

Double Glaze Matters

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Gas versus Electric Heating

An article in the Age this week claimed that Victorian homes could save \$658 a year by using existing reverse cycle heat pumps rather than gas heaters.

<http://www.theage.com.au/victoria/heat-pump-tech-could-save-victorian-homes-up-to-658-a-year-on-gas-report-20150825-gj7gzt.html>

While there was some truth in the story. It was a little misleading. The cost for gas in Victoria is 1.8 cents/Mjoule. Converting this to Kwh, this is 6.5 cents/kwh. Assuming your gas heater is 80% efficient, that is 7.5 cents for each kwh of heat delivered into the house.

By comparison, 1 kwh of electricity costs 35 cents/kwh. Now heat pumps are efficient. They deliver approximately 4 kwh of heat for each kwh of power, so that costs around 9 cents for

each kwh of heat delivered. More than for gas.

So, when does electricity win? At weekends when off peak power drops to 20 cents/kwh. Or when you are exporting power to the grid for 6 cents/kwh. But definitely not when you are exporting power for 66 cents/kwh.

Of course, reverse cycle units have the advantage that you heat a smaller area, normally one room rather than a whole house.

The real benefit is if you are building a new house. By using electric heat pumps for hot water and heating and cooling, and an electric stove and hotplates, you can save the \$250 annual connection fee. And installing 10 kw of panels on the roof will provide plenty of power to drive it all. Electricity is the way of the future!



Sustainable House Day

A reminder about Sustainable House Day on Sunday 13th September. On this day, many houses around Melbourne are open to the public highlighting ways to make homes more environmentally sustainable.

Houses are generally open from 10:00 until 16:00

I will be demonstrating some normal energy efficiency items such as double glazing, but will also talk about other unusual ideas such as my hot box on the roof or bubble wrap double glazing. I will also be demonstrating the thermal camera that we use for doing energy assessments.

One thing I will be talking a lot about is draught proofing your home. I hope to have some samples of a new product I found from EcoMad for draught proofing your doors. Its called Eco Seal and is pretty cheap at \$9.00 for 5 metres. Its not quite as good as the seal I have talked about before, but it is cheaper and much easier to fit.

eco-seal (white)



http://sustainablehouseday.com/house-profile-view/?house_id=11686

My Latest Energy

I often come up with silly energy saving devices. But this is perhaps the silliest. A small plastic bottle that saves me \$300 a year in time end energy



My energy saving bottle

Whenever I have a cup of coffee, I fill the bottle up to the ring and pour it into the electric jug. That is exactly one cup of water. Normally I just add a random amount of water and I found it averaged 1.5 cups.

I measured the time to heat the extra 1/2 a cup of water . 30 seconds. So, 4 cups a day saves 8 hours a year. That is 8 hours a year in time I save... and 8 hours a year that the jug is not boiling!

And next month I will tell you of my changed shower routine that saves similar amounts of energy.