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# Alameda County's transition to electric fleets

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Alameda County, CA - EV fleets By Michal Lenchner, Bay Area Green Careers Examiner June 19, 2011 12:44 am PT

Along with population growth worldwide and the increase in the ratio of car ownership, more vehicles contribute to road congestion and greenhouse gas emissions. As consumer awareness to alternative fueling is growing, more people examine hybrid and electric vehicles (EVs) to not only reduce dependency on foreign oil, but also produce less CO2. Fleet operations in the San Francisco bay area are leading in electric transportation deployment. While gauging the market and the demand for alternative fuel vehicles, Bay Area municipalities, businesses, and non-profit organizations are already working on various plans to set up an infrastructure for the anticipated growth in use of electric vehicles in the next two to three years.

The Charged Silicon Valley 2011 EV Symposium at SAP in Palo Alto, CA explored various aspects of EV business models, deployment, charging infrastructure (residential, workplace, and public), and EV policies in California. The Silicon Valley Leadership Group (SVLG) organized the symposium. Rafael Reyes from the Bay Area Climate Collaborative moderated a panel discussion of EV utilization in fleets.

Doug Bond, Transportation Services Manager at the Alameda County, CA said that fifty one percent of the county's carbon emissions come from transportation. In 2001, the Alameda County purchased its first hybrid car, becoming an early adoptee of alternative fuel vehicles (AFV). For the past ten years, the county deployed a variety of hybrids, such as Ford Fusion, Toyota Prius, and Ford Transit Connect trucks, resulting in over 126 vehicles today. Since 2002 the Alameda County hybrid fleet has reduced about one thousand tons of carbon emissions and presented a savings of over \$ 218,000. The county has also deployed several neighborhood electric vehicles to further reduce emissions in their operations. The county also explored other alternate fueling technologies and converted several vehicles to run on vegetable oil waste. Recently, Alameda's staff has been working with a hybrid truck manufacturer to make some custom adjustments to meet various applications of each vehicle.

Bond said that electrifying the county's fleet would have multiple benefits, one of which is the installation of EV charging infrastructure that will make it easier and more convenient for employees to use personal EVs. He presented a quantitative comparison of various fueling costs: Gasoline was factored at a \$ 4.50 per gallon compared to EV charging costs at peak at \$ 0.15, and off-peak at \$ 0.08. The cost-per-mile

averaged at \$ 0.25 for a conventional (internal combustion engine) car in comparison to \$ 0.036 for EV at peak and \$ 0.019 at off-peak charging.

For the Alameda County, the business case for transitioning into fleet electrification is clear:

In terms of the payback, the county looks at the lifecycle cost - although the purchase price is higher than conventional gasoline-operated cars, the savings in fueling and the lower on-going maintenance costs are significant advantages. Also, electrified fleets present fueling and environmental benefits. The county estimates that a plug in EV fleet will reduce vehicle maintenance costs by fifty percent, ensue one quarter fueling cost (by utilizing off peak electricity charging rates), and based on route predictability, would allow right sizing of vehicle battery to decrease battery investment costs.

To be able to plan and implement such projects, Alameda County has been looking at several funding resources at the federal, state and local levels. Some of the grants came for the California Energy Commission, BAAQMD (Bay Area Air Quality Management District), AAA (American Automobile Association), and more.

### **READ MORE - Electric vehicles in Corporate Fleets**

- Google's alternative transportation experimentation and GFleet programs.
- UPS fleet electrification, fuel reduction programs and the results.
- Electrified fleets are on the rise.

#### ADDITIONAL INFORMATION

> Alameda County Sustainability website: http://www.acgov.org/sustain/next/plan.htm

- Executive Summary (PDF) is available here.
- Click here for the full Sustainability Action Plan (by 2020).

> The Silicon Valley Leadership Group (SVLG) is a non-profit member organization in Silicon Valley, CA. The organization engages senior managers in cooperative efforts with local, state, and federal officials to address major public policy issues that affect the economic health and quality life in the region.

#### **UPCOMING EVENT**

SVLG will be presenting the **2011 Silicon Valley Energy Summit** on June 24, 2011 (a full day conference). Leaders from business, academia, and other organizations will discuss policies, programs, successful and sustainable business models, and provide insights on current best practices and new technologies. For more information, visit http://2011svenergysummit.eventbrite.com.



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