



Nellis Air Force Base Solar Power System



Nellis Air Force Base, home to the largest advanced air combat training mission in the world, the U.S. Air Force Warfare Center, is now home to another significant facility that merits the title “largest” – North America’s largest solar photovoltaic power plant, covering 140 acres and providing over 14 megawatts of electricity.

This innovative project showcases a unique public-private sector partnership using technology from SunPower Corporation and financing by MMA Renewable Ventures, with minimal capital investment by the U.S. Air Force.

The Nellis Air Force Base solar power system, designed

and built by SunPower Corporation, will meet an average of 25% of the electricity requirements at the base, where 12,000 people live and work, using the SunPower T20 Tracker single-axis solar tracking system to maximize solar electrical generation by following the path of the sun.

Equally innovative is the funding and ownership of the \$100 million system: MMA Renewable Ventures, LLC has financed and will own and operate the landmark solar energy system, selling power to Nellis Air Force Base at a guaranteed rate for the next 20 years, as well as selling Renewable Energy Credits (RECs) to Nevada Power.



The Nellis Air Force Base solar project demonstrates the Air Force's aggressive response to the Energy Policy Act 2005 and Executive Order 13423 – *Strengthening Federal Environmental, Energy, and Transportation Management*. This solar power plant places Nellis Air Force Base at the forefront of federally-mandated energy conservation and renewable energy initiatives. The solar power system will reduce CO2 emissions by 24,000 tons annually, equivalent to planting 260,000 trees or removing 185,000 cars from the roadways.

The Nellis Air Force Base Solar Power System supports the proud traditions of the Air Force in helping lead the way to a better future.

Project Information

Project surface area: 140 acres
Solar plant capacity: 14.2 megawatts
Date of completion: December 2007
Annual energy output: 30,100,000 kWh
Equivalent number of homes powered during the daytime: 13,200
Estimated annual Air Force savings: \$1 million
Length of construction: 26 weeks
Number of workers: 200

Technical Specifications

Technology: SunPower T20 Tracker
Number of Trackers: 5,821
Number of solar panels: 72,416
Number of solar cells: 5,891,328
Number of watts per panel: 200
Number of transformers: 18
Number of inverters: 54
Total length of power cables: 5,550,000 ft.

Project Partners

Energy Purchaser and Site Host:
Nellis Air Force Base

Utility:
Nevada Power

Solar System Owner & Operator:
MMA Renewable Ventures, LLC

Solar System Designer & Integrator:
SunPower Corporation

Solar Panel Manufacturers:
SunPower Corporation
SANYO
SunTech Power Holdings
Evergreen Solar, Inc.

Inverter Manufacturer:
Xantrex Technology Inc.

Data Acquisition System:
Energy Recommence, Inc.

