



Using the Power Mate Lite

The Power-Mate Lite is a useful tool that measures how much energy an appliance uses, both whilst in operation and in stand-by mode. It can also record how much an appliance is costing you and the amount of greenhouse pollution it creates. Checking the energy use of your appliances is one aspect of a broader home energy audit.



To download a blank copy of this energy audit form visit: www.byron.nsw.gov.au/sustainability

Why use a Power Mate Lite (PML)?

Appliances can account for up to 40% of a household's energy use and this number is predicted to grow as households increase the number, size and variety of home electrical goods.

Standby power (such as on your TV, stereo and computer) can account for 10% of electricity consumption in a typical home, costing households up to \$180 a year on their electricity bills.

Using a PML can help you to identify and reduce unnecessary energy costs and greenhouse pollution from your home and/or office.

What can Power Mate Lite measure?

The PML can measure three types of energy consumption:

- The amount of energy an appliance uses when running;
- The amount of energy an appliance uses in standby mode;
- Whether an appliance left on at the switch while not being used (e.g. toaster, kettle, etc.) is actually consuming power.

Using the Power Mate Lite

Please read the User Manual before you use the PML. The basic steps are:

(1) First, plug the PML into a power point (or a single plug on a power board) and then plug the appliance into the PML piggy-back plug.

(2) After you turn the power point on, hold down the green 'Run' button until 'CONFIRM CLR DATA' is displayed. Press the 'Run' button to confirm the clear of any previous data and once again to start your reading – indicated by a flashing triangle. If the power use shown is 0.0 then the appliance uses no power when switched on.

(3) By pressing the blue 'Menu' button, you can scroll through different modes and find out \$ cost, kilowatt/hr (kWh) usage and kilograms of greenhouse gas (G Gas) produced by your appliance. This is displayed in 'Real', 'Hourly', 'Quarterly' and 'Yearly' periods.

(4) Click the yellow 'Zoom' button to scroll through the various data display periods. Hold the 'Zoom' button to magnify the data and click 'Menu' to return to the previous un-magnified screen.

(5) If you want to compare the energy use of the appliance while in use and on standby, you will need to reset the PML between readings (as per step 1).

(6) To get the most accurate reading, it is a good idea to reset the PML after plugging into each new appliance.

Note: The PML has been set to a default rate of 22.12 cents / kWh. Refer to your energy bill and the user manual to modify this figure.

Note: The PML can take a minute or more before the reading stabilises. Readings are cumulative, so for an appliance that varies its energy use, such as a fridge or thermostat controlled heater, you will get a more accurate result by leaving the PML connected for a 24hr period.

Checking your electricity bill

The 'quarterly kilowatt hour' (kWh) figure corresponds to the kilowatt hour usage on your quarterly electricity bill. By using the PML to check the quarterly kilowatt hour usage of a device while it is on standby, you can find out how much it contributes to your total power bill.

Safety Precautions

Using a PML involves testing electrical appliances. Use with precaution and supervise children at all times.

- (1) Do not wet the PML and avoid using in moist areas.
- (2) The PML is for indoor use only.
- (3) Do not use if cord is damaged.
- (4) Do not expose PML to excessive heat.
- (5) Avoid measuring multiple devices using a power board to prevent overloading.
- (6) Do not dismantle the PML.
- (7) Supervise children at all times.

Disclaimer: Byron Shire Council accepts no responsibility for the accuracy of readings given by the Power Mate Lite. Any estimated savings may vary depending on individual circumstance.



Using the Power Mate Lite

Use this table to record your results



| APPLIANCE | WHEN APPLIANCE IS RUNNING | | | IN STANDBY MODE OR ON AT POWERPOINT | | |
|----------------------------|---------------------------|----------------------------------|---------------------|-------------------------------------|----------------------------------|---------------------|
| | Hourly Cost (\$) | Hourly Greenhouse Emissions (kg) | Hourly Energy (kWh) | Yearly Cost (\$) | Yearly Greenhouse Emissions (kg) | Yearly Energy (kWh) |
| Fridge | | | | | | |
| Microwave | | | | | | |
| Toaster | | | | | | |
| Blender | | | | | | |
| Electric kettle | | | | | | |
| Dishwasher | | | | | | |
| Washing machine | | | | | | |
| Electric shaver | | | | | | |
| Portable heater | | | | | | |
| Clock radio | | | | | | |
| Air conditioner | | | | | | |
| TV | | | | | | |
| DVD player | | | | | | |
| Computer | | | | | | |
| Laptop | | | | | | |
| Printer/scanner | | | | | | |
| Lamp | | | | | | |
| Cordless phone | | | | | | |
| Mobile charger | | | | | | |
| CD player | | | | | | |
| Fan | | | | | | |
| | | | | | | |
| | | | | | | |
| Total Standby Power | | | | (\$) | (kg) | (kWh) |

While individual appliances may seem to use little power, the sum of all appliances on at the switch or in sleep/standby mode can really add up.

Energy Saving Tips:

- Turn off your appliances properly at the 'off' switch or power point to prevent standby wastage (a power board with a switch or timer can help in hard to reach places).
- If you are purchasing a new appliance, choose an energy efficient one. Look for the star rating label or visit: www.energyrating.gov.au

Further Assistance

If the Power-Mate Lite is not working or you have any difficulties please return to the Library and notify Library staff. To download a blank copy of this energy audit form or to find out more about Byron Shire Council's Sustainability programs, please visit www.byron.nsw.gov.au/sustainability or call 6626 7000.