

TECHNOLOGY DEVELOPMENT PROJECT FACT SHEET

SP019: Maricopa County Desert Outdoor Center Solar Thermal HVAC System

The solar powered HVAC system at the Maricopa County Desert Outdoor Center is the first solar powered space heating and cooling system to be installed in Arizona. A system of solar collectors absorb heat from the sun and transfer that heat to a hot water storage tank. During the Winter, hot water can be drawn from the storage tank to provide space heating at the Center. During Summer months, hot water can be drawn from the storage tank to provide the heat source for a Lithium Bromide absorption chiller. In an absorption chiller, heat is used to evaporate a refrigerant and provide cooling for the Center's cooling system.



Location: 41402 N 87th Avenue, Peoria, Arizona

Chiller Manufacturer	Yazaki Energy Systems
Chiller Type	Yazaki WFC-SC20
Chiller Size	20 Tons
Coefficient of Performance	0.7
Refrigerant	Water
Absorbent	Lithium Bromide
Solar Collector Manufacturer	SOLID.gmbh
Annual Thermal Energy Collected	500 MM Btu
Projected Annual Heating Energy	45,000 kWh
Projected Annual Cooling Energy	72,000 kWh