



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD



TO: Commissioners Brown, Carlson, Mital, Simpson and Helgeson
 FROM: Mel Damewood, Chief Water Engineering & Operations Officer
 DATE: August 7, 2018
 SUBJECT: Tiered Pricing for Water
 OBJECTIVE: Information and Discussion

Issue

At the July 10, 2018 Board meeting, the Board of Commissioners discussed tiered electric pricing, and requested more information to consider the implications of eliminating EWEB’s current tiered water rate design at the August 2018 Board meeting. Due to time constraints, staff could not compile complete financial impact and customer profile characteristics for the August meeting.

Background

EWEB’s existing three-tiered inverted block rate for residential customers was the result of the 1998 Water Supply Plan (WSP). The 1998 WSP was initiated to develop an integrated resource planning process, which involved two citizen advisory committees, multiple public forums and public hearings, and the efforts of EWEB staff. Water Conservation was a focus of the 1998 WSP and implementing a new tiered rate structure was one of eight recommendations outlined by the WSP to encourage water conservation.

In November 2001, EWEB implemented tiered rates for residential water customers within the City of Eugene city limits, at the same time eliminating the last vestiges of declining block rates for commercial and industrial customers. Table 1 shows the Consumption Charges put into effect at that time of implementation and current residential Consumption Charges within the City of Eugene city limits.

TABLE 1
 EWEB Residential Consumption Charges

Water Use Quantity	Original Consumption Charge (November 2001)	Current Consumption Charge (July 2018)	Percent Change in Consumption Charge (2001-2018)
< 8,000 gallons per month	\$0.821 per 1,000 gallons	\$1.416 per 1,000 gallons	72.5%
8,001 to 30,000 gallons per month	\$1.109 per 1,000 gallons	\$2.391 per 1,000 gallons	115.6%
> 30,000 gallons per month	\$1.889 per 1,000 gallons	\$3.872 per 1,000 gallons	105.0%

EWEB’s base rate is also a component of the Water Utility’s total revenue stream. Water production

and delivery is largely a fixed cost business. Since 2012, EWEB has been gradually raising the residential basic charge to better capture fixed costs, moving from \$12.78 to the current \$20.87 per month. On a cost of service basis, the water utility captures approximately 50% of its fixed costs in the basic charge. With that in mind, EWEB has been able to keep its first tier rate lower than most comparable utilities to not penalize customers with low consumption. Below is a comparator chart of NW Water Utilities.

Table 1 - Comparing EWEB with Other Utilities with Flat and Tiered Rates

Utility	5/8-3/4 meter Basic Charge	Tier 1	Tier 2	Tier 3	Bill at 5 Kgal	Bill at 20 Kgal
EWEB	\$20.37	\$1.42	\$2.39	\$3.87	\$27.45	\$60.39
SUB	\$16.20	\$2.46	\$2.61	\$2.82	\$28.49	\$67.13
Corvallis	\$15.34	\$2.27	\$2.94	\$3.61	\$26.70	\$77.53
Bend*	\$23.37	\$2.59	n/a	n/a	\$36.33	\$75.24
Medford	\$11.62	\$0.73	\$1.27	\$1.82	\$16.03	\$34.18
Salem*	\$9.18	\$3.50	n/a	n/a	\$26.69	\$79.23
TVWD	\$27.90	\$6.16	\$8.78	n/a	\$58.70	\$162.18
Beaverton*	\$15.00	\$4.24	n/a	n/a	\$36.19	\$99.76
Portland Water Bureau*	\$14.79	\$6.54	n/a	n/a	\$43.68	\$133.90
Tacoma	\$21.20	\$2.44	\$3.05	n/a	\$34.98	\$76.15
Seattle	\$16.10	\$7.13	\$8.81	\$15.78	\$51.86	\$180.60
Average	\$17.37	\$3.59	\$4.27	\$5.58	\$35.19	\$96.81

*- Utilities with a flat rate

The water utility expects flat to small increases in consumption over time despite population growth. This is largely due to more efficient plumbing code. Also, residential water consumption is weather-dependent with hot dry summers leading to more landscape irrigation. EWEB currently does not have recent data on what percentage of summertime water demand is attributed to residential landscape irrigation.

Recognizing that the water utility has capacity to treat more water at the filtration plant and ample water rights to put to beneficial use, the general strategy has been to seek opportunities for more surplus sales to wholesale customers and to seek growth in industrial accounts that would offer more consistent use patterns.

Discussion

A key difference between the water and electric tiers is the cost-basis that led to the structure. The electric tiers set in 2003 were based on higher marginal costs for non-EWEB generated power, a circumstance that does not exist today. EWEB water tiers were intentionally set to provide a strong price signal when usage increased over average indoor needs. The levels are nearly double from one tier to the next based on best practices for water conservation pricing.

Another difference relates to national utility trends. While more electric utilities are looking to flatten rates to mitigate risks from stagnant growth, increasing fixed costs and more renewable

energy market penetration, this is not the case for water utilities. With climate change threats and water scarcity becoming a growing concern in other parts of the country, water utilities are more likely to move towards steeper pricing tiers and increased investment in water conservation programs. For reference, EWEB budgets \$25,000 for toilet rebates, and coupled with the Green Grass Gauge program, this represents EWEB's residential water conservation budget.

Division 86 Requirements

Every 5 years, EWEB must submit an update of the Water Management and Conservation Plan (MWCP) to address the requirements of the final order of EWEB's surface water Permit S-27741 (McKenzie River Permit of 183.0cfs/118.3mgd). The WMCP must comply with the Oregon Administrative Rules (OAR) 690-086-0150(1)-(6), also known as the Division 86 requirements. In January 2018, EWEB submitted its 5 year update and it is currently in the final stage of approval by the Oregon Water Resources Dept. In the 2018 update, EWEB gives the following update on 2012 benchmarking and then commits the following on future 5 year benchmark on rates and funding:

***Progress on 2012 benchmark:** EWEB met its rate structure and billing program benchmarks from the 2012 WMCP by providing water conservation billing best management practices information to the team conducting cost of service analysis during the reporting period. EWEB also evaluated customer classification as part of the 2012 Water Conservation Plan Update. EWEB maintained the tiered consumption charges for residential customers.*

***Five-Year Benchmark:** EWEB will continue to review its rates annually by analyzing funding requirements to pay for future capital and operating costs, as well as costs associated with water conservation programs. EWEB will continue to apply rates that encourage water conservation according to water utility best management practices. EWEB will also continue a monthly billing schedule for all customer classes.*

EWEB's commitment to "continue to apply rates that encourage water conservation according to water utility best management practices" will be problematic in defending a shift to a flat rate structure. Flat rate structures are not considered best management practices for water conservation in the water industry. Although not a mandate to have tiered rate structures, if EWEB decides to implement a flat rate structure, EWEB would have to explain the reason and impacts in the next progress report. The only mandate that can be found regarding customer billing is in OAR 690-086-0150(4)(d), which states; "A rate structure under which customers' bills are based, at least in part, on the quantity of water metered at the service connections". ORS 690-086-0150 (6)(d) also states as follows: "Adoption of rate structures, billing schedules, and other associated programs that support and encourage water conservation."

Triple Bottom Line Assessment

ECONOMIC

While EWEB currently has ample water rights and excess production capacity at the Hayden Bridge intake and treatment plant, EWEB does not produce 'surplus water'. Any water we do not produce or use locally does not harm the utility financially; it simply flows down river. However it must be acknowledged that the marginal cost of pumping and treating water decreases as production increases.

Managing peak demands has an economic benefit to EWEB from a water system planning perspective. If flattening the residential rate results in increased peak demand, this potentially

shortens the life of the Hayden Bridge treatment plant capacity and perhaps some distribution facilities. However, there is enough excess capacity at Hayden Bridge Intake, Treatment and Transmission systems to produce 80 million gallons per day (mgd) and current system peak demands are hovering just over 50 mgd. Also, distribution facilities are typically sized for fire flow capacity, which typically is much greater than any indoor or outdoor residential demand.

In terms of economic impacts to customers, our remaining consumption-based flat pricing charge would need to increase to absorb the lost revenue generated by the two higher usage tiers. Bill impact analysis is on-going and will be shared at a future meeting.

We know that a significant portion of our residential customers, including those with limited and fixed incomes, will have a higher bill for typical indoor usage. EWEB could increase its outreach and incentives for indoor water conservation measures to help mitigate this impact.

There are many options to consider in changing the existing three tier inverted rate structure, including a two tier system that still may be able to encourage conservation but not penalize low water users or low/fixed income customers.

ENVIRONMENTAL

For the second time in five years, we are facing another low snowpack year that will lead to corresponding low river flows and warmer temperatures in the lower McKenzie. Climate change will likely increase the frequency and severity of such events. While we have senior water rights that largely protect us from curtailment, EWEB has taken a leadership role in being a good steward of the McKenzie River. We also recognize that rivers are a system, with a sizable portion of the cold water entering the main stem of the Willamette coming from the McKenzie during summer months. As such, we have employed messaging to our customers during low flow years that encourages wise use to keep as much water in the river for fish and for downstream residents. While flattening tiers doesn't explicitly suggest wasteful consumption, it could send a conflicting message in this regard.

Higher water production and more frequent reservoir fill times not only increases utility energy usage, but also the waste products (primarily backwash water and sludge) associated with water production.

SOCIETAL

As noted in our earlier conversations, higher electric tiers act as a heating price penalty for all-electric homes and makes EWEB less competitive with natural gas. Water tiers were set with robust price signals to discourage over-watering landscaping and other uses that are unrelated to wellness and comfort.

Our customers have consistently set protection of the river and drinking water quality as a priority for EWEB. If customers perceive a nexus between their values around water stewardship and 'conservation' pricing, actions to flatten water tiers would be misaligned with those long-established values.

EWEB has abundant water rights on the McKenzie, a good portion of which have not been 'perfected'. If water pricing changes lead to higher consumption, EWEB may be able to put more water to beneficial use and secure the water rights for future generations of customers.

Recommendation

This backgrounder is for information only. Staff recommends decoupling the pricing discussion of flattening electric and water tiered rates at this time. This is based on the differing variables driving electric and water pricing structures and perception of best practices for pricing with each product line. Staff also recommends further study and discussion of water pricing impacts to the community at a later date.

Requested Board Action

No action required.

If you have any questions please contact Mel Damewood, Chief Water Engineering and Operations Officer at 541-685-7145 or email mel.damewood@eweb.org

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