## **EV Project: Public-private effort aims to ignite the future of transportation**

## **EV** test cities

By David Steves

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SALEM — Will 2010 be the year electric cars hit the road in Oregon?

Gov. Ted Kulongoski hopes so.

He's spent more than a year touring factories overseas, forging agreements with electric vehicle makers, prodding his staff to lobby for federal grants, and persuading the state Legislature to tweak the tax code — all in pursuit of his vision of Oregon as a state that shows the way to a future where battery-powered cars are assembled, parts are made and motorists say goodbye to carbon-producing gasoline.

"It's going to be the showcase of where this is all going," he said in a recent interview.

If things go as planned, the Oregon showcase goes on display starting next year.

That's when the state's share of a five-state, \$100 million federal grant will help businesses expand into manufacturing electric vehicle components in Coburg, Albany and Lebanon. And it's when nearly 1,000 all-electric Nissan Leaf cars and more than 2,250 electric charging stations are supposed to arrive in Eugene, Corvallis, Salem and Portland through the same joint public-private venture, dubbed the EV Project.

Despite the enthusiasm of Kulongoski and others who believe electric cars will take commuters and travelers to a carbon-free future, doubts persist whether the vehicles — if they're actually in showrooms late next year as promised — will make financial sense to consumers. The cost of major manufacturers' models will be in the \$30,000 to \$40,000 range — or \$15,000 more than comparable models with internal combustion engines. Tax credits — in Oregon, totaling \$9,000 when state and federal breaks are combined — would partially offset that markup.

Advocates hope that the prospect of low-cost travel will help sell the vehicles — which are distinct from gas-electric hybrids in that they do not use gasoline.

By Ecoworld.com's calculations, the costs of charging an electric vehicle amounts to 3.4 cents per mile driven — a big savings compared to the 10 cents per mile driven cost of gas for a 30-miles-pergallon auto. For a 15,000-mile year of driving, the savings would come to about \$1,000.

"All our eggs in one basket"

In addition to the EV Project grant it successfully pursued, Oregon made a separate bid for federal dollars for its electric vehicle push, seeking \$13.9 million from the Department of Energy to match

the \$25.4 million pledged by public and private entities for the purchase by companies and government agencies of 716 electric vehicles and a network of 1,250 charging stations along the Interstate 5 and Interstate 84 corridors.

The Oregon proposal stood out among those from other parts of the country, which sought federal money to buy or convert vehicles to run on a variety of alternative power sources — not just electricity but also natural gas, ethanol and propane.

"We were all in on electric vehicles," said Eugene Water & Electric Board's Jeannine Parisi, who was part of the effort. "We put all our eggs in one basket and it didn't work out."

The Department of Energy called the Oregon plan too futuristic, saying last month in a letter to state officials: "Availability of vehicles is very problematic to this proposal." The difficulty was that many of the electric vehicles Oregon wanted federal money to help pay for likely would not be available for purchase until two to three years after the money was awarded. Until then, the charging stations proposed for workplace parking lots and other locations would sit idle.

And once those vehicles and charging stations were in use, they would prove an expensive way to reduce gasoline consumption, the federal government found. While the electricity to run the vehicles is cheap, the upfront capital costs, including the vehicles and the charging stations, are big. The Department of Energy calculated that over the life of those vehicles and stations, their costs would amount to \$19 spent for every gallon of gasoline not consumed as a result.

Some question government's role

The Portland-based Cascade Policy Institute's Todd Wynn questioned the deployment of public resources — tax dollars, grants and incentives and salaries of government employees — to steer consumers and businesses toward any one of the many alternative transportation options in that emerging marketplace.

"If the technology is viable and cost effective and is desired by the people, then there's no reason for any intervention in advancing that technology. Electric vehicles are the perfect example," said Wynn, the co-author of a report called "A Free Market Perspective on Electric Vehicles," for the Cascade Policy Institute, which espouses free-market ideas.

Kulongoski argued that Oregon isn't picking electric cars in a game of winners and losers. He noted that in the entire clean-energy arena, Oregon's tax incentives, subsidies and mandates encourage an array of approaches to reducing fossil fuel consumption and expanding alternative energy sources: biofuels, public transit and cycling for getting around, and wind, solar, biomass and tidal energy for powering the electric grid.

But the Democratic governor made no apologies for his all-in approach to electric cars as part of that strategy. The governor said he has no doubt about the future of electric vehicles.

"In 20, 30, 40 years, the primary mode of transportation for family vehicles will be the electric car," he said.

The Cascade Policy Institute questioned the role of government and utilities in subsidizing charging stations so that those driving electric vehicles can keep them powered up while on the road.

Thanks to state and federal tax credits, the cost of installing a charging station, estimated at \$10,000, mostly will be picked up by taxpayers. The federal credit for such an expense is \$5,000 and through

Oregon's Business Energy Tax Credit program, the state picks up \$1,750 — leaving the business's cost at \$3,250 — or even less, if the purchaser wins other subsidies.

## Charging stations crucial

Under the plan, charging stations — some as simple as a pole-mounted box with an electric cable to plug into a car — would be at parking structures, service stations, shopping centers, workplaces, a family garage or other locations where electric vehicles' batteries can be recharged before moving on.

Such a network is considered critical since the storage capacity of electric car batteries will hover between 50 and 200 miles for many models coming out in the next few years.

Instead of turning to government for subsidies and tax breaks to cover the cost of such infrastructure, Wynn argued, existing roadside businesses, such as fast-food restaurants or service stations, should offer free recharging for electric cars to woo customers the way they offer free WiFi Internet connections. Depending on the type of charging unit, it would require a wait of as little as a few minutes for a partial charge or as long as six hours to fully recharge an electric vehicle battery.

The question whether to wait for consumer demand for electric cars to drive the establishment of a charging network, or for the government, utilities and others to coordinate the development of such infrastructure represents "a classic chicken-or-the-egg" case for those advocating electric cars, said Art James, innovative partnerships project director for the state Department of Transportation.

Electric vehicle drivers are expected to do 80 percent of their battery recharging at home, using 220-volt units that allow them to more quickly get their vehicles powered up than standard 110-volt outlets would. Technology will allow motorists to automatically start the charging process at night during off peak hours when costs are lowest.

No one knows how many electric vehicles might sell in Oregon over the next year or two.

## Station at LCC planned

But a big emphasis of policy-makers, utility companies and government planners is on the charging stations that would serve electric car drivers' other 20 percent of charging needs: at work and on the go.

One of the first big electric car charging stations in the Eugene area is being planned for the Lane Community College parking lot, on the south end of Eugene near Interstate 5. The 36-outlet, solar-powered station is in the design and development stage, with plans for its completion next July, said Anna Scott, an energy analyst at the college. With the help of a \$100,000 grant from EWEB, the college plans to complete the facility by next summer.

It's unclear where other charging stations would go in Lane County. Kulongoski transportation adviser Chris Warner said the governor hopes to flesh out his plans as the charging station network gets built, even if the hoped-for federal subsidy isn't available. The rejected grant proposal included commitments, if the federal money came through, for such units to be installed by the University of Oregon, EWEB, Emerald PUD, Springfield Utility Board, SeQuential Biofuels, the city of Eugene, the state Department of Transportation, Good Company and the Papé Group.

Kulongoski said he's convinced that Oregon's early commitment to a network of charging stations is a key to its ability to attract federal dollars and electric vehicle companies to Oregon.

"You have to build the infrastructure before you can get the cars," Kulongoski said. "And you can't do this if there are no charging stations."

Eugene, Corvallis, Salem and Portland are the cities in Oregon's test market for electric vehicles. It's

940 Nissan Leaf EVs, to be sold to consumers and fleets that agree to participate.

2,250 charging stations, with 940 being installed in the Leaf owners' homes and the rest going to

work and public places. About 50 would be "level 3 fast chargers."

part of a five-state test, underwritten with \$99.8 million in federal aid. Oregon stands to end up with: