

Equipment

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Project Title:
Integrating Zero Emission Vehicles
(ZEVs) into the Caltrans Fleet

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Integrating Zero Emission Vehicles (ZEVs) Into The Caltrans Fleet

A study on how to maximize the incorporation of zero-emission vehicles into Caltrans' fleet to meet its goals.

WHAT IS THE NEED?

On March 23, 2012, former California Governor Brown issued Executive Order (EO) B-16-12. It ordered that "California's state vehicle fleet increase the number of its zero-emission vehicles (ZEV) through the normal course of fleet replacement, so that at least 10 percent of fleet purchases of light-duty vehicles be zero-emission by 2015; and at least 25 percent of fleet purchases of light-duty vehicles be zero-emission by 2020." On January 26, 2018, another EO was issued, committing California to a goal of 5 million ZEVs in operation by 2030.

WHAT ARE WE DOING?

The research team will identify needs, opportunities, and constraints associated with ZEV acquisitions and deployments. They will include identifying existing fleet data and operational resources by utilizing expertise and knowledge, obtaining relevant vehicle activity data, and creating a database of relevant fleet and infrastructure information through existing telematics services and contracts. The database will serve as the foundation for ZEV based analysis and spreadsheet tools.

The research analysts will perform the following tasks:

- Identify the potential areas that will utilize Fuel Cell Vehicles based on Network Fleet data.
- Identify the potential areas that will utilize ZEV battery-operated vehicles based on Network Fleet data.
- Determine mileage range for the pure battery-operated vehicles.



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- Determine whether California Department of Transportation (Caltrans) districts have reached their capacity to accept ZEV battery-operated vehicles.
- Recommend new hydrogen fueling station locations to obtain maximum value for Caltrans.
- Recommend new charging station locations.

WHAT IS OUR GOAL?

The main goal of this study is to determine how to maximize Caltrans' use of ZEV's which includes both the procurement criteria of ZEV's and determining the new fueling station locations to obtain the maximum benefit, to align with Caltrans' goals.

WHAT IS THE BENEFIT?

This research will help Caltrans determine how to maximize ZEV use in its fleet, such as the placement of ZEV and determining new fueling station locations to obtain the maximum environmental benefits. By expanding vehicle charging infrastructure and increasing adoption of ZEV use, Caltrans will help reduce carbon emissions from transportation, which accounts for 50 percent of the state's greenhouse gas emissions and 80 percent of smog-forming pollutants.

WHAT IS THE PROGRESS TO DATE?

The identification, acquisition, and incorporation of vehicle telematics data is complete with occasional updates as new information and data become available. The research team continued prioritizing of factors impacting ZEV integrations and developing the database spreadsheet tool.