

CRYPTOCURRENCY MORATORIUM SMALL MINER RATE IMPACT

September 4, 2018



CHELAN COUNTY

TODAY'S DISCUSSION

Understanding impact

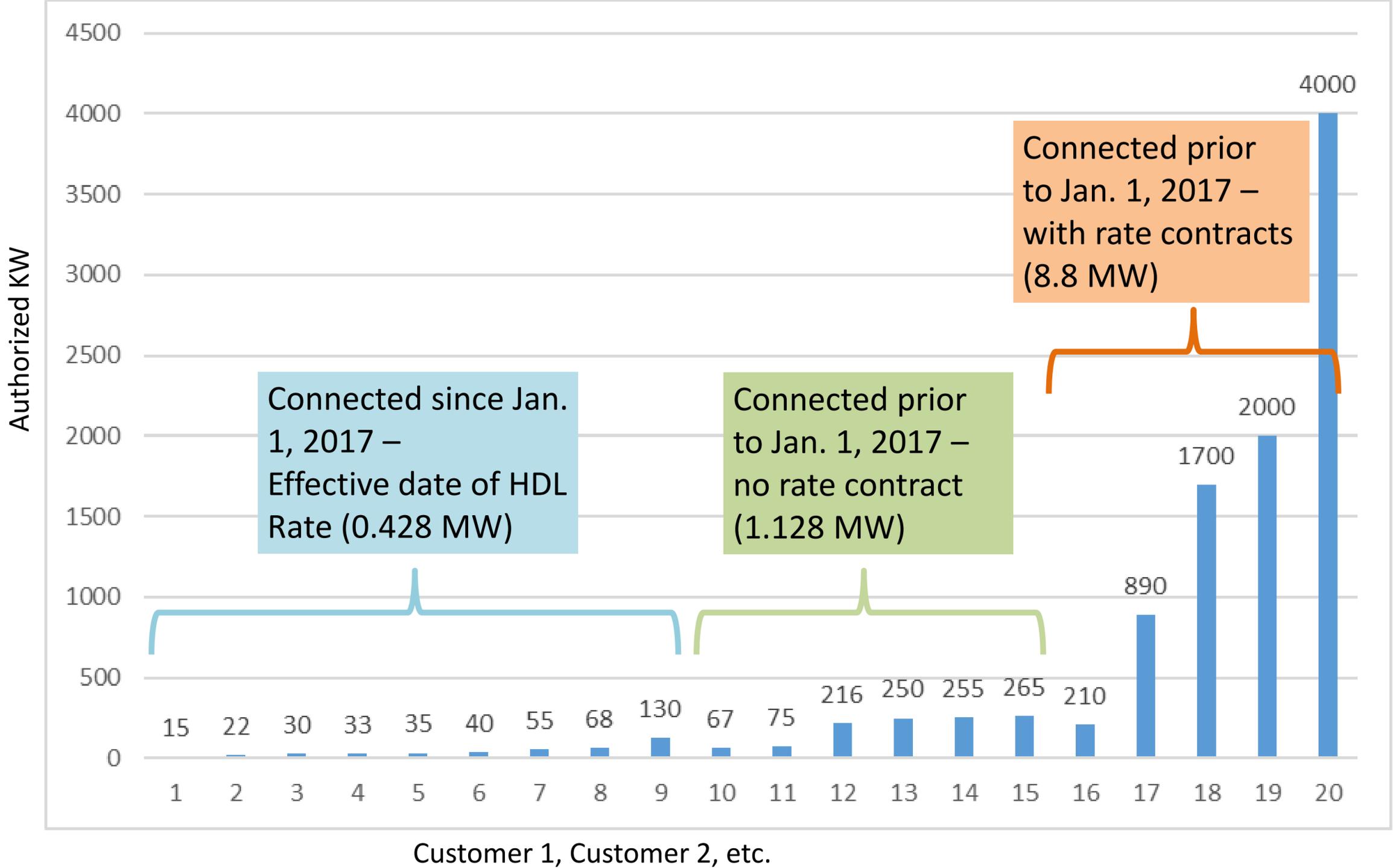
Rate considerations for residential connections

Next steps

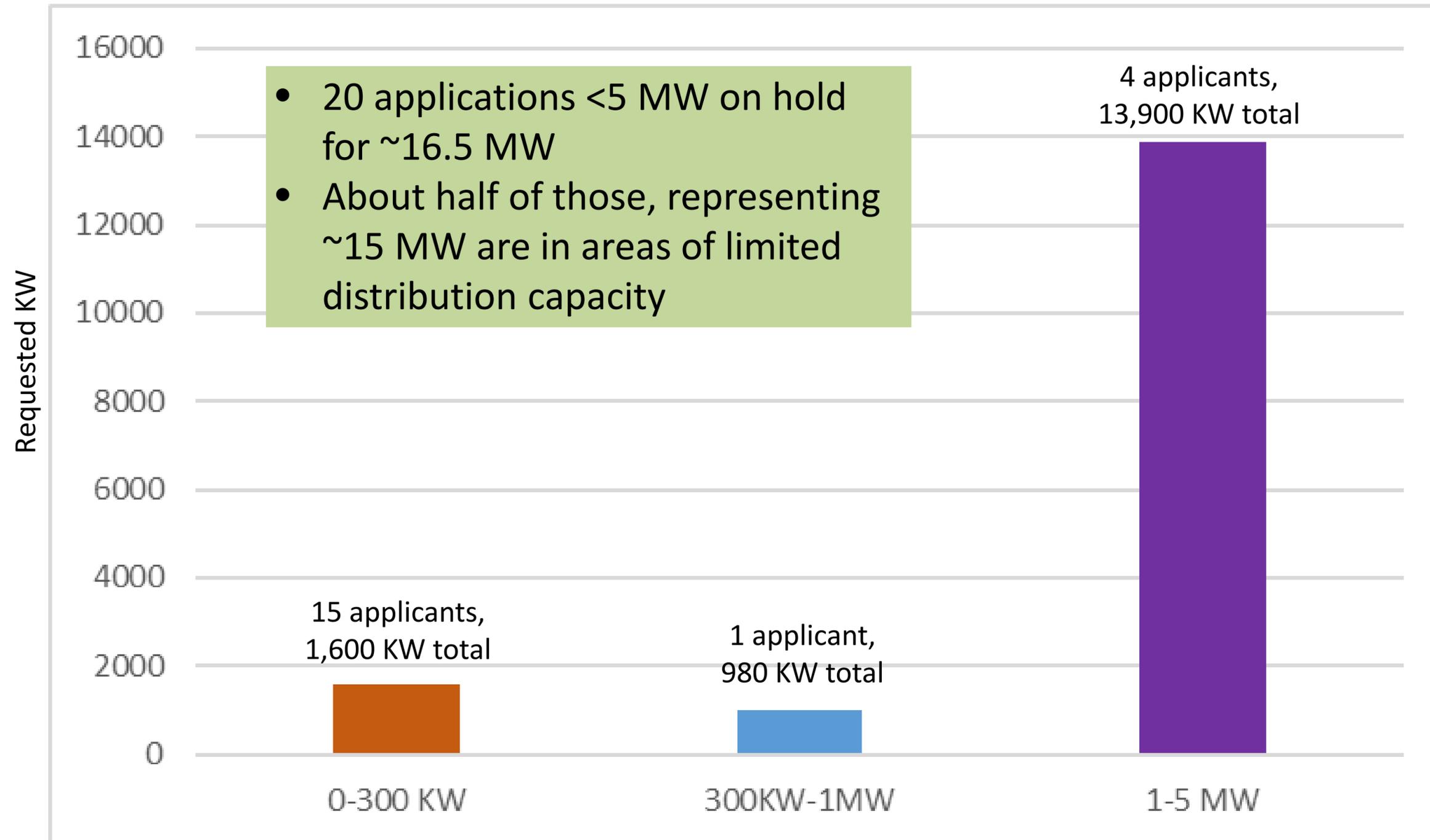
Seeking direction and feedback,

NO ACTION REQUIRED TODAY

Existing Cryptocurrency Connections



<5 MW Cryptocurrency Applications



Draft Cryptocurrency Rate from 8/20 Hearing

For use over 1 MW with past market month energy price months through 5.5 ¢/kWh*

Residential cost of 7-10 ¢/kWh is comprised of:

Customer Cost:	\$0.0019/KWh
Residential Delivery Cost:	\$0.0281/KWh
Market Energy:	<u>\$0.051/KWh</u> (currently)
	\$0.081/KWh

For use over 1 MW with future

For residential services, recommend adjusting delivery charge, resulting in 7-10 ¢/kWh* (as of May 2018), also increases with market**

Excess use charges apply for incidental use over authorized levels

*Includes customer charge, delivery and energy, does not include upfront charges

**This customer group needs further evaluation

Small Miner Rate Design

	Existing HDL	New: Residential Zone Cryptocurrency	New: Non-Residential Zone Cryptocurrency
Basic Charge	\$130/month for up to 300kW	\$900/month	\$900/month
Demand Charge	\$5.50/KW-mo	\$11/KW-mo	\$5.50/KW-mo
Energy Charge	\$0.027/KWh	~\$0.051/KWh	~\$0.051/KWh

Estimated Bill Differences

Based on residential customer size

- Follow-up analysis on model customers has identified challenges with proposal for small size/ low load factor customers
- Results in higher than anticipated effective rate per KWh

	Scenario A	Scenario B
Assumed Peak KW	30	30
Assumed Load Factor	0.9	0.57
Estimated KWh per month	19,440	12,312
Current Basic Charge	\$ 130	\$ 130
Current Demand Charge	\$ 5.50	\$ 5.50
Current Energy Charge	\$ 0.027	\$ 0.027
Est. Total Bill Current	\$ 820	\$ 627
<i>Calculated \$/KWh</i>	<i>\$ 0.042</i>	<i>\$ 0.051</i>
New Basic Charge	\$ 900	\$ 900
New Demand Charge	\$ 11	\$ 11
New Energy Charge	\$ 0.051	\$ 0.051
Est. Total Bill New	\$ 2,221	\$ 1,858
<i>Calculated \$/KWh</i>	<i>\$ 0.114</i>	<i>\$ 0.151</i>

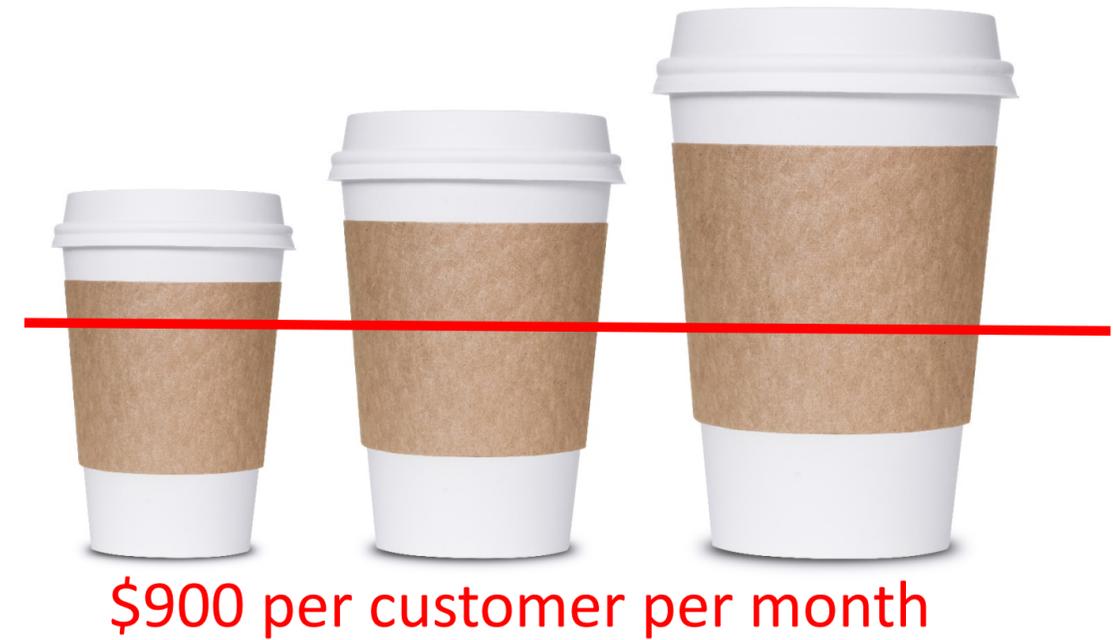
Estimated Rate Elements: Basic Charge



Allocate by customer number with each getting an equal charge

-OR-

Allocate by customer size with charge increasing with size



\$900 per customer per month



Per KWh or KW

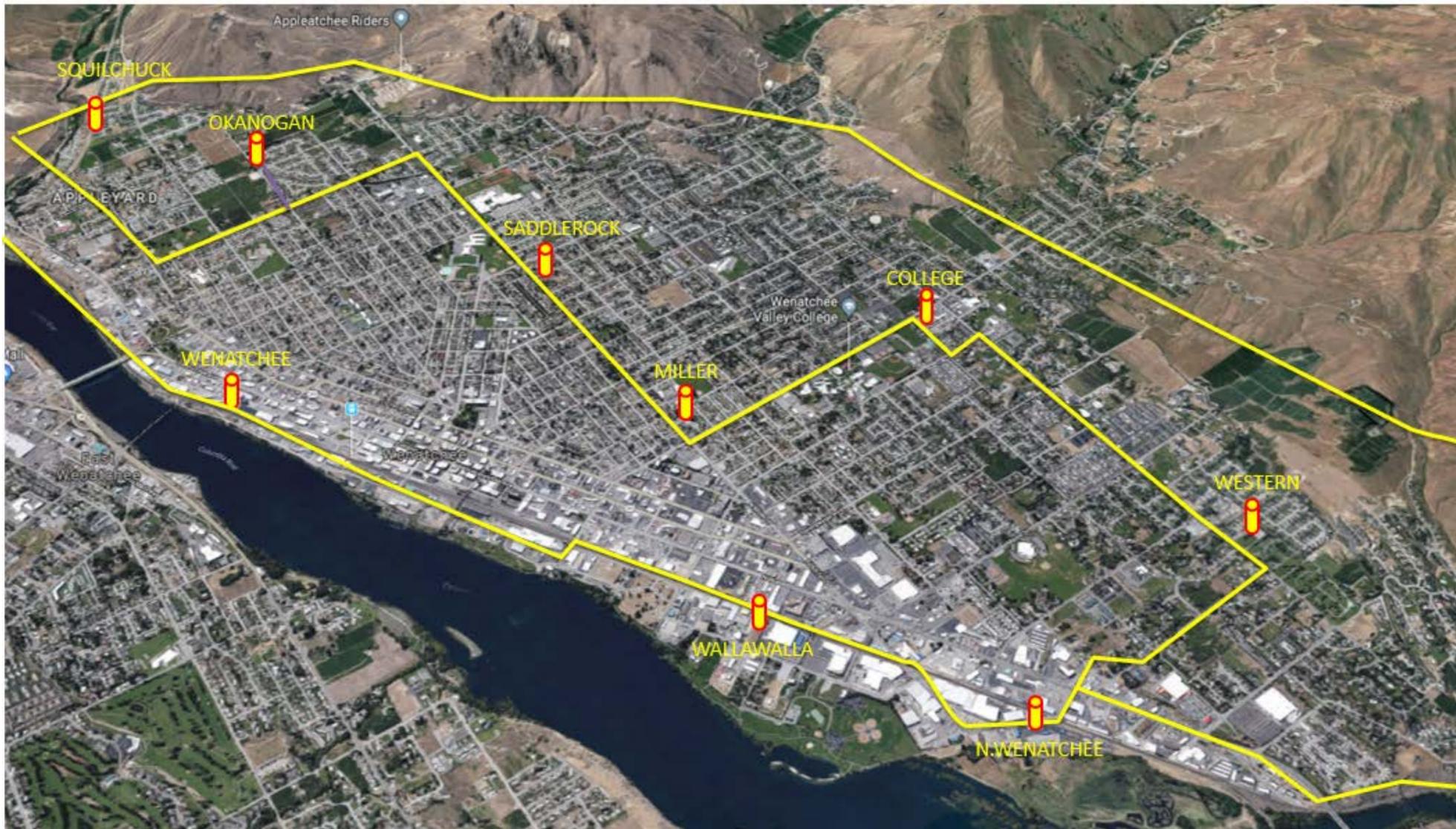
Estimated Rate Elements: Basic Charge

- Option 1: \$900/customer
Small customers often take equal or greater customer service time than larger customers
- Option 2: In consideration of the impact to small customers, set the basic charge equal to the HDL class

Up to 300 KW	300 to <1 MW	1 MW+
\$130	\$560	\$860

Estimated Rate Elements: Delivery Charge

City of Wenatchee (Existing Transmission & Substations)



Cost to deliver in HDL
(commercial/industrial)
areas:
\$0.0102/KWh

Cost to deliver in
Residential areas:
\$0.0281/KWh

Estimated Rate Elements: Delivery Charge

- Rate design driven by load factor assumption :
 - Option 1: \$11/KW at 55% load factor (lowest residential mining load factor)
 - Option 2: \$15/KW at 74% load factor (average residential mining load factor which reflects the greater overall distribution system impact)
- Financial impact and risk could decrease if other efforts by municipalities and County limit residential locations in future

Estimated Rate Elements: Energy Charge

**Estimated forward market price indicators total:
5.1 cents/kWh**

- Small customers have concern with market volatility and it is less likely to secure a third-party mitigation
- Customers desire predictability in rates
- Option to set rate annually or more often based on market prices and class size

Estimated Residential Miner Rate Impact

Option 1:

	Scenario A	Scenario B
Assumed Peak KW	30	30
Assumed Load Factor	0.9	0.57
Estimated KWh per month	19,440	12,312
Current Basic Charge	\$ 130	\$ 130
Current Demand Charge	\$ 5.50	\$ 5.50
Current Energy Charge	\$ 0.027	\$ 0.027
Est. Total Bill Current	\$ 820	\$ 627
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New Basic Charge	\$ 900	\$ 900
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New Energy Charge	\$ 0.051	\$ 0.051
Est. Total Bill New	\$ 2,221	\$ 1,858
<i>Calculated \$/KWh</i>	<i>\$ 0.114</i>	<i>\$ 0.151</i>

Option 2:

	Scenario A	Scenario B
Assumed Peak KW	30	30
Assumed Load Factor	0.9	0.57
Estimated KWh per month	19,440	12,312
Current Basic Charge	\$ 130	\$ 130
Current Demand Charge	\$ 5.50	\$ 5.50
Current Energy Charge	\$ 0.027	\$ 0.027
Est. Total Bill Current	\$ 820	\$ 627
<i>Calculated \$/KWh</i>	<i>\$ 0.042</i>	<i>\$ 0.051</i>
New Basic Charge	\$ 130	\$ 130
New Demand Charge	\$ 15	\$ 15
New Energy Charge	\$ 0.051	\$ 0.051
Est. Total Bill New	\$ 1,571	\$ 1,208
<i>Calculated \$/KWh</i>	<i>\$ 0.081</i>	<i>\$ 0.098</i>

Rate Implementation Options

Delayed implementation of new rate until April 2020,
following CIS implementation

Explore options for those who have made substantial
investment under the prior rates and policies

Immediate implementation requires manual billing



Proposed Next Step:

MORATORIUM DISCUSSION

September 17, 2018 | Regular Commission Meeting