



Holcim MicroCSP Solar Cooling Project



Project Overview

Sopogy's MicroCSP technology will be used to drive a 75 ton single-effect chiller and provide a renewable source of cooling for the new Hermosillo cement plant, which was inaugurated on March 10, 2011.

As the first solar powered air-conditioning system in Latin America, installation of the MicroCSP parabolic troughs have been assembled and mounted on the roof and ground in front of the cement production facility.

Currently Holcim Apasco's seventh plant in the country, the Hermosillo cement plant applies the highest sustainable construction criteria of the Holcim Foundation - meeting the strictest national and international standards.

*“Ladies and Gentlemen... Those solar collectors on the roof represent the future of Mexico. If there is one natural resource that we have, it is the sun.”**

- Felipe Calderón,
President of Mexico and former Minister of Energy

*Translated from Spanish

Environmental Impact*

The 75 ton output of the MicroCSP solar cooling system at Holcim will reduce CO₂ emissions by 3,450 metric tons of over the lifetime of the product. For perspective, the system's impact is equivalent to:

- Eliminating 8,010 barrels of oil consumed
- Removing 690 cars off the road
- Reducing 548,790 gallons of propane

Design Engineering: Synergy California L.P. · Point Richmond, CA, USA

Construction Contractors: ESASA · Hermosillo, Mexico

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

APPLICATION

75 ton single-effect solar air conditioning

LOCATION

Hermosillo, Mexico

PROJECT COMPLETION

Construction in progress

THERMAL CAPACITY

291 kW

FOOTPRINT

16,320 sq. ft. / 1,536 m²

PRODUCTS

- 160 SopoNova® parabolic trough collectors
- SopoTracker™ Field Controls

HEAT TRANSFER FLUID

Water

ESTIMATED ANNUAL SOLAR PRODUCTION

- 2,502 MMBTU
- 151,110 ton-hr of cooling

OPERATING TEMPERATURE RANGE

Inlet - 166 °F / 74 °C
Outlet - 203 °F / 95 °C

