



# Long-term Rate Planning

Electric, Water, Wastewater & Fiber

Jan. 20, 2020




CHELAN COUNTY

# Why we're here

## Objectives:

- Continue process to implement five-year rate plans as prescribed in the 2020-2024 Strategic Plan

# Retail Rate Public Outreach – Timeline

 Jan. 6, 2020	Seek board approval of outreach plan and request a rate hearing be set
Jan. 20, 2020	Rate detail presentation
Feb. 3, 2020	Public rate hearing; consider feedback received
Feb. 18, 2020	If Board direction remains unchanged, seek approval of rate
May 31, 2020	Implement Water*, Wastewater* and Fiber rate plans
No later than Dec. 15, 2020	Implement Electric* rate plans

\* Dates depend on successful implementation of customer information system



# Long-Term Rate Planning

*Review of Jan. 6, 2020 discussion, recommendations:*

- Electric: Focus residential revenue increases in the customer (aka basic) charge. In other classes, increase each rate element (customer/ demand/ energy) by 3% annually
- Electric: As part of the rate action, establish a new Board-Designated Fund for the purpose of holding incremental electric revenues from rate action
- Water: 4% annual rate increase
- Wastewater: 4% annual rate increase
- Fiber: 3% annual revenue increase
- Establish a set five-year rate plan vs. annual action
- Adjust low-income discounts with rate action (continue to concurrently review low-income energy efficiency and assistance programs)



# Long-Term Rate Planning – Electric

## Strategic Planning: The changing face of Chelan County customers

### Second homes/seasonal residences

- Same minimum cost needed to serve
- Don't use often - less recovered in energy usage charge

### Distributed resources/conservation

- Same minimum cost needed to serve
- Reduces usage per premises – less recovered in energy usage charge

Considered adjusting between rate components like the customer charge and energy usage charges to ensure proper cost recovery by rate component as customer characteristics change

**Customer charge** is designed to recover the cost for connection to grid at zero KWh consumption (minimum system cost)

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• <i>Meter operation, maintenance and replacement</i></li><li>• <i>Meter reading costs</i></li><li>• <i>Customer billing</i></li></ul> | <ul style="list-style-type: none"><li>• <i>Customer service</i></li><li>• <i>Service into customers facilities</i></li><li>• <i>Portion of distribution system (transformers &amp; maintenance)</i></li></ul> |
|--|---|

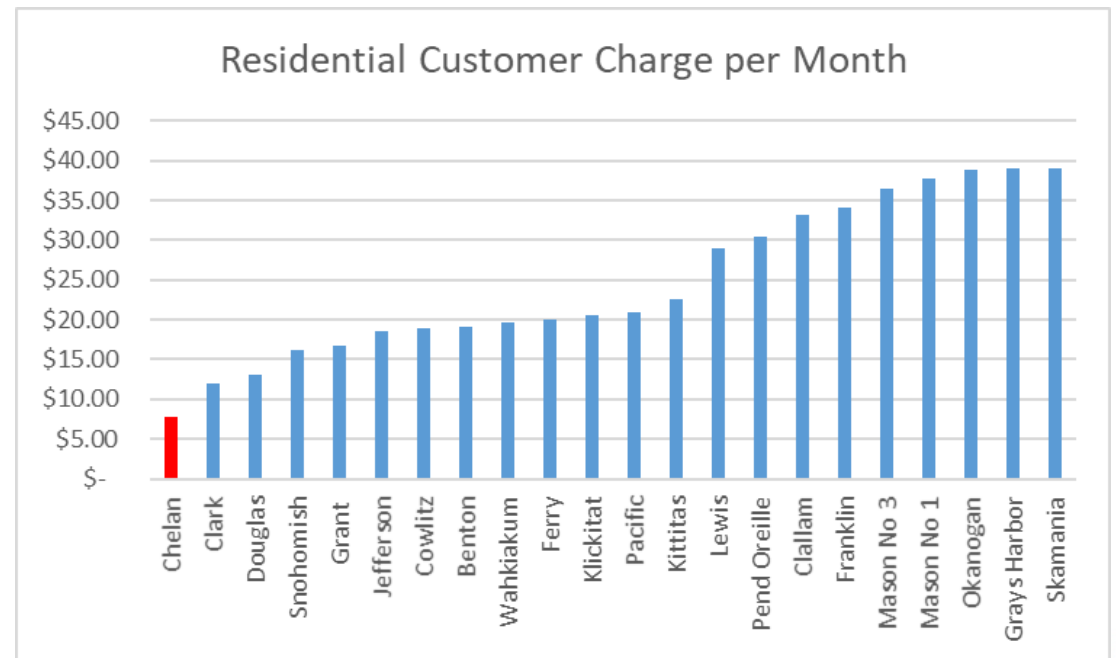
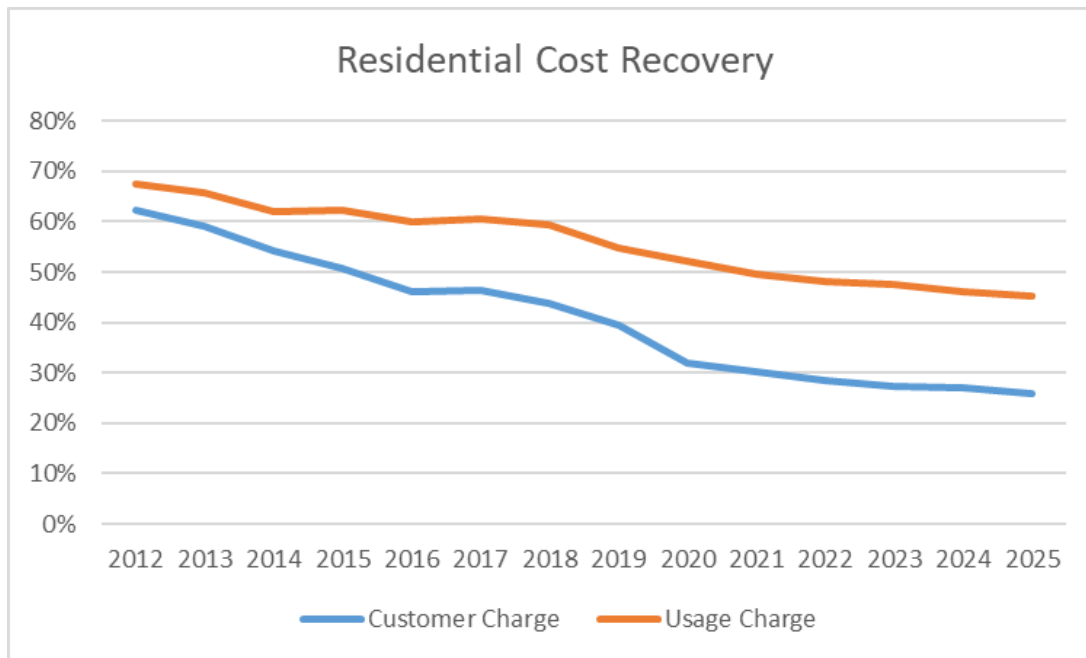




# Long-Term Rate Planning – Electric

## Rate Design Considerations

- Cost recovery compared to cost of service for residential basic charge is declining more rapidly than other charges
- Industry alignment is lagging





# Long-Term Rate Planning – Electric

## ***Residential Electric***

- Annual 3% class revenue increase allocated to the basic charge and 3% increase in low-income senior/disabled discount
- With annual average increase of \$1.75/mo per year the basic charge and average total bill increase over five years to \$16.45/mo and \$63.75/mo respectively

<i>Single-phase service</i>	<i>Start</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<i>Basic Charge</i>	\$7.70	\$9.45	\$11.20	\$12.95	\$14.70	\$16.45
<i>Average Total Residential Bill</i>	\$55.00	\$56.75	\$58.50	\$60.25	\$62.00	\$63.75
<i>Low-Income Discount</i>	(\$9.25)	(\$9.55)	(\$9.80)	(\$10.10)	(\$10.40)	(\$10.70)



## ***Residential Electric (cont.)***

Assumptions:	2018 residential revenue (excluding tax):	\$25.45M
	2018 residential service agreements:	38,423

	Total per year	Per Customer per month
Year 1	\$ 764,000	\$ 1.66
Year 2	\$ 786,000	\$ 1.70
Year 3	\$ 810,000	\$ 1.76
Year 4	\$ 834,000	\$ 1.81
Year 5	\$ 859,000	\$ 1.86
Total	\$ 4,053,000	\$ 8.79
Average		\$ 1.76

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# Long-Term Rate Planning – Electric

## *Residential Electric (cont.)*

### *Consideration of low-income impact*

- Phase 1: Adjust low-income discounts with rate action
- Phase 2: Review low-income energy efficiency and assistance programs
  - Conduct study to identify energy assistance needs and gaps
    - Study designed to meet both strategic planning directives and comply with Clean Energy Transformation Act requirements
  - Present findings and options in Q1



# Long-Term Rate Planning – Electric

## ***Residential Electric (cont.)***

- Consideration of low-income impact
  - Other utilities have found low correlation between income and energy use therefore we anticipate the impact of the change in customer charge to be consistent amongst customer groups

*Low-income customers are not systematically low or high users of energy, and they tend to use energy similarly to other customers who do not qualify as low-income*

- Tacoma Power, 2018

*Low-income households are similarly diverse in their energy usage profiles. One might assume that low-income households are typically smaller than other households and, therefore, use less energy. However, Opower data from seven programs indicates low-income populations have varying consumption patterns and, in some cases, even exhibit greater energy use than their higher-income counterparts.*

–ACEEE Summer Study on Energy Efficiency in Buildings, 2014



# Long-Term Rate Planning – Electric

## ***Commercial, Industrial, Irrigation, Frost Protection, Lighting***

Annual 3% increase for each rate element (Customer, Demand, Energy), average impacts:

<i>Per month</i>	<i>Start</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<i>Average Commercial</i>	\$ 200	\$ 206	\$ 212	\$ 218	\$ 225	\$ 232
<i>Average Industrial</i>	\$ 13,400	\$ 13,802	\$ 14,216	\$ 14,642	\$ 15,081	\$ 15,533
<i>Average Irrigation</i> <i>(Apr-Sept only)</i>	\$ 180	\$ 185	\$ 191	\$ 197	\$ 203	\$ 209
<i>Average Frost Protection</i> <i>(Mar-Jun only)</i>	\$ 66	\$ 68	\$ 70	\$ 72	\$ 74	\$ 76
<i>Average Light</i>	\$ 5.50	\$ 5.67	\$ 5.83	\$ 6.01	\$ 6.19	\$ 6.38



# Long-Term Rate Planning – Electric

## ***HDL & Cryptocurrency Electric***

Annual 3% increase for rate elements below

<b><i>Preliminary estimated rate impact, subject to change in rate design</i></b>	Current	Year 5
<b><i>Basic Charge (Per month per meter):</i></b>		
Up to 300 kW	\$130	\$150
300 kW to < 1 MW	\$560	\$650
1 MW to ≤ 5 aMW	\$860	\$1,000
<b><i>Monthly Demand Charge (per kW):</i></b>	\$5.50	\$6.40
<b><i>Residential Crypto Demand Charge (per kW):</i></b>	n/a	TBD <sup>1</sup>
<b><i>HDL Energy Charge (¢ per kWh):</i></b>	2.7	3.2
<b><i>Cryptocurrency Energy Charge (¢ per kWh):</i></b>	5.49	TBD <sup>2</sup>

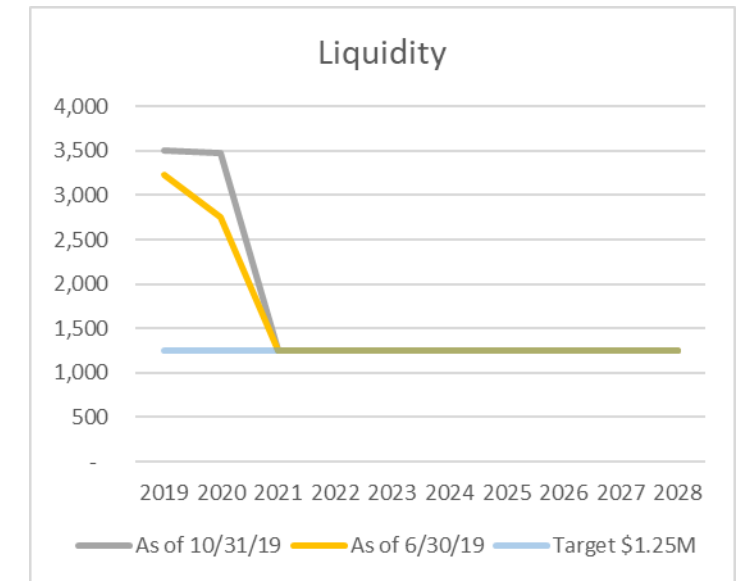
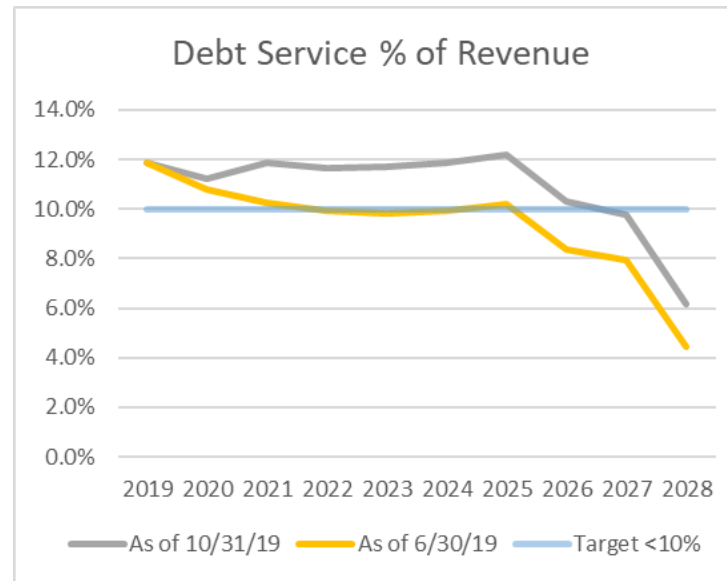
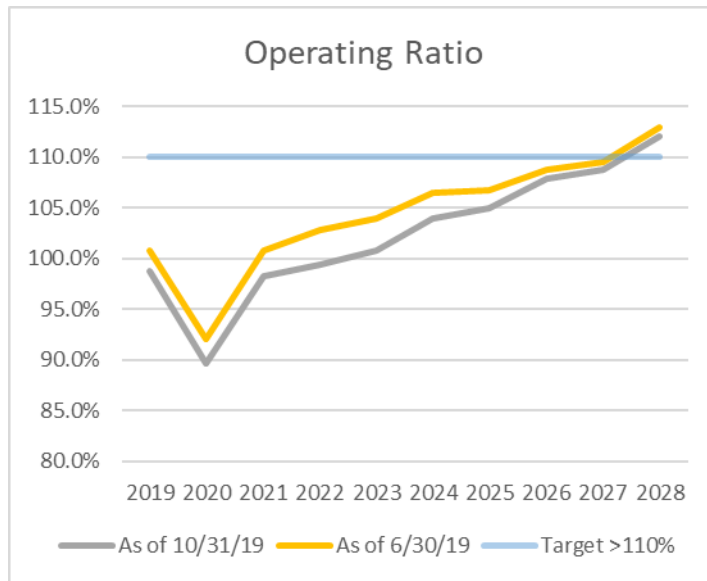
<sup>1</sup>Recommend deferring cryptocurrency residential demand charge at least 1 year due to CIS implementation timeline and low customer participation in residential services

<sup>2</sup>Cryptocurrency energy charges are market based, set annually based on ICE forecasts as of 12/15. Rate effective 4/1/2020 is 5.55¢ per kWh.



# Long-Term Rate Planning – Water

## *Water Metrics – Forecasts have shifted slightly since summer*



### Assumptions:

- Change in shared asset funding requirement: system share is 0% of cost of shared assets (facilities, CIS, etc.) 2020-2022 and 50% of cost annually thereafter
- Increase SDC charge by \$1,000 per ERU (approx. equal to 1.5% rate)



# Long-Term Rate Planning – Water

## ***Water***

- Annual 4% increase for each rate element and low-income senior/disabled discount
- Average customer impact:

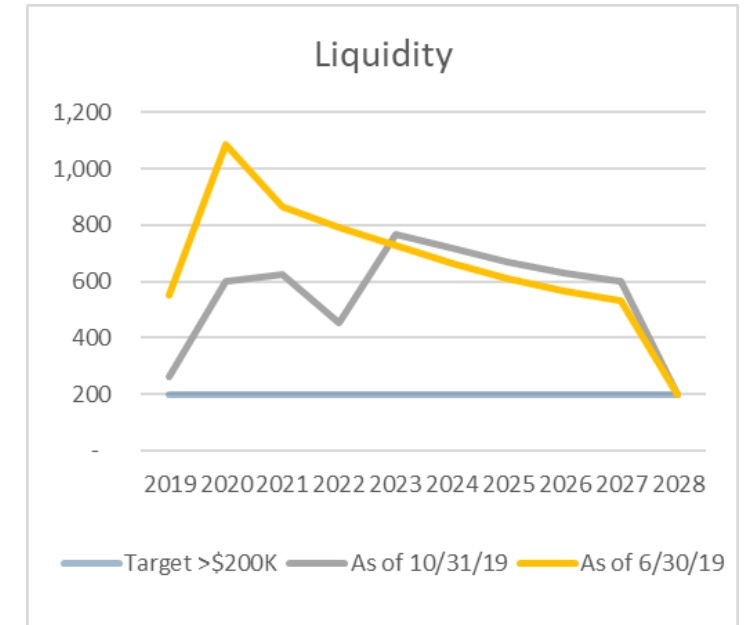
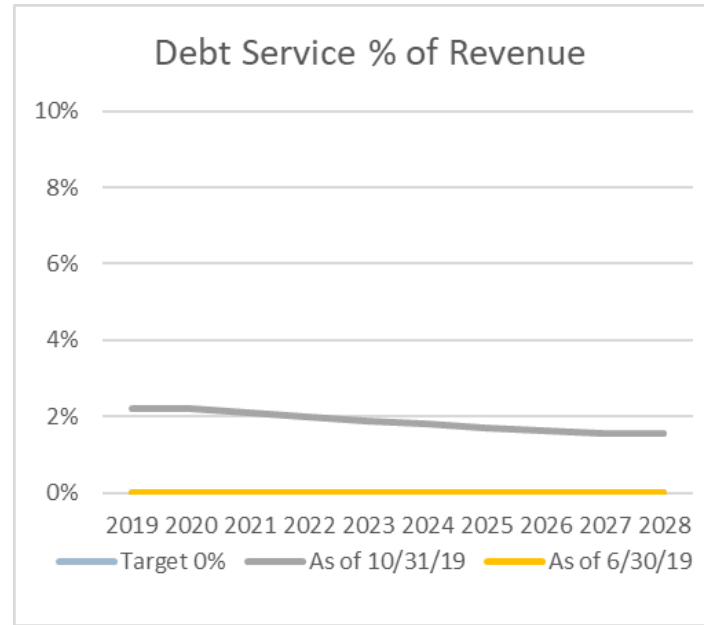
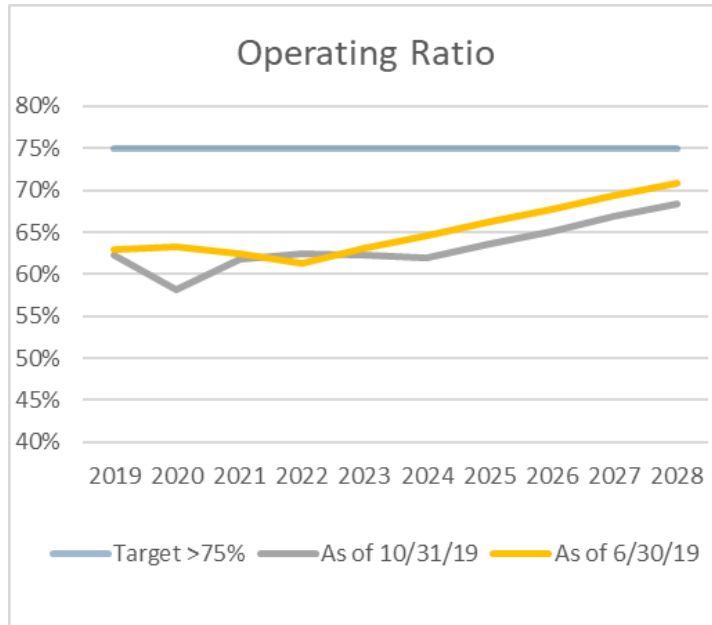
<i>Per month</i>	<i>Start</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<i>Average Residential</i>	\$52	\$54	\$56	\$58	\$60	\$62
<i>Average Commercial</i>	\$310	\$322	\$335	\$348	\$362	\$376
<i>Low-Income Discount</i>	(\$9.50)	(\$9.90)	(\$10.30)	(\$10.70)	(\$11.10)	(\$11.55)





# Long-Term Rate Planning –Wastewater

## *Wastewater Metrics – Forecasts have shifted slightly since summer*



### Assumptions:

- Change in shared asset funding requirement, system allocated 0% of cost of shared assets (facilities, CIS, etc) 2020-2022 and is allocated 50% of cost annually thereafter
- Future large capital projects assumed to be funded by at least 60% grants
- Allocation of PPB/wholesale electric revenues (approx. \$1.5M) to support improved water quality continued from prior strategic plan



# Long-Term Rate Planning –Wastewater

## ***Wastewater***

- Annual 4% increase for each rate element and low-income senior/disabled discount
- Average customer impact:

<i>Per month</i>	<i>Start</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<i>Average Residential</i>	\$77	\$80	\$83	\$86	\$89	\$93
<i>Average Commercial</i>	\$500	\$520	\$541	\$563	\$586	\$609
<i>Low-Income Discount</i>	(\$10.10)	(\$10.50)	(\$10.95)	(\$11.35)	(\$11.80)	(\$12.30)



# Long-Term Rate Planning – Fiber

## *Fiber*

- Increase core services revenue 3%
- 2020 forecasted Service Provider revenue \$7.5M

	<i>Start</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<i>Aggregate Bandwidth Revenue (includes growth)</i>	\$2.48M	\$2.84M	\$3.07M	\$3.31M	\$3.55M	\$3.81M
<i>Increase Impact</i>	\$0	\$113K	\$229K	\$236K	\$243K	\$251K

# Summary

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No later than Dec. 15, 2020	Implement Electric* rate plans

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# Next steps

Feb. 3, 2020

Electric, Water, Wastewater and Fiber rates public hearing

[contactus@chelanpud.org](mailto:contactus@chelanpud.org)

<http://www.chelanpud.org/ratesplanning>