

TECHNOLOGY DEVELOPMENT PROJECT FACT SHEET

SP014: Gray Wolf Landfill Solar-Hybrid Plant

The Gray Wolf Landfill is in a remote area, and was originally powered by three diesel gensets. In August, 2002, APS installed a solar-hybrid power system, using PV, battery storage and diesel backup to decrease fuel use.

This commercial power application was a perfect fit for the APS Tilted Tracker PV System. The Tilted Trackers use a

hydraulic actuator and electronic controls to advance the position of the PV modules by approximately 2 degrees every 8 minutes to maximize exposure to the sun. With the tilted axis rotation, the PV modules can deliver more solar energy throughout the year than if they were fixed or rotated on a horizontal axis.



Location: 23355 E. Highway 169, Dewey, Arizona

Solar PV Plant Rating	28,000 Watts DC
Annual Solar Generation	62,000 kWh
Quantity of Tilted Trackers	8 at 3500 Watts DC each
Quantity of Modules	160
Tracking	Single Axis, Tilted at Latitude
Inverter Manufacturer	Advanced Energy Systems
Inverter Rating	40 kW AC
Storage Battery	780 kWh
Back-up Diesel Generator	50 kW AC

Estimated emissions avoided as a result of operating this solar power plant instead of the diesel generators:

CO ₂	79,980 lb/yr
SO _x	161 lb/yr
NO _x	197 lb/yr
Particulates	11 lb/yr



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