

# Energy

Matrix Energy Inc.

## Stand-Alone Power Systems

Our autonomous power systems are an effective, proven and cost-effective means of supplying continuous DC or AC power in remote locations. Harvested solar energy is stored in batteries for continuous energy supply when and where needed. Of course, all of our systems are specifically suited to the unique climate in which they will operate.

Each system offers industry leading components including the solar array and mounting hardware that may be suited to any number of installation possibilities. Voltage regulator, batteries, circuit protection and surge suppression are all installed and pre-wired within a NEMA enclosure. Options include power and load breakers, inverters, rectifiers, lighting controllers, CSA , UL and Class 1 Division II certification.



Telemetry, Chili



Signalling, Canada

Applications >

[www.matrixenergy.ca](http://www.matrixenergy.ca)

- > Communications
- > Security Systems
- > Cathodic Protection
- > Lighting
- > WiMax
- > SCADA
- > Navigational Aids
- > Traffic Systems
- > Railway Signals & Communications
- > Back-up power
- > Telemetry
- > Customized Systems



Telecommunications, Peru

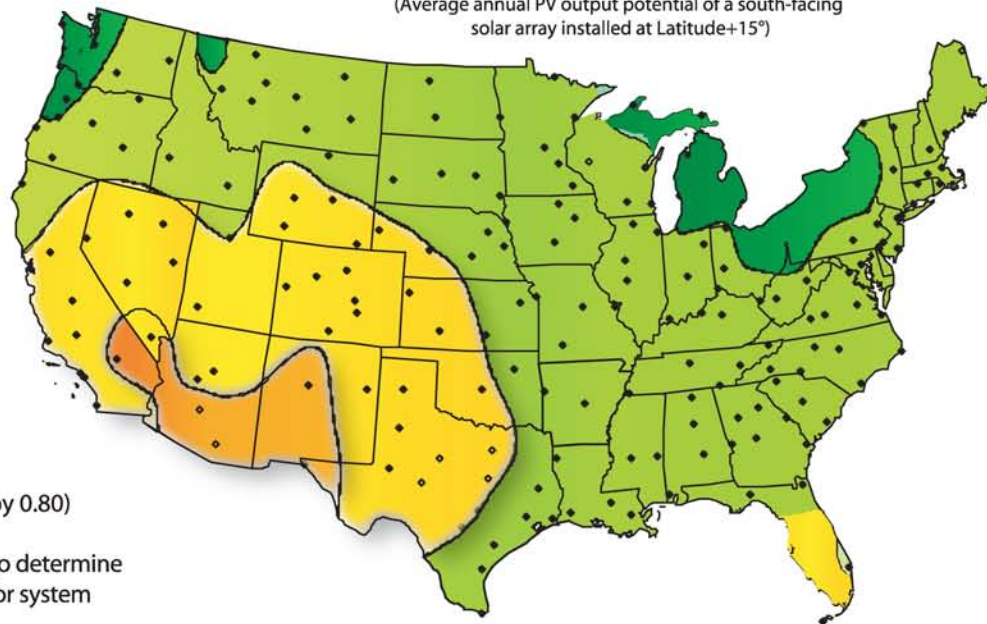


Custom built equipment and battery enclosures

Standard packages are available.  
Customized systems are the norm.  
Hybrid systems are also available.

## United States Solar Radiation Zones

(Average annual PV output potential of a south-facing solar array installed at Latitude+15°)



## System Selection

1. Identify your location on the map shown here  
(contact us for information on areas outside US)
2. Determine your average daily electrical load (W)  
(to convert AC loads to DC, divide AC load (watts) by 0.80)
3. Find your average daily load (W) in the table below to determine the array and battery size you need and contact us for system details.

(Unable to locate yours in the table below? Contact Matrix for system sizing)

■ Zone 1  
 ■ Zone 2  
 ■ Zone 3  
 ■ Zone 4  
 ■ Zone 5

Typical average annual watt/hours output per day @ 12 VDC nom.							
Array (W)	Battery (Ah)	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5*	Array (m) <sup>2</sup>
50	100	233	200	170	156	100	0.40
80	200	373	320	266	227	160	0.65
100	200	466	400	333	302	200	0.80
160	300	747	640	540	447	315	1.30
240	400	1120	960	799	639	480	1.95
320	500	1493	1280	816	850	640	2.60
400	600	1867	1600	1066	1000	800	3.25
480	700	2240	1920	1500	1200	960	3.90
560	800	2613	2240	1800	1456	1120	4.55

\* In some areas like Alaska you have 6 months of night.