



*“The 5MW solar project is the best use of the District’s undeveloped property, especially considering the savings we’ll realize over the next 25 years through the PPA – it’s truly a win-win. The reality is that we will continue to be plagued with limited water resources for the foreseeable future; our solar projects provide a sustainable solution to help us deal with increasing energy demand and escalating Utility costs.”*

**Andy Webster, Chief Engineer**  
RCWD

## Solar Energy Project

The Rancho California Water District (RCWD) serves the City of Temecula, portions of the City of Murrieta, and unincorporated areas of southwest Riverside County; in total, a service area of over 100,000 acres, with more than 120,000 customers. The District operates and maintains 940 miles of water mains, 36 storage reservoirs, one surface reservoir (Vail Lake), 47 groundwater wells, and 40,000 service connections.

RCWD has invested wisely in energy efficiency measures, advanced process and energy use monitoring, demand response practices to minimize peak day energy use, and on-site solar energy generation to offset energy consumption at power hungry sites. Over the past seven years, the District has installed over 2.75 megawatts of 100% renewable solar energy generation at three sites, which provide 99% of the power required by its Headquarters facility, and 9% of the District’s total electricity usage. However, with the start-up of RCWD’s latest solar energy project in June 2016, the total electricity usage supplied by solar will increase to 27%.

RCWD’s latest investment in solar energy is a 5MW single-site project that takes advantage of a unique bill credit program approved by the California Public Utilities Commission: the Renewable Energy Self-Generation Bill Credit Transfer program, or RES-BCT. This tariff, which is open to public agencies only (including schools), allows Utility customers to install a solar array of up to 5MWs at a site owned or leased by the public agency, and then apply bill credits associated with the power generated by the system to the public agency’s portfolio of electric meters. In other words, the solar energy system does not have to be located at the same site that will use the power generated by the array.



### KEY FACTS

#### Solar Project

System Capacity . . . . .	5,011 kWdc
Guaranteed Annual Production (1st yr) . . . . .	11,092,046 kWh
Technology . . . . .	Ground-mount Single-Axis Trackers with high efficiency PV modules
Number of Sites and Interconnections . . . . .	1
Total Acreage Required . . . . .	17 acres
Procurement Method . . . . .	Power Purchase Agreement
Estimated Lifetime Energy Cost Savings . . . . .	\$20.4 Million
Environmental Benefits . . . . .	7,454 tons of CO2 equivalents offset annually
Asset Management Services . . . . .	Provided by TerraVerde Renewable Partners

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## Solar Energy Project *(continued)*

RCWD retained TerraVerde to develop the project and oversee procurement, design, construction, commissioning, and system performance validation, including: Investment grade financial analysis, site selection and property due diligence, interconnection studies and interconnection agreement negotiation with Southern California Edison, system performance specifications, RFP documents, Power Purchase Agreement (PPA) contracts, performance guarantee, engineering/design requirements, site prep requirements, and Operations & Maintenance requirements. TerraVerde's Asset Management group will also provide on-going system performance management, financial reporting, and bill credit account management for the District.

After careful review of TerraVerde's financial analysis, the District chose to use a solar energy PPA, which allows the District to achieve its cost savings and sustainability goals with very little capital investment. The PPA locks in a rate that is substantially lower than the current cost of energy from SCE for 25 years with zero annual escalation, which yields total net savings of over \$20 Million over the term of the PPA.

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*"RCWD's RES-BCT based solar PPA project is a great example of how California public agencies can achieve substantial energy cost savings with no capital investment, and as an alternative to NEM solar projects, which are not always a good match for sites/facilities that have large electrical loads but very little available area for solar panels."*

**Rick Brown, PhD, President**  
TerraVerde

*"TerraVerde has been great to work with on our 5MW RES-BCT project. This project would not have happened without them. The best compliment of their technical abilities & experience came from the solar vendors who participated in TerraVerde's RFP process: the RFP package was the most complete and professional they had seen."*

**Andy Webster, Chief Engineer**  
RCWD

