

Instructions:

1. **'Amount' Column:** Write in the number of appliances in the Number Column, Column 1, for each appliance you will be running.
2. **'S' Column:** The purpose of the S Column, Column 3, is to estimate which appliances will be on at the same time. This Column helps us size the inverter. Simply give us your best guess.
3. **'Run Watts' Column:** If you know the actual watts of any appliance, cross out the existing number in the Run Watts Column, Column 4, after that appliance, and write in the more accurate wattage. Otherwise there is nothing you need to do to the Run Watts Column.
4. **'Start Watts' Column:** Most people can skip the Start Watts Column, Column 5. Occasionally it is helpful to know the surge wattage of a very large appliance.
5. **'Hours/Day' Column:** Write the average hours per day each appliance will be on in the Hours/Day Column, Column 6.
6. **'Days/Week' Column:** Write the number of days per week each appliance will be on in the Days/Week Column, Column 7.
7. **'Watt-Hrs/Day' Column:** Skip the Watt-Hrs/Day Column, Column 8.
8. If you will be using any DC appliances, write those in at the bottom of this load sheet.

NOTE: This estimate is only as good as the information supplied. Very large appliances are not economical to run on a solar system. The large appliances below are for information only.

McDonald Solar and Wind

Needs Analysis Form

mcdonaldsolarwind@hotmail.com

Name:

Date:

Address:

Phone:

e-mail:

| Amount | Appliance Description | S | Run Watts | Start Watts | Hours /Day | Days /Week | watt Hours /Day | % | Comments |
|--------|---------------------------------|----|-----------|-------------|------------|------------|-----------------|--------|-------------|
| 1 | SAMPLE | no | 5 | | 2 | 1 | 1.4 | 100.0% | Sample Only |
| | Air Conditioner - large central | | 5000 | | | | 0.0 | 0.0% | |
| | Air Conditioner - room size | | 1000 | | | | 0.0 | 0.0% | |
| | Air Conditioner - small central | | 2000 | | | | 0.0 | 0.0% | |
| | Blender | | 300 | | | | 0.0 | 0.0% | |
| | Blow Dryer - high | | 1200 | | | | 0.0 | 0.0% | |
| | Blow Dryer - low | | 300 | | | | 0.0 | 0.0% | |
| | CD Player | | 35 | | | | 0.0 | 0.0% | |
| | Charger, cell phone | | | | | | 0.0 | 0.0% | |
| | Clock,Electric | | 5 | | | | 0.0 | 0.0% | |
| | Clothes Dryer - gas heated | | 400 | | | | 0.0 | 0.0% | |
| | Coffee Maker | | 650 | | | | 0.0 | 0.0% | |
| | Computer - large laptop | | 50 | | | | 0.0 | 0.0% | |
| | Computer - large PC | | 200 | | | | 0.0 | 0.0% | |
| | Computer - small laptop | | 20 | | | | 0.0 | 0.0% | |
| | Computer Printer, deskjet | | 48 | | | | 0.0 | 0.0% | |
| | Computer Printer, laser jet | | 576 | | | | 0.0 | 0.0% | |
| | Computer, 14" monitor | | 120 | | | | 0.0 | 0.0% | |
| | Countertop Griddle | | 1200 | | | | 0.0 | 0.0% | |
| | Dishwasher - large | | 1500 | | | | 0.0 | 0.0% | |
| | Dishwasher - small | | 1200 | | | | 0.0 | 0.0% | |
| | Electric Blanket | | 180 | | | | 0.0 | 0.0% | |
| | Engine Block Heater - large | | 1000 | | | | 0.0 | 0.0% | |
| | Engine Block Heater - small | | 150 | | | | 0.0 | 0.0% | |
| | Evaporative Cooler - large | | 900 | | | | 0.0 | 0.0% | |
| | Evaporative Cooler - small | | 400 | | | | 0.0 | 0.0% | |
| | Fan, Ceiling | | 50 | | | | 0.0 | 0.0% | |
| | Fan,Table | | 10 | | | | 0.0 | 0.0% | |

| | | | | | | |
|-----------------------------------|------|-------|---|--|-----|------|
| Fan, Table - large | 25 | | | | 0.0 | 0.0% |
| Freezer 14 cf | 350 | | | | 0.0 | 0.0% |
| Furnace Blower - L, energy star | 440 | | | | 0.0 | 0.0% |
| Furnace Blower - L, non efficient | 1800 | | | | 0.0 | 0.0% |
| Furnace Blower - S, energy star | 250 | | | | 0.0 | 0.0% |
| Furnace Blower - s, non efficient | 850 | | | | 0.0 | 0.0% |
| Garage Door Opener | 350 | | | | 0.0 | 0.0% |
| Garbage Disposal | 450 | | | | 0.0 | 0.0% |
| Gas Range (glow plug) | 400 | | | | 0.0 | 0.0% |
| Ground Fault Circuit Interuptor | 5 | | | | 0.0 | 0.0% |
| Heater, Portable | 1500 | | | | 0.0 | 0.0% |
| Hot Water Heater | 4500 | | | | 0.0 | 0.0% |
| Iron | 1000 | | | | 0.0 | 0.0% |
| Lamp, 25W compact flour. | 28 | | | | 0.0 | 0.0% |
| Lamp, Cmpact flour. Eqiv. 40W | 40 | | | | 0.0 | 0.0% |
| Lamp, Cmpact flour. Eqiv. 60W | 60 | | | | 0.0 | 0.0% |
| Lamp, Cmpact flour. Eqiv. 75W | 75 | | | | 0.0 | 0.0% |
| Lamp, Cmpact flour. Eqiv. 100W | 100 | | | | 0.0 | 0.0% |
| Microwave Oven - large | 1740 | | | | 0.0 | 0.0% |
| Microwave Oven - lsmall | 600 | | | | 0.0 | 0.0% |
| Phantom Load- answer mach. | 7 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- nightlights | 4 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- Comp. Printer | 3 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- Computer | 3 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- Dryer Timer | 8 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- Instant ON TV | 30 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- Laser Printer | 3 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- Microwave Clk. | 4 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- Satellite LNA | 22 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- Stereo | 10 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- VCR Clock | 15 | 24 | 7 | | 0.0 | 0.0% |
| Phantom Load- Washer Timer | 8 | 24 | 7 | | 0.0 | 0.0% |
| Pump, deep well, 2 hp, 3 wire | 2100 | 11000 | | | 0.0 | 0.0% |
| Pump, deep well, 1 1/2 hp, 2 wire | 1780 | 12000 | | | 0.0 | 0.0% |
| Pump, deep well, 1 1/2 hp, 3 wire | 1700 | 11000 | | | 0.0 | 0.0% |
| Pump, deep well, 1 hp, 2 wire | 1200 | 9800 | | | 0.0 | 0.0% |
| Pump, deep well, 1 hp, 3 wire | 1200 | 9200 | | | 0.0 | 0.0% |
| Pump, deep well, 3/4 hp, 2 wire | 950 | 8200 | | | 0.0 | 0.0% |
| Pump, deep well, 3/4 hp, 3 wire | 950 | 7500 | | | 0.0 | 0.0% |
| Pump, deep well, 1/2 hp, 2 wire | 680 | 6500 | | | 0.0 | 0.0% |
| Pump, deep well, 1/2 hp, 3 wire | 680 | 5200 | | | 0.0 | 0.0% |
| Pump, water, 1/2 hp cntrfg. Jet | 1495 | | | | 0.0 | 0.0% |

| | | | | | |
|----------------------------------|------|-----------------------|-----|-----|------|
| Radio,Clock | 4 | | | 0.0 | 0.0% |
| Refrig/freezer 16 cf | 475 | | | 0.0 | 0.0% |
| Refrig/freezer 20 cf | 720 | | | 0.0 | 0.0% |
| Refrig/freezer very large | 1090 | | | 0.0 | 0.0% |
| Satellite dish | 30 | | | 0.0 | 0.0% |
| Security system | 1 | | | 0.0 | 0.0% |
| Sewing machine | 100 | | | 0.0 | 0.0% |
| Stereo - large | 30 | | | 0.0 | 0.0% |
| Stereo - small | 10 | | | 0.0 | 0.0% |
| Telephone, cordless | 10 | | | 0.0 | 0.0% |
| Toaster - large | 1500 | | | 0.0 | 0.0% |
| Toaster - small | 800 | | | 0.0 | 0.0% |
| Tool, drill, 1" | 1000 | | | 0.0 | 0.0% |
| Tool, drill, 1/2" | 750 | | | 0.0 | 0.0% |
| Tool, drill,3/8" | 350 | | | 0.0 | 0.0% |
| Tool, drill, 1/4" | 250 | | | 0.0 | 0.0% |
| Tool,hedge trimmer | 450 | | | 0.0 | 0.0% |
| Tool, Planer, 3.5" | 480 | | | 0.0 | 0.0% |
| Tool, Router, 1 hp | 1200 | | | 0.0 | 0.0% |
| Tool, Sander, 3" belt | 1000 | | | 0.0 | 0.0% |
| Tool, Sander, 9" disc | 1200 | | | 0.0 | 0.0% |
| Tool, Saw, 14" band | 1100 | | | 0.0 | 0.0% |
| Tool, Saw, circular | 1400 | | | 0.0 | 0.0% |
| Tool, Saw, Miter | 1440 | | | 0.0 | 0.0% |
| Tool, Saw, Radial Arm | 1200 | | | 0.0 | 0.0% |
| TV 25" color | 150 | | | 0.0 | 0.0% |
| Vacuum Cleaner - large | 700 | | | 0.0 | 0.0% |
| Vacuum Cleaner - shop | 660 | | | 0.0 | 0.0% |
| VCR/DVR | 40 | | | 0.0 | 0.0% |
| Waffle Iron | 1200 | | | 0.0 | 0.0% |
| Washing Machine - large | 920 | | | 0.0 | 0.0% |
| Water Pik | 100 | | | 0.0 | 0.0% |
| | | | | | |
| Inverter AC W-hrs Consumed Daily | 1.4 | +10% Invert Ineffic.= | 1.6 | | |

Upload form:
http://www.mcdonaldsolarandwind.com/define_needs
or email:
mcdonaldsolarwind@hotmail.com