



"We rely on McCalmont Engineering's solar expertise because they want every one of their systems to perform... Our solar system generated energy as promised."

**-Hilary G., Operations Contracts Manager
South Bayside Waste Management Authority**

South Bayside Waste Management Authority

YEARS OF EXPERIENCE

Business Needs

The location of SBWMA's 766 kW roof mounted system is the Shoreway Environmental Center, the Bay Area's leading green municipal waste and recycling facility owned by SBWMA. McCalmont Engineering designed and engineered the PV system, and Ecoplexus installed it through a solar Power Purchase Agreement (PPA), an energy contract that includes financing, owning, operating, and maintaining the photovoltaic system.

Solution

The SBWMA solar PV project presented many unique design and engineering challenges. One concerned the appropriate array sizing requirements on the two facility buildings. The larger Transfer Station building could support a sizable solar PV array, yet the MRF building—the smaller of the two—had a higher electricity demand load than the available space on its own roof could support. In order to meet the MRF building's load requirements, our engineers directed a portion of the solar power from the Transfer Station building with the smaller load to the adjacent MRF building.

Also, one of the four inverters servicing the Transfer Station was designed and positioned to allow for potential re-routing of conductors to meet future demand load in the MRF building. This flexible inverter re-wiring gives SBWMA options for future facility growth.

The developer demanded a very tight schedule for this project; design, engineering, procurement, installation, and system commissioning were completed in a four month span between September and December 2011.

Benefits

This large photovoltaic system served to bolster the facility's positive environmental profile and contributed to SBWMA becoming a LEED® Gold certified facility. This solar project is one of the larger installations in the Bay Area, and is estimated to save approximately \$2.1 million in energy costs over the next 20 years for SBWMA.

The South Bay Waste Management Authority (SBWMA) project offered a unique opportunity for McCalmont Engineering to showcase its design and engineering expertise for an environmentally conscious community public works facility in San Carlos, CA.

Project Specifications

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| Location: | San Carlos, CA |
| Size: | 766 kW |
| Completed: | December 2011 |
| Type: | Roof and Ground Mount |
| Scope: | Full engineering & design |
| Inverter: | Advanced Energy PV Powered & SMA |
| Modules: | Canadian Solar |
| Racking: | Unirac |