



# HOW TO BECOME ENERGY-EFFICIENT

A Practical Tip Sheet







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01

02

# COOLING AND THERMAL COMFORT



## 01 Do you feel the urge to immediately switch on the AC after coming in from the sweltering heat outside?

It is quite natural to feel this urge – but the sense of discomfort that you are feeling is probably false, created by a temporarily elevated metabolic rate. Start by opening windows for ventilation, using a fan, or opting for desert coolers in dry conditions. If you don't feel comfortable within 10 minutes, only then consider the use of AC. Delaying the use of air conditioner will help your body adjust to the temperature change; it will help prevent a state of thermal shock, in which the body struggles to adjust to sudden dip in temperature, causing colds, cramps and dizziness.

## 02 Do you use an AC only when necessary and keep it at an efficient setting?

The human body has the ability to adapt to achieve thermal comfort. In most Indian cities – says the National Building Code – people can achieve thermal comfort at

temperatures as high as 32°C, provided they are in a naturally ventilated environment. If you do choose to use an AC, set it at 27°C ± 2 and use a fan along with it. Every one-degree increase in AC temperature settings results in 6 per cent electricity saving.

## 03 Is your roof a dark color?

If you live or work on the top floor of your building, a significant part of the heat in your space might be coming from the roof. To reduce this influx of heat, use thermally efficient roofs: reflective, insulated or green roof systems can reduce heat gain and keep indoor spaces cooler.





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# LIGHTING



## 01 Are your curtains closed right now, while it is still daylight outside?

Open your curtains before switching on the lights. Besides saving electricity, natural light helps people be more active, productive, healthier and calmer – it acts as a mood enhancer.

## 02 Are you lighting the whole room just to read one book or work at one desk?

Use task lighting (lamps/ spotlights), which focuses light where it's needed instead of lighting the whole room.

## 03 Run a finger over lighting fixtures. Is there a visible layer of dust?

Dirty lighting fixtures reflect less light and have been found to absorb up to 50 per cent of the light.<sup>1</sup> Clean them regularly to maintain brightness and efficiency.

## 04 Do you compare lighting options based on luminous efficacy (lumens per watt) before buying?

When deciding to buy lighting fixtures, compare for luminous efficacy – how much light (lumens) is produced per unit of energy (Watt). LEDs sold today have luminous efficacy as high as 160-170 lm/W.

## 05 Are your interior walls and ceilings light-coloured and reflective?

Light-coloured surfaces help reflect natural light deeper into spaces, reducing the need for artificial lighting.



<sup>1</sup> - <https://hareda.gov.in/tips-for-energy-conservation/>

ENERGY-EFFICIENT



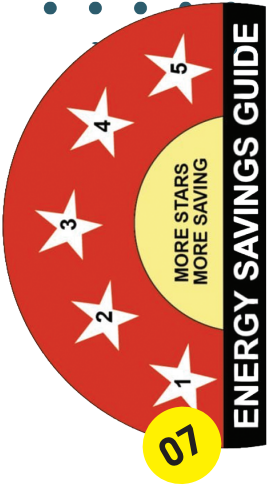
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# HOUSEHOLD APPLIANCES



## **01** Do you keep your AC's outdoor unit shaded?

Shading the outdoor unit improves the efficiency of the AC and reduces energy consumption.

## **02** Has it been more than a month since you cleaned your AC filter?

Clean the air-conditioner filter every month. When AC filters are clogged, airflow gets restricted, the AC struggles to pull air, and the compressor runs longer – this increases electricity usage.

## **03** Is your washing machine only half-full right now?

Run the washing machine on a full load to reduce energy use per wash, as heating, spinning and motor energy are utilised more efficiently.

## **04** Do you put hot food from the stove directly into the refrigerator?

Allow hot and warm food to cool before placing it in the refrigerator. Putting hot food in the refrigerator increases the cooling load, making the

compressor work harder and consume more energy, while also creating conditions that can promote bacterial growth.

## **05** Has it been more than a year since the last time you cleaned the coils at the back or bottom of your fridge?

When dust builds up on the refrigerator's condenser coils, the motor works harder and uses more electricity. Clean the coils regularly to make sure that air can circulate freely.

## **06** Place a lit flashlight inside your fridge and close the door. Do you see light escaping through the seals?

If a lit flashlight is visible from inside a closed fridge, your fridge is "bleeding" cold air. It's time to replace the gaskets.

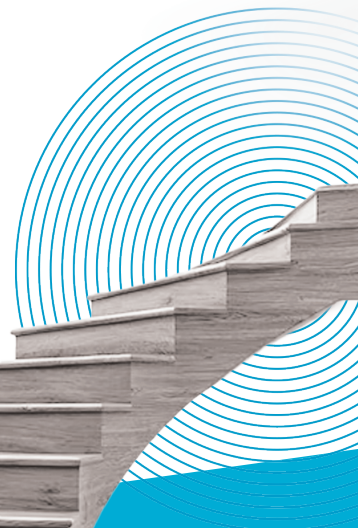
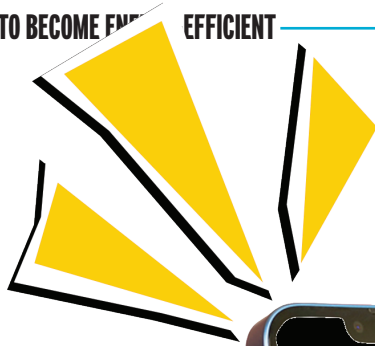
## **07** Do you check their BEE star rating while buying appliances?

Use the BEE star label app to check an appliance's energy-saving potential. Choosing a five-star AC over a three-star model can save roughly Rs 1,200-1,800 annually.<sup>2</sup>

<sup>2</sup>. <https://www.downtoearth.org.in/energy/what-is-the-star-rating-label-of-an-air-conditioner-telling-you>



HOW TO BECOME ENERGY EFFICIENT



**EVERYDAY  
BEHAVIOUR**





## 01 Do you leave your phone plugged in while you sleep?

Charge your phones during the day, not overnight. Leaving phones plugged in overnight can waste energy — your phone will continue to draw power even after it's fully charged.

## 02 Do you leave chargers plugged in without the device or switch off appliances only with the remote instead of at the socket?

Chargers draw power even when not in use, and appliances on standby continue consuming energy. Switching off at the socket can reduce wastage and emissions.

## 03 Is your phone set to vibrate for notifications?

Turn off the 'vibration' mode on your phone whenever possible. A vibration uses more energy than a ringtone to power small motors to shake the device.

## 04 Do you use the dryer mode on the washing machine?

Sun-dry your clothes rather than using the dryer mode of the machine.

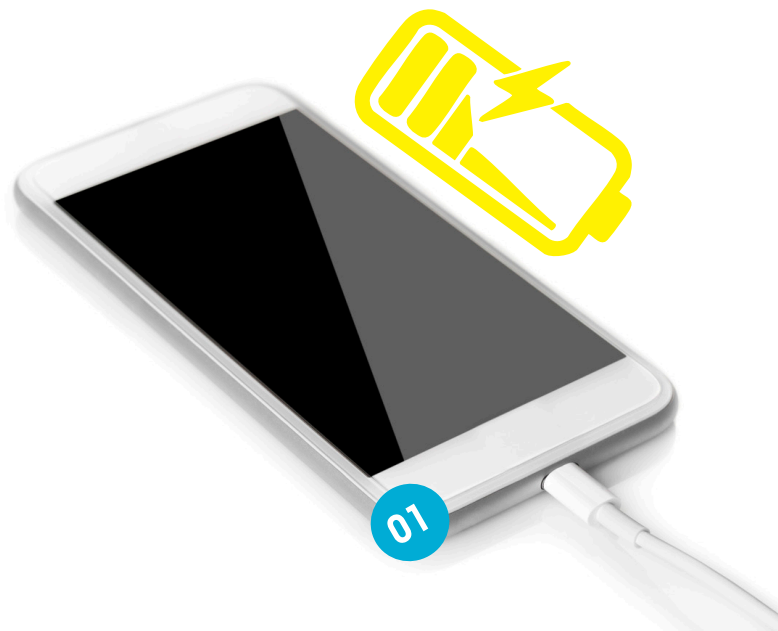
## 05 Do you use elevators for up to four floors?

Use a staircase for four or fewer floors to save energy and to stay fit.

## 06 Do you open the refrigerator and pause while deciding what to take?

Plan what you need before opening the door to reduce the time it stays open – this will help minimise the energy loss. Frequent opening of the door or leaving it open for long periods can put extra load on the cooling.

*For CSE's resources, publications etc on sustainable habitat, living and lifestyles, check out the Habitat section on [www.cseindia.org](http://www.cseindia.org).*





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