

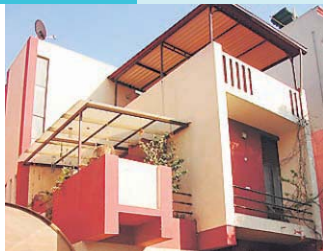


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# star tech

## HOUSE THAT?

Covering my rooftop (below) with asbestos and PVC sheets on a steel frame saved me lots of air-conditioning



## GREEN HUB

ITC's Gurgaon Green Centre (right) uses natural light, reflective paint and efficient cooling

# The Greenhouse Effect

Earth Hour begins at home. Little steps can make your house greener – and save you money



I'M WRITING this in the dark, lit only by the glow from the screen and other gadgets and chargers in the room. It's past 8.30 pm, and Earth Hour 2009 has begun. A half billion people on the planet have switched off their lights.

In South Delhi we have little choice: a thunderstorm has caused power to trip a while ago. We'd usually not notice it, because our backup would kick in, but we've killed the inverters and generators. The giant Select Citywalk mall, usually lit up like a thousand Christmas trees, is dark.

By the end of Earth Hour, Delhi's power draw has dipped by 1,000 megawatts, thanks only partly to the storm, rain and power cuts.

Earth Hour may be a drop in the ocean, but it was a reminder that we need to save power. The other reminder, of course, is rising electricity bills and spend on inverters and generators, batteries and diesel...

So set aside your own Earth Hour this Sunday, and see how you can cut down those power bills.

## GREEN BUILDINGS ARE COOL

The green building is hot today. (That's funny, because it's cooler than others.)

That's a building that has low impact on the environment: it uses energy and water efficiently, uses non-toxic, recycled materials, provides clean air and natural light as far as possible, and often uses intelligent building-management systems.

There are detailed, complex descriptions and rating systems, but you get the idea.

The leading rating system is US-based LEED, and it rates buildings silver, gold, and platinum. The first platinum-rated building in India was ITC Green Centre in Gurgaon, the headquarters for that group's hotel chain. For a while it was also the world's largest platinum-certified green building. (A newer alternative to LEED is TERI's Griha, a rating system more tuned to Indian needs.)

Newer construction projects are aiming for green certification. The Hyderabad Airport, built by GMR, is silver-rated. And upcoming residential projects such as Tata's 12-acre Raisina Residency in Gurgaon will have 'green homes' certified by IGBC, the Indian Green Buildings Council.

How does all this help you, if your house isn't green-certified, and your office probably

## ENERGY DRAIN

Maximise natural light and use motion sensors for energy savings isn't, either?

Well, buildings do dozens of things to be green, but you can pick up just a couple of them as ideas to use in your home – and save energy.

## IT'S THE GREENEST ONE

ITC's Green Centre is a benchmark for green buildings, and uses a variety of techniques to cut power and environment impact. Ignoring the many steps to tackle the latter, here's just a few energy-saving ideas – for your home.

Maximise use of natural light. Thin white curtains and shutters cut glare, let in diffused light. Special glass in east/west facing windows reflects heat, lets in light. Light sensors bring lights on automatically when daylight dips. Hot water comes from solar heat exchangers on the rooftop.

The terrace is insulated with polystyrene, and coated with reflective 'high-albedo' roof paint. This cuts down cooling needs.

Delhi's India Habitat Centre uses a large grid of fibre sheets on steel pipes to cut sunlight on the giant courtyard in summer, and let it through in winter.

There are cheaper alternatives. Aluminum paint can keep terraces from heating up. (Try painting your black rooftop water tanks silver... to keep the water from getting too hot.)

Before I covered my terrace with asbestos and PVC roofing, my top floor needed full-time air-conditioning in summer. The closed rooms were hotter than the outside temperature (I measured 47 degrees in 2006). After the sheet PVC covering, the

rooms dropped by 6 to 8 degrees – for the rooftop was no longer sunlit. Since then, we hardly ever use air-conditioning except at the peak of summer. And the whole house stays uniformly cooler.

Other simple retro-fit ideas include using motion-sensors (about Rs 1,000) to turn on porch lights, saving power and scaring off intruders. Use CFLs to gradually replace other types of lights, especially those that are used the longest hours. Power off stabilisers and chargers, to kill standby power drain.

And we haven't even got to solar power and windmills yet – but that's another story for another weekend!

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## GREEN BUILDINGS USE MANY TECHNIQUES TO SAVE POWER. YOU CAN ADAPT SOME FOR YOUR HOUSE

