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Load Analysis

For a stand-alone or off-grid system, it is important to have a good idea of your daily power usage so that the system will meet your required loads: unlike with grid connection, solar power systems do have a limited supply of power.

When filling out the following forms, take a look at the example, and then adapt it to your own home. Most appliances have its' wattage near the appliance power socket (usually on the back of the appliance). Check with the manufacturer if you are unsure.

The purpose of these forms is to provide you with a guide to your photovoltaic requirements. By working out your appliance usage based on a daily average you will be able to ascertain the photovoltaic power system suited to your power demands. However, please remember this is a guide only and each installation is different. Once the load analysis is completed, an individual system design and quote can be created.

We also suggest that you look at energy efficient appliances, especially light bulbs and refrigeration. These account for a lot of the total power usage and if energy efficient appliances are used, the total power consumption can be greatly reduced.

If you require any assistance with your analysis, please call us on (02) 9533 7444.



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Appliances	Number	Wattage	Hours per Day	Watt-hours per day	Comments
<i>Kitchen</i>					
Refrigerator					Please include the brand, model and size of your refrigerator and freezer
Kettle					
Toaster					
Microwave					
Freezer					Only include the stove/oven if it is electric - a gas stove would greatly reduce your electricity usage
Stove/oven					
<i>Lounge</i>					The wattage for each appliance can generally be found printed on the underside or back of the appliance. If you are unsure, still put in the appliance and its brand and model, if possible.
Television					
VCR/DVD Player					
Stereo (include speakers)					
Lamps					
<i>Laundry</i>					For appliances that you don't use every day, calculate the average time that you would use it every week and divide by seven
Washing Machine					
Dryer					
<i>Bathroom</i>					
Hairdryer					
Electric Shaver					
Electric toothbrush					
<i>Bedrooms</i>					
Clock Radio					
Television					
Bedside Lamps					

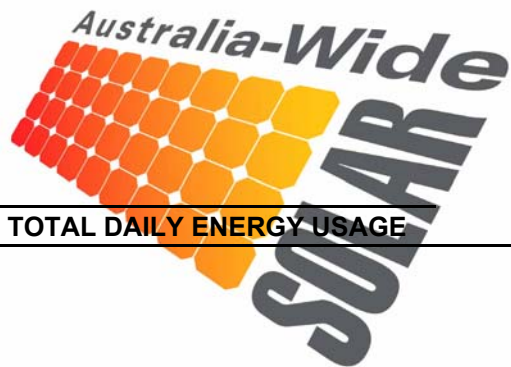


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Appliances	Number	Wattage	Hours per Day	Watt-hours per day	Comments
Study					
Computer					
Printer					
Fax Machine					
Telephone					
Answering Machine					
Scanner					
Modem					
Mobile Phone Chargers					
Desk Lamps					
<i>Other Appliances</i>					Include any other appliances that you use regularly in the extra spaces provided
Air Conditioner					
Vacuum Cleaner					
Fans					
Chest Freezer					
Appliance Total					

Lights	Number	Wattage	Hours per Day	Watt-hours per day	Comments
Lounge					Add extra lines for different sized lights if needed. The wattage of each light is generally printed on the bulb for incandescent lights or on the base of fluoro lights
Kitchen					
Bedroom 1					
Bedroom 2					
Bedroom 3					
Bedroom 4					
Bathroom					
Laundry					To cut down your energy usage, you may consider changing any incandescent lights to compact fluoros.
Hall					
Study					
Outside/Security					
Lights Total					

Appliance Total				
Lights Total				



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TOTAL DAILY ENERGY USAGE			
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Worked Example

Appliances	Number	Wattage	Hours per Day	Watt-hours per day	Comments
Television	1	150	2	300	
Radio	1	50	2	100	
Laptop	1	80	4	320	
Mobile Phone Charger	1	35	4	140	
Refrigerator	1	200	8	1600	
Microwave	1	1000	0.25	250	
Toaster	1	1000	0.25	250	
Washing Machine	1	500	1	500	
Vacuum Cleaner	1	800	0.25	200	
Iron	1	1000	0.25	250	
Appliance Total				3910 Wh	

Lights	Number	Wattage	Hours per Day	Watt-hours per day	Comments
Lounge	2	40	3	240	Fluoro lights have been used to cut down on power usage
Kitchen	2	40	3	240	
Bedroom 1	1	40	2	80	
Bedroom 2	1	40	1.5	60	
Bedroom 3	1	40	1.5	60	
Bathroom	1	30	1	30	
Laundry	1	30	1	30	
Hall	2	30	2	120	
Study	1	40	3	120	
Outside/Security	4	40	3	480	
Lights Total				1460 Wh	

Appliance Total		3910	
Lights Total		1460	
TOTAL DAILY ENERGY USAGE		5370 Wh	



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