

Serving our customers

Tacoma Power and Transportation Electrification

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Tacoma Power



A win-win-win situation

DRIVER

Electricity is less expensive
EVs need less maintenance

ENVIRONMENT

Reduced GHG emissions
Domestic source of energy
Improved air quality, less noise

UTILITY

Increased utility revenues

Study of the value of transportation electrification

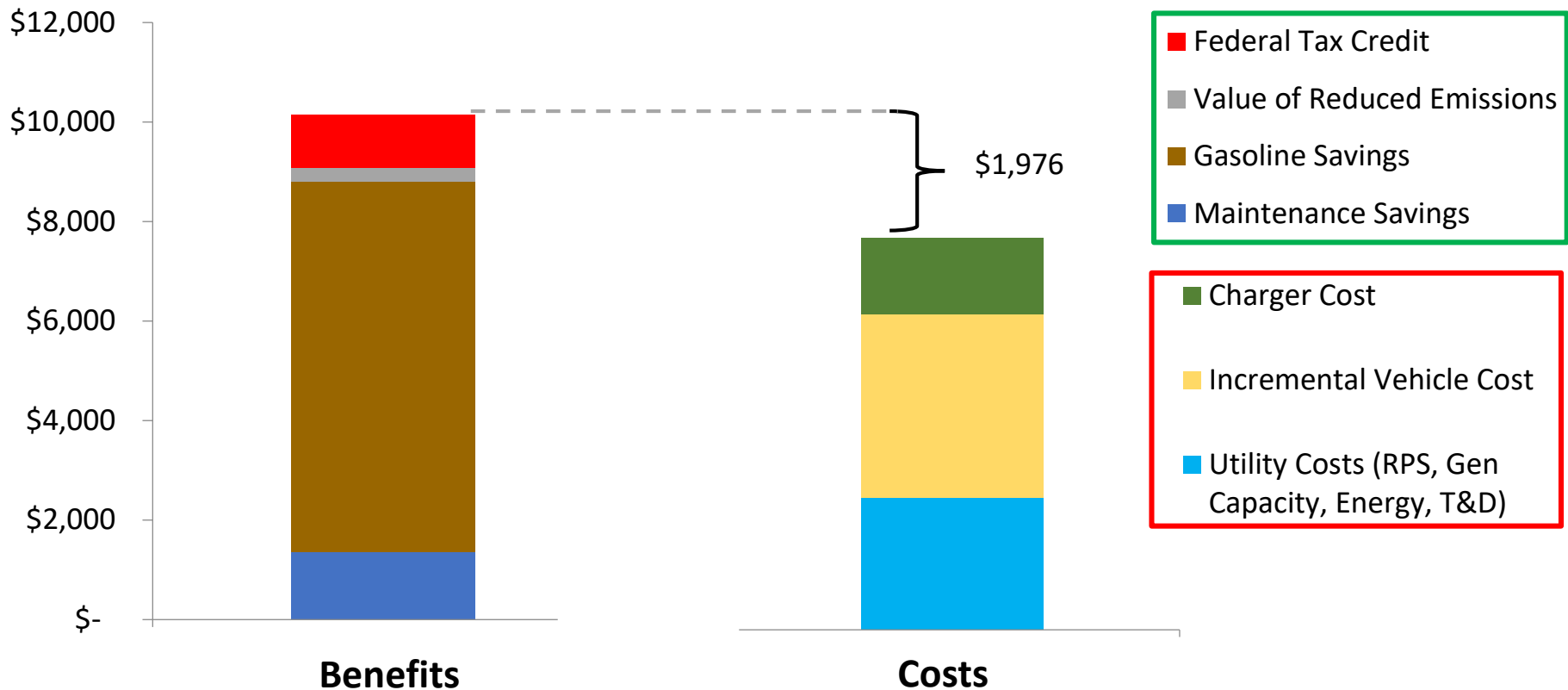


Purpose: To understand the benefits and costs that come with transportation electrification

Customer Economic Perspective

Net benefit of \$1,976/vehicle (lifetime)

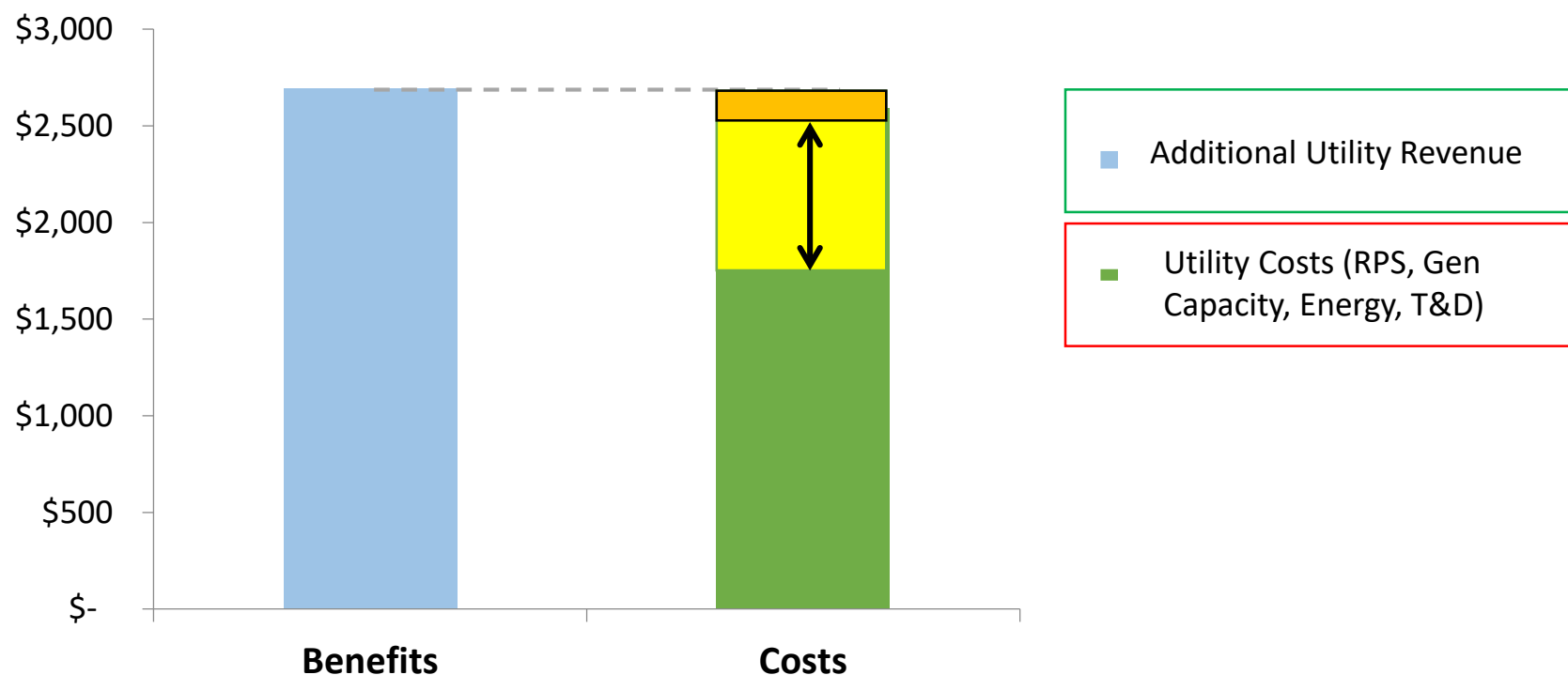
- Biggest cost drivers are: gasoline prices and incremental vehicle cost



Utility Customer Economic Perspective

Net benefit of \$100-\$1000/vehicle (over the vehicle life)

- Three cost drivers are: generation capacity value, opportunity cost of electric power (market), future retail rates

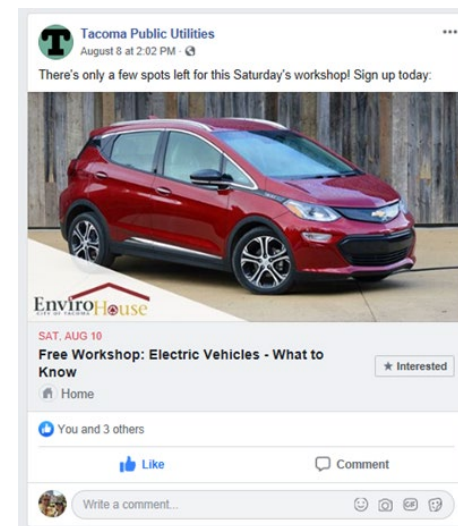
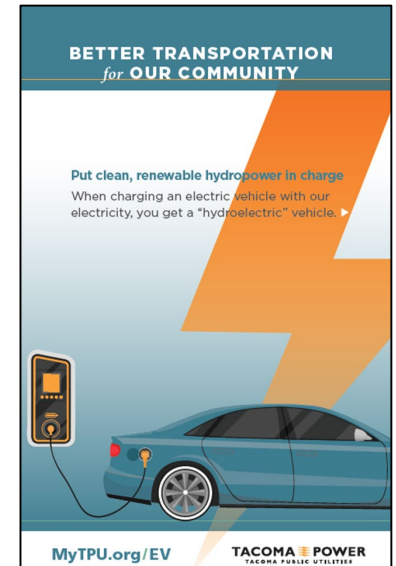
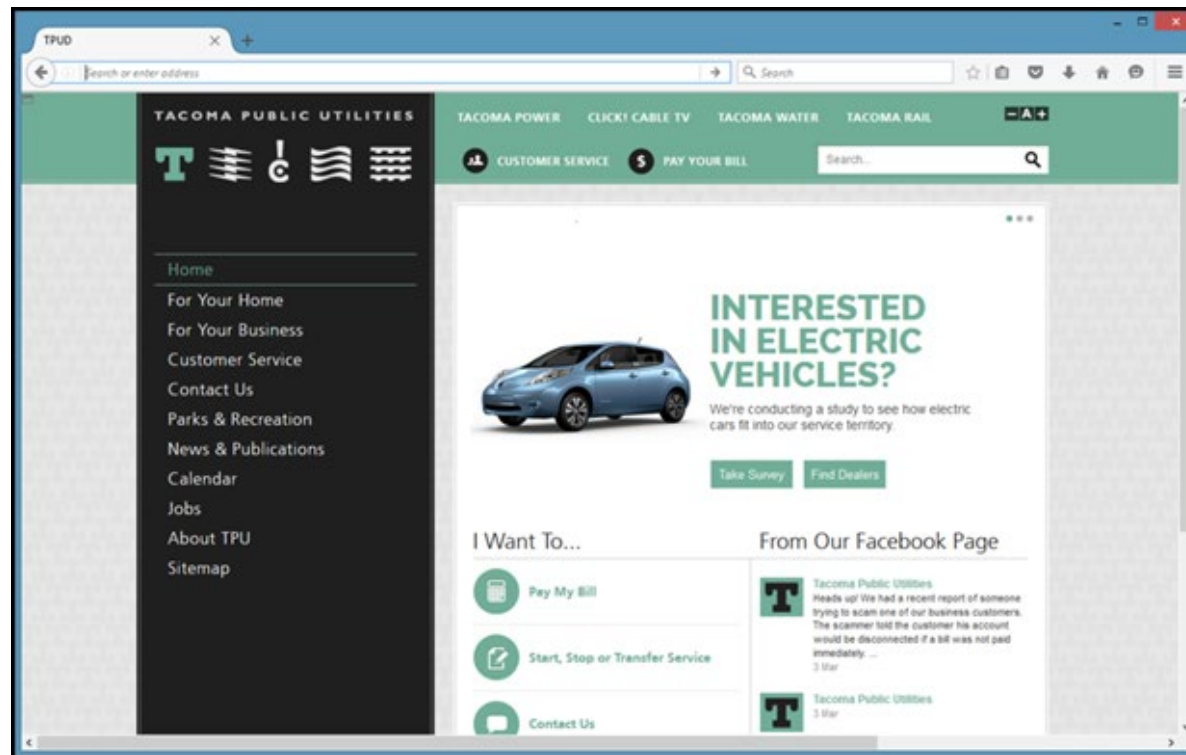


Transportation Electrification Projects



Customer Education and Outreach

- EV 101: Public workshop on EV benefits
- In person Q&A with EV experts
- Piloted ChooseEV.com webportal



Source: mytpu.chooseev.com/savings/

EV Ride and Drives

EV Ride and Drive events allow individuals to test ride and/or drive multiple electric vehicles

Held 5 events in the last 3 years.
2,000 people attended and over 400 drove EVs!

Customers, car dealers, and EV enthusiasts love these events!

These events give customers a chance to experience EVs without the pressure of a dealership environment



Electric Car Discount Program

- First program of its kind in WA State – pre Bill 1512
- Partnership between the City of Tacoma and Tacoma Power
- Dealers provide a limited time discount in exchange for City supported events and media promotion
- Included EV charging equipment and e-bikes
- Great way to get car dealership engagement



EV Charging Study

- Customers agree to attach dataloggers to their EVs and answer survey questions
- The data helps the utility understand usage and charging behavior to inform future program design
- Participants compensated for up to \$250/year for 2 years
- Study is fully subscribed and adding more participants



Leading by Example

- TPU fleet has been an early adopter of hybrid and plug-in EVs
- Tacoma Public Utilities joined the West Coast Electric Fleet Pledge
- First public EV charging stations installed in 2011
- Over a dozen plug in EVs in service



Working with local transit agencies

- Provide advice on charging design
- Location of potential opportunity charging stations
- Big idea: electrified transit hubs
- Commuter vanpool



EV Charging Infrastructure

- Two L3 plus five L2 stations (30 dual head) installed
- EVIPP, Electrify America provided funding
- Minimal Tacoma Power investment (<5% install costs)
- Supportive of Low Carbon Fuel Standard

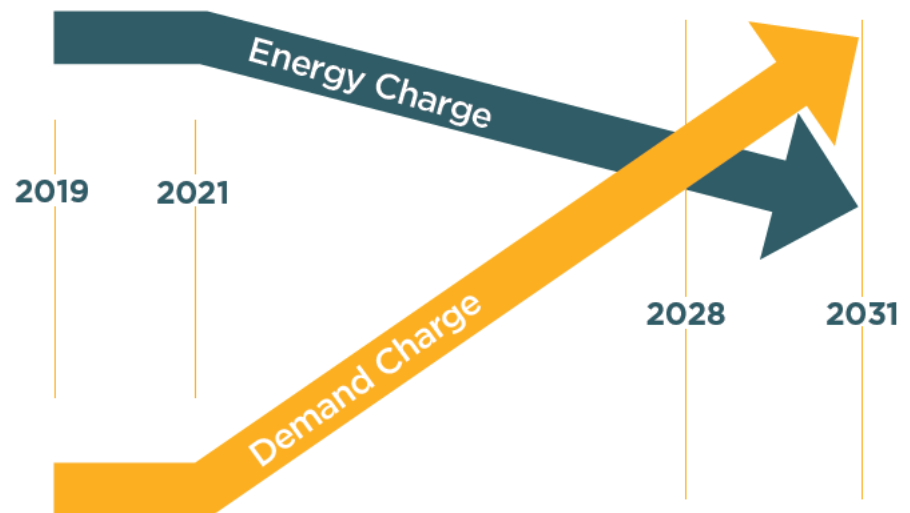


Supporting with rate design: Schedule FC

- To encourage companies to invest in public DC Fast Charging stations in Tacoma
- Removes demand charge for 2 years, adds back over time
- Increased energy charge for cost recovery
- Improves economics at low adoption levels



How energy charge and demand charge transition over 13 years



Electric school buses

- Diesel emission exposure in children has been shown to significantly increase health risk
- Help achieve a lower total cost of ownership through increased deployment
- Tacoma Power assisted with route selection, charger design and installation



Shore Power at the Port of Tacoma

- Install shore power infrastructure at Husky Terminal
- Funding from Tacoma Power, TransAlta Coal Transition Fund, Port of Tacoma, and EPA DERA
- Tacoma Power has proposed a special rate without demand charges that is less than the equivalent cost of Marine Gas Oil and provides cost recovery through increased energy charge
- Estimated CO2 reductions of 3,800 tons/year



Summary

Tacoma Power recognized the value in transportation electrification: for our customers, our communities, the environment

Limited from acting directly and offering programs to customers

We looked for opportunities to help customers find answers, get funding, and meet their goals.

All the while we were working with other utilities to change the legislation so we could act directly and help our customers.

Thank You!

