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Design and Implementation of the Enhanced Fleet Modernization Plus-Up Pilot Program: Lessons Learned from the San Joaquin Valley and South Coast Air Districts' First Year of Operation

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Topic / Issue

In order to reach California's ambitious air quality and climate change mitigation goals, the state needs a cleaner and more efficient transportation system. Replacing older, heavily-polluting cars with cleaner, more fuel-efficient vehicles is a first step. To help with this effort, the California Air Resources Board introduced the Enhanced Fleet Modernization Program (EFMP) Plus-Up pilot program in June 2015. EFMP Plus-Up increases incentives for low- and moderate-income households to retire and replace older and inefficient vehicles, providing up to \$9,500 toward the purchase of plug-in hybrids or electric vehicles.

The program was implemented as a pilot phase in the San Joaquin Valley Air (SVJ) Pollution Control District and the South Coast Air (SCA) Quality Control District. Researchers at UCLA used program data from these districts to better understand the initial impact of the program.

Research Findings

- Future expansion of EFMP Plus-Up seems promising. The demand for clean, advanced technology vehicle incentives among low- and moderate-income drivers in California's disadvantaged communities is likely to remain high if the program is expanded to the state's other 33 air quality districts.
- The program took hundreds of heavily-polluting cars off California roads. 773 replacement vehicle purchases or leases were made in the first year of operation of the EFMP Plus-Up pilot program (see Table 1).
- The program reached those who needed it most. Households which took advantage of the program were overwhelmingly low-income (see Table 2) and lived in a zip code which contained a disadvantaged community.

Study

This case study first describes the origins of the EFMP Plus-Up program, its relationship to other vehicle replacement incentive programs, and its funding sources. Using data from the two air districts, researchers then explain how the EFMP Plus-Up pilot was implemented during the first year of operation.

KEY TAKEAWAYS

- The EFMP Plus-Up program effectively reached vulnerable households which needed it most and removed heavily polluting cars from roads.
- Replaced vehicles tended to be newer, more efficient vehicles, such as hybrids or electric vehicles.

"The demand for clean, advanced technology vehicle incentives among the low-moderate income population in California is likely to be high for the foreseeable future."

Recommendations

- Other air quality management districts in California should consider the experience of the EFMP Plus-Up pilot phase. The 33 other districts can use the lessons learned from SJV and SCA when considering program design and operation decisions in the future. Air quality districts outside California can follow the state’s lead in seeking improvements in air quality and environmental justice through similar vehicle retirement and replacement programs.
- Air quality districts should explore alternative incentives to vehicle purchase. Some households may prefer transit passes or rideshare subscriptions over purchasing a car. However, coordination between local transit agencies and private sector firms to develop a universal travel pass has proven to be challenging.

Table 1: Replacement vehicle attributes

Vehicle Technology	Valley Air	South Coast
Average model year of replacement vehicle	2012	2013
Replacement vehicle is new	0 (0%)	120 (29.1%)
Battery electric (BEV)	60 (16.6%)	88 (21.4%)
Hybrid	197 (54.6%)	210 (51.0%)
Plug in hybrid electric (PHEV)	104 (28.8%)	114 (27.7%)
Total	361	412

Table 2: EFMP Plus-Up participants by household income category

Income Category	Valley Air	South Coast
Below 225% of FPL	360 (99.7%)	364 (88.4%)
225% - 300% of FPL	1 (0.3%)	30 (7.2%)
300% - 400% of FPL	0 (0%)	18 (4.4%)
Total	361	412

Pierce, Gregory, and DeShazo, J.R. 2017. "Design and Implementation of the Enhanced Fleet Modernization Plus-Up Pilot Program." UCLA Luskin Center for Innovation Report. See <http://innovation.luskin.ucla.edu/content/design-and-implementation-enhanced-fleet-modernization-plus-pilot-program>.

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