Driven to Succeed

A look at The Electric Vehicle Project

Owners of the Chevy Volt (left) and the Nissan LEAF (right) will benefit from The EV Project.

The Electric Vehicle (EV) Project is the largest deployment of electric vehicles and charge infrastructure in history.

ECOtality North America will deploy nearly 15,000 charging stations in 16 cities located in six states (Oregon, Washington, California, Arizona, Tennessee and Texas) and the District of Columbia. Nissan North American and General Motors/Chevrolet are partners in The EV Project.

For drivers of the Nissan LEAF zero-emissions electric car and the Chevrolet Volt plug-in hybrid with extended range who qualify to participate in The EV Project, a residential charger will be provided free, and most, if not all, of the costs of installation will be paid for by The EV Project. Additional commercial and public chargers will also be developed as part of the project. With permission from the vehicle owners, the charging stations will gather valuable information about EV driver needs and will ultimately guide how a robust EV infrastructure will be formed throughout the US.

The EV Project was officially launched on October 1, 2009, and will last approximately 36 months. ECOtality North America, a subsidiary of ECOtality, Inc., was awarded a $115 million grant from the U.S. Department of Energy to embark on this project. ECOtality North America is partnering with several organizations on this initiative. With partner match funds, the total value of the project is approximately $230 million. The EV Project – with participation of ECOtality, Nissan and more than 40 other project partners – will provide valuable information to the U.S. Department of Energy, as well as car and equipment manufacturers.

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Strategic partners include the City of Seattle, Seattle City Light, Tacoma Power, Puget Sound Energy and Snohomish PUD. With a population of 10 million, high numbers of environmentally conscious consumers and major corporations, and significant sources of clean energy, the Pacific Northwest is poised to be one of the strongest markets in North America for highway-capable EVs.

Plug-in electric vehicles (PEVs) have the potential to impact future PUD operations in a number of ways. The popular adoption of PEVs presents a potential challenge to the PUD in terms of adding additional energy demand to substantial existing load growth pressure. From the perspective of the electrical grid, PEVs will basically have the impact of a new large appliance. A PEV charging at a residence is expected to draw 1.5 kW to 6 kW. Initial system-wide impacts from PEVs will be negligible, but if they achieve rapid market penetration, PEVs could eventually comprise a significant portion of electric loads.

A typical plug-in vehicle is projected to consume approximately 1,500 kWh per year (based on 6,000 miles driven on electricity). Numerous impact studies have indicated that substantial numbers of PEVs can be integrated with minimal additions to generation and distribution infrastructure as long as vehicle-charging occurs primarily during off-peak hours. The information learned in The EV Project will be very useful for the PUD and other utilities in planning to meet the power needs of PEV’s owners as the vehicles become more common.

The EV Project will collect and analyze data to characterize vehicle use in diverse topographic and climatic conditions, evaluate the effectiveness of charge infrastructure and conduct trials of various revenue systems for commercial and public charge infrastructure. The ultimate goal of The EV Project is to take the lessons learned from the deployment of these first 8,300 EVs, and the charging infrastructure supporting them, to enable the streamlined deployment of the next 5,000,000 EVs.

In 2010, charging infrastructure will be deployed in the following major population areas: Phoenix and Tucson (AZ); San Diego and Los Angeles (CA); Portland, Eugene, Salem and Corvallis (OR); Central Puget Sound and Olympia areas (WA); Nashville, Knoxville and Chattanooga (TN); Washington D.C.; Dallas, Fort Worth and Houston (TX).

The Nissan LEAF has a range of approximately 100 miles when fully charged. The average U.S. driver travels a total of 29 miles a day, well under that 100-mile range.

Over the course of a year, the cars involved in The EV Project will reduce gasoline consumption by approximately two million gallons.

For more general information about the project, please visit www.theevproject.com.

The Numbers
The EV Project involves:
- 14,650 Level 2 (220V) Chargers
- 310 Level 3 Fast-Chargers
- 40+ Project Partners
- 5,700 Nissan LEAF Cars
- 2,600 Chevrolet Volt Cars
- 1,200 New Jobs by 2012
- 5,500 New Jobs by 2017
- 16 Major Cities