacements or capital additions to the Electric System, for the retirement of Bonds prior to the maturity thereof by purchase or by call for redemption or for any other lawful purpose of EWEB.

See Section 10 of Appendix A – "COPY OF THE BOND RESOLUTION" for additional covenants.

Funds and Accounts

Power Revenue Fund. EWEB pledges to pay all Revenues into the Power Revenue Fund, out of which fund shall be paid, in the following order of priority:

(1) the Operating Expenses when due;

(2) the amounts required to be paid into the Bond Fund for interest payments on the Bonds and in the event EWEB has entered into any Derivative Product on a parity of lien with the Bonds, to make any regularly scheduled Derivative Product Payments adjusted by any regularly scheduled Reciprocal Payments (provided, however, that termination payments with respect to any Derivative Product shall not rank on a parity of lien with the Bonds);

(3) the amounts required to be paid into the Bond Fund for principal payments on the Bonds and the amounts, if any, required to be paid into the Bond Fund as Sinking Fund Installments;

(4) the amounts required to be paid into the Reserve Account and to make all payments to reimburse principal and/or interest payments required to be made pursuant to a reimbursement or other agreement in connection with a Reserve Account Instrument;

(5) the amounts required to pay debt service on any obligations of EWEB having a lien on the Revenues subordinate to that of the Bonds; and

(6) the amounts required for any other lawful purpose of EWEB including, without limitation, payment into the Bond Fund to retire Bonds in advance of their maturities and deposits to the Rate Stabilization Account.

Rate Stabilization Account. EWEB has created a Rate Stabilization Account (the "Rate Stabilization Account") within the Power Revenue Fund. For purposes of calculating the coverage requirement under the heading "Covenants to Secure the Bonds – *Coverage*" above and the issuance of Additional Bonds under the heading "Issuance of Additional Bonds" below, there may be added to Net Revenues collected in any year any amount withdrawn from the Rate Stabilization Account in such year and deposited into the Power Revenue Fund and there shall be subtracted from Net Revenues collected in any year any amount withdrawn from the Power Revenue Fund and deposited into the Rate Stabilization Account in such year. Credits to or from the Rate Stabilization Account may be posted within 180 days after the end of a Fiscal Year. As of June 30, 2017, there was $31.3 million in the Rate Stabilization Account.

Bond Fund. The Bond Fund shall be held and maintained by EWEB or the Trustee for as long as any Bonds are Outstanding and shall be used solely for the purpose of paying the principal of and premium, if any, and interest on the Bonds. The Bond Fund shall continue to be held by the Trustee until EWEB determines that it be held by EWEB.

As long as any of the Bonds are Outstanding, EWEB covenants to set aside and to pay into the Bond Fund out of the Net Revenues and Bond proceeds in amounts sufficient as follows:

A. the accrued interest received upon the delivery of any Bonds, and out of the Revenues first available therefor on or before an interest payment date, the amount necessary to pay the interest due on the Bonds;

B. capitalized interest, if any, received upon delivery of any Bonds;

C. out of the Revenues first available therefor after making the deposit for interest on the Bonds, on or before the principal payment date or redemption date the amount necessary to pay principal and premium, if any, on the Bonds on that principal payment date;

D. out of the Revenues first available therefor after making the deposit for interest on the Bonds, on or before the day a Sinking Fund Installment(s) is due, the amount equal to the Sinking Fund Installments due; and

E. into the Reserve Account of the Bond Fund, the Reserve Requirement for any Series of Bonds secured by the Reserve Account including the Series 2017 Bonds.

Reserve Account*.* The Reserve Account generally is required to be funded in an amount equal to the Reserve Requirement. "Reserve Requirement" means, as of the date of computation, an amount equal to the least of (i) the Average Annual Debt Service on all Bonds Outstanding and secured by the Reserve Account, (ii) 10% of the proceeds on their date of issuance of each Series of Bonds then Outstanding and secured by the Reserve Account, or (iii) the Maximum Annual Debt Service on the Bonds Outstanding and secured by the Reserve Account. The Supplemental Resolution provides that the Series 2017 Bonds are secured by the Reserve Account. The Reserve Requirement shall be calculated at least annually on the first Business Day of each Fiscal Year, on each date any amounts are withdrawn from the Reserve Account and upon issuance of Additional Bonds.

The Supplemental Resolution authorizing any Bonds may establish a separate debt service reserve account for any such Bonds and set forth the reserve account requirement for such Bonds or provide that some or all of such Bonds be secured by the Reserve Account.

In the event there shall be a deficiency in the Bond Fund to meet maturing installments of interest on, principal of or Sinking Fund Installments for the Bonds, such deficiency shall be made up from the Reserve Account by the withdrawal of cash or investments therefrom or, if and to the extent applicable, from amounts drawn under a Reserve Account Instrument satisfying all or a portion of the Reserve Requirement, in sufficient amount to make up the deficiency.

EWEB shall not issue Additional Bonds without providing for the full funding of the Reserve Account at the Reserve Requirement for those Additional Bonds, either (a) by the contribution of proceeds of the Additional Bonds, (b) by a Reserve Account Instrument, or (c) by the accumulation, in five approximately equal annual installments, of amounts in the Reserve Account necessary to satisfy the Reserve Requirement for those Additional Bonds within five years of their date of issuance.

A Reserve Account Instrument may be deposited into the Reserve Account in lieu of cash. "Reserve Account Instrument" means a Qualified Letter of Credit, Qualified Insurance or other equivalent credit enhancement facility obtained by EWEB to satisfy the Reserve Requirement for any Bonds which, as of the time of issuance of such equivalent credit enhancement facility, is rated in one of the three highest rating categories by Moody's, if Moody's is then maintaining a rating on the Bonds, or S&P, if S&P is then maintaining a rating on the Bonds, or by either Moody's or S&P if neither Moody's nor S&P is then maintaining a rating on the Bonds. In the event of any expiration or termination of a Reserve Account Instrument, the Reserve Requirement for those Bonds for which such instrument was issued shall be funded with money, Investment Securities or a new Reserve Account Instrument within six months of the date of such expiration or termination.

As of June 30, 2017, the Reserve Account consisted of $3,037,500 in surety policies and $6,467,514 in cash and investments. Upon issuance of the Series 2017 Bonds, the Reserve Requirement is estimated to be $10,500,000.

Reserve Account (as of June 30, 2017)

	Amount
Surety Policies	$ 3,037,500
Cash and Investments	6,467,514
Total	$9,505,014

Surety Policies on Deposit with Trustee

Series	Stated Policy Amount	Provider	Policy Number	Expiration
1994	$1,837,500	MBIA (National)	15216	08/01/2022
1994C	1,200,000	MBIA (National)	15527	08/01/2022
Total	$3,037,500			

MBIA Insurance Corporation, now known as National Public Finance Guarantee Corp. ("National"), is currently rated "A" by S&P and "A3" by Moody's. The ratings on National are subject to change, and pursuant to the Bond Resolution, there is no requirement to replace the surety policies if the ratings on National change.

Issuance of Additional Bonds

Additional Bonds may be issued payable from the Bond Fund on a parity of lien with the Bonds and secured by an equal charge and lien on Revenues, for any lawful purpose of EWEB related to the Electric System on the conditions that, (a) except for Additional Bonds issued pursuant to the subheading "*Issuance of Refunding Bonds*" below, at the time of the issuance of such Additional Bonds there is no deficiency in the Bond Fund and no Event of

Default has occurred and is continuing and (b) the requirements of the applicable provisions of under this heading are complied with.

Additional Bonds may be issued for any lawful purpose of EWEB related to the Electric System, if there shall be on file with EWEB either:

(1) a certificate of the Treasurer stating that Net Revenues in any 12 consecutive months out of the most recent 24 months preceding the delivery of the Additional Bonds, as determined from the financial statements of the Electric System, were not less than 120% of Maximum Annual Debt Service on all Bonds then Outstanding and the Additional Bonds then proposed to be issued, or

(2) a certificate of a Professional Utility Consultant stating that the Net Revenues for any 12 consecutive months out of the most recent 24 months preceding the dated date of the Additional Bonds, as determined from the financial statements of the Electric System, adjusted as described below, shall be equal to at least 120% of Maximum Annual Debt Service, as estimated by the Professional Utility Consultant. The Net Revenues for the 12 month period selected by the Professional Utility Consultant (the "Base Period") may be adjusted:

(a) to reflect any changes in Net Revenues for the Base Period that would have occurred if the schedule of rates and charges in effect at the time of the computation (or approved by EWEB as of the time of such computation and to become effective within six months thereof) had been in effect during the portion of the Base Period in which such schedule was not in effect;

(b) to reflect a full 12 months of Net Revenues from any customers of the Electric System added prior to the computation date; and

(c) to reflect any changes in Net Revenues estimated as a result of, and upon completion of, any facilities under construction or to be acquired, constructed or installed as a part of the Electric System from the proceeds of any Bonds.

In rendering any certificate under this heading, the Professional Utility Consultant may rely upon, and such certificate shall have attached thereto, financial statements of the Electric System, certified by the Treasurer, showing income and expenses for the period upon which the same are based and a balance sheet as of the end of such period, or similar statements by an independent certified public accountant. In estimating the Maximum Annual Debt Service for any certificate required to be delivered by it pursuant to the Bond Resolution, the Professional Utility Consultant shall include the Annual Debt Service on all Bonds estimated to be Outstanding during each such Fiscal Year including the Additional Bonds to be issued.

Issuance of Refunding Bonds. Additional Bonds also may be issued from for the purpose of providing funds, with any other available funds, for retiring at or prior to their maturity or maturities any or all of the Bonds then Outstanding or any Reimbursement Obligation made pursuant to the subheading "*Reimbursement Obligations*" below. If such Additional Bonds are to be issued pursuant to this subheading, there shall be filed with EWEB a certificate signed by the Treasurer showing that the Annual Debt Service in any Fiscal Year thereafter shall not be increased by more than $5,000 by reason of the issuance of the Additional Bonds, or there shall be filed with EWEB either of the certificates required as described above.

Reimbursement Obligations. In the event that EWEB elects to meet the Reserve Requirement with respect to any Additional Bonds through the use of a Reserve Account Instrument, EWEB may contract with the Reserve Account Instrument Provider that EWEB's Reimbursement Obligation, if any, to such entity ranks on a parity lien with the Bonds. In the event that EWEB elects additionally to secure any issue of Additional Bonds through the use of a letter of credit, insurance or other credit enhancement device, EWEB may contract with the entity providing such letter of credit, insurance or other credit enhancement device that EWEB's Reimbursement Obligation for principal and interest on such Additional Bonds, if any, to such entity ranks on a parity of lien with the Bonds.

Subordinate Lien Bonds. Nothing contained in the Bond Resolution shall prevent EWEB from issuing obligations with a lien on the Revenues that is subordinate to that of the Bonds. Any subordinate lien obligation shall not be subject to acceleration.

Derivative Products. The following provisions shall not be in effect until all Outstanding Bonds are no longer Outstanding and shall be conditions precedent to the use of any Derivative Product on a parity with the Bonds under the Bond Resolution:

(1) General Parity Tests. The Derivative Product must satisfy the requirements for issuance of Additional Bonds described in the Bond Resolution taking into consideration regularly scheduled Derivative Product Payments and regularly scheduled Reciprocal Payments under the Derivative Product (without regard to any termination payments).

(2) Opinion of Bond Counsel. EWEB shall obtain an opinion of Bond Counsel on the due authorization and execution of such Derivative Product, the validity and enforceability thereof and opining that the action proposed to be taken is authorized or permitted by the applicable provisions of any Supplemental Resolution and will not adversely affect the excludability for federal income tax purposes of the interest on any Outstanding Series of Bonds issued as tax-exempt.

(3) Payments. Each Derivative Product shall set forth the manner in which the Derivative Product Payments and Reciprocal Payments are to be calculated and a schedule of Derivative Payment Dates.

(4) Supplemental Resolutions to Govern Derivative Products. Prior to entering into a Derivative Product, EWEB shall adopt a Supplemental Resolution, which shall (a) establish general provisions for the rights of providers of Derivative Products and (b) set forth such other matters as EWEB deems necessary or desirable in connection with the management of Derivative Products as are not clearly inconsistent with the provisions of the Bond Resolution.

EWEB does not currently have any Derivative Products.

Creation of Separate Utility Systems

EWEB is authorized to create one or more additional electric utility systems for the purpose of generating, transmitting or distributing electric energy, telecommunication facilities and businesses incidental thereto. EWEB may declare any such system to be a separate utility system not financed from Revenues except as a Contract Resource Obligation or except on a basis junior and inferior to the lien on Revenues pledged to secure the Bonds, the revenue of which separate utility system may be pledged to the payment of revenue obligations issued to purchase, construct, condemn or otherwise acquire or expand such separate utility system. The costs associated with any such separate utility system may, upon declaration of EWEB, constitute a Contract Resource Obligation.

Contract Resource Obligations

A Contract Resource Obligation may be included in the Electric System's Operating Expenses after all Outstanding Bonds are no longer Outstanding and if the following requirements are met:

(1) No Event of Default has occurred and is continuing;

(2) There shall be on file with EWEB a certificate of the Professional Utility Consultant stating that the annual Net Revenues for each of the full Fiscal Years in the period specified in the next sentence, as such Net Revenues are estimated by the Professional Utility Consultant in accordance with the Bond Resolution, shall be equal to at least 120% of Maximum Annual Debt Service, as estimated by the Professional Utility Consultant in accordance with the Bond Resolution. The period for the determination of annual Net Revenues shall be the period beginning with the first Fiscal Year following the earliest of (a) the date to which interest is capitalized, (b) the date of initial operation of the facilities to be financed, or (c) in the case of an existing facility, the date of acquisition thereof, and ending with the fifth full Fiscal Year after such date;

(3) There shall be on file with EWEB an opinion of the Professional Utility Consultant to the effect stated in (a) below if the Contract Resource Obligation is to be used to supply Power and Services or to the effect stated in (b) below if the Contract Resource Obligation is to be used to supply transmission capability:

(a) Acquisition of the additional source of Power and Services from such Contract Resource Obligation is sound from a power supply planning standpoint and is technically and economically feasible in accordance with prudent utility practice and the estimated cost of such Contract Resource Obligation is reasonable;

(b) The transmission capability to be acquired pursuant to the Contract Resource Obligation will be necessary within a reasonable time after the estimated date of commercial operation of the transmission facilities and the estimated cost of such Contract Resource Obligation is reasonable; and

(4) The Contract Resource Obligation shall not be subject to acceleration.

EWEB does not currently have any Contract Resource Obligations.

Intersystem Obligations

The Electric System has one obligation receivable from the Water System outstanding in the amount of $15,084,851 as of December 31, 2016, which matures in 2040 in connection with use of the operations center in west Eugene (the "Intersystem Obligation"). The Intersystem Obligation was created to account for the Water System's share of operating obligations as a result of bonds issued by the Electric System. In June 2017, the Water System paid $5.7 million of the Intersystem Obligation. The Intersystem Obligation is an unsecured obligation of the Water System payable solely to the Electric System and to no other party. As such, EWEB treats it as payable from the Water System net revenues available only after payment of the Water System's revenue-secured obligations, including the Water System revenue bonds and any subordinate obligations. In calculating the Coverage Requirement, the Electric System includes interest received as non-operating revenue, and a reduction of the intercompany obligation receivable. Payments for the Intersystem Obligation through 2040 are $523,173 annually after application of the lump-sum payment. Annual payments in July 2017 are estimated to consist of approximately $223,000 for interest and $300,000 for principal. The interest portion of the payments declines over time.

In addition, the Water System had an obligation receiveable from the Water System outstanding in the amount of $2,210,949 as of December 31, 2016, in connection with a payment to PERS for unfunded actuarial liability allocated to the Water System which was financed by the Electric System with proceeds of Electric System Revenue Bonds (the "PERS Obligation"). In June 2017, the Water System paid off its PERS Obligation. See Appendix B—AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED DECEMBER 31, 2016 AND DECEMBER 31, 2015," including Note 13 therein.

Events of Defaults and Remedies

EWEB has covenanted with the Bondholders that the following shall constitute Events of Default:

(1) If default shall be made in the due and punctual payment of the principal of, interest on, or premium, if any, on the Bonds when the same shall become due and payable, whether on an interest payment date, principal payment date, at maturity or by proceedings for redemption or otherwise;

(2) If EWEB fails to provide for any Sinking Fund Installment required the Supplemental Resolution;

(3) If an order, judgment or decree shall be entered by any court of competent jurisdiction: (i) appointing a receiver, trustee or liquidator for EWEB or the whole or any substantial part of the Electric System; (ii) approving a petition filed against EWEB seeking the bankruptcy, arrangement or reorganization of EWEB under any applicable law of the United States or the State; or (iii) assuming custody or control of EWEB or of the whole or any substantial part of the Electric System under the provisions of any other law for the relief or aid of debtors and such order, judgment or decree shall not be vacated or set aside or stayed (or, in the case custody or control is

assumed by such order, such custody or control shall not be otherwise terminated) within 60 days from the date of the entry of such order, judgment or decree; or

(4) If EWEB shall default in the observance and performance of any other of the covenants, conditions and agreements on the part of EWEB contained in the Bond Resolution or any covenants, conditions or agreements on the part of EWEB contained in any Supplemental Resolution and such default or defaults shall have continued for a period of 90 days after EWEB shall have received from the Trustee or from the Bondholders of not less than 20% in principal amount of the Bonds Outstanding a written notice specifying and demanding the cure of such default. For purposes of determining if an Event of Default has occurred and is continuing, if the coverage requirement set forth under the heading "Covenants to Secure the Bonds – *Coverage*" is met for any Fiscal Year it shall be deemed to have been met for all prior Fiscal Years.

For a description of remedies upon an Event of Default, see Appendix A—"COPY OF THE BOND RESOLUTION."

No Acceleration

Upon the occurrence and continuance of an Event of Default under the Bond Resolution, payment of the principal of and accrued interest on the Bonds is not subject to acceleration. EWEB thus is liable for principal and interest payments only as they become due. The inability to accelerate the Bonds upon an Event of Default could give rise to varying interests between holders of earlier and later maturing Bonds. The nature and extent of any such variance would depend in part upon the nature and duration of any default. In the event of multiple defaults in payment of principal or interest on the Bonds, the Bondholders would be required to bring a separate action for each such payment not made. EWEB has never defaulted on the payment of principal or interest on any of its bonds.

Amendments and Supplements to Resolution

EWEB may amend or supplement the Bond Resolution as provided in the Bond Resolution. See Appendix A—"COPY OF THE BOND RESOLUTION."

Contingent Obligations

EWEB has entered into, and may in the future enter into, contracts and agreements in the course of its business that include an obligation on the part of EWEB to make payments or post collateral contingent upon the occurrence or nonoccurrence of certain future events, including ratings below investment grade, events of default or other events that are beyond the direct control of EWEB. These agreements may include interest rate swaps and other similar agreements, agreements with respect to the delivery of electric energy or other energy, power service agreements, letter of credit agreements, and other financial and energy hedging transactions. Such contingent payments or posting of collateral may be conditioned upon the future credit ratings of EWEB and/or other parties, maintenance by EWEB of specified financial ratios, future changes in energy prices, and other factors. EWEB has entered into agreements with Bonneville Power Administration and certain hedging contracts that include such contingent payment obligations. The agreements include obligations on the part of EWEB to post collateral or a letter of credit contingent upon the occurrence or nonoccurrence of certain future events, such as future credit ratings below investment grade or defaults under power marketing contracts or indebtedness. EWEB does not currently have any derivative products in connection with bonds. See "ELECTRIC SYSTEM—Risk Management; Derivatives."

DEBT SERVICE REQUIREMENTS

Debt service on the Outstanding Bonds and the Series 2017 Bonds is set forth below. For additional information regarding EWEB's long-term debt obligations, see Appendix B—"AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED DECEMBER 31, 2016 AND DECEMBER 31, 2015"—Note 12.

Debt Service Requirements[1]

Period Ending August 1	Outstanding Bonds	Series 2017 Bonds		Total Debt Service[2]
		Principal	Interest	
2017	$ 18,499,896			
2018	14,830,460			
2019	14,683,142			
2020	14,528,170			
2021	12,487,605			
2022	13,827,001			
2023	14,420,316			
2024	12,560,069			
2025	12,482,219			
2026	11,934,219			
2027	10,928,719			
2028	11,028,969			
2029	10,921,219			
2030	10,924,375			
2031	10,917,925			
2032	10,270,825			
2033	8,236,463			
2034	4,539,713			
2035	4,543,813			
2036	4,546,113			
2037	4,541,413			
2038	4,539,663			
2039	4,540,413			
2040	4,548,225			
2041	2,319,625			
2042	2,318,813			
2043	--			
2044	--			
2045	--			
2046	--			
2047	--			
2048	--			
Total[2]	$ 249,919,378			

(1) In June 2017, EWEB defeased its then outstanding $16,415,000 principal amount of Electric Utility System Current Interest Revenue Bonds, Series 2001A (Federally Taxable) and its $4,067,555.95 principal amount of Electric Utility District Capital Appreciation Revenue Bonds, Series 2001A (Federally Taxable).

(2) Totals may not add due to rounding.

Additional Borrowing

EWEB does not currently expect to issue long-term indebtedness of the Electric System in the next three years. See "ELECTRIC SYSTEM—Capital Plan." In addition, when and if market conditions allow for the refunding of additional bonds of EWEB, such refundings will be considered.

Subordinate Lien Debt

EWEB does not currently have any debt junior to the lien on Revenues pledged to secure the Bonds.

THE EUGENE WATER & ELECTRIC BOARD

General

Eugene is a charter city operating under a charter most recently revised in 2008. Oregon law and the charter authorize the City to provide electric and water systems for serving the public within and without the City. The City is located approximately 110 miles south of the City of Portland and had an estimated 2016 population of 165,885.

The City commenced utility operations in 1908 with the purchase of a privately owned water system. In 1911, upon completion of the City's first municipal hydroelectric power plant, the City organized the Eugene Water Board to operate the City's electric and water utilities. The name of the Eugene Water Board was changed to the Eugene Water & Electric Board in 1949.

In 2016, the Electric System served approximately 92,000 customers, and the Water System served approximately 52,000 customers. The Electric System and the Water System are operated and accounted for as separate and independent entities. Under the direction of the General Manager and executive staff, EWEB employs 504 personnel for the operation of the Electric System and Water System.

EWEB is chartered by the City and is responsible for operating the City's electric and water utilities. EWEB is the primary supplier of water and electric power services to the City and certain neighboring communities. Its stated mission is "to enhance the Eugene community's vitality by providing water and electric products and services consistent with the values of our customer-owners." While the Electric System and Water System are operated and accounted for separately, EWEB and its management approach the delivery of services in a unified fashion. EWEB recognizes that the decisions and actions affecting one system can have important effects on the other. Thus, wherever possible, decisions and actions for one system are implemented in a manner that seeks to minimize risks and optimize benefits to the other system.

Board of Commissioners

The responsibilities delegated to EWEB pursuant to the City Charter are conducted under the direction of an elected board of five commissioners, one of which is elected at large and the remaining four are elected from wards. The members of the Board of Commissioners are elected for four year terms. The expiration dates of their respective terms of office are as follows:

Board of Commissioners

Member	Office	Current Term Expires
Dick Helgeson	President	December 31, 2020
John Brown	Vice President	December 31, 2018
Sonya Carlson	Commissioner	December 31, 2020
Steve Mital	Commissioner	December 31, 2020
John Simpson	Commissioner	December 31, 2018

Administration and Management

EWEB's General Manager/Secretary reports to the Board of Commissioners and has direct reports, which include the Executive Team. Information regarding the General Manager/Secretary and key staff follows:

Administration

Member	Title	Years of Utility Experience
Frank Lawson	General Manager/Secretary	15
Susan Fahey	Chief Financial Officer/Treasurer	6
Rodney Price	Chief Electric Engineering & Operations Officer	29
Mike McCann	Interim Chief Energy Officer	15
Susan Eicher	Accounting Supervisor/Assistant Treasurer	14

Frank Lawson, General Manager/Secretary. Mr. Lawson became the General Manager of EWEB on June 26, 2016. He joined EWEB in 2010 as the Systems Engineering Supervisor and served as interim strategic planning manager in 2014. Prior to joining EWEB, he was electrical engineering manager at Jeld-Wen, a wood-products manufacturing company; served as vice president of marketing and engineering at a division of Danaher Corp., a worldwide manufacturing and technology company; and held several positions at Eurotherm, which makes industrial control equipment for electric and water utilities as well as other industries. Mr. Lawson received a Bachelor's Degree in electrical and computer engineering from Oregon State University and a Master's of Business Administration from Northwest Christian University.

Susan Fahey, Chief Financial Officer/Treasurer. Ms. Fahey was appointed Treasurer in 2015 after serving as Fiscal Services Supervisor responsible for long-term financial planning, budgets, rates and power risk management. Ms. Fahey received a Bachelor's of Business Administration Degree with an emphasis in Accounting and Finance from Pacific Lutheran University. After 20 years in financial management positions at Eugene Public Schools, Ms. Fahey transitioned from her role as Chief Financial Officer to join EWEB in 2011. She also worked as an internal audit manager in the media/communications industry and as a senior accountant for Peat Marwick. She is a Certified Public Accountant.

Rodney Price, Chief Electric Engineering & Operations Officer. Mr. Price was hired in February 2017 as EWEB's Engineering Manager responsible for management of the electric, generation and water engineering departments. As a result of a June 2017 management reorganization, Mr. Price was appointed Chief Electric Engineering & Operations Officer. Mr. Price has 29 years of electric utility transmission and distribution experience. He served for five years as Senior Project Manager for a private consulting firm in Colorado and prior to that he worked at EWEB as a Senior Engineer and Systems Engineering Supervisor for 13 years. Mr. Price holds a Bachelor's and a Master's Degree in Electrical Engineering from the University of Idaho and is a licensed Professional Engineer in Electrical Engineering in Oregon and Washington. Prior to joining EWEB in 1999, Mr. Price was employed as an Electrical Engineer at Emerald PUD for one year and Bonneville for 10 years.

Mike McCann, Interim Chief Energy Officer. Mr. McCann was appointed EWEB's Electric Operations Manager in August 2016. As a result of a June 2017 management reorganization, Mr. McCann was appointed Generation and Engineering Operations Manager and is currently filling the role of Chief Energy Officer which was created in the reorganization. Prior to 2016 Mr. McCann served as EWEB's Generation and Fleet Services Manager and previously as the License Implementation Manager for EWEB's Carmen-Smith Hydroelectric Project. Mr. McCann holds a Bachelor's Degree in Chemical Engineering from the University of Notre Dame and a Master's Degree in Environmental Engineering from Clarkson University, and is licensed in Oregon as a Registered Professional Engineer in Chemical Engineering. Prior to joining EWEB in 2002, Mr. McCann was employed as a private consulting engineer and a Senior Engineer for the State.

Susan Eicher, Accounting Supervisor/Assistant Treasurer. Ms. Eicher was appointed Assistant Treasurer in 2011. Ms. Eicher received a Bachelor of Science Degree in Accounting from the University of Oregon and has been employed by EWEB since 2003. After serving as Senior Accountant and Senior Financial Analyst, Ms. Eicher was appointed to the position of General Accounting and Treasury Supervisor in 2011. Prior to joining EWEB, Ms. Eicher was employed as an audit manager for Moss Adams LLP. She is a Certified Public Accountant.

Personnel

EWEB employs a staff of 504 full-time equivalents, approximately 183 of which work directly in electric operations, approximately 69 of which work directly in water operations and approximately 252 of which work for shared services of both utilities. Of the total EWEB employees, approximately 160 are represented by the International Brotherhood of Electric Workers ("IBEW") Local 659. The collective bargaining agreement with IBEW expires March 31, 2021. EWEB and IBEW have established a Labor Management Committee that meets monthly to prevent and handle issues. See "Strategic Plan" for a discussion of expectations of a workforce reduction over the next three years.

Insurance

EWEB is exposed to various risks of loss relating to general liability and workers' compensation claims. EWEB self-insures for motor vehicle risk and general liabilities of less than $2 million. EWEB has $25 million excess liability coverage once the self-insured limit is exhausted, and the co-owned facilities have their own insurance programs. EWEB maintains a combined self-insurance fund for the Electric System and Water System with a balance of $2.1 million as of December 31, 2016. Amounts recorded in the general purpose financial statements are based on the estimated ultimate loss as of the balance sheet date, adjusted from current trends through a case-by-case review of all claims, as well as incurred but not reported claims. As of December 31, 2016, EWEB had approximately $70,000 of total claims liability. Prior and current-year claims are fully reserved and are not discounted. EWEB maintains a holistic insurance program for various causes of loss, which includes property damage coverage, including earthquake insurance, for generating facilities in line with the statement of values and subject to deductibles. EWEB does not have any reinsurance arrangements. EWEB has $3 million of cyber insurance coverage.

Tort Claims Against Oregon Governments

EWEB's risk of exposure for tort claims against EWEB is mitigated by statutory municipal tort limit laws of the State (the "Oregon Tort Claims Act" or "OTCA"). The OTCA (ORS 30.260 to 30.300) limits certain claims against EWEB for personal injury, death and property damage or destruction as described below. Claims under federal jurisdiction are not subject to such limitations and the State is subject to different limits.

Personal Injury and Death Claims. Under ORS 30.272, the liability of a local public body and its officers, employees and agents acting wtihin the person's employment or duties, to any single claimant for covered personal injury or death claims (and not property claims) arising out of a single accident or occurrence may not exceed a specific amount, which currently is $706,000. The liability limits for all claimants for covered personal injury or death claims (and not property claims) arising from a single accident or occurrence is currently $1,412,200. The liability limits for both a single claimant and all claimants is adjusted based on a determination by the State Court Administrator of the personal increase or decrease in the cost of living for the previous calendar year as provided in the formula in ORS 30.272. The adjustment may not exceed 3% for any year.

Property Damage or Destruction Claim. Under ORS 30.273, the liability of a public body and its officers, employees and agents acting within the scope of the person's employment or duties, for covered claims for damage to and destruction of property, including consequential damages, that arise from a single accident or occurrence may not exceed a specific amount, which currently is $115,800 for any single claimant and $579,000 to all claimants. These liability limits are adjusted based on a determination by the State Court Administrator of the personal increase or decrease in the cost of living for the previous calendar year as provided in the formula in ORS 30.273. The adjustment may not exceed 3% for any year.

Water System

EWEB operates a Water System that provides water service to all areas within the City as well as supplies wholesale water to the River Road and Santa Clara water districts outside the City. In addition, EWEB has surplus water contracts with the City of Veneta and Willamette Water Company. EWEB delivered water to approximately 52,000 retail customers in 2016 and sold water wholesale to two water districts, one city and one private water company. Water is supplied from the McKenzie River and is treated at the Hayden Bridge Filtration Plant, one of the largest treatment plants in Oregon. The Water System generated $38,957,663 in operating revenue in 2016, about 14% of EWEB's total operating revenue. As of June 1, 2017, the Water System had bonds outstanding in the principal amount of $53,400,000.Revenues of the Water System are not pledged to the payment of the Bonds.

Taxes and Intergovernmental Payments

Since 1943, EWEB has contributed a portion of electricity sales to Eugene and the City of Springfield in the form of contributions in lieu of taxes. The current rates are 6.0% of retail sales plus an agreed upon amount adjusted annually for inflation, which is $848,000 for 2017 (and which was $831,000 for 2016 and was $825,000 in 2015) for the City and 3.0% of retail sales to an industrial customer within the City of Springfield. In 2016, approximately $13.2 million was paid to Eugene and $591,000 to the City of Springfield. The payments to these two cities are considered to be collected on behalf of, and payable to, the cities, and are not considered operating revenue or expenses.

As a governmental entity, EWEB is exempt from federal and state income tax and certain excise taxes. EWEB pays certain other taxes, including property taxes on property outside of the State of Oregon, and for properties rented to non-governmental entities, Oregon Department of Energy assessments, Social Security taxes, Medicare, federal and State unemployment taxes. No sales or use taxes are levied by EWEB under current Oregon statutes.

EWEB also maintains a program of voluntary grants to schools to fund programs that further education in fields related to energy and water. The grants are for a three-year period and are included as operating expenses. Grant payments attributable to the Electric System were approximately $394,000 in 2015 and $414,000 in 2016.

Accounting

EWEB operates as a primary government, and is not considered a component unit of the City. EWEB's accounting policies conform to generally accepted accounting principles for public utilities and governmental units. EWEB applies all applicable Governmental Accounting Standards Board ("GASB") pronouncements. Accounts are maintained in accordance with the Uniform System of Accounts for Electric Public Utilities and Licensees as published by the Federal Energy Regulatory Commission ("FERC").

EWEB obtains an audit of its financial statements at least once each year pursuant to the Oregon Municipal Audit Law, ORS 297.405 to 297.555.

The financial statements for the periods ending December 31, 2016 and 2015, included in this Official Statement, have been audited by Moss Adams LLP, independent accountants as stated in their report appearing herein as Appendix B.

In connection with the presentation of its report on the audited financial statements of EWEB, Moss Adams LLP has provided the following language for inclusion in this Official Statement: "Moss Adams LLP, our independent auditor, has not been engaged to perform and has not performed, since the date of its report included herein, any procedures on the financial statements addressed in that report. Moss Adams LLP also has not performed any procedures relating to this Official Statement."

Cash and Investments

Oregon Statute 294.035 limits the types of investments allowable for public agencies. EWEB's investment policy calls for the investment of excess funds in a manner that will preserve capital and provide sufficient liquidity to meet cash flow demands while conforming with all State statutes governing investment of public funds. The policy includes provisions with respect to diversification and the credit quality of securities purchased. EWEB's primary objectives are, in order of priority: safety of principal, liquidity, and achieving a rate of return at least equal to the return on a comparably maturing U.S. Treasury bill. EWEB's intention is to match its investments to anticipated cash flow requirements. Securities are intended to be held to maturity, unless the quality, yield or maturity characteristics of the portfolio can be improved by replacing one security with another. Holdings are restricted to securities maturing within three years, and the weighted average maturity of investments as of December 31, 2016 was less than one year. The Assistant Treasurer is responsible for the investment program, including procedures and controls. The Bond Resolution restricts investments of certain funds to any investments authorized by State law.

The following tables show the cash and investments of EWEB's Electric System as of June 30, 2017.

Electric System Cash and Investments

	Restricted Cash and Investments	Cash and Cash Equivalents and Short-term Investments	Designated Funds	Total
Cash on hand	--	$ 13,560	--	$ 13,560
Cash in bank	$ 9,135,010	13,930,085	532,794	23,597,889
Investments in the Oregon Local Government Investment Pool	2,061,883	7,154,051	25,026,871	34,242,805
Investments – US Agencies, Treasuries and Corp.	17,964,825	18,984,286	66,412,342	103,361,453
Total	$29,161,718	$40,081,982	$ 91,972,007	$161,215,707

Source: EWEB.

Electric System Cash and Investments by Fund

Unrestricted	
Working Cash	$ 40,081,982
Rate Stabilization Account	31,298,759
Power Reserve	17,000,000
Capital Improvement Reserve	23,828,422
Carmen-Smith Fund	--
Operating Reserve	6,078,537
Pension and Post-Retirement Fund	13,766,289
Total Unrestricted Funds	$ 132,053,989
Restricted	
Construction Funds	$ 7,577,276
Investments for Bond Principal and Interest	11,153,219
Reserve Account	6,466,416
Customer Deposits and Other	1,901,873
Harvest Wind Escrow	2,062,934
Total Restricted	$ 29,161,718
Total	$ 161,215,707

Source: EWEB.

Local Government Investment Pool

The Oregon Local Government Investment Pool (the "LGIP") is an open-ended, no-load diversified portfolio pool. The fair value of EWEB's position in the LGIP is substantially the same as the value of EWEB's participant balance. The LGIP is an external investment pool that is part of the Oregon Short-Term Fund. Investment policies are governed by the Oregon Revised Statutes and the Oregon Investment Council (the "Council"). The State Treasurer is the investment officer for the Council. Investments are further governed by portfolio guidelines issued by the Oregon Short-Term Fund Board. The Oregon Short-Term Fund does not receive credit quality ratings from nationally recognized statistical rating organizations.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Oregon Short-Term Fund manages this risk by limiting the maturity of the investments held by the fund. As of March 31, 2017, the Oregon Short-Term Fund held approximately $16.1 billion, and 67.345% of the money held in such fund matured within 93 days, 17.90% matured from 94 days to one year, and 14.76% matured from one to three years. At June 30, 2017, the investments in the Oregon Short-Term Fund had an average daily interest rate of 1.45%.

Financial Policies

Beginning in 1990, EWEB adopted a series of comprehensive financial policies that provide direction for the financial management of the Electric System and Water System. These policies set standards for rate sufficiency, rate stability, reserve funds, capital investment, and debt management that guide the development of budgets, rates, and debt issues. Taken as a whole, the financial policies are intended and designed to provide financial performance indicators, including debt service coverage and reserves above the average of other similar municipal electric and water systems. EWEB updated its financial policies in June 2017 and provides the Board of Commissioners with semi-annual updates of its 10-year financial forecast.

The rate sufficiency policy provides that rates and charges will be adequate to provide revenues sufficient to maintain a high degree of financial soundness over and above requirements for compliance with existing bond covenants. EWEB's long term target for debt service coverage ratio for the Electric System is 1.75 times debt service, which is above the 1.00 coverage ratio required under the Bond Resolution. See "SECURITY FOR THE BONDS — Covenants to Secure Bonds." The rate stability policy provides that certain funds will be held in reserve for the purpose of mitigating the customer rate impact of unanticipated events. A Power Reserve Account has been established to smooth the effects of power availability and prices, and the Rate Stabilization Account has been established to smooth the effects of other unanticipated operational impacts. See "SECURITY FOR THE BONDS – Funds and Accounts – Power Revenue Fund."

Strategic Plan

By board policy, the Board of Commissioners reviews and approves EWEB's strategic direction annually. EWEB's most recent Strategic Plan update was approved in _______ 2017. The plan's strategic objectives provide a link between EWEB's mission to enhance its community's vitality by providing water and electric services consistent with the values of its customer-owners and operating plans, providing a basis for making decisions, and inspiring and aligning the organization toward actions and results. EWEB's core values that are used to make decisions supporting the strategic direction are: ensuring workforce and public safety (SAFE); reliable delivery of quality drinking water and electricity (RELIABLE); responsible stewardship of its customers' financial and natural resources (RESPONSIBLE) and our local community obligation (COMMUNITY). The most significant decisions confronting EWEB in the next decade involve sources of supply, including the renewal, replacement, or termination of major electric generating resource contracts, and decisions involving the diversification of drinking water sources for purposes of community resiliency and disaster recovery.

Strategic efforts and accomplishments will be phased, with the initial phase focused on fostering customer confidence by consistently and transparently improving EWEB's performance. The effectiveness and efficiency improvements for essential operations will target cost and customer responsiveness through simplicity and ease of doing business while maintaining safety and reliability. Strategic investments beyond essential service delivery include infrastructure replenishment and replacement, power resource planning, community social responsibility and modernization. Future phases are expected to create consumption flexibility and more resilient delivery.

Consistent with the first phase of the strategic plan, EWEB management is working on the General Manager's Affordability Initiative. This initiative is aimed at controlling costs through a combination of workforce reductions, scaling back programs, and efficiency improvements. It is anticipated that this initiative will be fully in place by

2020, with some strategic reduction efforts beginning in 2017. Workforce reductions will be achieved through a combination of attrition, including retirements, and elimination or reduction of some positions or functions with the goal to have approximately 430 positions by 2020 down from 529 in the 2017 budget. Full-time equivalent positions are expected to be reduced by approximately 10% in the 2018 budget. EWEB is offering an early voluntary retirement incentive to those employees who are eligible to retire.

Pension System

EWEB participates in a retirement pension benefit program under the State of Oregon Public Employees Retirement System ("PERS" or the "System"). The State and a majority of local governments in Oregon participate in PERS. EWEB also participates in the Federal Social Security program.

T1/T2 Pension Programs. Employees hired before August 29, 2003 participate in the "Tier 1" and "Tier 2" Pension Programs (the "T1/T2 Pension Programs"). The benefits provided through the T1/T2 Pension Programs are set by the Oregon Legislature and are based primarily on a defined benefit model and provide retirement and disability benefits, annual cost-of-living adjustments, and death benefits to members and their beneficiaries. Different benefit structures apply to participants depending on their date of hire. Effective January 1, 2004, T1/T2 Pension Program employee (participant) contributions fund individual retirement accounts under the separate defined contribution program known as the Individual Account Program (the "IAP"). Tier 1 and Tier 2 employees retain their existing T1/T2 Pension Program account, but the IAP account receives any future member contributions. Participant contributions may be paid by the employee or the employer, depending on the individual contract negotiated between the two. See "Employer Contribution Rates." See Note 16 of the audited financial statements included as Appendix B for a description of benefits.

OPSRP. Employees hired on or after August 29, 2003, participate in the Oregon Public Service Retirement Plan ("OPSRP") unless membership was previously established in the T1/T2 Pension Programs. OPSRP is a hybrid defined contribution/defined benefit pension plan with two components. Employer contributions fund the defined benefit program and employee contributions fund individual retirement accounts under the separate defined contribution program.

PERS Legislation and Court Order. In 2013, the Legislative Assembly limited annual cost of living adjustments ("COLAs"), eliminated a benefit increase for out-of-state retirees based on Oregon income tax, excluded salary increases given to pay for insurance costs from the final average salary used to calculate pension benefits, and reduced legislators' participation in PERS. The changes were estimated to reduce the total accrued actuarial liability of the system by approximately $4.7 billion.

Several cases were filed with the Oregon Supreme Court on behalf of PERS retirees and active employees alleging that the legislation constituted a breach of contract as well as an impairment of contract and a taking of property rights in violation of the Oregon and United States constitutions. In 2015, the Oregon Supreme Court (the "Court") invalidated the reductions in COLAs insofar as they applied to benefits that members earned before the effective dates of the legislative changes and held that adjustments to COLAs were permissible insofar as they applied to benefits that members earn on or after the effective dates of the legislation. The Court also upheld the elimination of a benefit increase for out-of-state retirees.

Actuarial Valuation. Oregon statutes require an actuarial valuation of the System at least once every two years. Based on the biennial actuarial valuation as of December 31 of odd-numbered years the Oregon Public Employees Retirement System Board (the "PERB") establishes the contribution rates that employers will pay to fund the T1/T2 Pension Programs, OPSRP and the PERS-sponsored Retirement Health Insurance Account program ("RHIA") described herein. Actuarial valuations are performed annually as of December 31 of each year, with the valuations as of December 31 of even-numbered years (such as 2016) used for advisory purposes only and valuations as of December 31 of odd-number years (such as 2017) used to set payroll contribution rates. Actuarial valuations are performed for the entire System (the "System Valuation"), and for each participating employer, including EWEB (the "EWEB Valuation"). Valuations are released nine to 11 months after the valuation date. PERS' current actuary is Milliman, Inc. ("Milliman").

In September 2016, Milliman released the December 31, 2015 Valuation (the "2015 System Valuation") which indicated that the System-wide funded status decreased from approximately 75.6% at December 31, 2014, to 71.3% at December 31, 2015 (after taking into account certain legislative changes and the Oregon Supreme Court ruling), without taking into account offsets for deposits made by individual employers from bond proceeds or cash on hand in side accounts (see "Pension Bonds and Side Accounts"). The funded status is reported by comparing liabilities estimated using the entry-age normal cost method, which represents each plan member's benefits as a constant share of payroll through the member's career. The liability estimates also incorporate the discount rate (7.50% for 2015 System Valuation).

The funded status of PERS and of EWEBs proportionate share will change over time depending on a variety of factors, including the market performance of the securities in which the Oregon Public Employees Retirement Fund ("OPERF") is invested, future changes in compensation and benefits of covered employees, demographic characteristics of members, methodologies and assumptions used by the actuary in estimating the assets and liabilities of PERS, and other actions taken by the PERB and the Legislature.

Actuarial Assumptions. On July 31, 2015, the PERB adopted revisions to its actuarial assumptions and methods based upon recommendations from Milliman. The current assumptions include: (a) investment return rate of 7.50%; (b) payroll growth rate of 3.50%; (c) updating the mortality assumptions to increase projections of life expectancy and (d) inflation rate of 2.50%. These assumptions were incorporated in the 2015 System Valuation (rate-setting for 2017-19 biennium) actuarial valuations.

Investments. The PERS Fund is managed by the Oregon State Treasury under the direction of the Oregon Investment Council. As of May 2017, approximately 39% of the funds were in public equity, 15% in private equity, 22% in fixed income and 12% in real estate. The 10-year annualized rate of return was 5.35% as of May 2017.

GASB 67 and GASB 68. In June 2012, the GASB approved Statements No. 67 and No. 68 that modify the accounting and financial reporting of pensions by state and local governments and pension plans. Statement No. 67 ("GASB 67"), Financial Reporting for Pension Plans, addresses financial reporting for state and local government pension plans. Statement No. 68 ("GASB 68"), Accounting and Financial Reporting for Pensions, establishes new accounting and financial reporting requirements for governments that provide their employees with pensions. The System is subject to GASB 67; each participating employer, including EWEB, is subject to GASB 68. The guidance contained in these statements changes how governments calculate and report the costs and obligations associated with pensions. GASB 67 is effective for Fiscal Year 2014 and GASB 68 is effective for Fiscal Year 2015. PERS has contracted with Milliman to provide information for local governments to use in their financial statements.

Under GASB 68, EWEB recognizes on the Statement of Net Position in its audited financial statements its share of the Net Pension Liability, or Asset, of the PERS system. GASB 68 results in pension expense that has "non-cash" components representing the change from year to year in the Net Pension Liability. EWEB has elected to treat the non-cash portion of the pension expense as a regulatory deferral as allowed under regulatory accounting, since EWEB does not intend to recover this expense in current rates. Deferred pension expense will be recognized over time as actual expenses are recovered in rates. For the year ended December 31, 2016, EWEB reported a net pension liability of $105.9 million and EWEB's total proportionate share of System pension expense as calculated by PERS was $18.9 million (of which approximately $15.6 million was attributed to the Electric System). See APPENDIX B – FINANCIAL STATEMENTS FOR THE YEARS ENDED DECEMBER 31, 2016 AND DECEMBER 31, 2015.

Pension Bonds and Side Accounts. Contribution rates for individual employers are adjusted if the employer maintains a "side account." In November 2006, EWEB paid $7.2 million to PERS for deposit into EWEB's side account. In 2001, approximately $29.6 million of the proceeds of the Series 2001A Bonds was paid to PERS. As of December 31, 2015, EWEB had $5,113,852 in its side account.

Pension Liability

EWEB's Schedule or Proportionate Share of the Net Pension Liability as of June 30, 2016

	2015	**2016**
EWEB's proportion of the net pension liability	0.79250%	0.70531%
EWEB's proportionate share of the net pension liability	$(45,501,290)	$(105,883,444)
EWEB's covered – employee payroll	$45,250,685	$44,141,193
Proportionate share of the net pension liability as percentage of covered-employee payroll	101%	240%
Plan's fiduciary net position	$64,923,626,094	$62,082,059,102
Plan fiduciary net position as a percentage of the total pension liability	91.90%	80.50%

Source: EWEB 2016 audited financial statements taken from the State of Oregon PERS 2016 audited financial statements.

The Electric System recognized a net pension liability of $86.8 million in 2016, compared to a $37 million net pension asset for 2015. The change from a net pension asset to net pension liability was primarily due to the Court's decision. See "PERS Legislation and Court Order."

Employer Contribution Rates. Employer contribution rates are calculated as a percent of covered payroll. The rates are based on the current and projected cost of benefits and the anticipated level of funding available from the OPERF, including anticipated investment performance of the fund. Contribution rates are subject to future adjustment based on factors such as the result of subsequent actuarial valuations, litigation, decisions by the PERB and changes in benefits resulting from legislative modifications. Pursuant to ORS 238.225, all participating employers are required to make their contribution to PERS based on the employer contribution rates set by the PERB. Employees are required to contribute 6% of their annual salary to the IAP. Employers are allowed to pay the employees' contribution in addition to the required employers' contribution. EWEB has elected to pay the employee contributions.

Rate Collar. In January 2010, the PERB adopted a rate collar to limit increases in employer contribution rates from biennium to biennium (the "Rate Collar") to smooth the impact of significant increases or decreases from one valuation to the next. The Rate Collar limits increases in employer contribution rates before rate reductions from side accounts are deducted, and does not cover charges associated with RHIA and Retiree Health Insurance Premium Account ("RHIPA"). Under normal conditions, the Rate Collar is the greater of 3% of payroll (the "3% parameter") or 20% of the current base rate (the "20% parameter"). If the funded status of an employer or the pool in which the employer participates is below 70% (or above 130%), the Rate Collar increases by 0.3% of payroll if under the 3% parameter, or 2% of payroll if under the 20% parameter, for every percentage point under the 70% (or above 130%) funded level (the "Collar Ramp") until it reaches 6% of payroll, or 40% of the current base rate at the 60% (or above 140%) funded level (the "Double Rate Collar"). If the projected rate necessary to fully fund the system (the "Uncollared Rate") causes an increase or decrease in rates that exceeds the Rate Collar, the excess increase or decrease is deferred to future rate cycles.

Contribution Rates. The past 2013-15 and 2015-17 biennial employer contribution rates for the Pension Programs incorporated the impacts of changes to the Pension Programs approved by the 2013 Legislature, many of which were later reversed by the Oregon Supreme Court (see "Actuarial Valuation"). The Supreme Court's actions affected rates in the 2017-19 biennium (beginning July 1, 2017). The Net pension contribution rate for T1/T2 for the 2017-19 biennium increased approximately 25.8% from the 2015-17 net pension contribution rate, and the total net employer contribution rate for T1/T2 for the 2017-19 biennium increased approximately 25.1% from the 2015-17 biennium rate. EWEB's employer contribution rates for the 2017-19 biennium are provided in the following table. EWEB currently pays the net employer contribution rate. Over half of EWEB employees participate in the OPSRP plan.

Employer Contribution Rates (%)

	2017-19 Employer Rates		
		OPSRP	
	T1/T2	General Service	Police & Fire
Pension			
Normal cost rate[1]	14.13	8.02	12.79
Tier 1/Tier 2 UAL rate[2][3]	12.83	12.83	12.83
OPSRP UAL rate[3]	1.27	1.27	1.27
Side account rate relief[4]	(1.22)	(1.22)	(1.22)
Net pension contribution rate	27.01	20.90	25.67
Retiree Healthcare			
Normal cost rate	0.07	0.00	0.00
UAL rate	0.43	0.43	0.43
Net retiree healthcare rate	0.50	0.43	0.43
Total net employer contribution rate	27.51	21.33	26.10

(1) Normal cost is the cost of benefits that have not yet been earned and will be spread over the future working lives of current members
(2) Includes Multnomah Fire District #10 rate.
(3) UAL is an employer's unfunded actuarial liability, which is the excess of the actuarially determined present value of the employer's benefit obligations to employees over the existing assets available to pay those benefits.
(4) Rate reduction as a result of the November 2006 lump sum payment to PERS.
Source: State of Oregon PERS 2016 audited financial statements.

In anticipation of higher rates due to lower than assumed earnings, EWEB's long term financial plan includes melded PERS employer contribution rate assumptions of 27% increasing to 34%, 39%, 44% and 49% in 2019, 2021, 2023 and 2025, respectively.

Contributions. EWEB's employer contributions to T1/T2 and OPSRP were $8.1 million in 2016 and $8.9 million in 2015. In addition, EWEB contributed $2.6 million in 2016 and $2.6 million in 2015 to T1/T2 and OPSRP on behalf of its employees.

Additional Information. The PERS website (www.oregon.gov/pers) includes various information on the System, including the valuation reports, the 2016 annual financial report, and investment reports.

Other Post-Employment Benefits

EWEB provides a subsidy for post-employment health care to all employees with at least 11 years of service who retire from EWEB at the time they are eligible to retire with pension benefits under PERS or OPSRP. All retirees, regardless of years of service at EWEB, are eligible to receive a fixed life insurance benefit of $5,000 at no cost to the retiree. The plan is a single-employer defined benefit plan. The latest actuarial valuation, dated August 31, 2016, included 449 retirees or surviving spouses of retired employees and 389 active employees. Health care coverage generally reimburses 80% of the amount of validated claims for certain medical, dental, and vision costs.

In 2007, through a new single-purpose trust, EWEB made arrangements to fund the accruing costs of these post-employment benefits other than pensions ("OPEB"). In November 2007, EWEB transferred $8.2 million into the OPEB trust to begin prefunding the benefits. On May 31, 2013, EWEB deposited $7 million from a reserve for pension and medical costs to pay down the unfunded actuarial accrued liability of the plan ("UAAL"), which represents past benefit costs (already earned or allocated under the actuarial cost method) that are not covered by plan assets. The deposit represented 36% of the trust's assets on that date. It is EWEB's intent to pay the actuarially determined OPEB cost annually to the trust. Valuations are updated every two years. The OPEB trust issues a publicly available set of audited financial statements, which may be obtained by writing to EWEB.

EWEB's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligation for 2016 and the preceding years are listed in the following table. ARC is the employer's annual required contributions.

OPEB Schedule of Employer Contributions

Fiscal Year Ended	Annual OPEB Cost (ARC)	Percentage of ARC Contributed	Net OPEB Obligation (Asset)
12/31/2014	$1,535,043	100%	$(7,004,361)
12/31/2015	1,166,812	100	(6,680,934)
12/31/2016	980,298	100	(6,492,334)

Source: EWEB 2016 audited financial statements.

As of August 31, 2016, the plan was 72% funded. The actuarial accrued liability for benefits was $24.3 million. The actuarial value of assets was $17.6 million, resulting in an unfunded actuarial accrued liability of $6.8 million.

The following table presents a schedule of funding progress for EWEB's OPEB Plan:

OPEB Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
06/01/2013	$19,257,425	$ 31,281,002	$12,023,577	62%	$42,796,406	28%
12/31/2014	19,172,194	26,579,575	7,407,381	72	45,250,685	16
08/31/2016	17,552,403	24,305,534	6,753,131	72	33,748,758	20

Source: EWEB 2016 audited financial statements.

As of April 1, 2016, the collective bargaining agreement with IBEW was amended to remove the subsidy for post-employment health care for employees hired after January 1, 2003. The subsidy for non-represented employees will be removed effective October 1, 2017. These changes have reduced EWEB's annual required OPEB contributions by approximately $385,000.

Deferred Compensation Plans

EWEB offers its employees deferred compensation plans created under Internal Revenue Code Section 457, which permit employees to defer a portion of their compensation until future years. EWEB has no liability for losses under the plan, but does have a duty to perform its limited administrative duties in a prudent manner. The plan is administered by a third party that performs the investing function.

ELECTRIC SYSTEM

General

The Electric System is operated as an independent system of EWEB and is managed by the executive team who reports to the General Manager. See "THE EUGENE WATER & ELECTRIC BOARD—Administration and Management." The Electric System has been in operation for over 100 years. The Electric System served approximately 92,000 customers in 2016. In 2016, the Electric System received approximately 69.4% of its power supply from the Bonneville Power Administration ("Bonneville"), 7.8% from the Carmen-Smith and Trailbridge Hydroelectric Plants, 9.4% from other EWEB-owned resources, 5.1% from jointly-owned resources and 8.3% from other contract resources. See "POWER SUPPLY—Electric System Energy Resources and Purchased Power Costs."

In 2016, approximately 90% of electricity consumed by customers came from sources that do not generate carbon based emissions.

Service Area

Electric service is furnished within Eugene and to adjacent suburban areas and areas along the McKenzie River between the cities of Walterville and Vida where two of EWEB's hydroelectric plants are located. EWEB's service area in and around the City adjoins the City of Springfield's system on the east, the Emerald People's Utility District's system and the Blachly-Lane County Electric Cooperative's system, both on the north and west, and Lane Electric Cooperative's system on the south. EWEB also provides service to International Paper Company's operation within the Springfield city boundary. The total service area covers 235.6 square miles.

The City Charter grants to the City Council the right to grant franchises for utilities within the City. Oregon law authorizes cities to "exclude or eject" any public utility, telecommunications utility or heating company within the City. Amending the City Charter requires voter approval.

Electric Properties

EWEB supplies power to its customers through its eight generating facilities and purchases from Bonneville and other power providers. The Electric System includes the electric utility properties, assets and rights now owned by EWEB, and all properties and assets constructed or acquired as renewals, replacements, additions, improvements and betterments to and extensions of such properties and assets, including facilities for the generation, transmission and distribution of electric power and energy, excluding any electric utility properties, assets and rights hereafter constructed or acquired by EWEB as a separate utility system. No such separate utility system currently exists.

Transmission and Distribution

EWEB's 115 and 69 kV electric transmission system includes eleven points of interconnection with neighboring Bonneville and PacifiCorp transmission grids. EWEB's 35 electric distribution substations, serving customers in and around the City, are interconnected through 167 circuit miles of transmission line.

EWEB's hydroelectric and cogeneration projects also interconnect with this transmission network. Outside of the Eugene area, EWEB owns 6.6 circuit miles of 115 kV transmission lines that interconnect the Stone Creek hydroelectric project to the northwest transmission system.

EWEB's 12.47 kV distribution system serves approximately 92,000 customers via 1,132 circuit miles of overhead and underground lines. Eugene's downtown business district is served by a low voltage secondary network system.

In 2001, EWEB signed the Network Integration Transmission Service ("NT") agreement with Bonneville to provide transmission for EWEB's generation projects and power provided under the Bonneville power contract. The NT agreement was amended in 2011 to extend services through September 30, 2028, to comport with the power purchase contract. See "POWER SUPPLY—Bonneville Power Administration."

EWEB arranges for point-to-point transmission on an as needed basis to support sales of surplus power to various counterparties.

In 2015, EWEB was one of 190 of the nation's more than 2,000 utilities that received the Reliable Public Power Provider award from the American Public Power Association. In 2015, the national average for the frequency of outages was 1.52 outages per customer per year and EWEB's rate was 0.36 outages per customer per year. In 2016, EWEB's rate increased slightly to 0.51 outages per customer per year due to a large ice storm in December.

Telecommunications

In 1999, EWEB constructed a 70-mile network of fiber-optic lines to serve substations, headquarters and other EWEB facilities. The network has been expanded to approximately 166 miles. The Electric System uses the network for all aspects of its communications between electric substations, local generation sites, and EWEB's dispatch center.

In 2000, Eugene voters approved changes to the City Charter giving EWEB broad authority to offer commercial telecommunications services to customers. EWEB maintains its certification as a Local Exchange Carrier ("LEC"), but has elected not to provide telephone or other communications services to its customers.

The expansion rate of EWEB's fiber optic network has grown dramatically in recent years, which was initially due to local agencies receiving federal grants needing fiber optic connections, but most recently due to "Tier 2" internet service providers selling lower cost services utilizing EWEB fiber optic infrastructure. EWEB expects to continue to leverage existing assets while looking for opportunities to improve the overall network flexibility, performance and reliability.

EWEB continues to leverage past investment in infrastructure by leasing dark fiber transport to schools and other public agencies, primarily under the auspices of the Public Agency Network Intergovernmental Agreement ("PAN"), which provides for joint development and operation of a fiber-based communications network in Eugene and Springfield. The fiber network also provides connectivity for medical providers, private businesses and third-party telecommunications carriers.

EWEB jointly developed and jointly owns a microwave radio network and a land mobile network ("LMR") with the Cities of Eugene and Springfield and Lane County. In 2011, EWEB completed construction of two microwave/LMR communication sites in the McKenzie River Valley for communications with its Carmen-Smith Project and for expansion of the shared radio system. These integrated radio and fiber optic networks provide high quality voice, data, and control system communications for the operation of the Electric System. In 2013, EWEB commissioned a City-wide ethernet network, over fiber optic cable, for multiple uses including Electric System and Water System supervisory control and data acquisition, advanced metering infrastructure, and mobile workforce management.

In 2015, EWEB partnered with the City, the Lane Council of Governments and the Technology Association of Oregon to provide high-speed internet fiber optic connections to 20 businesses in three downtown buildings. With the success of the 2015 pilot project, EWEB has connected an additional 10 buildings with many more currently in design. The partnership's future goal is to expand the footprint of these services by provisioning an open access, low-cost, high-speed municipal broadband network throughout the Eugene downtown business district. The expansion, which will be partially funded through a federal grant provided by the U.S. Economic Development Administration, is designed to serve approximately 120 buildings located in the downtown core with geographic expansion possible in the future. The downtown fiber network utilizes existing conduit pathways located alongside EWEB's electric infrastructure. This allows installation of the new fiber network to be completed without the need to tear up city streets. Construction is slated for completion in 2018.

Electric Rates

EWEB has, by City Charter and Oregon law, exclusive jurisdiction to fix rates for electric service within its service area. As part of its annual planning and budgeting process, EWEB examines the cost of providing electric service to determine if rates are sufficient to fund all operating costs and expenses, repairs, replacements, debt service and capital additions to the Electric System. In years with significant revenue requirement changes, a formal cost of service study is performed. At a minimum, the study is performed at least once every three years. The primary cornerstone of the cost of service study is to establish rates that, to the maximum extent feasible, do not include cross-subsidies among rate classes. At the end of the study, staff develops a rate proposal. EWEB then holds two public hearings to gather public comment on the rate proposal. Once the public comments have been considered, EWEB may modify or adopt the new rates. The last formal cost of service study was performed in the fall of 2016 for the February 2017 rate proposal.

Rates and charges of EWEB are not subject to the jurisdiction or control of any State or Federal regulatory body. The Public Utility Regulatory Policies Act of 1978 ("PURPA") directs state regulatory authorities and non-FERC-jurisdictional utilities (including EWEB) to consider certain standards for rate design and other utility procedures. EWEB believes that it is operating in compliance with these PURPA ratemaking requirements.

EWEB has the following rate categories: residential service, small general service (0-30 monthly kilowatts), medium general service (31-500 monthly kilowatts), large general service (501-10,000 monthly kilowatts), very large general service (over 10,000 monthly kilowatts without a contract) and street lighting. The residential rate is composed of three monthly charges: the basic charge regardless of usage, the delivery charge that covers the cost of distribution, and the energy charge that covers the cost of producing the electricity and transmitting it to EWEB's distribution system. The general service rates include a demand charge, which charges for peak kilowatt usage during the billing period. See "Current Rate Schedules" for EWEB's current rates. The rates for EWEB's largest three retail customers are based on separate power purchase contracts. See "Electric System's Customers."

Rate Adjustment Mechanisms. In addition to the base rate adjustments, EWEB implemented two additional rate adjustment mechanisms in 2001 to allow interim rate changes with reduced process requirements. The first is a Power Cost Recovery Adjustment ("PCRA"). This is a retrospective comparison of planned and actual net power costs for the prior year. If there is a significant variation in net power costs, EWEB may surcharge or credit future bills to recover the difference. The second rate adjustment mechanism is a Bonneville Cost Recovery Adjustment ("Bonneville CRA"). Under its power contracts, Bonneville has the right to increase rates during a two-year rate period based on certain financial metrics. If there is a significant difference in budgeted rates as compared to actual rates, EWEB may adjust rates to reflect expected Bonneville costs for up to a 12-month period. In 2013, the Board of Commissioners approved a policy to allow rates to be automatically adjusted for a Bonneville CRA.

Because EWEB is a preference customer of Bonneville and purchases over 69% of its electric power from Bonneville, EWEB's cost of purchased power is directly related to Bonneville's wholesale power rates. Bonneville adjusts its rates in October of odd-numbered years. Historically, EWEB has passed on that rate adjustment to customers the following month. Since 2015, Bonneville rate changes have been included as part of an annual rate adjustment in February and not automatically adjusted. In October 2015, Bonneville's rate adjustment resulted in a 3.1% increase to EWEB customers and EWEB included the impact of that rate increase in its February 2016 rate change. Bonneville is expected to raise its power rates approximately 6.5% effective October 1, 2017. See "ELECTRIC SYSTEM POWER SUPPLY—Bonneville Power Administration."

The following table shows the residential rate adjustments approved by the Board of Commissioners since 2010.

Residential Rate Adjustments

Effective Date	Average Increase
May 2010	2.50%
May 2011	3.50
November 2011 (Bonneville)	4.50
May 2012	5.50
May 2013	3.70
November 2013 (Bonneville)	1.75
May 2014	4.50
February 2016	2.50

Current Rate Schedules

The following summarizes certain rate schedules of the Electric System.

Electric System Rates

Residential		
Basic Charge	$20.50 per month	
Delivery Charge	2.624¢ per kWh	
Energy Charge		
First 800 kWh	5.948¢ per kWh	
Over 800 kWh	7.435¢ per kWh	
Small General Service (for service up to 30 kW)		
Basic Charge		
Single-Phase Service	$23.06 per month	
Three-Phase Service	34.08 per month	
Demand Charge		
First 10 kW	No charge	
All additional kW	$7.124 per kW	
Delivery Charge		
First 1,750 kWh	3.577¢ per kWh	
All additional kWh	0.132¢ per kWh	
Energy Charge	6.900¢ per kWh	
Medium General Service (for service from 31 to 500 kW)		
Basic Charge	Secondary Service	Primary Service
Single-Phase Service	$38.23 per month	--
Three-Phase Service	59.30 per month	$3,444 per month
Demand Charge		
First 300 kW	$7.431 per kW	--
Over 300 kW	$7.431 per kW	$7.281 per kW
Energy Charge	6.236¢ per kWh	6.148¢ per kWh
Large General Service (for service from 501 to 10,000 kW)		
Basic Charge	$2,757 per month	$2,680 per month
Demand Charge		
First 300 kW	--	--
Over 300 kW	$7.688 per kW	$7.486 per kW
Energy Charge	4.944¢ per kWh	4.851¢ per kWh
Very Large General Service (for service over 10,000 kW without a contract)		
Basic Charge	$2,785 per month	$2,711 per month
Demand Charge		
First 300 kW	--	--
Over 300 kW	$7.350 per kW	$7.140 per kW
Energy Charge	6.680¢ per kWh	6.680¢ per kWh

Delinquencies

EWEB makes every reasonable and cost-effective attempt to secure payment of all accounts receivable. In accordance with bond covenants, products and services are not provided free of charge. Bills are issued based upon actual use of products and services, except that billings are estimated when EWEB service meters are inaccessible, or other considerations necessitate issuing estimated billings. EWEB has a good record of collecting on its customer billings. Accounts receivable write-offs in 2016 were $579,000 or 0.31% of retail energy sales revenue.

Comparative Monthly Electric Bills

The following table compares the Electric System's monthly electric bills for selected residential, commercial and industrial loads with those of other local and major public and private utilities. The comparative monthly electric bills shown are based on specific rate schedules for each utility; the use of other schedules applicable to particular customers will yield different results.

Electric System[(1)]
Comparable Monthly Electric Bills
as of June 1, 2017
(Average summer/winter rates where applicable)

	Residential (1,600 kWh)	**Small General Service** (20 kW 8,500 kWh)	**Large General Service** (1,000 kW 600,000 kWh)
EWEB	$170	$752	$37,026
Oregon People's Utility District			
Emerald PUD	148	777	49,380
Washington Public Utility District			
Snohomish PUD	164	768	46,355
City Utilities			
Springfield Utility Board	101	498	32,593
Salem Electric	142	669	39,276
Seattle City Light	188	783	42,511
Tacoma Power	137	685	33,751
Private Power Companies/Cooperatives			
Blachly-Lane Electric Cooperative	191	548	31,407
Lane Electric Cooperative	168	836	40,197
Pacific Power (a PacifiCorp Company)	186	813	36,692
Portland General Electric	184	777	35,907
Puget Sound Energy	170	814	45,328

(1) Computed from the rate schedules provided by or found on the websites of the utilities listed. There are some variations in rate schedules and rate classification of the various utilities.

Source: EWEB and individual utilities.

Electric System's Customers

In 2016, residential customers made up approximately 90% of Electric System customers and approximately 50% of retail sales. The following table lists EWEB's five largest retail customers. In 2016, these customers represented 14.6% of Electric System revenues and 24.6% of energy consumption. The next five largest customers account for approximately 2.1% of Electric System revenues and 3.2% of energy consumption. EWEB has modeled the hypothetical loss of loads from its largest customers; the impact of the loss of any one of its large customers would be an average retail rate increase of less than 2%. EWEB has contracts with its three largest customers.

Five Largest Retail Customers

Name	Type of Business	Revenues	% of Total Revenues	MWh	% of Total MWh
International Paper	Container Board	$19,696,545	9.5%	389,405	17.0%
University of Oregon	Education	3,884,105	1.9	65,482	2.9
Flakeboard America Ltd	Sustainable Forest Products	3,484,422	1.7	58,406	2.6
City of Eugene	Government	1,872,239	0.9	27,565	1.2
Lane County	Government	1,260,709	0.6	19,724	0.9
		$30,198,020	14.6%	560,582	24.6%

EWEB has served the Springfield containerboard mill site since 1948. The mill has been owned by International Paper since 2008. The current contracts between EWEB and International Paper were entered into in October 2011 and expire on September 30, 2019, and govern retail power services provided by EWEB to the mill and the joint operation of the cogeneration unit described under "ELECTRIC SYSTEM POWER SUPPLY—EWEB-Owned Resources—*International Paper Industrial Energy Center Cogeneration Project*." EWEB is responsible for supplying power to serve the retail requirements of the mill and International Paper is responsible for paying the cost of such power purchased from Bonneville as "block" power. See "ELECTRIC SYSTEM POWER SUPPLY—Bonneville Power Administration." In late 2016, International Paper began a $100 million capital improvement plan aimed at modernizing the Springfield mill.

The following table presents the Electric System's customers, retail energy sales, revenues and peak demand during the calendar years 2012 through 2016.

Electric System
Customers, Retail Energy Sales, Revenue and Peak Demand[1]

	2012	2013	2014	2015	2016
Customers					
Residential	78,765	79,687	80,708	81,926	82,619
Commercial & Industrial	9,289	9,383	9,425	9,483	9,693
Total Customers	88,054	89,070	90,133	91,409	92,312
Retail Energy Sales (MWh)					
Residential	941,922	980,515	919,175	893,001	887,738
Commercial & Industrial	1,433,147	1,427,880	1,421,150	1,412,019	1,400,318
Total Retail Energy Sales (MWh)	2,375,069	2,408,395	2,340,325	2,305,020	2,288,056
Retail Energy Sales					
Residential	$ 90,784,575	$ 99,053,270	$100,206,047	$ 98,899,532	$100,328,832
Commercial & Industrial	93,040,047	96,395,554	104,287,038	104,751,910	106,911,993
Total Retail Energy Sales	$183,824,622	$195,448,824	$204,493,085	$203,651,442	$207,240,826
Average Annual Consumption per Residential Customer (kWh)[2]	11,959	12,305	11,389	10,900	10,745
Average Residential Revenue (cents per kWh)	9.6¢	10.1¢	10.9¢	11.1¢	11.3¢
Average Annual Residential Revenue per Customer	$1,153	$1,243	$1,242	$1,207	$1,214
Peak Load (kW)	479,000	557,000	497,000	473,000	463,000

(1) Retail Energy Sales presented above includes contributions in lieu of tax ("CILT"), which are included in retail rates. In the Historical Operating Results table, Operating Revenue is reported net of CILT collections.
(2) 1 kWh equals 0.001 MWh.

A substantial portion of Electric System peak load is attributed to electric heating and, therefore, peak load in any given year is a function of winter weather.

Wholesale Sales and Purchases

The majority of EWEB's power supply comes from hydroelectric generation. The financial performance of the Electric System is largely influenced by the availability of water for generation and the prices obtainable for excess generation in the wholesale markets. EWEB sets budgets and power supply forecasts based on the historical average hydroelectric generation. Budgets assume that hydroelectric generation will be 90% of the historical average. Hydroelectric generation in 2016 was 97.8% of the historical average. Measurements and conditions for forecasts are modeled from power projects in the Pacific Northwest Columbia River Basin. Hydroelectric generation through June 2017 was 114.6% of historical average. Hydroelectric generation for 2017 is projected to be 108.6% of historical average by year end.

EWEB's combination of generation and long term power supply contracts are generally sufficient to meet the Electric System's load requirements on an annual basis. Power not needed to serve retail load is sold into the wholesale markets. EWEB purchases and sells electricity on a daily, weekly, monthly, and seasonal basis to balance resources and load. EWEB is expected to have surplus power on an annual firm basis during most months of the year, but this may vary considerably based on weather and water conditions. During periods when resources are in excess of retail load, EWEB may sell excess capacity into the wholesale markets and is exposed to commodity price risk.

EWEB enters into forward contracts intended to manage the price risk associated with power sales in the wholesale market. The Electric System has a hedging program to ensure prices for power sold into the wholesale market do not drop below the amount budgeted. Prices for market sales have reached historic lows, largely due to downward pressure on prices from low cost natural gas powered resources and decreases in the price of oil. When customer load is lower than anticipated, unsold power is sold at market prices, which are currently lower than retail rates, resulting in lower operating revenue overall.

The following table contains a summary of EWEB's energy sales for wholesale customers for the past three years. The wholesale sales are shown net of non-physical delivery.

Wholesale
Energy Sales, Volume and Average Price per MWh

	2014	**2015**	**2016**
Wholesale Sales	$57,729,892	$38,761,472	$42,799,209
Wholesale Volume (MW)	1,818,055	1,687,954	1,875,668
Average price per MWh	$31.75	$22.96	$22.82

Power Risk Management; Derivatives

In order to ensure prudent participation in wholesale markets, EWEB maintains a comprehensive power risk management infrastructure. The Board of Commissioners provides strategic direction to management, which includes the formation of a Power Risk Management Committee ("RMC"), comprised of executives, managers and subject matter experts. The objective of the RMC is to provide reasonable assurances that wholesale power activity provides the support necessary to achieve EWEB's financial strategies and policies.

The RMC has approved and adopted Energy Risk Management Procedures, which set forth policies, limits and control systems governing power purchase and sales activities for the Electric System. The objectives of such policies are to protect the organization from financial instability and unacceptable risk relating to market price volatility and counterparty performance and to provide reasonable assurance that the financial objectives of the Electric System are achieved. Compliance with policies is monitored by the RMC. Key components of the procedures include the following:

- Prohibition on speculative trade activity
- Resource adequacy requirements
- Financial and volumetric limitations on market positions across a five year horizon

- Monitoring and reporting of aggregate hedging activity
- Execution and approval requirements for all transactions
- Minimum credit review requirements
- Maximum exposure thresholds by creditworthiness
- Daily valuation of counterparty exposure
- Valuation and reporting of short-term and mid-term compliance positions
- Financial stress testing
- Power cost management

EWEB enters into forward purchase and sale contracts for electricity with a variety of organization types, including utilities, municipalities, financial institutions, corporations, independent power producers and marketers. EWEB is exposed to credit risk related to the possibility of non-performance by its counterparties. To limit the risk of counterparty default or non-performance, EWEB uses an evaluation process that assigns an internal measure of creditworthiness to EWEB's counterparties and sets limits to the dollar value of business that can be transacted with counterparties. All counterparties and their associated credit limits are monitored and reviewed on a regular basis. EWEB generally chooses not to do business with counterparties deemed to be of low creditworthiness. On a case by case basis, however, EWEB may require letters of credit, prepayment or other forms of security to mitigate perceived credit risk.

EWEB utilizes derivative instruments to minimize its exposure to wholesale price risk. When hedging derivatives settle, they are recorded as either wholesale sales revenue or purchased power expense. See Appendix A for a definition of "Operating Expenses." A hedging derivative can be found to be ineffective if, before settlement, either the customer load forecast increases or forecast resources decrease. When either event happens, hedges can be in excess of the resources to be hedged and are then classified as investment hedges. At that time, the fair value is recorded as investment revenue and a deferred inflow or outflow. When the underlying trades settle, the settled amounts are recorded as wholesale sales revenue, net of deferred inflows and outflows. For the year ended December 31, 2016, $1.3 million had been recognized as investment earnings from derivatives.

Hedging derivative and forward contracts may be terminated by mutual agreement of EWEB and the counterparty, or upon the occurrence of a termination event. Termination events include the non-payment, non-delivery, deterioration of creditworthiness, or other material adverse changes, among other events. EWEB may be required to pay a termination payment even if a counterparty defaults. Governing documents for forward contracts are established by the International Swaps and Derivative Association and/or Western Systems Power Pool, as applicable. During the years 2010-2016 there were no terminations.

The following table shows EWEB's hedging derivatives as of December 31, 2016.

Hedging Derivatives
(as of December 31, 2016)

	2015	**2016**
Notional Value	$11,678,920	$8,575,960
Fair Value – Asset	$4,688,639	$2,695,395
Fair Value – Liability	$895,480	$818,560
Cash Paid	$716,840	$500,040
Reference Rates	Mid-C Index	Mid-C Index
Dates Entered Into	01/2013 through 12/2015	01/2013 through 11/2016
Dates of Maturity	01/2016 through 12/2017	01/2017 through 06/2018

Preparedness and Cyber Security

EWEB considers emergency preparedness as one of the top strategic priorities in the next decade. EWEB has included infrastructure resiliency in its Electric System Capital Plan that was approved by the Board of Commissioners in July 2017. EWEB is assessing the impacts of the Cascadia Subduction Zone Earthquake and other potential disasters in order to "rebound" in an efficient and effective manner to restore system capabilities for critical loads and ultimately to all of its customers. These resiliency improvements are incorporated in the Capital Improvement and Long Term Financial Plans. In 2017, EWEB was selected by the U.S. Geological Survey to pilot its new earthquake early warning system, ShakeAlert, a technology that can provide seconds to minutes of advance warning before local shaking begins. EWEB is already receiving the early warning signals at computers in Dispatch, Real Time Trading, and Security Departments and is investigating the potential to automate critical control systems capable of mitigating seismic damage to infrastructure. EWEB is also preparing the community through education for emergency preparedness in partnering with the American Red Cross and other public agencies which will help aid in the recovery process in the case such a disaster occurs.

EWEB conducts annual System Restoration Exercises identifying and rectifying any deficiencies in restoring the Electric Generation, Transmission, and Distribution systems. Essential staff have been identified and trained in the NIMS™ Incident Command System. All emergency response at EWEB is managed using the Incident Command System structure and protocols. EWEB has Mutual Aid Agreements with the Western Energy Institute ("WEI"), the American Public Power Association ("APPA") and local utilities. All Transmission and Distribution Operators are certified through the North American Electric Reliability Corporation ("NERC") and all electric system transmission operations meet or exceed the NERC Reliability Standards. In 2017, EWEB hired an Emergency Program Manager responsible for an all-hazards emergency plan. The Emergency Program Manager conducts business continuity risk and impact assessments to identify service gaps, define critical services, and supports implementation of technological and operational solutions for the utility-wide Incident Command System.

EWEB is required to comply with regulatory requirements related to its information services ("IS") and Industrial Control System ("ICS") resources. EWEB's IS and ICS systems are designed to provide data confidentiality, security, integrity, and availability for reliable business operations and electrical system operations of the Electric System. The strategy behind this security architecture is to protect EWEB's cyber assets, detect signs of compromise, respond and recover from a detected compromise of IS or ICS systems.

The NERC Critical Infrastructure Protection ("CIP") physical and cyber security standards outline the compliance requirements for the EWEB ICS systems. EWEB has developed the necessary security policies and subordinate programs, plans, processes and procedures to address all requirements and sub-requirements in the NERC-CIP standards. EWEB has implemented physical and cyber security resources to attain and sustain compliance with these standards. Physical and cyber security personnel are dedicated to protecting EWEB's cyber assets and have implemented commonly used cyber security and IS practices in the security solutions.

EWEB also recognizes that all personnel are involved in the success of the cyber security program. To address this, EWEB has developed an all-employee cyber security awareness program to continue to build on employees' security knowledge. Additionally, EWEB performs routine cyber vulnerability assessments and penetration tests to identify any issues or gaps that can be mitigated in an effort to regularly improve EWEB's reliability posture. EWEB has a $3 million cyber insurance policy. EWEB cannot predict whether this policy would be sufficient in the event of a cyber attack.

Operating Results

The following table presents a summary income statement of the Electric System for the calendar years 2012 through 2016. See the definition of "Operating Expenses" in Appendix A. Appendix B contains the audited financial statements for EWEB for the years ended December 31, 2016 and 2015.

Electric System
Historical Operating Results[1]

	2012	2013	2014	2015	2016
OPERATING REVENUES					
Residential	$ 85,337,500	$ 93,465,978	$ 94,553,818	$ 93,321,059	$ 94,669,774
Commercial and Industrial	88,015,788	90,305,936	97,731,619	98,152,553	100,193,356
Sales for Resale	47,791,870	48,494,081	57,729,892	38,761,472	42,799,209
Other Sales Revenue	4,238,875	5,794,223	7,154,880	8,747,550	7,587,642
Net Regulatory Credits[2]	6,944,050	--	--	--	--
Total Operating Revenues	$ 232,328,083	$ 238,060,219	$ 257,170,209	$ 238,982,634	$ 245,249,981
OPERATING EXPENSES					
Purchased Power	$ 101,960,527	$ 108,998,086	$ 115,015,794	$ 108,239,149	$ 117,194,256
System Control	6,623,647	6,174,737	6,828,337	5,902,729	5,657,580
Wheeling	12,246,671	12,562,973	12,866,001	12,903,605	12,273,110
Steam and Hydraulic Generation	11,336,093	11,426,464	12,180,126	11,631,177	11,486,118
Transmission and Distribution	18,721,597	17,936,464	20,924,788	22,147,905	24,545,553
Customer Accounting	9,605,099	10,149,095	9,285,136	8,151,904	8,027,392
Conservation Expenses	6,890,817	3,679,257	3,766,563	3,885,029	4,720,681
Administration and General	23,800,403	19,082,016	22,381,311	21,018,247	21,864,641
Depreciation on Utility Plant	16,690,026	17,494,697	19,532,135	23,537,801	23,986,786
Total Operating Expenses	$ 207,874,880	$ 207,503,789	$ 222,780,191	$ 217,417,546	$ 229,756,117
TOTAL OPERATING INCOME	$ 24,453,203	$ 30,556,430	$ 34,390,018	$ 21,565,088	$ 15,493,864
OTHER INCOME/(EXPENSES)					
Investment Earnings	$ 604,436	$ 893,593	$ 1,204,649	$ 678,899	$ 2,864,903
Intersystem Interest Earnings	1,177,806	1,159,177	1,139,644	1,119,164	982,621
Allowance for Funds used During Construction	100,585	119,857	--	--	--
Interest Expense and Related Amortization	(12,595,278)	(12,843,004)	(12,403,032)	(11,033,773)	(9,298,262)
Other Revenue/(Deductions), net[3]	1,655,244	1,623,423	3,334,271	3,403,447	6,841,113
Total Other Income/(Expenses)	$ (9,057,207)	$ (9,046,954)	$ (6,724,468)	$ (5,832,263)	$ 1,390,375
NET INCOME BEFORE CAPITAL CONTRIBUTIONS	$ 15,395,996	$ 21,509,476	$ 27,665,550	$ 15,732,825	$ 16,884,239
Contributions in Aid of Construction	$ 1,693,346	$ 2,459,663	$ 2,792,653	$ 3,085,774	$ 6,655,664
Contributed Plant Assets	$ 68,900	$ 157,414	15,678	$ 920,455	$ 939,115
Special Item – Carmen Smith[4]	--	--	--	--	$ (9,556,180)
CHANGE IN NET POSITION	$ 17,158,242	$ 24,126,553	$ 30,473,881	$ 19,739,054	$ 14,922,838
AVAILABLE FOR DEBT SERVICE[5]	$ 44,206,069	$ 51,727,319	$ 58,711,416	$ 79,117,817	$ 40,655,239
Annual Bond Debt Service	$ 20,230,373	$ 19,233,868	$ 22,391,124	$ 24,290,157	$ 24,589,808
Bond Debt Service Coverage	2.2x	2.7x	2.6x	2.1x	1.7x[4]
Subordinate Debt Service[6]	$ 2,647,640	$ 2,647,640	$ 2,647,640	$ 29,432,392	--
Combined Debt Service Coverage[7]	1.9x	2.4x	2.3x	1.5x[6]	1.7x
TOTAL NET POSITION– BEGINNING OF PERIOD[8]	$ 325,937,222	$ 343,095,464	$ 322,184,845	$ 352,658,726	$ 372,397,780
TOTAL NET POSITION – END OF PERIOD[7]	$ 343,095,464	$ 367,222,016	$ 352,658,726	$ 372,397,780	$ 387,320,618

(1) Columns may not foot due to rounding.
(2) Regulatory credits represent the recognition of revenue deferred from prior periods, intended to match expenses for relicensing.
(3) Other revenue includes grant revenue, gain on disposal of property, and other miscellaneous non-operating revenue. Other revenue deductions include grant expense, loss on disposal of property, and other miscellaneous non-operating expenses.
(4) Pre-construction costs for a fish ladder and fish screen at the Carmen-Smith Project. Due to a revised relicensing settlement agreement that reduced the overall project costs, the ladder and screen will not be constructed. This expense caused Bond Debt Service Coverage to be below the standard established by EWEB financial policies. Without the impact of this Special Item, Bond Debt Service Coverage would have been 2.04x.
(5) For purposes of debt service coverage calculation, depreciation, amortization of conservation assets and interest expense are excluded from Operating Expenses. Available for Debt Service year 2015 includes $28,760,635 in Other Monies (reserves) to pay the junior lien debt related to the Harvest Wind Project.

(6) In 2015, the maturity payment for the junior lien debt related to the Harvest Wind Project was included in combined debt service causing a large decrease to combined debt service coverage.
(7) Includes the Bonds and subordinate lien debt.
(8) Beginning Net Position for year 2014 was restated, reduced by $45 million, for implementation of accounting standards for pension expense in 2015. The change in net position for 2014, as restated, for this implementation was an increase of $944,000. Debt Service Coverage for year 2014 was not restated.

Management's Discussion of the Electric System's Financial Results

Operating revenue varies from year to year based on customer load, generation available for sale, and the market prices for generation available for sale. Electric System net operating income for 2016 decreased compared to 2015 primarily due to increased power supply costs, which were partially offset by increased operating revenue and a December ice storm resulting in $4 million of restoration costs. During 2017, EWEB was awarded a grant through FEMA's disaster assistance program to reimburse 75% of qualifying costs associated with the storm.

In 2017, first quarter retail sales were higher than budget due to colder than typical weather. A wet winter replenished snow-pack levels and has translated into strong stream flows allowing for more hydro-generation than budgeted. The additional hydro-generation has added to amounts available for resale in wholesale markets. In addition, a planned outage at EWEB's Carmen Smith project has been delayed until 2018 also contributing to amounts available for sale in wholesale markets. Contribution margin, which is a measure of the amount power sales and purchase activity contribute to the other operating costs of the utility, is projected to be about $10.1 million over budget at year end. Operating expenses have remained stable and are generally in line with budget assumptions through June 30, 2017. The 2017 budget included a planned reserve deposit of $7.8 million.

In June 2017, Electric System defeased $20.7 million of Outstanding Bonds using excess reserves. This resulted in a current year expense recognition of $15.7 million and eliminated approximately $42 million of debt service payments through 2027. This defeasance allowed the Bond Resolution to take effect in August 2017.

Also in 2017, EWEB embarked on an Affordability Initiative in alignment with strategic plan revisions. This initiative has resulted in approximately $6 million of on-going Electric System savings through debt restructuring and cost reductions while continuing EWEB's investment in infrastructure and resiliency work. After reviewing the long-term financial plan the Board of Commissioners directed staff to prepare the 2018 budget with no assumed increase in revenue requirements and to use excess reserves to provide a $5 million dividend to residential customers in 2018.

Currently, EWEB operations are split between two locations in Eugene: the Roosevelt Operations Center ("ROC") in west Eugene and a headquarters building located in downtown Eugene. Approximately 17 acres of property surrounding the headquarters property is being sold to the City of Eugene. An effort is underway to move EWEB staff out of the headquarters location and consolidate most operations at the ROC. Studies have concluded consolidated operations will be more cost effective and efficient.

EWEB's Modernization Program

EWEB is in the process of preparing to offer enhanced customer services made available by significant advances in technology. These upgrades will allow EWEB to improve service reliability and efficiency, enable customers to more easily manage their electric and water use and expand the menu of services and choices available to customers. EWEB is in the midst of upgrading many of its technology platforms, including customer information, geographic information, outage management, data management, and its aging electric and water meters. Already underway, the upgrades are expected to continue through 2018. When complete, customers will be able to choose when and if they want to have enhanced services enabled by wireless technology.

Capital Plan

The five year historical capital expenditures, and the most recent five-year projection and approved capital plan revised as of July 2017, for capital expenditures with expected resources, are presented in the following table:

Historical Electric System Capital Expenditures ($000)

	2012	2013	2014	2015	2016	Total
Actual Capital Expenditures						
Carmen-Smith Relicensing & Improvements	$ 9,367	$ 2,551	$ 582	$ 3,669	6,397	22,566
Generation	1,432	1,958	1,997	4,006	1,975	11,368
Transmission & Distribution	13,215	13,697	13,220	11,198	13,598	64,928
General Plant	10,915	9,605	5,723	1,880	3,467	31,590
Total Expenditures	$34,929	$27,811	$21,522	$20,753	25,437	130,452
Capital Funding Sources						
Electric Rates	$16,657	$16,062	$14,582	$14,330	12,266	73,897
Customer Contributions[1]	1,694	2,829	2,793	3,086	5,912	16,314
Bond Funds	12,047	8,920	4,147	3,337	6,397	34,848
Insurance Proceeds					862	862
Reserves[2]	4,531	--	--	--		4,531
Total Funding	$34,929	$27,811	$21,522	$20,753	25,437	130,452

(1) [Cash contributions]
(2) Reserves are used when expenses exceed Capital Improvement Plan deposits funded by Electric Rates.

Projected Electric System Capital Plan ($000)

	2017	2018	2019	2020	2021	2022	Total
Program Budgets							
Carmen-Smith Relicensing & Improvements	12,960	$13,700	$19,880	$24,560	$20,630	$10,470	$ 102,200
Generation	1,196	2,020	1,367	2,395	1,860	6,030	14,868
Transmission & Distribution	14,093	11,608	11,154	14,625	12,936	12,062	76,478
General Plant	7,488	7,580	8,322	7,744	5,293	3,261	39,688
Total Expenditures	35,737	$34,908	$40,723	$49,324	$40,719	$31,823	$233,234
Capital Funding Sources							
Electric Rates	18,665	$18,665	$18,665	$19,500	$19,500	$19,500	$ 114,495
Customer Contributions	4,877	3,563	2,150	2,192	2,233	2,275	17,290
Bond Funds[1]	12,960	13,700	4,090	23,642	20,630	10,470	85,492
Rate Stabilization Account		–	15,790	918	–	–	16,708
Grant Funding		215	–	–	–	–	215
Interest on Reserves	61	88	93	94	82	89	507
Total Funding	36,563	$36,231	$40,788	$46,346	$42,445	$32,334	$234,707
Increase/Decrease in Reserves	826	$ 1,323	$ 65	$(2,978)	$ 1,726	$ 511	$ 1,473

(1) EWEB currently expects to issue long-term indebtedness in 2021 to finance some of these capital expenditures. See "DEBT SERVICE REQUIREMENTS—Additional Borrowing."

ELECTRIC SYSTEM POWER SUPPLY

Electric System Energy Resources and Purchased Power Costs

The following table contains a summary of the electric generating resources that are either owned or under long-term contract to EWEB.

Energy Resources (MWh)

	2012	2013	2014	2015	2016	% of Total for 2016
System Purchases						
Bonneville	2,601,050	2,396,987	2,428,029	2,323,881	2,363,447	69.4%
Market Purchases(1)	1,612,428	1,195,022	1,563,582	1,090,144	1,457,462	N/A
Subtotal	4,213,478	3,592,009	3,991,611	3,414,025	3,820,909	69.4%
EWEB Owned Resources						
Carmen-Smith and Trailbridge Hydroelectric	300,078	256,502	286,807	203,799	263,337	7.8%
International Paper Cogeneration(2)	54,781	76,461	70,367	78,680	74,604	2.2
Leaburg Hydroelectric	101,534	100,213	89,887	57,150	83,529	2.4
Smith Creek Hydroelectric	79,289	80,340	82,749	65,693	62,188	1.8
Stone Creek Hydroelectric	62,070	62,682	62,828	46,562	52,630	1.5
Walterville Hydroelectric	62,462	64,049	53,595	41,519	52,019	1.5
Subtotal	660,214	640,247	646,233	493,403	588,307	17.2%
Jointly Owned Resources						
Foote Creek I Wind(3)	22,920	23,970	27,349	21,926	29,258	0.9%
Harvest Wind	48,382	52,805	52,096	45,723	49,483	1.4
Western Generation Agency Cogeneration	--	--	--	--	94,165	2.8
Subtotal	71,302	76,775	79,445	67,649	172,906	5.1%
Contract Resources						
Priest Rapids Hydroelectric	17,137	16,338	11,839	13,155	14,440	0.4%
Klondike Phase-III Wind	62,432	67,030	64,526	59,468	63,256	1.9
Metropolitan Wastewater Mgmt. Comm.	5,109	6,198	--	--	--	0.0
Seneca Sustainable Energy Cogeneration	110,106	114,443	116,818	115,312	118,214	3.4
Smith Creek Hydroelectric	--	--	--	--	44,067	1.2
Stateline Wind	53,813	51,868	50,679	49,146	47,457	1.3
Solar PV	2,200	2,391	2,207	2,221	2,086	0.1
Subtotal	250,797	258,268	246,069	239,302	289,520	8.3%
Total(4)	5,195,791	4,567,299	4,963,358	4,214,379	4,871,642	100.0%

(1) Market Purchases include non-physical delivery purchases and is not included in the Percentage of Total for 2016.
(2) EWEB's half-share of the project output.
(3) EWEB's 21.21% share of the project output before sales to BPA.
(4) Totals may not add due to rounding.

Bonneville Power Administration

Bonneville was established by the Bonneville Project Act of 1937. Bonneville markets power from 31 federal hydroelectric projects, one non-federally owned nuclear plant, several small power plants in the Pacific Northwest, and from various contractual rights having an expected aggregate output of the Federal System in operating year 2017 (August 1, 2017 through July 31, 2018) of 10,472 annual average megawatts ("aMW") under average water conditions and 8,135 annual aMW under low water conditions. Annual aMW are the number of megawatt-hours of electric energy used, transmitted, or produced over the course of one year and each annual aMW is equal to 8,760 megawatt-hours. These hydroelectric projects, built and operated by the United States Bureau of Reclamation and the United States Army Corps of Engineers, are located in the Columbia River basin. The region's sole nuclear facility was built and is being operated by Energy Northwest. The Federal System currently produces more than one-third of the region's electric energy supply. Bonneville's transmission system includes over 15,000 circuit miles of transmission lines, provides approximately 75% of the Pacific Northwest's high-voltage bulk transmission capacity, and serves as the main power grid for the Pacific Northwest. Bonneville sells electric power at wholesale rates to more than 125 utility, industrial and governmental customers in the Pacific Northwest. Its service area covers over 300,000 square miles and has a population of approximately 14 million.

EWEB and other publicly owned utilities and cooperatives are "preference" customers of Bonneville pursuant to federal legislation, which requires Bonneville to give preference and priority to public agencies and cooperatives in the distribution and marketing of federal power. In 2016, EWEB was Bonneville's seventh largest preference power service customer and accounted for approximately 3% of Bonneville's preference power sales.

Bonneville supplies EWEB power under a 17-year Block and Slice Power Sales Agreement, which extends from October 1, 2011 through September 30, 2028. This contract provides federal power in the form of two products: Block and Slice. The Block product provides fixed quantities of power at designated times and in monthly amounts ranging between 110 MW to 120 MW. The Slice product provides EWEB about 1.8% of the output of the Federal System as generated. For the Slice product, EWEB accepts the risk of fluctuations in actual Federal System output and is responsible for managing its share of the Federal System. EWEB's share of the Slice product is expected to be 160 aMW in an average year, but varies considerably based on water conditions within the Northwest.

Under the Bonneville power sales agreement, Bonneville requires preference customers to post collateral if Bonneville determines that it is necessary to secure the payments under the contract. Bonneville has not required EWEB to post collateral, and EWEB does not expect to be required to post collateral in the future.

Under all of the Bonneville preference power contracts, the amount of power ("Tier 1" power) that preference customers may purchase under Bonneville's lowest cost rate is limited to an amount equal to the generating output of the current Federal System, with some limited amounts of augmentation. Any incremental purchases ("Tier 2" power) by preference customers above this base amount of power is sold at a rate reflecting the incremental cost to Bonneville of obtaining the additional power. Bonneville has established for each preference customer a contractually defined level of access to power available at Bonneville's lowest cost preference rate ("Tier 1" rates). This Tier 1 amount eligible for purchase is based on the lesser of the customer's rate period high mark established by Bonneville every two years or the customer's net requirement load forecasted each year. EWEB does not currently purchase and is not projected to need Tier 2 power.

Bonneville Rates. Bonneville is required by federal law to recover all of its costs through the rates it charges its customers. Bonneville conducts a rate case every two years. Bonneville's current average preference customer rate is $33 per MWh. The current rate period monthly composite customer rate for EWEB's critical Slice share of 1.8% is $2,062,767 per month per percentage point, or $3,700,000 per month. Bonneville raised its rates 7.1% overall effective October 1, 2015. Bonneville conducts a rate case every two years, but the rates are subject to a cost recovery adjustment clause that allows power rates to increase during a two-year rate period if certain events occur. There are any number of factors that have and could impact Bonneville's cost of service and rates, including federal legislation, Bonneville's obligations regarding its outstanding federal debt, number of customers, water conditions, fish and other environmental regulations, capital needs of the Federal System, outcome of various litigation, and regional transmission issues. Bonneville is expected to raise its power rates approximately 6.5% effective October 1, 2017.

Bonneville Transmission Services. EWEB traditionally purchased bundled electric power and transmission services from Bonneville under EWEB's power sales contract. In response to changed Federal Energy Regulatory Commission ("FERC") regulations, however, Bonneville unbundled its electric transmission services in the late 1990's, and now requires that transmission be purchased separately. EWEB purchases Network Integration Transmission Service from Bonneville. EWEB's current contract with Bonneville for transmission services expires on September 30, 2028. Bonneville expects to keep its average transmission rates relatively flat effective October 1, 2017.

Energy Northwest. Energy Northwest is a Washington municipal corporation, whose membership includes 27 Washington municipal utilities. Energy Northwest was engaged in the construction of five nuclear generation facilities (Projects Nos. 1, 2, 3, 4 and 5), of which one, the Columbia Generating Station (formerly Project No. 2) was placed in commercial operation in 1984. Construction of Projects Nos. 4 and 5 was terminated in 1982 and construction of Projects Nos. 1 and 3 was terminated in 1994. EWEB purchased a 0.061% share of Project No. 1, but is not a member of Energy Northwest. EWEB, Energy Northwest, and Bonneville entered into a separate Net Billing Agreement with respect to Energy Northwest's Project No. 1, under which EWEB purchased from Energy Northwest, and in turn, assigned to Bonneville EWEB's share of the capability of Project No. 1. Under the Net Billing Agreement, Bonneville is responsible for EWEB's percentage share of the total annual cost of Projects No. 1, including debt service on revenue bonds issued to finance the cost of construction of such Net Billed Project, whether or not the Project is completed. In 2006, Energy Northwest and Bonneville executed agreements with respect to the Net Billed Projects under which Bonneville agreed to pay directly to Energy Northwest all costs for the Net Billed Projects, including EWEB's share. Since 2006, this has resulted in no payments by, or credits to EWEB under the Net Billing Agreement. In the event that Bonneville fails to make a payment, or the parties terminate the Direct Pay Agreements, the original obligations of the Net Billing Agreements would resume. Bonneville has always met all of its obligations to Energy Northwest.

EWEB Owned Resources

Carmen-Smith and Trailbridge Hydroelectric. EWEB owns and operates the Carmen-Smith Hydroelectric Project ("Carmen-Smith Project") near the head waters of the McKenzie River in Linn County, Oregon. The Carmen-Smith Project is EWEB's largest utility-owned generation source and is a hydro peaking facility made up of three dams and two powerhouses. The Carmen-Smith Project includes the Carmen Power House with two generating units with a nameplate capacity of 52 MW each. The Carmen-Smith Project also includes the Trail Bridge re-regulating facility, with an additional generating unit with a nameplate capacity of 10 MW.

The federal operating license for the Carmen-Smith Project expired on November 30, 2008. A license application was submitted to FERC in 2006, and supplemented with a comprehensive settlement agreement, signed by State and Federal agencies, Native American tribes and non-governmental organizations, in 2008. A revised and restated Settlement Agreement, which included capital improvements for fish, wildlife and recreation enhancements, was filed with FERC in November 2016. FERC action on EWEB's license application remains pending but is expected in 2018. Since 2008, EWEB has received, and expects to continue to receive until the new license is issued, an annual operating license from FERC that allows EWEB to operate the project under the terms of the original license. Projected costs for the enhancements are included in the capital improvement plan. See "ELECTRIC SYSTEM—Capital Plan."

Leaburg-Walterville Hydroelectric. EWEB also owns and operates the Leaburg-Walterville Hydroelectric Project ("LW Project") on the McKenzie River in Lane County, Oregon. The LW Project is comprised of two run-of-river facilities located at different points on the McKenzie River. The Leaburg facility includes a diversion dam on the lower McKenzie River, a canal and two generating units with a combined nameplate capacity of 15.9 MW. The Walterville facility includes a canal that diverts water from the McKenzie River and one generating unit with a nameplate capacity of 8 MW. In 2001, FERC granted EWEB a new 40-year hydroelectric license for the LW Project.

<u>Threatened Species Issues for the Carmen-Smith and Leaburg-Walterville Hydroelectric Projects</u>. Columbia River basin bull trout, listed in 1999 as threatened by the United States Fish and Wildlife Service ("USFWS"), inhabit the mainstem and many tributaries of the McKenzie River including in and around the Carmen-Smith Project, and LW Project. In 1999, the National Marine Fisheries Service ("NMFS") listed the upper Willamette spring Chinook salmon as a threatened species. Both of these threatened species spawn in the McKenzie River. The northern spotted owl, listed in 1990 as threatened by the USFWS, inhabits old-growth forests within and adjacent to the Carmen-Smith Project. Oregon chub, listed in 1993 as endangered and delisted in 2015, inhabit the lower McKenzie River including areas within the LW Project. The formal consultation under Section 7 of the Endangered Species Act for the LW Project was completed in 2001. Project improvements were built at Leaburg-Walterville as conditions of the 2000 FERC license for the project. License conditions included screens to keep migratory listed fish out of the power canals and turbines, upstream passage improvements, minimum instream flow requirements and habitat enhancement.

The Carmen-Smith Project is near the upper range of bull trout and spring Chinook salmon habitat and is an important spawning and rearing habitat for both species. EWEB has implemented the conservation measures from the 2003 Biological Opinion, which included habitat enhancement projects and studies. The new license is expected to contain numerous enhancements for bull trout and spring Chinook salmon. Proposed project improvements in the Settlement Agreement include upstream and downstream fish passage at Trail Bridge Reservoir, wood, and gravel placement for aquatic habitat, and increased instream flows in project bypass reaches to improve habitat for listed species. Construction of Carmen-Smith Project improvements began in 2013. EWEB will continue to cooperate with and support federal and state resource agencies as they implement recovery related strategies for spring Chinook salmon and bull trout in the Project area.

International Paper Industrial Energy Center Cogeneration. EWEB and International Paper ("I.P.") (formerly Weyerhaeuser Company) cooperatively developed and jointly operate a cogeneration facility at the I.P. Springfield plant. The unit, which has a nameplate capacity of 25.4 MW (average output is approximately 20 aMW), went online in 1976 and is owned by EWEB, with I.P. providing operation support and fuel. Under terms of the current agreement (which expires in September 2019), the project operating and maintenance costs and output for this unit are shared equally by the parties. See "ELECTRIC SYSTEM—Electric System's Customers."

Stone Creek Hydroelectric. The Stone Creek project has one turbine with a peak capacity of 12 MW. This facility is on a tributary to the Clackamas River approximately 45 miles southeast of Portland. The project is a run-of-river development located between two hydroelectric facilities that are owned and operated by Portland General Electric ("PGE"). The plant was commissioned in 1993 by an independent power producer, and EWEB purchased the project in 1994. The facility is operated and maintained for EWEB by PGE, and is licensed through 2038.

Jointly Owned Resources

Foote Creek I Wind. EWEB partnered with PacifiCorp to develop the Foote Creek I Wind Project, making EWEB one of the first Oregon utilities to invest in wind power. The project began commercial operation in April 1999, and was constructed along the Foote Creek Rim in Carbon County, Wyoming, which is considered to be one of the premier wind energy development sites in the United States, with an average annual wind speed of approximately 24 miles per hour. The 41.4 MW project includes 68 0.6 MW turbine-wind machines, a substation and over 28 miles of transmission lines to connect to the existing transmission system in the area. EWEB and PacifiCorp are the joint owners of the project, with EWEB having a 21.21% ownership, which translates to 8.8 MW of the project capacity. EWEB has sold 26% or 2.3 MW of its share to Bonneville under the terms of a 25-year power purchase agreement, pursuant to which Bonneville has committed to purchase 15.3 MW of the project's total capacity. Net of sales to Bonneville, EWEB receives approximately 2.5 aMW per year from the Foote Creek I Wind Project. PacifiCorp recently expressed interest in acquiring the portion of the project owned by EWEB. If EWEB and PacifiCorp can agree on a sale, EWEB would divest or assign all rights and obligations related to the plant to PacifiCorp and be compensated based on the current value of the energy and environmental attributes of the project.

Harvest Wind. EWEB, Public Utility District of Cowlitz County, Washington, Lakeview Light and Power, and Peninsula Light Company are the joint owners of the Harvest Wind Project, with EWEB having a 20% ownership share. All project assets are held by a corporation formed by the owners. The project began commercial operations in December 2009 and has 43 2.3 MW turbines with a total nameplate capacity of 98.9 MW. The project is located along the Columbia Valley Gorge on 9,500 acres of ranch land in Klickitat County, Washington. The owners hold long-term leases with four private landowners and the Department of Natural Resources under which the landowners receive revenue from the sale of 4-5% of the project output. Annual project generation is approximately 268,860 MWh or about 31 aMW per year, yielding a capacity factor of roughly 31%. EWEB and the other owners have committed to purchase power, including related environmental attributes, from the corporation in proportion to their ownership shares through December 2029. Additionally, EWEB is committed to subsidize the initial construction of transmission lines, deposit funds to ensure contract performance and purchase transmission from the owner of the transmission lines through 2029. As of December 31, 2016, EWEB has $23.7 million invested in the Harvest Wind Project. EWEB received $445,000 in income and distributions of $1.8 million in 2016 from the project. EWEB has deposited approximately $2 million in escrow to ensure payment of its share of contingent liabilities of the corporation and transmission expenses. In 2017, EWEB and the other joint owners solicited offers to purchase all or part of the Harvest Wind Project. The sale effort is in the early stages, and no decision has been made whether to sell any or all of the Harvest Wind Project.

Western Generation Agency Cogeneration. The Western Generation Agency ("WGA") is a special purpose entity established by EWEB and Clatskanie People's Utility District ("CPUD") under ORS 190. WGA owns a cogeneration project at the Georgia Pacific mill in Wauna, Oregon (the "Wauna Cogeneration Project") with a nameplate rating of 36 MW capable of producing an average 26 MW of energy. The Wauna Cogeneration Project includes a steam turbine and a fluidized bed boiler. Bonneville purchased the output of the project under a 20 year contract that expired in April 2016. The output is now split between EWEB and CPUD through the remainder of the ownership agreement, which expires in 2021.

EWEB made an equity investment totaling $15.1 million in WGA as partial funding of the Wauna Cogeneration Project. The bond agreements for the Wauna Cogeneration Project allow EWEB to be repaid its equity investment plus a cumulative preferred dividend at 7.875% should the operating revenues of the Wauna Cogeneration Project be sufficient to cover operating costs, debt service, plus other reserve requirements. Repayment of the equity investment and preferred dividends are not guaranteed. In October 2006, WGA refunded its bonded debt. The refunding allowed repayment to EWEB for $12.1 million of its original $15.1 million investment. As of December 31, 2016, EWEB had a preferred dividend receivable of $667,000. The bond agreements limited distributions to EWEB and CPUD to $400,000 per year, each, until the Series C debt was fully redeemed. EWEB received $400,000 in 2016, and expects to receive approximately $1.7 million in 2017. EWEB's investment in WGA consists of the balance of its original equity contribution, 50% of WGA's net income and losses, and distributions of excess cash. The balance of the investment at December 31, 2016 was $3.5 million. As of June 1, 2017, WGA had $14,405,000 of project bonds outstanding.

Contract Resources

Priest Rapids Hydroelectric. EWEB purchases power from the Priest Rapids Hydroelectric Project composed of the Priest Rapids Development and the Wanapum Development, two large hydroelectric developments on the Columbia River in Washington owned by Public Utility District No. 2 of Grant County, Washington ("Grant County PUD"). The most recent power purchase contract with Grant County PUD continues through October 31, 2059. Under this renewed contract, EWEB's current right to physical power from Grant County PUD will be about 1.4 aMW per year.

Stateline Wind. In 2002, EWEB agreed to purchase 25 MW from the Stateline Wind Project located on Vansycle Ridge in the Columbia Gorge on the border between Oregon and Washington, in Walla Walla County, Washington and Umatilla County, Oregon. The project consists of 399 wind turbines with total generating capacity of about 450 MW. The contract for Stateline expires on December 31, 2026.

Klondike III Wind. EWEB agreed to purchase 25 MW (11.18%) from Phase 3 of the Klondike Wind Project located near the town of Wasco in Sherman County, Oregon. The project consists of 125 wind turbines with total generating capacity of 223.6 MW. The contract for Klondike expires on October 31, 2027.

Seneca Sustainable Energy Cogeneration. On February 25, 2010, EWEB entered into a power purchase agreement with Seneca Sustainable Energy LLC ("SSE") to purchase the output of a biomass fueled electric cogeneration facility located in Eugene, Oregon. The contract term is for 15 years commencing on the commercial date of April 5, 2011. The nameplate capacity of this project is 19.8 MW and expected average output is approximately 14 aMW.

Smith Creek Hydroelectric. The Smith Creek Project is a run-of-the-river hydroelectric project on Smith Creek, a tributary of the Kootenai River in Northern Idaho. It is comprised of three units with a combined nameplate capacity of 38.3 MW. In April 2001, EWEB took ownership of the project, which is licensed through 2037. In 2015, EWEB entered into an agreement to sell the Smith Creek Project and the sale closed at the end of June 2016. EWEB used the proceeds of the sale of the Smith Creek Project, and additional funds to defease $23.79 million of outstanding 2012 Bonds on August 1, 2016. As part of the sale, EWEB agreed to purchase the project output through June 30, 2019.

Solar PV Purchases. EWEB has a program to support the development of Solar PV generation in Eugene through the provision of net metering rates to those customers with small systems that wish to self-generate power and standard offers for long-term power purchases at fixed rates for customers with larger systems. Program participation is limited to systems of no more than 0.2 MW. As of December 31, 2016, EWEB has acquired net metering contracts with total capacity slightly over 3 MW and 0.37 aMW of energy and direct generation contracts with a total capacity slightly over 2 MW and 0.29 aMW of energy.

Trojan Nuclear Plant

EWEB, PGE and Pacific Power and Light jointly own the Trojan Nuclear Plant (the "Trojan Project"). EWEB has a 30% ownership share of the 1,130 MW Trojan Project. In 1993, PGE, which owns 67.5% of the Trojan Project and has primary operating responsibility under the terms of the Trojan Project Operating Agreement, presented EWEB, Pacific Power and Light (which owns 2.5% of the Trojan Project) and Bonneville with a proposal to terminate operation of the Trojan Project. That proposal was approved by the Trojan Project co-owners and Bonneville and operation was terminated in 1993. The final plan for decommissioning of the Trojan Project was approved by the Nuclear Regulatory Commission in early 1996. Upon execution of the Net Billing Agreements in 1970, EWEB's ownership share of the Trojan Project was assigned to Bonneville. Under the terms of that assignment agreement, EWEB receives payments equal to its share of all Trojan Project costs, including decommissioning, spent fuel storage and debt service, whether or not the Trojan Project is operable or operating, and notwithstanding the suspension, interruption, interference, reduction, or curtailment of the Trojan Project output.

Since Bonneville is obligated to pay EWEB's share of all Trojan Project costs and has provided EWEB with written assurances of its commitment to that obligation, EWEB does not expect the closure and decommissioning of the Trojan Project to have any adverse effect on the Electric System. However, if one of the parties to the Trojan Project fails to perform on their obligation for decommissioning costs, the other parties may be liable.

Integrated Electric Resource Plan

EWEB has an Integrated Electric Resource Plan that is updated periodically and primarily used to guide long-term energy resource strategy and acquisitions. It also establishes a framework enabling adaptive response to changing energy markets and regulatory environments. The current plan, adopted in January 2012, and annual updates include the following directions: (1) pursue conservation to meet forecasted load growth and (2) develop and maintain strategies to partner with customers to avoid the need for new peaking power plants. EWEB's adopted plan and update shows that sufficient resources are available to meet its customers' supply requirements for the next 10 years.

Conservation and Renewable Energy

EWEB is acquiring demand-side energy resources through efficiency improvements in customers' end use applications and the installation of decentralized renewable energy devices such as solar electric systems. Among the programs currently being offered are: increased home insulation, high-efficiency heat pumps and water heaters, energy efficient residential and commercial new construction, high-efficiency commercial lighting, efficiency improvements in commercial and institutional buildings and efficiency improvements to industrial processes.

Through 2016, EWEB's conservation programs have saved approximately 157 million kilowatt hours, which is estimated to have reduced total demand by 5.8% below what it would have been without the conservation programs.

Environmental Matters

EWEB is engaged in environmental compliance, investigation and remediation efforts in its ordinary course of business. In the opinion of management, the ultimate outcome of these matters will not have a material effect on EWEB's financial position beyond amounts already accrued as of December 31, 2016.

EWEB updated its Environmental Policy in March 2016, to guide the utility in compliance, environmental planning, greenhouse gas emissions reduction, waste minimization, water and energy conservation, watershed protection, natural and cultural resource protection, transportation, and employee education. EWEB is committed to environmental protection and resource conservation, as demonstrated by its waste minimization, hazardous materials product substitution, transformer reclassification, and waste oil, antifreeze, and scrap metal recycling efforts. EWEB also invests in watershed protection to safeguard Eugene's sole source of drinking water in a way that aligns with FERC compliance efforts associated with the Carmen-Smith and Leaburg-Walterville hydroelectric generation facilities in the McKenzie Watershed. EWEB recognizes the importance of being proactive in responding to a hazardous spill or other emergencies that could threaten McKenzie River water quality, and has worked with dozens of federal, State and local agencies to implement the McKenzie Watershed Emergency Response System ("MWERS"). Incident commanders use MWERS to quickly gain access to crucial information, equipment and trained people, making their response more effective. Interagency response trailers are staged at critical areas in the watershed to facilitate an effective response to spills. Employees of EWEB are responsible for monitoring compliance with federal, State and local environmental laws and regulations and for the development of EWEB's environmental policies and guidelines.

Electric utilities are subject to continuing environmental regulation. Federal, State and local standards and procedures, which apply to the environmental impacts of electric utilities, are subject to change. These changes may arise from continuing legislative, regulatory and judicial action regarding such standards and procedures. Consequently, there is no assurance that the current laws and regulations to which EWEB and its operations are subject will not change. Further, there is no assurance that EWEB or its facilities will be able to comply in all respects with any future standards, especially those that are applied retroactively, or that such additional revised statutes, regulations or orders will not subject EWEB to substantial additional capital or other costs.

Environmental Legislation and Climate Change

Oregon Renewable Energy Act. In 2007, the State enacted Senate Bill 838, known as the Oregon Renewable Energy Act (the "Act") requiring electric utilities to comply with a Renewable Portfolio Standard starting in 2011 whereby a percentage of annual sales to customers must come from qualifying renewable resources. For a utility the size of EWEB, the Act requires that at least 5% of the electricity sold must be from qualified renewable resources by 2011, 15% by 2015, 20% by 2020, and 25% by 2025. There are exemptions in the Act that allow EWEB to reduce the annual compliance target if complying would cause the utility to replace its non-fossil resources with new qualifying renewable resources. Because EWEB's power portfolio is overwhelmingly made up of hydro power, EWEB does not forecast any need to acquire additional qualifying renewable resources to meet the Renewable Portfolio Standard in the near future.

Climate Change. Various federal energy legislation proposals could set national standards for renewable energy generation, conservation efforts, and encourage greenhouse gas reduction. Bonneville participated in formulating rules to implement the standards.

Federal, regional, state and international initiatives have been proposed or adopted to address global climate change by controlling or monitoring greenhouse gas emissions, by encouraging renewable energy development and by implementing other measures. EWEB cannot predict whether or when new laws and regulations or proposed initiatives would take effect and, if so, how they would affect EWEB. The physical effects of climate change could affect the generation capability of Bonneville to meet the loads of its power purchasers, including EWEB. Bonneville's generating capacity is primarily hydroelectric generation and is reliant on precipitation and snow pack. Climate change could affect the amount, timing and availability of hydroelectric generation, which could result in increased costs to EWEB. To gain a better understanding of this risk, EWEB continues to support and engage in research at Oregon State University and the University of Oregon around predicting climate change impacts and developing systems that increase resiliency to these impacts. These efforts include understanding the scope, scale and applicability of micro grids that add resiliency to the system and maintain business continuity for critical services, implementing a monitoring system that is sensitive to climate change impacts, modeling basin-wide hydrology and predicting flows based on snow pack, and investing in watershed protection that aligns with partner investments for restoration and conservation actions that help mitigate impacts.

Various Factors Affecting the Electric Utility Industry

The electric utility industry in general has been, or in the future may be, affected by a number of factors which could impact the financial condition and competitiveness of many electric utilities and the level of utilization of generating and transmission facilities. Such factors include, among others, (1) effects of compliance with changing environmental, safety, licensing, regulatory and legislative requirements, (2) changes resulting from conservation and demand-side management programs on the timing and use of electric energy, (3) changes resulting from a national energy policy, (4) effects of competition from other electric utilities (including increased competition resulting from mergers, acquisitions, and "strategic alliances" of competing electric and natural gas utilities and from competitors transmitting less expensive electricity from much greater distances over an interconnected system) and new methods of, and new facilities for, producing low-cost electricity, (5) State laws and regulations and judicial or legislative action or inaction, (6) Federal laws and regulations and judicial or congressional action or inaction, including legislation impacting Bonneville, (7) increased competition from independent power producers and marketers, brokers and federal power marketing agencies, (8) issues integrating wind generation, (9) cybersecurity and other security breaches, (10) "self-generation" or "distributed generation" (such as microturbines and fuel cells) by industrial and commercial customers and others, (11) issues relating to the ability to issue tax-exempt obligations, including severe restrictions on the ability to sell to nongovernmental entities electricity from generation projects and transmission service from transmission line projects financed with outstanding tax-exempt obligations, (12) increased operating and maintenance costs, (13) changes from projected future load requirements, (14) increases in costs and uncertain availability of capital, (15) shifts in the availability and relative costs of different fuels (including the low cost of natural gas), (16) increases in the price of energy purchased on the open market that may occur in times of high peak demand in an area of the country experiencing such high peak demand, such as has occurred in California and the Pacific Northwest, (17) inadequate risk management procedures and practices with respect to, among other things, the purchase and sale of energy and transmission capacity, (18) other legislative changes, voter initiatives, referenda and statewide propositions, (19) effects of the changes in the economy, (20) effects of possible manipulation of the electric markets, (21) natural disasters or other physical calamities, including, but not limited to, earthquakes, lahars, wind storms, floods and droughts, (22) man-made physical and operational disasters, including, but not limited to, terrorism, cyber-attacks and collateral damage from computer viruses, and (23) changes to the climate. See "CERTAIN INVESTMENT CONSIDERATIONS—Natural Disasters." Any of these factors (as well as other factors) could have an adverse effect on the financial condition of any given electric utility, including EWEB, and likely will affect individual utilities in different ways.

EWEB is unable to predict what impact such factors will have on its business operations and financial condition. This Official Statement includes a brief discussion of certain of these factors. This discussion does not purport to be comprehensive or definitive, and these matters are subject to change subsequent to the date hereof. Extensive information on the electric utility industry is available from the legislative and regulatory bodies and other sources in the public domain, and potential purchasers of the Series 2017 Bonds should obtain and review such information.

GENERAL AND ECONOMIC INFORMATION

The City of Eugene, incorporated in 1862, covers 43.9 square miles in Lane County (the "County"), at the southern end of the Willamette Valley. The City is the center of government and education in the County and is the location of the University of Oregon, Lane Community College and offices of County, State and Federal government agencies. It is the second largest city in the State, with a 2016 population of 165,885 or about 45% of the County's population of 365,940. The City and the neighboring city of Springfield are contiguous, sharing Interstate 5 as a boundary and forming a metropolitan area that dominates the economy of the County. Springfield is the tenth largest city in the State, with a 2016 population of 60,140. For statistical purposes, the entire County comprises the Eugene-Springfield Metropolitan Statistical Area.

Employment

Employment and unemployment data are presented for the Eugene-Springfield Metropolitan Statistical Area ("MSA"), which consists of all of Lane County.

Labor Force by Place of Residence
Eugene-Springfield MSA (Lane County)

Year	Civilian Labor Force	Number Unemployed	Employment
2012	172,255	15,349	156,906
2013	167,211	13,423	153,788
2014	169,238	11,715	157,523
2015	172,528	10,041	162,487
2016	179,242	9,230	170,012

Notes: The National Compensation Survey defines Civilian Workers as the sum of all private industry and State and local government workers. Federal Government, military and agricultural workers are excluded. Numbers may not add due to rounding.

Source: Bureau of Labor Statistics.

Eugene-Springfield MSA
Annual Average Employment and Percent Distribution by Industry

Industry	2015 Annual Average	2015 Percent of Total	2016 Annual Average	2016 Percent of Total	Percent Change
Total Nonfarm Employment	152,200	100.00%	156,800	100.00%	3.02%
Total Private	122,500	80.49	126,400	80.61	3.18
Mining and Logging	1,000	0.66	900	0.57	(10.00)
Construction	6,100	4.01	6,500	4.15	6.56
Manufacturing	13,200	8.67	13,600	8.67	3.03
Durable Goods	8,700	5.72	8,800	5.61	1.15
Wood Product Manufacturing	3,300	2.17	3,300	2.10	0.00
Transportation Equipment Manufacturing	500	0.33	500	0.32	0.00
Nondurable Goods	4,500	2.96	4,700	3.00	4.44
Trade, Transportation and Utilities	29,600	19.45	30,000	19.13	1.35
Wholesale Trade	6,100	4.01	6,300	4.02	3.28
Retail Trade	20,000	13.14	20,400	13.01	2.00
Food and Beverage Stores	4,300	2.83	4,500	2.87	4.65
Transportation, Warehousing and Utilities	3,400	2.23	3,400	2.17	0.00
Information	3,200	2.10	3,000	1.91	(6.25)
Financial Activities	7,700	5.06	7,700	4.91	0.00
Professional and Business Services	16,500	10.84	17,600	11.22	6.67
Administrative and Support Services	8,200	5.39	8,800	5.61	7.32
Educational and Health Services	24,100	15.83	24,900	15.88	3.32
Health Care and Social Assistance	22,300	14.65	23,100	14.73	3.59
Leisure and Hospitality	16,300	10.71	16,900	10.78	3.68
Accommodation and Food Services	14,300	9.40	14,900	9.50	4.20
Food Services and Drinking Places	12,600	8.28	13,100	8.35	3.97
Other Services	5,000	3.29	5,300	3.38	6.00
Government	29,700	19.51	30,400	19.39	2.36
Federal Government	1,600	1.05	1,700	1.08	6.25
State Government	3,100	2.04	3,300	2.10	6.45
Local Government	25,000	16.43	25,300	16.14	1.20
Local Education	18,200	11.96	18,400	11.73	1.10

Note: Many sub-categories are not shown. Numbers may not add due to rounding.
Source: Oregon Employment Department, QualityInfo.org.

The annual average unemployment rates for the City, the County, the State and the United States from 2011 through 2016 are as follows.

Average Annual Unemployment
(As a percent of Labor Force)

Year	City of Eugene	Lane County	State of Oregon	United States
2012	9.1%	8.9%	8.8%	8.1%
2013	8.2	8.0	7.9	7.4
2014	6.7	6.9	6.8	6.2
2015	6.5	5.8	5.6	5.3
2016	4.7	5.1	4.9	4.9

Note: These are not seasonally adjusted numbers
Source: Bureau of Labor Statistics & Oregon Employment Department, QualityInfo.org. and City of Eugene Comprehensive Annual Financial Report 2016.

Housing

The National Association of Realtors data indicate the median sales price of existing single family homes in the Eugene-Springfield MSA climbed to $239,700 in 2016. This was a 7.9% increase over the median sales price of $222,200 reported in 2015 and a 13.9% increase over the 2014 median sales price of $210,400. Preliminary data for the first quarter of 2017 indicates a median sales price of $245,800.

Construction Activity

Building permits and valuation for new construction and additions/alterations in the City from 2011 through 2016 are shown in the following table.

Building Permits and Valuation
City of Eugene

	New Buildings				Additions/Alterations			
	Residential		Non-Residential		Residential		Non-Residential	
Year	Number of Permits	Value ($000,000)	Number of Permits	Value ($000,000)	Number of Permits	Value ($000,000)	Number of Permits	Value ($000,000)
2012	181	$ 74.1	31	$28.7	619	$12.0	672	$48.5
2013	209	84.1	47	73.0	606	12.7	626	94.4
2014	294	217.7	48	51.5	566	12.4	664	65.9
2015	284	89.9	46	47.3	617	12.0	642	98.8
2016	355	108.0	55	59.4	624	12.5	612	92.6

Note: Excludes mobile homes; public buildings are included under non-residential.
Source: City of Eugene, Planning and Development Department, June 28, 2017.

The University of Oregon

The University of Oregon (the "University"), founded in 1876, is located on a 295-acre campus in Eugene. Enrollment at this State liberal arts university is approximately 23,600 students. The University employs approximately 5,500, including faculty, graduate assistants and administrative and classified staff (not including temporary and student workers). The University is a major public research institution. It is composed of a College of Arts and Sciences, honors college, school of dance and art, graduate school and six professional schools: education, business, law, music, architecture, and journalism.

Healthcare

The City's largest employer and medical services provider is PeaceHealth Medical Group. PeaceHealth operates the 338 bed RiverBend Regional Medical Center in Springfield's Gateway area, as well as the 104 bed Sacred Heart Medical Center – University District in the City. The RiverBend facility is the largest hospital between the cities of Portland and San Francisco and the only Level II trauma center in the County.

Additional Economic and Demographic Tables

The following tables present data for the Eugene-Springfield Metropolitan Statistical Area, and for the City when available. The tables provide additional information about the economic and demographic nature of the City.

Population Estimates

Year	City of Eugene	Percent Change	Lane County	Percent Change	State of Oregon	Percent Change
2012	158,335	0.8%	354,200	0.3%	3,883,735	0.7%
2013	159,580	0.8	356,125	0.5	3,919,020	0.9
2014	160,775	0.7	358,805	0.8	3,962,710	1.1
2015	163,400	1.6	362,150	0.9	4,013,845	1.3
2016	165,885	1.5	365,940	1.0	4,076,350	1.6

Source: Population Research Center at Portland State University.

Personal Income

	Personal Income ($000)	Per Capita Personal Income		
Year	Lane County	Lane County	State of Oregon	United States
2011	12,175,709	34,430	37,387	42,454
2012	12,696,903	35,805	39,105	44,274
2013	12,760,064	35,878	39,498	44,483
2014	13,575,594	37,867	41,690	46,454
2015(1)	14,468,971	39,871	43,783	48,183

(1) Latest data available.
Source: U.S. Department of Commerce, Bureau of Economic Analysis

Top Ten Employers in the Lane County (2016)

Employer	Employees(1)	Percentage of Total County Employment
PeaceHealth Medical Group	5,500	3.33%
University of Oregon	5,479	3.31
U.S. Government	1,669	1.01
State of Oregon	1,656	1.00
City of Eugene	1,463	0.89
Lane County	1,369	0.83
Springfield School District	1,242	0.75
Eugene School District 4J	1,198	0.72
Lane Community College	943	0.57
McKenzie-Willamette Medical Center	880	0.53
Total	21,330	12.94%

(1) Employee count is for the 1st Quarter of 2016 and percent of county employment is as of January 1st of each year.
Source: Lane County 2016 Comprehensive Annual Financial Report.

CERTAIN INVESTMENT CONSIDERATIONS

The purchase of the Series 2017 Bonds involves investment risk. Prospective purchasers of the Series 2017 Bonds should consider carefully all of the information set forth in this Official Statement, including its appendices, evaluate the investment considerations and merits of an investment in the Series 2017 Bonds and confer with their own tax and financial advisors when considering a purchase of the Series 2017 Bonds. The following includes certain additional investment considerations.

Initiatives and Referendum

The Oregon Constitution, Article IV, Sec. 1, reserves to the people of the State (1) the initiative power to amend the State constitution or to enact State legislation by placing measures on the statewide general election ballot for consideration by voters and (2) the referendum power to approve or reject at an election any act passed by the Legislative Assembly that does not become effective earlier than 90 days after the end of the legislative session. The Legislative Assembly may also refer an act to the voters for approval or rejection.

State law permits any person to file a proposed initiative with the Secretary of State's office without payment of fees or other burdensome requirements. Although a large number of initiative measures are submitted to the Secretary of State's office, a much smaller number of petitions contain sufficient signatures to be placed on the ballot.

Proposed Initiative Measures that Qualify to be Placed on the Ballot

To place a proposed initiative on a general election ballot, the proponents must submit to the Secretary of State initiative petitions signed by the number of qualified voters equal to a specified percentage of the total number of votes cast for all candidates for governor at the gubernatorial election at which a governor was elected for a term of four years next preceding the filing of the petition with the Secretary of State. For the 2018 general election, the requirement is 8% (117,578 signatures) for a constitutional amendment measure and 6% (88,184 signatures) for a statutory initiative. Any elector may sign an initiative petition for any measure on which the elector is entitled to vote.

The initiative petition must be submitted to the Secretary of State not less than four months prior to the general election at which the proposed measure is to be voted upon. As a practical matter, proponents of an initiative have approximately two years in which to gather the necessary number of signatures. State law permits persons circulating initiative petitions to pay money to persons obtaining signatures for the petition.

Once an initiative measure has gathered a sufficient number of signatures and qualified for placement on the ballot, the State is required to prepare a formal estimate of the measure's financial impact. Typically, this estimate is limited to an evaluation of the direct dollar impact. Historically, a larger number of initiative measures have qualified for the ballot than have been approved by the electors. According to the Elections Division of the Secretary of State, the total number of initiative petitions that qualified for the ballot and the numbers that passed in recent general elections are provided in the following table.

Historical Initiative Measures – General Elections

Year of General Election	Number of Initiatives that Qualified	Number of Initiatives that Passed
2002	7	3
2004	6	2
2006	10	3
2008	8	0
2010	4	2
2012	7	2
2014	4	2
2016	4	3

NOTE: The Secretary of State posts a listing of initiatives on its website (www.sos.state.or.us).
Source: Elections Division, Oregon Secretary of State.

Future Initiative Measures

The recent experience in the State is that many more initiative measures are proposed in some form than receive the number of signatures required to be placed on a ballot. Consequently, EWEB cannot accurately predict whether specific future initiative measures that may have an adverse effect on EWEB's financial operations will be proposed, obtain sufficient signatures, and be placed on a ballot for voter approval, or if placed on a ballot, will be approved by voters. The Oregon Secretary of State's office maintains a website (www.sos.state.or.us) which lists all initiative petitions which have been submitted.

Referendum Petitions and Legislative Referrals

Within 90 days after the end of a legislative session, any person may file a petition seeking to have any act passed by the Legislative Assembly that does not become effective earlier than 90 days after the end of the legislative session referred to the voters for their approval or rejection at the next general election, or at a special election provided for by the Legislative Assembly. To place a proposed referendum on the ballot, the proponents must submit to the Secretary of State within 90 days after the end of the legislative session referendum petitions signed by the number of qualified voters equal to 4% of the total number of votes cast for all candidates for governor at the gubernatorial election at which a governor was elected for a term of four years next preceding the filing of the petition with the Secretary of State. For the 2016 general election, that requirement was 58,789 signatures. Any elector may sign a referendum petition for any measure on which the elector is entitled to vote. An act approved by the voters through the referendum process becomes effective 30 days after the date of the election at which it was approved. A referendum on part of an act does not prevent the remainder of the act from becoming effective as provided in the act.

City Charter

In addition to statutory and constitutional changes by the Legislative Assembly and the initiative and referendum process, the independent basis of legislative authority has been granted to cities in Oregon by municipal charters. A copy of the City Charter is available on the City's website.

Protection of Rate Covenants

The obligation to comply with rate covenants despite subsequently approved conflicting initiative petitions has been tested in the courts and is also the subject of recent legislation. In *AMBAC Indemnity Corporation v. City of Oregon City*, Civil No. 96-865-JO, the United States District Court in Portland, Oregon considered a case in which Oregon City voters approved a ballot measure in 1996 that rolled back electric rates to those that had been in effect in 1994 and prohibited future rate increases without voter approval. Plaintiffs alleged that the measure violated existing rate covenants with respect to outstanding electric revenue bonds, and the District Court agreed. The court ruled, with respect to holders of outstanding bonds, that the rollback of rates and prohibition on rate increases substantially impaired the contractual relationship between Oregon City and its bondholders. The court based its finding on testimony that alternative revenue sources were not sufficient, and that the city would be unable to make debt service payments if it could not raise rates. The measure was therefore a substantial impairment of an existing contract.

In addition to the above ruling, the Oregon Legislative Assembly approved House Bill 2181, a statutory amendment which, among other things, provides additional protection for revenue pledges securing bonds or other obligations. House Bill 2181 was signed by the Governor of the State of Oregon on May 25, 1997. In relevant part, House Bill 2181 amended Oregon Revised Statutes 288.594 (now ORS 287A.325) and provides that any initiative or referendum measure which changes statutory or charter provisions affecting rates, fees, tolls, rental or other charges will not be given effect if to do so would impair existing covenants regarding the imposition, levy or collection of such rates, fees, tolls, rentals or other charges pledged to secure outstanding bonds or other obligations.

Limitations on Remedies

Any remedies available to the owners of the Series 2017 Bonds upon the occurrence of an Event of Default under the Bond Resolution are in many respects dependent upon judicial actions which are in turn often subject to discretion and delay and could be both expensive and time-consuming to obtain. If EWEB fails to comply with its covenants under the Bond Resolution or to pay principal of or interest on the Series 2017 Bonds, there can be no assurance that available remedies will be adequate to fully protect the interests of the owners of the Series 2017 Bonds. See Appendix A—"COPY OF THE BOND RESOLUTION."

Under ORS 287A.310(8) and (9), a pledgee may commence an action in a court of competent jurisdiction to foreclose the lien of the pledge and exercise rights and remedies available to the pledgee under the operative document and may foreclose the lien of the pledge by applying the moneys or property in the fund to the payment of the bonds subject to the terms, conditions and limitations in the operative document.

In addition to the limitations on remedies contained in State law, the rights and obligations under the Series 2017 Bonds and the Bond Resolution may be limited by and are subject to bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium, and other laws relating to or affecting creditors' rights, to the application of equitable principles, and to the exercise of judicial discretion in appropriate cases.

The legal opinion of Bond Counsel regarding the validity of the Series 2017 Bonds will be qualified by reference to bankruptcy, insolvency, moratorium, reorganization or other similar laws of general application affecting the rights of creditors and by the application of equitable principles and the exercise of judicial discretion.

Bankruptcy

A municipality such as EWEB must be specifically authorized under state law in order to seek relief under Chapter 9 of the United States Bankruptcy Code (the "Bankruptcy Code"). A creditor cannot bring an involuntary bankruptcy proceeding against a municipality, including EWEB. Under Chapter 9, a federal bankruptcy court may not appoint a receiver for a municipality or order the dissolution or liquidation of the municipality. The federal bankruptcy courts have some discretionary powers under the Bankruptcy Code. Under current Oregon law, cities in Oregon are not authorized to seek bankruptcy relief. Should the law change and EWEB files for bankruptcy, there could be adverse effects on the holders of the Outstanding Bonds, the Series 2017 Bonds and any Additional Bonds.

Under the Bankruptcy Code, if EWEB became a debtor in a federal bankruptcy proceeding, the owners of the Outstanding Bonds, the Series 2017 Bonds and any Additional Bonds would continue to have a statutory lien on Revenues after the commencement of the bankruptcy case so long as the Revenues constitute "special revenues" within the meaning of the Bankruptcy Code. "Special revenues" are defined under the Bankruptcy Code to include, among other things, receipts by local governments from the ownership, operation or disposition of projects or systems that are primarily used to provide utility services. The Bankruptcy Code provides that "special revenues" can be applied to necessary operating expenses of the project or system, before they are applied to other obligations. It is not clear which expenses would constitute necessary operating expenses.

If EWEB is in bankruptcy, parties (including the Trustee and the holders of the Series 2017 Bonds) may be prohibited from taking any action to collect any amount from EWEB or to enforce any obligation of EWEB, unless the permission of the bankruptcy court is obtained.

Seismic and Other Natural Disasters

EWEB's facilities are in an area of seismic activity, with frequent small earthquakes and occasional moderate and larger earthquakes. EWEB can give no assurance regarding the effect of an earthquake, a volcano, mudslide, windstorm, drought, or other natural disaster or that proceeds of insurance carried by EWEB would be sufficient, if available, to rebuild and reopen EWEB's facilities or that EWEB's facilities or surrounding facilities and infrastructure could or would be rebuilt and reopened in a timely manner following a major earthquake or other natural disaster.

TAX MATTERS

Tax Exemption

Exclusion from Gross Income. In the opinion of Bond Counsel, under existing federal law and assuming compliance with applicable requirements of the Internal Revenue Code of 1986, as amended (the "Code"), that must be satisfied subsequent to the issue date of the Series 2017 Bonds, interest on the Series 2017 Bonds is excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the alternative minimum tax applicable to individuals.

Bond Counsel is also of the opinion that interest on the Series 2017 Bonds is exempt from State of Oregon individual and corporate income taxes.

Continuing Requirements. EWEB is required to comply with certain requirements of the Code after the date of issuance of the Series 2017 Bonds in order to maintain the exclusion of the interest on the Series 2017 Bonds from gross income for federal income tax purposes, including, without limitation, requirements concerning the qualified use of Series 2017 Bond proceeds and the facilities financed or refinanced with Series 2017 Bond proceeds, limitations on investing gross proceeds of the Series 2017 Bonds in higher yielding investments in certain circumstances, and the requirement to comply with the arbitrage rebate requirement to the extent applicable to the Series 2017 Bonds. EWEB expects to covenant to comply with those requirements, but if EWEB fails to comply with those requirements, interest on the Series 2017 Bonds could become taxable retroactive to the date of issuance of the Series 2017 Bonds. Bond Counsel has not undertaken and does not undertake to monitor EWEB's compliance with such requirements.

Corporate Alternative Minimum Tax. While interest on the Series 2017 Bonds also is not an item of tax preference for purposes of the alternative minimum tax applicable to corporations, under Section 55 of the Code, tax-exempt interest, including interest on the Series 2017 Bonds, received by corporations is taken into account in the computation of adjusted current earnings for purposes of the alternative minimum tax applicable to corporations (as defined for federal income tax purposes). Under the Code, alternative minimum taxable income of a corporation will be increased by 75% of the excess of the corporation's adjusted current earnings (including any tax exempt interest) over the corporation's alternative minimum taxable income determined without regard to such increase. A corporation's alternative minimum taxable income, so computed, that is in excess of an exemption of $40,000, which exemption will be reduced (but not below zero) by 25% of the amount by which the corporation's alternative minimum taxable income exceeds $150,000, is then subject to a 20% minimum tax.

A small business corporation is exempt from the corporate alternative minimum tax for any taxable year beginning after December 31, 1997, if its average annual gross receipts during the three-taxable-year period beginning after December 31, 1993, did not exceed $5,000,000, and its average annual gross receipts during each successive three-taxable-year period thereafter ending before the relevant taxable year did not exceed $7,500,000.

Tax on Certain Passive Investment Income of S Corporations. Under Section 1375 of the Code, certain excess net passive investment income, including interest on the Series 2017 Bonds, received by an S corporation (a corporation treated as a partnership for most federal tax purposes) that has Subchapter C earnings and profits at the close of the taxable year may be subject to federal income taxation at the highest rate applicable to corporations if more than 25% of the gross receipts of such S corporation is passive investment income.

Foreign Branch Profits Tax. Interest on the Series 2017 Bonds may be subject to the foreign branch profits tax imposed by Section 884 of the Code when the Series 2017 Bonds are owned by, and effectively connected with a trade or business of, a United States branch of a foreign corporation.

Possible Consequences of Tax Compliance Audit. The Internal Revenue Service (the "IRS") has established a general audit program to determine whether issuers of tax-exempt obligations, such as the Series 2017 Bonds, are in compliance with requirements of the Code that must be satisfied in order for interest on those obligations to be, and continue to be, excluded from gross income for federal income tax purposes. Bond Counsel cannot predict whether the IRS would commence an audit of the Series 2017 Bonds. Depending on all the facts and circumstances and the type of audit involved, it is possible that commencement of an audit of the Series 2017 Bonds could adversely affect the market value and liquidity of the Series 2017 Bonds until the audit is concluded, regardless of its ultimate outcome.

Certain Other Federal Tax Consequences

Series 2017 Bonds Not "Qualified Tax-Exempt Obligations" for Financial Institutions. Section 265 of the Code provides that 100% of any interest expense incurred by banks and other financial institutions for interest allocable to tax-exempt obligations acquired after August 7, 1986, will be disallowed as a tax deduction. However, if the tax-exempt obligations are obligations other than private activity bonds, are issued by a governmental unit that, together with all entities subordinate to it, does not reasonably anticipate issuing more than $10,000,000 of tax-exempt obligations (other than private activity bonds and other obligations not required to be included in such calculation) in the current calendar year, and are designated by the governmental unit as "qualified tax-exempt obligations," only 20% of any interest expense deduction allocable to those obligations will be disallowed.

EWEB is a governmental unit that, together with all subordinate entities, reasonably anticipates issuing more than $10,000,000 of tax-exempt obligations (other than private activity bonds and other obligations not required to be included in such calculation) during the current calendar year and has **not** designated the Series 2017 Bonds as "qualified tax-exempt obligations" for purposes of the 80% financial institution interest expense deduction. Therefore, no interest expense of a financial institution allocable to the Series 2017 Bonds is deductible for federal income tax purposes.

Reduction of Loss Reserve Deductions for Property and Casualty Insurance Companies. Under Section 832 of the Code, interest on the Series 2017 Bonds received by property and casualty insurance companies will reduce tax deductions for loss reserves otherwise available to such companies by an amount equal to 15% of tax exempt interest received during the taxable year.

Effect on Certain Social Security and Retirement Benefits. Section 86 of the Code requires recipients of certain Social Security and certain Railroad Retirement benefits to take receipts or accruals of interest on the Series 2017 Bonds into account in determining gross income.

Other Possible Federal Tax Consequences. Receipt of interest on the Series 2017 Bonds may have other federal tax consequences as to which prospective purchasers of the Series 2017 Bonds may wish to consult their own tax advisors.

Potential Future Federal Tax Law Changes. From time to time, there are legislative proposals in Congress which, if enacted into law, could adversely affect the tax treatment, market value or marketability of the Series 2017 Bonds. It cannot be predicted whether future legislation may be proposed or enacted that would affect the federal tax treatment of interest received on the Bonds. Prospective purchasers of the Series 2017 Bonds should consult with their own tax advisors regarding any proposed or pending legislation that would change the federal tax treatment of interest on the Series 2017 Bonds.

UNDERWRITING AND LEGAL INFORMATION

Ratings

As noted on the cover page of this Official Statement, Moody's Investors Service Inc., S&P Global Ratings and Fitch Ratings have assigned ratings on the Series 2017 Bonds of ____, ____ and ____, respectively. EWEB furnished certain information and materials to the rating agencies regarding the Series 2017 Bonds, the City and EWEB. Generally, rating agencies base their ratings on the information and materials furnished to them and on their own investigations, studies and assumptions. Such ratings will reflect only the respective views of such rating agencies and are not a recommendation to buy, sell or hold the Series 2017 Bonds. An explanation of the significance of such ratings may be obtained from any of the rating agencies furnishing the same.

There is no assurance that such ratings will be maintained for any given period of time or that they may not be raised, lowered, suspended, or withdrawn entirely by the rating agencies, or any of them, if in their or its judgment, circumstances warrant. Any such downward change in or suspension or withdrawal of such ratings may have an adverse effect on the market price of the Series 2017 Bonds. The City and EWEB undertake no responsibility to oppose any such change or withdrawal.

Litigation

There is no litigation or other proceedings pending, or to the knowledge of EWEB, threatened, questioning the existence of EWEB, or the title of the officers of EWEB to their respective offices, or restraining or enjoining the issuance, sale or delivery of the Series 2017 Bonds or in any way questioning or affecting the validity of any provision of the Series 2017 Bonds, the Resolution, or the power and authority of EWEB to issue the Series 2017 Bonds or to fix rates and collect charges for power furnished by EWEB.

EWEB is involved in various litigation relating to its operations in its normal course of business. In the opinion of management, the ultimate outcome of these claims will not have a material effect on EWEB's financial position beyond amounts already accrued as of December 31, 2016.

Approval of Counsel

Legal matters incident to the authorization, issuance and sale of the Series 2017 Bonds by EWEB are subject to the approving legal opinion of Foster Pepper PLLC, Bond Counsel, Seattle, Washington. The form of the opinion of Bond Counsel with respect to the Series 2017 Bonds is attached as Appendix B. The opinion of Bond Counsel is given based on factual representations made to Bond Counsel, and under existing law, as of the date of initial delivery of the Series 2017 Bonds, and Bond Counsel assumes no obligation to revise or supplement its opinion to reflect any facts or circumstances that may thereafter come to its attention, or any changes in law that may thereafter occur. The opinion of Bond Counsel is an expression of its professional judgment on the matters expressly addressed in its opinion and does not constitute a guarantee of result. Bond Counsel will be compensated only upon the issuance and sale of the Series 2017 Bonds. Foster Pepper PLLC is also serving as Disclosure Counsel to EWEB in connection with the issuance of the Series 2017 Bonds.

Certain legal matters will be passed on for the Underwriter by Pacifica Law Group LLP, Seattle, Washington, Counsel to the Underwriter. Any opinion of such firm will be addressed solely to the Underwriter, will be limited in scope, and cannot be relied upon by investors.

Underwriting

The Series 2017 Bonds are being purchased by RBC Capital Markets, LLC (the "Underwriter") at a price of $_________ (representing the par amount of the Series 2017 Bonds plus an original issue premium of $_________, less an underwriter's discount of $________). The Bond Purchase Agreement between EWEB and the Underwriter provides that the Underwriter will purchase all of the Series 2017 Bonds if any are purchased and that the purchasers of the Series 2017 Bonds are subject to the conditions set forth in that Bond Purchase Agreement.

The Underwriter may offer and sell the Series 2017 Bonds to certain dealers or unit investment trusts and money market or other funds and others at lower prices than the initial offering prices corresponding to the yields set forth on the inside cover page of this Official Statement, and such initial offering prices may be changed from time to time by the Underwriter without notice.

The Underwriter and its respective affiliates are full-service financial institutions engaged in various activities that may include securities trading, commercial and investment banking, municipal advisory, brokerage, and asset management. In the ordinary course of business, the Underwriter and its respective affiliates may actively trade debt and, if applicable, equity securities (or related derivative securities) and provide financial instruments (which may include bank loans, credit support or interest rate swaps). The Underwriter and its respective affiliates may engage in transactions for their own accounts involving the securities and instruments made the subject of this securities offering or other offering of EWEB. The Underwriter and its respective affiliates may make a market in credit default swaps with respect to municipal securities in the future. The Underwriter and its respective affiliates may also communicate independent investment recommendations, market color or trading ideas and publish independent research views in respect of this securities offering or other offerings of EWEB.

Financial Advisor

Piper Jaffray & Co. has served as financial advisor to EWEB relative to the preparation of the Series 2017 Bonds for sale and other matters relating to the Series 2017 Bonds. The financial advisor has not audited, authenticated or otherwise verified the information set forth in this Official Statement or other information relative to the Series 2017 Bonds. The financial advisor makes no guaranty, warranty or other representation on any matter related to the information contained in this Official Statement. A portion of the financial advisor's compensation is not contingent upon the successful delivery of the Series 2017 Bonds.

Trustee

EWEB has appointed U.S. Bank National Association as Trustee for the Series 2017 Bonds. The Trustee is to carry out such duties as are assigned to it under the Bond Resolution, which provide that the Trustee is undertaking no duties except in accordance with the terms of the Bond Resolution. Except for the contents of this paragraph, the Trustee has not reviewed or participated in the preparation of this Official Statement and assumes no responsibility for the nature, contents, accuracy or completeness of the information set forth in this Official Statement.

Conflicts of Interest

All or a portion of the fees of the Underwriter, Underwriter's Counsel, Financial Advisor, Bond Counsel and Disclosure Counsel are contingent upon the issuance and sale of the Series 2017 Bonds. From time to time, Bond Counsel serves as counsel to the Financial Advisor in transactions unrelated to the issuance and sale of the Series 2017 Bonds. From time to time, Underwriter's Counsel serves as counsel to the Financial Advisor in matters unrelated to the issuance and sale of the Series 2017 Bonds. None of the Commissioners or other officers of EWEB or the City have any conflict of interest in the issuance of the Series 2017 Bonds that is prohibited by applicable law.

CONTINUING DISCLOSURE

Rule 15c2-12 of the United States Securities and Exchange Commission (the "Rule") requires annual disclosure of current financial information and timely disclosure of certain events with respect to the Series 2017 Bonds. Pursuant to the Rule, EWEB has agreed to provide the Municipal Securities Rulemaking Board (the "MSRB") audited financial information of EWEB and certain financial information or operating data. In addition, EWEB has agreed to provide the MSRB notice of certain events, pursuant to the requirements of Section (b)(5)(i) of the Rule. A copy of EWEB's Continuing Disclosure Certificate is attached hereto as Appendix D.

EWEB's continuing disclosure obligations and compliance procedures are separate from those of the City and are solely the responsibility of and under the control of EWEB. EWEB makes no representation as to the City's compliance with continuing disclosure obligations of the City.

Prior Compliance with Continuing Disclosure Undertakings **[TO BE REVIEWED AND UPDATED BY FOSTER PEPPER, PACIFICA AND PIPER; language from 2016 OS]**

EWEB has previously entered into continuing disclosure undertakings under Rule 15c2-12. EWEB currently believes that it is in compliance with its prior undertakings for the previous five years in all material respects. In connection with bonds issued for its water utility that are no longer outstanding, EWEB did not file information on the service area of its water utility for the years ended December 31, 2010 and 2011. In connection with its Electric System Bonds, although EWEB filed its operating data for the year ended December 31, 2012 in a timely manner, it failed to link such data to its Series 2012 Bonds. In addition, the continuing disclosure undertaking in connection with EWEB's Series 2011A Bond and Series 2011B Bonds requires filing within 210 days after the end of each fiscal year, which is a shorter period than its other Electric System Bonds, and operating data for the years ended December 31, 2013 and 2014 were filed in connection with such bonds in September 2014 and September 2015, respectively. The continuing disclosure certificate in the official statement for the Series 2001A Bonds inadvertently stated that EWEB will provide forecast distribution division operating results for the Series 2001A Bonds as contained in the official statement; however, there was no information relating to forecast information in the official statement for those bonds. In addition, the continuing disclosure undertaking executed in connection with the Series 2001A Bonds did not require such information and no information relating to forecast information has been filed in connection with those bonds. Providing forecast information retroactively would be immaterial if produced today. EWEB intends to file such information in connection with the Series 2001A Bonds going forward as long as the Series 2001A Bonds remain outstanding.

MISCELLANEOUS

Any statements made in this Official Statement involving matters of opinion, estimates or projections, whether or not so expressly stated, are set forth as such and not as representations of fact. No representation is made that any of such estimates will be realized. The descriptions contained in this Official Statement of the Series 2017 Bonds, the Resolution, and legislation do not purport to be complete and are qualified in their entirety by reference to the respective documents and laws. Copies of the Resolution are available prior to the sale of the Series 2017 Bonds at the offices of the City or EWEB.

At the time of delivery of the Series 2017 Bonds, one or more officials of EWEB will furnish a certificate stating that to the best of his, her or their knowledge this Official Statement, as of its date and as of the date of delivery of the Series 2017 Bonds, does not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements herein, in light of the circumstances under which they were made, not misleading (except no such statement or representation will be made with the information provided by DTC in Appendix E).

The execution and delivery of this Official Statement have been duly authorized by EWEB on behalf of the City.

Neither this Official Statement nor any statement which may have been made orally or in writing is to be construed as a contract with the owners of any of the Series 2017 Bonds.

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APPENDIX A

COPY OF THE BOND RESOLUTION

APPENDIX B

AUDITED FINANCIAL STATEMENTS FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015

APPENDIX C

PROPOSED FORM OF OPINION OF BOND COUNSEL

[TO COME]

APPENDIX D

FORM OF CONTINUING DISCLOSURE CERTIFICATE

[TO COME]

APPENDIX E

BOOK-ENTRY SYSTEM

The following information has been provided by the Depository Trust Company, New York, New York ("DTC"). The City and EWEB make no representation regarding the accuracy or completeness thereof. Beneficial Owners (as hereinafter defined) should therefore confirm the following with DTC or the Participants (as hereinafter defined).

DTC will act as securities depository for the Series 2017 Bonds. The Series 2017 Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Series 2017 Bond certificate will be issued for each maturity of the Series 2017 Bonds in the principal amount of such maturity and will be deposited with DTC.

DTC, the world's largest depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, and trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has a S&P Global Ratings rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of the Series 2017 Bonds under the DTC system, in denominations of $5,000 or any integral multiple thereof, must be made by or through Direct Participants, which will receive a credit for the Series 2017 Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2017 Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are expected, however, to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2017 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Series 2017 Bonds, except in the event that use of the book-entry system for the Series 2017 Bonds is discontinued.

To facilitate subsequent transfers, all Series 2017 Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Series 2017 Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2017 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2017 Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

When notices are given, they will be sent by the Bond Registrar to DTC only. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices will be sent to DTC. If less than all of the Series 2017 Bonds within a maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2017 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the City as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series 2017 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payments on the Series 2017 Bonds will be made to Cede & Co. or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the City or the Bond Registrar, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Bond Registrar, or the City, subject to any statutory or regulatory requirements as may be in effect from time to time. Payments to Cede & Co. (or any other nominee as may be requested by an authorized representative of DTC) is the responsibility of the City or the Bond Registrar, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as securities depository with respect to the Series 2017 Bonds at any time by giving reasonable notice to the City and the Bond Registrar. Under such circumstances, in the event that a successor securities depository is not obtained, Series 2017 Bond certificates are required to be printed and delivered.

The City and EWEB may decide to discontinue use of the system of the book-entry only transfers through DTC (or a successor securities depository). In that event, Series 2017 Bond certificates will be printed and delivered to DTC.

With respect to Series 2017 Bonds registered on the Bond Register in the name of Cede & Co., as nominee of DTC, the City and the Bond Registrar will have no responsibility or obligation to any Participant or to any person on behalf of whom a Participant holds an interest in the Series 2017 Bonds with respect to (i) the accuracy of the records of DTC, Cede & Co. or any Participant with respect to any ownership interest in the Series 2017 Bonds; (ii) the delivery to any Participant or any other person, other than a bondowner as shown on the Bond Register, of any notice with respect to the Series 2017 Bonds, including any notice of redemption; (iii) the payment to any Participant or any other person, other than a bondowner as shown on the Bond Register, of any amount with respect to principal of, premium, if any, or interest on the Series 2017 Bonds; (iv) the selection by DTC or any Participant of any person to receive payment in the event of a partial redemption of the Series 2017 Bonds; (v) any consent given action taken by DTC as registered owner; or (vi) any other matter. The City and the Bond Registrar may treat and consider Cede & Co., in whose name each Series 2017 Bond is registered on the Bond Register, as the holder and absolute owner of such Series 2017 Bond for the purpose of payment of principal and interest with respect to such Series 2017 Bond, for the purpose of giving notices of redemption and other matters with respect to such Series 2017 Bond, for the purpose of registering transfers with respect to such Series 2017 Bond, and for all other purposes whatsoever. For the purposes of this Official Statement, the term "Beneficial Owner" will include the person for whom the Participant acquires an interest in the Series 2017 Bonds.

M E M O R A N D U M

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO:	Commissioners Helgeson, Brown, Mital, Simpson and Carlson
FROM:	Sue Fahey, Chief Financial Officer; Sarah Creighton, Enterprise Risk Management Supervisor
DATE:	August 1, 2017
SUBJECT:	SD20 Enterprise Risk Management (ERM) Update
OBJECTIVE:	Information Only

Issue

SD20 calls for a periodic report on the status of Enterprise Risk Management (ERM) activities. The following is a status report on projects completed in the last year, in progress, and planned.

Background

EWEB continues to use risk management approaches and programs to address several risks, including the Safety program, Power Risk Management Committee (RMC), Dam Safety program, Reliability Council, and involvement with regional disaster preparedness groups.

Following the adoption of SD20, EWEB has been moving toward the practice of an enterprise-wide approach to embed risk-based decision making throughout the organization, as well as identify, mitigate and manage various risks. In addition to the enterprise risk work, ERM staff is also responsible for claims, insurance procurement, record retention, public record requests, and internal reviews for operational efficiencies, controls and effectiveness.

Discussion

The Executive Team and ERM staff analyzed the risk inventory developed in 2016 to determine which risks to focus on from an organization-wide perspective in an effort to ensure responsible stewardship of our customers' financial and natural resources as well as maintain safety and regulatory compliance. These risks were determined to be:

- Compliance with contracts other than those for goods and services,
- Regulatory and legal compliance,
- Information and records lifecycle management, and
- Enhancing a risk-aware culture.

Governance Structure continues to be a risk given ongoing reorganizations, so ERM staff are working with management to ensure risks and compliance items for their team are proactively managed in the face of changing staff assignments. ERM has also partnered with Information Services staff to provide employee education on the existence of, and ways to mitigate, various cyber risks, such as phishing scams.

<u>Contractual Compliance:</u> The Contract Governance program referenced in last year's SD20 update has been operational since January 2017. This program addresses non-standard contracts developed outside of the Purchasing department with the intent of ensuring that all stakeholders have the opportunity to provide feedback during contract development. To date, eighteen new contracts have been reviewed by stakeholders via this process. Additionally, a tool was created to track these contracts and provide increased visibility throughout the contract term. Presently 162 contracts are tracked. The contract repository, reporting functionality and process continue to be refined in order to provide meaningful data to management.

<u>Legal and Regulatory Compliance:</u> ERM policy work has focused on enhancing compliance with laws and regulations in addition to improving internal controls. The following policies were revised by ERM since last year's SD20 update:

Records Retention Policy	Revised September 2016
Inspection of Public Records Policy	Revised September 2016
Contract Management Policy	NEW November 2016
Personal Mobile Device Policy	NEW November 2016
Delegated Authority Policy	Revised November 2016
Identity Theft Prevention Policy	Revised March 2017
Shredding and Recycling Policy	Revised March 2017
Ethics Policy	Revised June 2017

Training is an integral part of the compliance program. Last year, internal control training was offered to managers and supervisors. This organization-wide focus on controls and standardization was recently cited by the external auditors as one of the reasons audit fees were reduced. Earlier this year, all staff completed training on Oregon Ethics laws. Identity Theft Prevention training is scheduled for August 2017 for staff whose jobs require access to customers' personal information. The Privacy Committee, chaired by ERM staff, works to ensure Personally Identifiable Information (PII) is protected by investigating and responding to potential breaches of PII. Over the past year, one potential breach was reported to the Privacy Committee. The incident was fully investigated, and approximately 200 potentially affected parties were notified and offered credit monitoring services.

The process for receiving timely notification of regulation changes has been noted as an improvement area, particularly given organizational changes. ERM has begun actively monitoring certain regulations to ensure appropriate stakeholders are aware of new requirements. These regulations include the Telephone Consumer Protection Act of 1991, the Office of Foreign Assets Control, and Specially Designated Nationals and Blocked Persons List. ERM is partnering with management to evaluate what additional regulation monitoring might bring additional value. Staff also works to ensure ongoing and planned activities are in compliance with applicable laws and regulations by maintaining open lines of communication across the utility and participating in the review of new contracts.

Information and Records Management: The Information Management risk represents legacy practices that have the potential to lead to inconsistent or ineffective records management practices. ERM staff has created educational materials and is offering training opportunities to embed best practices for the management of records. Records Retention training was provided to all work groups. Staff completed an in-depth review and reorganization of archived records to improve efficiency and reduce storage expenses. Processes for intake and management of archived records continue to be enhanced, including making improvements to the archive retrieval process. Staff also responds to public records requests; over the past year staff has responded to 30 different requests for records.

Risk-Aware Culture: ERM staff continues to enhance a risk-aware internal culture to enable all employees to make effective, risk-informed decisions. A common language and risk assessment framework was introduced to increase consistency in the way risks are addressed. ERM staff meets at least quarterly with management to develop a common understanding of risks and mitigation strategies. Where gaps are identified between present and desired mitigation strategies, ERM staff partner with departments to assist in closing that gap. As an example, ERM has created and disseminated enterprise-wide communications and trainings on ethics and compliance to complement mitigation efforts of the Organizational Culture risk. Additionally, staff provide consulting services to internal decision-makers to guide them toward appropriately considering and addressing risks when making decisions.

Other functions: In addition to the work summarized above, ERM staff is also responsible for claims, insurance procurement, and internal reviews for operational efficiencies and effectiveness.

The majority of liability and recovery claims EWEB experiences are within the self-insurance threshold and are resolved internally. EWEB maintains a broad portfolio of insurance policies to cover a variety of other exposures including Cyber Insurance beginning in 2016.

Internal reviews are currently focusing on assessing internal controls, operational efficiencies and effectiveness for a variety of processes. Staff performed a limited review of purchase card usage and determined that practices aligned with procedures. Staff also assessed internal controls and efficiencies for a portion of the warehouse inventory exchange process, leading to a successful pilot program and improved organizational efficiency. Efficiency improvements to the purchase requisition and purchase order processes were reviewed to ensure compliance with internal controls and adequate segregation of duties. EWEB presently offers a variety of loans to residential and business customers to make energy efficiency and water conservation upgrades, and these programs are presently being reviewed to ensure compliance with internal controls and adequate segregation of duties.

Recommendation
This is for information only.

Requested Board Action
No action is requested at this time.

M E M O R A N D U M

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO:	Commissioners Helgeson, Brown, Mital, Simpson and Carlson
FROM:	Sue Fahey, Chief Financial Officer; Aaron Balmer, Interim General Accounting Supervisor
DATE:	July 21, 2017
SUBJECT:	Electric Utility Second Quarter 2017 Financial Report
OBJECTIVE:	Information Only

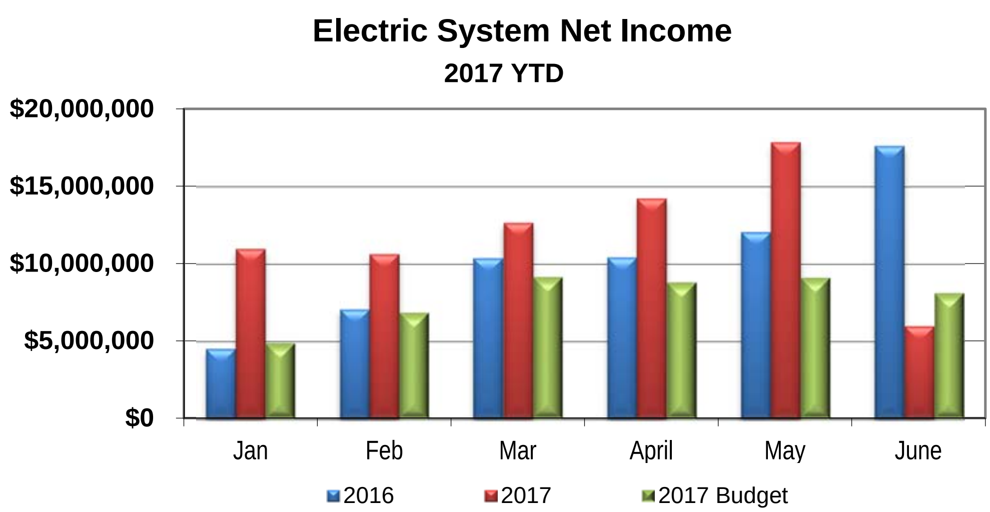
Schedule of Revenues, Expenses, and Changes in Net Position (Income Statement) - Page 4

Income before capital contributions (Net Income)
Net income for the electric utility is $6 million. The variance of Net Income to the Year to Date (YTD) seasonally shaped budget is an unfavorable $2.1 million due to the $15.7 million accounting loss on defeasance of debt. Excluding the accounting defeasance loss, would result in a favorable $13.6 million variance.

The variance detail compared to budget is as follows (unfavorable)/favorable:

		Millions
• Retail Revenue	$	2.2
• Wholesale and Other revenue		7.3
• Purchased Power		0.5
• Non-power Operating Expenses		0.5
• Other Non-operating revenues		2.9
• Other Non-operating expenses		(15.5)
	$	(2.1)

For comparability purposes, the budget has been modified to reflect seasonal fluctuations in revenue, purchased power and wheeling.



Operating Revenues
The positive budget variance in **Residential** revenue is a result of colder than anticipated weather during the first quarter of the year.

Stream flows continue to be strong and are allowing for more hydro-generation than budgeted. The favorable variance in **Sale for resale and other** is a result of this added generation. A planned outage at Carmen Smith has also been delayed until 2018 also contributing to the amounts available for sale in wholesale markets.

Operating Expenses
Wheeling has an unfavorable variance of $705,000 due to additional BPA transmission costs associated with favorable hydro generation and unbudgeted amortization of prepaid Harvest Wind transmission. The variance of $318,000 to budget in **Generation** is primarily a result of EWEB electing to not take its share of IP generation delivery due to having excess power and low wholesale sale prices.

Customer accounting expenses are unfavorable compared to budget due to the pace of capital spending. With year to date actual capital spending slower than the seasonal budget, the corresponding overhead transfers from operations & maintenance (O&M) to capital are lagging. The rate of overhead transfers from O&M to capital also impacts the **Administrative and general** line, however Electric Utility budgeted contingency funds of $1.2 million mask the unfavorable variance.

Conservation expenses are favorable due to low spending year-to-date for energy management services.

Non-operating Revenues
Investment earnings have an unfavorable variance due to the mark-to-market adjustment on derivatives. This is a non-cash transaction and required by generally accepted accounting principles (GAAP). There is no budget for the change in the market value for these investments.

In June, the Water Utility repaid $11 million to the Electric Utility which resulted in a $3 million favorable variance for **Interest Earnings, Water.**

Other Non-operating Expenses
The significant variance in **Other expenses** is caused by a $15.7 million accounting loss on defeasance of debt. The Electric Utility used repayment proceeds from the Water Utility, along with other cash reserves to defease high interest debt. The loss is a result of the accounting treatment required when future debt principal and interest obligations are paid. The defeasance allows the new master bond resolution to take effect and accordingly, this loss will not be included in the debt service coverage calculation. Since this loss was not anticipated in the 2017 budget, the Board will likely be requested to approve a budget amendment in November.

Interest expense and related amortization has an unfavorable variance to budget. At the time the 2017 budget was created, the new amortization schedules related to the 2016 electric bond refunding were not finalized.

Contributions in Aid of Construction (CIA)
CIA is significantly higher than year to date budget due to $1.9 million of CIA collected in 2016 being recorded in 2017 when the capital work was performed as required by GAAP.

Statement of Net Position (Balance Sheet) - Page 5

Utility Plant in Service is $2.5 million less than December 2016 due to a year-end reclassification required by GAAP. The reclassification moves construction work in progress to utility plant in service for work orders where the asset is substantially complete and the work order hasn't been closed. Accounting and Operations anticipate closing the work orders in the third quarter.

Due from Water System decreased by $8 million as a result of the $11 million repayment mentioned in the **Non-operating Revenues** section.

Long Term Debt has been reduced by $21.5 million since the start of the year due to recurring premium amortization and the defeasance of debt as approved by the Board in June.

Eugene Water & Electric Board
Electric Utility
Schedule of Revenues, Expenses, and Changes in Net Position
for the six months ended June 30, 2017

	Prior Year Comparison			YTD Budget Comparison		
	6/30/2017	**6/30/2016**	**Annual Working Budget**	**Budget $**	**Budget %**	**Budget Variance**
Residential	$ 54,873,003	$ 47,869,157	$ 101,465,141	$ 52,934,000 [1]	104%	$ 1,939,000
Commercial and industrial	50,606,401	49,350,050	101,684,339	50,283,000 [1]	101%	323,000
Sale for resale and other	24,246,814	26,114,466	33,670,893	16,906,000 [1]	143%	7,341,000
Operating revenues	129,726,218	123,333,673	236,820,373	120,123,000	108%	9,603,000
Purchased power	54,513,023	55,728,900	112,087,636	55,001,000 [2]	99%	488,000
System control	2,493,661	2,994,565	5,538,297	2,769,000	90%	275,000
Wheeling	7,464,790	6,406,644	13,429,919	6,760,000 [1]	110%	(705,000)
Generation	5,553,797	5,478,312	11,744,955	5,872,000	95%	318,000
Transmission and distribution	11,000,620	10,389,896	22,331,009	11,166,000	99%	165,000
Customer accounting	4,362,554	4,169,545	7,884,707	3,942,000	111%	(421,000)
Conservation expenses	1,903,171	1,871,598	5,040,990	2,520,000	76%	617,000
Administrative and general	11,462,559	10,526,994	23,044,057	11,522,000	99%	59,000
Depreciation on utility plant	11,156,048	12,077,149	22,519,481	11,260,000	99%	104,000
Operating expenses	109,910,223	109,643,603	223,621,051	110,812,000	99%	900,000
Net Operating Income	19,815,995	13,690,070	13,199,322	9,311,000	213%	10,503,000
Investment earnings	756,991	2,181,050	2,028,478	1,014,000	75%	(257,000)
Interest earnings, Water	3,404,930	551,594	737,405	369,000	923%	3,036,000
Other non-operating revenue	1,764,310	6,871,352	3,325,150	1,663,000	106%	101,000
Non-operating Revenues	5,926,231	9,603,996	6,091,033	3,046,000	195%	2,880,000
Other expenses	16,246,877	541,900	2,025,935	1,013,000	1604%	(15,234,000)
Interest expense and related amortization	3,510,165	5,119,530	6,518,767	3,259,000	108%	(251,000)
Other Non-operating Expenses	19,757,042	5,661,430	8,544,702	4,272,000	462%	(15,485,000)
Income before capital contributions	5,985,184	17,632,636	10,745,653	8,085,000	74%	(2,100,000)
Contributions in aid of construction	3,216,125	4,208,551	3,219,000	1,610,000	200%	1,606,000
Contributed plant assets	937,201	604,145	-	-		937,000
Increase in Net Position	$ 10,138,510	$ 22,445,332	$ 13,964,653	$ 9,695,000	105%	$ 443,000

Notes to the Financial Statements:

[1] Seasonal budget figure based on PPM forecast used for budgeting.
[2] Seasonal budget figure based on cyclical account activity averaged from the past four years.
Unmarked seasonal budget figures are not shaped and are allocated using a straight-line method
Budget variance column may not add up due to rounding.

Eugene Water & Electric Board
Electric System
Statement of Net Position
June 30, 2017 and 2016

	2017	2016	December 2016
Assets			
Capital assets			
Utility plant in service	$ 738,883,406	$ 723,622,618	$ 741,377,401
Less - Accumulated depreciation	(412,931,573)	(392,359,169)	(403,327,971)
Net utility plant in service	325,951,833	331,263,449	338,049,430
Property held for future use	827,449	827,449	827,449
Construction work in progress	24,623,958	14,279,792	11,489,223
Net utility plant	351,403,240	346,370,690	350,366,102
Current assets			
Cash and cash equivalents	13,791,343	34,290,769	6,423,227
Short-term investments	26,290,639	28,864,480	19,149,761
Restricted cash and investments	29,161,718	47,504,581	27,424,546
Designated cash and investments	91,972,007	101,384,102	52,930,042
Receivables, less allowances	25,922,950	27,194,955	35,212,662
Due from Water System	319,196	897,325	870,656
Materials and supplies, at average cost	3,918,584	4,248,067	3,675,617
Prepaids	7,115,415	7,186,819	7,483,244
Total current assets	198,491,852	251,571,098	153,169,755
Non-current assets			
Long-term receivable, conservation and other	3,648,394	5,166,508	3,453,706
Due from Water System	8,944,597	16,923,252	16,612,001
Long-term investments	-	-	59,198,524
Investment in WGA	3,969,871	3,443,437	3,509,388
Investment in Harvest Wind	23,098,814	24,295,199	23,730,662
Nonutility Property	7,830,500	7,830,500	7,830,500
Other assets	52,107,739	63,442,819	61,900,158
Total non-current assets	99,599,915	121,101,715	176,234,939
Deferred Outflows			
Deferred outflows of resources	55,521,362	8,245,275	57,024,020
Total Assets and Deferred Outflows	$ 705,016,369	$ 727,288,778	$ 736,794,816
Liabilities			
Current liabilities			
Payables	$ 14,914,754	$ 17,175,857	$ 26,292,077
Accrued payroll and benefits	5,360,211	5,256,752	4,754,554
Accrued interest on long-term debt	2,811,553	4,616,586	2,868,599
Long-term debt due within one year	9,175,000	13,510,000	11,165,000
Total current liabilities	32,261,518	40,559,195	45,080,230
Non-current liabilities			
Long-term debt	180,685,595	232,242,858	200,279,317
Net pension liability	86,824,424	37,311,057	86,824,424
Other liabilities	2,321,713	9,830,535	9,996,306
Total liabilities	302,093,250	319,943,645	342,180,277
Deferred Inflows			
Deferred Inflows of resources	5,463,991	12,502,019	7,293,921
Net Position			
Net investment in capital assets	185,839,883	149,999,320	178,261,000
Restricted	17,735,593	24,395,383	13,282,845
Unrestricted	193,883,652	220,448,411	195,776,773
Total net position	397,459,128	394,843,114	387,320,618
Total Liabilities, Deferred Inflows, and Net Position	$ 705,016,369	$ 727,288,778	$ 736,794,816

Electric System
Financial Ratios
June 30, 2017

	YTD 2017	Status	December 2016	Performance Standard
Current Ratio	6.15		4.71	3.250x
Debt as % of Net Book Value	58%		63%	≤ 60%
Debt Service Coverage - Annualized	3.35		1.65	1.75 to 2.0x
Age of System - Overall	56%		54%	< 60%
Distribution Plant			62%	
Electric Generating Plant			55%	
Days Unrestricted Cash	236		241	>150 days
Rate of Return - Annualized	7%		5%	Range 5-7%

Ratios

The current ratio remains well above Board targets due to balances in restricted and designated cash remaining classified as short term. A portion of these balances is reclassified annually in December to long term investments for external reporting. Securities held by the Board are highly marketable and could be liquidated if a need arose. Debt as a % of Net Book Value measures the overall leverage of system assets. As of 6/30/17, this metric is within the performance standard. However, this ratio is expected to increase in September due to the issuance of new debt. Annualized debt service coverage ratio is above performance standards at 3.35. Debt coverage is higher than the 2017 budget due to the defeasance of debt in June. The debt service coverage ratio as of December 2016 was below the performance standard due to December storm costs and the Carmen-Smith write-off. Greater detail was provided to the Age of System metric for informational purposes. As of December 2016, the age of the distribution plant system was outside the performance standard. Monitoring this metric is new and the detailed information presented for informational purposes will continue to be refined through discussions with management and engineering. At the end of the month, all other ratios are performing in line or better than the performance standards.

See next page for Ratio definitions and benchmark sources

Current Ratio
Total current assets to total current liabilities. This ratio measures the utility's short-term liquidity (ability to pay bills). The standard is set by EWEB financial policies and is meant to support a higher than average credit rating. Long term investments are included in the calculation since they are highly marketable and could be liquidated if the need arose.

Debt as % of Net Book Value (NBV)
Ratio of the amount of debt outstanding against the remaining Net Book Value of assets. This metric measures overall leverage of the system in an effort to align debt service payments with the useful lives of assets. The performance standard of 60% is derived from APPA publications and is typical of electric utilities involved in both generation and distribution.

Debt Service Coverage
Ratio of annualized net revenues available for debt service to total long-term debt service for the year. This ratio measures the utility's ability to meet its annual long-term debt obligation. The standard is meant to support a single A credit rating.

Age of System
Ratio of accumulated depreciation against the historical value of assets. This ratio measures how old the system is as compared to how much has been depreciated. Infrastructure over 65% depreciated should be watched for aging, while infrastructure less than 50% depreciated is representative of newer systems.

Days Unrestricted Cash
Ratio of total unrestricted cash and cash equivalents to average daily cash requirements for operating expenses (defined as yearly budgeted operating expenses net of depreciation divided by 365 days in the year). This figure measures the length of time the utility can carry on normal operations with available unrestricted cash not otherwise designated for future capital needs. Standard and Poor's Industry Standards for Investment Grade ratings are typically 60 to 90 days, however the APPA has indicated 150-200 days unrestricted cash is desired for high bond ratings. Long term investments are included in the calculation since they are highly marketable and could be liquidated if the need arose.

Rate of Return
Rate of return on investment, expressed as a percentage of the total amount invested in infrastructure. For mid-year calculations, year-to-date net operating income is annualized. This ratio measures the utility's ability to pay current infrastructure costs and future replacement costs. Per the APPA, a rate of return between 5-7% is an acceptable range.

Eugene Water & Electric Board
Electric Utility
Capital Budget Comparison
for the six months ended June 30, 2017

	Current Month	Year to Date	Annual Working Budget w/Amendment	% of Budget
Transformers (Pre-capped) [1]	$ 141,594	$ 897,884	$ -	0.0%
Meters (Pre-capped) [1]	1,280	103,737	-	0.0%
Type 1 Capital				
2016-2017 ICS Events	-	89,200	-	0.0%
Buildings & Land	93,594	114,206	1,074,000	10.6%
[1] Distribution	742,306	3,740,824	6,915,000	54.1%
Electric Fleet	9,993	68,173	500,000	13.6%
Generation	109,331	381,615	1,196,000	31.9%
Information Technology	26,506	581,533	562,000	103.5%
Substation	171,199	573,426	1,780,000	32.2%
Telecom	3,071	61,667	250,000	24.7%
Transmission	2,014	58,663	150,000	39.1%
Total Type 1 Capital	1,158,014	5,669,307	12,427,000	45.6%
Type 2 Capital				
[1] AMI	1,126,078	1,533,842	1,650,000	93.0%
CIS Replacement	-	-	1,230,000	0.0%
Downtown Network	78,471	142,495	1,000,000	14.2%
Electric Master Plan	-	-	1,425,000	0.0%
Grid Edge Demonstration Project	-	-	837,000	0.0%
Holden Creek Substation	28,684	1,022,999	4,457,000	23.0%
Leaburg Dam Rollgates	16,685	54,752	-	0.0%
LTD West Side EMX	-	(6,460)	-	0.0%
Telecom Type 2 Projects	27,882	69,253	600,000	11.5%
Up River Re-configuration	-	-	-	0.0%
Total Type 2 Capital	1,277,800	2,816,881	11,199,000	25.2%
Type 3 Capital				
Carmen-Smith Re-license	949,907	2,718,710	11,700,000	23.2%
Total Type 3 Capital	949,907	2,718,710	11,700,000	23.2%
Total Capital before CIA	3,528,595	12,206,519	35,326,000	34.6%
Contribution in aid	(219,198)	(3,216,125)	(3,219,000)	99.9%
Grand Total	$ 3,309,397	8,990,394	$ 32,107,000	28.0%

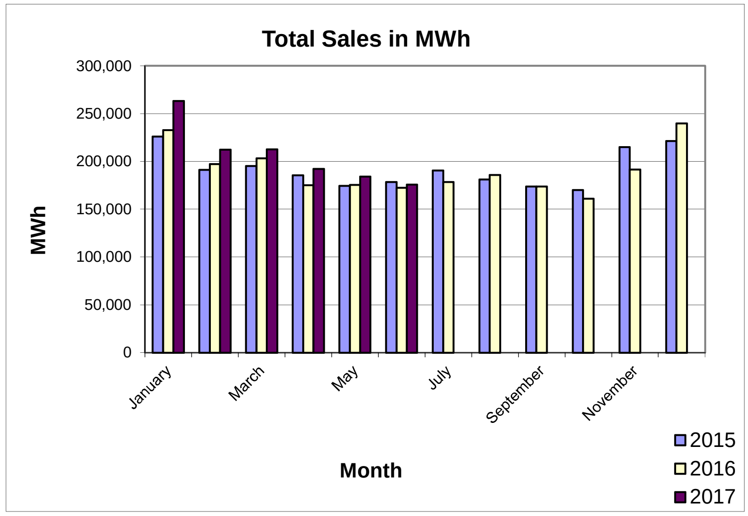
1 Meters and transformers are capitalized at the time of purchase. The budget for meters is included within the Distribution project and the AMI project. However, the actual costs are not included in project reporting in WAM and are included as their own line item.

Capital
The capital budget is approved by the Board as the maximum amount allowed for all capital work. Annual budgets by type and by individual projects are prepared for planning and reporting purposes, but overall budget accountability to the Board remains at the total capital level. The Electric Utility has spent $12.2 million or 34.6% of the capital budget, compared to $9.9 million or 25.1% in year to date 2016.

Electric Utility Sales in MWh
June 2017

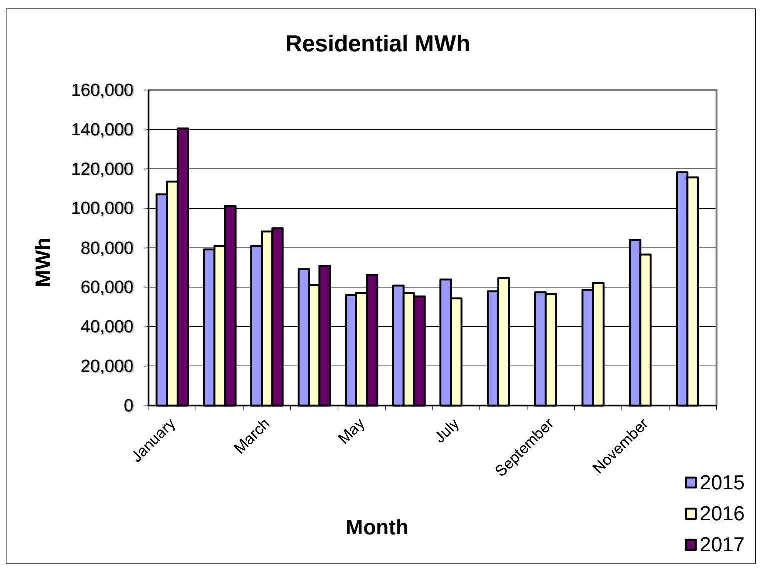
Total Electric Utility Sales in MWh

	2015	2016	2017
January	226,208	232,720	263,514
February	191,281	197,213	212,299
March	195,492	203,425	212,765
Q1 total	612,981	633,357	688,578
April	185,698	175,157	192,317
May	174,491	175,703	184,183
June	178,629	172,650	175,832
Q2 total	538,818	523,510	552,333
July	190,535	178,658	0
August	181,414	186,064	0
September	173,902	173,917	0
Q3 total	545,851	538,639	0
October	170,136	161,121	0
November	215,218	191,617	0
December	221,322	239,812	0
Q4 total	606,676	592,550	0
Annual total	2,304,326	2,288,057	1,240,911



Residential Sales in MWh

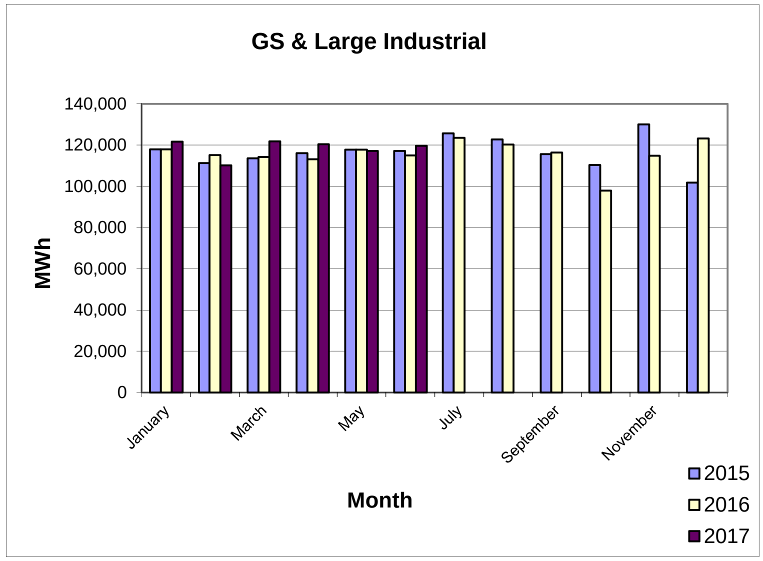
	2015	2016	2017
January	107,136	113,589	140,471
February	79,168	80,958	101,102
March	81,006	88,256	89,865
	267,310	282,803	331,439
April	69,023	61,190	70,920
May	55,898	57,055	66,270
June	60,721	56,918	55,295
	185,642	175,163	192,485
July	63,866	54,329	0
August	57,890	64,718	0
September	57,313	56,523	0
	179,069	175,570	0
October	58,717	62,095	0
November	84,028	76,508	0
December	118,236	115,600	0
	260,981	254,203	0
Total	893,002	887,738	523,923



Electric Utility Sales in MWh
June 2017

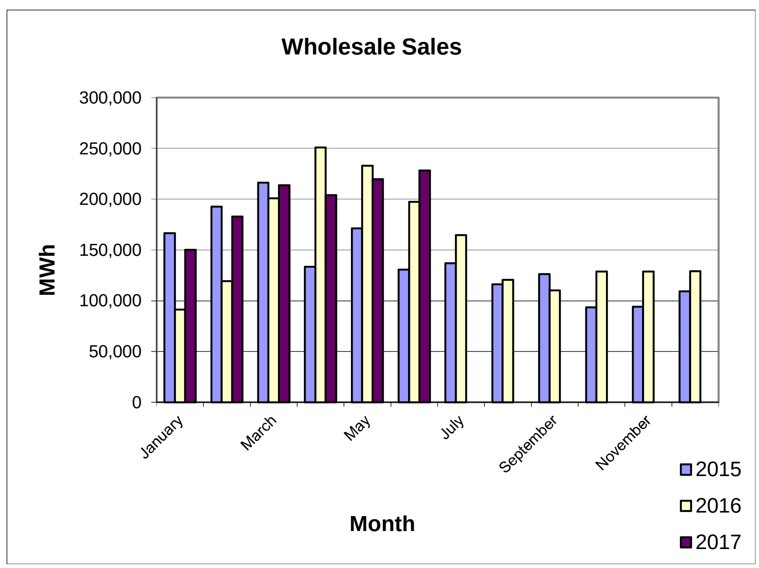
General Service & Large Industrial Sales in MWh

	2015	2016	2017
January	117,866	117,905	121,636
February	111,091	114,969	110,038
March	113,463	114,088	121,755
	342,420	346,962	353,429
April	116,038	112,987	120,325
May	117,742	117,677	117,010
June	117,015	114,827	119,584
	350,795	345,491	356,920
July	125,672	123,364	0
August	122,673	120,117	0
September	115,459	116,236	0
	363,804	359,717	0
October	110,229	97,802	0
November	130,010	114,712	0
December	101,752	123,126	0
	341,991	335,640	0
Total	1,399,010	1,387,810	710,349



Total Wholesale Sales in MWh

	2015	2016	2017
January	166,562	91,229	150,213
February	192,878	119,306	182,911
March	216,315	200,903	213,771
	575,755	411,438	546,895
April	133,635	251,173	204,220
May	171,384	233,001	219,982
June	130,835	197,619	228,488
	435,854	681,793	652,689
July	136,993	164,635	0
August	116,194	120,758	0
September	126,384	110,175	0
	379,571	395,568	0
October	93,491	128,793	0
November	94,117	128,802	0
December	109,166	129,274	0
	296,774	386,869	0
Total	1,687,954	1,875,668	1,199,584



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO:	Commissioners Helgeson, Brown, Mital, Simpson and Carlson
FROM:	Sue Fahey, Chief Financial Officer; Aaron Balmer, Interim General Accounting Supervisor
DATE:	July 21, 2017
SUBJECT:	Water Utility Second Quarter 2017 Financial Report
OBJECTIVE:	Information Only

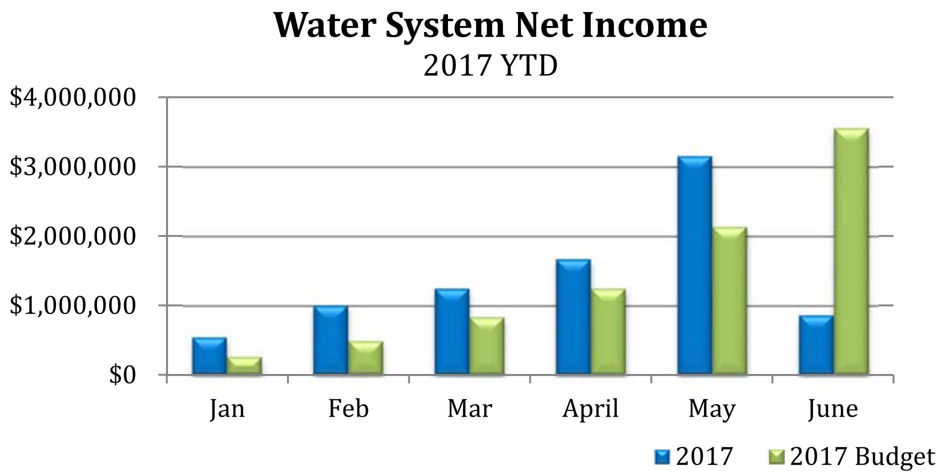
Schedule of Revenues, Expenses, and Changes in Net Position (Income Statement) - Page 3

Income before capital contributions (Net Income)

Net income for the Water Utility as of June 30, 2017 is $865,000 and is unfavorable to the seasonally shaped budget by $2.7 million primarily due to Water's $3 million share of interest expense on the defeasance of Electric debt. Excluding the interest expense related to defeasance would result in a favorable $386,000 variance. The variance from budget breakdown is as follows (unfavorable)/favorable:

	Thousands
Retail Revenue	$ (405)
Wholesale and Other Revenue	66
Operating Expenses	574
Non-Operating Revenues	113
Non-Operating Expenses	(3,039)
	$ (2,691)

The comparison of net income to annual budget before capital contributions in the chart below is seasonally shaped. Within the Water Utility, revenue and consumption peak in the summer. Construction and maintenance activities peak in the summer, as well, while production and delivery costs remain fairly constant throughout the year.



Operating Revenues
For purposes of analysis, the revenue budget has been modified to reflect seasonal fluctuations. **Residential** consumption through June is less than projected resulting in total operating revenues being 2% below the seasonally shaped budget. In June, Accounting staff revised the method of recording unbilled revenue to more closely align with finished pumping information. This change resulted a one-time ‘true-up’ to revenue and consumption. Additionally, more customers have consumed at tier 1 levels (under 8,000 kgal) when compared to budget. Higher tier 2 consumption is anticipated throughout the summer months, and Finance staff will continue to monitor the shift between tiers, expecting to see more consumption in tier 2 as the summer months progress. **Sales for resale and other** includes sales to Water Districts, Willamette Water Company, as well as sales to the City of Veneta. Other operating revenue includes revenues from customer account related fees and reimbursements for billable work.

Operating Expenses
Operating expenses remain favorable and are 95% of budget. **Transmission and distribution** is below budget by $727,000 due in part the water utility’s budgeted contingency funds, which have not yet been allocated for spending and contributes $287,000 to the favorable budget variance. Position vacancies contribute $343,000 to this positive variance. **Administration and general** expenses are over budget by $434,000 due in part to the slower pace of capital spending, budgeted labor offsets for vacancies ($160,000) and PERS savings ($186,000). Although budgeted in **Administration and general**, the vacancy savings have been realized in the **Transmission and distribution** category.

Non-operating expenses
The Water Utility transferred $11 million to the Electric Utility in June as payment on intercompany principal and interest, and $3 million was recognized as **Interest Expense, Electric**.

Contributed plant assets include $755,000 contributed for five completed subdivisions. **System Development Charges** stem from construction activity and is corollary to contributed assets and contributions in aid.

Statement of Net Position (Balance Sheet) - Page 4

Utility Plant in Service is $5 million less than December 2016 due to a year-end reclassification required by GAAP. The reclassification moves construction work in progress to utility plant in service for work orders where the asset is substantially complete and the work order hasn’t been closed. Accounting and Operations anticipate closing the work orders in the third quarter.

The Water Utility transferred $11 million to the Electric Utility in June as payment on intercompany principal and interest. **Amounts Due to Electric** decreased $8 million on the balance sheet.

Financial Ratios - Page 6

The December 2016 **Debt Service Coverage** ratio was adjusted in June for the transfer from the Rate Stabilization fund. This transfer was based on 2016 results and was approved last month by the Board in Resolution No. 1710. The transfer of $5 million resulted in an increase of the ratio to 7.89 from 6.32.

Eugene Water & Electric Board
Water System
Schedule of Revenues, Expenses and Changes in Net Position
for the six months ended June 30, 2017

	Prior Year Comparison			YTD Budget Comparison		
	6/30/2017	6/30/2016	Annual Working Budget	Budget $	Budget %	Budget Variance
Residential	$ 8,912,067	$ 9,561,500	$ 20,405,566	$ 9,462,000 [1]	94%	$ (550,000)
Commercial and industrial	6,526,120	6,577,228	13,925,378	6,381,000 [1]	102%	145,000
Sale for resale	770,852	817,386	1,983,128	758,000 [1]	102%	13,000
Other	785,707	745,762	1,466,002	733,000	107%	53,000
Operating revenues	16,994,746	17,701,876	37,780,074	17,334,000		(339,000)
Source of supply, pumping and purification	2,646,828	2,411,901	5,750,047	2,875,000	92%	228,000
Transmission and distribution	3,056,649	2,788,463	7,567,897	3,784,000	81%	727,000
Customer accounting	833,454	651,187	1,628,307	814,000	102%	(19,000)
Conservation expenses	165,676	109,269	394,212	197,000	84%	31,000
Administrative and general	2,251,563	2,012,252	3,635,250	1,818,000	124%	(434,000)
Depreciation on utility plant	2,990,679	3,041,050	6,063,784	3,032,000	99%	41,000
Operating expenses	11,944,849	11,014,122	25,039,497	12,520,000	95%	574,000
Net operating income	5,049,897	6,687,754	12,740,577	4,814,000	105%	236,000
Investment earnings	253,839	222,768	394,970	197,000	129%	57,000
Other revenue	60,590	65,803	7,200	4,000	1515%	57,000
Non-operating revenues	314,429	288,571	402,170	201,000	156%	113,000
Other revenue deductions	2,598	191,346	85,000	43,000	6%	40,000
Interest expense and related amortization	1,091,517	1,096,554	2,096,078	1,048,000	104%	(44,000)
Interest expense, Electric	3,404,930	551,594	737,405	369,000	923%	(3,036,000)
Non-operating expenses	4,499,045	1,839,494	2,918,483	1,460,000	308%	(3,039,000)
Income before capital contributions	865,281	5,136,831	10,224,264	3,555,000	24%	(2,691,000)
Contribution in aid of construction	518,086	593,748	1,133,000	567,000	91%	(49,000)
Contributed plant assets	876,272	102,213	-	-	0%	876,000
System development charges	644,877	804,765	412,000	206,000	313%	439,000
Increase in net position	$ 2,904,516	$ 6,637,557	$ 11,769,264	$ 4,328,000	67%	$ (1,423,000)

Notes:

[1] Seasonal budget figure based on cyclical consumption activity averaged from the past five years. Unmarked budget figures are not shaped and are allocated using a straight-line method.

Budget variance column may not add up due to rounding.

Eugene Water & Electric Board
Water System
Statement of Net Position
June 30, 2017

	2017	2016	December 2016
Assets			
Capital assets			
Utility plant in service	$ 262,734,725	$ 254,647,514	$ 267,601,807
Less - Accumulated depreciation	(114,326,287)	(108,589,038)	(111,343,682)
Net utility plant in service	148,408,438	146,058,476	156,258,125
Property held for future use	2,389,372	1,156,424	1,184,434
Construction work in progress	13,893,124	10,645,271	3,063,265
Net Utility Plant	164,690,934	157,860,171	160,505,824
Current assets			
Cash and cash equivalents	2,838,402	1,582,686	4,740,905
Short-term investments	-	-	845,370
Restricted cash and investments	19,251,771	19,897,843	19,562,392
Designated cash and investments	20,405,539	24,750,930	14,959,703
Receivables, less allowances	4,201,682	5,020,621	3,298,133
Material and supplies, at average cost	848,330	1,018,618	900,944
Prepayments and special deposits	1,396,372	1,454,851	1,254,709
Total current assets	48,942,096	53,725,549	45,562,156
Non-current assets			
Long-term investments - designated	-	-	12,286,276
Long-term investments - unrestricted	-	-	1,269,344
Long-term receivables, conservation and other	137,384	176,016	157,206
Other assets	4,103,766	2,294,262	4,124,167
Total non-current assets	4,241,150	2,470,278	17,836,993
Deferred Outflows of Resources			
Deferred Outflows of Resources	11,462,409	3,740,358	11,561,575
Total Assets & Deferred Outflows	$ 229,336,589	$ 217,796,356	$ 235,466,548
Liabilities			
Current liabilities			
Payables	$ 416,280	$ 548,629	$ 1,201,768
Accrued payroll and benefits	1,292,940	1,326,438	1,094,980
Accrued interest on long-term debt	966,271	504,974	966,271
Long-term debt due within one year	1,840,000	425,000	1,840,000
Due to Electric System	319,196	897,325	870,656
Total current liabilities	4,834,687	3,702,366	5,973,675
Non-current liabilities			
Long term debt-bonds payable	59,088,259	61,354,839	59,273,233
Due to Electric System	8,944,597	16,923,252	16,612,001
Net pension liability	19,059,020	8,190,233	19,059,020
Other liabilities	224,375	283,522	267,484
Total liabilities	92,150,938	90,454,212	101,185,413
Deferred Inflows of Resources			
Deferred inflows of resources	1,009,432	2,160,135	1,009,432
Net Position			
Net invested in capital assets	106,345,639	94,537,138	97,536,117
Restricted	8,801,184	6,229,300	7,368,976
Unrestricted	21,029,396	24,415,571	28,366,610
Total net position	136,176,219	125,182,009	133,271,703
Total Liabilities, Deferred Inflows & Net Position	$ 229,336,589	$ 217,796,356	$ 235,466,548

Eugene Water & Electric Board
Water System
Capital Budget Comparison
for the six months ended June 30, 2017

	Current Month	Year-to-Date	Annual Working Budget	% of Budget
Meters (Pre-capped) [1]	$ 5,400	$ 204,248	$ -	0.0%
Type 1 Capital				
Buildings & Land	20,545	22,991	248,000	9.3%
Distribution Facilities	66,828	313,631	1,339,000	23.4%
Distribution Pipe & Services [1]	495,034	2,946,199	6,181,001	47.7%
Information Technology	5,818	127,654	123,355	103.5%
Source Of Supply	21,093	512,577	1,029,999	49.8%
Water Fleet	-	104,726	110,000	95.2%
Total Type 1 Capital	609,318	4,027,778	9,031,355	44.6%
Type 2 Capital				
AMI [1]	247,187	336,697	280,000	120.2%
CIS	-	-	270,000	0.0%
Distribution Facilities	1,741	108,813	712,000	15.3%
Distribution Pipe & Services	3,807	5,312	-	0.0%
Source Of Supply	16,172	96,210	2,245,000	4.3%
Total Type 2 Capital	268,907	547,032	3,507,000	15.6%
Type 3 Capital				
Source Of Supply	83,457	1,597,992	1,830,000	87.3%
Total Type 3 Capital	83,457	1,597,992	1,830,000	87.3%
Total Capital before CIA	967,082	6,377,050	14,368,355	44.4%
Contributions in aid	(35,190)	(518,086)	(1,133,000)	45.7%
Grand Total	$ 931,892	$ 5,858,964	$ 13,235,355	44.3%

[1] Meters are capitalized at the time of purchase. The budget for meters is included within the Distribution Pipe and Services project and the AMI project. However, the actual costs are not included in project reporting in WAM and are included as their own line item.

Capital
The capital budget is approved by the Board as the maximum amount allowable for all capital work. Annual budgets by type and by individual project are prepared for planning and reporting purposes, but overall budget accountability to the Board remains at the total capital spending level. Information by project is provided in the quarterly EL1 report.

Eugene Water & Electric Board
Water System
Financial Ratios
June 30, 2017

	YTD 2017	Status	December 2016	PERFORMANCE STANDARD
Current Ratio	10.12		9.90	3.250x
Debt as % of Net Book Value	47%		49%	≤ 60%
Debt Service Coverage - Annualized	3.77		7.89	2.0 to 2.50x
Age of System - Overall	44%		42%	< 60%
Pumping Plant			67%	
Water T&D Plant			49%	
Days Unrestricted Cash	442		694	>150 days
Rate of Return - Annualized	9%		10%	Range 5-7%

Ratios
The current ratio is well above the Board performance target of 3.25, due primarily to the deposit of water bond proceeds in May 2016. Strong sales, lower expenses and the adoption of a rate smoothing strategy by the Board are allowing the utility to accumulate cash and reserves. Although the debt service ratio decreased in 2017 from December 2016 as a result of the 2016 debt issuance, it continues to be well above the target of 2.0. The debt service coverage ratio was adjusted in June 2017 for the net transfer from the Rate Stabilization fund based on 2016 results. All other ratios are performing better than the Board performance standards.

Note: See next page for ratio definitions

Current Ratio
Total current assets to total current liabilities. This ratio measures the utility's short-term liquidity (ability to pay bills). Long term investments are included in the calculation since they are highly marketable and could be liquidated if the need arose. The standard is set by EWEB financial policies and is meant to support a higher than average credit rating.

Debt as % Net Book Value (NBV)
Ratio of the amount of debt outstanding against the remaining Net Book Value of assets. This metric measures overall leverage of the system in an effort to align debt service payments with the useful lives of assets.

Debt Service Coverage
Ratio of annualized net revenues available for debt service to total long-term debt service for the year. This ratio measures the utility's ability to meet its annual long-term debt obligation. The performance standard is meant to support a double A credit rating.

Age of System
Ratio of accumulated depreciation against the historical value of assets. This ratio measures how old the system is as compared to how much has been depreciated. Infrastructure over 65% depreciated should be watched for aging, while infrastructure less than 50% depreciated is representative of newer systems.

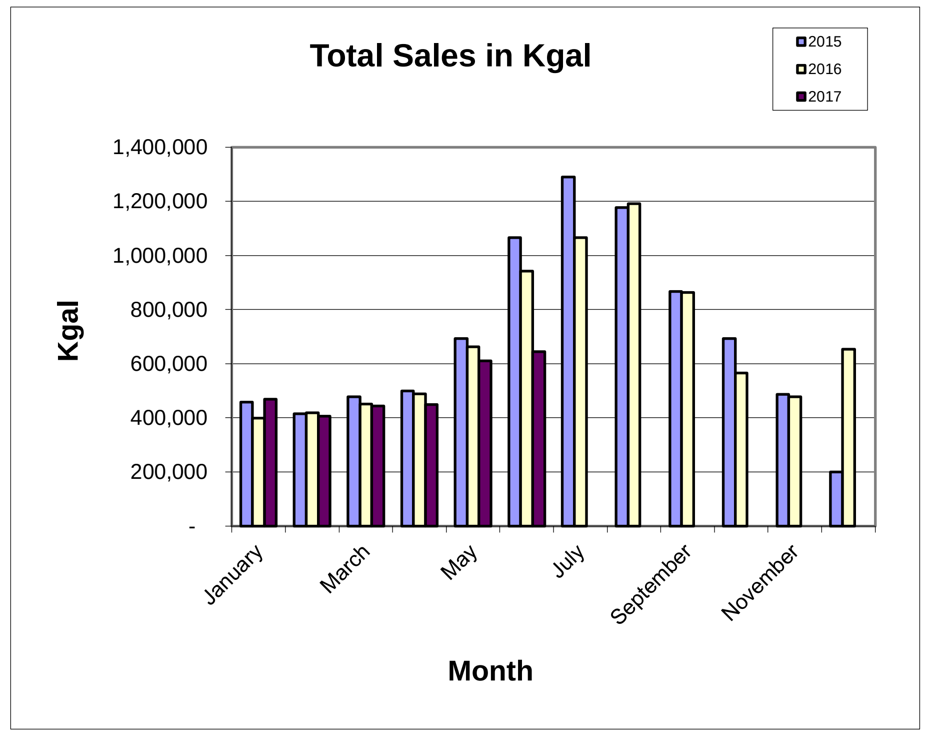
Days Unrestricted Cash
Ratio of total unrestricted cash and cash equivalents to average daily cash requirements for operating expenses (defined as yearly budgeted operating expenses net of depreciation divided by 365 days in the year). This figure measures the length of time the utility can carry on normal operations with available unrestricted cash not otherwise designated for future capital needs. Long term investments are included in the calculation since they are highly marketable and could be liquidated if the need arose. Standard and Poor's Industry Standards for Investment Grade ratings are typically 60 to 90 days. The higher performance standard supports higher credit rating.

Rate of Return
Rate of return on investment, expressed as a percentage of the total amount invested in infrastructure. This ratio measures the utility's ability to pay current infrastructure costs and future replacement costs. Per the AWWA, a range of 5-7% is an acceptable range (the upper quartile for return on assets is approximately 6%).

Water System Sales in Kgal
June 2017

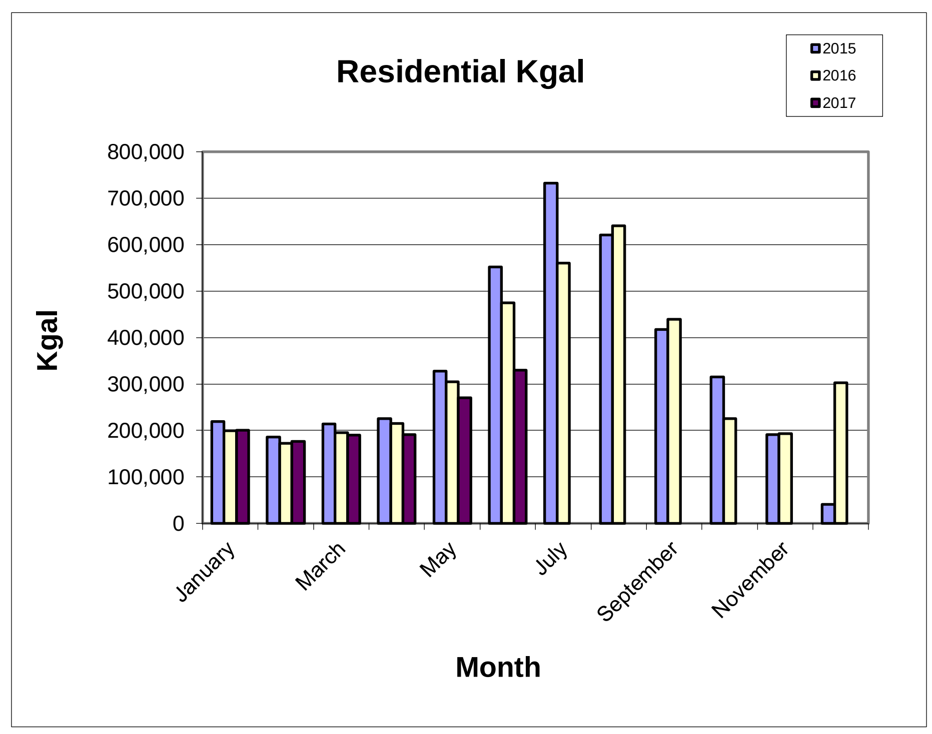
Total Water Sales in Kgal

	2015	2016	2017
January	459,108	399,369	469,493
February	404,303	419,161	405,815
March	467,462	450,547	444,552
Q1 total	**1,330,873**	**1,269,077**	**1,319,860**
April	487,636	488,756	450,168
May	679,838	662,977	610,855
June	1,051,349	942,995	643,822
Q2 total	**2,218,823**	**2,094,728**	**1,704,845**
July	1,255,528	1,066,322	0
August	1,145,986	1,190,789	0
September	840,585	863,372	0
Q3 total	**3,242,099**	**3,120,483**	**0**
October	674,261	566,078	0
November	473,737	478,000	0
December	187,717	653,434	0
Q4 total	**1,335,715**	**1,697,512**	**0**
Annual total	8,127,510	8,181,800	3,024,705



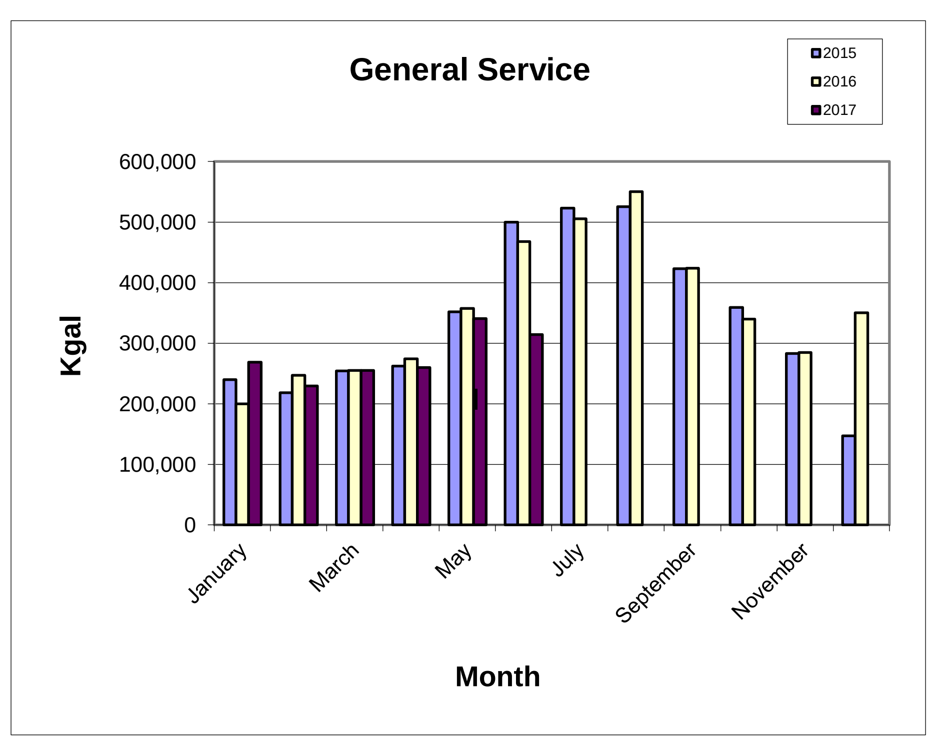
Residential Sales in Kgal

	2015	2016	2017
January	219,363	199,360	200,913
February	186,053	172,258	176,564
March	213,577	195,684	190,004
Q1 total	**618,993**	**567,302**	**567,481**
April	225,226	214,567	190,757
May	328,179	305,247	270,359
June	551,652	474,954	329,725
Q2 total	**1,105,057**	**994,768**	**790,841**
July	732,314	560,639	0
August	620,535	640,466	0
September	417,603	439,526	0
Q3 total	**1,770,452**	**1,640,631**	**0**
October	315,532	226,033	0
November	191,016	193,702	0
December	41,102	303,194	0
Q4 total	**547,650**	**722,929**	**0**
Total	4,042,152	3,925,630	1,358,322



General Service, Contract & Other in Kgal

	2015	2016	2017
January	239,745	200,009	268,580
February	218,250	246,903	229,251
March	253,885	254,863	254,548
Q1 total	**711,880**	**701,775**	**752,379**
April	262,410	274,189	259,411
May	351,659	357,730	340,496
June	499,697	468,041	314,097
Q2 total	**1,113,766**	**1,099,960**	**914,004**
July	523,214	505,683	0
August	525,451	550,323	0
September	422,982	423,846	0
Q3 total	**1,471,647**	**1,479,852**	**0**
October	358,729	340,045	0
November	282,721	284,298	0
December	146,615	350,240	0
Q4 total	**788,065**	**974,583**	**0**
Total	4,085,358	4,256,170	1,666,383



M E M O R A N D U M

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Helgeson, Brown, Mital, Simpson and Carlson

FROM: Sue Fahey, Chief Financial Officer; Sarah Gorsegner, Purchasing & Warehouse Supervisor

DATE: July 24, 2017

SUBJECT: Quarterly Contract Report for Q2 2017

OBJECTIVE: Information Only

Issue

The Board requested that management provide a quarterly report of awarded contracts that are not approved on the consent calendar.

Background

A few years ago, the policy was changed to align with Oregon Statute solicitation thresholds which streamlined the contract approval process and allowed the Board and staff to focus on higher dollar contracts and other strategic initiatives.

Current statute and Board thresholds are:

Purchase of all Goods, Equipment, Services and Personal Services: $ 150,000 or greater
Purchase of Construction Services: $ 100,000 or greater.

Discussion

Attached is the contract report for the second quarter of 2017.

Recommendation/Requested Board Action

None at this time. This information is provided for informational purposes only.

Contract Execution Date	Contractor	City, State	Description	Contract Amount	Contract Term	Contract Process	ET Manager
3/7/2017	UO School of Law	Eugene, OR	Legal Counsel regarding FEMA standards for floodplains	$ 24,984	12/31/2017	Direct Negotiation-IGA	Mel Damewood
4/4/2017	Praetorian Group Inc.	Austin, TX	Penetration Test for AMI/MDM	$ 56,000	5/15/2017	Informal RFP	Matt Barton
4/5/2017	Personnel Source Inc.	Eugene, OR	Temporary Staffing Services ~ organization-wide	$ 145,000	4/4/2022	Direct Negotiation	Lena Kostopulos
4/13/2017	Idaho Power	Boise, ID	Acoustic Doppler Velocity Meter Calibration	$ 35,440	6/30/2017	Informal RFP	Mel Damewood
4/14/2017	Riley Research Group	Portland, OR	*Retail Pricing Research & Analysis	$ 32,600	12/31/2017	Informal RFP	*Frank Lawson
4/19/2017	Cornforth Consultants	Portland, OR	Carmen Power Tunnel Inspections	$ 75,800	8/9/2017	QBS - Direct Negotiation	Mel Damewood
4/25/2017	Dougherty Landscape Architects	Eugene, OR	Ice Cap Campground Landscape Architecture Services	$ 35,840	1/1/2018	QBS - Direct Negotiation	Mel Damewood
5/1/2017	Energy Resource Economics	Knoxville, TN	*Retail Pricing Research and Analysis	$ 40,000	6/30/2018	Informal RFP	*Frank Lawson
5/1/2017	Cameron McCarthy Landscape Architecture & Planning	Eugene, OR	Planning support for Willamette Water Treatment Plant	$ 27,300	6/30/2018	QBS - Direct Negotiation	Mel Damewood
5/2/2017	ENS-Inc.	Sacramento, CA	Trend Micro Anti-Virus Software	$ 27,582	6/22/2018	Informal Quotes	Matt Barton
5/8/2017	GSI Water Solutions, Inc.	Portland, OR	2018 Water Management & Conservation Plan	$ 57,514	1/1/2018	QBS - Direct Negotiation	Mel Damewood
5/15/2017	Energized Substation Maintenance, Inc.	Apple Valley, CA	Substation Cleaning and Painting Services	$ 100,000	5/14/2017	Informal Quotes	Mel Damewood
5/16/2017	US Geological Survey	Portland, OR	Hydrologic Surveillance Program	$ 101,050	9/30/2017	IGA	Mel Damewood
5/18/2017	Advanced Steel and Crane	Tulsa, OK	Steel Structures for Holden Creek Substation	$ 106,912	7/31/2017	Formal ITB	Mel Damewood
6/23/2017	Kleinschmidt Associates	Portland, OR	Trail Bridge Micro Hydro Feasibility Study	$ 35,000	8/31/2017	QBS - Direct Negotiation	Mel Damewood
6/27/2017	Wrk Engineers Inc	Vancouver, WA	Roosevelt Operations Center Seismic Evaluation	$ 32,500	9/1/2017	QBS - Direct Negotiation	Mel Damewood

EWEB association for all above contracts = None

Qualification Based Selection (QBS) is required based on current statutes and EWEB Public Contracting Rules for consultants who provide architectural, engineering, land surveying, and related services. The selection process for contracts on this report requires selection from pre-qualified firms, contract values are based on negotiations and reviewed for appropriate effort and rate schedules.

*Contracts were previously let by the Customer & Community Relations Officer.

Questions? Please contact: Sarah Gorsegner, 541-685-7348

MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO:	Commissioners Helgeson, Brown, Mital, Simpson and Carlson
FROM:	Mike McCann, Interim Chief Energy Officer and Patty Boyle, Principal Project Manager
DATE:	August 1, 2017
SUBJECT:	Update to FERC License Issuance and Carmen Plant Improvement Projects
OBJECTIVE:	Information Only

Issue

This memo provides an informational update on the work completed since April 2017 as part of the Amended and Restated Settlement Agreement and powerhouse improvement efforts at the Carmen-Smith Hydroelectric Project.

Background

On November 8, 2016, the Board approved Resolution 1629 that authorized the General Manager to enter into the Carmen-Smith Amended and Restated Settlement Agreement and associated FERC filings related to the revisions of the Carmen-Smith Final License Application. The revised contracts and filings were submitted to the FERC on November 30, 2016. Principally these revisions changed the upstream and downstream fish passage provisions from a fish ladder and screen system to a trap and haul system.

In collaboration with EWEB, the FERC has since conducted a tour of the Carmen-Smith Project and held a technical conference regarding the filings and revisions of the Final License Application. The tour allowed FERC staff and other interested parties to learn first-hand about the features of the Project and the planned environmental improvements. The technical conference ensured that FERC and the parties to the settlement agreement had a common understanding of the proposed terms and established the regulatory processes to be completed prior to license issuance.

Since the technical conference, EWEB has completed its the required regulatory filings including updates to seven of the eight Final License Application Exhibits and significant revisions to the Biological Assessment of the Carmen Smith Hydroelectric Project. The regulatory agencies are similarly completing the processes established at the Technical Conference, having filed their prescriptions and recommendations to FERC in late July. The filing with the longest expected lead time will come from the State of Oregon Department of Environmental Quality. In order to be considered by the FERC, this filing needs to be made by DEQ by late February of 2018.

EWEB Generation Engineering and Operations staff continue to support projects that will replace the two failing turbine shut-off valves (TSVs) and reconstruct the Carmen substation facilities in 2018 and 2019, respectively. Although the TSVs were delivered to the project in early July, their late arrival (90 days overdue) has necessitated delay of the installation work until the spring/summer of 2018. Delaying the work is the prudent course of action because installation could not be completed before the onset of severe winter weather. Also, the impact of keeping the Carmen Plant out of service during the high power demand season is too great from a financial perspective. The substation reconstruction work remains on schedule. Procurement of long lead-time switchgear and control system equipment as well as detailed design for the work will occur in 2018. The substation rebuild and installation work will be completed during the 2019 construction season.

Discussion

License Issuance

Having completed the required license filings, staff have turned their attention to the anticipated deployment of the license. While there are no known issues that could delay license issuance, we are proceeding in a cautious manner. License issuance will trigger a series of events and requirements culminating in an official acceptance of the license by EWEB. Assuming EWEB accepts the license and there are no challenges by other parties to the proceeding, staff will then meet with FERC staff to formally transfer the proceeding from licensing to compliance staff. This step initiates license compliance with FERC.

The Revised Settlement Agreement, and presumably the new license, includes a number of required actions within the first year of license issuance. These include development of the following plans:

- Water Quality Management Plan
- Transmission Line Management Plan
- Vegetation Management Plan
- Upstream and Downstream Passage Plan, including a schedule for design and construction of fish passage facilities

The timing and complexity of the deployment of each of these plans is dependent on the specific terms of the license and settlement agreement. We estimate that the initial planning and deployment of the license will take no fewer than five years and be supported by up to six fully dedicated employees with additional employees contributing specific expertise as needed. Once the initial deployment is complete, there will be on-going effort required for the duration of the license term to maintain compliance with the license requirements. The level of effort planned for license deployment was anticipated in the economic analysis provided to the Board for its consideration when authorizing the General Manager to enter the Amended and Revised Settlement Agreement.

Powerhouse Improvements

Delaying the installation of the new TSVs triggered revisions to other work plans, though it did not necessarily delay all of the associated work that was planned for 2017. Already complete is the installation of a new flow control valve at the Smith Reservoir intake structure. This improvement will ensure that power tunnel dewatering for the upcoming work can occur in a fully controlled and reliable manner in spite of heavy leakage occurring through the existing TSVs. Also complete are improvements to the Carmen Plant's draft tube gate system, which is another essential improvement needed to support the upcoming TSV installation work.

Staff are currently preparing to conduct a power tunnel inspection scheduled for this fall to clearly define any tunnel repair issues that might need to be addressed during the 2018 TSV outage. The inspection will also provide an opportunity to test and replace pressure relief valves located within the tunnel, further improving EWEB's ability to dewater the tunnel in a reliable manner in 2018. This inspection will require that the Carmen Plant be taken off-line for approximately four weeks beginning in mid-September. As a result of the dewatered condition, this outage will provide an opportunity for engineering staff to fully inspect the turbines at the Carmen Plant, an activity which hasn't been possible for several years due to the excessive leakage through the TSVs. At the same time, Wildish will use the outage to upgrade the plant's sump pumping system, another improvement that will benefit the 2018 TSV outage work.

Finally, planning and design work for the turbine replacement and generator rewind at the Carmen Plant is progressing well. A request for proposals was issued in June and proposals are due in late August. All of the major vendors for this type of work have shown an interest in EWEB's RFP. Staff expect that this RFP will yield a favorable proposal and are scheduled to return to the Board to seek authorization to award the contract at a meeting later this year. EWEB's consulting engineer has estimated the value of this turbine-generator contract at approximately $14 million.

Requested Board Action

None at this time. This memo is for information purposes.