

## ■ Study mission on energy efficiency and renewable energy to California ■

**E**nergy efficiency is a key to sustainable development, mitigating climate change, and ensuring national energy security. It requires policy formulation, capacity building of government and the private sector, and fostering energy professionals. With increasing energy demand in the Asia-Pacific region, member governments are keen to increase energy efficiency by adopting clean technology (CleanTech) policies. The APO, in association with USJP Technology, therefore organized an observational study mission (OSM) to California, USA, 25–29 October 2010, to study its initiatives and best practices in energy efficiency, CleanTech, and renewable energy applications. For more than 30 years, California has aggressively implemented energy efficiency and renewable energy policies to minimize the impact of resource use on the environment. California's energy productivity rate, i.e., amount of GDP per unit of energy used, is higher than that of any other state at 68%.



*OSM participants and experts*

The California OSM was attended by 17 delegates from 10 APO member countries. The opening session explained how California had lowered per capita electricity consumption since 1973 despite doubling per capita GDP by using renewable energy technology, including a smart grid system. The smart grid system, introduced by Pacific Gas and Electric Company, uses “smart meters” that enable computerized control of electricity consumption. Prof. Tony Seba of Stanford University spoke on opportunities for solar power technology and the cost-effectiveness and reliability of solar-thermal power generation.

In San Jose, participants witnessed the application of energy efficiency in public buildings and remotely controlled street lighting systems. Chris Yelton and Andy Robinson of Echelon explained how their products saved energy via communication among electric devices in offices and homes. At Aurora Algae, participants learned about biofuel production using optimized algae. Tesla Motors let participants test-drive its Roadstar, a dynamic electric car; Solano County demonstrated the fundamentals of electricity generation from a wind power facility. Presentations by the California Energy Commission and Senate Committee on Energy illustrated how the state promoted energy efficiency through tax credits and special subsidies. On the final day, participants observed operations at a Northern California Power Agency geothermal plant in Calistoga.

The OSM provided many learning opportunities. Preeda Boonsilps of Thailand commented, “It was interesting to learn about programs that could benefit all of us.” Chairman of the Alternative Source of Energy and Fuel Committee Philippines Felix A. Velasquez noted that, “The quality and quantity of information we gathered kept us wide awake during all the study mission visits and meetings.” 