



Project Summary

The American Renewal and Reinvestment Act (ARRA) includes \$300 million for alternative fuel and advanced technology vehicle projects. A diverse and expansive team of public and private sector organizations will be submitting a proposal for these funds, taking a significant step towards transforming Oregon's transportation system from one almost solely dependent on petroleum to one increasingly dependent on electricity. This will have multiple benefits including reduced emissions (and associated improvements in environmental and public health), improved energy security and increased economic opportunities. The project will support the State's push to meet its greenhouse gas reduction goals and, with proper design, could support the increased use of renewable energy and ease the strain on the region's electricity grid.

The Oregon Department of Transportation's (ODOT) Office of Innovative Partnerships is serving as lead agency for this project. ODOT has already invested considerable time and effort into laying the groundwork for electric vehicles and charging stations and this project will build upon those efforts. Approximately 80 partners from across the state including state agencies, utilities, local governments and private sector organizations have signed onto the project.

The application will be submitted to the U.S. Department of Energy (DOE) for funding through its Clean Cities program. The DOE grant request can be up to \$15 million and requires at least a 50 percent match. Oregon's proposal will be for up to \$15 million and will more than exceed the 50 percent match requirement. Matching funds will be contributed by all of the project partners. The project's objectives are to:

- increase the number of various types of electric vehicles: regular hybrids, plug-in hybrids, battery electric and medium-duty hybrid vehicles
- deploy charging stations throughout the state to support electrified vehicles and help convince average consumers that the infrastructure is there to support the use of these vehicles
- conduct public outreach and education as well as technician training on electric vehicles
- support the development of market opportunities for electric vehicles, batteries and charging stations
- gather data and study the use of electric vehicles and charging stations to support the development of this market across the country

Steering Committee

The Steering Committee guiding the development of this project consists of:

- Oregon Department of Transportation
- Oregon Department of Energy and its role as lead of the Columbia-Willamette Clean Cities Coalition
- Oregon Economic and Community Development Department
- Oregon Department of Consumer and Business Services – Building Codes Division
- Oregon Transportation Research and Education Consortium (part of OUS)
- Portland General Electric
- PacifiCorp

Partners

Soon after developing the project concept, the Steering Committee began an outreach effort to sign on additional partners from across the state. Within only a few weeks almost 80 partners had signed onto the project. These partners include a wide variety of public and private sector organizations as provided here.

Public Agencies

Baker Rural Fire Prot. District
 City of Ashland
 City of Beaverton
 City of Corvallis
 City of Eagle Point
 City of Eugene
 City of Fairview
 City of Gresham
 City of Hillsboro
 City of Hood River
 City of Lake Oswego
 City of Mosier
 City of Portland
 City of Salem
 City of Sandy
 City of Tigard
 Clackamas Community College
 Clackamas County
 Columbia Gorge CC
 Deschutes County
 Jefferson Co Library District
 Lane Community College
 Lane County
 Linn-Benton CC
 Metro
 Multnomah County

Dept. of Administrative Svcs
 Oregon University System
 Port of Hood River
 Port of Portland
 Portland Community College
 SAIF Corp
 TriMet
 Washington County

Utilities

Emerald PUD
 Eugene Water & Electric Board
 Salem Electric
 Springfield Utility Board

Private Sector Partners

200 Market Associates
 AmeriStar EcoStations
 Blackburn Construction
 BlueSky Fuel
 Cambridge Condos
 Clean Water Services
 Columbia Gorge CC
 Cranston Machinery Co.
 Edge Lofts

Eliot Tower
 Fred Meyer
 Friendsview Retirement Cmty
 Good Company
 Gramor Development, Inc.
 Gregory
 Hawthorne Auto Clinic, Inc.
 Hilltop Properties
 Imerjent
 Independence Station
 Landmark Ford Lincoln Mercury
 LRS Architects-OR Lottery
 Mirabella Retirement Cmty
 Northwest Health Foundation
 Old Town Lofts
 Peace Health Med Labs
 Price Industrial Service Co.
 Providence Milwaukie Hospital
 Rogue Valley Clean Cities
 SeQuential Biofuels
 Shorepower
 Springhouse Cellar Winery
 Star Oilco
 Sunset Empire Transportation
 The Pape Group
 Umpqua Bank
 Zipcar

Estimated Budget (as of April 29, 2009)

Line Item	DOE grant	Partners	Total
Infrastructure installations	\$ 4,000,000	\$ 4,000,000	\$ 8,000,000
Vehicle purchases	\$ 8,500,000	\$ 15,300,000	\$ 23,800,000
Strategic planning	\$ 400,000	\$ 100,000	\$ 500,000
Training and education	\$ 300,000	\$ 100,000	\$ 400,000
Public outreach	\$ 300,000	\$ 100,000	\$ 400,000
Knowledge transfer/Reporting	\$ 300,000	\$ 100,000	\$ 400,000
Administration	\$ 1,150,000	\$ 100,000	\$ 1,250,000
Total estimated project expenses	\$ 14,950,000 (43%)	\$ 19,800,000 (57%)	\$ 34,750,000

Timeline

Task	Date
Grant application due	May 29, 2009
Notice of award	August 2009
Award disbursement	September 2009
Strategic planning	October 2009 – December 2010
Infrastructure installations	October 2009 – September 2011
Vehicle purchases	October 2009 – September 2011
Training and education	October 2009 – September 2011
Public outreach	October 2009 – September 2011
Knowledge transfer/Reporting	October 2009 – September 2013
Administration	October 2009 – September 2013

Consistency with “Oregon Way” Objectives

Job Creation

This project will retain and create jobs in the areas of vehicle production and sales and charging station production, sales and installation. While some of the products purchased with these grant funds would be produced outside Oregon, particularly vehicles, the products will likely be procured from Oregon vendors. The primary source of jobs for Oregonians from this project comes from the installation of charging stations. According to OECDD’s economist, the project will result in 522 new jobs with labor income of almost \$31 million. These estimates do not include additional jobs created to service and maintain the new vehicles or charging stations.

Energy and Emissions Impact

By deploying electric vehicles and charging stations, this project will help the state meet its greenhouse gas (GHG) reduction goals. Even if you assume an electric vehicle is charged with only coal-based electricity, the vehicle would reduce GHGs by approximately 20 percent over a conventional, gasoline vehicle. In Oregon, where our energy is considerably less dependent on coal, the emissions reduction will be even better. In addition, Oregon will reduce its dependence on foreign oil, thereby improving our energy security. An initial calculation of the project’s annual benefits shows that the project would:

- reduce GHG emissions by over 3,000,000 lbs or almost 1,500 metric tons CO₂e per year
- save over 167,000 gallons of fuel (or almost 4,000 barrels of oil) per year
- decrease carbon monoxide (CO) emissions by over 130,000 lbs per year
- decrease volatile organic carbon (VOC) emissions by over 8,000 lbs per year
- decrease nitrogen oxides (NO_x) emissions by over 37,000 lbs per year

These estimates are likely lower than the true project benefits because they are based on a national average electricity grid, which is much more dependent on fossil fuels than Oregon’s electricity supply.

Integration

As mentioned above this project benefits from a large and diverse group of partners. At present, 80 partners have signed onto the project with additional partners still joining the effort. Participants include state agencies, local governments, utilities, educational institutions, developers and many other private sector partners. The Steering Committee has also been examining ways to integrate the work of the Clean Cities project with other,

related stimulus funding sources. Efforts are underway to apply for funds from at least two other funding sources (Transportation Electrification and smart grid) that could augment this electric vehicle project.

This project also integrates with a number of related initiatives undertaken by the State. The project supports the goals of the Alternative Fuel Infrastructure Working Group established by the Governor in his Executive Order No. 08-24. The project also builds upon and integrates with work that ODOT has been performing on the electric vehicle charging network. This work has resulted in standard signage approved by the Oregon Traffic Control Device Committee and a request for proposals (RFP) for electric vehicle charging equipment. ODOT, in cooperation with technical advisors and experts, developed a specification for the performance, safety, and appearance of charging stations that will accommodate vehicles from all manufacturers. The RFP will result in state contracts for charging equipment that will be available to a wide variety of entities who will benefit from uniform operational characteristics and better pricing through bulk purchasing. The project also benefits from the work of the Building Codes Division of the Department of Consumer and Business Services who adopted the Electric Vehicle Charging Station Statewide Permit and Inspection Protocol, effective January 1, 2009.

Workforce Development

Portland Community College is expected to provide technician and first-responder training as an extension of its existing automotive training program. These technicians will then be well positioned to support the next generation of vehicles that will be commanding growing market share in the future. In addition, the project will lead to new jobs installing and maintaining charging stations and converting hybrids into plug-in hybrids.

The Department of Consumer and Business Services will develop training materials focusing on construction standards for and regulation of charging stations. Training will be offered throughout the state and provide contractors, installers, and local governments information on requirements for the safe installation of these new technologies. Training provided by the Department may be directly linked to continuing education requirements for the licenses or certifications affected. Grant funds will provide for additional on-the-job training for infrastructure installation and vehicle maintenance.

Local Sourcing

Coupled with other vehicle manufacturing initiatives, this project will support the retooling of automotive and component manufacturing to support the increasing reliance on electricity as the transportation fuel of the future. In addition, it demonstrates Oregon's leadership of the sustainable economy. It is this leadership and the demonstrated willingness of Oregonians to purchase cutting-edge, green vehicles that motivated the state's pursuit of the electric vehicle company Th!nk to locate its manufacturing facility in the state. In addition, ODOT's RFP for charging stations could support the development of local manufacturing capacity for charging infrastructure to support electric vehicles. Finally, there is the indirect benefit to Oregon companies who are entering or already operating in the emerging market for electric vehicles and associated components.

Applied Innovation

The federal grant would fund the continuation of Oregon's forward-thinking charging infrastructure installation and electric vehicle purchases for rapid adoption and widespread use. The partners anticipate leveraging ODOT's statewide procurement authority and the charging system specifications so participants can rapidly install standardized charging equipment and purchase vehicles. The request was endorsed by the Oregon Transportation Commission at its regular meeting on April 15, 2009. The Department of Consumer and Business Services as well as the Clean Cities Coalitions will be contributing to the public education and acceptance campaigns. In addition, OTREC will gather data, synthesize useful lessons and conduct outreach to serve as technology transfer to other communities interested in electrifying their transportation system. This will continue Oregon's tradition of being the place where innovative and creative things happen first and keep our State on the leading edge of sustainability.