

# Solar Keeps Caltrans on Green Goal Track

Systems Financed by Feds Delivering Cheaper, Cleaner Power to 70 Facilities

Caltrans' solar power program continues to save money and help the Department comply with Governor Edmund G. Brown Jr.'s 2012 executive order for state agencies to reduce grid-based energy purchases by at least 20 percent by 2018.

The status of the Clean Renewable Energy Bonds (CREBs) program was outlined in an annual report recently released by Caltrans.

Through a federal financing program, Caltrans installed and now operates 70 photovoltaic solar collection systems at its facilities around the state. The CREBs program provided Caltrans with a \$20 million bond for construction and installation costs, at a 1.45 percent interest rate.

The system has had some minor issues. Components of the system, which have been generating electrical power since 2010, have required repairs that cut into operating time. Other factors, such as sun angle, building orientation, dirt and dust, and temperature variation also have contributed to reduced power generation, the report said.

Despite these logistical issues, by the time the bonds are paid off in 2023-24, Caltrans will have saved an estimated \$2.8 million in energy costs, the report estimates.

At peak efficiency, the system can generate 2.4 megawatts of power — enough to satisfy the average energy needs of 500 homes. By comparison, Caltrans' 344 maintenance stations require 2.1 megawatts of electricity annually.

Of the 70 Caltrans facilities with solar systems financed through the CREBs program, 55 are at the agency's maintenance or equipment shops. The remaining 15 operate at Caltrans office buildings, materials laboratories, roadside rest areas, transportation management centers, and toll bridge or truck inspection facilities.

Several of Caltrans' regional districts also have installed photovoltaic systems not associated with the



Caltrans photo by Steven Hellon

Although this solar array in Caltrans District 8 is not part of the CREBs program, it contributes to the Department's efforts to reduce grid-based power purchases 20 percent by 2018 from 2012 levels.

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CREBs program, including District 8 in the Inland Empire area, and Stockton-based District 10. Solar facilities independent of CREBs also have been built at the San Francisco-Oakland Bay Bridge Maintenance Complex, and at State Route 99 rest areas outside Tulare.

Utilizing this clean power source also supports the state's ambitious climate goal of cutting greenhouse gas emissions 40 percent below 1990 levels by 2030. **MM**

Source: Clean Renewable Energy Bonds Program 2017 Annual Report; Division of Business, Facilities and Security