

# Quarterly Electric Load Update

April 3rd, 2023



Presented by: Andy Wendell, Director of Customer Service



CHELAN COUNTY

# Why we are here today



- 2022 actuals- electric meters
- 2023 new services & meters projected
- County wide development & large loads
- Update Mission Ridge expansion plan
- December 2022 peak demand overview
- Substation build status update
- No action requested today

# New Meter Installs 2017 - 2023 YTD




# Notable applications & inquiries

- Leavenworth Meadows -Mend property,  
(300 units, residential, in final design stage)
- Entiat multi family structures ~120 units
- Leavenworth La Quinta hotel ~60 rooms  
(located behind Safeway grocery)
- Lake Chelan Casino expansion- 1 to 5 MW  
(100 room hotel & 50K sq. ft added gaming area)



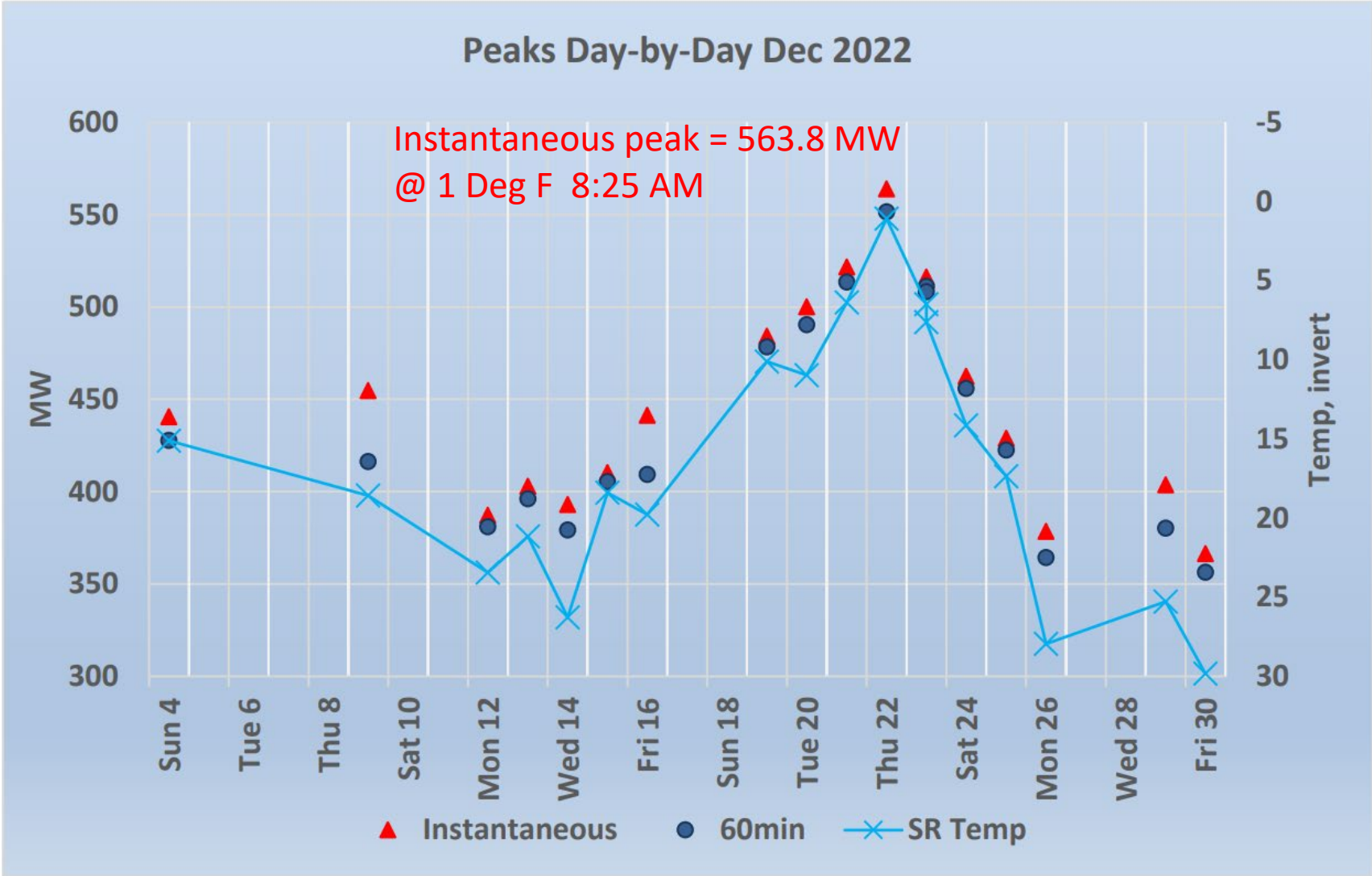
# 10-Year Electrical Load Forecast

(Net of energy conservation plans & excludes new large loads)

<i>Date of Forecast</i>	<b>Base Case</b>	<i>High Case</i>	<i>Low Case</i>
April 2022 Annual growth rate %	31 avg MW 1.4 %	107 avg MW 4.3 %	16 avg MW 0.7 %
November 2022 Annual growth rate %	<b>15 avg MW</b> 0.7 %	47 avg MW 2.0 %	6 avg MW 0.3 %
 April 2023 Annual growth rate %	<b>15 avg MW</b> 0.7 %	47 avg MW 2.0 %	6 avg MW 0.3 %

Notes: 1) Load forecast team scheduled to publish a new 10-year forecast August/September of 2023

# Electrical Demand (Peak) December 2022



# December 22, electrical distribution system performance

- Overall distribution system functioned as planned
- Occurred over holiday break resulting in higher vacation area loads.
- Measured new peak demand on several substations and distribution feeders.
- Sporadic losses of line fuses associated with higher-than-expected demand.
- Sustained a long duration outage in Leavenworth.



# Distribution Substation Planning

Current & Future Locations (updated April 2023)



**Existing Substation** 34

**Future Substation Property Acquired** 6

**Future Substation Seeking Property** 7

Google





# Chelan PUD Substation Planning

Updated March 2023

Substation & Vicinity		Year Planned <sub>1</sub>	Property Acquired	Transmission Required <sup>2</sup>
North Shore Substation	Lake Chelan, Henderson Road	2023	Yes	No
Bavarian Substation	Chumstick Highway Leavenworth	2025	Yes	Yes
Wenatchee Substation	Worthen Street Wenatchee	2026	Yes	No
Castlerock Substation	West Wenatchee, Castlerock Street	2026	Yes	Yes
West Wenatchee Substation	Western Foothills vicinity Wenatchee	2026	No	TBD
Gorge Substation	Gorge Road, South of Chelan City	2027	Yes	Yes
Stemilt Creek Substation	Stemilt Creek/Malaga West Vicinity	2027	No	TBD
Roses Substation	North Shore Lake Chelan, Roses Lake	2026	No	TBD
Entiat North Substation	North End of Entiat City Hwy 97A	2028	Yes	No
Mission Ridge Substation	Mission Ridge / Upper Squilchuck	2030	No	Yes
Cashmere East Substation	Cashmere East / Monitor Vicinity	2037	No	TBD
Howard Flats Substation	Chelan Airport / Howard Flats Vicinity	2029	No	Yes
Rock Island Substation	Rock Island / Malaga East Vicinity	2030	No	TBD
Hay Canyon Cashmere Substation	Cashmere North Vicinity	2030	No	TBD

Notes:

1. Year planned is based on forecasted capacity and build capability and is subject to change from year to year depending on load growth
2. Transmission required (Y/N) based on if significant new transmission corridors are required

# Current Substation Build Activity

Station	Next Phase	Est. Phase Completion
North Shore	Construction	Q4 - 2023
Leavenworth (Bavarian)	Permitting and environmental review	Q2 - 2023
Wenatchee (upsized)	Environmental review	Q4 - 2023
Wenatchee Foothills (west Wenatchee)	Siting and utility plans	Q3 - 2023
Malaga/Stemilt	Site property evaluations	Ongoing
Various Station Rehab	Sunnyslope, South Shore, Summit, L. Wenatchee & Western	2023

*Please note:*

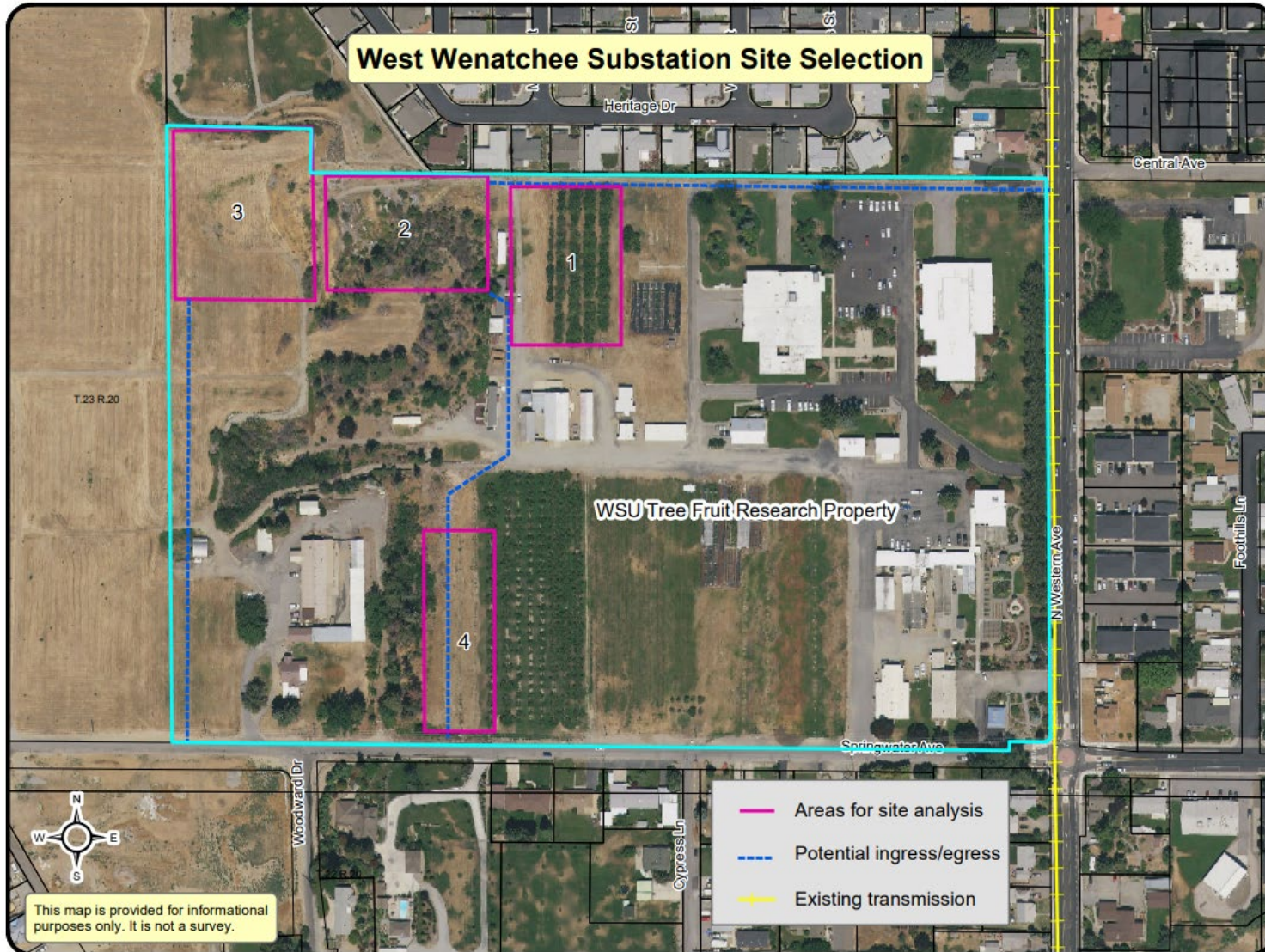
- Schedules are subject to change (station build team is updating)
- See 2023 District Performance Plan for more details

# North Shore Substation Site Grading



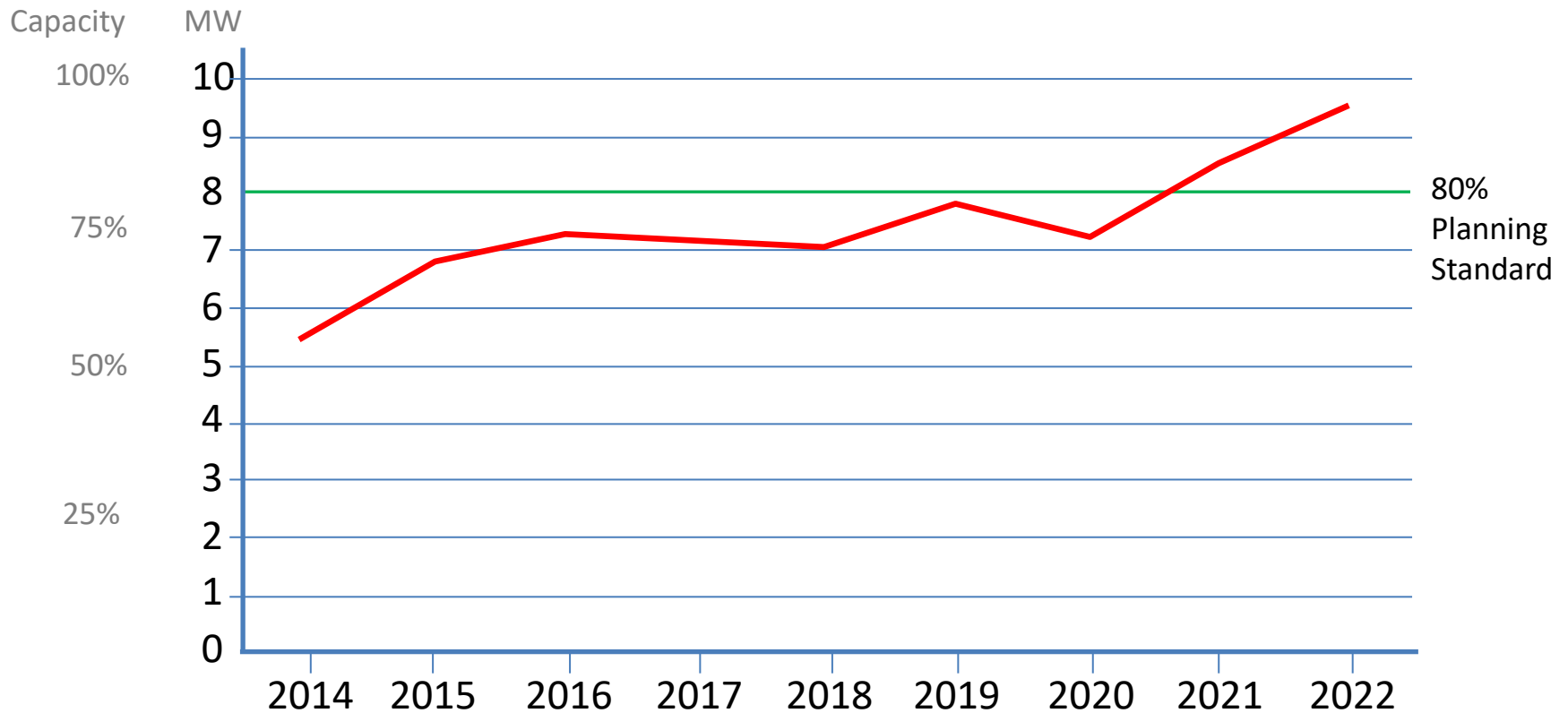
# West Wenatchee Area Substation Siting

Public meeting held: February 21, 2023



# Mission Ridge

## Squilchuck Distribution Feeder Actual load (MW)



# Mission Ridge

- a) 2023- Perform comprehensive planning with budgeting
  - Distribution system improvements
  - Long range forecasting (including substation)
  
- b) 2024- Begin construction of early phases of multi-phased plan



Single Circuit Distribution  
(Existing Mission Ridge Configuration)



Double Circuit Distribution  
(Typical double circuit configuration)

# Summary

- New residential construction remains steady county wide.
- Forecasting 800+ new residential services per year for the next 3 years consistent with historical numbers.
- Some large single family residential developments slowing build out pace
- No material shift away from substation build plan.
- December 2022 new peak demand results in moderate changes to targeted areas
- Planned utility infrastructure investments are positioned well to meet demands of growth in water, electric, wastewater and fiber.
- County wide planning efforts combined with advanced metering (AMI) data are improving our forecasting accuracy.

# Questions?





# New Developments

(3 year view housing units)

## SUPPLEMENTARY SLIDE

Leavenworth	=	337
Cashmere	=	64
Chelan	=	520
Wenatchee	=	1,845
Malaga/Mission	=	672
Entiat	=	150
		~ 3,588