

Load Calculator



Intro

This worksheet is a good starting place for designing any solar power system. In order to design a system to your needs, you need to have an accurate idea of what your needs are!

It is not an exhaustive or perfect list but a place to start.

There are also lots of other load calculators online you can use, some do the math for you.

It is simple, but not easy, as it requires some hard thinking about what power you actually use.

It can be an enlightening experience! We mostly all use more power than we think.

Instructions

1. Write down an appliance that you use, and how many you have.
2. Write down the watts that appliance uses. You can use the cheat sheet here, look on the appliance, or find the info online or elsewhere.
3. Figure out how many hours per week the appliance is using electricity.
4. **Multiply the watts x quantity x hours/week = your watt-hours/week.**
5. Repeat for other items.
6. Add together all of the watt-hours/week to get the total household watt-hours/week.
7. Contact us and we will design a system to meet your power needs!

Notes

- *Fridges run an average of 8 hours a day.*
- *Freezers run an average of 18 hours a day.*
- *As you can see, appliances that use electricity to create heat are power hogs. Consider alternatives to using electric hot water heaters, stoves, dryers, block heaters etc.*
- *Items like toasters do use a lot of power, but they are used for a short amount of time, so many people still use them.*

Power Usage Cheat Sheet



Appliance	Watts	Appliance	Watts	Appliance	Watts
Air conditioner (window unit)	1500	Freezer (17 cubic ft.)	79	Satellite receiver or	35
Air Conditioner (central)	3500	Furnace blower fan,	900	Smoke Detector	5
Block heater	1500	Furnace blower fan, RV	100	Starlink, active	75
Cable Modem or DSL	6	Game console (XBOX 360)	135	Starlink, inactive	20
Ceiling fan	120	Heater (electric space)	1250	Toaster	1100
Clock radio	10	Home stereo	100	Toaster oven	1250
Clothes dryer, natural gas/LP	300	Hair dryer	1540	TV, 20" LED flatscreen	25
Clothes Dryer, electric	3400	Hotplate	1200	TV, 40" LED flatscreen	45
Clothes iron	1400	Light bulb, CFL	25	TV, 60" LED flatscreen	75
Clothes washer	425	Light bulb, 30w incandescent	30	TV, 40" Plasma flatscreen	60
Coffee maker	1050	Light bulb, 60w incandescent	60	TV, 40" LED flatscreen	45
Compact fluorescent	25	Light bulb, 75w incandescent	75	TV, 60" Plasma flatscreen	165
Computer	250	Light bulb, 100w	100	Vacuum cleaner	1220
Computer, laptop	50	Light bulb, 150 watt	150	Water heater, electric (40gal)	5000
Computer monitor	150	Light bulb, LED	15	water pump, RV	100
Dehumidifier	785	Microwave oven	1000	Well pump, 1/3 hp	365
Dishwasher	1800	Phone charger (cell)	10	Well pump, 1/2 hp	525
DVD/Blu Ray player	30	Phone, portable	4	Well pump, 1hp	1050
Electric blanket	80	Refrigerator (18 cubic ft.)	69	Window fan	150

List of Loads



Appliance	x Quantity	x Watts	x Hrs/Week	Watt Hours/Week
Total Watt Hours/Week				