
Alternative Fuel Vehicle Infrastructure Working Group

Electric Vehicles in Oregon: Strategies, Discussion and Recommendations

RECOMMENDATION SUMMARY

Top Recommendations. The Working Group focused on seven top recommendations as critical for this stage of discussion on Oregon's alternative fuels infrastructure.

1. Create an Electric Vehicle Executive Council by Governor's Executive Order.
2. Engage utility regulators and governing boards in identifying barriers to and solutions for EV commercialization.
3. Set purchase standards for state-funded fleets to increase the percentage of alternative fueled vehicles in the fleets.
4. Create a program that results in free home audits prior to installing charging equipment.
5. Incorporate electric vehicle manufacturing into the Business Energy Tax Credit (BETC) program.
6. Create a new Transportation Electrification Tax Credit (TETC) for electric vehicles and infrastructure.
7. Create a world-class, multi-disciplinary, transportation electrification and "smart mobility" Center of Excellence

A. Job Creation Opportunities - The economic development potential of the EV industry in Oregon includes new (and renewed) jobs in manufacturing, information technology, services and education.

Recommendations. The following recommendations focus on helping Oregon solidify its niche in the EV industry while creating career opportunities for Oregonians.

- Create a world-class, multi-disciplinary, transportation electrification, "smart mobility" Center of Excellence.
- Incubate a world class automotive testing and certification lab that can be shared and used by EV companies from all over the world.
- Ensure the location of at least one EV charging station at key training centers and community college campuses.
- Provide additional funding to Oregon Nanoscience and Microtechnologies Institute (ONAMI) to fund research into nano technology-based breakthroughs in energy storage, particularly in ultracapacitors and electro-chemical anodes and cathodes.
- Explore selling Clean Energy Bonds to fund accelerating the build out of the Smart Grid and EV charging infrastructure.

B. Electric Vehicle Acceptance in the Oregon Market - There are many barriers that would need to be addressed to implement Phases 1 through 3 of technology deployment: Perception Barriers, Product Barriers, Distribution Barriers, and Infrastructure Barriers.

Recommendations. The following recommendations focus on Phase 1 of EV technology deployment, as this phase is currently the highest priority for the state.

- Stimulate consumer demand for EVs through expansion of the state's alternative fuel vehicle tax credit and simplified access to EV incentive information.
- Accelerate fleet conversion to alternative fuel vehicles.
- Stimulate an economically sustainable charging infrastructure.
- Enact legislation that allows public agencies to provide EV charging to the public at no cost

C. Deployment of Electric Vehicle Charging Stations - The initial phase of deployment will attempt to focus limited resources in the places where they will do the most good in the fastest manner.

Recommendations. The following recommendations focus on strategies for successfully deploying EV infrastructure in Oregon.

- Develop a comprehensive strategy for charging station locations for the I-5 corridor.
- Support and encourage the deployment of cost-effective TSE technologies at key areas.
- Support investigating the options for electric utility ownership/maintenance of infrastructure.
- Survey governmental and commercial organizations to collect data and information.
- Prioritize station location.
- Create and maintain a statewide clearinghouse of location charging stations.

D. Electric Vehicle Charging Station Design and Performance - Currently, one of the biggest limitations for drivers thinking about making the transition to EVs is the absence of a reliable network of charging facilities to increase the range of these vehicles and to alleviate range anxiety.

Recommendations. These recommendations focus on making it easier for Oregon's EV market to grow.

- Create a new Transportation Electrification Tax Credit (TETC) for electric vehicles and infrastructure.
- Adopt local ordinances to allow towing of unauthorized vehicles parked in public EV charging/parking spaces.
- Enact legislation to authorize (but not require) public agencies to provide electricity for public charging at no cost.
- Support adoption of time-of-use pricing tariffs for electric utilities (see further discussion in Section E).
- Offer free home "EV charging" audits to prospective buyers in order to pencil out the cost of installing Level 2 charging (i.e., similar to home energy efficiency audits).
- Revisit the appropriateness of building code amendments requiring EV conduit in new construction.
- Maximize the use of state and federal tax credits and financing assistance for the installation of EV charging equipment.
- Develop emergency responder curriculum and training.
- Urge U.S. DOT to develop of uniform signage indicating where public charging is available.
- Create a toll-free hotline for reporting malfunctions of EV public chargers.
- Ensure public EV charging is consistent with the Americans with Disabilities Act (ADA).
- Develop statewide design guidelines for public electric vehicle charging stations.
- Support PUC staff and Boards of consumer-owned/municipally-owned utilities in investigating options for ownership/maintenance of infrastructure.
- Set an aggressive target of 48 hours for local jurisdictions for turnaround of EV infrastructure installation and inspection.

E. Oregon Electric Utilities and Transportation Electrification - Collectively and individually, Oregon's electric utilities can play a variety of roles in transportation electrification.

Recommendations. The following recommendations focus on helping define the role electric utilities might play in Oregon's EV industry.

- Engage utility regulators and governing boards in identifying barriers to and solutions for EV commercialization.
- Oregon electric utilities should coordinate EV program efforts.
- Oregon electric utilities should consider time-of-use and other related tariffs to encourage off-peak charging electrical use, regardless of whether EV-charging related or other uses.
- Oregon policy should encourage the research, development, and demonstration of V2G technologies.
- Oregon should explore creation of a center of excellence for Smart Grid integration of electric vehicles.