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<th><strong>Docket Number:</strong></th>
<th>17-ALT-01</th>
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<tr>
<td><strong>Project Title:</strong></td>
<td>2018-2019 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program</td>
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<td><strong>TN #:</strong></td>
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<tr>
<td><strong>Document Title:</strong></td>
<td>WCC AFICC Overview</td>
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<tr>
<td><strong>Description:</strong></td>
<td>Overview of West Coast Collaborative Alternative Fuel Infrastructure Corridor Coalition. Submitted on behalf of Jon Mikulin, Environmental Protection Specialist, United States Environmental Protection Agency Region 9.</td>
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<td><strong>Filer:</strong></td>
<td>Jacob Orenberg</td>
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<td><strong>Organization:</strong></td>
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<td><strong>Submitter Role:</strong></td>
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John Mikulin
Technology & Partnerships Office – Air Division
US EPA, Region 9
California Energy Commission
Alternative & Renewable Fuel & Vehicle Technology Advisory Committee
November 7, 2017
Agenda

1) West Coast Collaborative (WCC)
   a) West Coast M/HD Diesel Emissions
   b) Partnership Opportunities
   c) Diesel Emissions Reduction Act (DERA)
   d) Other air quality and clean energy funding

2) M/HD Alternative Fuel Corridors
   a) FHWA Corridor Nominations
   b) FAST Act Funding
   c) WCC M/HD Alternative Fuel Infrastructure Corridor Coalition (AFICC)
❖ Public-Private Partnership

❖ Over 1,000 Partners

❖ EPA Regions 9 & 10 → AK, AZ, CA, HI, ID, NV, OR, WA, Pacific Islands & 419 Native Tribes
West Coast Collaborative Goals

1) Help meet National Ambient Air Quality Standards (NAAQS).
2) Reduce of diesel particulate emissions in impacted communities.
3) Support Greenhouse Gas (GHG) Reductions.
4) Support technology advancement to increase energy efficiency, energy security, and clean energy production.

Picture: Pre-1980 school bus exhaust
West Coast M/HD Diesel Emissions
West Coast Diesel PM2.5 Primary

- California
- Oregon
- Washington

- On-Road Heavy Duty Vehicles
- Non-Road Equipment
- Locomotives
- Commercial Marine Vessels

Finding: Mobile HD Diesel = 45% of California NOx Emissions

Note - Solvents + Miscellaneous + Dust + Bulk Terminals < 1%

California GHG Emissions

- Transportation: 39%
- Industrial: 23%
- Electricity Generation (In State): 11%
- Electricity Generation (Imports): 8%
- Agriculture: 8%
- Residential: 6%
- Commercial: 5%
- Not Specified: <1%

2015 Total CA Emissions: 440.4 MMTCO2e

Source: CARB (2017) [https://www.arb.ca.gov/cc/inventory/data/data.htm](https://www.arb.ca.gov/cc/inventory/data/data.htm)
Estimated Growth in Freight by 2045
Partnership Opportunities

1) WCC Announcements & Events
   a) Join/Sign Up – http://westcoastcollaborative.org/
   b) Participate in WCC Sector Work Groups (ad hoc, teleconference)
   c) Participate in WCC Partner-hosted events (e.g., GTSE 4/17-19/18)
   d) Participate in WCC Partners Meetings (biennial, in-person)

2) Diesel Emissions Reduction Act (DERA)
   a) Support DERA implementation
   b) Sign Up – https://www.epa.gov/cleandiesel/e-mail-updates
   c) Apply for Grants - https://www.epa.gov/cleandiesel/clean-diesel-national-grants
   d) Apply for Rebates - https://www.epa.gov/cleandiesel/clean-diesel-rebates
# California Mobile Source Incentive Programs (2017)

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*FY17-18 Governor's Budget Proposal
VW Diesel Settlement

- ZEV Investment Plans = $800M in CA; $1.2B in other 49 states
  - Focused on LD ZEV education and infrastructure deployment w/ some potential to support LD ICEV-to-ZEV replacements in CA.

- NOx Mitigation Trust = $2.7B nationwide (over 10 yrs)
  - California = $381.28M
  - Oregon = $68.24M
  - Washington = $103.96M

- NOx mitigation funds could be used for M/HD diesel-to-AFV replacements and repowers, including:
  - Class 4-8 trucks
  - Buses – school, shuttle and transit
  - Forklifts and other cargo handling equipment
  - Airport ground support equipment
  - Harbor craft
  - Switch locomotives
Other Air & Energy Funding

- BAAQMD MSIF & TFCA (fees) = ~$33M/yr
- SMAQMD (fees) = ~$4M/yr
- SJVAPCD TAP (fees) = ~$5M/yr
- SCAQMD TAO (fees) = ~$10M/yr
- WDOE Clean Diesel Program (State Appropriations + DERA) = ~$1M/yr
- US DOE VTO & FCTO (Federal Appropriations) = ~$400M/yr
- USDA NRCS (Farm Bill) = ~$30M/yr
- US EPA Targeted Air Shed (Federal Appropriations) = ~$30M/yr
- US EPA Clean Air Technology Initiative (CAA 105) = ~$1M/yr
- TBD federal infrastructure funding = ~$1T…?
M/HD Alternative Fuel Corridors
FAST Act: Section 1413
Alternative Fuel Corridor Designations

- National electric vehicle charging, hydrogen, propane, and natural gas fueling corridors.
  - Directs US DOT to designate alternative fuel corridors that identify the near and long-term need for, and location of fueling infrastructure at strategic locations along major national highways to improve the mobility of passenger and commercial vehicles that employ electric, hydrogen fuel cell, propane, and natural gas fueling technologies across the United States.

- Total funding for planned alternative fuel stations throughout California = $111.38M (from projects cited in FHWA nomination package)
  - **Potential federal cost-share** (≤ 80% w/ US DOT funding) ≤ $89.1M

Source: California Department of Transportation (2016)
FAST Act: National Funding

CMAQ - Congestion Mitigation and Air Quality Improvement Program = ~$2.4B/yr
https://www.fhwa.dot.gov/environment/air_quality/cmaq/

FASTLANE - Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies = ~$900M/yr
https://www.transportation.gov/buildamerica/FASTLANEgrants

TIGER - Transportation Investment Generating Economic Recovery = ~$500M/yr
https://www.transportation.gov/tiger

TIFIA - Transportation Infrastructure Finance and Innovation Act = ~$300M/yr
https://www.transportation.gov/buildamerica/programs-services/tifia

FTA Bus and Facility Competitive Grants = ~$300M/yr

FTA Low-No Bus Grants = ~$55M/yr
https://www.transit.dot.gov/funding/grants/low-or-no-emission-vehicle-program-5339c
West Coast M/HD Alternative Fuel Corridors

- Interstate collaboration needed to develop west coast corridors for M/HD AFV fueling similar the one shown here for LD ZEVs. This would help address:
  - Air quality
  - Climate change
  - Fuel supply diversity
  - Sustainable freight, transit and public works
  - Local job creation and economic development
WCC AFICC Steering Team Members


California: GO-Biz, Caltrans, CARB, CEC, CALCOG, CAPCOA

Oregon: ODOT, ODEQ, ODOE, CWCCC

Washington: WSDOT, WDOE, WSEO, PSCAA, PSRC
Leveraging FAST Act for M/HD Alternative Fuel Deployment

WCC M/HD Alternative Fuel Infrastructure Corridor Coalition

1) Convene a stakeholder coalition focused on infrastructure deployment.
2) Coordinate workgroups to develop a multi-state infrastructure plan.
3) Synthesize stakeholder input into a plan document.
4) Use the plan as the basis for joint applications to US DOT’s competitive funding programs.
5) Obtain federal funding assistance to help implement infrastructure in California, Oregon and Washington (i.e., natural gas, propane, electric vehicle charging and hydrogen for public and private M/HD fleets).
Ideas, Comments, Questions...?

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