



OFF-GRID INDUSTRIAL SOLAR SIZING GUIDE & DESIGN ASSISTANT

HOW TO SIZE AND DESIGN THE RIGHT OFF-GRID INDUSTRIAL SOLAR SYSTEM FOR YOUR NEEDS.

1. CALCULATE LOADS

Compile your device(s) load data over a 24-hour period, individually calculating loads with continuous power draws and loads with duty cycles.

2. FIND Wh/DAY

Then, multiply your calculated power requirements (loads) from each device by x24 to find your watt hours per day (Wh/Day). Reference appropriate **Wh/Day** in the chart below.

3. DETERMINE VOLTAGE

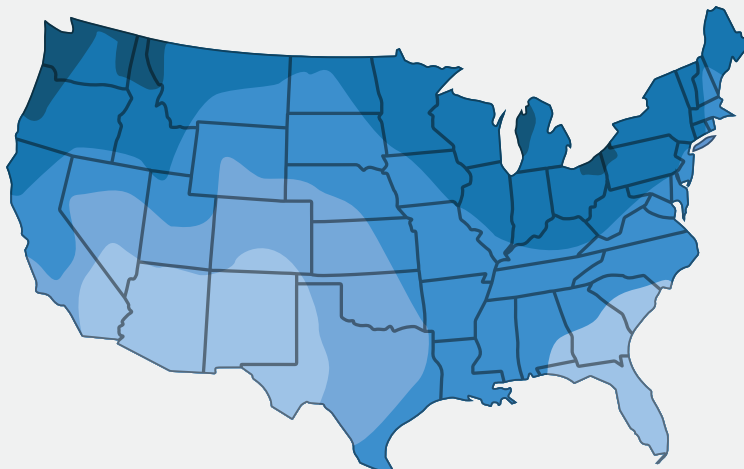
Determine the nominal voltage(s) required for your system; 12VDC, 24VDC, or 48VDC. Reference appropriate **VDC** in the chart below.

4. IDENTIFY ZONE

Define the location of your installation site on the map below to identify your zone. Reference appropriate **Zone #** in the chart below.

5. SIZE YOUR SYSTEM

In the chart below, use your **Wh/Day**, **VDC**, and **Zone #** to identify the recommended appropriate Industrial Solar System for your application, per IEEE Standards.



AUTONOMY (Li)	
4-5 Days	Zone 5
5-6 Days	Zone 4
6-7 Days	Zone 3
8-10 Days	Zone 2
12-15 Days	Zone 1

	Voltage(V)	Capacity(Ah)	Array(W)	Ground Mount	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
12VDC					Wh/Day	Wh/Day	Wh/Day	Wh/Day	Wh/Day
12VDC 50Ah 50W	12	50	50		28	60	68	78	105
12VDC 75Ah 65W	12	75	65		43	85	100	115	145
12VDC 150Ah 100W	12	150	100		75	165	195	230	280
12VDC 270Ah 200W	12	270	200		205	315	370	425	530
12VDC 540Ah 400W	12	540	400		285	625	725	815	1070
24VDC					Wh/Day	Wh/Day	Wh/Day	Wh/Day	Wh/Day
24VDC 100Ah 150W	24	100	150		100	210	270	310	365
24VDC 270Ah 400W	24	270	400		285	605	735	850	1050
24VDC 540Ah 800W	24	540	800		580	1220	1465	1675	2125
24VDC 810Ah 1200W	24	810	1200	✓	715	1550	2010	2150	2550
24VDC 1080Ah 1600W	24	1600	1080	✓	950	2025	2795	2950	3500
48VDC					Wh/Day	Wh/Day	Wh/Day	Wh/Day	Wh/Day
48VDC 540Ah 2000W	48	540	2000	✓	725	2450	2825	3350	4250
48VDC 810Ah 2400W	48	810	2400	✓	1750	3600	4350	4850	6250
48VDC 1080Ah 2800W	48	1080	2800	✓	2000	4350	5650	6300	7400

YOUR OFF-GRID SOLAR SYSTEM EXPERTS!

Battle Born Batteries' team of Industrial Solar Specialists are experts in the field and can run custom sizing analyses to give you specific recommendations for your needs.

Give us a call for any questions regarding an Off-Grid Industrial Solar System.

SOLAR@DRAGONFLYENERGY.COM
(775) 622-3448 EXT. 027

