

Plug-in Electric Vehicles

Resources for Fleet Managers in San Diego

Plug-in electric vehicles (PEVs) offer government fleet managers opportunities to decrease fuel and operating costs while supporting goals mandated by local, state and federal policies to significantly reduce greenhouse gas (GHG) emissions.

PEVs in Local Public Agency Fleets

Cleaner fleets can play a sizeable role in meeting local and state GHG emissions reductions goals. Local agency fleets that have successfully adopted PEVs include:

- Port of San Diego:
<http://www.portofsandiego.org/environment/1520-nissan-electric-car-debuts-in-san-diego.html>
- University of California, San Diego:
<http://sustainability.ucsd.edu/initiatives/transportation-alternatives.html>

Benefits of PEVs

Reduced petroleum use, GHG emissions and operating costs

Government incentives

Reduced dependence on imported oil

PEVs in Private Fleets

Integrating clean vehicles in private fleets can help companies achieve their sustainability goals. Private fleets that have deployed PEVs in the San Diego region include:

- Frito-Lay: <http://www.fritolay.com/about-us/press-release-20120810.html>
- FedEx: <http://news.van.fedex.com/fedex-expands-hybrid-electric-fleet-50-percent-groundbreaking-conversion-program>
- car2go: <https://www.car2go.com/en/sandiego/>

Vehicle Incentives and Rebates

- Local governments and public agencies can take advantage of PEV rebates offered by the Clean Vehicle Rebate Project for up to 20 vehicles per year.¹
- The California Hybrid Truck and Bus Voucher Incentive Program is available to public entities purchasing a hybrid or electric truck or bus. Find out more at <http://www.californiahvip.org/>.
- The Goods Movement Emissions Reduction Program Proposition 1B provides funding for California truck owners to replace their old vehicles with newer, cleaner equipment.²

Choosing the Right PEV

Choosing the right PEV for your fleet requires a thorough understanding of current vehicle use.

- Fleet data logs can help determine which fleet vehicles can be replaced by PEVs.
- Fleet vehicles that travel fewer than 100 miles per day can be replaced with battery electric vehicles (BEVs-100% electric).
- Fleet vehicles that need extended range can be replaced with plug-in hybrid electric vehicles (PHEVs).
- The Department of Energy maintains a website of currently available PEVs at http://www.afdc.energy.gov/vehicles/electric_availability.html.

Charging PEVs at a Fleet Facility

An important consideration when planning for PEVs is the need for charging equipment, known as electric vehicle supply equipment (EVSE). San Diego Gas & Electric (SDG&E) can help plan for fleet charging. Learn more at <http://www.sdge.com/clean-energy/business/fleet>.

¹ <https://energycenter.org/programs/clean-vehicle-rebate-project>

² San Diego fleet managers can keep up to date with funding for this program by visiting <http://www.sdapcd.org/homepage/grants/grants.html>.

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- SDG&E will help fleet managers understand their historic electricity use (demand and timing) to determine the most cost-effective plan for charging. Commercial customers will receive information on their facility's electrical capacity for charging.
- Fleet managers must determine the number, location and types of EVSE for their PEVs. The different levels of charging (Level 1: 120-volt, Level 2: 240-volt) offer different charging speeds and have different up-front and operating costs.
- Placing charging infrastructure near electrical utility equipment can reduce installation costs.

Considerations for Fleet Managers

- Collect drive cycle data to understand fleet needs and which PEV would best meet those needs.
- Determine which fleet vehicles are optimal for replacement by PEVs.
- Consider future PEV fleet size and EVSE siting/needs when installing charging infrastructure.
- Inform drivers on ways to maximize fuel efficiency/battery life (reduce speeding, use of GPS route planning).
- Offer test drive opportunities to staff members and fleet drivers to promote and exhibit new technology.
- Share successful experiences with electric fleets and infrastructure installation among other regional fleet managers.
- Take into account the capital required for EV charging equipment and installation when planning for a new electric fleet.

Resources

California Energy Commission: Resources for fleet managers interested in upgrading to a clean vehicle fleet can be found at <http://www.energy.ca.gov/drive/upgrade/fleets.html>.

California Air Resources Board: Resources for incentives, grants, and funding for fleet managers interested in greening their fleet can be found at http://www.driveclean.ca.gov/pev/Resources_For_Fleets.php.

Department of Energy Clean Cities: A Plug-In Electric Vehicle Handbook for Fleet Managers is available online at http://www.afdc.energy.gov/pdfs/pev_handbook.pdf

Idaho National Laboratory Report: A brief report comparing energy costs per mile for electric and gasoline-fueled vehicles by the Idaho National Laboratory is found at <http://avt.inel.gov/pdf/fsev/costs.pdf>.

Department of Energy: The DOE's tool, eGallon, calculates fuel savings by using electricity instead of gasoline at <http://energy.gov/articles/egallon-how-much-cheaper-it-drive-electricity>.