

# Chelan PUD Transportation Electrification Roadmap

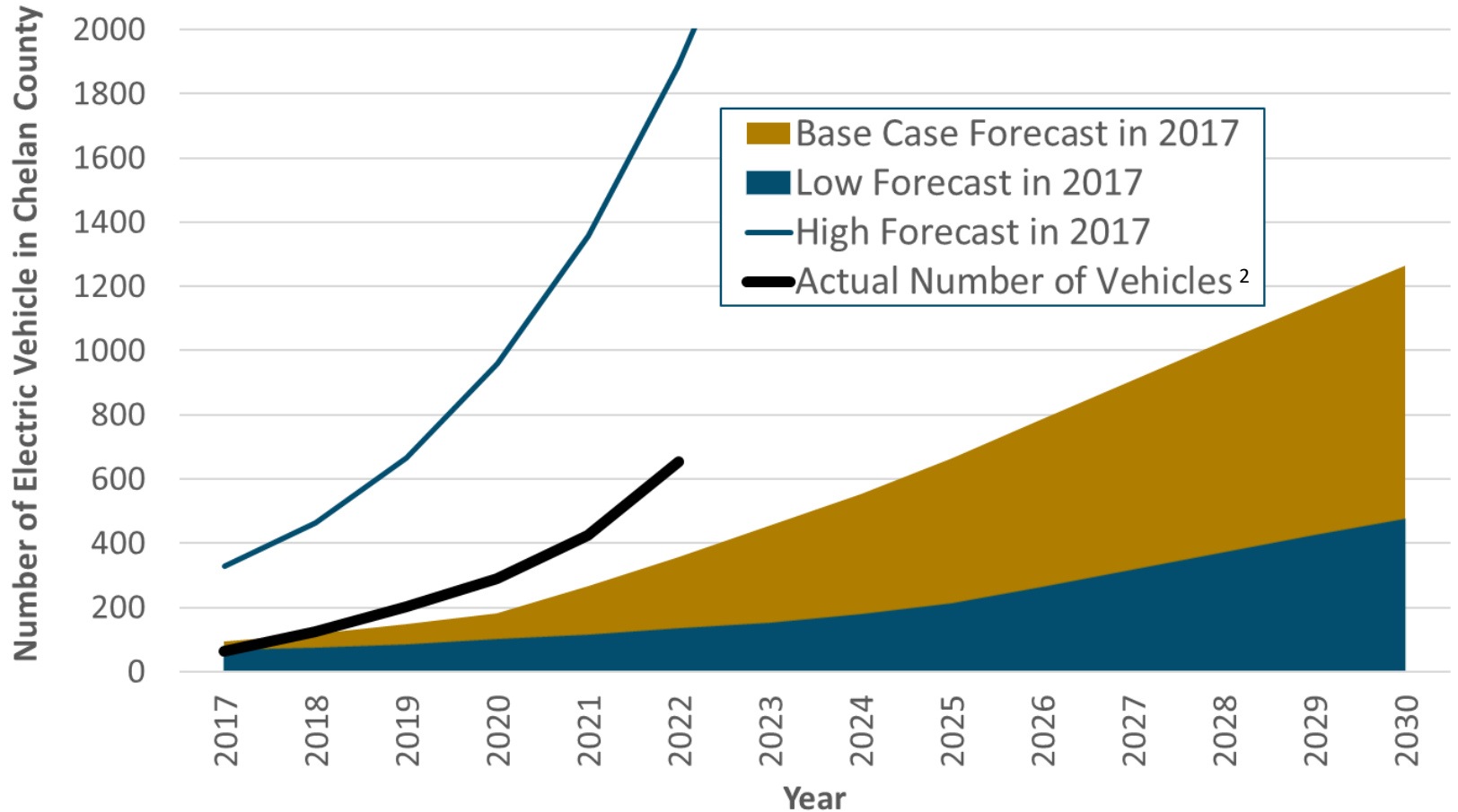


January 23, 2023

# What we'll talk about

- Electric vehicle trends in Chelan County
- EV Growth Impacts
- Washington Clean Fuels Standard
- Planning, strategies, and actions

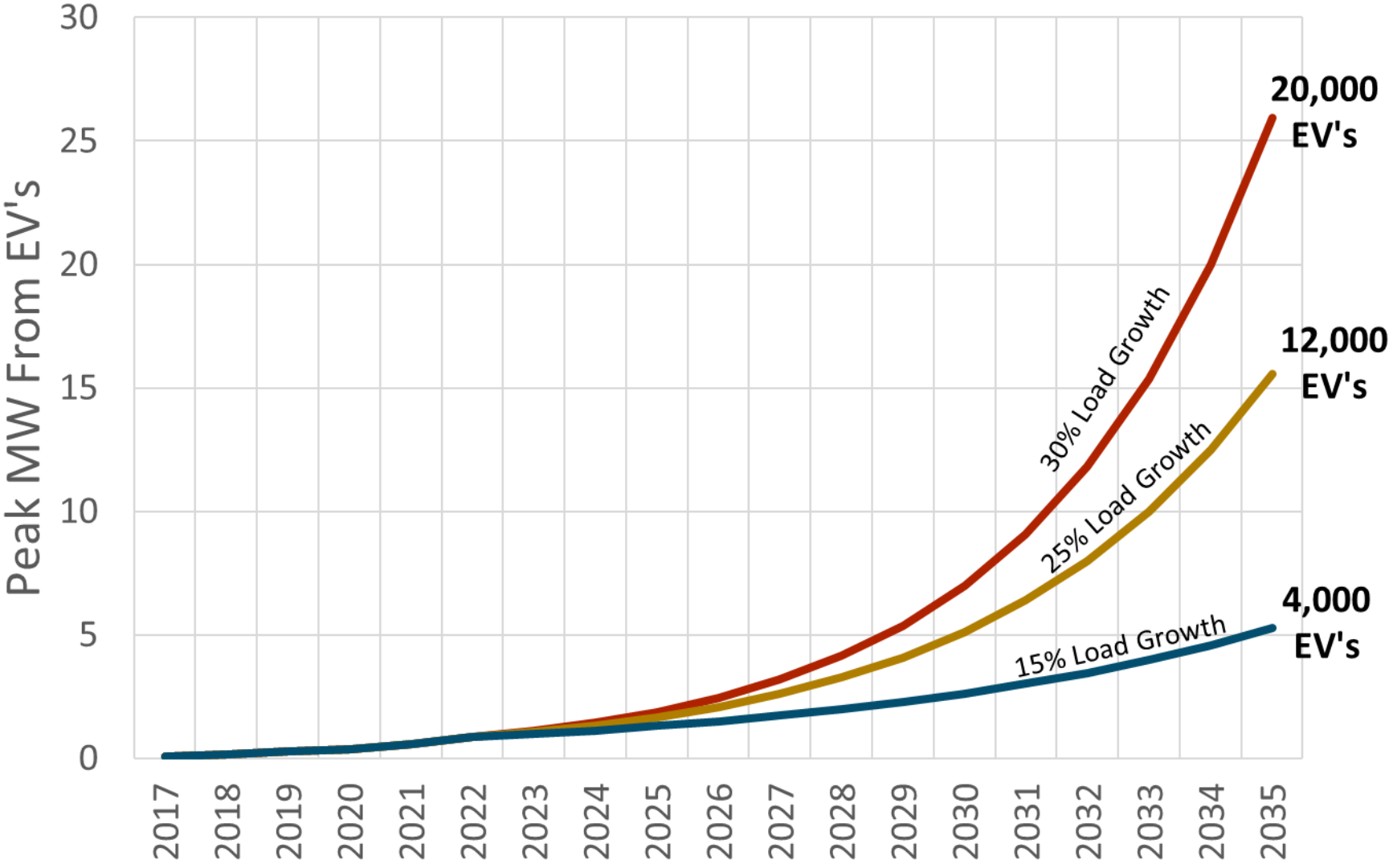
# 2017 Chelan County Light Duty EV Forecast<sup>1</sup> Vs Actual



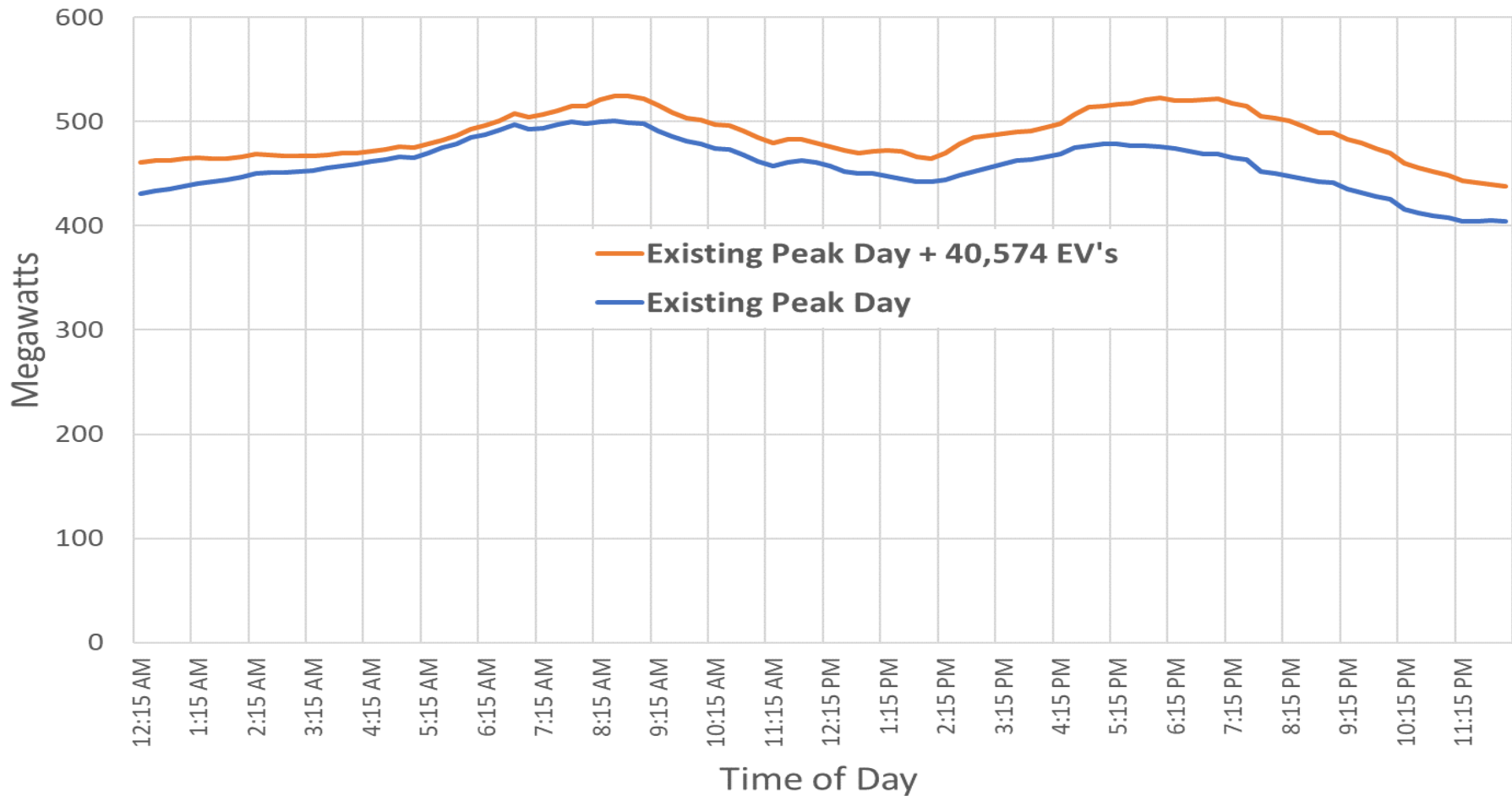
<sup>1</sup> Forecast from March 2017 Report Titled: Economic and Grid Impacts of Plug-In Vehicle Adoption in Washington and Oregon. Energy+Environmental Economics (E3).

<sup>2</sup> Actual Number of Electric Vehicles through December 8, 2022

# Potential Load Growth From EV's

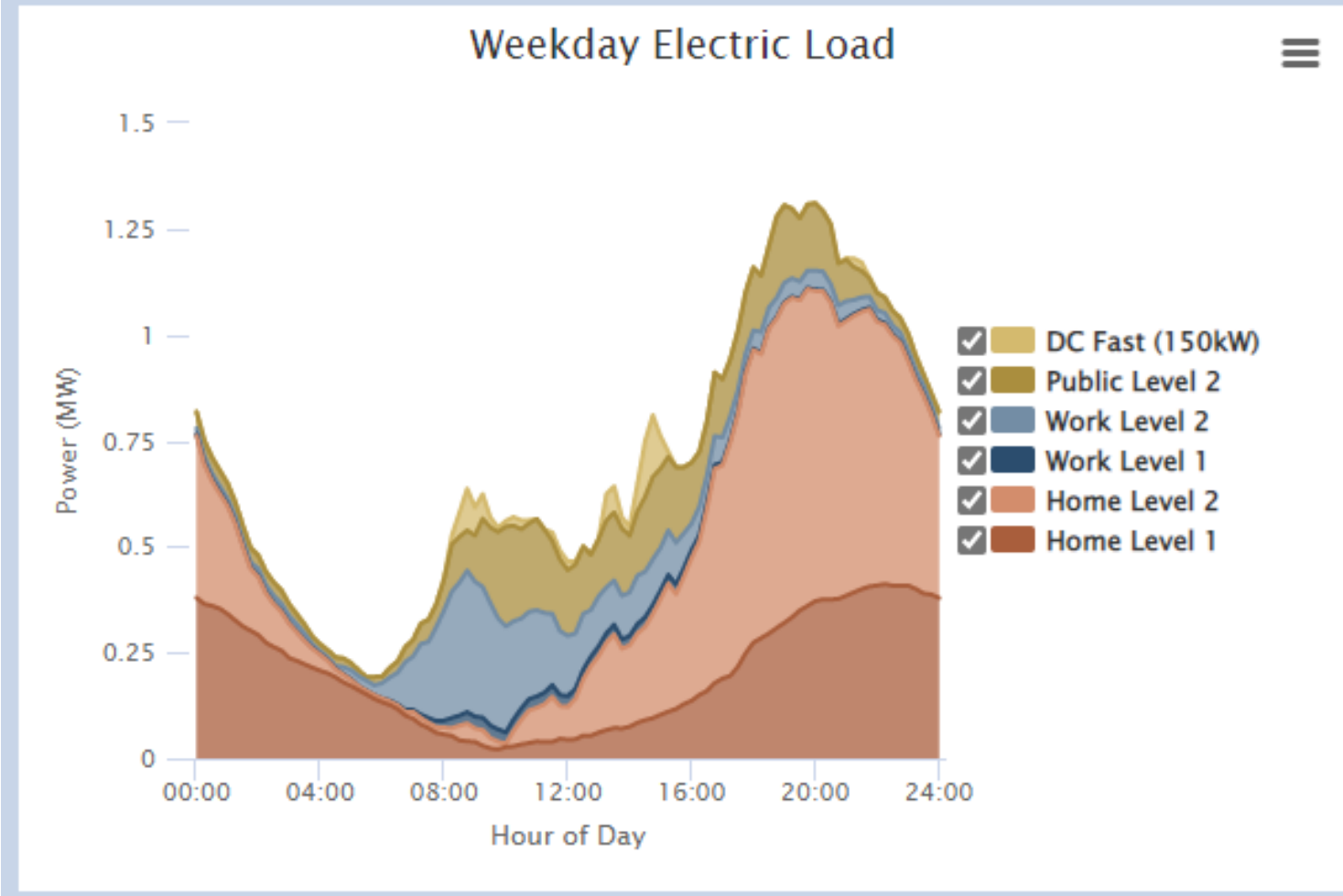


## Peak Loads in Chelan County If Every Customer with a Residential Meter Drove an Electric Vehicle



# Load Profile of EV Charging<sup>1</sup>

In the Wenatchee area, supporting a fleet of 1,000 plug-in electric vehicles would result in the following electric load profile:



# Washington Clean Fuels Standard

- Also known as Low Carbon Fuel Standard
- Legislation passed in 2021, rulemaking complete in 2022
- Targets the emissions from the transportation sector
- Fuels assessed to determine carbon intensity
  - Clean fuels (like electricity from our hydropower) will generate credits to be sold
  - Fuels with high intensities will need to purchase credits or reduce
- 2023 is the first year of implementation

# Electric Vehicle Planning

## External Factors

- **Availability and Affordability** of electric vehicles, numbers are growing
- **Low Carbon Fuel Standard (Washington Clean Fuel Standard)** started in 2023
- **Wholesale Electricity Prices** of energy, capacity, carbon-free and resource adequacy
- **Volatility** of gasoline prices
  - Electricity is cleaner and 90% less expensive

## Chelan PUD Factors

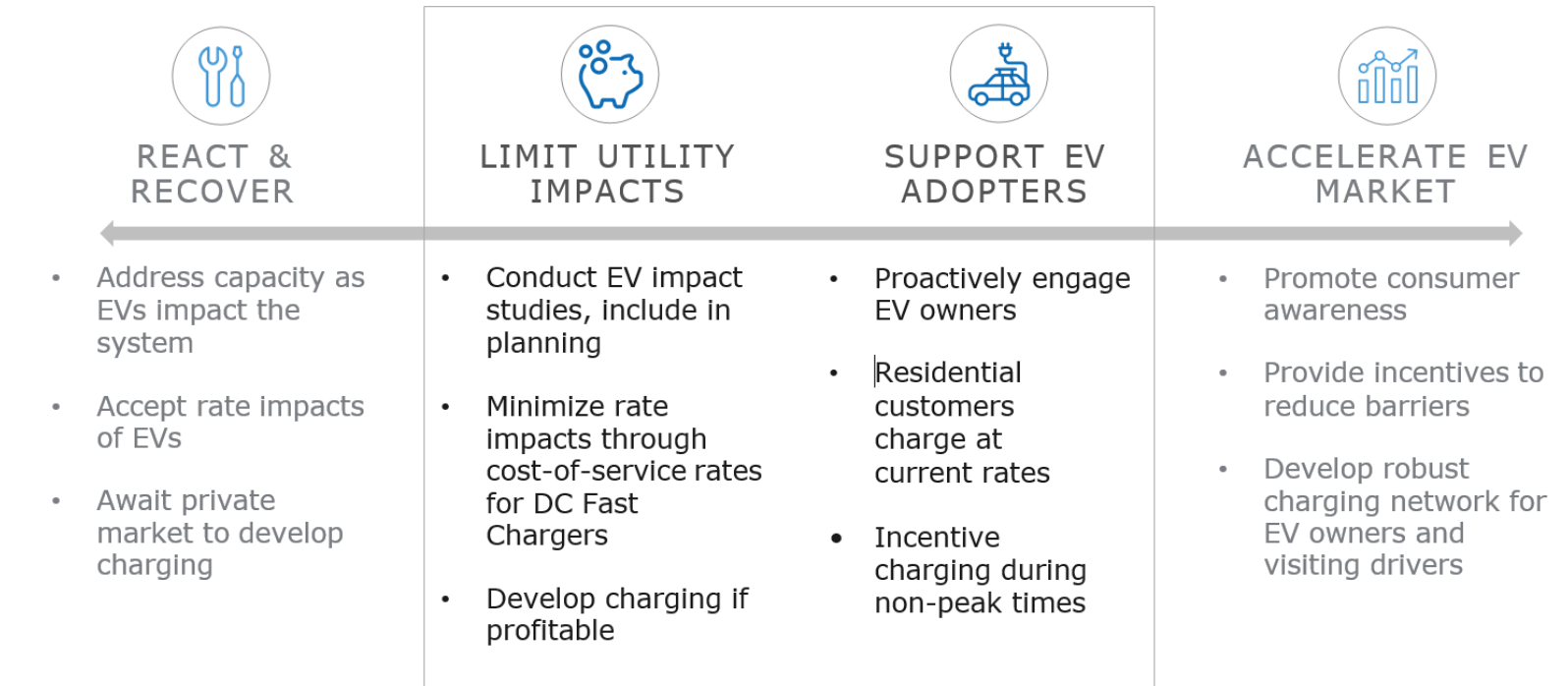
- **EV adoption** Above base case but lower than high case
- **Winter peaking** Impact on electrical distribution system is manageable
- **Economic value** of managed charging and other Demand Response type programs
- **Commercial fleet plans** in County are being studied
- **Technical Assistance** to electrify LINK Transit's fleet




# Current Guiding Principles-Any Changes?


- **Do the Best for the Most for the Longest** for all customer owners.
- **Stay ahead of customer needs**, offer products and services that delight EV owners
- Continue to plan operations and investments with a **lens toward anticipated growth in Transportation Electrification adoption** and charging infrastructure.
- **Proper cost recovery to avoid subsidies** for TE unless a business case can demonstrate benefits to the PUD and community.
- **Limit rate impacts** to non-participating customers from EV load growth, while improving system utilization.
- Collaborate with local stakeholders and **engage thoughtfully in state policy** issues to advance the PUD's interests in TE.


# Our Current Position





# Current Strategies

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1. Gather EV data & customer insights to inform TE planning and priorities
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2. Mitigate utility costs from EV load growth
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3. Align costs and revenues for EV charging while maintaining fuel savings
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4. Engage in TE dialogue locally with internal and external stakeholders
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5. Educate customers and public on Chelan TE strategies and benefits

# Work Completed to Date

- Data collection: Installed load profile meters on DC fast charging equipment
- Adopted DC Fast charging rate
- Maintained engagement with LINK and investigated grant funding
- Utilized relationships with other utilities and regulators to advocate utilities receive residential charging credits.
- Supported District Services Team to develop and review both public charging and fleet pilot options at new HQ.
- Conducted EV system impact study in support of Customer Utilities planning
- Installed five publicly available charging stations at four locations

# 2023 Transportation Electrification

- Operationalize Low Carbon Fuel Standard program
- Identify high potential DC FC sites for potential future deployment
- Conduct EV adoption study: data for IRP, system planning, and identify value of managed charging program
  - Residential Customers
  - Local Fleet Survey
  - School Districts
- Maintain regular engagement with LINK on buildout and innovative peak reduction efforts
- Support District fleet electrification efforts
- Develop managed charging pilot for 2024/2025 implementation

# Questions?

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