

CRYPTOCURRENCY MORATORIUM UPDATE

July 23, 2018



CHELAN COUNTY

TODAY'S DISCUSSION

Update on load siting capability and cost

Update on rate considerations

Discussion only. No Board action today.

High Density Load Transmission System

ESTIMATED AVAILABILITY

SCENARIO 0: Olds Station, Monitor, Malaga, Wenatchee

SCENARIO 1: Olds Station, Monitor

SCENARIO 2: Olds Station, Malaga

SCENARIO 3: Malaga

SCENARIO 4: Malaga, Monitor, Olds Station

\$ = Interconnection Cost Estimate

Total HDL addition beyond **100 MW** on the transmission system results in a significant increase in interconnection costs for the HDL customer to pay for required system upgrades.



CHELAN COUNTY

Evaluation assumptions included Alcoa operation at both 0 MW and 265 MW.

OLDS STATION

| SCENARIO | AVAILABILITY |
|----------|--------------|
| 0 | 30 MW |
| 1 | 45 MW |
| 2 | 55 MW |
| 3 | N/A |
| 4 | 35 MW |

MONITOR

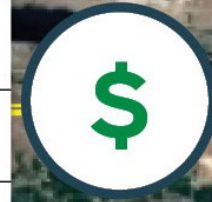
| SCENARIO | AVAILABILITY |
|----------|--------------|
| 0 | 30 MW |
| 1 | 45 MW |
| 2 | N/A |
| 3 | N/A |
| 4 | 35 MW |

WENATCHEE

| SCENARIO | AVAILABILITY |
|----------|--------------|
| 0 | 35 MW |
| 1 | N/A |
| 2 | N/A |
| 3 | N/A |
| 4 | N/A |

MALAGA

| SCENARIO | AVAILABILITY |
|----------|--------------|
| 0 | 5 MW |
| 1 | N/A |
| 2 | 55 MW |
| 3 | 80 MW |
| 4 | 35 MW |



Cryptocurrency Upfront Capital Charge

Transmission Costs

- » \$55/kW (first 100 MW) in Wenatchee corridor (Monitor, Olds Station, Wenatchee, Malaga)
- » No connections allowed north of Leavenworth (Anderson Canyon-Summit Line)
- » \$400/kW - \$500/kW in all other areas, or cost based on Transmission Study

Distribution Costs

- » \$270-388/kW depending on substation capacity
- » Where substation capacity not available customer may be required to build necessary infrastructure

Willingness to pay does not guarantee service availability

Substation Availability

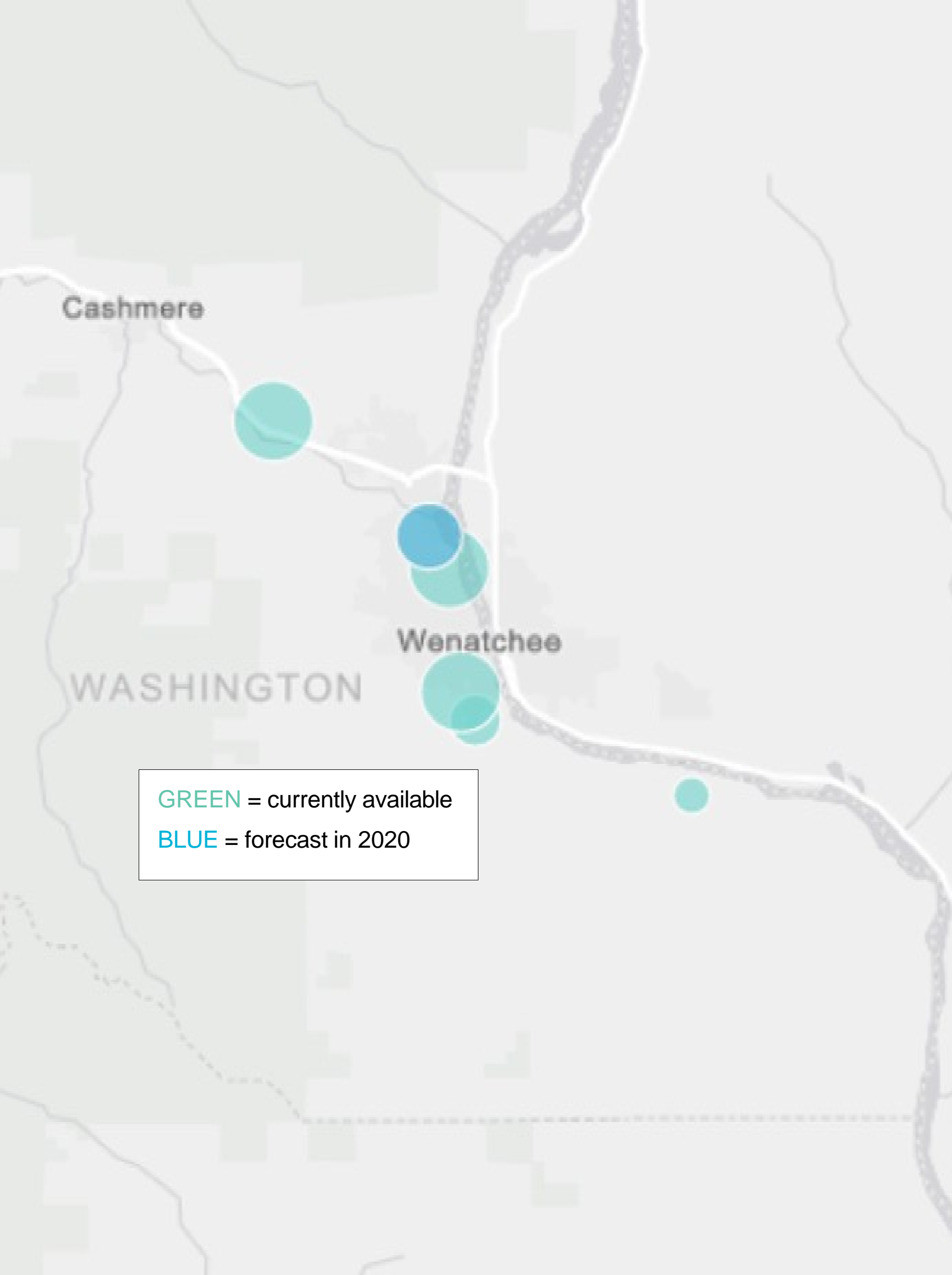
Size of dot indicates relative capacity available

No single location has more than 4 MW available

Substation capacity does not equate to a single location, locational availability subject to engineering study

All regular line extension costs and increased upfront charges apply

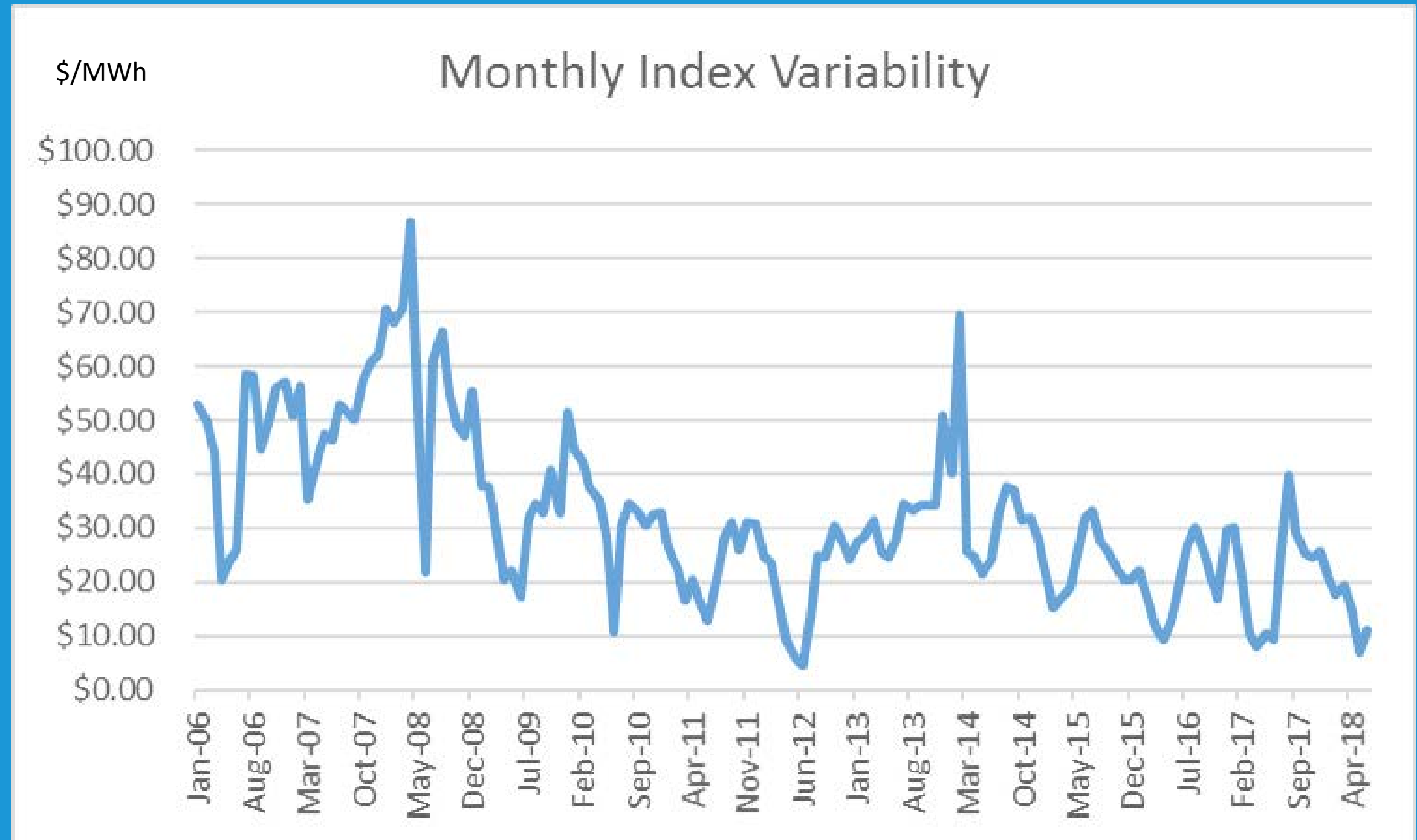
Load requests in excess of location availability may be required to fund or build infrastructure, including substation facilities



Draft Cryptocurrency Rate Considerations

Evaluating market index pricing

- » Approximately half of the rate will be subject to market volatility
- » Customers could mitigate variability through a third-party



Draft Cryptocurrency Rate Considerations

For use over 1 MW, at market monthly average index energy price over the last 24 months, averages 5.5 ¢/kWh*

For use over 1 MW, at 5-yr future market energy, approx. 6 ¢/kWh* for commercial or industrial services

For residential services, recommend adjusting delivery charge, resulting in 7-10 ¢/kWh*

Excess use charges apply for incidental use over authorized levels

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

Summary of Findings to Date

Continued goal of keeping non-cryptocurrency customers neutral to potential impact

We have identified system capacity for some cryptocurrency growth but costs will increase significantly when the capacity is spoken for

To avoid impact on other local growth we have included five years of forecasted load in determining what is available

Recommend considering rate increases to reflect cost of purchasing market energy and increased cost of delivery in residential areas



Next Steps

MORATORIUM PUBLIC HEARING

August 6, 2018 | 1:00 p.m. | Confluence Technology Center