

Maximizing EMWD's Resources

Energy Efficiency Program Overview

A significant electrical load coupled with capacity issues with the regional electrical power grid and the cost of electrical power led EMWD to pursue alternative sources of electrical power supply including use of solar, digester gas, fuel cell technology, and microturbines.

Solar Project

- EMWD installed solar power generation systems at its Perris, Moreno Valley, Temecula, San Jacinto, and Sun City facilities.
- The systems produce 1 megawatt (1,000 kilowatts) of power to be used at each of the respective facilities and surrounding supporting infrastructure.
- Each facility will have an average of 30 percent of its energy usage provided through the solar facilities.
- The solar investment is anticipated to save ratepayers more than \$1 million annually over the life of the system.

Digester Gas Driven Fuel Cells

- Installed at EMWD's Moreno Valley and Perris Valley regional water reclamation facilities.
- Fuel cells, which operate on renewable fuel, provide 25 to 40 percent of each facility's energy requirements and produce virtually zero emissions, cutting greenhouse gases by more than 10,600 tons annually—the equivalent of taking approximately 1,000 cars off the road for one year.
- The fuel cells save approximately \$1 million per year in energy costs.

Microturbines

- Nine 60-kw microturbines provide additional power generation. The exhaust from these microturbines heats water necessary to power a 150-ton air conditioning unit.
- Microturbines save more than \$300,000 a year.



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Climate Action Leader

EMWD is a member of the California Climate Change Action Registry, a non-profit public/private partnership that serves as a voluntary greenhouse gas (CHG) registry to protect, encourage and promote early actions to reduce CHG emissions.

In addition to efficiency investments that are already paying off, EMWD has a two-pronged approach for investing in projects that address climate change. EMWD is committed to investing in projects that adapt to climate change such as climate resilient water supplies and landscapes as well as demand reduction efforts. EMWD is also committed to investing in projects that mitigate climate change by maximizing energy independence, reducing GHG emissions, and advancing policies and strategies that address climate adaptation.

Technology

Using the most appropriate technology, many facilities are managed remotely through a 24-hour per day Supervisory Control and Data Acquisition System (SCADA). In addition, Geographical Information Systems (GIS) provides precise mapping of EMWD's water systems.



Decerto Water Optimization Software saves energy by using reservoir levels, water demands, system pressures, and supply constraints to determine optimal schedules for running pumps.