



How to Increase Zero-Emission Vehicles in Overburdened Communities

Background

Zero-emission vehicles (ZEVs) have largely been bought by higher-income households. Growing the ZEV market to meet the goal of 100% ZEV sales by 2035 and achieving the long-term air quality and climate goals will require expanding ZEV access to all California drivers. Accelerating this access to overburdened communities is especially

important to ensure that those communities can enjoy the air quality benefits of these vehicles and have access to economic opportunities that may become available with improved transportation options.

Researchers from the University of California, Davis (UCD) put together a project to understand the transportation needs of overburdened communities and see whether ZEVs can cost-effectively meet those needs.



What was done?

Seven listening sessions were held in communities throughout the Central Valley and San Francisco Bay Area. The listening sessions provided common themes and topics centering ZEV concerns directly from community members.

The common themes from these sessions were used to develop an online state-wide survey. Survey topics included travel needs, travel behavior, ZEV perceptions, impacts of interventions on increasing ZEV consideration, and barriers to ZEV purchase and use.

The online survey was sent to 100,000 Californians in overburdened communities. Survey responses were analyzed, and the findings were compared to current policies to determine if the transportation needs of survey participants were being met.

Findings

Lack of charging options at home and high car costs are big barriers to buying ZEVs in overburdened communities. Survey results showed participants were unfamiliar with ZEVs, unaware of available ZEV incentives, and concerned about driving range. Older, middle-income participants in rural areas with less pro-environmental attitudes had the most negative view of ZEVs overall. The research team concluded that ZEVs can be an achievable form of transportation in these communities if the right support is provided, such as:

- Giving large incentives for buying ZEVs and increasing the number of affordable ZEVs,
- Providing chargers at home and work while subsidizing charging costs,
- Continuous engagement and building wealth in communities.

This research shows how important it is to combine the right policy support with factors like personal attitude and perceptions to meet the ZEV needs of underserved communities.



More Information

This research was conducted between May 2022 – Dec 2024 by Scott Hardman and Jesus Barajas from UCD (contract [21STC017](#)). Visit [CARB Research](#) or contact the [Research Division](#) for more information.