



EVS27: Barcelona, Spain

November 19, 2013

West Coast Electric Highway:  
*Building a Robust PEV Market  
through Regional Collaboration*

Ashley Horvat

*State of Oregon Chief EV Officer*  
Oregon Department of Transportation

# West Coast Electric Highway: *Sustained Leadership, Initiative, & Commitment*



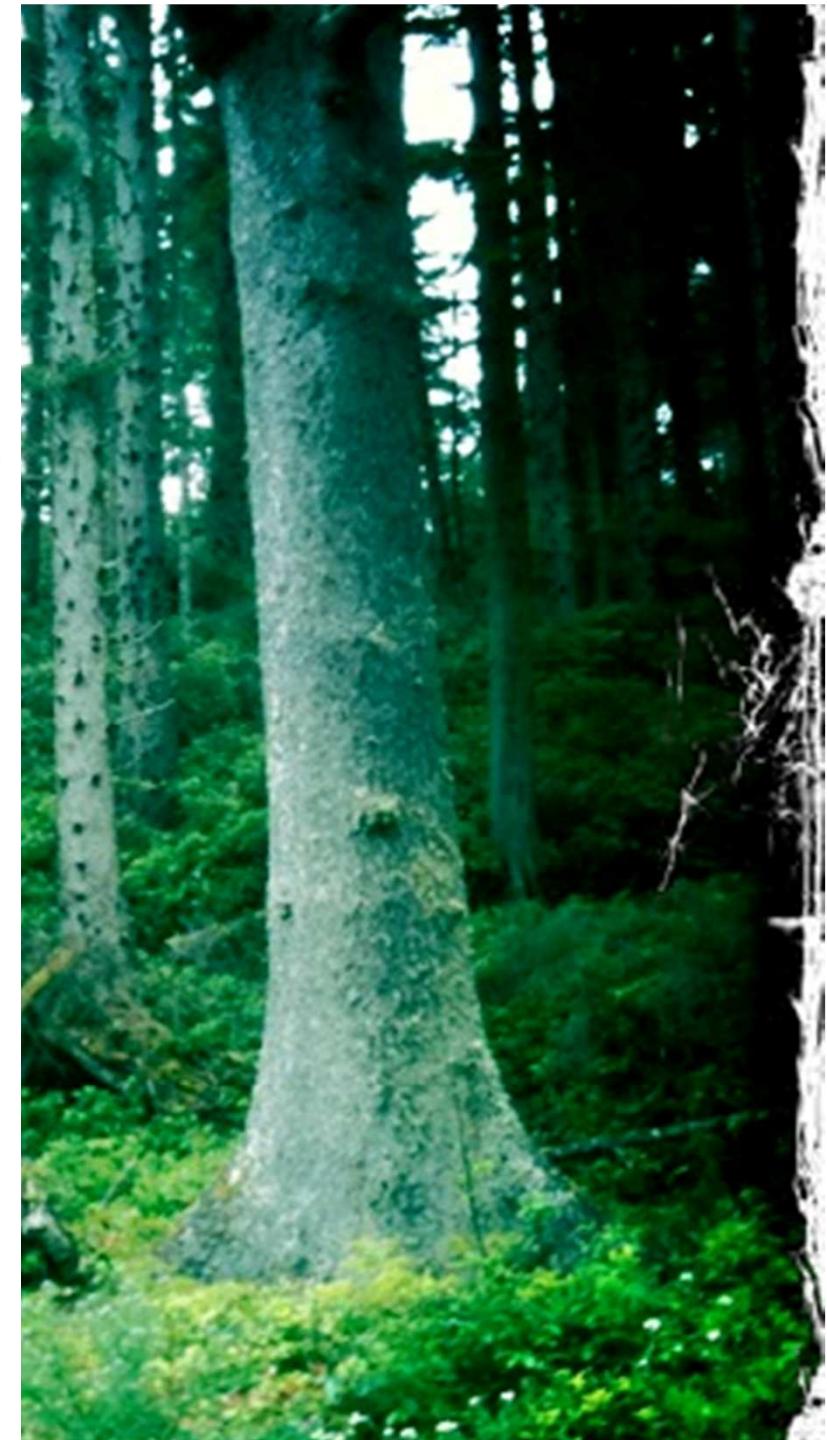
- “*West Coast Green Highway*” Initiative: BC, WA, OR, & CA - Make the 1,350 miles of the West Coast’s “Main Street,” I-5, an alternative fuels corridor.
- *First step: Create an Electric highway from “BC to Baja”*

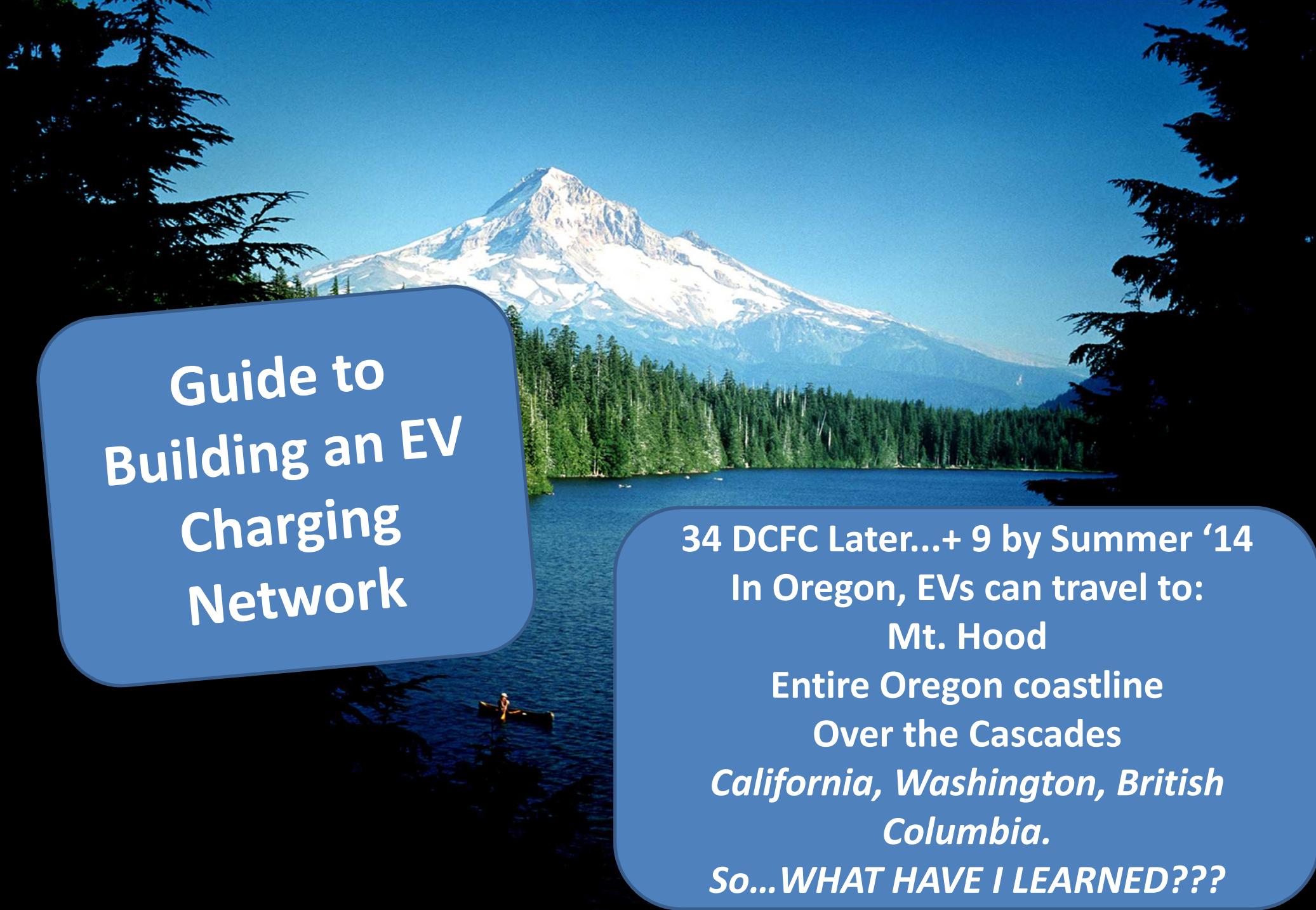


# WEST COAST ELECTRIC HIGHWAY

Drive cleaner. Drive smarter. Drive electric  
and save

Pacific Ocean





# Guide to Building an EV Charging Network

34 DCFC Later...+ 9 by Summer '14  
In Oregon, EVs can travel to:  
**Mt. Hood**  
**Entire Oregon coastline**  
**Over the Cascades**  
*California, Washington, British Columbia.*  
**So...WHAT HAVE I LEARNED???**

# My Overarching Policy: Visibility



The public needs to see these cars on the roads. They need to get behind the wheel. They need to find someone they know that has an EV. They need to SPREAD THE WORD-Even if they never buy an EV. They'll support electric transportation, because it's FAMILIAR.



Employer. Colleagues. Friends. Family. Neighbors. Library. Community businesses. Respected large & small corporations using EVs in fleet. E-bikes. Doctor's office.

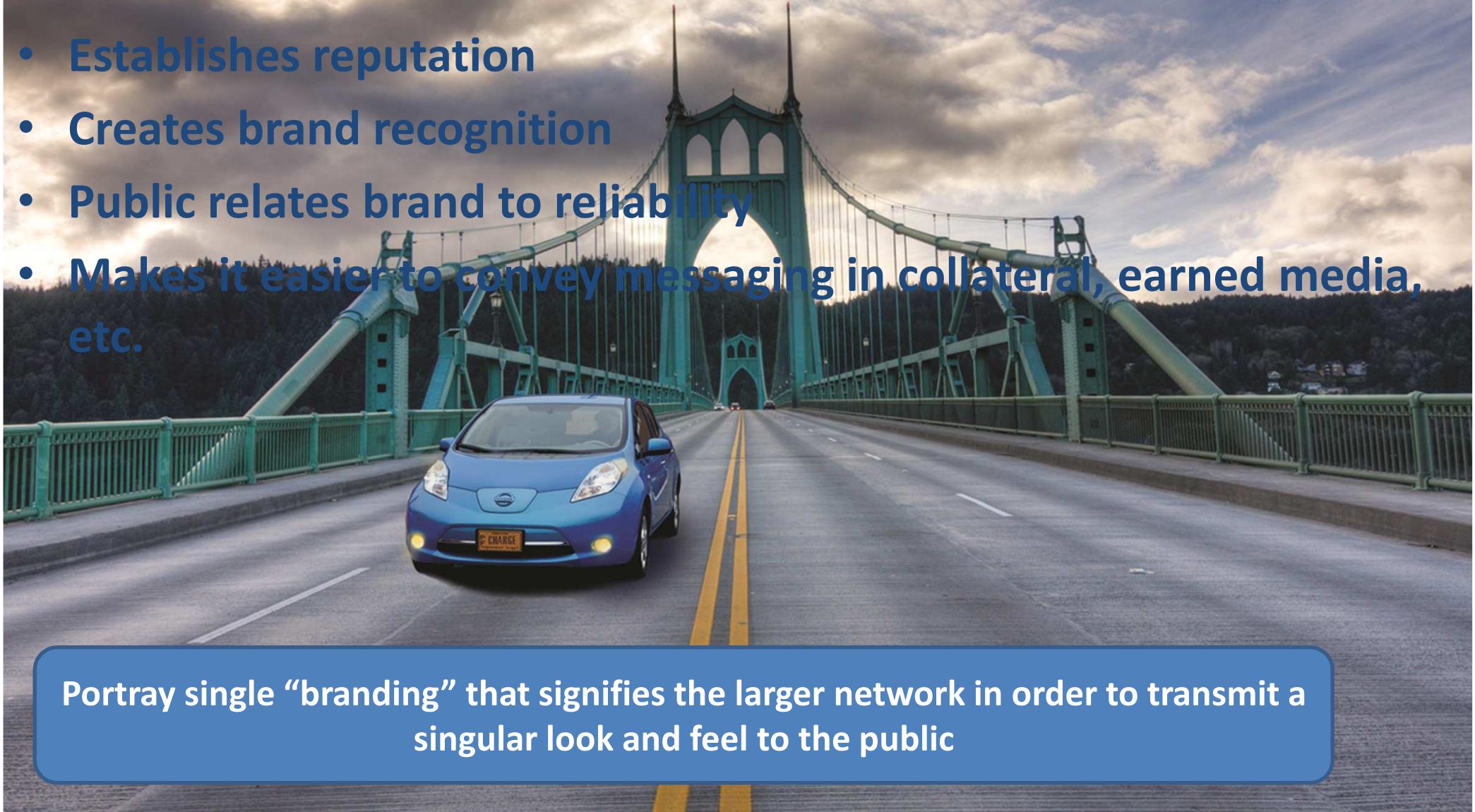
# Determine Single Point of Contact



Single point of contact can coordinate with multiple regions/partners in order to ensure seamless network, avoid duplication, avoid conflicts, establish accountability, and provide consistency.

# Agree upon a “brand” (Example: West Coast Electric Highway)

- Establishes reputation
- Creates brand recognition
- Public relates brand to reliability
- Makes it easier to convey messaging in collateral, earned media, etc.



Portray single “branding” that signifies the larger network in order to transmit a singular look and feel to the public

# West Coast Electric Highway: Creating A Brand

## Get plugged in!

Making the case for a shift towards electric transportation

**Energy independence. National security. Economic stability. Clean environment.**

Moving toward other sources of energy, especially renewable sources, is an increasing priority for people and governments, including the states of Oregon and Washington. America's transportation sector, highly reliant on oil, offers a prime opportunity to make such a move. That's where electric vehicles (EVs) come in.

Oregonians spend \$7 billion per year for petroleum, money that mostly disappears from the state's economy. EVs, powered by locally generated electricity, keep the money near home.

About one-third of Oregon's greenhouse gas emissions (GHG) come from the transportation sector, including traditional, internal combustion engine vehicles. Replacing these vehicles with EVs can make a significant impact on reducing overall GHG emissions.

All of these variables have created the conditions for a nationwide effort to move to electric transportation, using a sustainable, reliable and cleaner transportation fueling source.

**The West Coast Leading the Charge on Electric Transportation**

## Now let's drive on and explore!

A 100% electric vehicle can now coast the 585 miles of U.S. major transportation vein through Oregon and Washington, without using a single drop of gasoline.

Follow your sat-nav and begin your gas-free journey. Be sure to charge up along the way, though. EVs with the available fast-charging at Bellview Village Shopping Center. You might want to stop by the Oregon State Fair to charge up and check out the latest in electric vehicle and outdoor equipment right next door at RII for your upcoming adventures along the West Coast Electric Highway!

Hop onto U.S. Route 2 and head toward Lawrenceville to explore the historic town of Gold Beach and the Gold Beach Inn. You can also stop at the Bavarian Village, refined by a heating up of hot chocolate.

Fully charged and ready-to-go, you can continue your emission-free trip along I-5 towards Oregon, where you can stop at the Oregon Coast, the Oregon Caves, and the Columbia River Gorge. A quick stop at the EV store or a available charge off the highway will keep the system to the max.

Make your first electric vehicle stop in Oregon on Division Avenue in the heart of Portland's Old Town.

Thinking about outfitting those like you parked at OVI in Beaverton while charging? From Portland you can head straight over to Government Camp and the Mount Hood. Just about 100 miles from Portland, Government Camp is a great place along I-84. You can take your EV right out over 40 miles to Hells Canyon to enjoy the whitewater and learn about the Columbia River.

Enjoy a 21st century railway journey at the World's Only right off I-5 in beautiful Southern Oregon, a historic 1880s steamship stop.

Don't have time to get off the highway? No problem. If you're feeling the heat out of town and want to take a spot-on road trip? You can still get an EV on the road. From the Oregon Coast to the Columbia River, along I-5, you can take your EV right out over 40 miles to Hells Canyon to enjoy the whitewater and learn about the Columbia River.

Drive west to travel the famed U.S. 101 coastline, with over 180 miles of roadway EV-ready. You can travel fully charged from Astoria to the Forests, home of the Sea Lion Caves.

Railroad drivers drive longer, and save money along the West Coast Electric Highway. What a great place to invest in your EV!

**WEST COAST ELECTRIC HIGHWAY**

Drive electric. Drive smart. Drive electric.

<img



## Partners Developed: Logo, branding, brochure, & outreach plan.

# Oh, the places we'll go.

Transportation Electrification for a  
Clean, Energy-Independent Future.

WEST COAST  
ELECTRIC  
HIGHWAY

Drive cleaner. Drive smarter. Drive electric.  
Electric

Washington State  
Department of Transportation

Oregon  
Department  
of  
Transportation

CLEAN  
CITIES



# Establish Parameters

**GOAL:** Develop host site specifications to filter potential host sites, which all regions must utilize.

1. Location Relative to the Interstate/Interurban Highway
2. Site Accessibility
3. Site Layout
4. Site Facilities
5. Site Hours of Operation and Staffing
6. Site Parking
7. Site Shelter
8. Signage
9. Combination or Cooperative Sites



# Deployment Lessons Learned



1. Co-locate & leverage funding (+ visibility)
2. Conduct an assessment of existing traffic patterns
3. Install more than one charger at high traffic sites
4. At a minimum, prepare the site with power infrastructure (A.K.A. "Make Ready")
5. Install accompanying Level 2 (+ Level 1 if could be used for workplace charging)
6. If possible, install charger that has CHAdeMO & SAE

# Deployment Lessons Learned



1. Engage the utility as soon as possible (THINK 3-PHASE POWER, 480V)
2. Create a list after conduct audit of all possible choices that fit parameters of 2-3 top choices
3. Keep city, local permitting involved along the way
4. Make contact with chamber and any other stakeholders once you've done the research for consultation within reason
5. Ensure you're locating best site for EV driver and centrally located to spur local economic activity
6. Post the host site options on a virtual platform for public comment
7. KEEP PUBLIC/EV Community engaged throughout, open process, document everything
8. Keep file for future install leads that didn't work out, you NEVER know



Wait, wait...don't tell me...

1. OCPP

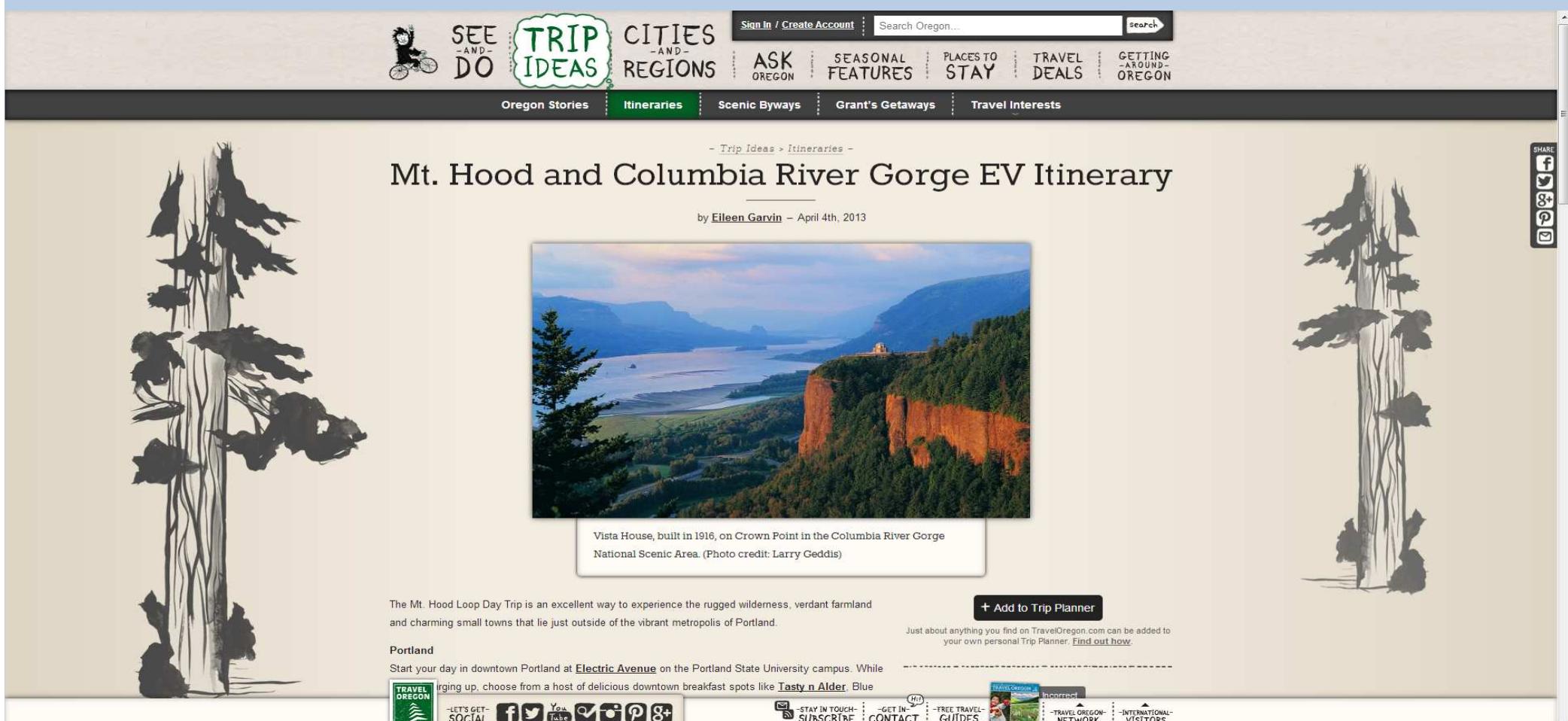
2. Open architecture

3. Build in as much **flexibility** as possible to the contract, in order to remain nimble

# Visibility: Tourism

## EV Tourism Initiative : ODOT & Travel Oregon

**GOAL: To develop an EV Tourism Industry in Partnership with Travel Oregon, Travel Portland, and other Tourism Industry partners.**



The screenshot shows the Travel Oregon website with a blue header. The main content is an itinerary titled "Mt. Hood and Columbia River Gorge EV Itinerary" by Eileen Garvin, dated April 4th, 2013. The itinerary features a large image of the Vista House at Crown Point, a red rock cliff overlooking the Columbia River Gorge. The page includes sections for Portland, travel deals, and social media sharing options. The website has a "SEE AND DO" section with a cartoon character, "TRIP IDEAS", "CITIES AND REGIONS", "ASK OREGON", "SEASONAL FEATURES", "PLACES TO STAY", "TRAVEL DEALS", and "GETTING AROUND OREGON". There are also links for "Oregon Stories", "Itineraries", "Scenic Byways", "Grant's Getaways", and "Travel Interests". The footer includes the Travel Oregon logo, social media links, and a "Stay in Touch" section with "SUBSCRIBE", "GET IN CONTACT", "FREE TRAVEL GUIDES", "TRAVEL OREGON NETWORK", and "INTERNATIONAL VISITORS".

SEE AND DO TRIP IDEAS CITIES AND REGIONS ASK OREGON SEASONAL FEATURES PLACES TO STAY TRAVEL DEALS GETTING AROUND OREGON

Oregon Stories Itineraries Scenic Byways Grant's Getaways Travel Interests

- Trip Ideas > Itineraries -

## Mt. Hood and Columbia River Gorge EV Itinerary

by Eileen Garvin – April 4th, 2013



Vista House, built in 1916, on Crown Point in the Columbia River Gorge National Scenic Area. (Photo credit: Larry Geddis)

The Mt. Hood Loop Day Trip is an excellent way to experience the rugged wilderness, verdant farmland and charming small towns that lie just outside of the vibrant metropolis of Portland.

**Portland**

Start your day in downtown Portland at [Electric Avenue](#) on the Portland State University campus. While you're up, choose from a host of delicious downtown breakfast spots like [Tasty n Alder](#), [Blue](#)

**Add to Trip Planner**

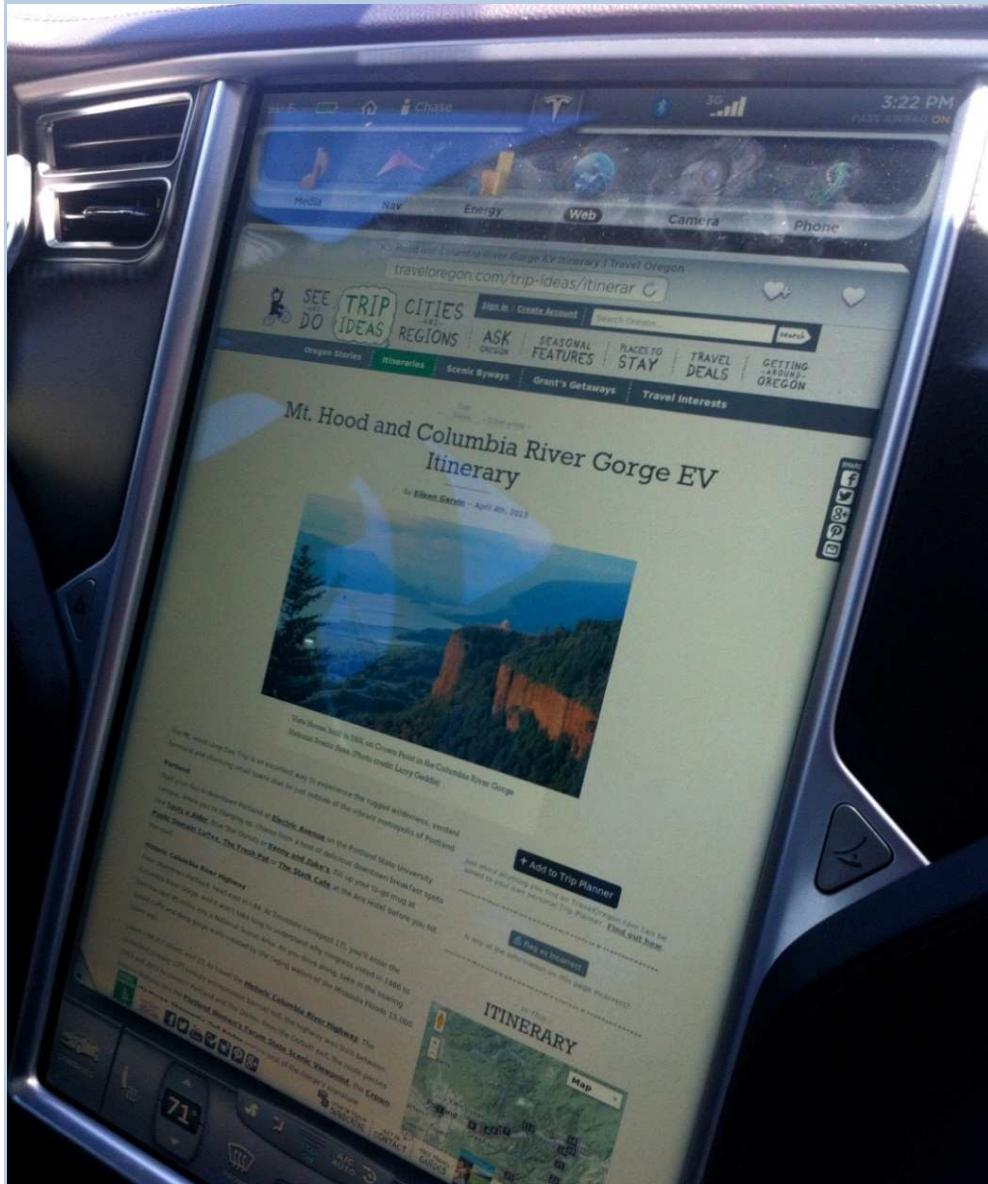
Just about anything you find on TravelOregon.com can be added to your own personal Trip Planner. [Find out how](#)

LET'S GET SOCIAL [f](#) [t](#) [y](#) [o](#) [i](#) [p](#) [g](#)

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# Travel by EV: Quieter. Faster. Cleaner. Smarter. *Better.*

## *Leave Oregon like you found it.*



# EV Ambassadors Initiative: ODOT & Citizens' Utility Board

EV Host Site Ambassador: Astoria, Oregon



[www.evambassadors.com](http://www.evambassadors.com)



# EV Ambassadors:

## *Citizens' Utility Board & ODOT*



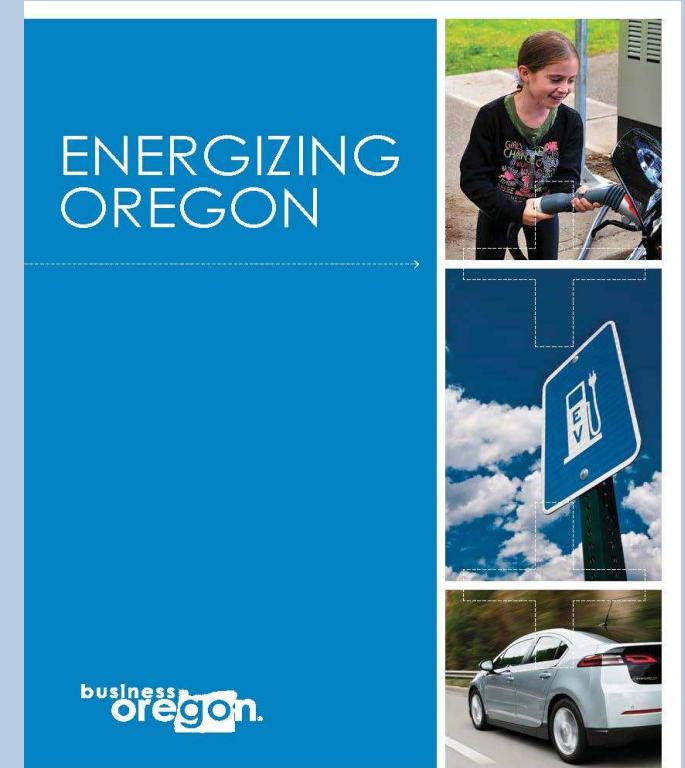
# Key Recommendation: EV Highway Signage-ODOT petitioned FHWA



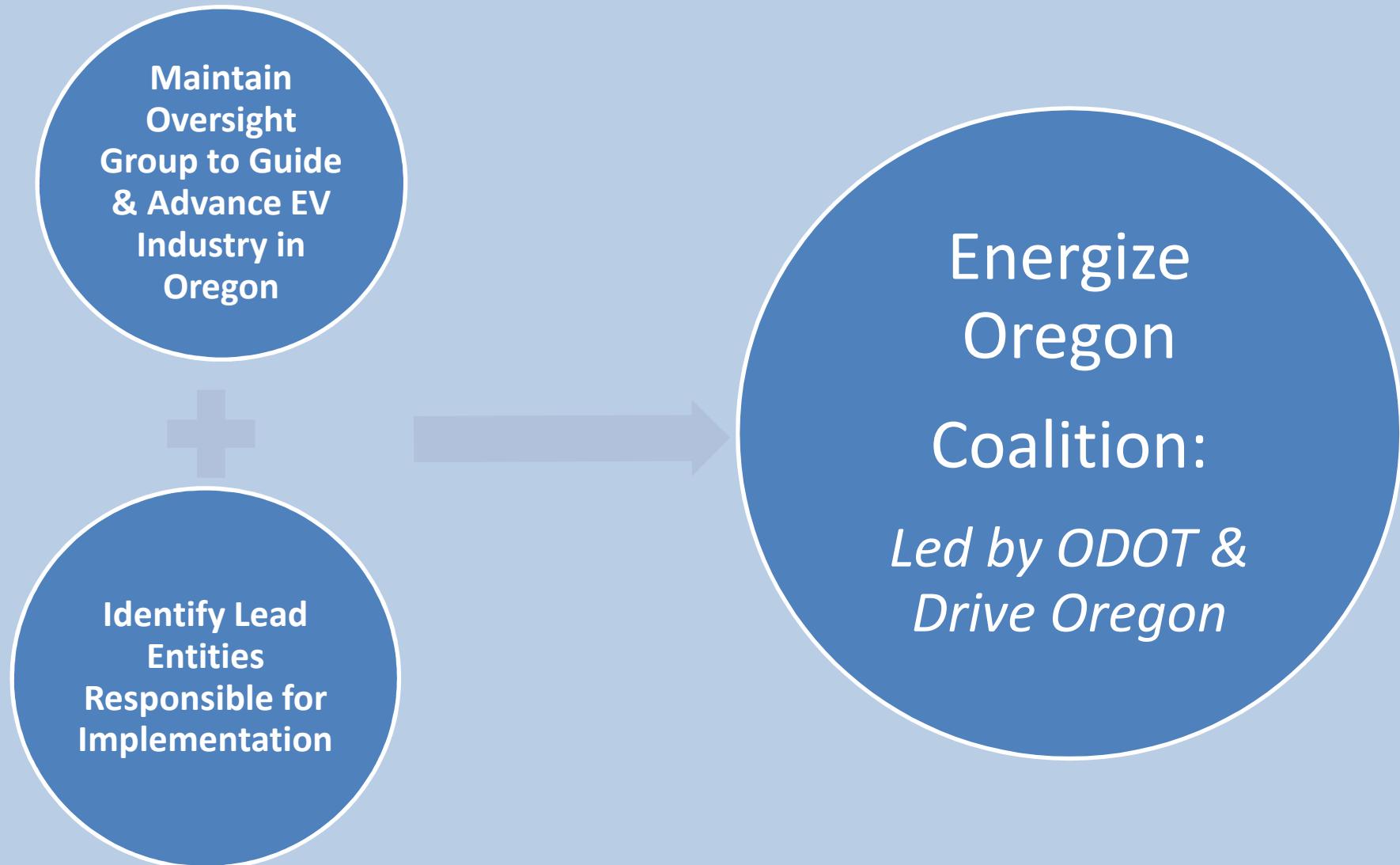
# *“Energizing Oregon”*

## *Oregon’s Statewide EV Plan*

- Action-oriented plan with a specific set of recommended actions.
- Energize Oregon Coalition: Serves as an implementation arm of the plan with public (ODOT) and private (Drive Oregon) co-chairs.
- Divided into 5 Key Challenges & Recommendations Categories:
  1. *Organizational*
  2. *Deployment*
  3. *Policy & Inducements*
  4. *Utilities*
  5. *Outreach, Education, & Communications*



# Key Recommendation: *Organizational*



**Travel Oregon by EV.**

**Quieter. Faster. Cleaner. Smarter. *Better.***

**Leave a lighter footprint so you can return to  
explore again!**



**Ashley Horvat, Oregon's Chief EV Officer**

**Cell: (503) 385-3293**

**Email: [ashley.n.horvat@odot.state.or.us](mailto:ashley.n.horvat@odot.state.or.us)**

**Twitter: [@ashleyinoregon](https://twitter.com/ashleyinoregon)**