



1/8/2018 **Electrical Load Growth - Quarterly Update**

Chad Rissman- Director of Engineering and Asset Management & Andy Wendell –Director of Customer Services



CHELAN COUNTY

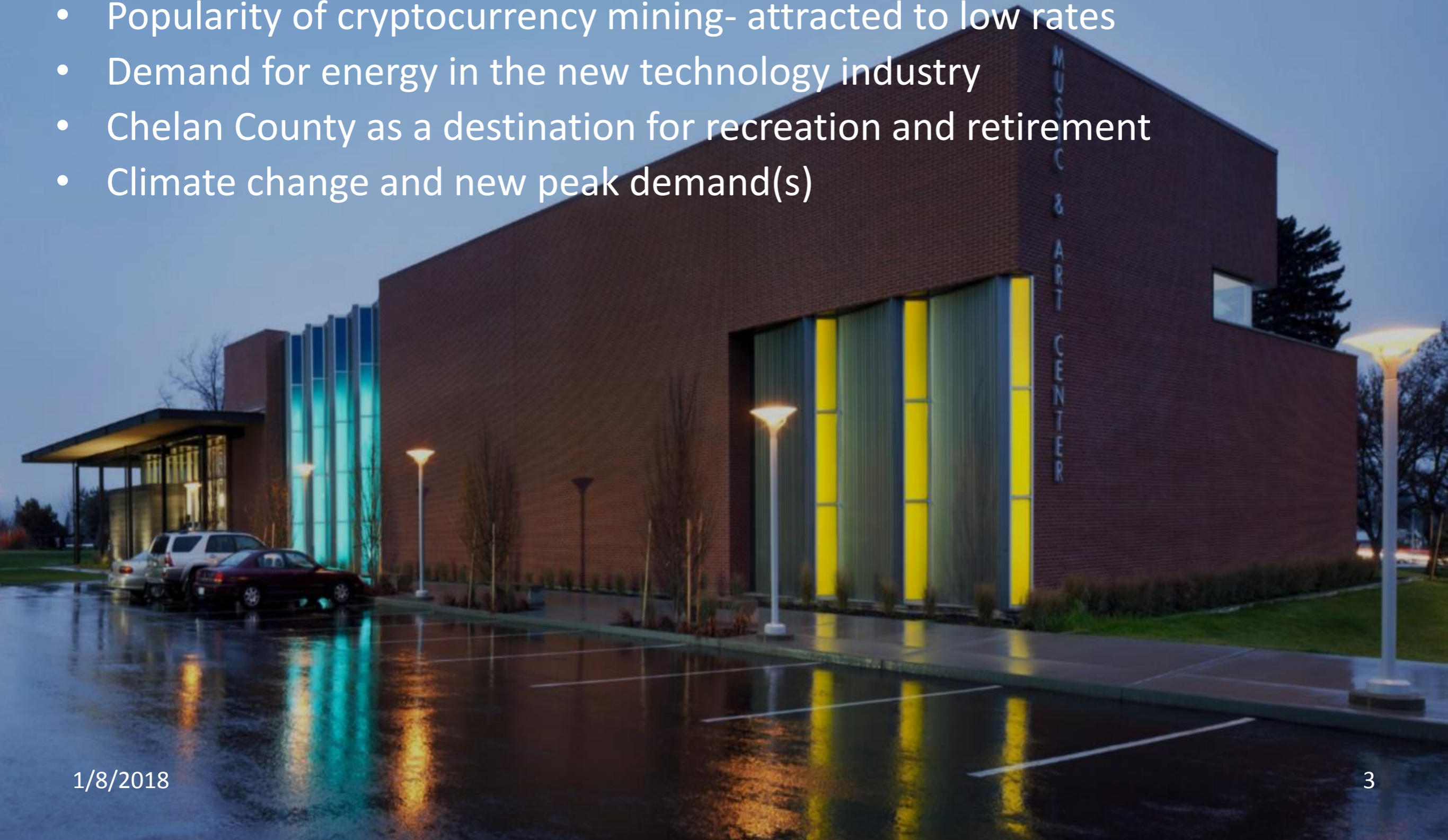
Purpose

Share with the Board our insights relating to new trends in customer growth and expansion, how this is impacting our business and what strategies we are putting into place to help manage these challenges.

No action requested today

Customer Growth Drivers

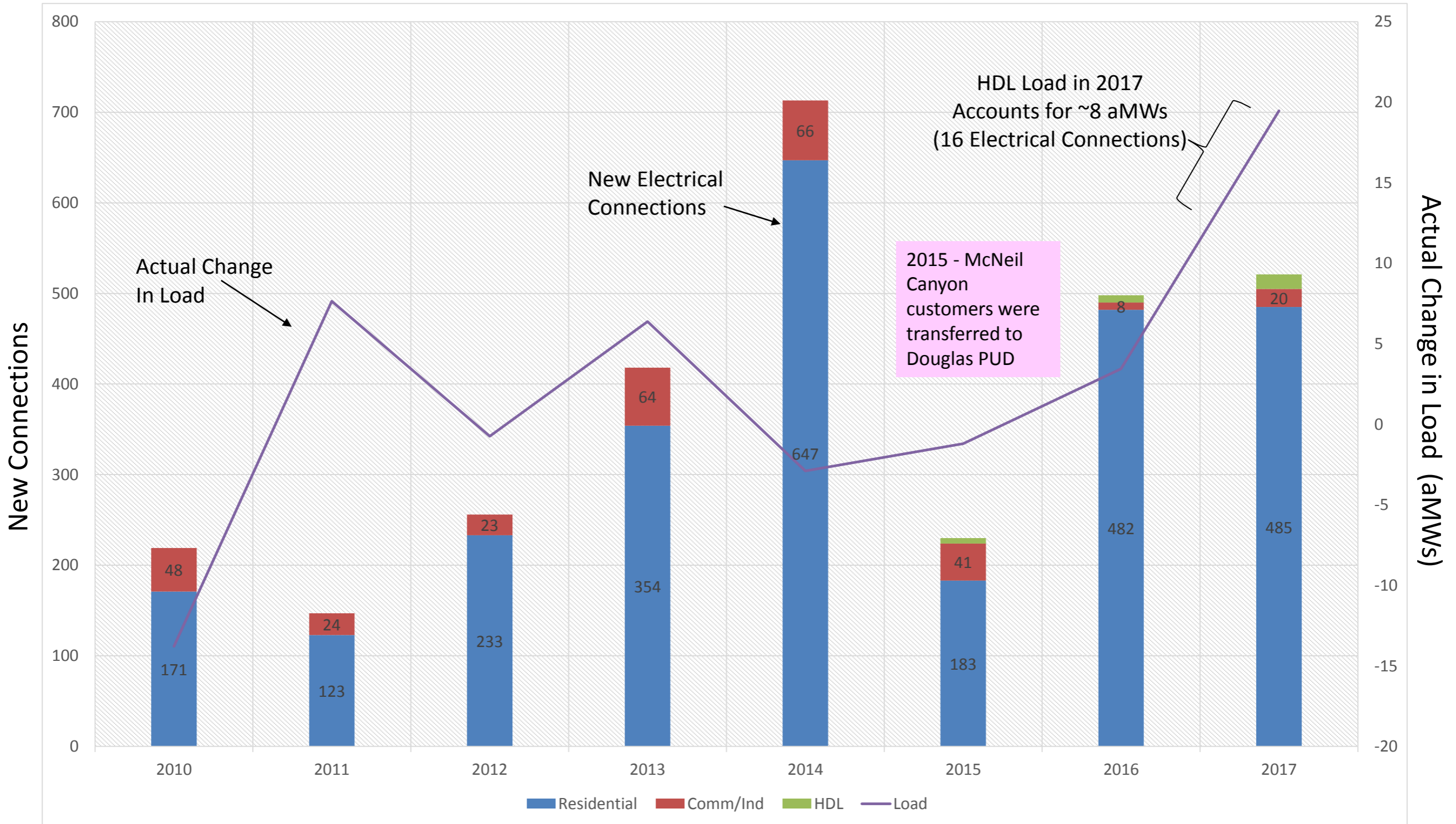
- Improvements in economic confidence
- Developers responding to residential housing shortage
- Popularity of cryptocurrency mining- attracted to low rates
- Demand for energy in the new technology industry
- Chelan County as a destination for recreation and retirement
- Climate change and new peak demand(s)



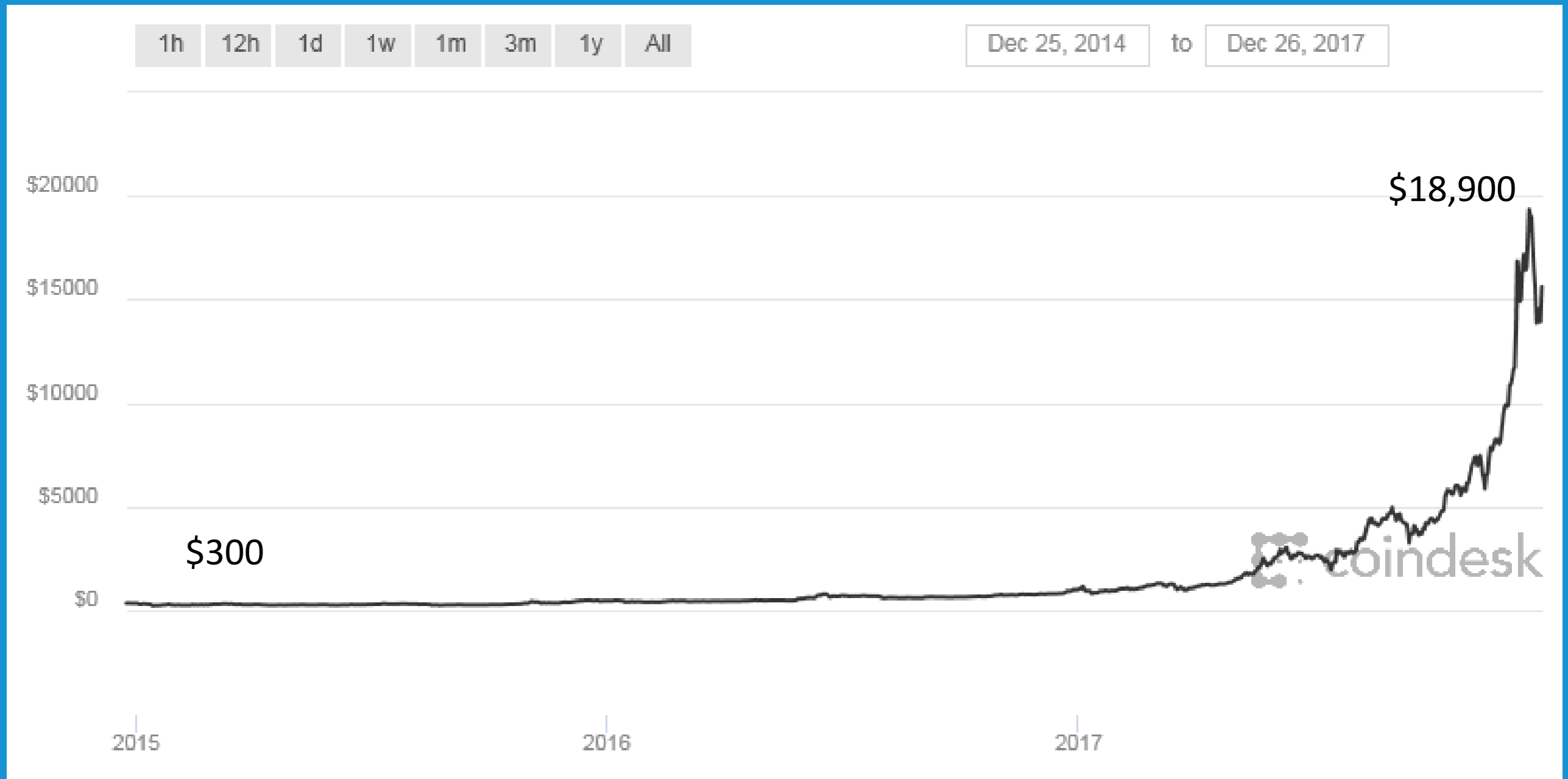
Direct impacts on our business

- Current PUD planning models no longer adequately reflect growth trends
 - *The magnitude of energy requested (MWs) inconsistent with historical requests*
- Stretching of resources:
 - *Distribution Engineering* -*Transmission Engineering* - *Energy Resources*
 - *Customer Service* -*Support Areas (Legal, Communications, Procurement)*
- Limited system capacity consumed at a much faster pace
- Infrastructure siting continues to grow more complex
- Our technology is limited in supporting necessary analytics and operations
- Better collaborative planning with County and municipal partners needed
- Policies, regulations, and revenue recovery may no longer adequately reflect growth trends

New Electrical Service Connections versus Annual Change In Load (aMWs)



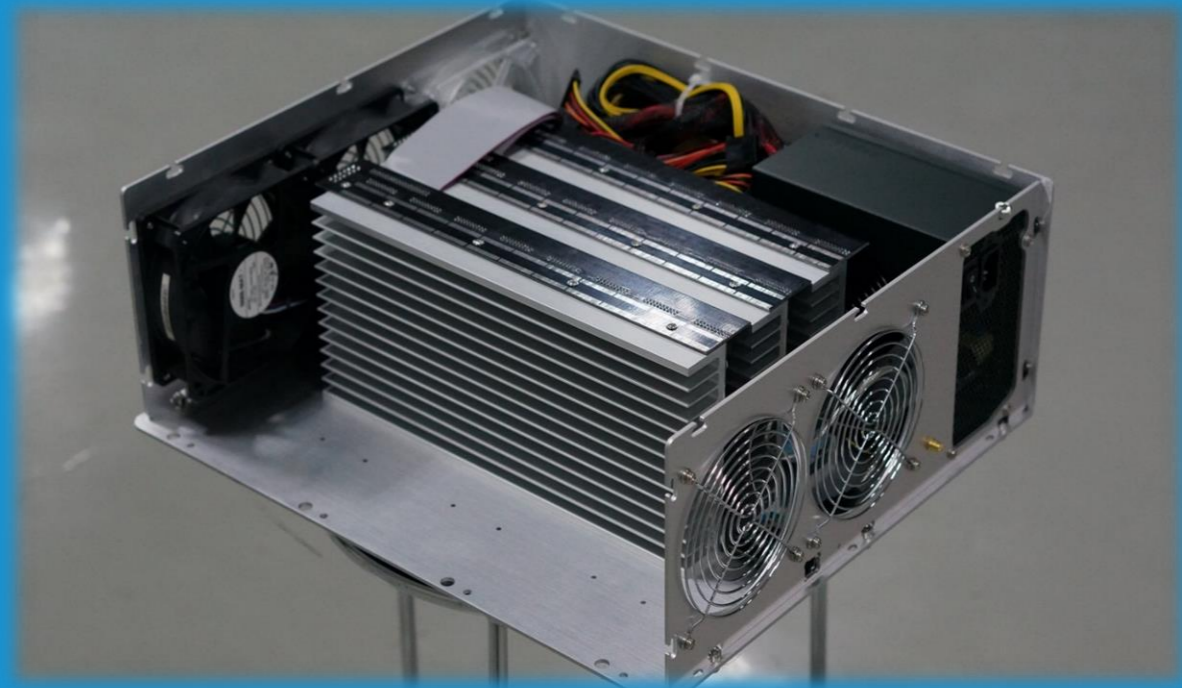
Bitcoin (USD) Price



Source: <https://www.coindesk.com/price/>

High Density Load - Inquiries

- > 75 HDL inquiries between October 17 to December 17
- Inquiries in form of walk-ins, phone calls, emails, letters
- Range from 5KW up to 100 MWs
- > 95% are in leased space
- Majority of inquiries from out of County and out of state



Note:

Unapproved HDL load does exist in our system and is becoming an increasing area of concern.

Power Requests by Area (applications & pre-application)

Leavenworth Area:

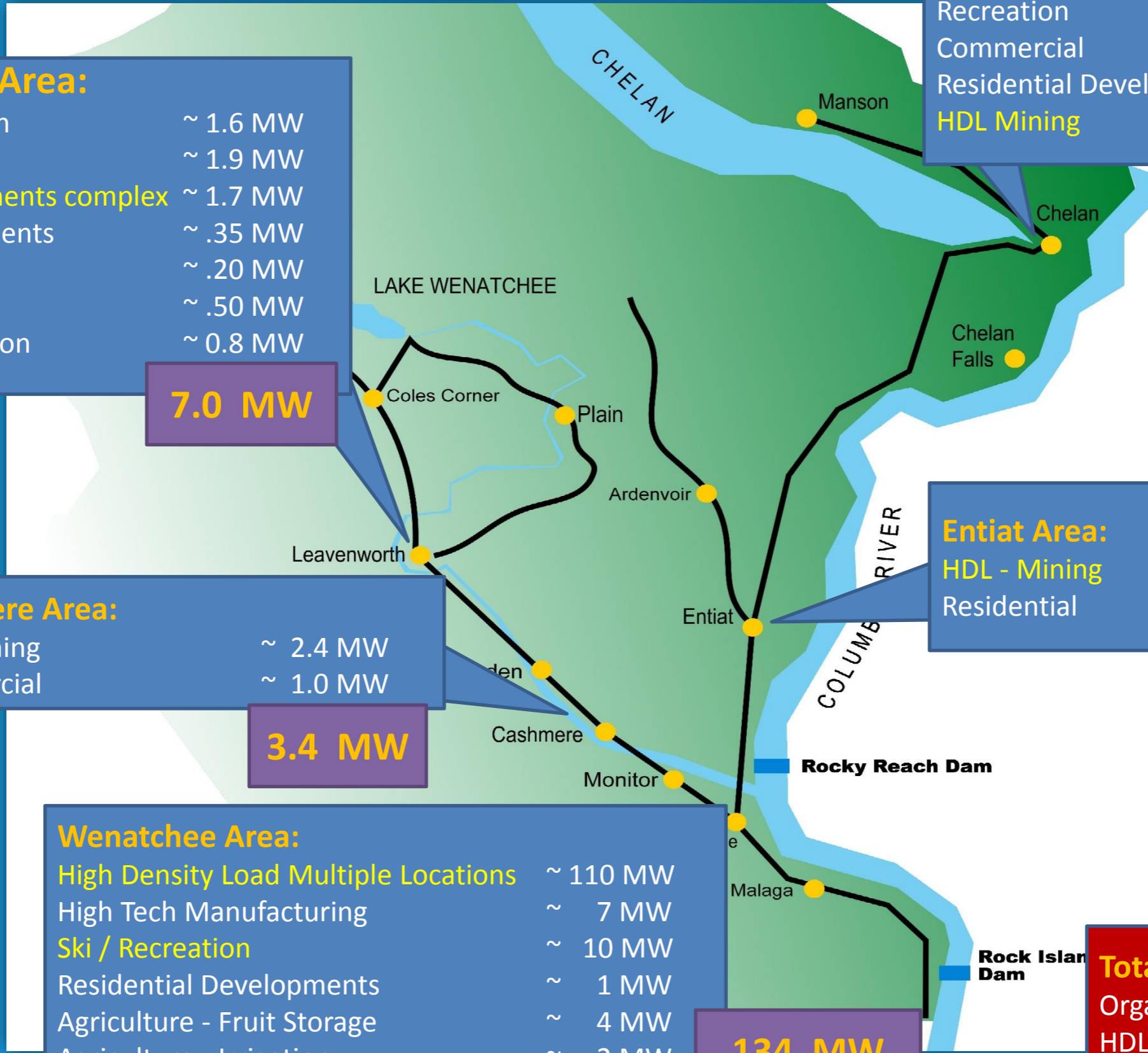
EV Charging Station	~ 1.6 MW
Commercial	~ 1.9 MW
Residential Apartments complex	~ 1.7 MW
Housing Developments	~ .35 MW
Recreation	~ .20 MW
HDL Mining	~ .50 MW
Public Transportation	~ 0.8 MW

7.0 MW

Chelan Area:

Recreation	~ 3.0 MW
Commercial	~ 1.6 MW
Residential Developments	~ 5.0 MW
HDL Mining	~ 6.5 MW

16 MW



Cashmere Area:

HDL-Mining	~ 2.4 MW
Commercial	~ 1.0 MW

3.4 MW

Entiat Area:

HDL - Mining	~ 100 MW
Residential	~ .10 MW

100 MW

Wenatchee Area:

High Density Load Multiple Locations	~ 110 MW
High Tech Manufacturing	~ 7 MW
Ski / Recreation	~ 10 MW
Residential Developments	~ 1 MW
Agriculture - Fruit Storage	~ 4 MW
Agriculture - Irrigation	~ 2 MW

134 MW

Total:

Organic Growth	= 40
HDL/Mining	= 220

Our Strategies looking forward

(short term)

- Recruiting (3) FTEs: Engineering, System Planning and Field Engineering
- Install new substations: Leavenworth, North Shore Chelan, Olds Station
- Aggressively pursue technology: CIS / MDM / AMI / OMS / GIS
- Maintain maximum flexibility in budgets and future budget modifications
- Re-prioritizing existing capital projects to respond to immediate load growth
- Developing transmission studies based on large load requests
- Developing a large load request intake process
- Engage County & municipal planning in pursuit of corridors and properties

(longer term)

- Advancing our infrastructure planning and load growth models
- Move up future substation planning: Wenatchee, Entiat, Malaga, others
- Re-evaluate revenues sources, rates, policies and service offerings

A scenic landscape photograph showing a mountain ridge in the foreground. The ridge is composed of reddish-brown rock and has several dirt trails winding across it. A few hikers are visible on the ridge. In the background, a town is nestled in a valley, with a river flowing through it. The mountains in the distance are hazy and blue. The word "Questions?" is overlaid in white text in the center of the image.

Questions?