

Transportation Projects at a Glance

RECENTLY COMPLETED

[Driving California's Transportation Emissions to Zero](#)

Funder: California Environmental Protection Agency

How to comprehensively reduce emissions from the state's largest source of carbon emissions — the transportation sector — has always been a vexing question. To address this, the California Environmental Protection Agency partnered with the University of California Institute of Transportation Studies on a landmark study. LCI was part of the team from UCLA, along with UC Davis, UC Berkeley and UC Irvine, that identified strategies to achieve the state's goal of carbon neutrality in the transportation sector by 2045. The study outlines policy options that could lead to a zero-carbon transportation system while also improving equity, health and the economy. Leading the study's workforce analysis, we found that achieving carbon neutrality in California's transportation sector could create over 7.3 million job-years of employment over the next 25 years.

[Setting an Agenda for Equity-Centered Clean Transportation](#)

Funder: Los Angeles Business Council

This study, led by our researchers and aided by a working group of community advocates, business leaders, and policymakers, links equity to the effectiveness of California's ambitious clean transportation goals. Key recommendations include targeting clean vehicles incentives towards moderate- and low-income drivers and ensuring public and private zero-emission fleets are first deployed to disadvantaged communities.

[An Electric Vehicle Charging Station Siting Strategy for the South Coast: Expanding Opportunities in Multi-unit Dwellings and Workplaces](#)

Funder: Mobile Source Air Pollution Reduction Review Committee

This report identifies residential and workplace areas in Southern California where investing in charging infrastructure can spur electric vehicle adoption, ultimately helping to reduce carbon emissions and local air pollution. The study uses data from the Southern California Plug-in Electric Vehicle Atlas, a tool that explores local factors such as unmet demand for charging stations at multifamily dwellings, and locations of employment centers, existing charging stations. Cities and others can use the report to identify where charging investments would make the most impact.

[Procedural Equity in Implementing California's Clean Cars for All Program](#)

Funder: Electrify America via Liberty Hill Foundation

We analyzed the means of and extent to which CC4A program implementation strategies have achieved procedural equity outcomes in the South Coast Air Quality Management District, the San Joaquin Valley Air Pollution Control District, and the Bay Area Air Quality Management District. Key findings include that outreach varied widely across the districts; capacity building was accomplished through different tactics; and that the state can provide more comprehensive guidance and support.

[Evaluating the Use of Fast-Charging Stations to Support Electric Vehicle Drivers in Multi-Unit Dwellings \(MUDs\)](#)

Funder: EVgo Services LLC

We evaluated a MUD-focused fast charging pilot program developed by EVgo, a charging network company. The study found that MUD-residents plug in their cars at fast chargers more frequently and closer to home than their non-MUD resident counterparts. This suggests that fast charging stations are an important component for encouraging electric vehicle adoption among MUD residents.

Designing Clean Vehicle Incentive Programs for Low-income Households

Funders: California Air Resources Board, the Strategic Growth Council and CalTrans

Our recent studies have helped California improve clean transportation access for disadvantaged communities. Researchers surveyed low- and moderate-income households about their vehicle history and travel preferences and assessed how existing state incentive programs are helping lower-income households replace their polluting vehicle. The findings of these provide a roadmap for programs that can most effectively and equitably support transitions to clean transportation for lower income households.

CURRENT RESEARCH

Forecasting Performance of Policy Interventions to Transition to Low-Carbon Medium and Heavy-Duty Vehicles

Funder: California Air Resources Board (CARB)

In partnership with lead-institution UC Irvine, we are participating in a CARB-funded study on how California can accelerate the transition to low-carbon medium/heavy-duty vehicles and off-road equipment between 2020 and 2050. We are specifically focused on developing an incentive and regulatory program evaluation tool that consists of a total-cost-of-ownership module that estimates amortized costs of ownership for a variety of vehicle and fuel technologies, a fleet turnover module that simulates turnover and vehicle/equipment choice and forecasts future inventories, and an impact analysis module that quantifies emissions reductions, health and employment benefits, and cost effectiveness of low-carbon transportation programs. With a planned public launch in spring 2022, it will inform CARB's incentive design and also demonstrate to fleet owners the financial case for going entirely zero-emission.

UC Carbon Neutral Fleet Plan for 2025

Funder: University of California Office of the President

The University of California (UC) system has over 5,500 vehicles spread throughout its 10 campuses. As part of the effort to be carbon neutral by 2025, the UC fleets set out to develop strategies for sustainable fleet management and the purchase of carbon offset credits based on a technological feasibility analysis and a financial analysis of fleet turnover and operations. This analysis uses three vehicle replacement scenarios to assess the tradeoffs among potential options for achieving carbon neutrality within the UC systemwide fleet.

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