TECHNOLOGY DEVELOPMENT PROJECT FACT SHEET

SP020: Cochise College Solar Thermal HVAC System

The solar powered HVAC system at Cochise College is the first in Arizona to use a parabolic trough solar collector field to harness the energy of the sun to provide space heating and cooling. The system of parabolic mirrors concentrate the sun's energy onto pipes carrying a water/anti-freeze mixture which is heated as it circulates through the solar collector field. The heat is transferred to a solar water storage tank. During the Winter, hot water can be drawn from the storage tank to provide space heating at the College. During the Summer months, hot water can be drawn from the storage tank to provide the heat source for an Ammonia/Water absorption chiller. In an absorption chiller, heat is used to evaporate a refrigerant and provide cooling for the College cooling system.

COCHISE COLLEGE

Location: 4190 W. Highway 80, Douglas, Arizona

Chiller Manufacturer	Energy Concepts Co.
Chiller Type	Energy Concepts Helichiller 60
Chiller Size	60 Tons
Coefficient of Performance	0.7
Refrigerant	Ammonia
Absorbent	Water
Solar Collector Manufacturer	IST Corp
Annual Thermal Energy Collected	1,640 MM Btu
Projected Annual Heating Energy	180,000 kWh
Projected Annual Cooling Energy	210,000 kWh

For more information contact Janet Crow at 602-250-4990 or janet.crow@aps.com