



CRYPTOCURRENCY RATE & MORATORIUM

Public Hearing - Nov. 19, 2018

Moratorium action required



CHELAN COUNTY
www.chelanpud.org

AGENDA

- Public outreach results
- Proposed rate schedule
- Proposed moratorium approach
- Next steps

SUMMARY OF MEETINGS TO DATE

- **March 19, 2018 – Moratorium Implemented**
- **April 16, 2018 – Board presentation** (Unauthorized Use fees and charges, Investigation processes)
- **May 15, 2018 – Moratorium Hearing** (Existing challenges, Actions to date, Future work)
- **July 23, 2018 – Board presentation** (Preview of cryptocurrency rates, Infrastructure and capacity availability)
- **August 6, 2018 – Moratorium hearing** (Public comment on proposed cryptocurrency rates)
- **August 20, 2018 – Moratorium hearing** (Additional rate considerations, Public comment on proposed cryptocurrency rates)
- **September 4, 2018 – Board presentation** (Summary of outreach efforts with county, city officials, Small mining operation overview, Residential rate considerations)
- **September 17, 2018 – Moratorium Hearing** (Overview of rate and phase-in recommendation, Rate outreach plan, Public comment on proposed rates)
- **November 5, 2018 – Board Preview of Public Information Meeting** (Progress since September, Proposed rate schedule, Calculation examples for customers)
- **November 7, 2018 – Public Information Meeting** (Background on need for new rate, Progress since September, Proposed rate schedule, Calculation examples for customers, Upfront Capital Costs)
- **November 19, 2018 – Board presentation** (Fees and Charges update)
- **November 19, 2018 – Rate & Moratorium Hearing** (Review of updates throughout moratorium, Rate recommendation, Moratorium recommendation)

THEMES OF PUBLIC COMMENT & STAFF RESPONSE

Concern that new rates will make existing mining operations uneconomic, leading to shut down

- Similar comments have been considered throughout the process and rate proposal has been adjusted where reasonable
- Proposed rate was developed with objective of cost recovery

Concern that new rate will drive away new business opportunities

- Similar comments have been considered throughout the process and rate proposal has been adjusted where reasonable
- Proposed rate was developed with objective of cost recovery

Concern that increasing energy need will require purchase of resources that are not green

- Proposed rate schedule contemplates that the PUD would purchase specified source products that maintain a green energy portfolio

THEMES OF PUBLIC COMMENT & STAFF RESPONSE

Opinion that there has not been adequate opportunity for public to inform rate

- Comments from prior hearings and Board presentations, as well as other written and verbal comments, have been considered and incorporated into the rate proposal
- At least 11 public meetings, with opportunity to comment, held in the last 9 months
- Countless print and digital media reports on the process

Concern that the rate is short-sighted and does not consider the economic benefits

- Ongoing outreach to local municipalities and County leaders has been performed to better understand local benefits
- Of primary concern among community leaders is that the increasing demand for large amounts of electricity from the cryptocurrency class would leave traditional non-crypto customers without the ability to connect new loads or expand existing loads

Recognition by public that this has been a thoughtful process

- Consideration of what is best, for the most, for the longest
- Efforts to avoid cost shifting
- Focus on safety and reliability

PROPOSED RATE SCHEDULE 36

CRYPTOCURRENCY PROCESSING; BLOCKCHAIN PROCESSING; AND SIMILAR LOADS

This Schedule applies to any customer involved in computing or data processing load related to cryptocurrency mining, Bitcoin, blockchain, proof-of-work or other loads having, in the District's determination, similar characteristics including any of the following: high energy use density, high load factor, need for more than routine alterations to the District's Electric Service Facilities in order to maintain safety, load that is portable and distributable, highly variable load growth or load reduction as an individual customer and/or in aggregate with similar customers in the District's service area, able to relocate quickly in response to short-term economic signals, high sensitivity to volatile commodity or asset prices, or part of an industry with potential to quickly become a large concentration of power demand in the District's service area.

PROPOSED RATE SCHEDULE 36

Recommended Effective 4/1/2019:

	Per month per meter
Basic Charge:	
Up to 300 kW	\$130
300 kW to < 1 MW	\$560
1 MW to ≤ 3 MW	\$860
Monthly Demand Charge	\$5.50 per kW of Demand
Energy Charge, total billed:	5.33¢ per kWh
Consists of:	
Market energy ¹ :	3.02¢ per kWh
Other ² :	2.31¢ per kWh

Recommended Effective 4/1/2020:

	Per month per meter
Basic Charge:	
Up to 300 kW	\$130
300 kW to < 1 MW	\$560
1 MW to ≤ 3 MW	\$860
Monthly Demand Charge, Residential	\$15 per kW of Demand
Monthly Demand Charge, Non-Residential	\$5.50 per kW of Demand
Energy Charge, total billed:	5.33¢ per kWh
Consists of:	
Market energy ¹ :	3.02¢ per kWh
Other ² :	2.31¢ per kWh

¹**Market Energy Rate** For authorized connections less than 3 MW, the market energy portion of the rate will be charged at a fixed rate which is reviewed by the District on at least an annual basis. The fixed market rate will be established using the average flat price as calculated using the Mid-C Peak and Off-Peak Futures as published daily by the Intercontinental Exchange (ICE) for the applicable 12 month period with a 6% administrative fee added.

Current Estimates Fixed Energy Rate 4/1/2019-3/31/2020: \$0.02847 / kWh + 6% admin fee = \$0.0302/kWh (estimate as of 11/15/18)

²**Other** Includes costs such as, but not limited to: environmental attributes, scheduling, risk, overhead, public utility tax

PROPOSED RATE SCHEDULE 36

DEMAND EXCEEDANCE¹

Exceedances of the Demand limit shorten the lifespan of District's Electric Service Facilities and may damage the same and create safety hazards to persons and property. In addition to all other rates and charges, in each month Demand exceeds the Customer's maximum authorized Demand, Customer will be assessed a \$150 fee plus a daily charge of 1.5 times the applicable demand rate on the exceedance in each day it occurs.

¹This charge is in addition to, not exclusive of, the District's rights to require additional protective measures, recover for damages sustained to the Electric Service Facilities, disconnect Service, terminate this any Service Contract, or take any other remedial action available to recover losses and prevent future exceedances.

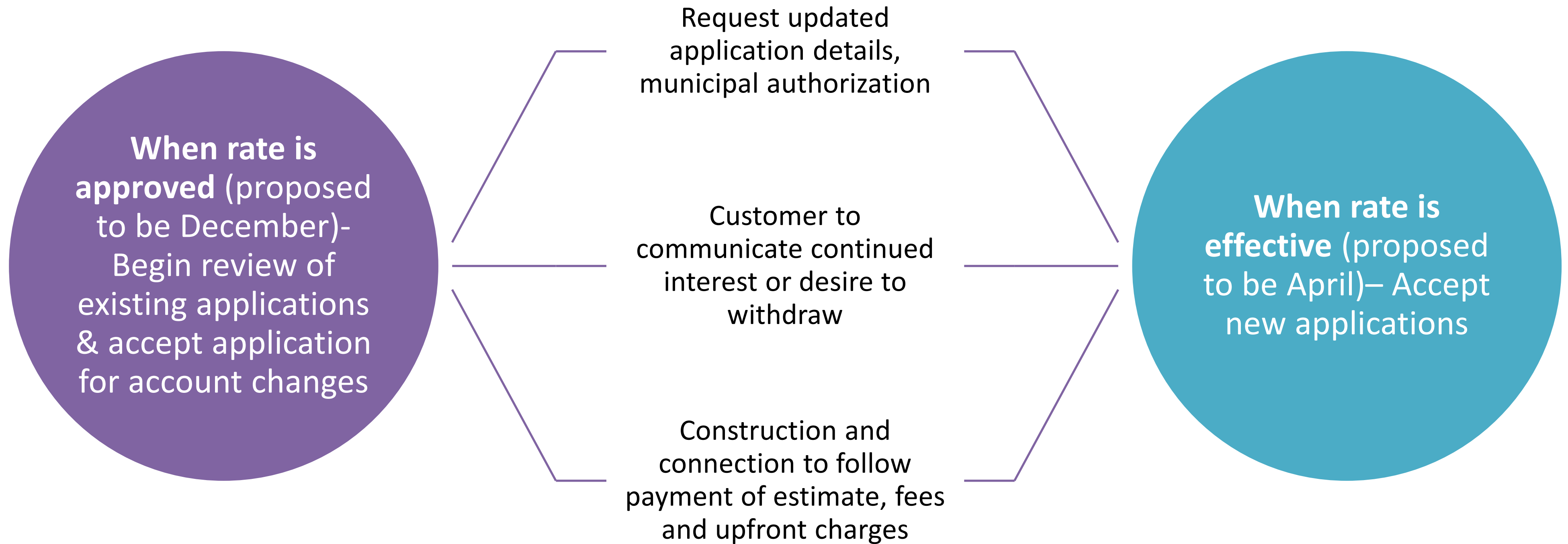
PROPOSED RATE SCHEDULE 36

PROPOSED RATE FIGURES APPLY TO SERVICES AUTHORIZED AT 3 MW AND LESS

Services over 3 MW under this schedule would have a contract rate that may also include:

- Energy at daily market prices
- Minimum demand charges
- Ancillary energy services (load following, energy imbalance, etc.)
- Other

MORATORIUM RECOMMENDATION



STAFF RECOMMENDED NEXT STEPS

- **Motion to continue the cryptocurrency moratorium to Dec. 3**
- **Consider a rate resolution Dec. 3**
- **Other staff efforts & Board action necessary in coming months to implement rate:**
 - Drafting new customer agreements
 - Updating associated policy and regulation

PUBLIC COMMENT

PROPOSED MORATORIUM MOTION

In order to allow time for the Board to consider the rate proposal, move to continue the moratorium and set the next public hearing for December 3, 2018, during the Board's regular meeting and direct staff to prepare a rate resolution.