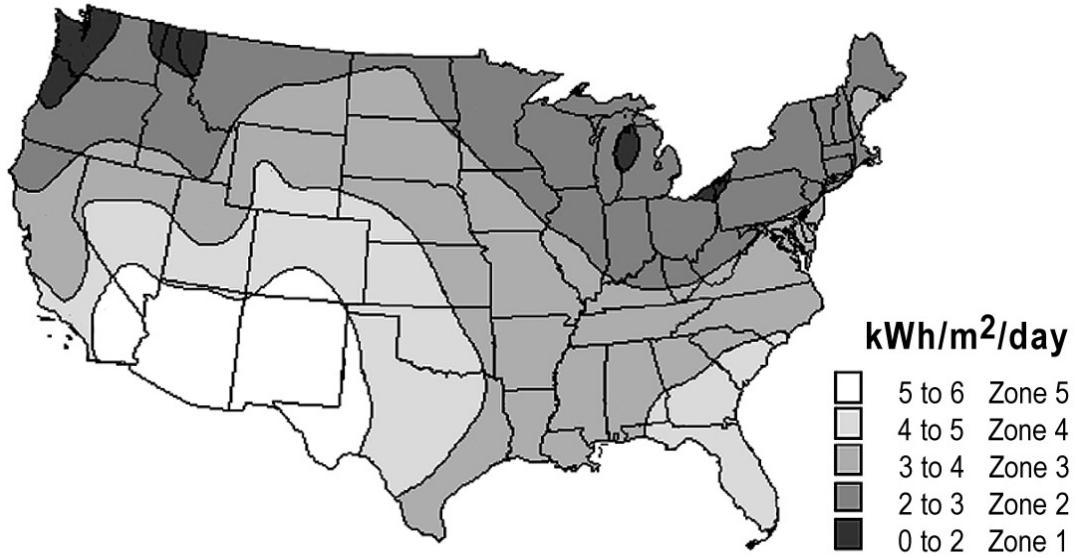
SOLAR ELECTRIC SUPPLY, INC.

SINCE 1996



MAPPS Solar Power Systems Design Guide

1. CALCULATE YOUR POWER REQUIREMENTS

Figure your load in Watt-hours per day. Consider both continuous and intermittent loads in a 24-hour period. Average over a week if loads change daily.

2. DETERMINE YOUR SOLAR INSOLATION ZONE

Locate your site on the map below. The map represents average solar energy available in the winter. Available energy increases incrementally from zones 1 through 5.

3. USE THE PERFORMANCE TABLE TO CHOOSE YOUR SYSTEM

The tables below represent the Watt-hours per day performance of each MAPPS system in the different solar zones. Choose your system voltage, then look down your solar zone column for the value that meets or exceeds your design load Watt-hours. Follow the row to the left for the corresponding prepackaged MAPPS system that will fully power your load requirements.

Complimentary solar sizing analysis for your location can be provided with quotation

12 Volt MAPPS System Design Table

12 Volt DC Systems MAPPS ID Number	Solar Array Wattage	Battery Capacity Amp-hr	Zone 1 MAPPS Whr/d	Zone 2 MAPPS Whr/d	Zone 3 MAPPS Whr/d	Zone 4 MAPPS Whr/d	Zone 5 MAPPS Whr/d
MAPPS 20-36-12	20	36	13	26	39	51	64
MAPPS 30-58-12	30	58	20	39	59	77	96
MAPPS 50-108-12	50	108	33	65	98	128	160
MAPPS 90-108-12	90	108	59	117	176	230	288
MAPPS 90-216-12	90	216	59	117	176	230	288
MAPPS 120-216-12	120	216	78	156	234	306	384
MAPPS 150-216-12	150	216	98	195	293	383	480
MAPPS 180-216-12	180	216	117	234	351	459	576
MAPPS 300-265-12	300	265	195	390	585	765	960
MAPPS 300-530-12	300	530	195	390	585	765	960

Wholesale Pricing available for OEM's, distributors, integrators & dealers

UL-508 Listed Industrial Control Panel Option: $970

24 Volt MAPPS System Design Table

24 Volt DC Systems MAPPS ID Number	Solar Array Wattage	Battery Capacity Amp-hr	Zone 1 MAPPS Whr/d	Zone 2 MAPPS Whr/d	Zone 3 MAPPS Whr/d	Zone 4 MAPPS Whr/d	Zone 5 MAPPS Whr/d
MAPPS 90-108-24	90	108	59	117	176	230	288
MAPPS 100-108-24	100	108	65	130	195	255	320
MAPPS 190-108-24	200	108	130	260	390	510	640
MAPPS 300-265-24	300	265	195	390	585	765	960
MAPPS 380-265-24	400	265	260	520	780	1020	1280
MAPPS 380-530-24	400	530	260	520	780	1020	1280
MAPPS 570-530-24	600	530	390	780	1170	1530	1920
MAPPS 760-530-24	800	530	520	1040	1560	2040	2560
MAPPS 1140-530-24	1200	530	780	1560	2340	3060	3840
MAPPS 1140-1060-24	1200	1060	780	1560	2340	3060	3840

Wholesale Pricing available for OEM's, distributors, integrators & dealers

UL-508 Listed Industrial Control Panel Option: $970

48 Volt MAPPS System Design Table

48 Volt DC Systems MAPPS ID Number	Solar Array Wattage	Battery Capacity Amp-hr	Zone 1 MAPPS Whr/d	Zone 2 MAPPS Whr/d	Zone 3 MAPPS Whr/d	Zone 4 MAPPS Whr/d	Zone 5 MAPPS Whr/d
MAPPS 1200-530-48	1200	530	780	1560	2340	3060	3840
MAPPS 1600-795-48	1600	795	1040	2080	3120	4080	5120
MAPPS 2000-795-48	2000	795	1300	2600	3900	5100	6400
MAPPS 2400-1060-48	2400	1060	1560	3120	4680	6120	7680

UL-508 Listed Industrial Control Panel Option: $970

120 Volt MAPPS System Design Table

120 Volt AC Systems MAPPS ID Number	Solar Array Wattage	Battery Capacity Amp-hr	Zone 1 MAPPS Whr/d	Zone 2 MAPPS Whr/d	Zone 3 MAPPS Whr/d	Zone 4 MAPPS Whr/d	Zone 5 MAPPS Whr/d
MAPPS 50-108-12-120	50	108	27	55	82	109	136
MAPPS 90-108-12-120	90	108	49	99	148	196	245
MAPPS 90-216-12-120	90	216	49	99	148	196	245
MAPPS 100-216-12-120	100	216	54	110	164	218	272
MAPPS 150-216-12-120	150	216	81	165	246	327	408
MAPPS 200-108-24-120	200	108	108	220	328	436	544
MAPPS 300-265-24-120	300	265	162	330	492	654	816
MAPPS 400-530-24-120	400	530	216	440	656	872	1088
MAPPS 600-530-24-120	600	530	324	660	984	1308	1632
MAPPS 800-530-24-120	800	530	432	880	1312	1744	2176
MAPPS 1200-1060-24-120	1200	1060	648	1320	1968	2616	3264
MAPPS 1600-795-48-120	1600	795	864	1760	2624	3488	4352
MAPPS 2000-795-48-120	2000	795	1080	2200	3280	4360	5440
MAPPS 2400-1060-48-120	2400	1060	1296	2640	3936	5232	6528

Note: These systems include a DC to 120 VAC pure sine wave inverter for AC loads

UL-508 Listed Industrial Control Panel Option: $970

Options	Add -RS for radio shelf for customer load equipment
(Add to Model #)	Add -SL for Sunlight Lighting Controller, timer/photocontrol

Load Power Requirement Example:

Test the actual power draw of the equipment if you can. Add up all the loads in Watt-hr/day

12 VDC example: 1.1 Amps X 12 Volts = 13.2 Watts X 24 hr/day = 316.8 Watt-hr/Day
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