PSE's Transportation Electrification Plan & Activities

UTC EVSE Workshop

July 2, 2024

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PSE's Transportation Electrification Plan

- A five-year strategic framework for EV products and services
- Filed in March 2021 and acknowledged by the UTC in August 2021
- Positions PSE to help drive the transition to a clean energy future

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Transportation Electrification Plan Objectives

- Advance Clean Mobility and enable market transformation
- Address charging infrastructure gaps
- Plan for and manage electric loads
- Further energy equity and inclusion

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PSE Up & Go Electric Current Opportunities

Launched in 2023

EDUCATION & OUTREACH

- Awareness of EVs & charging
- Costs and benefits of switching
- Hands-on EV experiences & virtual education
- **Ongoing**

MULTIFAMILY CHARGING

- Expand access to charging for multifamily property tenants
- Reduce upfront costs for building owners and management
- **Accepting applications**

FLEET CHARGING

- For school districts, municipalities, small businesses & community orgs with fleet operations
- Participants automatically enrolled in optional load management program
- **Accepting applications**

WORKPLACE CHARGING

- Making EVs an option for commuters who drive longer and/or don't have charging at home yet
- Reduce upfront costs for employers and workplace facilities
- **Accepting applications**

Launched in 2024

PUBLIC CHARGING

- Increase charging availability to EV drivers who don’t have access to home or workplace charging
- **Public Stations: Accepting Applications**
- **Pole Charging: Partner Engagement and Site Selection**

HOME CHARGING

- New rebate program for eligible Level 2 Chargers; enhanced incentives available for income-eligible customers
- Participants automatically pre-enrolled in Demand Response
- **Open for enrollment**

TECHNOLOGY DEMONSTRATIONS

- Test technologies or services different from those already served under other programs
- Evaluate impacts and assess viability for full scale deployment

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Empower Mobility

- Each product includes **increased incentive amounts** and/or **higher service levels** for Empower Mobility customers
- Applicants **are asked how** their organization or the project serves and benefits Named communities
- Examples:
  - **Multifamily:** King County Housing Authority, Sterling Ridge Apartments (HUD-verified private landlord)
  - **Fleet:** Opportunity Council, Lighthouse Mission
  - **Workplace:** Boys & Girls Clubs, King South Community Services Office

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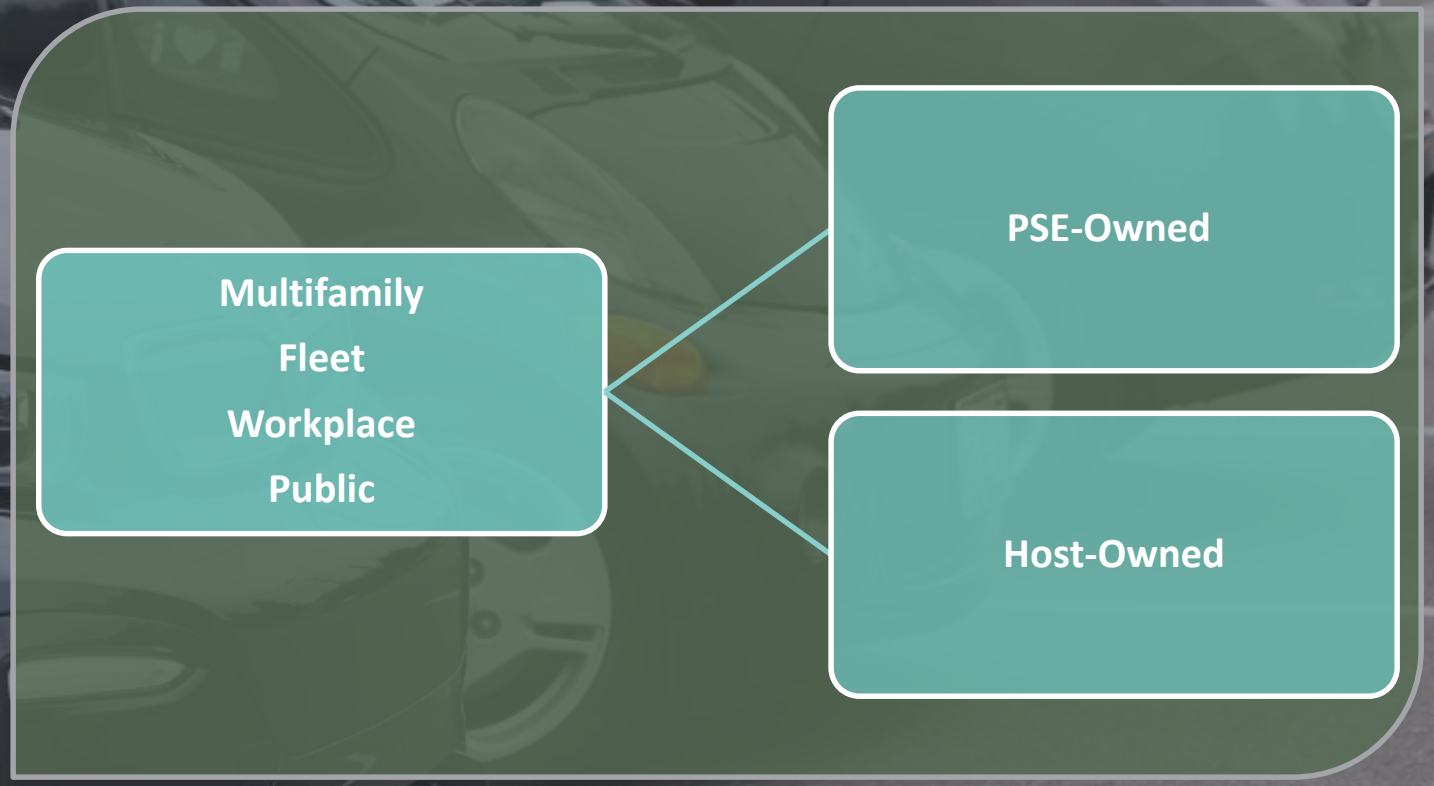
Ownership Options & Enhanced Incentives



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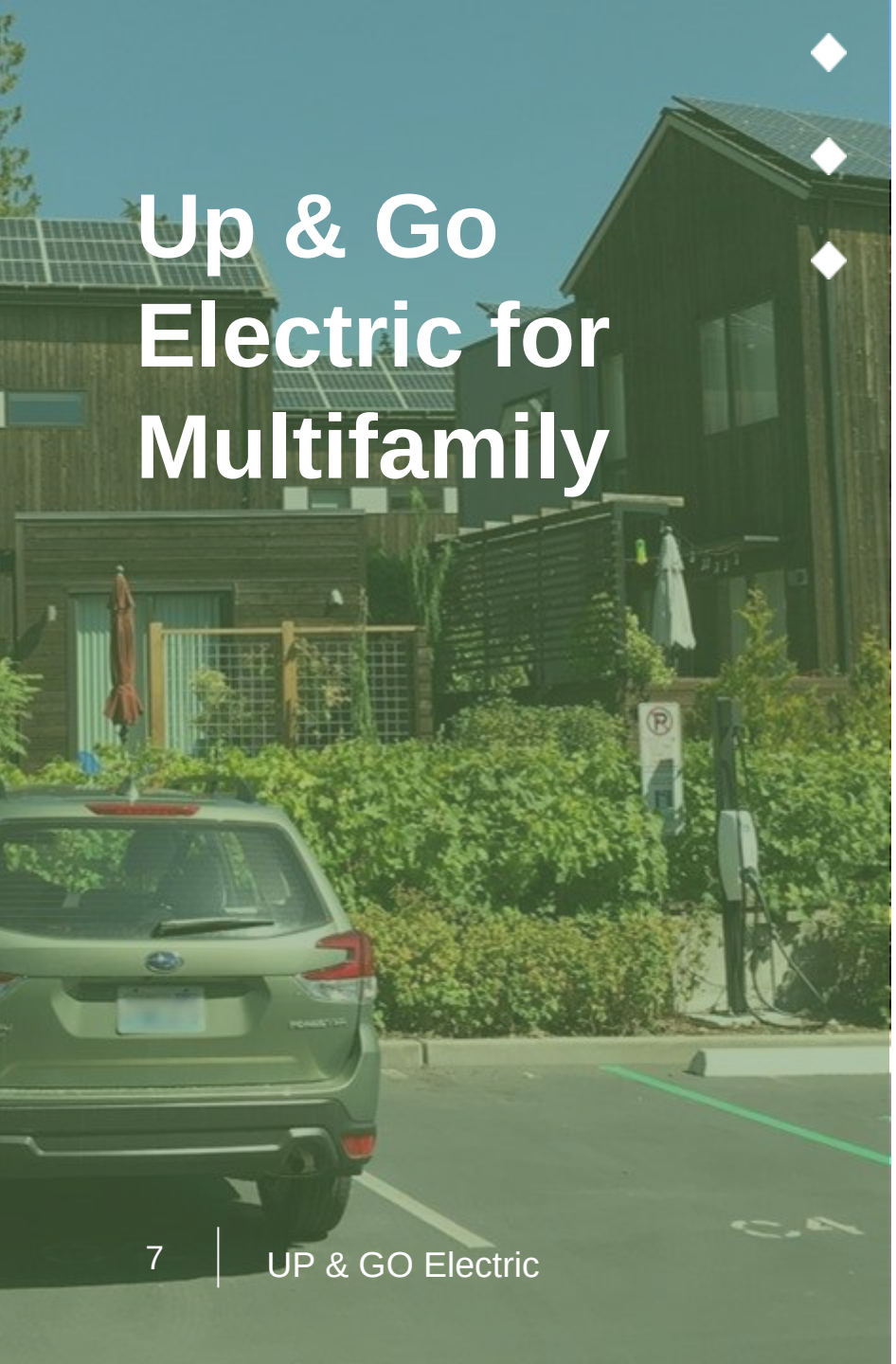


Up & Go Electric for Multifamily

Who: Residential **Property Owners/Managers**

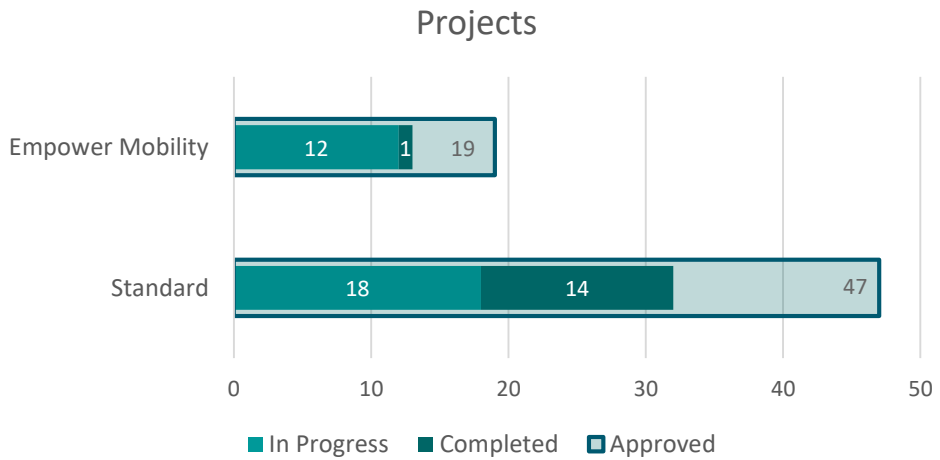
How: Incentives for charging equipment

What: 2 easy options to install L2 charging at apartment and condo buildings for low or no cost

1. PSE-owned turnkey service: PSE covers 100% of installation and maintenance costs up to $10k/port

2. Customer-owned: PSE covers up to 50% of costs up to $2k/port (Empower Mobility*: up to 100% of installation costs up to $4,000 per port + EV Incentive)

Utility-side infrastructure upgrade costs are **fully covered for **Empower Mobility** customers following 2024 tariff update*



Uptime – Past Quarter

99%

Uptime – Past Year

99%

**Properties that primarily house low-income and/or Tribal residents are eligible for Empower Mobility*

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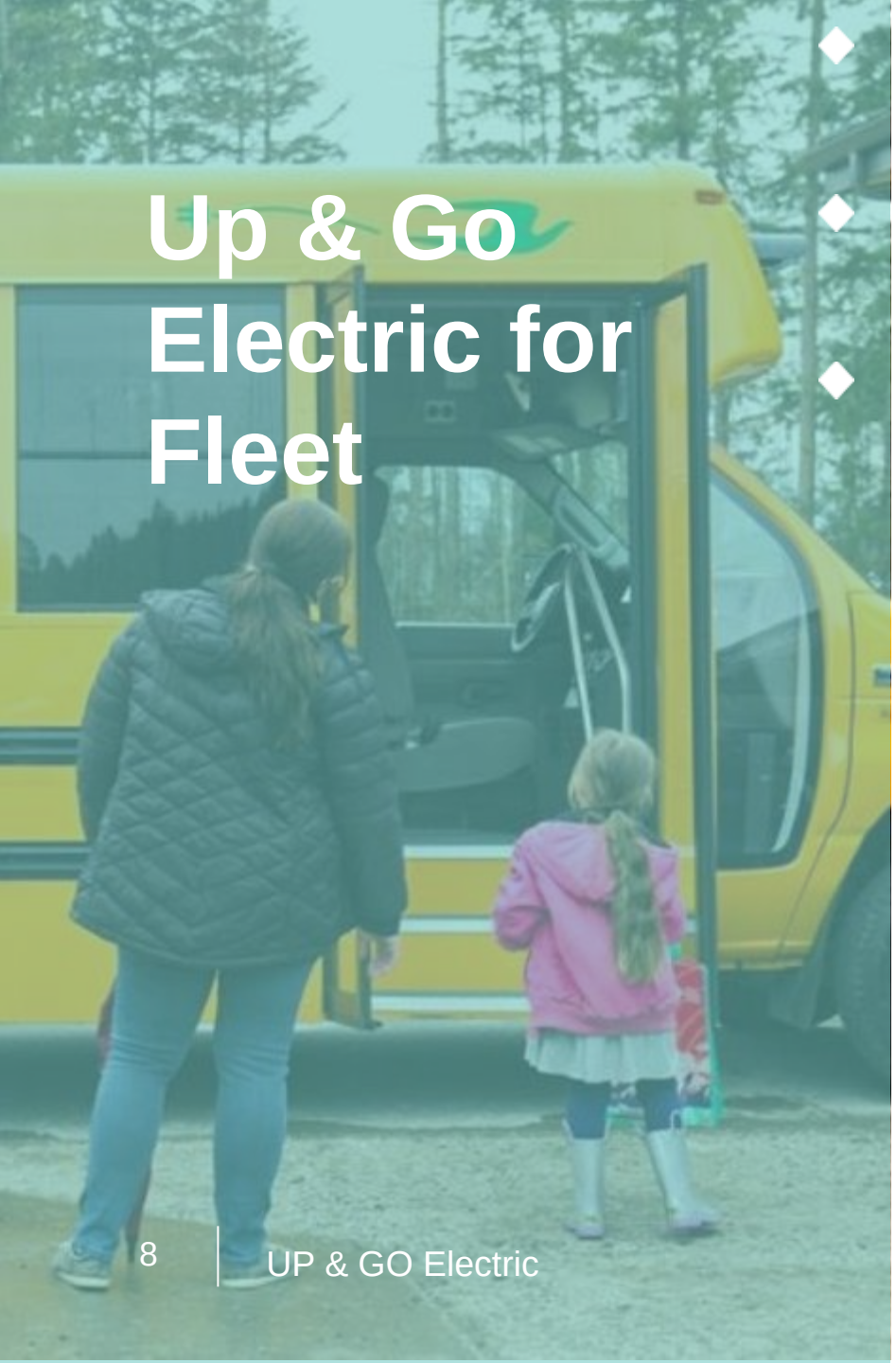


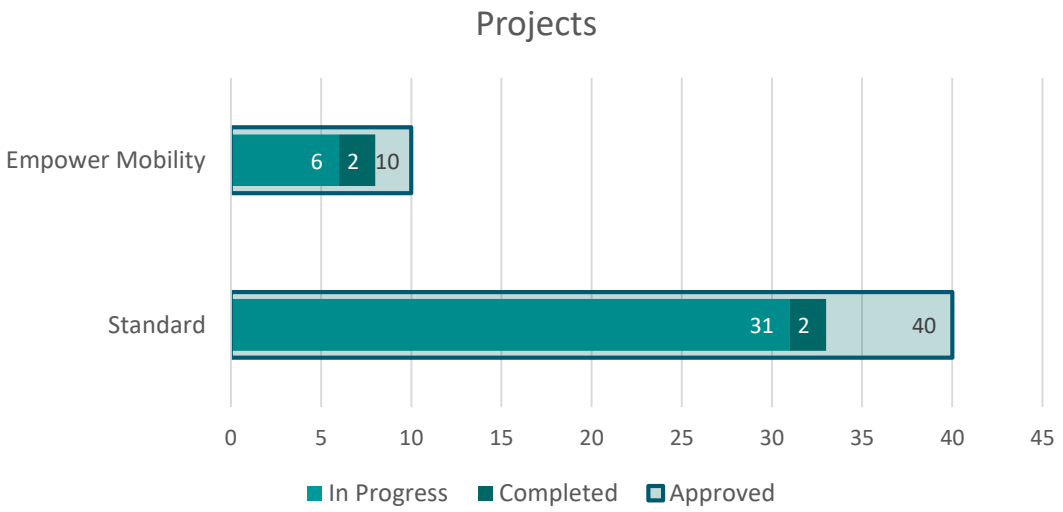
Up & Go Electric for Fleet

Who: businesses, municipalities, tribes, community-based service providers and organizations with Fleet operations

How: Advisory services and incentives to help offset costs of transitioning to an electric fleet

What: Flexible ownership structure for Level 2 and DCFC smart chargers, with $250K per site cap including utility-side costs.

1. PSE-owned turnkey service: PSE covers 100% of installation and maintenance costs up to $12k/L2 port and $125K/DC port
2. Customer-owned/installed: PSE covers up to $4k/L2 port and $60k/DC port (Empower Mobility*: up to $6k/L2 port and $100k/DC port + EV Incentive)



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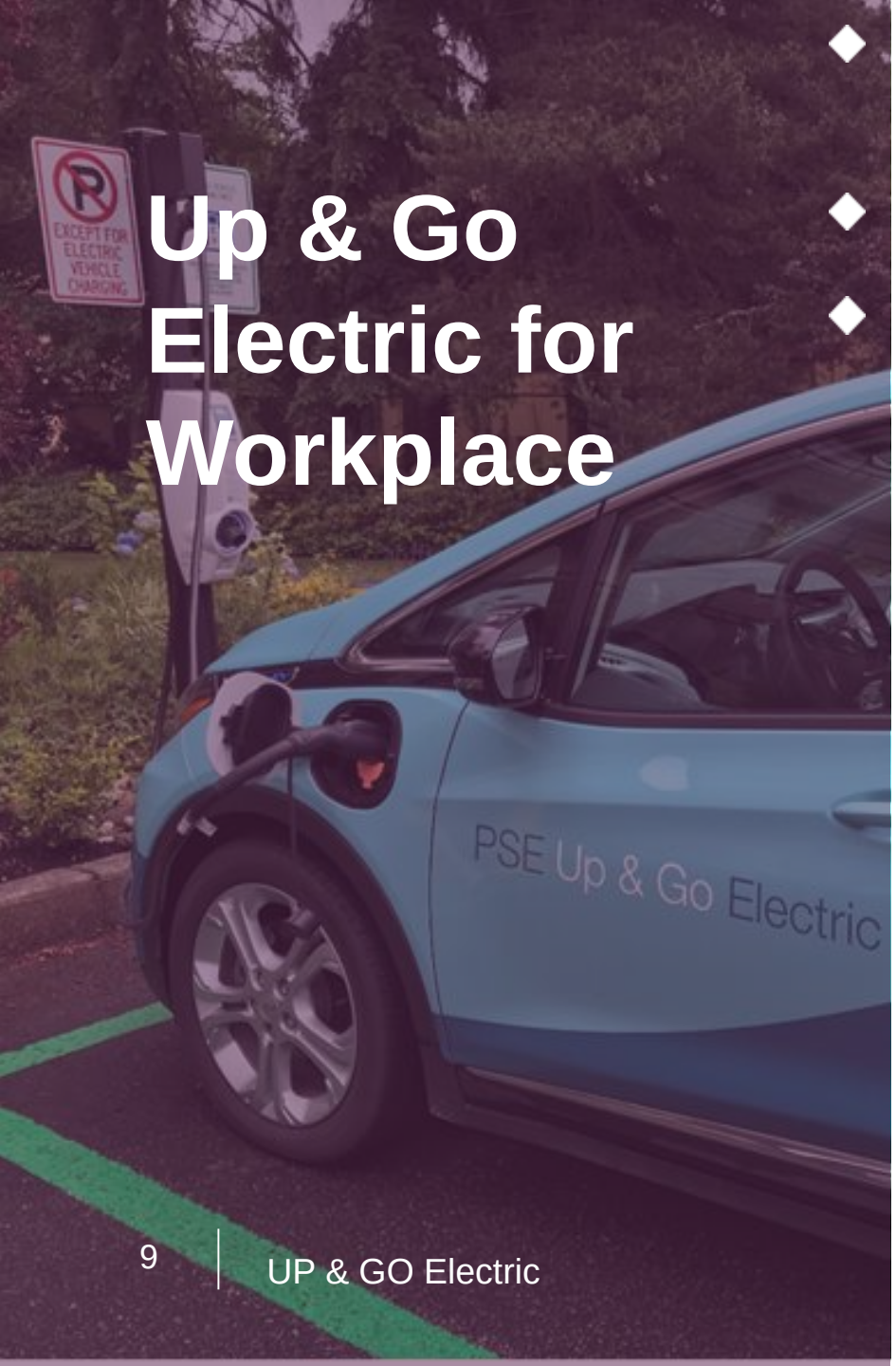


Up & Go Electric for Workplace

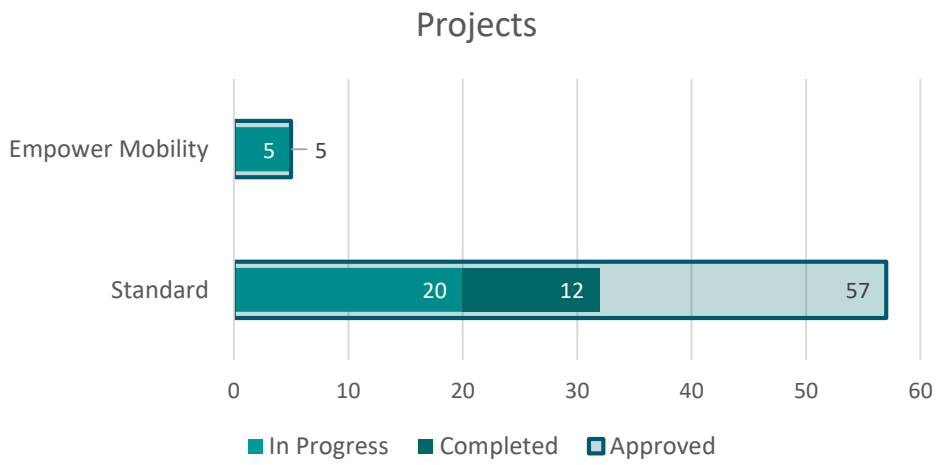
Who: Employer or shared workplace facilities (retail or business park) managers/owners

Why: To empower more commuters to go electric.

What: Businesses and commercial properties with shared employee parking can receive incentives for employee EV charging equipment and installation.

1. **PSE-owned turnkey service:** PSE covers up to 100% of installation and upgrade costs for up to $12k per charging port and 10 ports per project

2. **Customer-owned:** PSE covers up to 50% of installation and upgrade costs for up to $2k per charging port and 10 ports per project (Empower Mobility*: 100% up to $4k per port)



Uptime – Past Quarter

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Uptime – Past Year

99%

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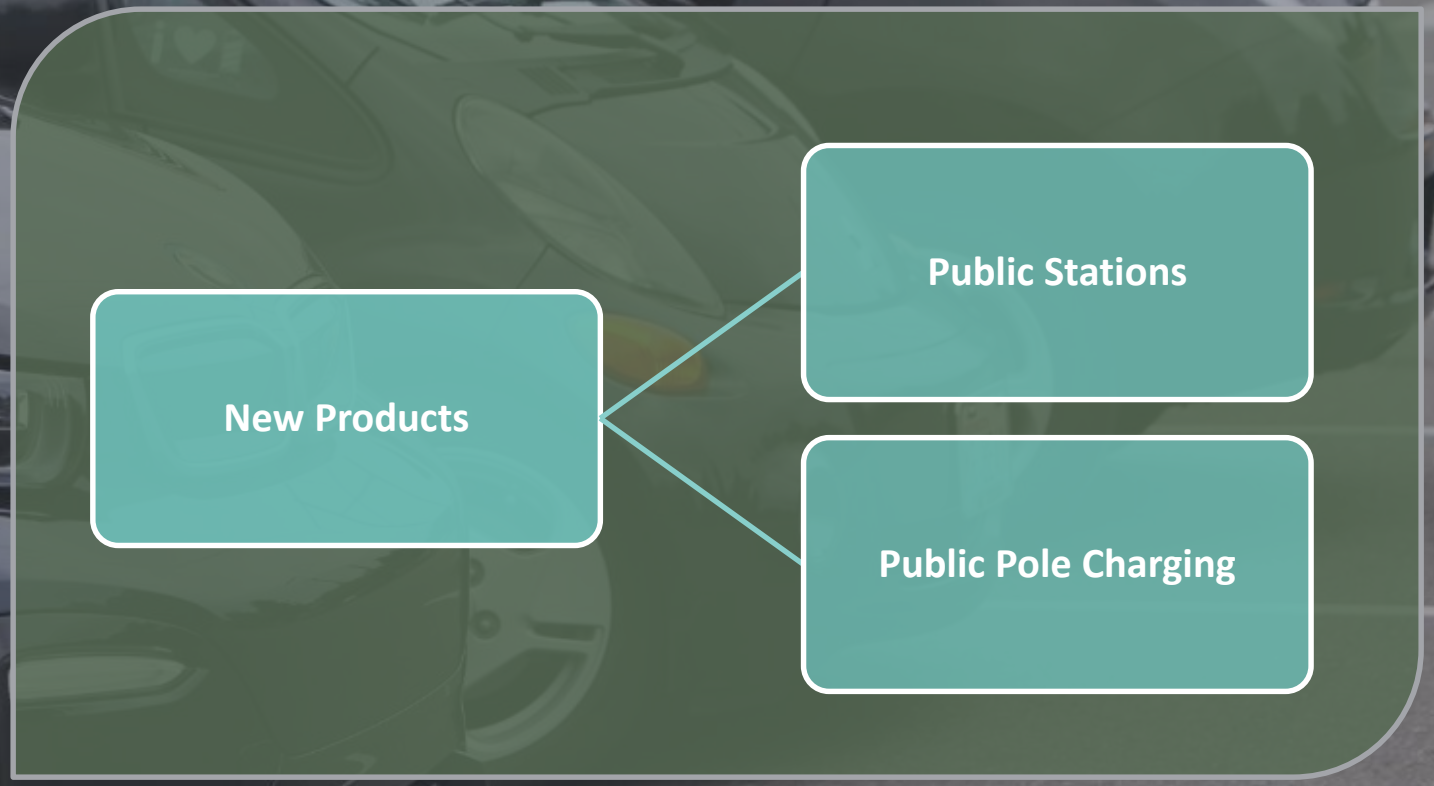
PSE's Public Charging Programs



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Up & Go Electric for Public – Charging Stations

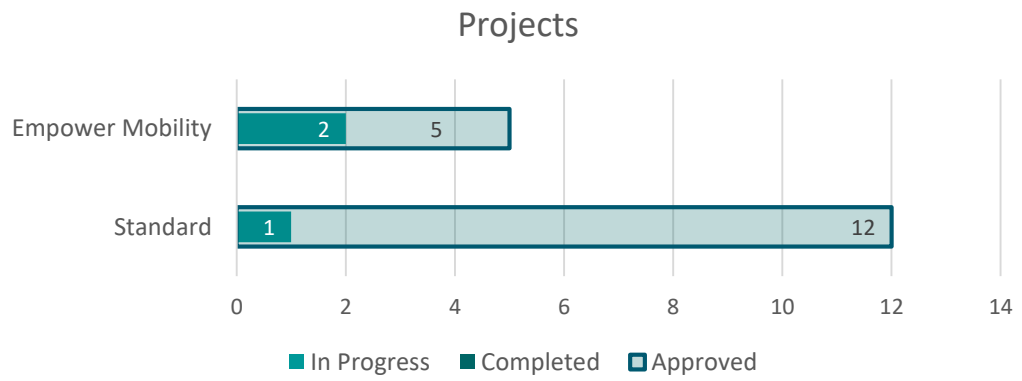
Where: Community spaces with dedicated, publicly available parking: parks, libraries, shopping centers, and more!

How: Flexible incentives for installing charging stations

1. PSE-owned turnkey service: PSE covers 100% of installation, maintenance, and operating costs
2. Customer-owned/installed: PSE covers 50% up to $2k/L2 port and up to $40k/DC port
   - $250k max per site
   - Empower Mobility*: PSE covers 100% up to $4k/L2 port and $80k/DC port

Who: Organizations with authority over dedicated, publicly available parking spaces

- Municipalities, Ports, or other public entities
- Local and independent businesses
- Community centers



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Up & Go Electric for Public – Pole Charging

Who: Municipalities and Tribal organizations with PSE-serviced electric poles in the right-of-way who want to partner.

Why: To bring innovative, publicly accessible charging infrastructure where community members live, work and play.

How: Leveraging existing electrical infrastructure – electric poles with capacity – to save on space and new infrastructure costs.

- **PSE-owned turnkey service:** PSE covers up to 100% of installation and upgrade costs

What: Municipalities and Tribal organizations were prioritized with the following factors:

- Lack of Charging available
- Proximity to Multifamily housing and activities
- Equity Impact

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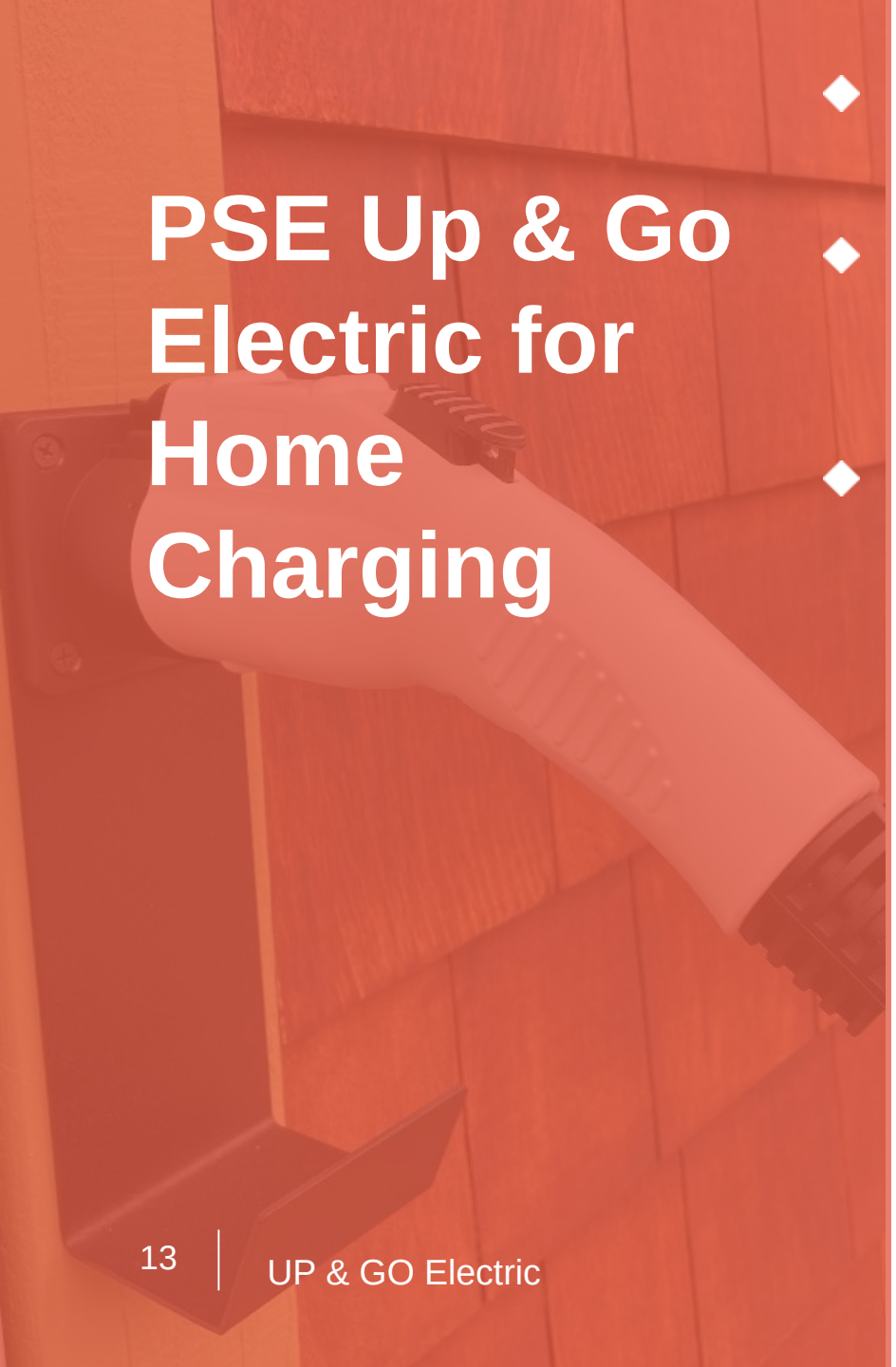
PSE Up & Go Electric for Home Charging



Who: Houses, townhouses and condos with a dedicated parking spot

Why: The convenience and savings of EV charging at home is invaluable. Upfront costs can be high so PSE is reducing the barrier.

How: Providing a rebate on the cost of a Level 2 fast charger, and pre-enrolling rebate customers into PSE's load management program with ongoing benefits.

- **Standard Rebate:** Up to $300 in a rebate or instant discount on qualified Level 2 chargers.
- **Empower Mobility:** Up to $600 rebate towards a L2 charger and up to $2,000 towards installation costs

Total Rebates	Empower Mobility Rebates
228	40

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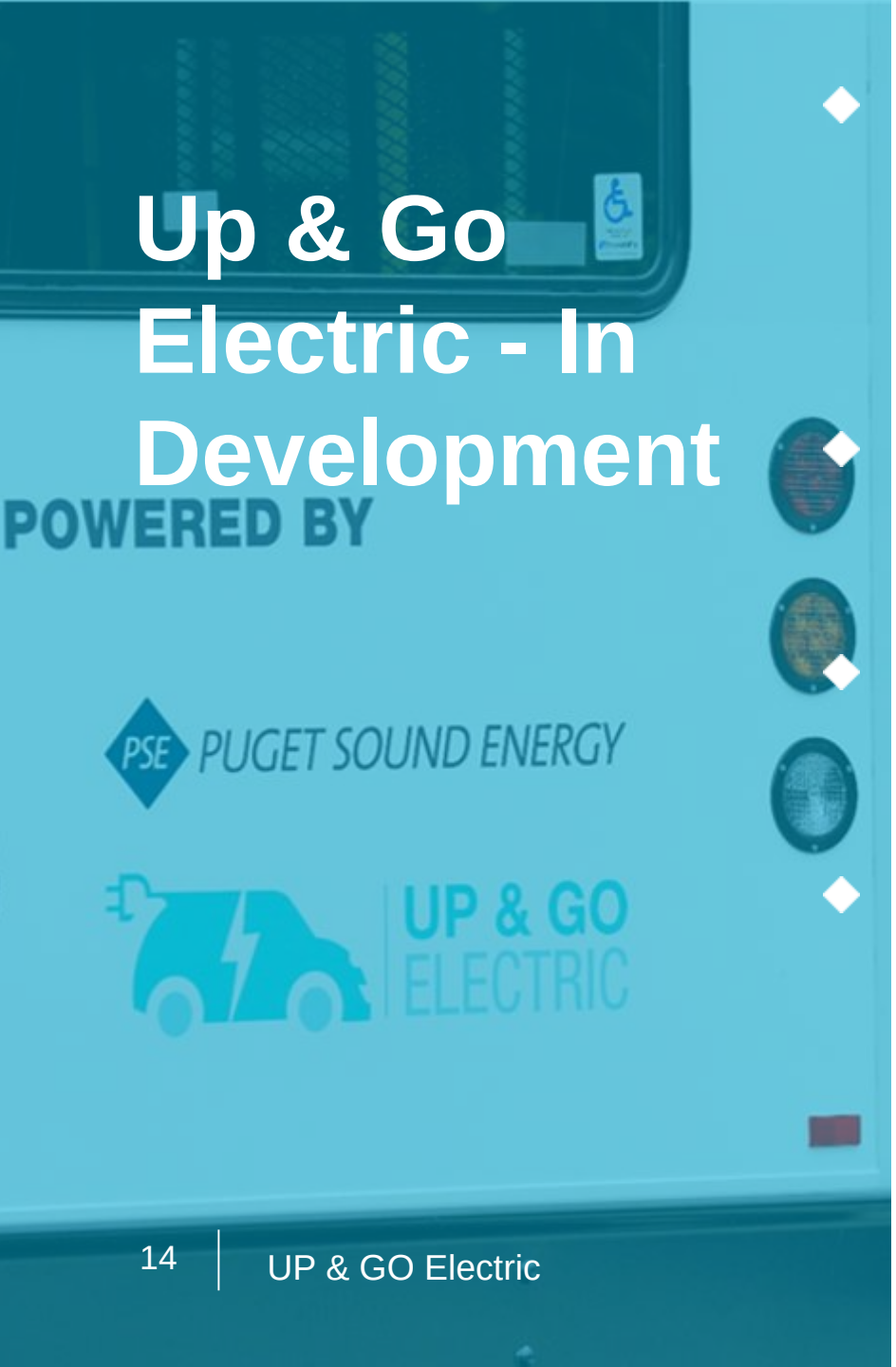
Up & Go Electric - In Development



Vehicle-to-Everything (V2X): Identify & evaluate the technical feasibility, operational requirements, and interconnection protocols, as well as to engage with customers and interested parties to assess the benefits, barriers, and market readiness for V2X.

Agricultural Electrification Demonstrations: Develop an E-Tractor rideshare model and electric Ag equipment lending library that would allow farms to demo equipment.

Transportation Electrification Pricing: Design a new rate class to provide depot based fleets with rate options that encourage staggering or shifting load based on business needs.

Clean Fuel Standard Integration: Assess mechanisms to augme nt or amplify TEP portfolio with revenues generated through Cle an Fuel Standard credit monetization.

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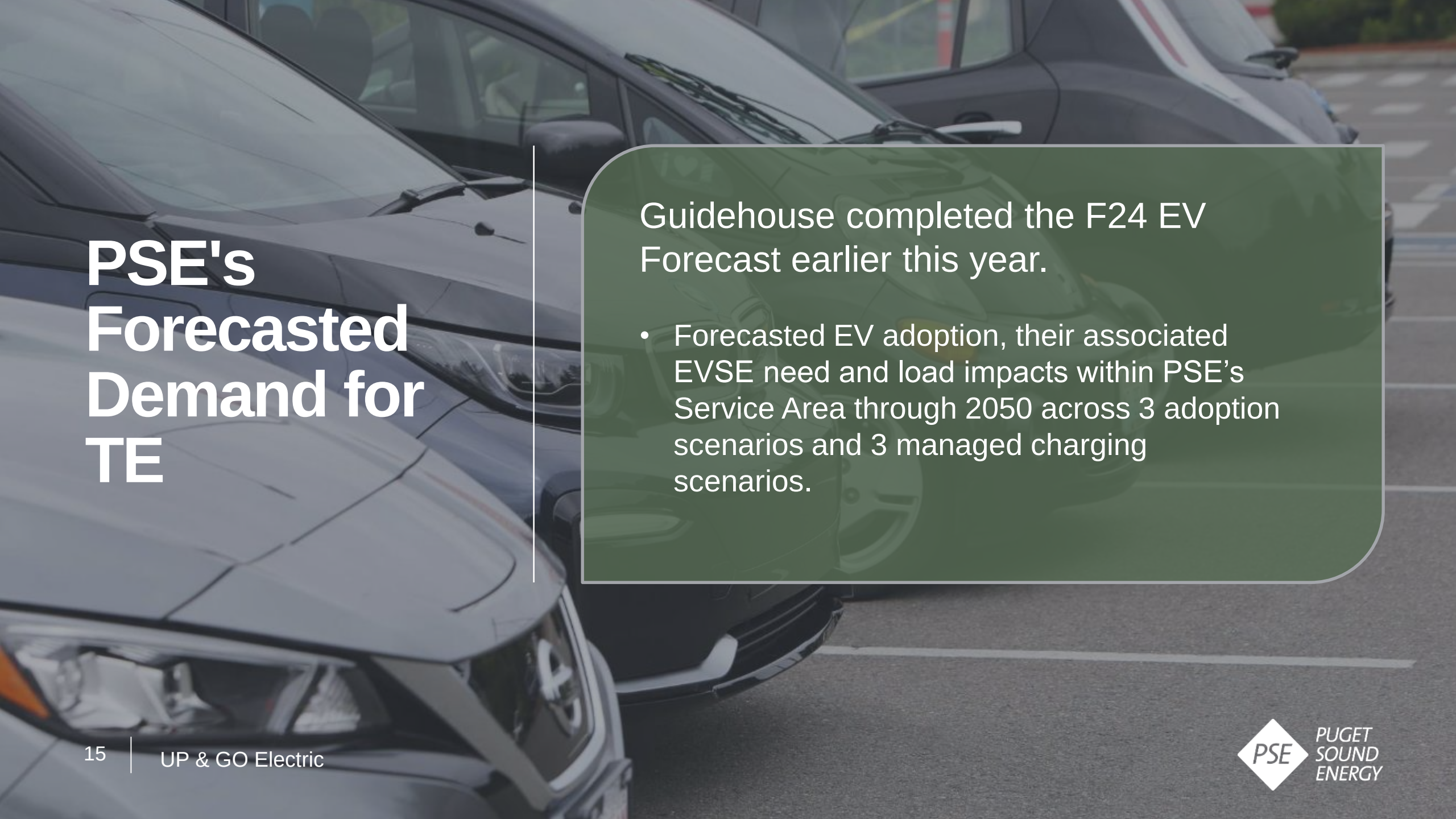

PSE's Forecasted Demand for TE

Guidehouse completed the F24 EV Forecast earlier this year.

- Forecasted EV adoption, their associated EVSE need and load impacts within PSE's Service Area through 2050 across 3 adoption scenarios and 3 managed charging scenarios.

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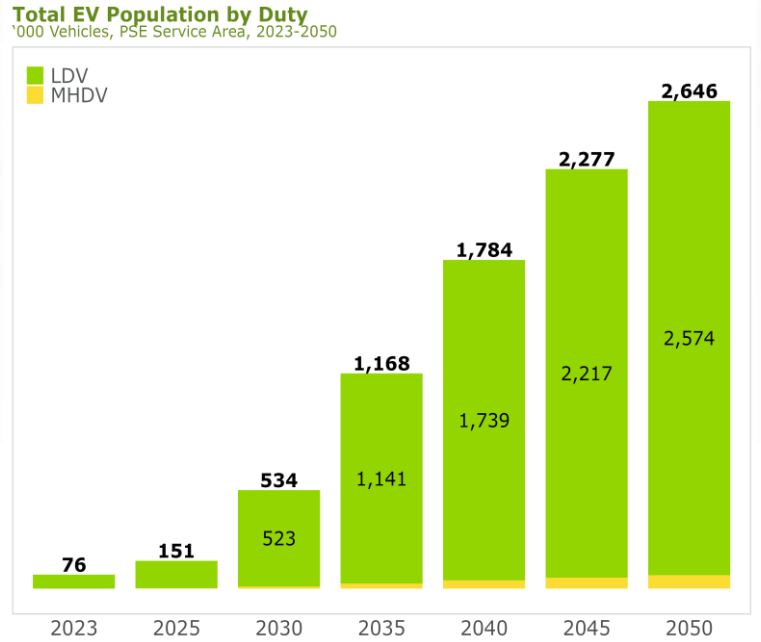
PSE Base Scenario EV Adoption & Load Impacts

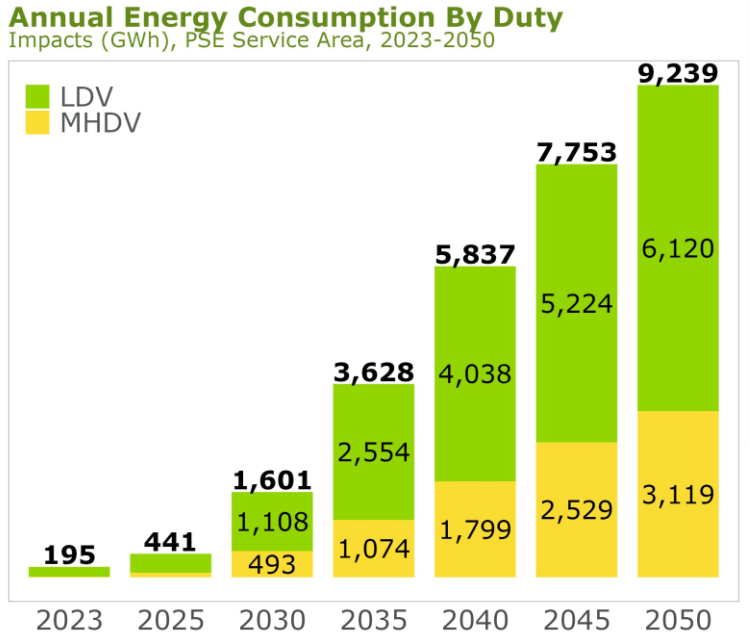
By 2050, 2.6 million EVs are forecasted in PSE's Service Area (71% of the total vehicle population), requiring 9.2k GWh of energy with an annual EV peak before losses forecasted to hit 1,800 MWs

EV Population



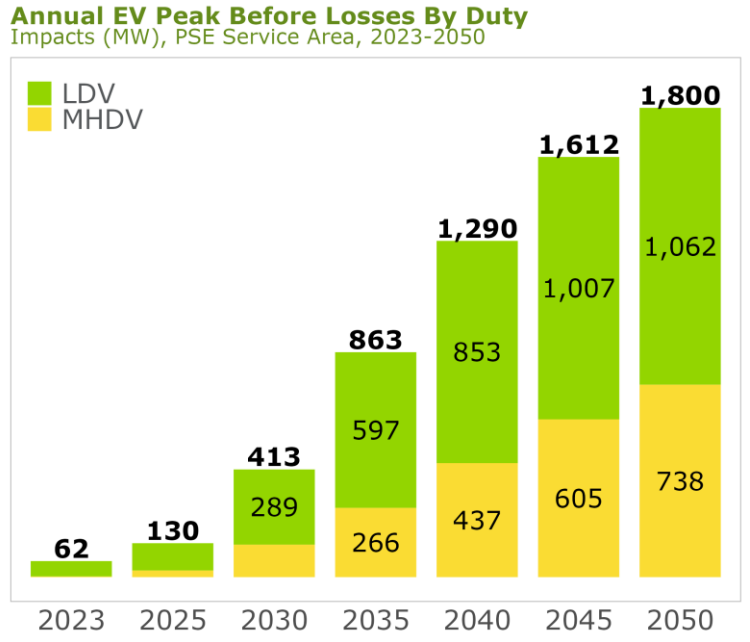
- By 2050, **Light-duty (LD) EVs represent 97%** of the total EV population
- The Base Scenario forecast is **heavily impacted by policy** assumptions, specifically that sales targets under the **Advanced Clean Cars II and Advanced Clean Trucks** are achieved

Energy Need



- **MHDVs**, while only 3% of the total number of EVs, are forecasted to **represent 34% of the required energy needs** due to larger batteries, lower efficiencies and more demanding duty-cycles

EV Peak Before Losses*



- The **peak load** associated with EV charging occurs between **7:00 and 8:00 PM** for most years
- The peak is driven by **residential charging for LDVs** and **depot charging for MHDVs**

* The Annual EV Peak Before Losses is not coincident with PSE's system peak and occurs at the customer's meter.

Guidehouse Outwit Complexity

Questions?

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