California Valley Solar Ranch Project

Quick Facts

- **Location**: San Luis Obispo County, California
- **Capacity**: 250 MW
- **Type**: Single-axis ground-mount (solar photovoltaic)
- **Power Purchaser**: Pacific Gas and Electric
- **Completed**: October 2013

Overview

NRG Energy, Inc., through its wholly-owned subsidiary, NRG Renew, acquired California Valley Solar Ranch (CVSR), a 250-megawatt (MW) photovoltaic solar electric system, from SunPower. Generated energy is sold through two long-term power purchase agreements to Pacific Gas and Electric, helping California achieve its renewable energy delivery requirement, as mandated by California’s Renewable Portfolio Standard (RPS).

The CVSR project consists of nine solar photovoltaic (PV) arrays, or groups of solar PV panels, along with a substation and other facility buildings. The project’s design and construction approach minimized impacts to the 4,700-acre CVSR site. Solar arrays cover only 30% of the total site, requiring minimal grading and water usage. Other beneficial features of the project include reseeding to promote vegetation recovery around the arrays and preserving wildlife migration pathways. Also, an abandoned gypsum mine on the site was cleaned and restored.

Solar PV panels at CVSR use the SunPower T0 Tracker system that tracks the sun’s movement during the day, increasing energy capture by up to 25 percent over conventional fixed-tilt systems. The electricity generated by CVSR is enough to serve a yearly average of 100,000 homes, and double that number at maximum capacity during peak hours of the day. The system offsets approximately 336,000 metric tons of greenhouse gas emissions each year of operation.

The project also provided a boost to the local economy by having created as many as 700 construction jobs during its two-year construction period, all while generating emission-free electricity and consuming an extremely small amount of water. NRG has secured a $1.237 billion federal loan guarantee from the U.S. Department of Energy in connection with the financing of the project.
Benefits

- Up to 336,000 metric tons of greenhouse gas emissions will be avoided each year of operation
- Created 700 construction jobs during the two-year construction period
- Injects $315 million, including $10 million in total tax revenues into the local economy
- Protects and conserves more than 12,000 acres of land in and around the Carrizo Plain
- Includes a water recycling plan that minimizes annual water use
- Project design includes a wildlife corridor and compatible fencing with minimized visual, grading and species impact

About NRG Renew

NRG is at the forefront of changing how people think about and use energy. A Fortune 250 company, NRG supports clean energy resources and technologies that are critical to our transition to a sustainable, low carbon society and clean future. We’re using tomorrow’s technologies – today.

Our diverse power generating facilities have a capacity of about 53,000 megawatts, capable of supporting almost 42 million homes, and our retail electricity and thermal energy divisions serve nearly 3 million residential, business, commercial and industrial customers in 47 states. We built the nation’s first privately-funded electric vehicle charging infrastructure and continue to create new, clean energy solutions for our customers.

NRG Renew, a subsidiary of NRG Energy, Inc., is one of the largest renewable energy companies in the United States, with more than 150 renewable energy projects totaling approximately 4,500 gross megawatts (MWeac) of solar and wind capacity in operation throughout North America, U.S. territories and the Caribbean.

Rather as one of the largest solar power developers in the country or by giving customers the latest tools to better manage their energy use, NRG is a pioneer in developing smarter energy choices.