

Grid-Tied Solar Power System

SCTE Headquarters Installation in Philadelphia, PA

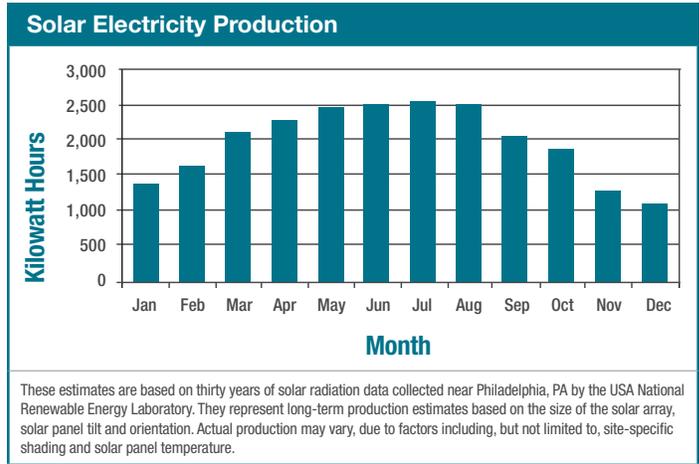


Alpha Energy's ballasted rooftop solar system uses zero roof penetrations to secure the solar array, minimizing cost and preserving the rooftop integrity for this critical load backup installation.

Utilizing high efficiency SHARP 240W mono-crystalline photovoltaic modules and OutBack FX Series inverters, the sub-array design allows fault tolerance and future expansion capabilities, and boasts a 95.5% CEC weighted efficiency.

Utilizing a Power Purchase Agreement (PPA) to finance the system, SCTE faces no capital outlay at the time of installation, and will pay a fixed amount per kilowatt hour of solar energy used. This arrangement protects them from utility company price fluctuations and increases. At the end of the PPA in 2017, SCTE has the options of extending the agreement or purchasing the solar power system at a reduced rate to take advantage of the free solar energy to offset their utility power requirements.

System Specifications	
System Power:	17.04kW DC, (2) 88kW DC
PV Array:	(48) SHARP 235W and (36) SHARP 240W mono-crystalline modules
Solar Inverters:	OutBack FLEXpower ONE system (FX inverter/charger, FLEXmax Series charge controller and MATE3 system display and communications)
Combiners:	AC combiner chosen for future expansion capability
Racking:	2V X12 Schletter ballasted racking system (3½ racking blocks)
Data Monitoring Software:	Portable web monitoring, data logging, weather monitoring and auto-alerts



Progression Photos

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Frames and 48 panels



Large open roof space dedicated to solar power



PV array racking under construction roof



Assembling support rails



Two 5kW inverters



Onsite project management ensured smooth installation



Construction complete in three days



Completed array of 48 panels that provide 11.28kW DC power