

# Off-Grid Load Worksheet

Start by finding how many watts each appliance will consume. Do not add appliances that should be propane-fueled, such as cooktops, hot water heaters and electric heat. Then multiply rated wattage of each appliance by the number of hours per day, on average, that appliance runs. This gives the total watt-hours per day for each light or appliance. Do this for each and every appliance. The total for all appliance loads is the total watt-hours needed each day.

Figures below show some appliances commonly used in independent solar homes. Substitute your own daily hours for each and add other appliances not listed. Refrigerators come on and off on demand by thermostat, so running time per day is not known. A KILL-A-WATT meter will accurately test watt-hours used per day for any AC appliance up to 1875 watts.

Appliance	Watts	Run Time (Hr/Day)	WattHours/Day
Microwave oven	1260	1/4	315
Food processor	200	1/20	10
Toaster	1200	1/10	120
Coffee Maker	300	1	300
Clothes Washer	700	3/4	525
Vacuum Cleaner	550	1/4	138
Refrigerator/Freezer (Energy Star)			1000
Small 4CF Apartment Fridge			945
12/24V NovaKool 4CF (w/ added insulation)			300
10 CF Freezer, standard			1000
Window Air Conditioner	660	6	4000
Ceiling fan, AC	60	6	360
Ceiling fan, 12/24V DC	5-20	6	30-120
Well pump 120V AC (100 gal/day)	1000	1/3	350
Well pump DC (100 gal/day)	100	1	100
CF bulbs, equal to 15 watts	15	4	60
LED bulbs, equal to 5 watts	5	4	20
Computer	100	4	400
Laser printer, in operation	90	1/4	23
32" LCD TV	140	3	420
Satellite receiver	20	3	60
Stereo	40	4	160

Use the tables below to determine the total energy in watt-hours per day used by all the AC and DC loads in your system.

1. List all DC loads in the table below and calculate the total watt-hours per day.

Description of DC loads	Watts	X	Hours/day	=	Watt-hours/day
<b>Total DC watt-hours/day</b>					

2. List all AC loads in the table below and calculate the total watt-hours per day.

Description of AC loads	Watts	X	Hours/day	=	Watt-hours/day
<b>Total ACwatt-hours/day</b>					

3. Add DC & AC totals together to get TOTAL WATT-HOURS PER DAY.