

Solar Power: Metropolitan's Investment in Renewable Energy



Sitting at the center of the water-energy nexus, the Metropolitan Water District of Southern California is uniquely positioned to benefit from solar power. Delivering 1.5 billion gallons of water every day to a service area of 19 million people takes energy, a lot of it. Every year, Metropolitan uses enough electricity to power a small city. While much of that comes from hydropower, electricity purchased from retail utilities is partially generated from fossil fuels. As climate change increasingly challenges water reliability, Metropolitan wants to be an even greater part of the clean-energy solution. Over the past 10 years, Metropolitan has invested more than \$23 million in solar power, building photovoltaic solar energy projects at two of its five water treatment plants and a visitor center. In 2017, it will do the same at a third treatment plant. These investments not only cut the agency's carbon footprint, they protect Metropolitan against energy market price increases and reduce overall operational costs.

Metropolitan's Solar Facilities



SKINNER WATER TREATMENT PLANT IN WINCHESTER

Design capacity: 630 million gallons of water per day

Solar power: 1 MW, generating 2.3 million kWh of clean energy a year, offsetting nearly 20% of the plant's demand

Construction cost: \$12.5 million

Size: 10 acres with 4,620 photovoltaic panels

Launched: May 2009



WEYMOUTH WATER TREATMENT PLANT IN LA VERNE

Design capacity: 520 million gallons of water per day

Solar power: 3 MW, generating 6.5 million kWh of clean energy a year, offsetting 45% of the plant's current demand, or 30-35% once the plant switches to ozonation treatment

Construction cost: \$10.5 million

Size: 15.5 acres with 10,780 photovoltaic panels

Launched: June 2016



JENSEN WATER TREATMENT PLANT IN GRANADA HILLS

Design capacity: 750 million gallons of water per day

Solar power: 1 MW, generating 2.3 million kWh of clean energy a year, offsetting nearly 20% of the plant's demand

Estimated construction cost: \$4-5 million

Size: 5 acres

Estimated launch: Late-2017



DIAMOND VALLEY LAKE VISITOR CENTER IN HEMET

Educates the public about Diamond Valley Lake and water in California

Solar power: 0.5 MW capacity, generating about 330,000 kWh of clean renewable energy per year

Size: Roof-mounted on seven buildings

Launched: 2006

Cutting Carbon Emissions to Combat Climate Change

To combat climate change, California has committed to cutting carbon emissions to 1990 levels by 2020 and to 40 percent below 1990 levels by 2030. By investing in solar and other renewable energy, Metropolitan is doing its part, both to help the state and to meet its own water reliability goals. Climate change means a future of longer droughts, higher temperatures and less snowpack, all of which will challenge Metropolitan's mission of providing reliable water to the region. Because 95 percent of Metropolitan's greenhouse gas emissions come from energy use—moving and treating water and powering its headquarters—cutting its emissions means addressing its energy use. So Metropolitan is taking an important step toward reducing its carbon footprint by investing in the solar facilities at Skinner, Weymouth, Jensen and Diamond Valley Lake.

Metropolitan's solar facilities will eliminate about 3,400 metric tons of carbon dioxide every year.

This is equivalent to the carbon dioxide emissions from:



Burning
3.6 million pounds
of coal



Powering
1,700 homes
with electricity
for a year



Consuming
387,000 gallons
of gasoline



Four Reasons Solar Means Saving:

1 Solar power pays for itself.

The solar facilities at Skinner, Weymouth and Jensen are expected to last many years and will pay for themselves thanks to the cost savings they bring by replacing retail electricity with self-produced energy from the sun.

2 The retail electricity market is volatile and expensive.

Global fuel resource competition, climate change and increased regulation of greenhouse gas emissions will likely mean greater volatility and escalating costs in electricity markets.

3 State and local rebates are available.

Metropolitan will receive more than \$6 million in rebates from the California Solar Initiative Program for the Skinner and Weymouth facilities. The Jensen facility will be eligible to receive \$1.4 million in solar rebates.

4 Metropolitan can offset other electricity purchases.

Metropolitan will be credited for extra solar power it produces but does not consume at the plants and can use the credit to offset other electricity bills.

WHO IS METROPOLITAN

The Metropolitan Water District of Southern California is a state-established cooperative of 26 member agencies – cities and public water agencies – that serve nearly 19 million people in six counties. Metropolitan imports water from the Colorado River and Northern California to supplement local supplies and helps its members develop increased water conservation, recycling, storage and other resource-management programs.

OUR MISSION

The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

The Metropolitan Water District of Southern California

700 N. Alameda St.
Los Angeles, CA 90012

P.O. Box 54153
Los Angeles, CA 90054-0153
(213) 217-6000
(800)call-mwd (255-5693)

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