

•Transportation Electrification



•Electricity as transportation fuel

Oregon Electric
Vehicle Association

EV Update

Jan 12, 2012



PORTLAND GENERAL ELECTRIC

Infrastructure Projects- Update

EV Project

- Over 400 residential and fleet chargers installed
- Over 170 Public Level 2 and DC Quick Chargers installed
- Chevrolet Volt added to the EV Project
- DC Quick Charge stations
 - 1 in 3 more coming soon
 - Hillsboro, Fairview and Sandy



State of Oregon DC Quick Charge

- Southern Oregon ARRA Funding
 - 8 Charger installations by end of Jan 2012 (4 completed)
 - All will be commissioned at the same time. Level 2 are co-located and operational now
- Tiger II Grant- 22 additional
 - Support identified transportation corridors
 - Installation by end of 2012

Electric Avenue On-Street Demonstration Project (SW Montgomery between 6th and Broadway)

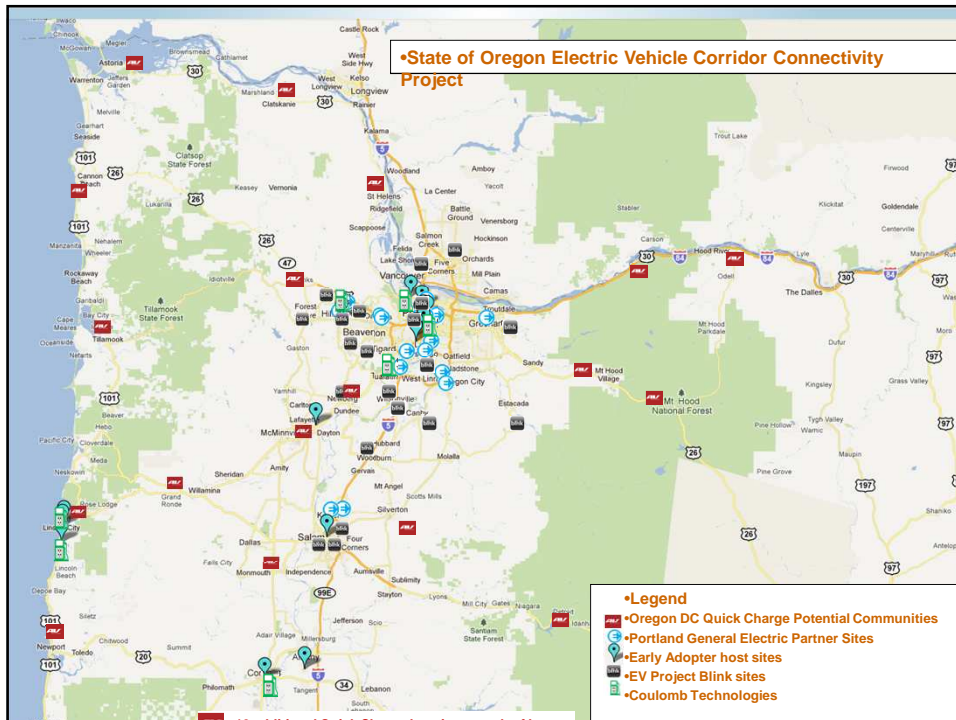
- DC Quick Charge plus 7 parking spots for Multi Vendor Level 1 and 2 Stations
- Changes coming- 2 stations will be replaced
- New ones: 1- First of a kind in US 1- First of a kind in Oregon



Oregon: an early EV deployment market

Tesla Roadster	Spring 2010
Toyota Plug-in Prius	Jun. 2010
Nissan Leaf	Dec. 2010
Ford Transit Connect EV	May 2011
Smith Electric Newton Truck	Fall 2011
GM (Chevy) Volt	Fall 2011
Mitsubishi "i"	Fall 2011
Ford Focus EV	Early 2012
Freightliner Electric Truck	Early 2012
Honda Fit EV	Jul. 2012

▪ Many more models to come in 2012 - 2013



Will all charging locations work with my car??

Level 1	120 volts Dedicated outlet		All new cars will come with a special cordset to plug into 120 volt outlet
Level 2	208 or 240 volts Special Connector		Most new vehicles will come with this standard connector 
DC Quick Charge	3 Phase Power		Nissan Leaf Mitsubishi i-Miev



Know any good locations? Level 2 or DC QC

Willing property owner and host

- Willing to accept a free charger and \$\$ towards installation
- This will probably be the last opportunity for "free stuff"
- Have a publicly available- dedicated parking spot
- Unless the installation is really close to available power may need to contribute funds
- Some tax credits might still available for contribution you may need, but don't count on them



Choosing a location

Considerations

- Covered area is best for protection from the elements, but the equipment is designed for operation in wet weather.
- To reduce costs, need a location where power is close to the parking lot (Contact your utility !!!)
- Consider an electric rate that charges for only the electricity not a Demand Charge (PGE Rate Schedule 38)



Multi Family still a challenge

Tenants needs:

- A convenient place to charge their vehicle when they want
- Willing to pay for the electricity for charging, but not pay too much
- Might help pay for installation but don't want to subsidize others use of it
- Don't want to be inconvenienced
 - Share space and have to move cars around
 - Walk many blocks away



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