



Board of Commissioners Meeting



Revenue Requirement Results

Presented by:
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Paul Quinn

September 23, 2020



Presentation Overview

- **Recap**
- **Revenue requirement updates & scenarios**
 - » Water
 - » Electric
- **Next steps**
- **Questions / discussion**



- **Study commenced April 2020**
- **Board presentations:**
 - » July 13, 2020 to discuss rate setting fundamentals and study goals & objectives
 - » August 18, 2020 to discuss preliminary revenue requirement results and scenarios

Previous Water Scenarios	Average Monthly Residential Bill (Assumes 4,200 gallons)										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
S1 Water: \$1.6MM Loan	\$37.83	\$50.69	\$59.31	\$62.13	\$65.08	\$68.17	\$71.41	\$74.80	\$78.35	\$82.07	\$85.97
S2 Water: \$5.0MM Loan	\$37.83	\$42.75	\$48.31	\$54.59	\$61.69	\$69.71	\$73.89	\$78.32	\$83.02	\$88.00	\$93.28

Previous Water Scenarios	\$ / Mo. Difference										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
S1 Water: \$1.6MM Loan		\$12.86	\$8.62	\$2.82	\$2.95	\$3.09	\$3.24	\$3.39	\$3.55	\$3.72	\$3.90
S2 Water: \$5.0MM Loan		\$4.92	\$5.56	\$6.28	\$7.10	\$8.02	\$4.18	\$4.43	\$4.70	\$4.98	\$5.28

Previous Electric Scenarios	Average Monthly Residential Bill (Assumes 1,000 kWh)										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
S1 Electric: \$1.6MM Loan	\$114.22	\$118.79	\$123.54	\$128.48	\$131.69	\$134.98	\$138.35	\$141.81	\$145.36	\$146.81	\$146.81
S2 Electric: \$5.0MM Loan	\$114.22	\$120.50	\$127.13	\$129.99	\$132.91	\$135.90	\$138.96	\$142.09	\$145.29	\$145.29	\$145.29

Previous Electric Scenarios	\$ / Mo. Difference										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
S1 Electric: \$1.6MM Loan		\$4.57	\$4.75	\$4.94	\$3.21	\$3.29	\$3.37	\$3.46	\$3.55	\$1.45	\$0.00
S2 Electric: \$5.0MM Loan		\$6.28	\$6.63	\$2.86	\$2.92	\$2.99	\$3.06	\$3.13	\$3.20	\$0.00	\$0.00



Overview of Rate Setting Process

Fiscal Policies – Set the Management Foundation

Today's
Focus

Step 1:
Revenue
Requirement
(defining overall needs)

Revenue

Debt

Reserves

O&M

Capital

Step 2:
Cost of Service
(equity evaluation)

Define Customer Classes

Allocate Costs

Step 3:
Design Rates
(collect target revenue)

Fixed Charges

Variable Charges



Water Utility



Key Changes

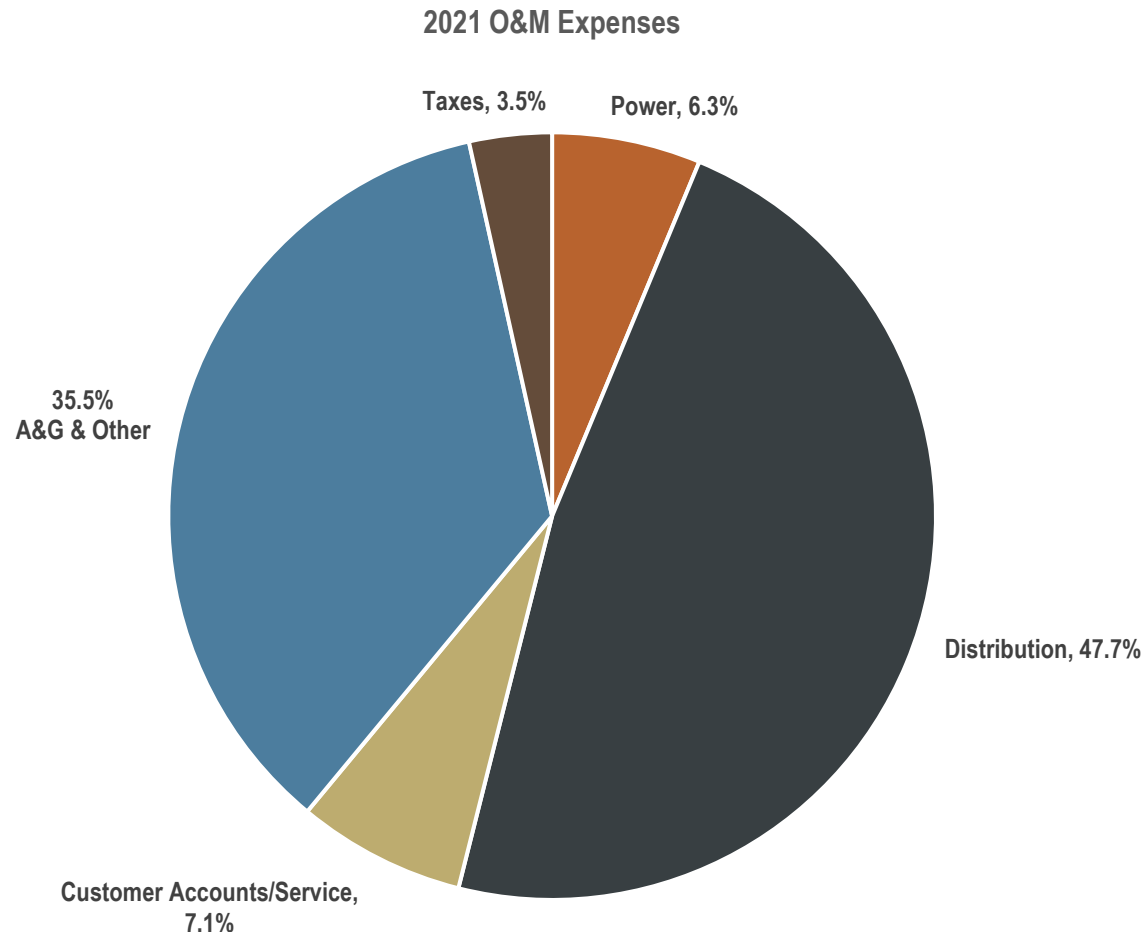
- **Analysis updated to reflect the latest 2021 budget figures**
 - » Includes operating expenses/non-rate revenues and capital plan
 - » 2021 becomes new baseline for O&M projections

Key Changes	Previous Forecast	Current Forecast	Difference
Kala Point Sewer Rates	Maintains the difference btwn Kala Point & standard sewer rate	Aligns Kala Point w/ standard sewer rate	~\$15,000
2021 Non-Rate Revenues	\$0.6M	\$0.8M	+\$0.2M
2021 O&M Expenses	\$3.0M	\$3.2M	+\$0.2M
2020 - 2030 PUD Funded CIP	\$16.1M	\$15.7M	-\$0.4M



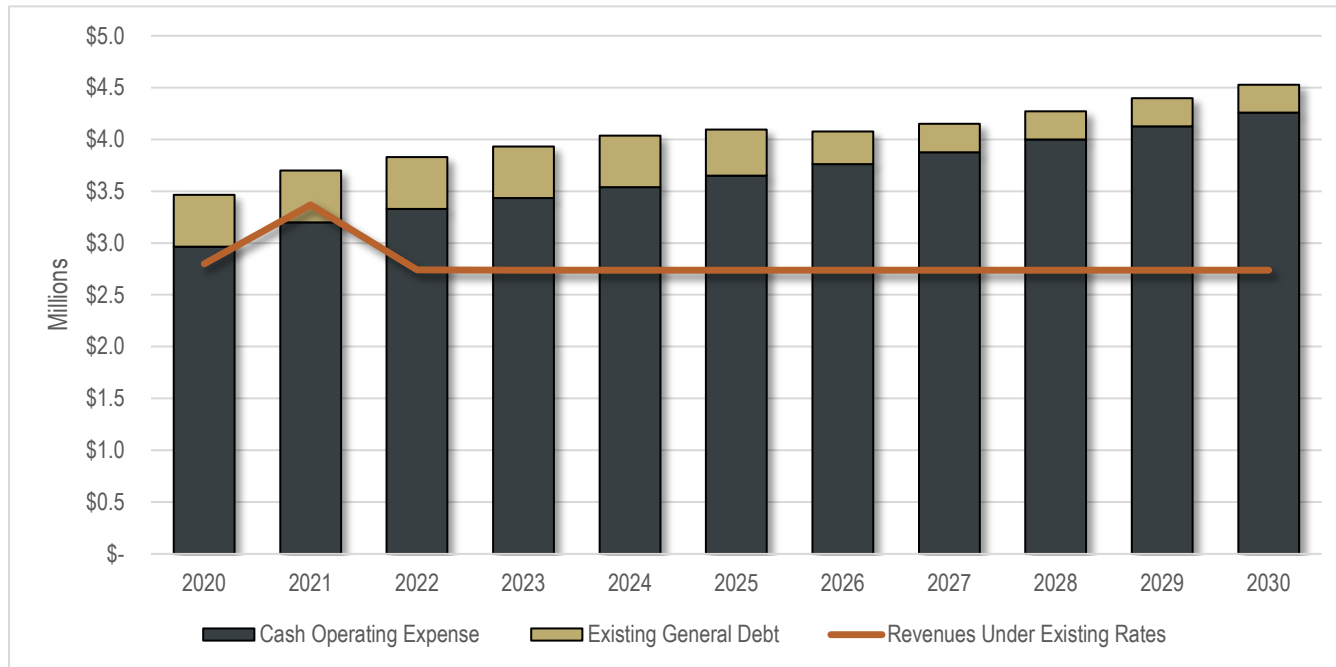
Water Key Components – O&M Expenses

- 2021 budget used as baseline





Water Revenue Requirement – Baseline Operating



- **Existing rates are not sufficient to cover existing O&M and debt**
 - » Does not include CIP
 - » Starting 2020 rates are not sufficient to cover O&M
 - One-time benefit of Peterson Lake timber harvest in 2021



Water Scenarios

- **Without tax revenue balances water starts 2020 near \$0 cash**
 - » Interdivision loan of \$5M is assumed to meet obligations
 - 10-year term length | 2.00% interest rate
- **Two scenarios for consideration**
 - » Scenario 1: no rate increase in 2021
 - » Scenario 2: \$5 increase to base rate in 2021 – proportional increase to larger meter sizes and Kala Point accounts
- **New debt assumed**
 - » Assumes 2022 low interest loan for the Quilcene Storage Tank of \$2.2 million
 - » New revenue bonds to minimize rate increases as much as possible
 - 20-year term length | 5.00% interest rate



Water Scenarios

S1 Water: No Increase in 2021	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Average Monthly Residential Bill	\$37.83	\$37.83	\$51.83	\$59.73	\$65.11	\$70.97	\$74.51	\$78.24	\$82.15	\$86.26	\$90.57
\$ / Mo. Difference		\$0.00	\$14.00	\$7.90	\$5.38	\$5.86	\$3.55	\$3.73	\$3.91	\$4.11	\$4.31
Self Sustaining	X	X	X	X	X	X	✓	✓	✓	X	✓
Meets Op. Rsrv Target w/out Line-of-Credit	✓	✓	✓	X	X	X	X	X	X	X	X
Annual Rate Increases	0.00%	0.00%	37.00%	15.25%	9.00%	9.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Total Debt Proceeds	\$5,000,000	\$ -	\$3,226,829	\$ -	\$1,250,000	\$ -	\$1,000,000	\$ -	\$ -	\$7,000,000	\$ -

Notes: Sewer Kala Point rate is aligned w/ standard sewer rate in 2022. Sewer rates follow Water percentage increases. | Residential bill is based on 4,200 gallons of monthly usage.

S2 Water: \$5 Base Rate Increase in 2021	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Average Monthly Residential Bill	\$37.83	\$42.83	\$50.54	\$59.64	\$65.15	\$71.18	\$75.09	\$79.22	\$83.58	\$88.18	\$93.03
\$ / Mo. Difference		\$5.00	\$7.71	\$9.10	\$5.52	\$6.03	\$3.91	\$4.13	\$4.36	\$4.60	\$4.85
Self Sustaining	X	X	X	X	X	X	✓	✓	✓	✓	✓
Meets Op. Rsrv Target w/out Line-of-Credit	✓	✓	✓	X	X	X	X	X	X	X	X
Annual Rate Increases	0.00%	11.45%	18.00%	18.00%	9.25%	9.25%	5.50%	5.50%	5.50%	5.50%	5.50%
Total Debt Proceeds	\$5,000,000	\$ -	\$3,226,829	\$ -	\$1,250,000	\$ -	\$1,000,000	\$ -	\$ -	\$7,000,000	\$ -

Notes: Sewer Kala Point rate is aligned w/ standard sewer rate in 2021. Sewer rates increased by \$5 in 2021. Subsequent years follow Water percent increases. | Residential bill is based on 4,200 gallons of monthly usage.

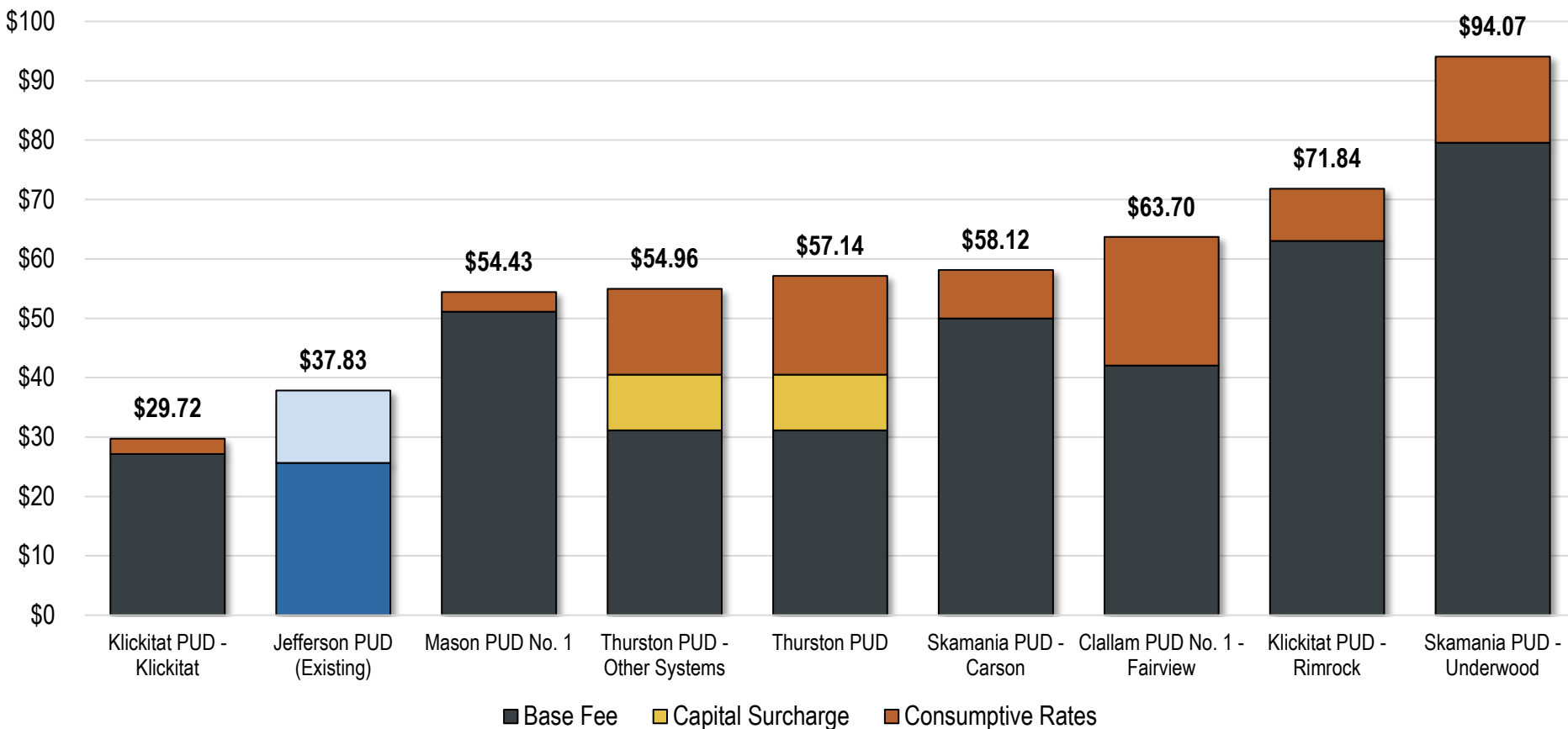


Board Feedback

- **Input on updated scenarios**
- **Alternative scenarios for consideration?**
 - » Rate increase timing difference
 - » Interdivisional loan changes
 - » Other?



Water Rate Survey

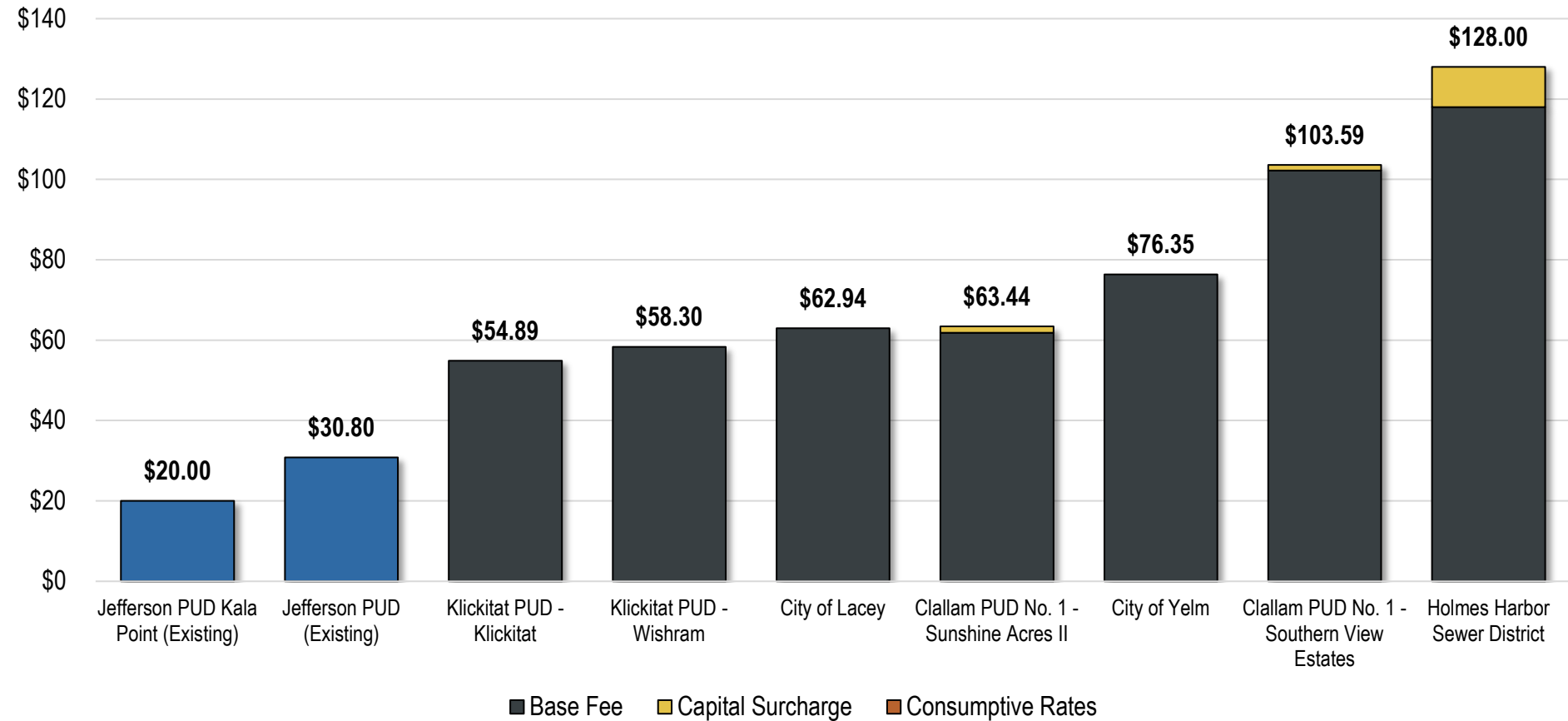


Notes:

1. Assumes 4,200 gallons per month of consumption



Sewer Rate Survey





Electric Utility

Key Changes

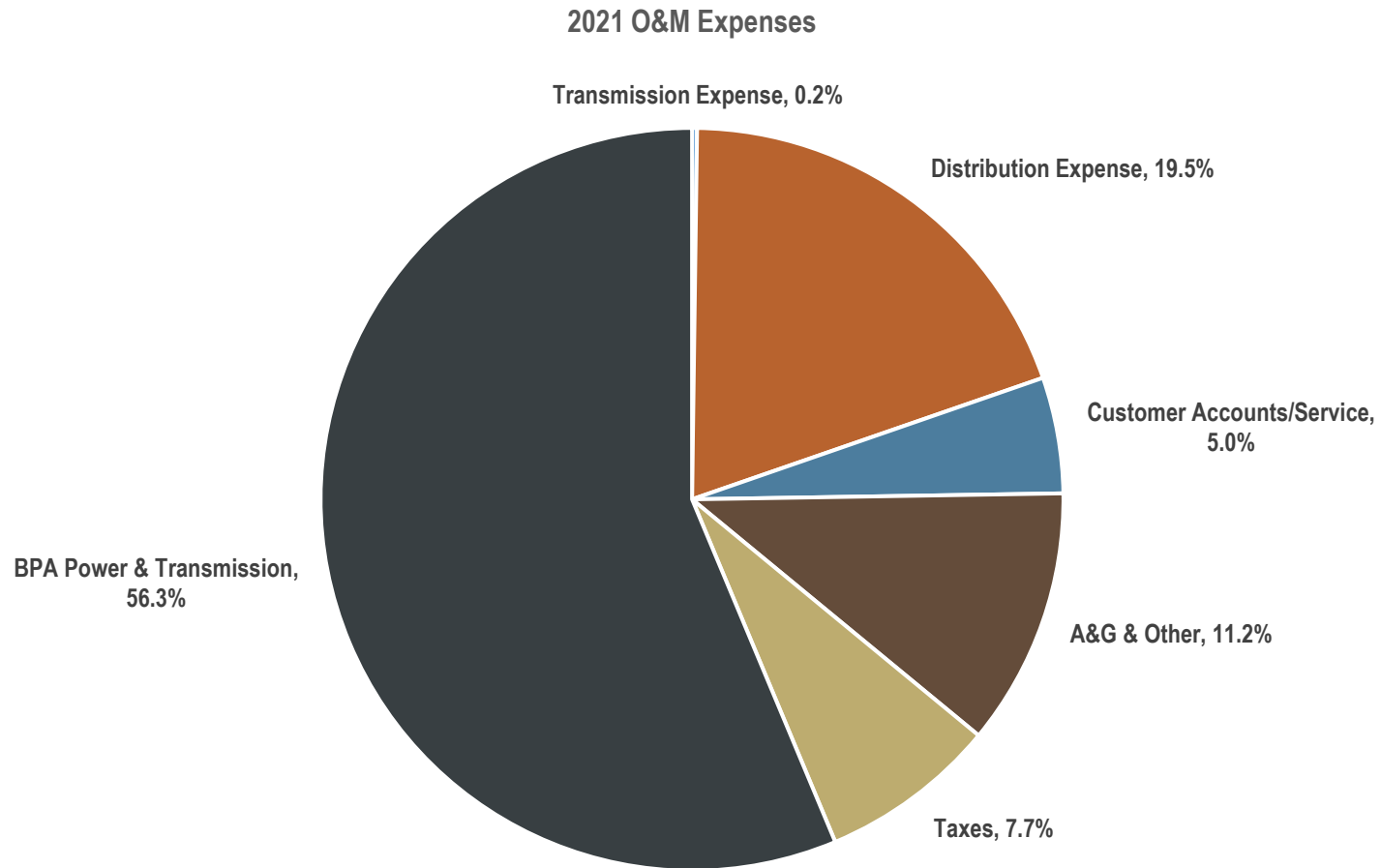
- **Analysis was updated to reflect the latest 2021 budget figures**
 - » Includes operating expenses/non-rate revenues and capital plan
 - » 2021 becomes new baseline for O&M projections

Key Changes	Previous Forecast	Current Forecast	Difference
Rate Increases	Effective Jan 1st	Effective Apr 1st	Less Revenue in Year of Rate Increase
2021 Non-Rate Revenues	\$1.3M	\$1.6M	+\$0.3M
2021 O&M Expenses	\$13.0M	\$13.0M	\$0.0M
2021 Power Expenses	\$16.8M	\$16.8M	\$0.0M
2020 - 2030 PUD Funded CIP	\$73.6M	\$72.3M	-\$1.3M



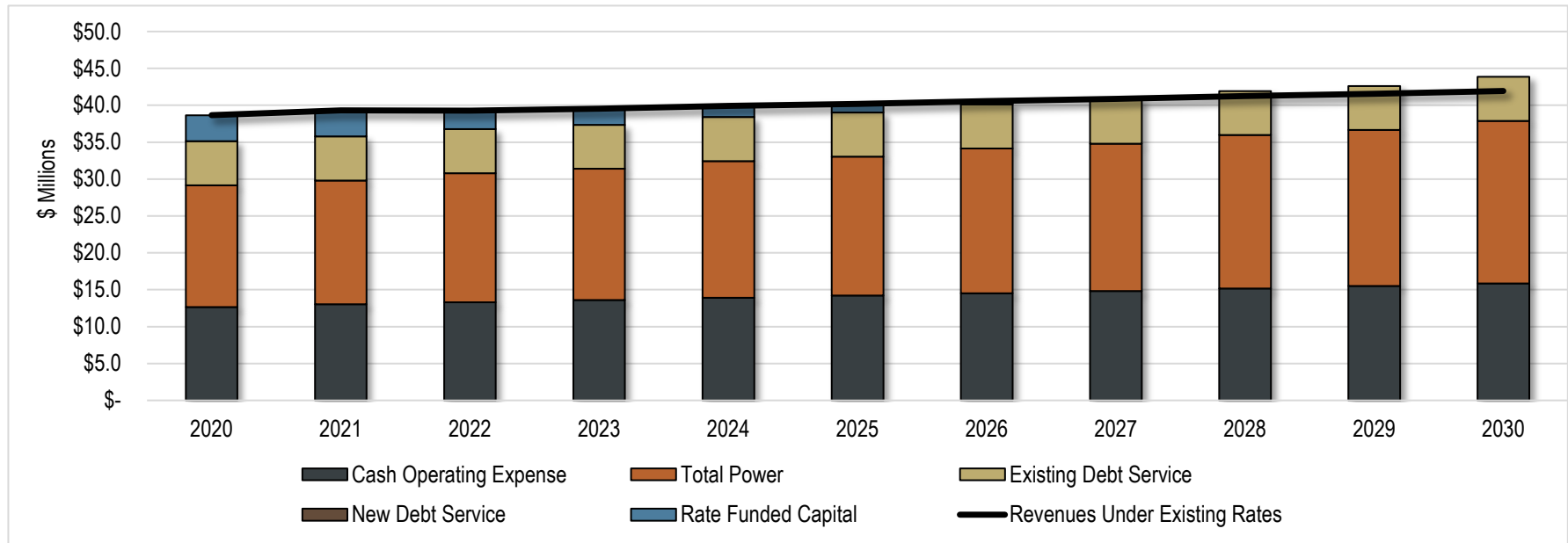
Electric Key Components – O&M Expenses

- 2021 budget used as baseline





Electric Revenue Requirement – Baseline



RUS Debt Tests	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Debt Service Coverage - Min 1.25x	1.94x	1.96x	1.83x	1.75x	1.63x	1.55x	1.47x	1.38x	1.29x	1.20x	1.10x
Operating Debt Srv Cvg - Min 1.10x	1.62x	1.62x	1.42x	1.33x	1.26x	1.17x	1.09x	1.00x	0.91x	0.82x	0.72x
TIER - Min 1.25x	2.73x	2.38x	2.09x	1.89x	1.58x	1.35x	1.08x	0.76x	0.41x	0.00x	-0.47x
Operating TIER - Min 1.10x	1.97x	1.62x	1.11x	0.86x	0.62x	0.34x	0.02x	-0.34x	-0.75x	-1.23x	-1.79x

- Existing rates are not sufficient to cover existing O&M and debt
 - » Operating expenses & debt service exceed revenues starting in 2028
 - » Operating TIER requirement would not be met starting 2023



Electric Scenarios

- **Interdivision loan of \$5M to Water is assumed**
 - » 10-year term length | 2.00% interest
- **Two scenarios consideration**
 - » Scenario 1: No rate increase in 2021
 - » Scenario 2: 3.00% increase in 2021
- **No new debt – capital plan 100% cash financed**

S1. No Rate Increase in 2021	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Average Monthly Residential Bill	\$114.22	\$114.22	\$131.07	\$133.69	\$136.36	\$139.09	\$141.87	\$141.87	\$141.87	\$141.87	\$141.87
\$ / Mo. Difference		\$0.00	\$16.85	\$2.62	\$2.67	\$2.73	\$2.78	\$0.00	\$0.00	\$0.00	\$0.00
Meets Op. Rsrv Target w/out Line-of-Credit	X	X	X	X	X	X	✓	✓	✓	✓	✓
Annual Rate Increases	0.00%	0.00%	14.75%	2.00%	2.00%	2.00%	2.00%	0.00%	0.00%	0.00%	0.00%

Notes: Residential bill is based on 1,000 kWh of monthly energy usage

S2. 3.00% Rate Increase in 2021	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Average Monthly Residential Bill	\$114.22	\$117.65	\$125.88	\$130.29	\$134.85	\$137.54	\$140.30	\$143.10	\$143.10	\$143.10	\$143.10
\$ / Mo. Difference		\$3.43	\$8.24	\$4.41	\$4.56	\$2.70	\$2.75	\$2.81	\$0.00	\$0.00	\$0.00
Meets Op. Rsrv Target w/out Line-of-Credit	X	X	X	X	X	X	X	✓	✓	✓	✓
Annual Rate Increases	0.00%	3.00%	7.00%	3.50%	3.50%	2.00%	2.00%	2.00%	0.00%	0.00%	0.00%

Notes: Residential bill is based on 1,000 kWh of monthly energy usage

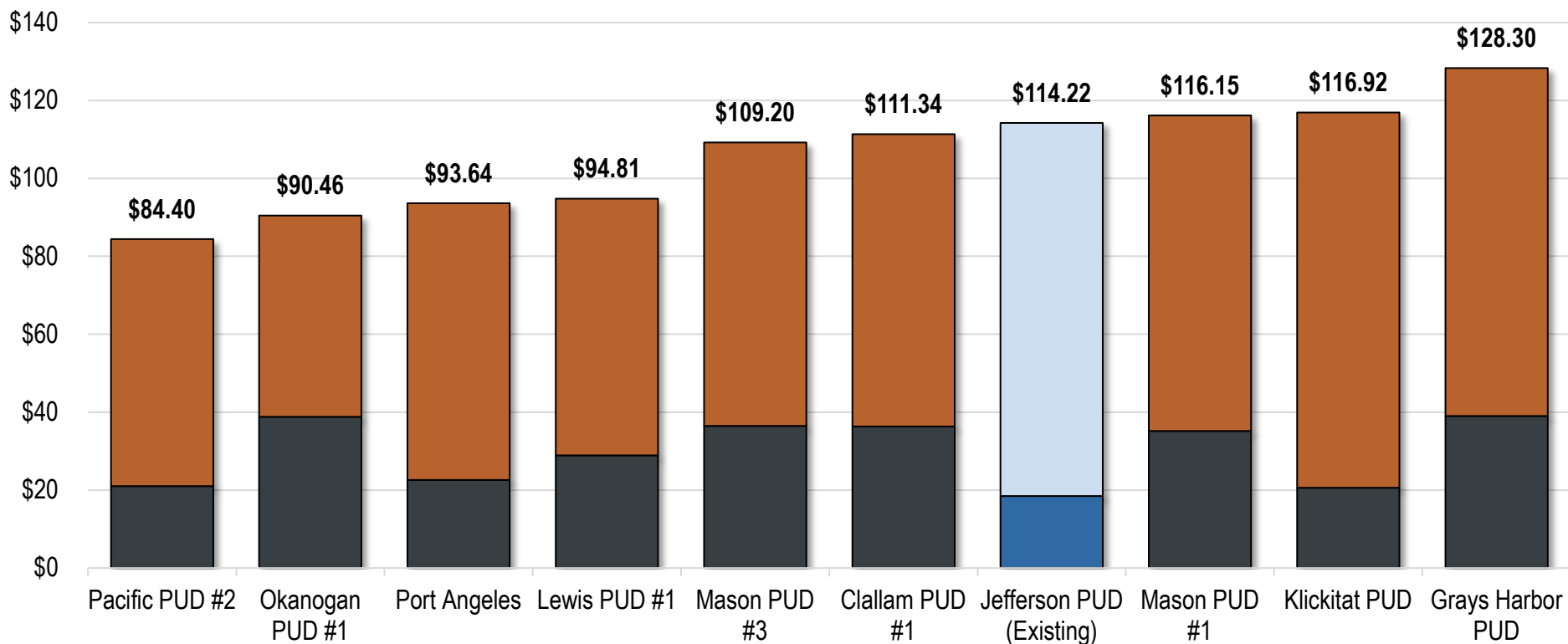


Board Feedback

- **Input on updated scenarios**
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 - » Interdivisional loan changes
 - » Other?



Electric Rate Survey



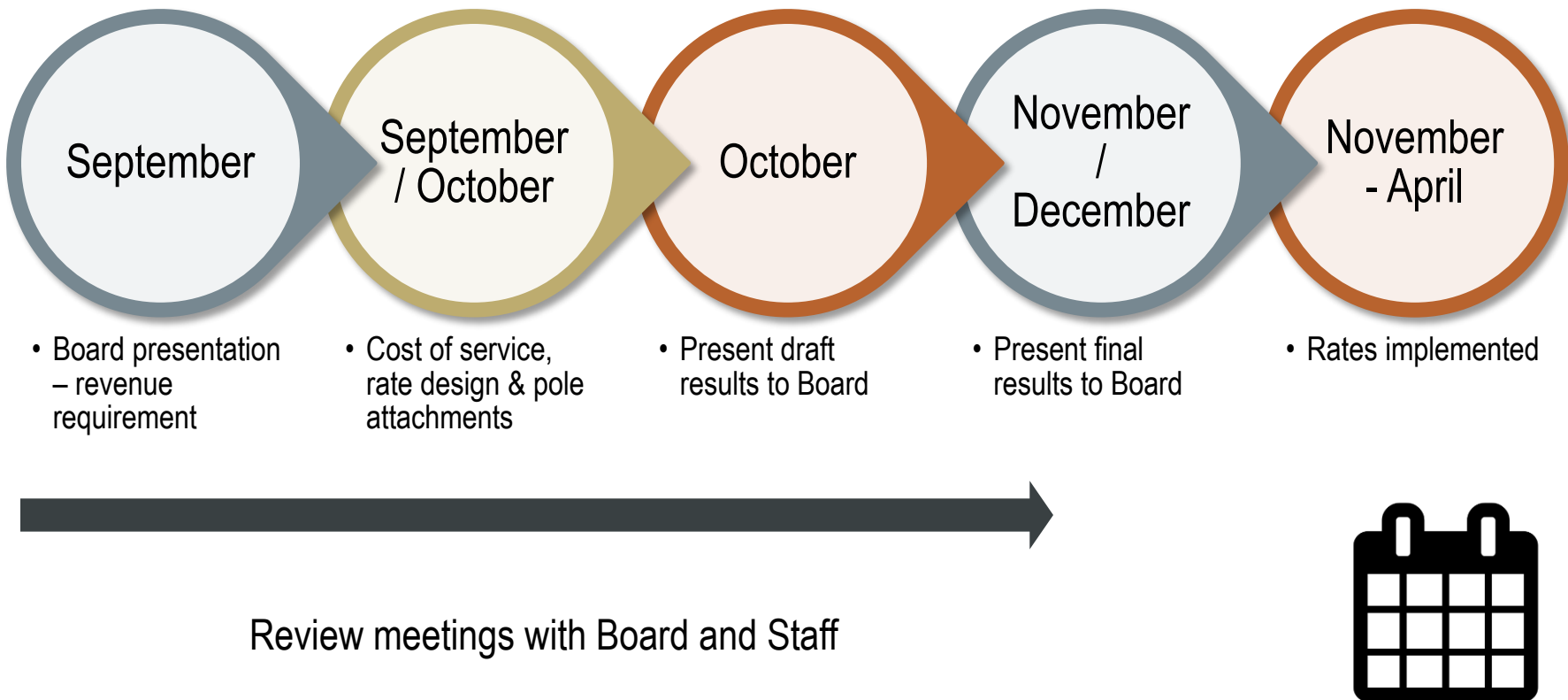
Notes:

1. Assumes 1,000 kWh per month

■ Basic Charge ■ Energy Charge

Category	Pacific PUD #2	Okanogan PUD #1	Port Angeles	Lewis PUD #1	Mason PUD #3	Clallam PUD #1	Jefferson PUD	Mason PUD #1	Klickitat PUD	Grays Harbor PUD
# of Meters	17,496	21,204	10,970	33,672	33,535	32,008	19,984	5,293	13,191	40,253
Population Density	23.42	8.19	1,885.50	33.40	68.43	44.16	17.85	68.43	12.17	39.28
MHI	\$ 46,844	\$ 47,336	\$ 42,967	\$ 54,096	\$ 60,736	\$ 47,350	\$ 54,904	\$ 60,736	\$ 61,030	\$ 43,540
Debt to Assets	0.14x	0.20x	0.10x	0.35x	0.35x	0.21x	0.74x	0.32x	0.54x	0.45x

Next Steps



Thank you! Questions?

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Appendix



Legal Authority for Rate Setting

- **RCW 54.24.080**
- (1) The commission of each district which shall have revenue obligations outstanding shall have the power and shall be required to establish, maintain, and collect rates or charges for electric energy and water and other services, facilities, and commodities sold, furnished, or supplied by the district. The rates and charges shall be fair and, except as authorized by RCW 74.38.070 and by subsections (2) and (3) of this section, nondiscriminatory, and shall be adequate to provide revenues sufficient for the payment of the principal of and interest on such revenue obligations for which the payment has not otherwise been provided and all payments which the district is obligated to set aside in any special fund or funds created for such purpose, and for the proper operation and maintenance of the public utility and all necessary repairs, replacements, and renewals thereof.
- (3) In establishing rates or charges for water service, commissioners may in their discretion consider the achievement of water conservation goals and the discouragement of wasteful water use practices.



Glossary of Terms

- **A&G – administrative and general**
- **BPA – Bonneville Power Administration**
- **CIP – capital improvement program**
- **COSA – cost-of-service analysis**
- **DSC – debt service coverage**
- **kWh – kilowatt hours**
- **kW – kilowatt**
- **O&M – operating & maintenance**
- **PUD – public utility district**
- **RCW – revised code of Washington**
- **R&R – renewal and replacement**
- **TIER – time interest earned ratio**



Water CIP Detail

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
<u>Bywater Bay</u>												
Well #1 Portable Generator					\$ 20,000							\$ 20,000
Well #1 Emergency Power Connections					6,000							6,000
Shine Plat LUD Distribution Piping Replacement		201,250	201,250									402,500
Replacement Fire Pump								25,000				25,000
Bywater (Shine Well) Pump Replacement		35,000										35,000
Shine Plat LUD-Distribution Replacement	45,000											45,000
Bywater Booster Station Install		31,000										31,000
<u>Gardiner</u>												-
Gardiner Well Portable Generator				25,000								25,000
Gardiner Well Emergency Power Connections				6,000								6,000
Replacement Well			20,000									20,000
Replacement Well												-
<u>Coyle</u>												-
Fire Pump				50,000								50,000
Transmission Line Replacement												-
Distribution Piping Replacement						100,000	100,000	100,000	100,000	100,000		500,000
Transmission Line Replacement												-



Water CIP Detail

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
<u>Quimper</u>												
New Glen Cove Storage Tank										2,325,000	2,325,000	4,650,000
Addition of fire pump to Ocean Grove BPS					95,000							95,000
New domestic demand BPS							40,000					40,000
New domestic demand BPS								40,000				40,000
New 4-inch pipe (1,500 LF) and new domestic demand BPS									175,000			175,000
New 6-inch pipe (760 LF) and new domestic demand BPS										130,000		130,000
New PRV station							80,000					80,000
Reconfiguring pressure zone using existing piping and valves			2,000									2,000
Upsizing 4-inch to 8-inch (200 LF)			16,000									16,000
Upsizing 8-inch to 12-inch (3,700 LF) to support higher flows from new Glen Cove Storage Tank			-							289,000		289,000
Upsizing 6-inch to 10-inch (7,300 LF)			-									-
Reconfiguring pressure zone using existing piping and valves			2,000									2,000
Upsizing 4-inch to 8-inch (360 LF)			28,000									28,000
Upsizing 2-inch to 6-inch (940 LF) and new 6-inch (2,520 LF) to make pipe loop						270,000						270,000
Upsizing 4-inch to 6-inch (1,200 LF)							94,000					94,000
Upsizing 6-inch to 8-inch (2,300 LF)								179,000				179,000
New 6-inch pipe (350 LF) to make pipe loop									27,000			27,000
New 6-inch pipe (30 LF) to make pipe loop										5,000		5,000
Sparling II Treatment Building Air Compressor												-
Phase II Treatment Upgrades				50,000								50,000
Kilisut Harbor Bridge	180,000											180,000
Quimper-SCADA Replacement	15,000											15,000



Water CIP Detail

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
<u>Lazy C</u>												-
Well #1 or #2 Chlorination tank, shed, control panel, source meter and associated infrastructure				75,000								75,000
Lazy C Emergency Well Pump and Accessories		22,000										22,000
Booster Pumps Replacement	2,317											2,317
<u>Triton Cove</u>												-
Well #2 Portable Generator					20,000							20,000
Well #2 Emergency Power Connections					6,000							6,000
Williams Addition Wellhouse	50,000	10,000										60,000
<u>Snow Creek</u>												-
Wellhouse Replacement												-
Snow Creek Wellhouse Replacement Project	89,750	179,500										269,250
<u>Mats View Terrace</u>												-
New source well?												-
Well/BPS Emergency Power Connections			6,000									6,000
pump replacement	20,000											20,000
<u>Quilcene</u>												-
Source 2 Development	10,000	5,000	10,000									25,000
New Quilcene Storage Tank	359,000		2,099,000									2,458,000
New larger pump at USFS well												-
Quilcene Well Emergency Power Connections				6,000								6,000
Quilcene-SO2 Development	1,000											1,000
Quilcene Pump Replacement-USFS		15,000										15,000



Water CIP Detail

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
<u>Other PUD-Wide Projects</u>												-
Pipeline Replacement			70,000		70,000		70,000		70,000			280,000
WSDOT culvert coordination projects						160,000						160,000
Well Rehabilitation (cleaning)			5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000		40,000
Replacement Well Drilling				60,000			-	-	-	60,000		120,000
Booster Pump Replacement (with VFD)				20,000		20,000	-	-	20,000			60,000
Tank Cleaning/Painting			5,000		5,000		5,000	5,000	5,000	5,000		30,000
Tank Inspection			5,000		5,000		5,000	5,000	5,000	5,000		30,000
Seismic Retrofitting of Tanks			20,000				30,000	10,000	10,000	10,000		80,000
SCADA Upgrades			5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000		40,000
Retrofit Valves on ATEC Media Filter Systems			5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000		40,000
Replacement of ATEC Media Filters			5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000		40,000
Decommissioning of Various Wells	49,450	20,000										69,450
6 Year Water Plan from HDR	60,000											60,000
New Water Installs	50,000	50,000										100,000
Fire Hydrant Replacement and Repair	7,000	7,000										14,000
Reynolds Well Pump in Bywater System	42,000											42,000
Sparling Well Repair and VFD Installation	8,500											8,500
Eagle Ridge Booster Station Install	1,600											1,600
Hilda Street Bridge - Chimacum Creek	90,000											90,000
Kala Point Pressure Tank Replacement	11,000											11,000
Line Replacement--Coyle and Others		55,000										55,000
SCADA Controls--Septic		5,000										5,000
Triton Cove, Lazy C, and Quilcene SCADA Replacement		15,000										15,000
WSDOT Chimacum Creek		160,000										160,000
Vehicle		55,000										55,000
<u>Capitalized Labor (2 601.1)</u>	132,190	122,822	128,042	133,484	139,157	145,071	151,237	157,664	164,365	171,351	178,633	1,624,017
<u>Annual Sewer CIP Placeholder</u>	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	110,000
Total	\$ 1,233,807	\$ 998,572	\$ 2,642,292	\$ 455,484	\$ 396,157	\$ 725,071	\$ 605,237	\$ 551,664	\$ 606,365	\$ 3,130,351	\$ 2,513,633	\$ 13,858,634
Total (Inflated)	\$ 1,233,807	\$ 1,018,807	\$ 2,783,154	\$ 485,342	\$ 428,413	\$ 817,450	\$ 693,337	\$ 642,235	\$ 724,277	\$ 4,032,174	\$ 3,316,678	\$ 16,175,675

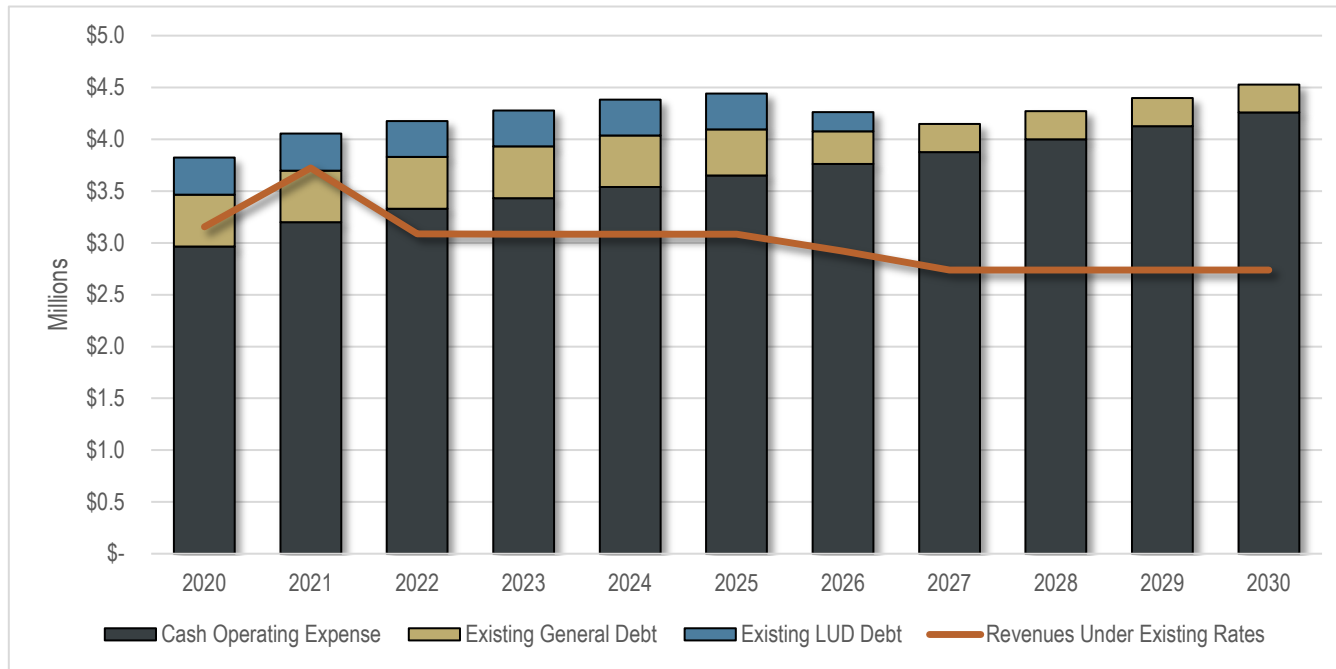


Electric CIP Detail

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
New Line Construction	\$ 545,000	\$ 440,000	\$ 525,000	\$ 625,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,135,000
New Distribution Main-Line Construction	400,000	220,000	400,000	100,000	-	-	-	-	-	-	-	1,120,000
Conversion	640,000	50,000	550,000	530,000	-	-	-	-	-	-	-	1,770,000
New Substations	260,000	100,000	75,000	-	-	-	-	-	-	-	-	435,000
Substation Changes	214,000	354,000	755,000	665,000	-	-	-	-	-	-	-	1,988,000
Miscellaneous Distribution Equipment	480,000	585,000	920,500	1,209,500	-	-	-	-	-	-	-	3,195,000
Other Distribution Items	345,000	995,000	1,535,000	920,000	-	-	-	-	-	-	-	3,795,000
Transmission Line and Station Changes	170,000	45,000	60,000	285,000	-	-	-	-	-	-	-	560,000
Other Transmission Lines	45,000	25,000	-	80,000	-	-	-	-	-	-	-	150,000
Communications	145,000	140,000	110,000	160,000	-	-	-	-	-	-	-	555,000
Headquarters Facilities	50,000	-	125,000	100,000	-	-	-	-	-	-	-	275,000
Miscellaneous Projects/Other	3,582,000	3,076,000	700,000	600,000	600,000	600,000	600,000	600,000	600,000	600,000	600,000	12,158,000
Annual Average Placeholder	-	-	-	-	4,887,000	4,887,000	4,887,000	4,887,000	4,887,000	4,887,000	4,887,000	34,209,000
Total	\$ 6,876,000	\$ 6,030,000	\$ 5,755,500	\$ 5,274,500	\$ 5,487,000	\$ 5,487,000	\$ 5,487,000	\$ 5,487,000	\$ 5,487,000	\$ 5,487,000	\$ 5,487,000	\$ 62,345,000
Total Escalated to Year of Construction	\$ 6,876,000	\$ 6,210,900	\$ 6,106,010	\$ 5,763,589	\$ 6,175,667	\$ 6,360,937	\$ 6,551,765	\$ 6,748,318	\$ 6,950,767	\$ 7,159,290	\$ 7,374,069	\$ 72,277,312



Water Revenue Requirement – Baseline Operating



- **Existing rates are not sufficient to cover existing O&M and debt**
 - » Does not include CIP
 - » Starting 2020 rates are not sufficient to cover O&M
 - One-time benefit of Peterson Lake timber harvest in 2021