Electric Vehicles: Expanding the Pathways

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Innovative Partnerships

Public Meeting
April 20, 2016
Moses Lake, Washington
16,529 Plug In Electric Vehicles Registered in Washington
As of December 31, 2015

Map includes Electric Vehicles (EVs) produced by major automakers since about 2011. It does not include cars that were converted to EVs by their owners, neighborhood EVs or EV models from the 1990’s that are still registered in Washington, or motorcycles. WSDOT created this map based on data provided by the Washington State Department of Licensing.
Washington’s PEV Registration Growth

<table>
<thead>
<tr>
<th>Month</th>
<th>PHEV</th>
<th>BEV</th>
<th>Total</th>
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<tbody>
<tr>
<td>June 2014</td>
<td>2,863</td>
<td>6,802</td>
<td>9,665</td>
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<td>Dec 2014</td>
<td>3,474</td>
<td>8,761</td>
<td>12,235</td>
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<td>June 2015</td>
<td>3,714</td>
<td>9,214</td>
<td>12,928</td>
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<tr>
<td>Dec 2015</td>
<td>4,471</td>
<td>12,058</td>
<td>16,529</td>
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Washington’s PEV Registration Growth

Battery Electric Vehicle Registrations by Model

- Honda FIT
- Volkswagen E-Golf
- Chevrolet Spark
- KIA Soul EV
- Mercedes-Benz B-Class
- Fiat 500E
- Toyota RAV 4
- Mitsubishi i-MiEV
- Mercedes-Benz Smart For Two
- Tesla Roadster
- Ford Focus
- BMW i3
- Tesla Model S
- Nissan Leaf
Washington’s PEV Registration Growth

Plug-In Hybrid Electric Vehicle Registrations by Model

- Honda Accord
- Fisker Karma
- Cadillac ELR
- BMW i8
- Toyota Prius
- Ford Fusion
- Ford C-Max
- Chevrolet Volt

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</tr>
</thead>
<tbody>
<tr>
<td>Honda Accord</td>
<td>1,605</td>
<td>1,837</td>
<td>2,156</td>
<td>544</td>
</tr>
<tr>
<td>Fisker Karma</td>
<td>429</td>
<td>461</td>
<td>464</td>
<td>801</td>
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<tr>
<td>Cadillac ELR</td>
<td>352</td>
<td>559</td>
<td>708</td>
<td>866</td>
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<tr>
<td>BMW i8</td>
<td>475</td>
<td>610</td>
<td>615</td>
<td></td>
</tr>
<tr>
<td>Toyota Prius</td>
<td>1,605</td>
<td>1,837</td>
<td>1,909</td>
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<tr>
<td>Ford Fusion</td>
<td>1,909</td>
<td>2,156</td>
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<tr>
<td>Ford C-Max</td>
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<td></td>
<td></td>
<td>544</td>
</tr>
<tr>
<td>Chevrolet Volt</td>
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Washington State Department of Transportation
West Coast Electric Highway

Unique EV Driving Experience from BC to BC
- Equipment Specifications
- Highway Signs
- Branding and Marketing

Fast-Charge Site Criteria:
- Within ½ mile of highway interchange
- Safe and convenient access
- Parking spaces
- Restrooms and drinking water
- Shelter and lighting
- 480V 3-phase electric power supply
- Customer amenities (food, traveler info)
EV Charging Locations
Fast charging stations at retail sites every 35-50 miles along I-5.

Charging Equipment:
- AeroVironment
  - 50kw DC fast charger (CHAdeMO)
  - Level 2 EVSE (J1772)

Federal Funding: 3 Grants
- Washington: $1.6M USDOE ARRA
- Oregon: $1M+ USDOE
  - $3M+ FHWA TIGER II

Partners:
- WSDOT/ODOT
- AeroVironment
- 22 Electric Utilities
- 57 Host sites
- EV Drivers
DC Fast Charging for California’s Corridors

- Complete the West Coast Electric Highway.
- Awarded $8.8m in state funds to fund DC fast chargers on north-south portions of I-5, SR 99 and US 101.
- Coordinate with regional planning councils as California is complex:
  - 482 Municipalities
  - 58 Counties
  - 170,000 miles of roadways
- Regions have unique EV micro-climates and topography that require region-specific infrastructure plans.
- Regions have varied land-uses, unique driver characteristics, travel patterns, and objectives for PEV policies.
EV Fast Charging Network I-5 Corridor
(Regional Commuter)

Bellingham, Exit 252
Sehome Village

Tumwater, Exit 102
Shell Station and Deli Mart

Centralia, Exit 82
Wendy’s

Burlington, Exit 229
Outlet Shoppes at Burlington

Castle Rock, Exit 49
Cascade Select Market

Ridgefield, Exit 14
Country Café
EV Fast Charging Along US 2, I-90 Corridors (EV Tourist)
Media Relations and Partnership Building
Special Events and Outreach
International All Electric Road Rally
Eco Tourism
Consistent Highway and On-Site Signage

Roadway Directional Signs
State Highways, Local Roads, City Streets

- Exit 102 Trosper Road Black Lake
- Harrison Ave Factory Outlet Way 1/2 mile
- D9-11b (alternate) EV Charging Station Symbol

Regulatory Signs & Striping
“No Parking Except Electric Vehicle Charging”

- British Columbia
- Washington state law “de-ICEing bill” (SB 5849)

www.westcoastgreenhighway.com/evsigns.htm
Joint Transportation Committee Study on EV Charging Business Models

Findings: Need to strengthen and expand the state highway DC fast charging network, fill infrastructure gaps, and encourage private investment through government intervention in the short-term.

Interregional EV Travel on Interstate 90

EV Travel to and within Ocean Shores

EV Travel to and within Tri-Cities and Walla Walla
Pilot Program to Expand Public EV Charging

Starting with $1m from new $50 annual EV registration fee
EV Infrastructure Pilot Program
Draft Rules

468-602-010 Authority and purpose. RCW 47.04.350 directs WSDOT to develop a pilot program to support the deployment of electric vehicle (EV) quick charging infrastructure along highway corridors that is supported by private financing.

468-602-020 Definitions.
• Lead applicants: Local government such as cities, counties, tribes, and transit

468-602-030 Priority corridors.
• I-5, I-90, U.S. 2, and U.S. 101, Bidders may propose other corridors.

468-602-040 Project requirements.
• Bidders must have private sector partners contributing to the Project such as motor vehicle manufacturers, retail stores, or tourism stakeholders
• Projects must be valuable to EV drivers, address a gap in the state's network, and be profitable and sustainable for the owner-operator and private sector partner

468-602-050 Selection process.
• Competitive
EV Infrastructure Pilot Program

Gathering Stakeholder Feedback
- Car dealers and manufacturers
- Citizens
- Elected officials
- EV drivers & Associations
- EV Charging equipment providers
- Cities, counties, transit, tribes
- Utilities
- Universities

Public Outreach
- March 16th Workshop and Public Meeting at SeaTac Airport
- April 20th Public Meeting at SGL/BMW plant in Moses Lake
EV Infrastructure Pilot Program

Next Steps:

- Take public comment on rules (May)
- Hold public hearing on rules (June)
- Develop criteria, grant application, and solicitation process (spring)
- Request solicitation of proposals (summer)
- Award grants and start projects (fall)
- Evaluate pilot program and report on progress (winter)
- Plan for 2017-19 program rollout (spring)
For more information, contact:

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www.westcoastelectrichighway.com
New Legislation: Alt Fuel & Electric Vehicles

2ESHB 2778: Retail sales and use tax exemption criteria for clean alternative fuel vehicles (powered by electricity, natural gas, propane or hydrogen)
- Amends RCW 82.08.809 to increase cap from $35,000 to $42,500 starting July 1.
- Reduces applicable exemption to a max of $32,000 of vehicle’s selling price.
- Expands incentive to leased vehicles.
- Now includes vehicles able to travel at least 30 miles on a battery charge.
- Expires after 7,500 vehicles qualify.

SHB 2884: Modifying the business and occupation tax credits and public utility tax credits for alternative fuel commercial vehicles
- Expands tax credit incentive to include leased vehicles.

SHB 2357: Concerning the authority of the pollution liability insurance agency
- Establishes a revolving loan and grant program for retrofitting underground storage tank facilities. Includes monetary incentive for installing EV charging stations.

HB2317: Expanding the use of neighborhood and medium-speed EVs
- Allows medium-speed electric vehicles to operate on state highway segments with a posted speed limit under 35 miles per hour.