

Environment

Home truths on energy use



Anne Zammit

How to use energy efficiently in a domestic setting is this month's burning topic.

A fractional cloud of doubt over man-made climate change was all but lifted after last month's Intergovernmental Panel on Climate Change report that mankind's contribution to global warming is now estimated to be 95 per cent certain.

Climate sceptics who still cling to a five per cent sliver of uncertainty should remember that, in the scientific world, nothing is ultimate. Denying human causes of emissions, which threaten the earth's atmosphere and planetary survival, is like choosing to board an aircraft with only a one-in-20 chance of not crashing.

During October, the Malta Resources Authority organised a series of information sessions open to the public.

In a hands-on session, engineer George Cassar invited participants to compare electrical devices such as phone chargers and transformers, which emit heat when left plugged into an electrical socket, consuming

all fall under the new legislation, part of which became effective as of last month.

The new labels give an indication of the annual energy consumption that can be expected from the product with average use. If a product is imported from outside Europe, the supplier for the local market must acquire technical data on energy efficiency from the manufacturer and make it available to consumers.

Guidance for suppliers and dealers on making product information available to consumers is available from the Malta Competition and Consumer Affairs Authority.

Televisions must carry an icon showing how much energy is wasted when left on standby mode. Other environmental factors are included in the new



ENERGY LABEL
 Name of manufacturer and product: DAIKIN
 SEER: 6.8
 SCOP: 4.15
 Design load for cooling: 3.0
 Design load for heating: 3.5
 Annual energy consumption during a cooling season: 58.05
 Annual energy consumption during a heating season: 2.56
 Sound power value for indoor unit: 58.05
 Sound power value for outdoor unit: 64.05

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sessions open to the public. In a hands-on session, engineer George Cassar invited participants to compare electrical devices such as phone chargers and transformers, which emit heat when left plugged into an electrical socket, consuming energy needlessly. Such devices should be switched off at the plug.

Homes losing energy to equipment on standby can waste up to nine per cent of their total consumption. However, not all devices can easily be left disconnected from the power supply.

Satellite equipment, DVDs, VCRs and cable boxes may need to be left on to retain their settings or receive signals for updating. Other systems usually on standby which may not be practically switched off include security systems, answering machines, modems, ID caller, and emergency lighting.

Losses of over one watt on appliances in standby mode should generally be avoided.

One area where energy efficiency can easily be improved is office equipment, which drains away energy when left plugged in. One solution is to use a single power strip with a switch to control clusters of equipment (printer, shredder, computer, and so forth) and switch off when not in use.

Mosquito repellent burners left on, even when not needed, make a home less energy efficient. A device similar to a multi-plug can be bought to measure the actual consumption of each appliance used in the home, apart from those that may be wired-in such as air conditioners or water heaters.

When out shopping for appliances, consumers will find that comparing energy efficiency for the same type of product is getting easier thanks to new EU labeling laws. Washing machines, fridge-freezers, televisions, vacuum cleaners, air conditioners, dishwashers and tumble dryers

labelling scheme, such as water consumption and noise levels of different appliances, which may vary from make to make.

Refrigerator energy labels also list decibels when the motor is running. Noise levels are shown for both wash and spin on washing machines as well as water consumption per cycle. Wine refrigerators fall into a separate category. New energy labeling legislation for dishwashers coming onto the market after December 1 will soon be in force.

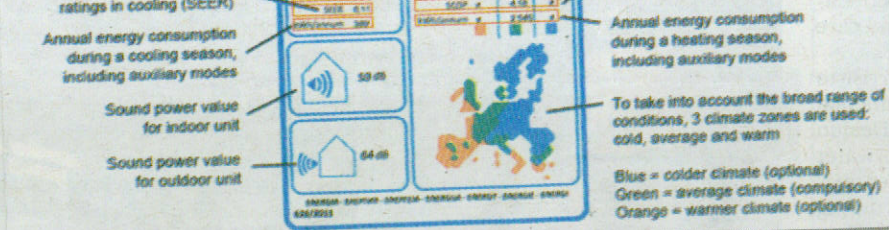
Labels on luminaires or lamps placed on the market as of last month must now show the best energy efficient choices of bulb for the appliance.

During a presentation by Stephen Schaa of Projects in Motion Ltd, participants learned of an energy cost initiative for retail points by 11 European countries, including Malta. Yearly appliance energy cost indication (YAECI) shows upfront on the price tag, how much it would cost to run large appliances.

For washing machines and dishwashers, the price tag would also indicate the cost of water these appliances would use in a year with average use.

A number of shops selling white goods and appliances have already adopted this voluntary, climate-friendly initiative.

When shopping for an energy-efficient appliance, care should be taken to keep in mind the required load, and choose an appropriate size. Choosing a smaller model because the numbers are lower could result in higher costs if more



“**Choosing a smaller model of washing machine because the numbers are lower could result in higher costs, if more loads are needed compared to a larger model. On the other hand, larger televisions consume more energy than smaller-sized models**”

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Guidelines on maintaining refrigerators and air conditioners to maximise their efficiency were provided by Daniel Privitera, a trainer of refrigeration technicians at the Malta College of Arts, Science and Technology.

“Don’t suffocate your fridge by squeezing it into a confined space,” he advised. Built-in fridge/freezers are less efficient than a stand-alone design.

Settings should be checked with a thermometer over a 24-hour period (fridges at 2°C to 4°C degrees and freezers at -15°C to -18°C). After switching off the fridge, dust should be removed from fan blades and the condenser/evaporator vacuumed – especially when there are pets in the home.

Leaving the fridge at least 20 per cent empty allows for better air circulation and improved efficiency. Items should be allowed to cool before putting in the fridge and younger members of the family may be appointed as mini wardens to control needless opening and shutting of the fridge door.

Check the gasket seal on the doors, defrost using fans and never try to top-up refrigerant without engaging an accredited technician. Finally, the most basic check is to make sure the motor is switching both on and off, ensuring that the thermostat is in good order.

Air conditioners are high consumers. To compare the efficiency of different brands, a

check can be run on their Coefficient of Performance (COP) and Energy Efficiency Ratio (EER) ratings. Shops tend to oversize with profits in mind so a double-check on matching capacity to actual load is advised.

Locating the outdoor unit in a shaded area if possible makes a big difference in energy savings. Ice forming means trouble with refrigerant leaks, which need to be immediately seen to. If outdoor pipework is not properly insulated, the air conditioner will end up cooling the environment instead of the room for which it was intended.

An optimum room temperature is 24°C, with variations of two or three degrees maximum. People who resort to sleeping in an air-conditioned room simply to gain some noise-free sleep may do better to invest in double glazing for a more energy-efficient home.

Engineer Samuel Farrugia of the Building Regulations Office spoke on European obligations of the energy performance certificate for dwellings.

Another information session on energy efficiency for householders will be held by the MRA on October 30.

www.pim.com.mt
www.appliance-energy-costs.eu/mt/tips-to-save-energy-mt/

Correction

With reference to the article ‘Air Quality for Power Stations’ by Anne Zammit published on September 15, the name of one of the consulting environmental engineers and sustainability managers mentioned in the article is Scott Mikalauski, not as featured.