

# Solar air conditioning – Is there anybody out there?

by Tonia Haynes

My sister recently bought an air conditioner. Considering she and her family live on the smell of a benevolent social system, expense wise this was no mean feat. I can see all you lovers of Gaia's green beginning to bristle at such an environmentally selfish act, but actually my sister's not a bad bloke. She's right into organics and permaculture and does her best to live simply just so others can simply live.

But the family home is located in south-west Brisbane, where the summer temps regularly hit the forties and unfortunately the design of the building doesn't lean toward the installation of reverse cycle ceiling fans or other such friendly goodies. I notice also that my oh so environmentally friendly mates are slowly but surely beginning to add the word 'aircon' to their otherwise earth loving vocab. The scary

bit is the tone of longing and envy if they don't have it, and the continual waxing lyrical if they do.

I have just spent Christmas with friends at Nimbin. Do they have air conditioning? Of course not! The house is surrounded by trees and the north side verandah abounds with healthy grapevines, which are very cooling. Was I worried about the potentially hot summer days that goodtime country can offer? Not at all. Me who is so at one with myself and nature, was going to tune the physical body with grace and ease to whatever gifts old Sol could offer. Alas I was so completely wrong.

All I can think is, the tuning station in my brain is in sad need of repair to which many would agree. I have the recessive genes of an Eskimo or my higher self sees that the way to enlightenment can only be achieved by frying the body cells to the consistency

of a hard-boiled egg.

Being that one's optimism can only take so much, one can be forgiven for thinking - yes we are definitely in deep shit when even the most stalwart of Gaia's love groupies start praying for a fossil fuel guzzling air conditioner just to keep them not only sane, but perhaps also in the land of the living. Let's face it, hard-boiled eggs are definitely dead.

As we all know, there have been huge amounts of lateral thought activated throughout the journey to nurture and save the Mother of us all, accompanied by huge amounts of courage. And Northern NSW would definitely have to be leader of the team. But I am questioning the amount of action or lack of in that direction lately.

What happened? Are we too tired, too old, too scared or do we just feel that the rewards for past endeavours

somehow keep kicking us in the arse, oft times bruising our once brave and hopeful hearts? Or are the pixies still quietly working at the bottom of the underground garden making wonderful and positive changes which will be revealed to us mere mortals at the appropriate time or space?

In the meantime, air conditioners are happily hissing out cooling air, rapidly subverting all and sundry, while fossil fuels burn at the rate of a runaway semi-trailer and we all grimly hang off the back hoping to hell we will survive the journey, or at least some of something will.

I guess the major challenge is that even the most dedicated greenie is only human and if things get too painful we will use painkillers, even air conditioning, and to hell with the threat of severe rectal glue.

So where is this doom and gloom bitch leading to? Actually it's a cry for help from all us Gaia groupies and a plea for clemency for the foolish ones who live in places like The Gold Coast in concrete towers with plastic flowers.

To you amazing and largely unsung heroes out there who created the Rainbow Power Company and other such wizard wonders. Please! Please! May we have an alternative solar powered air conditioner?

I'm pretty dumb when it comes to engineering and technology so if it can't be done, feel free to say so. All the same we need a miracle, otherwise soon we could all end up like hard-boiled eggs.

Perhaps you're all sitting out there on your Josephine thrones saying, "So the bastards have no bread? Let them eat cake! Serves 'em right!" and who could blame you? It's been a

shitty road, potholed with little appreciation for many unsung heroes since the sixties. But Mother's still here, as are many of us. So if we want to be around as long as it takes for the clarion call to finally sink into the heads and hearts of the stupid and slow, we need to be relatively healthy and not dying from heat exhaustion.

I know I'm asking for a band aid for a much more serious issue, but sometimes one needs to cover the wound in order to give the bigger picture time to heal.

Are we, the supposed children of lateral thinking and the new age, going to continue the dance toward a better way of being for all? Or are we just too tired and sad because unwittingly we did let the bastards get us down?

How about a nice solar air conditioner that is portable, with battery backup?

## Will air-cons help us survive global warming?

by Peter Pedals

Every hot summer's day the consumers of grid electricity are under the threat of power blackouts. With Chinese-made air conditioners now selling for \$200, the rush is on to purchase one for every grid connected home.

The problem is that climate worldwide is getting hotter: 2003 and 2005 now being the two hottest years on record and January 1st 2006 being the hottest New Year's Day for South East Australia ever. That global warming is for real should really no longer be in doubt. Instead we should all be dedicated to reversing this trend before we all snuff it.

Air conditioners are heat pumps that pump the heat out of your house or your vehicle and into the surrounding environment. It should then come as no surprise that on a hot day the temperature in any big city can be considerably higher than the temperature of the surrounding countryside. This phenomenon is known as weather islanding and

can be observed all over the planet.

This means that the more air conditioners we have in the cities, the more everyone else will have to get one as well and the harder the air conditioners will have to work. This is an ever-increasing spiral that will not end until the whole system collapses in a big heap. And I haven't as yet spoken about all the extra greenhouse gas emissions of all the power stations burning more coal to keep up with the ever increasing consumer demand for more power.

The truth is that air conditioners **really suck** in every sense of the word. When we at Rainbow Power Company look at a customer's load profile in order to design them a solar power system, our first recommendation is likely to be: GET RID OF THE AIRCON!

Solar powered air conditioning is money down the drain. There are better things to do with your money and there are better solutions to the ongoing threat of us

all frying to death. Design your house according to passive solar principles, or if it is already built, make some appropriate changes to it, like:

1. Shading the east and west walls,
2. Extending the eaves over the north wall such that the sun doesn't penetrate into the house over the summer months,
3. Grow some shady plants around the house. A mature shady tree can be as affective as an air conditioner without adding to the greenhouse effect. In fact, an increase in vegetation reduces greenhouse effect by taking CO2 out of the atmosphere and turning it into tree. Vegetation cools through the process of evapo-transpiration which effectively removes the heat at ground level and transfers it up into higher altitudes.
4. Consider building shady areas with the help of trellises and vines (especially deciduous vines

such as grapes). Creating enclosed areas with living material is known as biotecture.

5. Consider underground dwellings or dwellings partially dug into hillsides. Just a very short distance below the Earth's surface the temperatures are not wildly fluctuating like they are above the surface. Check out the dugouts of Coober Pedy.
6. Make use of natural air flow with an open house where you reduce the number of walls that inhibit air flow. This has always

been the tradition of people dwelling in the tropics and hot deserts.

7. Use fans and evaporative coolers in preference to air conditioners. Horizontal air flow over your perspiring body has a great cooling effect without the enormous power consumption of an air conditioner. Blowing air through moist material also cools the air.
8. Instead of using ceiling fans to blow the hot air that has risen up to the ceiling back down again, use extractor fans in the

ceiling and at the highest extremity of your roof to extract the hot air that rises and replace this with cool air taken from the coolest shadiest side of the house by only opening a door, window or vent on this side.

Air conditioners are inevitably the selfish act of personal comfort inside the home whilst increasing the heat outside the home. So, before you rush out to buy a cheap Chinese air-con, think about all the critters that don't have that option, like the entire community known as the Great Barrier Reef.

The Rainbow Power Company was happy to assist Cliff Guy to improve the capabilities of his Toyota-donated vehicle. Cliff and his wife Sandy tour Australia to produce "Escape with E.T." (Ten Network). RPC donated and installed the 120 watt solar panel, 73-litre auto fridge, Apple regulator, HRC fuse. They also currently sponsor a lone yachtsman and a long distance cyclist, so the gear is getting very well field-tested.



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