

Zero Emission Vehicle (ZEV) Workforce Development in California

Building a Sustainable Future Through Skilled Workforce Development

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ZEV Equity Definition and Action Plan



ZEV Equity Task Force November 4th

- Building ZEVs equity definition
- Developing the ZEV Equity Action Plan



Key Areas for ZEV Equity Action Plan

- Workforce
- Access and affordability
- Infrastructure
- Outreach and Education



Opportunities

- Feedback loops
- Presentations



Input

- Interagency mtg in early 2025
- Community group input process in 2025



Introduction to ZEV and Workforce Needs

Overview of ZEV in CA:

- CA's ambitious goals to transition to ZEV economy
- Key targets, policies and legislation

Workforce Development:

- Skilled workforce is critical to achieving ZEV goals
- Demand and projected needs for ZEV professionals



California's ZEV Goals and Targets

- 2025 Goal: 1.5 million of Vehicles as ZEV
- 2030 Goal: 5 million of vehicles as ZEV
- 2035 Goal: 100 % All new vehicles sold to be zero-emission
- Policy Backing:
 - California's Executive Orders (N-79-20) and support from state agencies

California's State Policies on ZEVs

Bill	Sponsor	Year	Short Description
<u>SB 350</u>	De Leon	2015	Clean Energy and Pollution Reduction Act of 2015
<u>AB 1082</u>	Burke	2017	Electric Vehicle Charging Infrastructure: School Facilities and other Educational Institutions
<u>AB 1083</u>	Burke	2017	Electric Vehicle Charging Infrastructure: State Parks and Beaches
<u>SB 1014</u>	Skinner	2018	California Clean Miles Standard and Incentive Program: Zero-emission Vehicles
<u>SB 1000</u>	Lara	2018	Electric Vehicle Charging Infrastructure
<u>AB 2127</u>	Ting	2018	Electric Vehicle Charging Infrastructure: Assessment
<u>SB 676</u>	Bradford	2019	Electric Vehicles-Grid Integration
<u>AB 841</u>	Ting	2020	Energy: Transportation Electrification and School Energy Efficiency Stimulus Program
<u>AB 2061</u>	Ting	2022	Transportation Electrification: electric vehicle charging infrastructure
<u>AB 50</u>	Wood	2023	Public Utilities: timely service: customer energization
<u>SB 410</u>	Becker	2023	Power Up Californians Act

Key Sectors for ZEV Workforce Development



Manufacturing and Assembly

Building ZEVs in CA



Battery Technology and Charging Infrastructure

Expanding the support network, software engineering



Maintenance and Repair

Upskilling current auto workforce



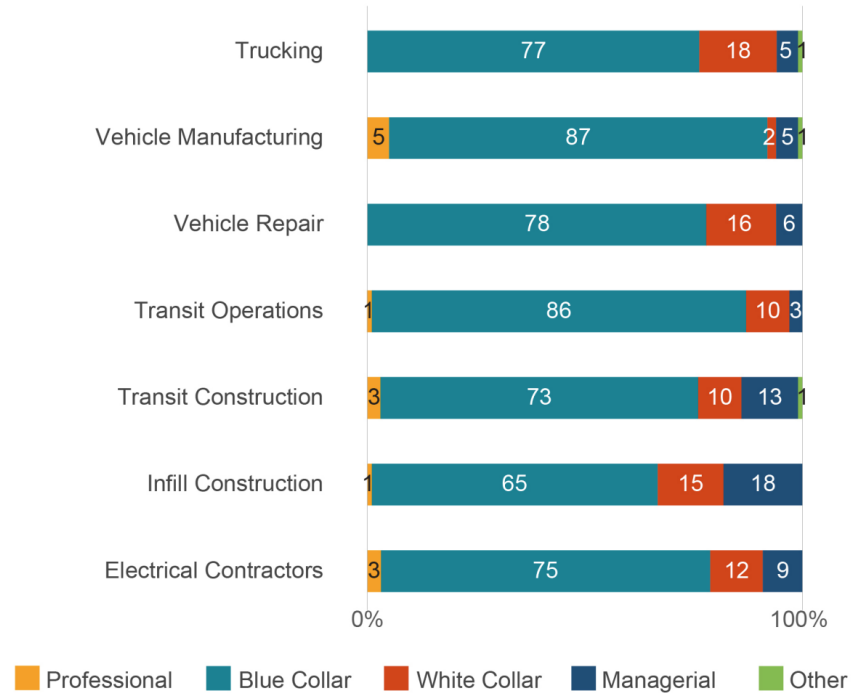
Policy and Advocacy

Leadership roles for advancing ZEV policies



Charts

Exhibit 7.3. Industries and Occupations in the Transportation Sector



Source: May 2016 OES Research Estimates by State and Industry [https://www.bls.gov/oes/current/oes_research_estimates.htm]



Workforce Challenges in the ZEV transition

Skilled Labor Shortage:

- Lack of trained professionals in ZEV fields

Training Programs and Funding:

- Current gaps in availability

Training Programs and Funding:

- Addressing retraining needs for fossil fuel dependent roles

California ZEV Training Centers:

- California Energy Commission
- Foundation for CA Community Colleges

Grants and Funding Opportunities:

- Federal and state funding for ZEV Workforce
- Public-Private partnership

Workforce Development Initiatives and Programs



Case Studies



Electric Vehicle Infrastructure Training Program (EVITP)

California State certified electricians can access an online training program for certification. EVITP certification is required for most projects installing electric vehicle chargers funded by the CEC



ZE Vehicle High School Pilot Project

\$ 3.5 million awarded to increase career awareness in clean fuels transportation field for HS students



ZE Vehicle Equity Training Project

The project provided funding for ZEV automotive programs at seven community colleges initially and was amended to provide funding to six additional colleges in 2022.



The Electric School Bus Training Project

\$2 million awarded to provide electric school bus technicians training.



- **Centering Equity in Access to ZEVs**
- **Supporting Workers in transition industries**
- **Equity in policy designs and funding**

Just Transition Strategies



Q and A

- How do we prepare for a just transition?
- What's your take on the pathways to develop a skilled workforce?
- How can workforce demand and supply be balanced?
- Anything else?

Thank You!