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[Editor's quote : Our column on 'Issues that impact our daily lives' returns with Energy saving tips for the ensuing summer months]

ENERGY SAVING TIPS



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Earlier, we looked at our Energy bills and how different appliances in our respective environments affected our consumption. This time around, let us look at how we can reduce our consumption by optimising their usage. Here are some quick tips that I have followed over the past several years that are beneficial in bringing down Energy bills across commonly-used everyday gadgets and equipment.



AIR-CONDITIONERS :

For domestic users, ACs consume the most amount of Energy, clocking up to Rs.200 per night of usage.

For commercial/industrial users, costs could be more since these operate during day-times when ambient temperatures are significantly higher, while paying a higher per-unit Energy cost to the distribution companies.

As a primary line of defence, ensure the nylon/plastic air-filters of ACs are cleaned every 15 days, by washing them in warm soap-water and a brush (use an old toothbrush if you don't have any specific tools). Ensure periodic maintenance by a service provider who shall clean the vents with a blower and with a damp cloth to remove all dirt blockages. If there is an external split AC unit, ensure the same is carried out on the outside unit as well.

Most modern ACs, especially the split-units come with a programmable feature on the remote that can

reduce the cooling in the room at pre-defined intervals (eg. 1 degree every hour as the night advances).

This is a powerful way to reduce consumption. As a thumb rule, each 1 degree increase of temperature reduces energy consumption by 5%. Alternatively, the timer feature can also be used to shut off the AC earlier than your waking hour, thereby reducing Energy bills.

WATER-HEATERS:

In the contest for the highest-energy consumption device in the domestic devices category, the water-heater wins the Gold medal. They can be quite brutal, costing over Rs. 18 per hour of usage. An average person consumes about 30 litres of hot water during a shower-bath and spends about 20 minutes on average.



If the bathroom is shared with family members, they ensure bath times are sequenced one after the other in quick succession. This ensures the water-heater maintains a steady heating-cycle, rather than being cooled and heated in succession. Typically, the last person to take a bath can shut off power to the water-heater before entering the bathroom, since the water contained within the unit shall be significantly hot.

REFRIGERATORS :

While they perform a critical-function as regards to storage of eatables, they are heavy-consumption devices that run non-stop all year round.

In the hotter months that shall follow, you may face higher bills due to increased cooling requirements. Keep the condenser coils behind the fridge clean by wiping with a

damp cloth (ensure this is done while the device is disconnected from the mains). Also ensure the provision of additional space behind the device so the coils can dissipate heat to the environment. Loading of vegetables in the designated tray area should be carried out after removing the tray from the fridge, rather than with the door open.

Similarly, cleaning of the inner compartments should be carried out with the fridge powered off. A fridge well-stocked, allows lesser areas for warm air to seep-in when opened. So optimise cooling by ensuring you do not keep a semi-empty fridge. Refrigerator gaskets (the insulating seal between the door and the body) need to be tight-enough to ensure cold-air does not leak out. A simple test to validate is by keeping a piece of paper in-between and shutting the door. If the paper can be pulled-out without having to exert adequate pressure, it may be time to replace the gasket.

LED / LCD / PLASMA / CRT TVS / MUSIC AMPLIFIER SYSTEMS :

The advent of high-definition (HD) picture resolution digital television sets has led to power-hungry equipment driving HD, 3D and Gaming requirements. Shutting them off completely from the main power sockets during non-usage hours rather than keeping them on standby mode (ie: do not merely power off from the remote control) can help save a lot. Stand-by power can add up significantly for many such devices kept in this state, for several hours of non-usage each day and night. Some might argue that the LCD clock-display on some of these devices need to be re-programmed each time they are switched-off, but this is a small price to pay for the savings that shall accrue. After all, these are not the only ways to read time in your home or office areas.



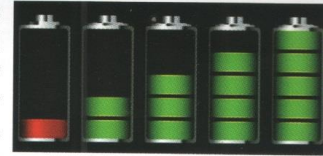
HOME & OFFICE LIGHTING :

Switching over to Energy-efficient lights and lamps such as those incorporating LEDs and CFLs considerably help conserve energy. If the additional expenditure in procuring these seems to be a deterrent, changing tube lights and fittings to more efficient T8 or T5 slim-lights definitely help lower consumption.



LAPTOPS / MOBILE PHONES / TABLETS / HAND-HELD DEVICES :

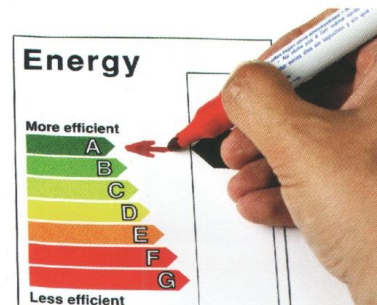
At the onset, it is important to understand that the life of any rechargeable-type battery is dependent on the number of charging



cycles it has undergone. Hence to lengthen the service-life of a battery, it is important to charge and discharge it to the extent possible as per device specifications. Make a note of the amount of time your mobile/hand-held device requires to be fully charged from minimal state, and ensure the device is hooked up only for that time period. Leaving the device charging at the electrical socket, only leads to power being wasted in trickle-charge mode, in the form of heat besides reducing battery capacity.

ENERGY AUDIT:

From time to time, subject your residence or office to an energy audit that shall assess the efficiency of your devices as against manufacturers' ratings and



provide you with a detailed summary of your Energy footprint. You may be well surprised with the outcomes and would want to re-validate the existence of several old and inefficient equipment, against the convenience they provide.

In all earnest, we should not forget our moral duty towards optimising Mother Earth's resources with a view to save them for future generations. After all, there is only one planet we call home, and no better time than now to make a difference.

The writer is an independent energy consultant and founder of a successful start-up. He can be reached at prasad@bigswitchindia.com