



Energy Efficiency (EE) technologies greatly reduce the energy consumption of households. This will save you money.

There is a simple step-by-step way of introducing and benefiting from energy efficiency in a household. The following steps are recommended.

1 MEASURE

Measure your current electricity consumption.

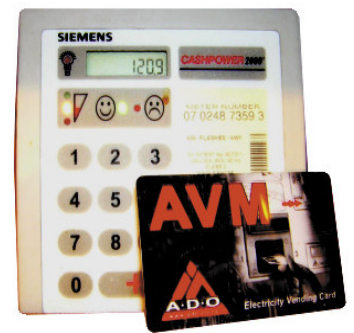
Whether you use a credit meter (municipal bills) or pre-payment meter, record the amount of UNITS (kWh), MONEY (N\$) and TIME PERIOD (days).

This will allow you to calculate how much money you spend per month and how much electricity you use. The benefit of measuring your consumption is that you will know exactly what the impact of your energy-efficiency conversion is.



2 PRE-PAYMENT

Credit meters (where you receive a monthly bill from the municipality) have a lower cost per kWh (this is called "tariff"), but they carry a monthly basic charge. The cost of the basic charge depends on the size of the connection (measured in Ampere), but you still need to pay something even if you have not used any electricity. A pre-payment meter carries no basic charge. Therefore every kWh you save directly reduces your electricity expense, while in addition you do not pay any basic charges. Credit meters work out cheaper only if your household uses a lot of electricity. Depending on where in Namibia you live, the tariff that you pay and what circuit breaker is installed, the cut-off lies between 400 kWh and 600 kWh. Below these, it is cheaper to immediately convert to pre-payment.



A pre-payment meter can be applied for at most municipalities in Namibia.

3 LIGHTS

Ordinary (incandescent) light bulbs waste a lot of electricity. Only 5% of the electricity is converted to light, while the rest is lost through heat. Energy Saving Lights (also called Compact Fluorescent Lights - CFL) are much more efficient. A 15-Watt CFL provides the same light as a 75-Watt light bulb and lasts 6 times longer (2 to 3 years). Your investment will have paid for itself within 2 to 3 months and you will save money every month for the next 30 months!

Replace ALL the lights in your home at the same time. This will show you the impact on your electricity measurements more clearly.



4 SOLAR HOT WATER

Water heating, using electricity, accounts for about 50% of a household's energy expense.

Namibia has almost 100,000 electric household geysers, which collectively consume about N\$150 million in electricity every year. Solar Water Heaters could replace all these electric geysers, and would reduce Namibia's national electricity consumption by over 10%.

In Namibia a solar water heater takes about 4-5 years to save enough money to have paid for itself. After that hot water is entirely for free, except for minor maintenance on the solar water heater.



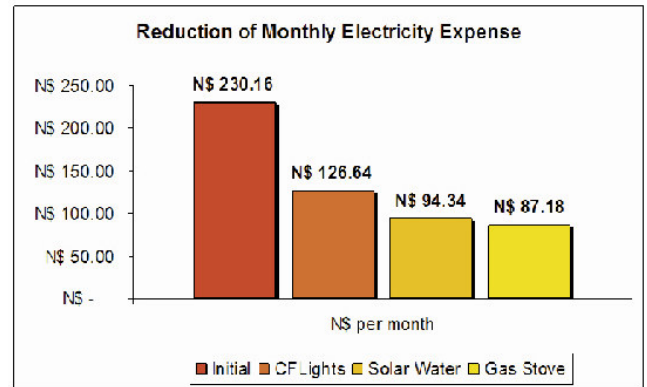
CASE STUDY - WINDHOEK

This data shows the impact of implementing energy efficiency in an urban household. The data was gathered from a 4-person home in Kleine Kuppe, Windhoek, from 2003 to 2006.

Electricity tariff = N\$0.6118 per kWh

Daily Electricity Consumption

- Initial electricity consumption: 12.54 kWh
- After installation of Energy Saving Lights: 6.90 kWh
- After installation of Solar Water Heater: 5.14 kWh
- After installation of Gas Stove: 4.75 kWh



MORE ENERGY SAVING TIPS

Wash clothes at 40 °C rather than at 60 °C. You'll save money, and modern washing powders work just as well at lower temperatures.

Wait until you have a full load before using the washing machine or dishwasher, or select the half load or economy setting.

Do not keep your fridge or freezer door open for long (cold air escapes) and do not put warm food into your fridge or freezer; let it cool down first.

Defrost your fridge and freezer regularly to avoid ice building up. Layers of ice reduce the efficiency.

Don't leave appliances turned on or on stand-by unnecessarily. Leaving a computer screen on overnight wastes enough electricity to print 1,000 pages. A television on stand-by uses 7% of the electricity of a television that is switched on. A video player on stand-by uses 85% of its total energy requirement, even though it's not actually in use!

Optimise your freezer's performance by making sure it is as full as possible. Add plastic cool drink bottles filled with water. The frozen bottles will help keep the fridge cool (which is useful during power interruptions), or they can keep food and drinks cool when travelling.

Fridges emit heat at the back. Move the fridge away from the wall at least a hand's width so that air circulation is improved to carry this heat away.

Treat your geyser like a kettle: only switch it on 30 minutes before using hot water and then switch it off again. If you wrap the geyser and hot water pipes in old blankets or other types of insulation materials, you can leave the geyser off for longer and still have hot water.

Cook with a lid on the pot and don't use a small pot on a large stove plate. Invest in cast iron pots or similar thick-walled pots that retain heat better.

Dress to suit the season! Take off your jacket in summer (rather than using an air conditioner) or put your jacket on in winter (rather than using a heater).

Use curtains to regulate direct sunlight and heat through a window. Allow sunlight into the room rather than switching on lights or a heater. Close the curtains to block out the heat.

Remember: dark colours absorb heat; light colours reflect heat.

Monthly Cash Saving

N\$ 125 Basic Charge

+ N\$ 140 Electricity

= N\$ 265

Monthly Electricity Cost:

N\$ 90 to N\$ 100

Additional Information

http://en.wikipedia.org/wiki/Energy_saving

<http://www.energystar.gov>

<http://www.aceee.org>

www.drfn.org.na

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