U. S. Department of Energy
National Energy Technology Laboratory

Project Summary

Energizing Oregon

A PEV Market and Community Plan

Funding Opportunity Title:

Clean Cities
Community Readiness
and Planning for
Plug-in Electric Vehicles
and Charging Infrastructure

Funding Opportunity Number:
DE-FOA-0000451

CFDA Number:
81.086 Conservation Research
and Development

Submitted By:

business oregon
where business grows

In Partnership With:

Columbia-Willamette Clean Cities

ROGUE VALLEY CLEAN CITIES

PROJECT OBJECTIVES

The Energizing Oregon project has three main objectives briefly described below:

1. Integrate and optimize existing Oregon PEV readiness efforts. The first objective is to integrate and optimize all of Oregon's existing plug-in electric vehicle (PEV) efforts, partnerships and stakeholders so that all PEV-related groups, activities and communications are under one umbrella and operating from a uniform platform of policies and messaging.

2. Develop a statewide PEV market and community plan. The second objective is to engage existing and new stakeholders to develop a statewide PEV market and community plan with a roadmap defining stakeholder responsibilities that complements and expands on current efforts. This plan will also identify and address key barriers, such as policies and incentives, that must be addressed to achieve broad, fast and successful deployment of PEVs.

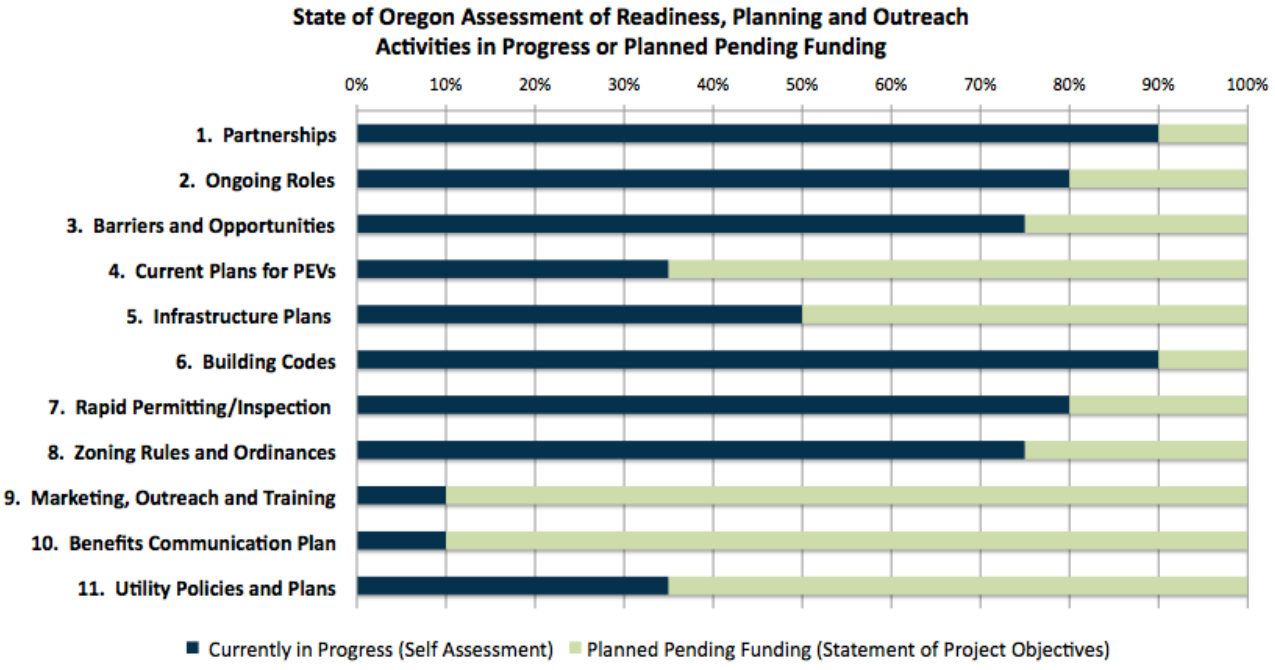
3. Create momentum for reaching national PEV deployment goal. Finally, this project will create momentum for Oregon to exceed its share of the national goal of 1 million PEVs by 2015. This will be achieved through expanded PEV and EV supply equipment (EVSE) planning, increased visibility and understanding of PEVs and EVSE, outreach and education to engage future adopters of PEV and installers of EVSE and targeted training to key early audiences. All of these efforts will capitalize on Oregon's willingness to adopt early, experiment and share lessons learned and best practices.

SELF ASSESSMENT

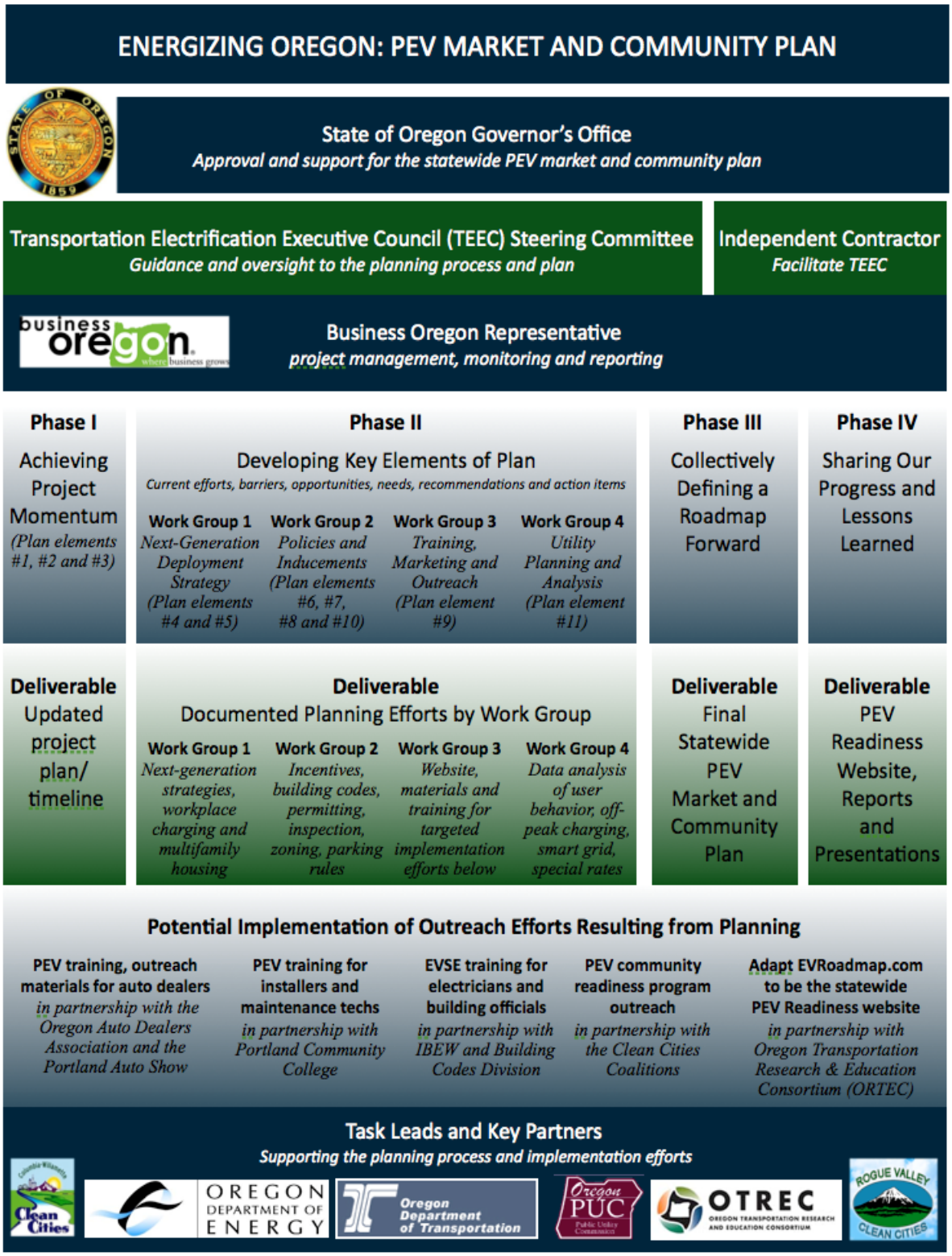
PEV readiness planning progress chart. The graphic below shows Oregon's level of progress towards completing the eleven sample plan elements that will ultimately lead to a comprehensive statewide PEV market and community plan. The blue bar shows progress completed on the plan elements, and the green bar demonstrates additional progress that will be accomplished via the Energizing Oregon project if the state is awarded this grant.

What Oregon is doing well. After completing the self-assessment, it is clear that existing PEV readiness efforts, such as ECOtality's EV Project, the West Coast Green Highway project and the ODOT's TIGER II project, driven by governor-established steering committees address plan element numbers: (1) partnerships, (2) roles and responsibilities, (3) barriers and opportunities, (6) building codes, (7) rapid permitting/inspection, and (8) zoning and local rules/ordinances.

Areas needing additional focus. Because Oregon is doing well on the elements listed in the previous paragraph, it makes sense to focus this project on the other areas where Oregon might not be so far along. Therefore, the Energizing Oregon project will focus on further developing the following plan elements: (4) current plans for PEVs; (5) infrastructure plans; (9) marketing, outreach and training; (10) benefits communication plan; and (11) utility policies and plans. As is discussed in subsequent pages, these are the areas that need the most attention if PEVs are to be successful.



METHODOLOGY TO ADDRESS ALL PLAN ELEMENTS



Governor-approval and support for completing all eleven plan elements. The Energizing Oregon project is approved and supported by Governor Kitzhaber to address all identified plan elements. Further, the Governor-appointed TEEC will provide oversight and guidance to the project. A representative from Business Oregon will serve as the Project Manager and will work closely with the TEEC and other stakeholders to ensure that work proceeds in an efficient and effective manner. The Energizing Oregon project will proceed as depicted in the workflow graphic on the previous page including four phases, deliverables and anticipated implementation of outreach efforts to address all eleven plan elements.

Key organizational partners (ODOT, ODOE, OPUC, OTREC) will serve as co-task leads for the four work groups. This will both spread the work in a manageable fashion but also ensure that the subject matter experts are responsible for guiding the appropriate portions of the plan development. The task leads will also be responsible for sharing information across groups to maximize the work of the individual groups. It will often be the case that work that is happening in one work group will be relevant to another group or groups. Thus, task leads from all of the work groups will meet at least monthly to exchange information, provide updates, ask questions, etc. This will ensure that the project is as integrated and coherent as possible. A brief description of the four work groups follows.

1. Next-generation deployment strategy work group to address plan elements #4-5.

- **Who.** OTREC will lead work group 1 in partnership with ODOT. It consists of partners from various levels of government, OEMs, fleet managers, EVSE companies, utilities and other industry representatives.
- **What.** This group will focus on developing next-generation deployment strategies, such as integrating existing efforts into a statewide EVSE network; determine key gaps in EVSE coverage; plan for connection to other PEV corridors including the Green Highway project; identify community nodes for staged infrastructure development; workplace charging; multi-family housing charging; services beyond passenger cars and light-duty trucks, such as taxis, urban freight and ecotourism; infrastructure to serve daily commuters, captive fleet, and long distance travelers; EVSE connectivity between rural and urban communities.
- **Why.** Potential implementation efforts resulting from this process include engaging potential PEV adopters including fleets and others in order to increase PEV visibility, awareness and understanding. The purpose of these implementation efforts would be to expose more of the public to PEVs, either by seeing more PEVs in operation or by actually driving one, so they become more comfortable with PEV and EVSE technology and more likely to consider one for their next vehicle purchase.

2. Policies and Inducements work group to address plan element #6-8 and #10.

- **Who.** Business Oregon will lead work group 2. Key stakeholders include policymakers, building code officials, local governments, fleets, community residents and business owners.
- **What.** This group will identify next-generation policies and other tools that could be encourage adoption of PEVs by fleets, the general public and business owners. The work will begin with a survey of what has been done to date along with an examination of the relative effectiveness of current measures to inform the identification of new and better policies and inducements. This group's work will also include recommendations for any required changes to building codes, construction permitting and inspection, zoning, parking rules or other local ordinances.
- **Why.** BCD created statewide PEV and charging infrastructure codes and policies and ODOE administers business and residential incentives for the purchase of PEVs and EVSE in order to position Oregon as a PEV leader. This group will analyze the success of these innovative policies and incentives and determine if there is need for adjustments or new efforts based on PEV adoption and user behavior gathered from existing efforts.

3. **Training, Marketing and Outreach work group to address plan element #9.**

- **Who.** CWCCC and ODOE will lead work group 3 in partnership with OTREC. It consists of partners from various levels of government, OEMs, EVSE companies, utilities, industry representatives, fleets, community residents and business owners.
- **What.** The third work group will focus on training, marketing, outreach and education planning, which is anticipated to be the largest effort of the Energizing Oregon project. The group will conduct a perception and awareness survey to scale current PEV and EVSE knowledge and to identify opportunities to influence the perceptions of potential PEV adopters.
- In addition to developing a plan, these partners will be developing and implementing innovative outreach efforts including: PEV training and outreach materials for auto dealers in partnership with OADA, PEV training for installers and maintenance techs in partnership with PCC, EVSE training for electricians and building officials in partnership with IBEW and BCD, PEV outreach in the territories of the two participating Clean Cities Coalitions, and adaptation of EVRoadmap.com to be the statewide PEV website in partnership with OTREC.
- **Why.** This analysis will include business-case scenarios and user-oriented case studies to help the average consumer, business owner, or fleet manager make the decision to purchase a PEV and/or install EVSE. Innovative outreach efforts will aim to increase PEV visibility, awareness and understanding.

4. **Utility Planning and Analysis work group to address plan element #11.**

- **Who.** CWCCC and ODOE will lead work group 4 in partnership with OPUC. Others will include utilities and partners, including investor-owned utilities, public utility districts, BPA and others.
- **What.** The goal of the planning process is to examine ways to minimize potential grid impacts from increasing the numbers of PEVs in the state. This will include data analysis of PEV user behavior and charging habits to determine what is most effective with different PEV user groups to ensure that most charging happens off-peak. Data analysis could also examine the true effects on a user's utility bill given different PEV usage patterns and existing home electricity use. Another possible area of examination would be the effect on a medium or large commercial customer's bill if they buy a fleet of PEVs or offer public charging. For large electricity users, the incorporation of or support for PEVs might have larger fiscal impacts that could become more visible to business owners through the Energizing Oregon project.
- **Why.** The group's plan will detail ways to encourage off-peak charging of PEVs and will possibly include development of marketing materials to support this. It will also provide real-world data to help make the business case to the general public on what it will truly cost to own and operate a PEV. This group's work will build off of current discussions led by the OPUC on such things as multi-family metering and other utility-related issues that have been identified by the Commission as needing further study.