



ELECTRIC VEHICLES ROADMAP INITIATIVE

Launch Webinar

July 14, 2020



KEYNOTE

Kate Brown

WGA Chair and Oregon Governor

PANELISTS

Tonia Buell

Project Development Manager,
Washington State Department of Transportation

Katie Pegan

Energy Program Manager,
Idaho Governor's Office of Energy
& Mineral Resources



Jim Ogsbury

Executive Director
Western Governors' Association



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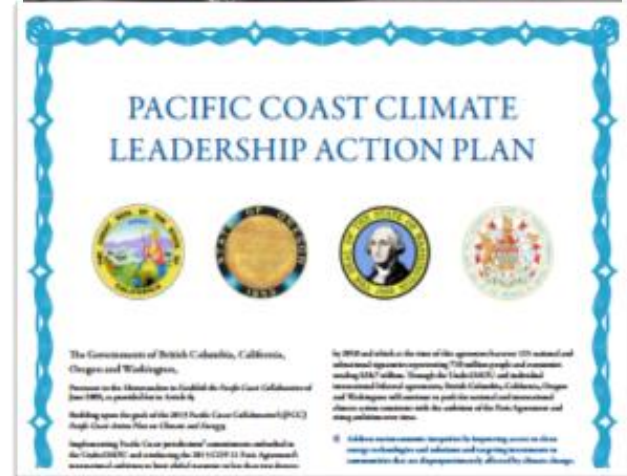
WEST COAST ELECTRIC HIGHWAY

Drive cleaner. Drive smarter. Drive electric
and save!

Tonia Buell, Project Development Manager
WSDOT Innovative Partnerships
Western Governors' Association
Electric Vehicles Roadmap Initiative
July 14, 2020

Promoting Clean Fuels on the Pacific Coast

- **Pacific Coast Collaborative:** leaders in Washington, Oregon, California, British Columbia and West Coast Cities
- Green Highway from British Columbia, Canada to Baja California, Mexico “BC to BC”
- Promotes petroleum reduction and sustainable transportation solutions on I-5 / Hwy 99 corridor
- Provides travelers with alternative fuel infrastructure
 - CNG
 - Hydrogen
 - Biodiesel
 - Electricity
- West Coast Electric Highway
- West Coast Electric Fleets



Highway Corridor EV Charging Network



Accelerating EV adoption by promoting robust electric vehicle fast charging corridors.

Connecting Communities and Enabling Long Distance Travel

Seamless EV Driver Experience

- Equipment Specifications
- Highway Signs
- Branding and Marketing

I-5, Hwy 99, US 101, and other major highway corridors

Common vision, patchwork of funding sources and projects

www.westcoastgreenhighway.com



Original West Coast Electric Highway Sites



56 EV Charging Locations

Fast charging stations (44 in OR, 12 in WA) at retail sites every 35-50 miles along I-5 and connecting roadways

Charging Equipment: AeroVironment
50 kW DC Fast Charger (CHAdeMO)
7.2 kW Level 2 EVSE (J1772)

Federal Funding:

Washington: \$1.6M USDOE ARRA SEP
Oregon: \$1M+ USDOE SEP
\$3M+ FHWA TIGER II

Partners:

- WSDOT/ODOT
- Host Sites
- 22 Electric Utilities
- EV Drivers

Open for Public: 2012

Original sites in Washington

Need updating to add Combo Charging System (CCS) capabilities

Six stations along I-5:



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

Original sites in Washington

Need updating to add Combo Charging System (CCS) capabilities

Four sites along US 2 and two sites along I-90



Sultan Visitor Information Center



Skykomish Sky Deli



Snoqualmie Pass Chevron



Leavenworth City Hall



Wenatchee Convention Center



Cle Elum Suncadia Resort

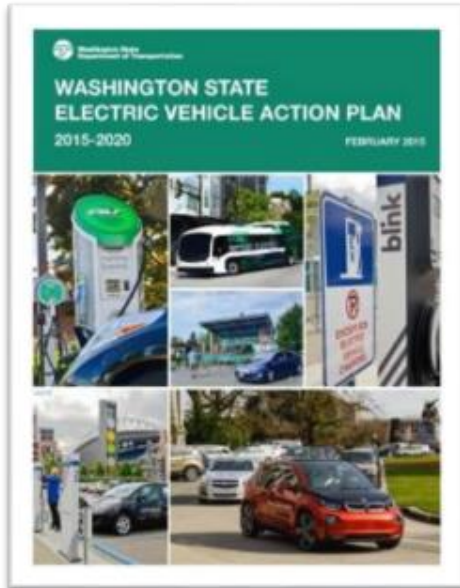
West Coast Electric Highway Guidelines

Site Criteria:

- Located 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)
- Each site must include CHAdeMO and SAE Combo System Charging (CCS) DC fast charging capabilities (50kW) and Level 2 Electric Vehicle Supply Equipment (EVSE)
- All stations must be certified, stationary, connected to the grid, and networked
- Multiple charging/parking stalls, stubbed out with conduit and power access sufficient to accommodate future 150kW C fast charging



Washington's Goal: 50,000 by 2020



2015-2020 Actions

Accelerate Electric Vehicle Sales/Adoption in WA

1. Renew the sales and use tax exemption for the purchase of Clean Cars.
2. Transform public and private fleets.
3. Conduct public education and outreach to increase consumer awareness.
4. Provide more EV charging signage to increase public awareness of availability.
5. Explore providing incentives for driving electric vehicles.

Strengthen Washington's EV Charging Network

6. Complete build-out of WA's fast charging network.
7. Explore funding mechanisms and business models to bolster EVSE installation.
8. Support workplace charging.
9. Address building codes, policy, and zoning barriers to EV infrastructure.
10. Engage utilities.
11. Support both DC fast charging standards (CHAdeMO and SAE CCS).

Synergize Actions throughout the Region

12. Support and participate in regional alternative fuel partnerships.
13. Track and participate in national EV efforts.

Governor Inslee announces 50,000 plug in electric vehicles in Washington!

<https://www.youtube.com/watch?v=yGLYtlAaPro>

Expanding Corridor Charging

Electric Vehicle Infrastructure Partnership Program (EVIPP) investments from 2017-2019

As of February 2020; New public electric vehicle charging stations supported by the EVIPP program



Map source: Washington State Department of Transportation Innovative Partnerships office.

Notes: A map of all charging locations statewide is available on [plugshare.com](https://www.plugshare.com).



**WEST COAST
ELECTRIC
HIGHWAY**

New Fast Charging Sites Along I-5

Grant Recipient: Forth

Network Provider: EVgo



Bellingham
Whole Foods Market
(2 DCFC)



Lynnwood
Whole Foods Market
(2 DCFC)



Seatac
SeaTac Cell Phone Lot
(2 DCFC)



Tacoma
LeMay America's Car Museum
(2 DCFC, 1 L2 EVSE)



DuPont
Ace Hardware
(2 DCFC, 1 L2 EVSE)



Chehalis
Commerce District
(1 DCFC, 1 L2 EVSE)

New Fast Charging Sites in Eastern WA

Grant Recipient: Energy Northwest/EVITA

Network Provider: Greenlots



**Kennewick (US-395)
Southridge Sports Complex**



**Yakima (I-82)
Chevron/Bullseye Burgers**



**Moses Lake (I-90)
Downtown Grant PUD**



**Richland (I-182)
City Parks and Facilities Div.**



**Connell (US-395)
Welcome Center**



**Prosser
Chevron**

Photo Credits : EV drivers using Plugshare.com

New Fast Charging Sites in Eastern WA

Grant Recipient: Energy Northwest/EVITA

Network Provider: Greenlots



Ellensburg
Main Street



Pasco (I-82 & US-395)
Starbuck's
(with solar canopy)



Cle Elum (I-90)
Coffee Company
(co-located w/ Tesla
Supercharger, includes 4.5kW
solar array)

Photo Credits : EV drivers using Plugshare.com

Consistent Signage

Roadway Directional Signs State Highways, Local Roads, City Streets



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)

Source: www.westcoastgreenhighway.com/evsigns.htm

Collaboration with Partners

Encouraging electro mobility through partnerships with electric utilities, businesses, federal/state/city governments, transportation industry, community based organizations, car manufacturers and dealers, researchers, associations and EVSE providers.



Governor Support is Important

Washington Governor Jay Inslee is an EV Champion



100,000-Mile EV Driver Tumwater 2013



Nissan Dealership 6 DCFC Bellevue 2015



EV Tourism Season Wenatchee 2015



LeMay America's Car Museum DCFC Tacoma 2019

Connecting fast charging networks across state lines and international borders.



International BC2BC All Electric Road Rally

Preparing for the future

Zero Emission Vehicles

- More variety (makes and models)
- More pricing options (low to luxury subscription)
- More driving range
- Bigger battery packs
- More shared EVs (TNCs)
- More autonomous driving features
- Medium/Heavy duty delivery and freight vehicles
- Electric school and transit buses

Highway Infrastructure

- More interstate coverage
- Improved technology
- More charging plazas
- Farther corridor spacing
- Extreme Fast Charging
- Faster DCFC charge time
- Higher power levels (120 - 400 kW)
- Higher electricity demand charges
- Multiple fast charging standards
- Hydrogen Fuel Cell Vehicle Fueling



Resources

Technical assistance:

- Federal, state, local stakeholders
- National EV Associations
- Alternative Fuel Toolkit <http://altfueltoolkit.org>

Unbiased data for investment decisions:

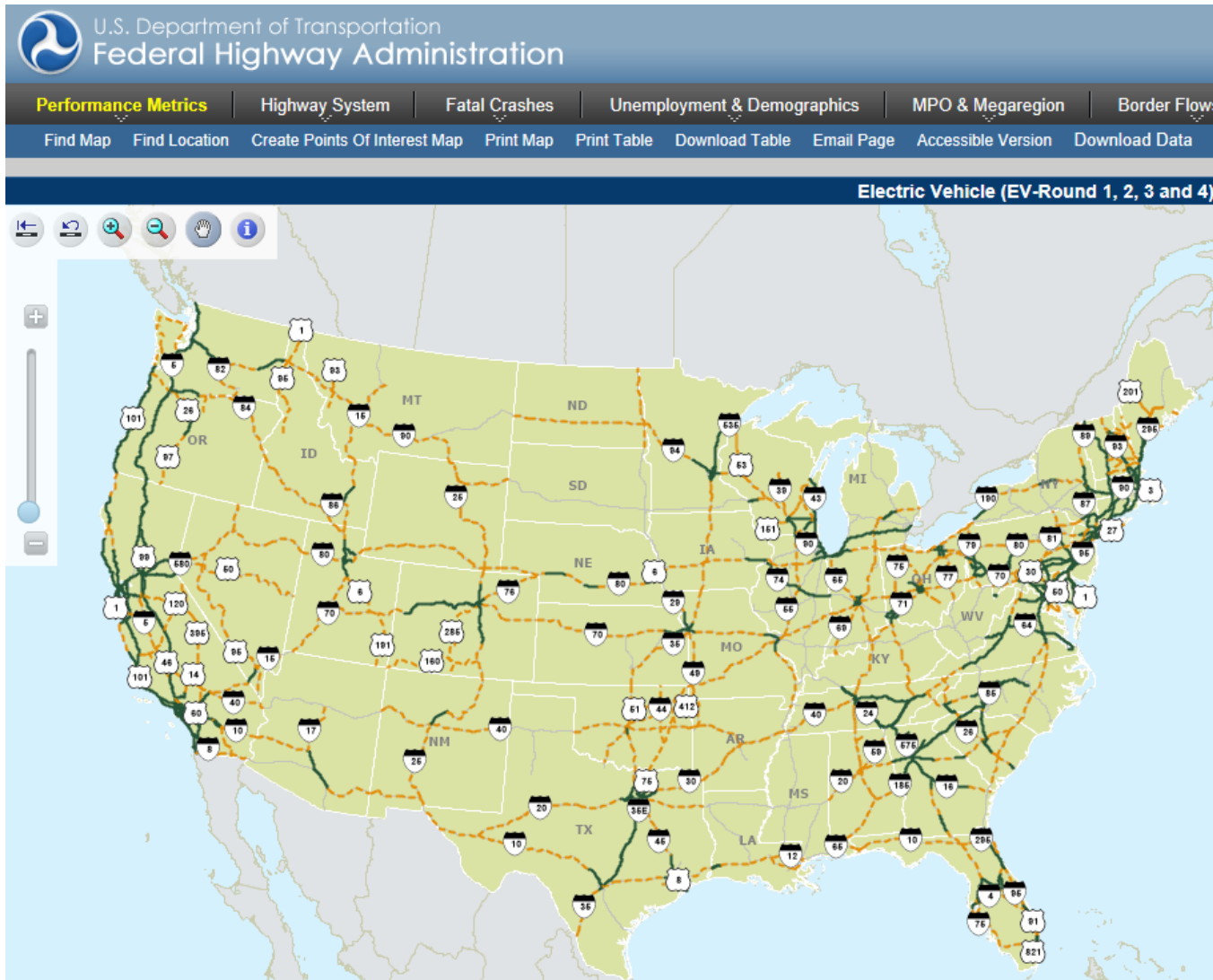
- Universities
- National Labs

Share resources and tools:

- U.S. Dept. of Energy www.energy.gov
- Plug In America www.pluginamerica.org
- Alternative Fuels Data www.afdc.energy.gov
- Clean Cities www.cleancities.energy.gov
- FuelEconomy.gov www.fueleconomy.gov



Nationwide EV Charging Network



Source: FHWA Alternative Fuel Corridors https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/maps/

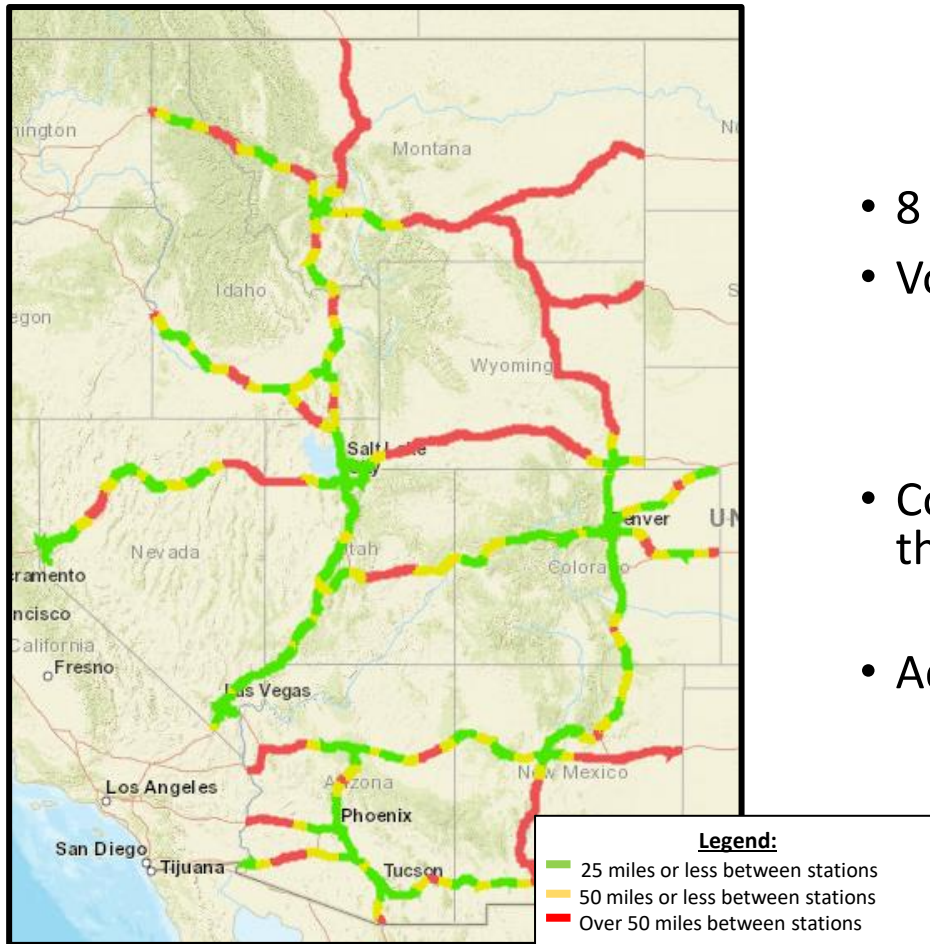
Connecting Our EV Charging Corridors

West Coast Electric Highway



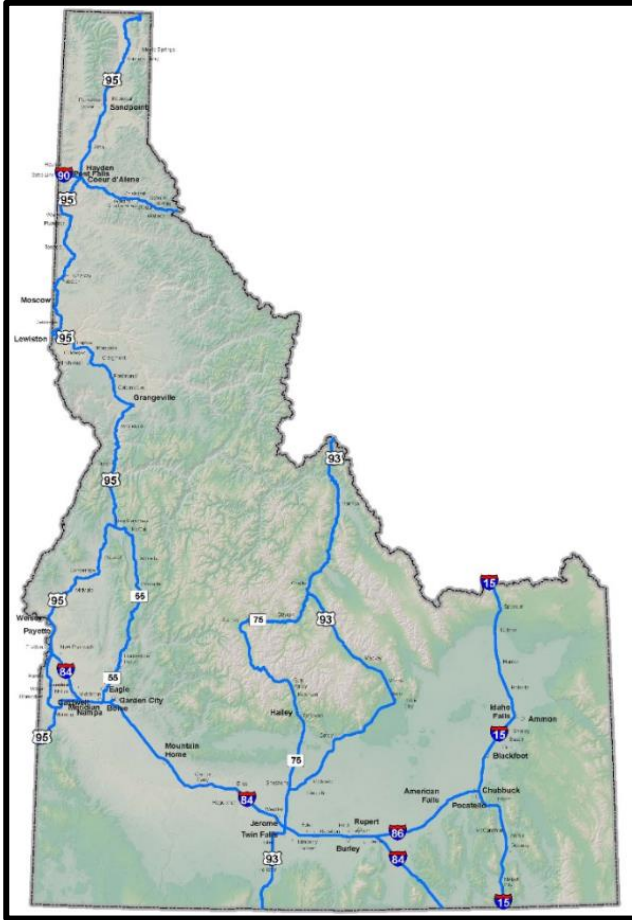
REV West

Regional Vehicle Plan for the West (REV West)



- 8 states participating
- Voluntary MOU since 2017
 - Re-established commitment with 2019 MOU
 - Signed by members' current Governors
- Connecting major travel corridors in the region
 - Avoid an electric highway to nowhere
- Addressing region-wide issues
 - Rural corridor electrification
 - Encourage similar station standards
 - Share best practices

Idaho's Work on EV Infrastructure



- Collaborate with partners like REV West & Electrify America
 - Avoid duplication of efforts
- Use 15% of VW Settlement funding on highway build out
 - Fill in gaps to cover Idaho's major corridors
- Coordinate stakeholder discussion on additional efforts
 - EV pilot programs
 - Rural charging studies



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