

Planning/ Policy/  
Programming

**MAY 2019**

**Project Title:**

Advancing Adoption of Alternative Fuel  
Commercial Vehicles

**Task Number:** 2536

**Start Date:** July 1, 2014

**Completion Date:** August 31, 2016

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## Advancing Adoption of Alternative Fuel Commercial Vehicles

Finding Ways of Accelerating the Adoption of Alternative Fueled  
Vehicle for Freight Transport

### WHAT IS THE NEED?

Reducing hazardous emissions to improve air quality and lessen the impacts to human health have been a high priority for the Department and the State for Decades. More recently there have been significant efforts to reduce greenhouse gas emissions in the hopes of slowing the effects that will be brought about by climate change. While there are many sources of air pollution, mobile sources account for about 40% of hazardous air emissions per year nationally and up to 65% of harmful emissions in California.

When compared to passenger vehicles, trucks and other commercial vehicles have disproportionately higher emissions and impacts. One strategy to reduce emissions from commercial vehicle sources is to transition away from fossil-based diesel by increasing the adoption of alternative fuel vehicles.

### WHAT WAS OUR GOAL?

The development and understanding of the policies and regulations surrounding alternative fuels and commercial vehicles and the business considerations and motivations of the freight industry. This was done in order to identify the intersection between the freight industry and public and the shorter term goals of private industry (running a profitable company) with the longer term goals of government (human health and welfare). In this case reducing greenhouse gasses to moderate the effects of climate change and reducing priority pollutants to reduce the impact on human health.



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## WHAT DID WE DO?

- CInventoried existing alternative fuel infrastructure along the I-5 Corridor,
- Identified gaps in alternative fuel infrastructure along the corridor and looked for ways to establish additional alternative fueling locations.
- Studied the potential for integrating alternative fuel station locations and attributes to the mix of truck traveler information in the Smart Truck Parking System.
- Mapped the current policy environment for alternative fuels and commercial vehicles
- Met with stakeholders in number of forums to identify and discuss the implementation issues, synergies and barriers to developing alternative fuel facilities, and identified possible solutions.

## WHAT WAS THE OUTCOME?

An assessment of alternative fuels for trucks indicates that natural gas has the greatest near-term potential for long-haul trucking along the Interstate 5 (I-5) corridor of the West Coast providing a reduction in health-based and greenhouse (GHG) emissions from diesel.

It is possible for a goods movement truck to travel the full length of the I-5 corridor (California, Oregon, Washington) on compressed natural gas (CNG), although many of the fueling locations are not located at traditional truck stops.

The feasibility for expanding alternative fueling along the I-5 corridor was explored through a series of interviews with truck stop operators and four forums with industry experts. The forums yielded some specific and consistent themes:

1. There are major differences between California and the Northwest states on regulations and

2. funding for incentives to ;
2. The West Coast corridor and other national corridors have different approaches to the development of alternative fuels infrastructure for goods movement;
3. There is significant support for compressed natural gas —preferably renewable—and advanced engine technologies that can reduce emissions even further;
4. There is a need for consistent long term tax credits, increased grant funding and regulatory flexibility for alternative fuel conversion;
5. The West Coast Collaborative (WCC) and companion state programs provide funding for emissions and idle reduction devices, vehicle replacements, and alternative fuel options for fleets not major capital alternative fuel facilities or land acquisition, and;
6. With long haul and metro area truck parking shortages, there are future opportunities to match more flexible public capital investments in alternative fuel facilities and expanded parking with private truck stop operator management resources and oversight

## WHAT IS THE BENEFIT?

The long-term benefit of using alternative fuels for freight transport will be a reduction in greenhouse gasses and priority pollutants to slow down global warming and improve air quality. In the near term, this project developed a understanding of many of the issues and direction needed for alternative fuel facilities design and development, policies and activities that can lead toward improved air quality.