Heat Relief: 10 Overlooked Low-Tech Ways To Keep Your House Cool

By Lloyd Alter | Tree Hugger

Summer is almost here and the air is already full of the the sound of whining air conditioners, all seriously sucking kilowatts. Yet much of that air conditioning load could be reduced or the air conditioning season shortened if we did simple things, many of them common before air conditioning was common in North America. Here are some low-tech tips for keeping cool.

The best ideas are those that keep the heat out of your home in the first place, rather than paying to pump it out after it gets in.

1. Use awnings.

According to the Washington Post, The Department of Energy estimates that awnings can reduce solar heat gain—the amount temperature rises because of sunshine—by as much as 65 percent on windows with southern exposures and 77 percent on those with western exposures. Your furniture will last longer, too.

We noted in Planet Green last spring that this can translate into a saving of cooling energy of 26 percent in hot climates, and 33 percent in more temperate climates where it might even make air conditioning unneccessary.

Low-tech Tips: Keep Cool with Awnings

Lloyd Alter

2. Plant A Tree.

I don't own an air conditioner. The house immediately to the south does it for us, completely shading the south side of our house. What it misses, a huge ancient maple in its front yard gets, so in winter I get a lot of sun in my window, and in summer I am always in shade. A tree is as sophisticated as any electronic device around; it lets the sun through in winter and grows leaves in summer to block it.

Geoffrey Donovan studied it in Sacramento, and calculated the savings.

"Everyone knows that shade trees cool a house. No one is going to get a Nobel Prize for that conclusion," says the study co-author, Geoffrey Donovan. "But this study gets at the details: Where should a tree be placed to get the most benefits? And how exactly do shade trees impact our carbon footprint?"

Find out in Planet Green: Be Cool and Plant A Tree

Travelpod

3. Plant Vines.

Frank Lloyd Wright once said "a doctor can bury his mistakes, but an architect can only advise his clients to plant vines." It turns out he could have been a mechanical engineer, for it is surprising how effective vines are at keeping a house cool. With the new weatherization grants, the salesmen are out peddling ground source heat pumps to keep you cool for less, but really, free is better.

Vines such as ivy, russian-vine and virgina creeper grow quickly and have an immediate effect; according to Livingroofs.org.

Climbers can dramatically reduce the maximum temperatures of a

building by shading walls from the sun, the daily temperature fluctuation being reduced by as much as 50%.Together with the insulation effect, temperature fluctuations at the wall surface can be reduced from between –10°/14°F to 60°C/140°F to between 5°C/41°F and 30°/86°F. Vines also cool your home through envirotranspiration, described in our post Be Cool and Plant A Tree.

More in Planet Green: Plant Vines; It is like a second skin for your house.

4. Tune your Windows

The windows on your home are not just holes in the wall that you open or close, they are actually part of a sophisticated ventilation machine. It is another "Oldway"—People used to take it for granted that you tune them for the best ventilation, but in this thermostat age we seem to have forgotten how.

For instance, everyone knows that heat rises, so if you have high windows and open them when it hot inside, the hot air will vent out. But it can be a lot more sophisticated than that. When air passes over your home, it works the same way as it does over an airplane wing: the Bernoulli effect causes the air on top and on the downwind side of the house to be at a lower pressure than on the upwind side. So if you have double hung windows, you can open the bottom section of the upwind side of the house and the upper section of the downwind side, and the low pressure will suck the air through your house. Make the outlet openings larger than the inlet opening, it increases the draft. That is why I love double hung windows; they offer the most flexibility and options. Others say that casement windows are best because they can open up to 100%; double hungs can never be open more than 50%. However I have seen studies (which I cannot find) that show that double hung

windows actually work better because of the many options in setting them.

More on Planet Green: Tune Your Windows; They are not just holes in the walls.

5. Get a Ceiling Fan

It doesn't have to be like Collin's Batman fan; they come in all kinds of designs and work on the same principle, that moving air evaporates moisture from your skin and keeps you cooler.

Collin notes that using them is one of our 25 Ways to Save the Planet, and they can save you some cash since they operate at a fraction of central and window air-conditioning units (and they can work great in tandem with your A/C if global warming has you sweating it out). As Energy Star reminds us, ceiling fans help keep you cool, rather than cooling the entire room.

READ THE REST OF THE ARTICLE.