



Del Valle Solar Installation Fact Sheet



What you are looking at:

This is a 348-kilowatt solar electric power system at Zone 7's Del Valle Water Treatment Plant in Livermore, CA. The solar array spans approximately two acres and is intended to produce, on average, 648,600 kilowatt-hours (kWh) of energy annually.

This represents approximately one-third of the energy usage on site and is expected to save Zone 7 more than \$800,000 in energy costs over the 20-year term of the agreement. These savings could be substantially higher if conventional power costs escalate more than the conservative projections.

Some of the System's Key Features:

- The installation has 1,484 Yingli 235-watt solar modules (or panels) mounted on Array Technology's DuraTrack single-axis tracking solar racking technology.
- These panels are able to track the path of the sun from dawn to dusk, providing increased efficiency and production over a system that uses fixed-tilt racking.
- The Direct Current (DC) power produced by each solar panel flows into a Solaron Inverter (made by Advanced Energy), where it's converted to usable Alternating Current (AC) power.
- As a grid-tied installation, the solar power installation interacts with Pacific Gas and Electric Co.'s utility distribution network. Among other things, this provides Zone 7 with PG&E energy credits when power produced by the solar panels exceeds Zone 7's immediate need and is sent into the PG&E system.

Who's paying for this solar installation?

The project has been financed using a popular solar financing model called a Power Purchase Agreement (PPA). Under this PPA:

- Borrego designed and built, and now maintains and owns, the solar power installation on Zone 7 property.
- In return for the right to use Zone 7 land, Borrego agreed to sell the clean energy the solar installation produces to Zone 7 at pre-determined rates (currently 28% less per kWh than the PG&E grid rate) for 20 years. As a private entity, Borrego is able to take advantage of federal tax incentives.



What happens when the 20 year agreement is over?

After the initial 20 year term of the PPA, Zone 7 will have three options:

- 1) enter a new Power Purchase Agreement with Borrego
- 2) purchase the system at the depreciated fair market value, or
- 3) have the system removed at Borrego's expense.

How this benefits Zone 7 and its water customers:

Zone 7:

- was able to go solar with zero capital investment.
- will see an immediate and long-term reduction in energy costs, saving \$50,000 in the first year alone and an estimated \$812,000 over the 20-year term of the agreement.
- will save its water ratepayers money by reducing operating costs.
- doesn't have to worry about repairs and maintenance because those are covered by the system owner (Borrego) whose financial interest is in having the system operating optimally.
- will be able to accurately forecast energy costs for 20 years because the rate it's paying for the solar energy is set in advance.
- will be buffered from volatile energy rate increases from PG&E.
- will deploy a renewable technology aligned with environmental stewardship. About one-third of the conventional power at Del Valle will be replaced with green solar power.

What are the environmental benefits over a 20-Year Period?

- Reduce Carbon Dioxide emission by 15,891,018 lbs.
 - This is equivalent to the effect of removing 64 passenger vehicles from the road
 - This is equivalent to the effect of planting 143 acres of trees
- Reduce Nitrogen Oxide emission by 15,311 lbs.
- Reduce Sulfur Oxide emission by 33,174 lbs.
- It would require the burning of 23,547 barrels of oil to produce as much electricity as this installation

For the fourth year running, Zone 7 Water Agency in 2010 was awarded Climate Action Leader status by the California Climate Action Registry