

Water Pollution Control Facility Solar Power



The City of Hayward is committed to generating and utilizing renewable energy sources to operate the City's Water Pollution Control Facility (WPCF). Solar energy is an important resource in the WPCF's mission to generate 100% of its energy needs and to export energy to PG&E so that other City accounts may benefit from energy produced from clean and green sources. Use of renewable energy at the WPCF is also helping the City meet its goals of reducing municipal greenhouse gas emissions from 2005 levels by 20% by 2020 and 82.5% by 2050.



What solar facilities currently operate at the WPCF?

In December 2010, a one megawatt solar photovoltaic system was completed and commissioned. The solar installation consists of 5,152 panels covering approximately 8 acres just west of the City's WPCF.

How much solar energy is currently generated?

The solar system generates various amounts of energy depending on weather and temperature. As can be expected, less energy is produced on cloudy and rainy days, while sunny days result in higher production. During 2015, monthly energy production ranged from 90,000 kilowatt hours (kWh) to more than 270,000 kWh. Since coming on line in December of 2010, the system has produced over 2,300 megawatt hours of electricity annually offsetting an estimated 5.6 million pounds of carbon dioxide that would have otherwise been emitted into the atmosphere.

How much of the WPCF's energy needs are supplied by solar?

The solar array is capable of providing up to 30% of the WPCF's energy needs. With successful implementation of a cogeneration facility in 2014 which produces energy from digester gas (a byproduct of the wastewater treatment process and another renewable resource), reliance on solar energy for WPCF operations has decreased and almost all of the solar energy is exported to PG&E. The exported electricity is credited to other City facilities.

What are the City's plans for future solar energy production at the WPCF?

The City has plans to install an additional one megawatt solar facility. A second solar facility offers the City an excellent opportunity to generate additional renewable and clean energy to help the City achieve "Zero Net Energy" status for all City facilities. Financial incentives make it possible to cost effectively construct and operate a second installation, while meeting the City's goal to reduce its dependence on fossil fuels.

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