



Energy Productivity Success Stories

Los Angeles County Metropolitan Transportation Authority - Encouraging Consumer Acceptance of Energy Efficiency through Electric Vehicles

SUMMARY

The Los Angeles County Metropolitan Transportation Authority (Metro) recognizes the importance of energy efficiency, while ensuring that its transit and transportation network continues to be resilient in changing times. In 2011, Metro developed a comprehensive Energy Conservation and Management Plan (Energy Plan) that provides a blueprint for Metro's overall energy management and use. The Energy Plan incorporates elements of the Metro Board-adopted Energy and Sustainability and Renewable Energy Policies. By 2020, Metro's goal is 33 percent renewable energy use, and the agency is well on its way to hitting that target. Metro is now at 25 percent. The emergence of electric vehicles as an alternative type of personal transportation influenced how Metro plans for an integrated multi-modal transportation network. In 2013, Metro deployed, through a California Energy Commission (CEC) funded pilot program, twenty electric vehicle charging stations at five of Metro's park and ride locations. This type of electric vehicle charger network is the first of its kind that is operated and maintained by a transit agency in the United States.

COMPANY/ORGANIZATION BACKGROUND

Metro has a unique function among the nation's transportation agencies. It serves as the transportation planner and coordinator, designer, builder and operator for one of the country's largest, most populous counties. More than 9.6 million people – nearly one-third of California's residents – live, work, and play within its 1,433-square-mile service area.

BENEFITS

The placement of electric vehicle chargers at Metro park and ride locations was strategic. Charge stations at Metro park and ride facilities provide much needed infrastructure to Plug-In Electric Vehicle (PEV) users, but also provide those users with connectivity to Metro's other modes of transportation. This powerful link enables important consumer behavioral changes by blending two low-carbon transportation options: Plug-In Electric Vehicle (PEV) usage and public transportation via rail and any of Metro's natural gas fueled buses. Additionally, by placing PEV infrastructure at Metro transit stations, Metro provides visual reinforcement to a large number of potential PEV adopters that there is a charging network readily available. Further, connected through a support network that subscribes EV charger users, collects payments, and provides operations and maintenance support, Metro's electric vehicle charger stations provide a seamless integrated mobility solution.

EXPANSION

Using Metro's approach to incorporating EV chargers into its park and ride stations as a fundamental strategy, Southern California Edison has successfully applied for a tariff to fund extensive deployment of electric vehicle chargers across Southern California, ensuring that the transit and electric vehicle nexus continue to be a viable option in avoiding trips and traffic congestion in Southern California roads and highways. Through another CEC grant, Metro is currently expanding its EV charger network to an additional five park and ride locations. It is also leveraging another local fiscal year 2016 funding to deploy EV chargers at four rail



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divisions and 11 bus divisions for workplace charging. Metro will ultimately deploy electric vehicle chargers throughout its system and workplace locations.

LOOKING AHEAD

Metro continues to explore innovative ideas to ensure energy resiliency, including powering EV chargers with renewable energy sources (such as solar panels connected to deployable storage systems) and using those chargers as a source of emergency power. Metro's procurement to use biomethane as bus fleet fuel (instead of fossil natural gas) will further enhance Metro's greenhouse gas emissions reduction efforts for the Los Angeles region. Metro currently produces carbon credits generated through its dispensing of fossil natural gas. In the future, carbon credits through the use of biomethane and electricity as propulsion power (through its EV chargers and its rail network) can be sold along with Metro's current carbon credits to reinvest in energy efficiency, renewable energy, and energy resilience initiatives.