

Abstract #: 446

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Abstract Title: Does Public Charging Infrastructure Sale Electric Vehicles?

Abstract Text:

Low availability of public charging infrastructure is often cited as a major barrier for growing the plug-in vehicle (PEV) market even though many PEV owners do not use public charging. We use a set of surveys of more than 5,000 PEV owners from 13 states and region to explore the impact of incentives and infrastructure on vehicle purchase and usage. The survey includes all popular battery electric vehicle (BEV) models and all plug-in hybrid (PHEV) models and explores the importance of monetary and non-monetary incentives including factors such as subsidy for EVSE installation at home, workplace charging, and dedicated parking on the decision to buy or lease a plug-in vehicle. We use an ex post stated preference design to evaluate PEV user probability to buy the vehicle with and without the charging infrastructure and correlate between purchasing/leasing and vehicle usage including travel behavior and charging behavior. We find that only a small share of market growth can be attributed directly to public charging and that the impact of public charging varies by vehicle type, usage pattern and location. We also show that public charging, even when not the most important purchase incentive, still has an important role in creating a bundle of incentives needed to ramp up the PEV market.