

Solar Thermal Case Study: Solar Cooling System Abu Dhabi Distribution Company



CHROMASUN



Project Overview

Chromasun will install 27 MCT collectors at the Abu Dhabi Distribution Company (ADDC) Distribution Management Centre. The building is presently air-conditioned by conventional electrically driven screw type chillers which have significant peak power demands on hot days. Chromasun will install a solar-driven system to supplement building air-conditioning load and offset this peak electrical consumption with clean renewable energy. The project will involve fitting Chromasun's MCT collectors on the roof space, which will in turn provide high-grade thermal energy to the air-conditioning plant room. Inside the plant room, a double-effect absorption chiller will be fitted that will convert the heat coming from the MCT panels into chilled water that supplements the cooling for the building.

About Chromasun

Founded in 2008, Chromasun is a leading developer and manufacturer of rooftop friendly high performance solar solutions. Chromasun's unique MCT HT solar collector provides high grade thermal energy, but in a familiar flat panel format with no external moving parts. The MCT HT is designed to drive high performance air-conditioning absorption chillers and other industrial process heat applications. It is the most space efficient solar technology available and can produce more energy per unit of roof area than any competing technology. As a leader in the space, the Chromasun team of engineers and professionals have decades of experience in utility scale solar, air-conditioning engineering, product development and manufacturing.

SYSTEM AT A GLANCE

Location	Abu Dhabi, UAE
Building	Distribution Management Centre
Collectors	27 MCTs
Total Collector Area	1000 square feet
Chiller	Thermax 25 ton
Solar Field Flow Rate	530 gallons/hr.
Therms Offset (1 Year)	2,218 (estimated)
System Size	54 KWt



Chromasun MCTs arriving on site

Company Perspective

"The Chromasun MCT showcase at the ADDC Distribution Management Center will be the first showcase demonstration of commercial solar air-conditioning in the UAE. I believe that advanced solar air-conditioning technologies such as the Chromasun MCT can significantly reduce the peak electricity power demands of buildings and hence improve the operational stability of modern grid systems which are under the greatest stress on hot summer days. This showcase project will prove the viability of such systems and pave the way for far greater adoption of solar air conditioning."

-Peter Le Lièvre, Chromasun CEO