

Informational
Only-No
Action
Requested

ELECTRIFICATION

Public Power Benefit Update
April 16, 2018

ANDREW GRASSELL
JIM WHITE



CHELAN COUNTY

RESPONSE TO 2016 STRATEGIC INITIATIVE

Installed five PUD-owned
Electric Vehicle (EV) chargers
at Chelan PUD locations

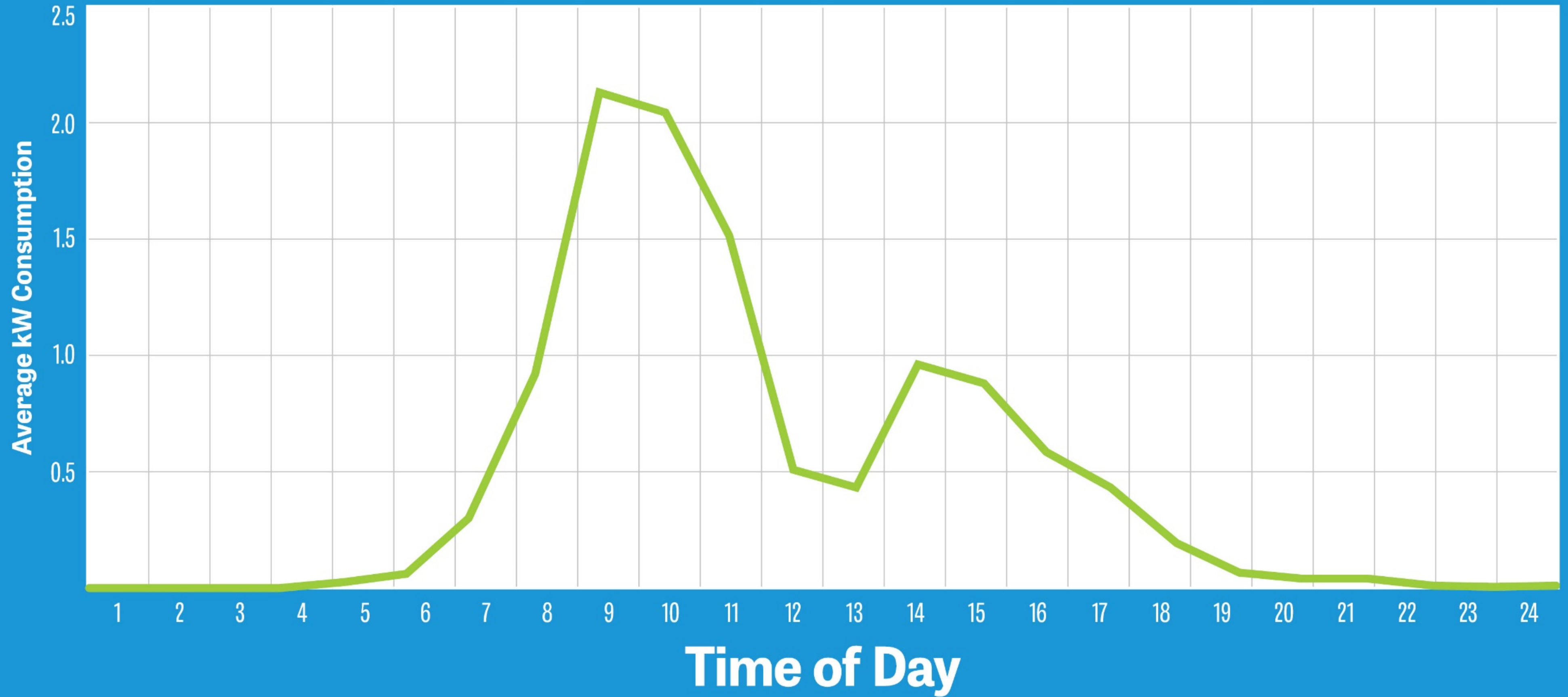
- » Public-private partnership allows
free EV charging by employees and the public
- » Monitoring EV charger use
and impact on the District

Participated in regional study of impact of
vehicle electrification with four utilities
(Avista, Snohomish PUD, Tacoma and Puget Sound Energy)

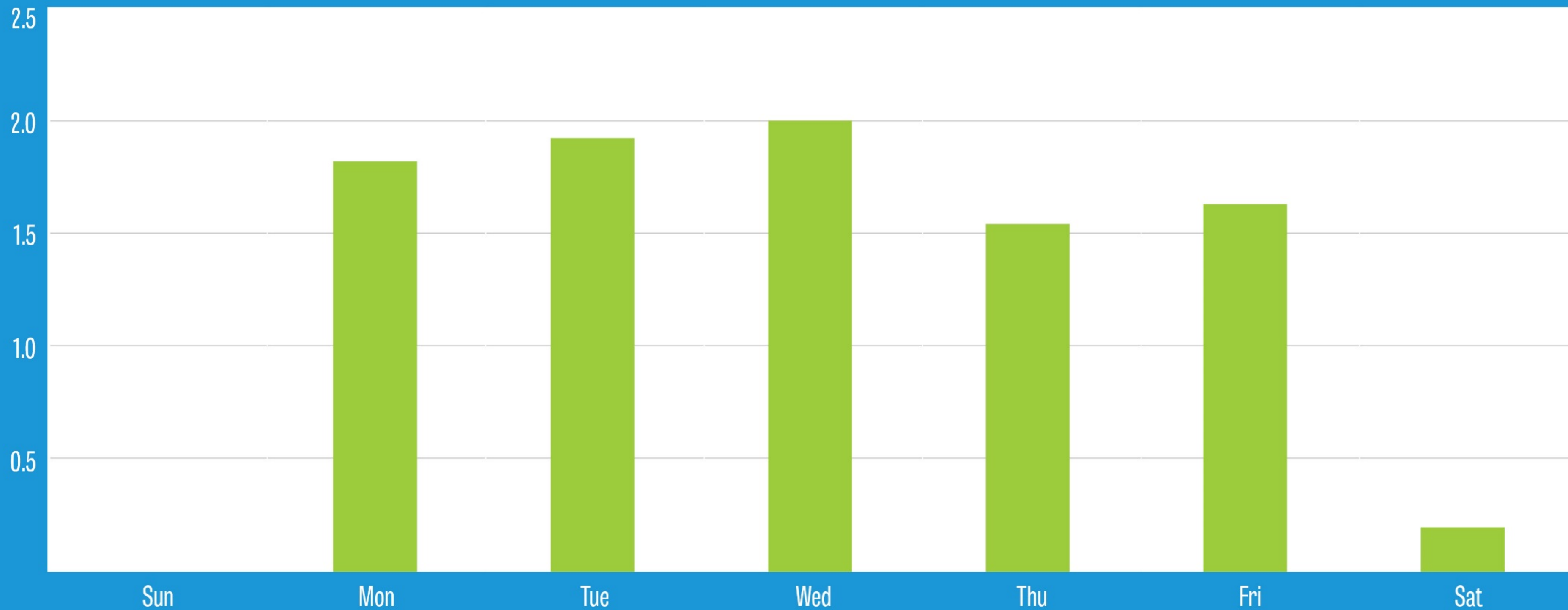
Based on findings, conducted additional
study with Western Washington
University



PUD HQ BUILDING WALL MOUNTED CHARGER



PUD HQ WALL CHARGER SESSIONS PER DAY



REGIONAL STUDY FINDINGS

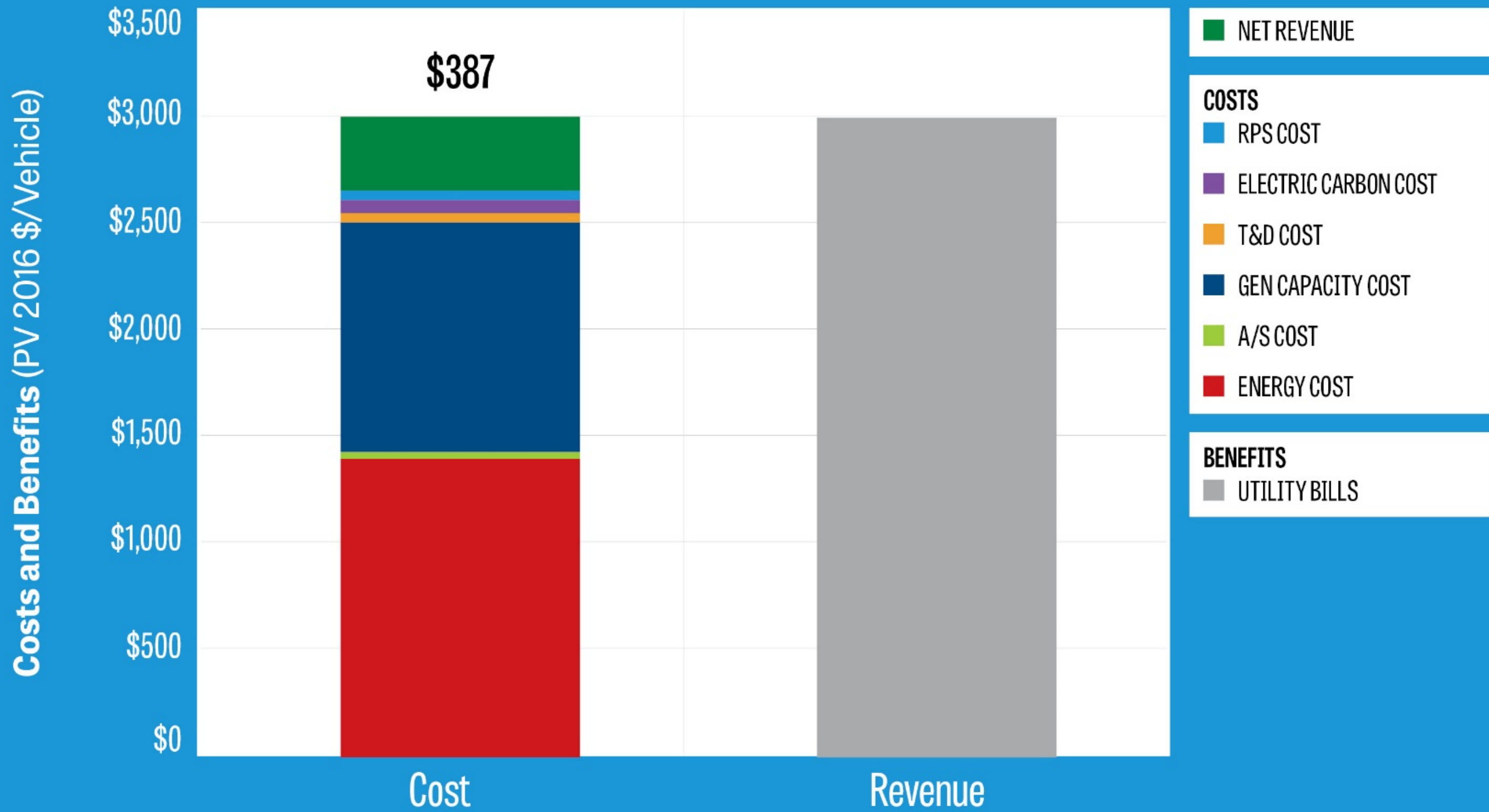
EV ownership provides positive benefits to the region and customers

EV ownership provides net positive benefit to most electric utilities except Chelan PUD

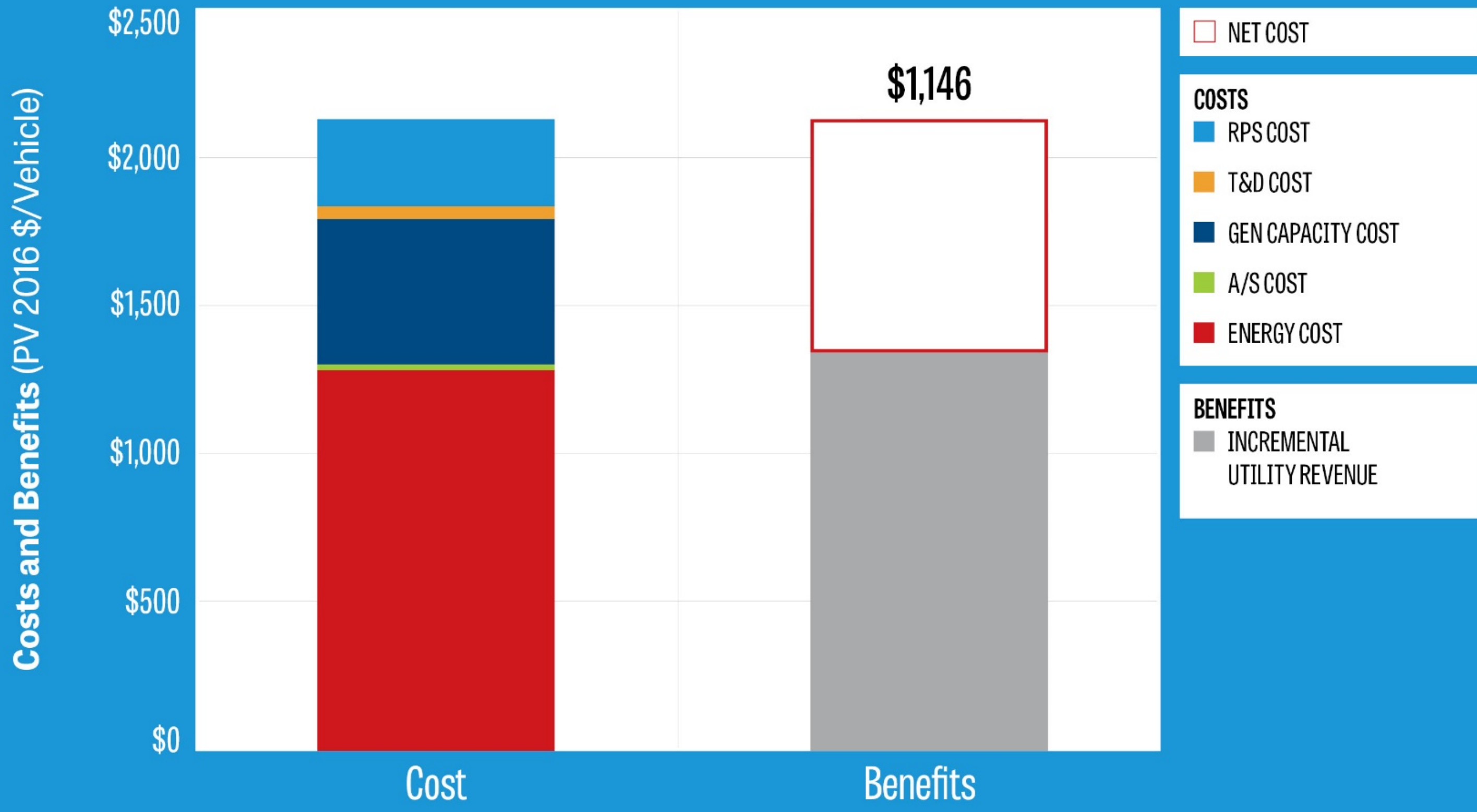
Increase in retail sale of electricity to EV owners does not cover the reduction in wholesale revenue and distribution costs.



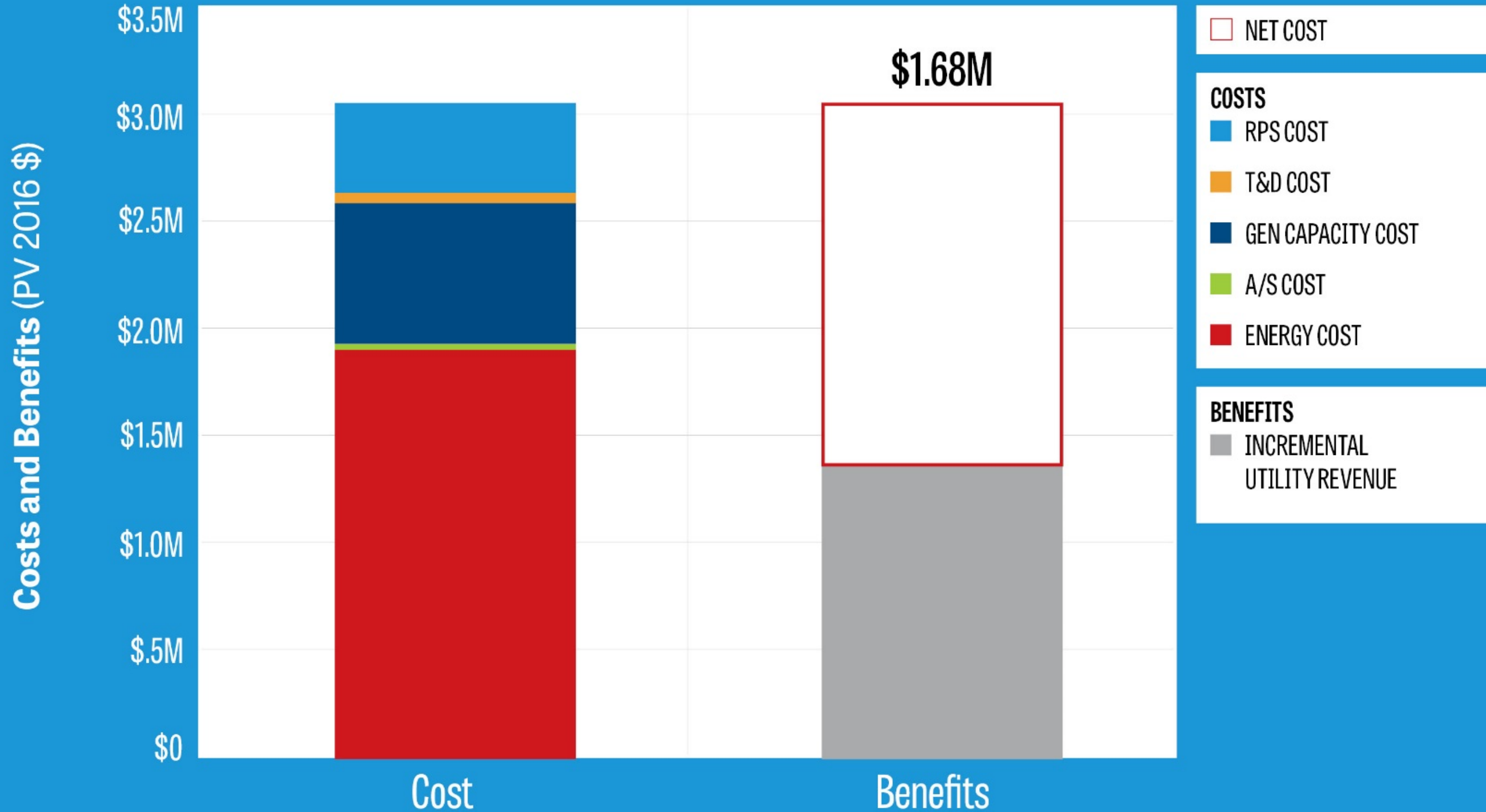
ECONOMIC IMPACT OF ELECTRIC VEHICLES ON PACIFIC NW ELECTRIC UTILITIES' BALANCE SHEET



PER VEHICLE ECONOMIC IMPACT OF ELECTRIC VEHICLES ON CHELAN COUNTY PUD BALANCE SHEET

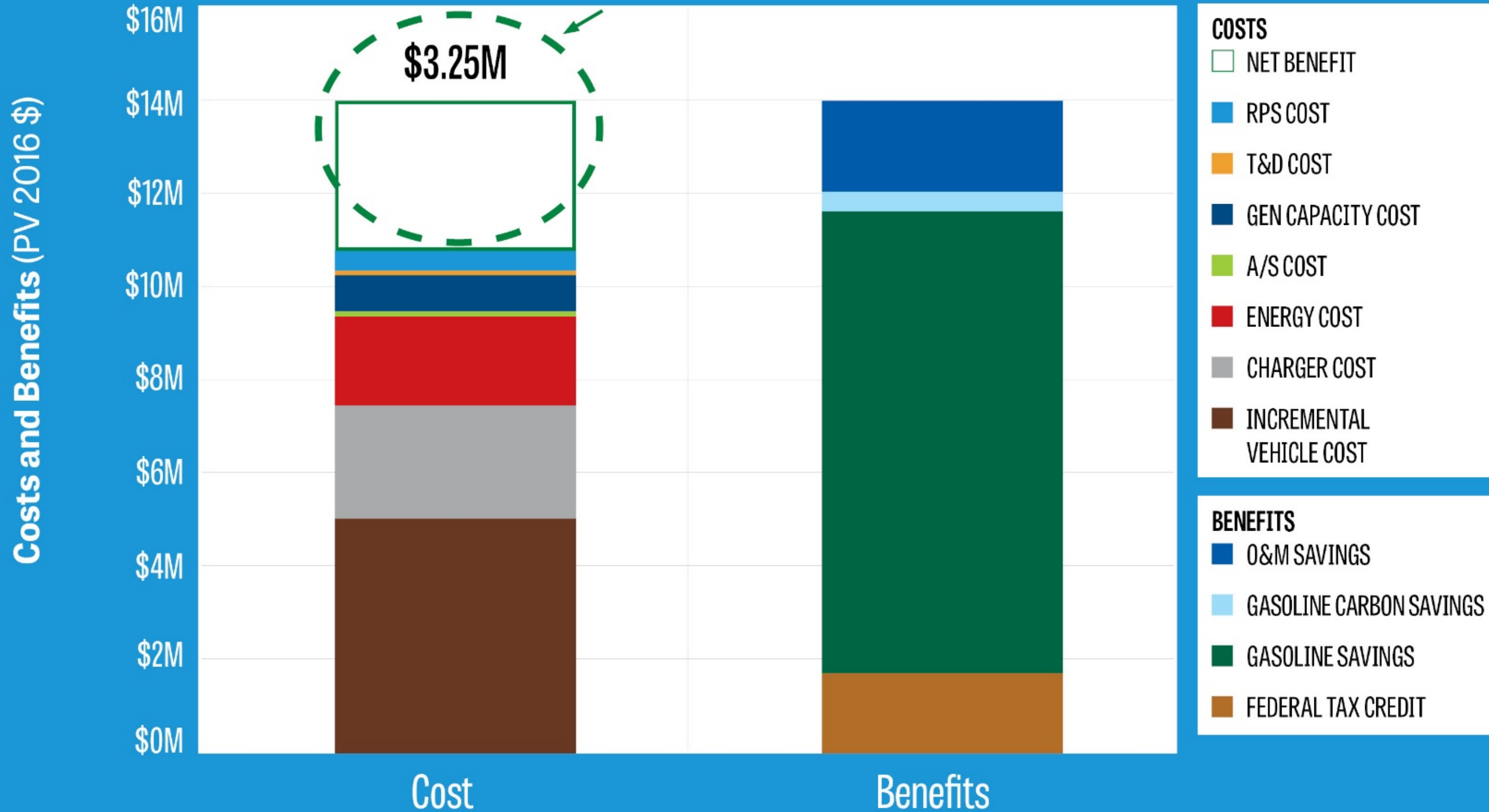


TOTAL ECONOMIC IMPACT OF ELECTRIC VEHICLES ON CHELAN COUNTY PUD BALANCE SHEET FROM 2017 - 2036



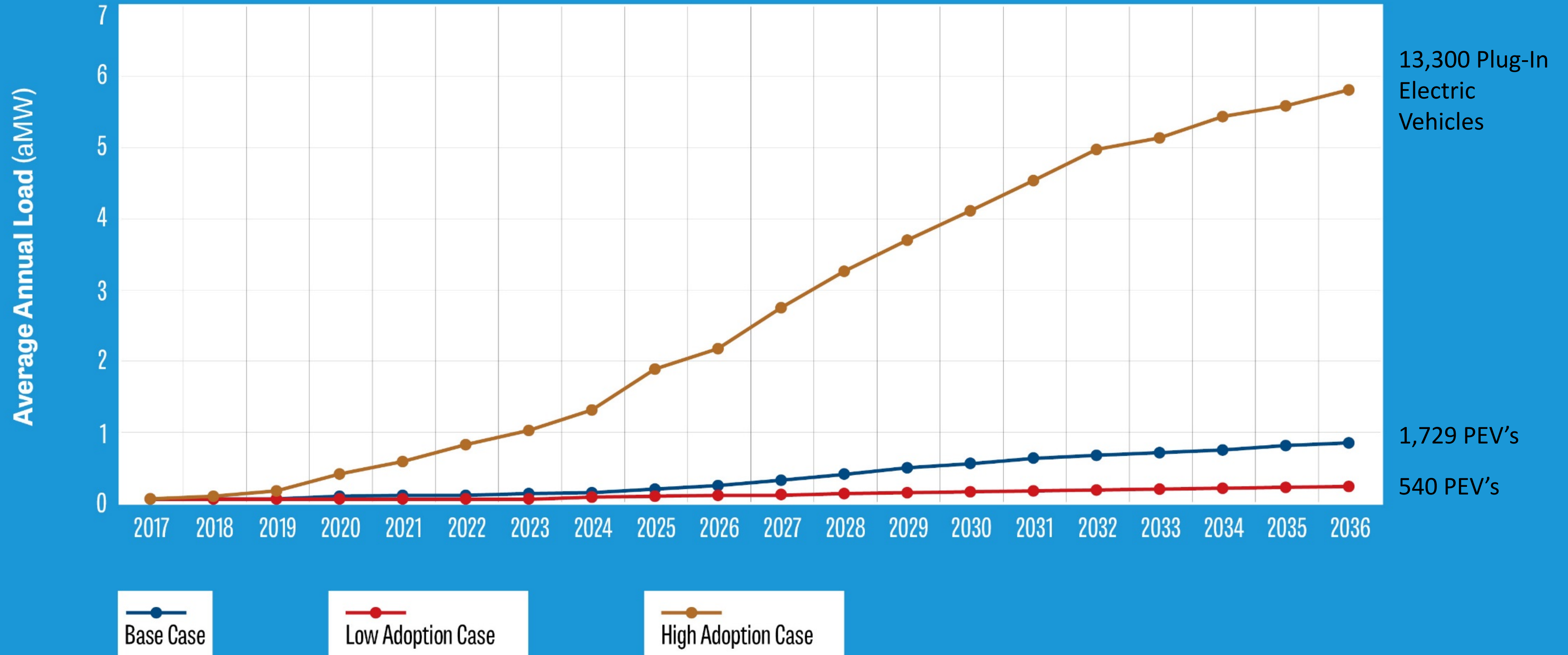
OVERALL ECONOMIC IMPACT OF ELECTRIC VEHICLES THROUGHOUT CHELAN COUNTY

NET PRESENT VALUE 2017 - 2036



AVERAGE MEGAWATT FROM LIGHT DUTY ELECTRIC VEHICLES IN CHELAN COUNTY

2020-2035



WESTERN WASHINGTON UNIVERSITY FINDINGS

Options to Reduce Impacts to Chelan PUD

POLICY OPTIONS

Rate Design

- »Time-of-Use rate
- »Specific EV charger rate

Legislation to reduce costs and/or increase benefits to Chelan PUD

- »Utility-use tax credits
- »Carbon tax
- »Access to VW settlement funds



WESTERN WASHINGTON UNIVERSITY FINDINGS

Options to Reduce Impacts to Chelan PUD

- »Load control of EV chargers
- »Stand-alone PUD-owned public EV chargers
- »Behind-the-meter PUD-owned EV chargers
- »Education and outreach on “smart charging”

There is also a “do nothing” option;
view the load as Chelan PUD views
any other organic load growth.



WHERE WE ARE NOW

- »Tracking EV legislation
- »Providing technical expertise to customers
- »Identifying and applying for grant funding where applicable
- »Evaluating PUD-owned chargers
- »Participating in quarterly meetings with Pacific Northwest Utility Transportation Electrification Collaborative






ELECTRIC
VEHICLE
PARKING
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CHARGING

ESTACIONAMIENTO DE
VEHÍCULO ELÉCTRICO SÓLO
MIENTRA




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QUESTIONS?