

Amy Lastuka, Center for Sustainable Energy

Poster Title: Barriers to scaling up electric vehicle adoption in public fleets

Abstract: As part of the Department of Energy's Clean Cities initiative, The Center for Sustainable Energy conducted a focus group with managers from four local fleets. The fleets were all members of the San Diego Regional Clean Cities Coalition and were all interested in adding plug-in electric vehicles (PEVs) to their fleets. To better understand the barriers to scaling up PEVs the fleet managers were asked about challenges that had arisen as they added PEVs to their fleet and potential concerns about adopting medium- or heavy-duty PEVs. The focus group participants reported positive experiences with the PEVs they currently operate in their fleets, including high driver satisfaction and lower maintenance costs. However, they also highlighted several key barriers to adopting more PEVs in their fleets. Their largest concerns were the costs associated with the vehicles and the infrastructure. The higher upfront cost of a PEV compared to a similar non-electric car is problematic for public agencies that rely on a council or legislature to approve expenditures. A related concern was a lack of reliable data on the total cost of ownership for PEVs. Key technical concerns raised by the participants were the inability to track fueling costs for individual vehicles, a need for faster refueling, a need for redundancy in the event of an extended power outage, and high battery replacement costs causing vehicles to have low value on the used market. The main concerns related to medium- or heavy-duty PEVs were the comparability in power output and the potential difficulty in charging logistics for vehicles that are needed for shift work.