

# Double Glaze Matters

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Alan Cuthbertson

alan@diydoubleglaze.com.au

## *Sustainable Living Festival*

*Visit me at the Sustainable Living Festival at Federation Square on Feb 17th-19th.*

*Or at Woodend on Saturday 11th Feb*

*Its FREE!*

## Drying your clothes

Franciscus Henri has the right idea below and I would just like to comment further on drying clothes.

We all know that clothes lines are good and electric dryers are bad, but many do not realize that hanging your clothes over a gas heater vent also consumes a lot of energy, although it is probably 1/2 that of an electric dryer.

I weighed a towel at 650 gm. When wet it weighed 900 gm. Most people don't realize that drying a towel over a gas heater requires exactly the same heat as boiling the 250 gm of water. Heating 250 water to 100 degrees takes 20 Kjoule. Boiling it takes another 550 Kjoule. This equals .16 KWH.

A standard electric dryer will cost 4 cents to dry the towel, while a gas heater 1 cent. This doesn't sound much, but drying two loads of washing on the heater (3 Kg of water) corresponds to around 5% of the average daily gas used to heat the house.

So, use the clothes line to get most of the moisture out and finish it off inside.

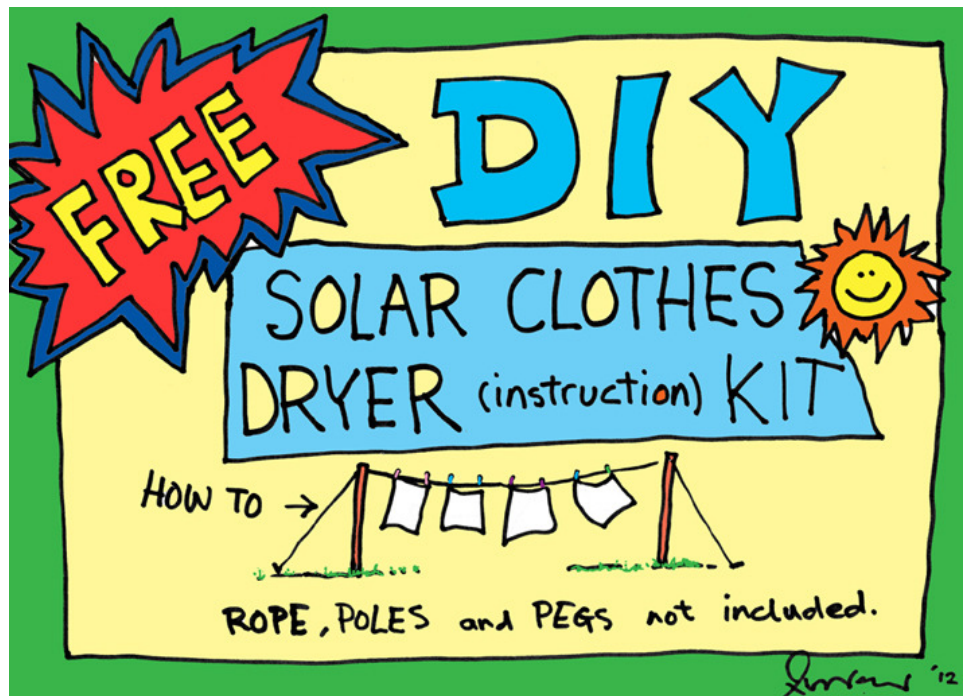
In summer the reverse holds. Drying a wet towel inside acts like an evaporative cooler, extracting .16 KWH of heat from the house. So summer time is when you should dry your clothes inside, not winter time!

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**Franciscus Henri—the best way to dry clothes**

## Door to Door Electricity Salesmen

A bit of a warning about people selling electricity schemes door to door. I got a visit the other week from Lumo who tried to get me to change supplier. The things that annoyed me were:-

- He inferred he was sent by my current supplier.
- He tried to sell me an "anytime" plan which was much more expensive than my peak/Off peak scheme
- He had incorrect rates for my current supplier.

- He wanted to take my licence details

The good thing was that I rang my current supplier (Origin) who gave me an 8% discount off the existing rate, plus another 4% for having gas & electricity and early payment.

So if Origin is your supplier, give them a call and ask for a discount! Email me if you want more details.

*DIY Double Glazing  
Course*

*Sat Mar 21st*

*Eltham Living &  
Learning Centre*

## Refrigerative versus Evaporative Coolers

I have always known that evaporative coolers are more energy efficient than refrigerative coolers, but it was only recently that I realized how much more efficient.

A refrigerative cooler "pumps" heat out of the house. It uses electricity to do so, and is able to get an efficiency up to 400%. That is, it will use 1 KW of electricity to pump out 4 KW of heat

Evaporative coolers are very different. They take hot air from outside, pass it through wet pads so that the temperature of the air drops to the dew point, then pass it into the house.

We have a .5 kw system and I took some measurements of it the other day. It was delivering around 1.3 Cubic metres of air per sec at 21 degrees. This corresponds to 4,700 cubic metres per hour, or nearly 6 tonnes of air.

The air would pass through the house and leave at around 27 degrees. The heat transferred out of the house is approximately 1 KWH

for every degree difference for each tonne of air.

In my case, 6 tonnes of air with a 5 degree difference corresponds to 30 kw each hour. This corresponds to 60Kw removed for each KW of power used, 15 times that of the refrigerative cooler. (Note: doubling the air flow often makes little difference to the heat removed, since the temperature difference may reduce from 5 to only 3 degrees)

Evaporative coolers do have downsides though. They use water. Approximately 10 litres per hour in my case. They also "dump" a lot of water when they turn off.

Also, they don't get the room really cold. Approximately 3 degrees above last night's minimum is the best you will get.

I am working on an exhaust fan to pump air into the house at night. It uses 1/10 the power and pumps 1/3 the air. So it is more energy efficient, provided the outside air is cool.