# Davis-Monthan AFB
## MicroCSP Solar Cooling Project

## Project Overview

Sopogy's MicroCSP solar cooling project at the Davis-Monthan Air Force Base, located in Tucson, Arizona, will showcase the viability of MicroCSP solar technology with an absorption chiller to effectively supply solar cooling for the Youth Center.

The integrated solar air conditioning system includes Sopogy's MicroCSP parabolic solar energy system linked to a double-effect absorption chiller plus thermal energy storage. The project will feature innovative renewable energy technology that not only assists the Department of Defense in meeting its energy goals, but also reduces its greenhouse gas footprint by decreasing grid electricity consumption.

The project will enable the Youth Center building to operate with a lower carbon footprint and aid the base in meeting federally mandated reduction goals.

## Environmental Impact*

The 60 ton output of the MicroCSP solar cooling system at Davis-Monthan AFB will reduce $CO_2$ emissions by **2,220** metric tons of over the lifetime of the product. The system's impact is equivalent to:

- Eliminating **5,160** barrels of oil consumed
- Removing **450** cars off the road
- Reducing **352,800** gallons of propane

*Source: EPA Greenhouse Gas Equivalencies Calculator
http://www.epa.gov/cleanenergy/energy-resources/calculator.html

### APPLICATION
60 ton double-effect Solar Air Conditioning

### LOCATION
Tuscon, Arizona, USA

### PROJECT COMPLETION
Estimated December 2011

### THERMAL CAPACITY
180kW

### FOOTPRINT
7,344 sq. ft. / 682 m²

### PRODUCTS
- 72 SopoNova parabolic trough collectors
- SopoTracker™ Field Controls
- Thermal Energy Storage

### HEAT TRANSFER FLUID
Water

### ESTIMATED ANNUAL SOLAR PRODUCTION
- 1,111 MMBTU
- 120,888 ton-hr of cooling

### OPERATING TEMPERATURE RANGE
Inlet - 323 °F / 161 °C
Outlet - 350 °F / 176 °C




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