

# Hybrid Power System

Security Monitoring Station Installation on the U.S./Mexico Border



**The need was complex. Maximize the range and coverage of hundreds of remote security sites. Sites with no grid power were required to reduce the number of sites and lower costs. The solution was Alpha, Alpha Energy created a Hybrid power system (HPS). The customer has ease of mind knowing an experienced contractor handles procurement, installation and life-cycle management.**

When a customer needed solar power they turned to Alpha Energy. The Alpha solution extends system life by sharply reducing generator runtime. Less runtime cuts down on expensive refueling trips. The Alpha solution has the ability to communicate with industry standard Modbus Protocol. This provides advanced control and alarm features, quickly resolving any problems.

Seventeen Alpha systems were installed in early 2008. Alpha's expertise in security solutions with significant Alpha IP gives Alpha Energy a competitive edge for future projects in this expanding field.

System Specifications	
System Voltage:	48V
Customer Load:	1700W continuous
PV Array:	(18) SHARP 170W modules
Generator:	7.5kW, 48V Alpha DC Generator (48V, 2800-3600RPM)
Rectifier:	(5) Codex 3.6kW (67A each @ 54VDC)
Batteries:	1327Ah Deka Unigy II interlock system
Temperature Range:	32 to 140°F (0 to 60°C)

