

Solar Energy Systems

Reducing Energy Costs at Key Water Facilities



Improving INFRASTRUCTURE

Solar energy systems produce green power and reduce energy costs for the San Diego County Water Authority at its three largest facilities. Solar panels have been installed on the roof and carport structures at the Kearny Mesa headquarters and the Fred A. Heilbron Operations Center in Escondido. A larger solar system is in place at the Twin Oaks Valley Water Treatment Plant north of San Marcos.

Power generated by the solar power systems reduces the Water Authority's energy costs, making its operations more efficient for rate payers.



Photo courtesy of Borrego Solar Systems, Inc.
Solar panels at Twin Oaks Valley Water Treatment Plant.

Water Authority Solar Power Systems

	NUMBER OF SOLAR PANELS	ESTIMATED ANNUAL PRODUCTION (kW hours)	% OF ENERGY FROM SOLAR
Kearny Mesa Headquarters	1,918	644,000	60%
Escondido Operations Center	742	245,000	55%
Twin Oaks Valley Water Treatment Plant	4,844	1,755,000	25%

The new solar power systems will generate about 2,600,000 kilowatt-hours each year. Combined, they are expected to cut the agency's energy expenses by nearly \$1.7 million over the next 20 years. The systems also reduce the Water Authority's draw from the local power grid by 25 to 60 percent per site.

The Water Authority's solar power systems use photovoltaic panels to convert sunlight directly into electricity. Unlike other power systems, they do not consume water to generate energy.

No-Cost Installation

The solar energy systems were installed at no cost to the Water Authority through a 20-year contract with San Diego-based Borrego Solar Systems. Borrego owns and operates the systems and sells the energy to the Water Authority at a reduced and fixed rate with an annual price escalation factor. A monitor in the Kearny Mesa lobby displays power production for all three sites in real time.

The environmental benefits of the three solar power systems are equivalent to planting 900 acres of trees. Over a 30-year period, the systems will:

- Prevent about 100 million pounds of carbon dioxide emissions
- Conserve nearly 145,000 barrels of oil. ■



Rooftop solar panels at Kearny Mesa headquarters.