

Double Glaze Matters

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..DIY double glazing

An information session covering materials and where to get them, costs, construction method, and tips on what works and what doesn't.

Sat 17 September;

10am-12noon

Eltham Living & Learning Centre

\$15

Email for more info

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Managing your Heating

We all make decisions on what temperature we should run the heater. Often this process is fairly arbitrary, we just turn it up until we feel comfortable.

Today I would like to break down the decision making process so that we can hopefully make better decisions.

I would like to introduce the concept of "cost" and "value". Each additional degree of temperature has a "cost" and a "value". We should increase the temperature until they are equal. It's not the total cost versus the total value, otherwise we would heat the house less when it is 10 degrees outside, rather than 15 degrees outside.

For a gas heater, each degree "costs" about the same. Looking at the "value", we greatly appreciate moving from 10–11 degrees, but don't really value moving from 20–21 degrees. The cross over point falls somewhere in the middle, probably around 18 degrees.

Lets look at "cost". Clearly we include the cost of the gas to heat the house. If you care about climate change, you include the cost of the emissions so that your cross over point moves and you don't heat your house as much. Also, if you use electric heaters, each additional degree of warmth costs more and so the crossover is much lower.

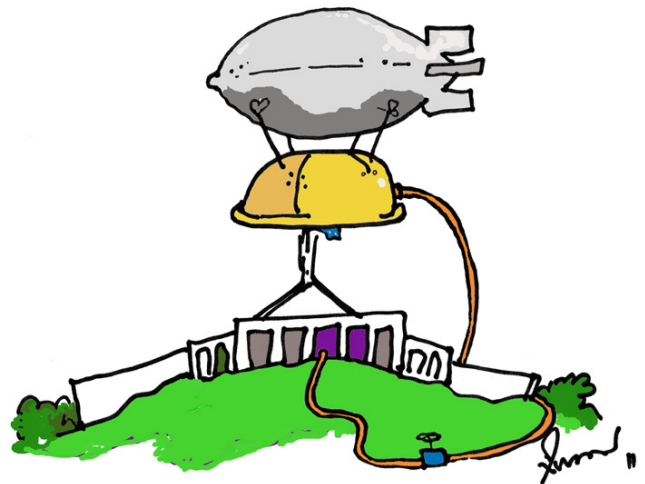
What happens if you insulate your house? The cost of heating drops, as does the incremental cost, and so you tend to heat the house to a higher temperature. This can be a significant

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When to turn down the thermostat-

- **If you have poor insulation or expensive heating.**
- **If you are concerned about your emissions.**
- **At night.**
- **When there is no one in the house.**
- **When there are few people in the house.**
- **When it is sunny outside.**
- **When we are active.**
- **When leaving in the next hour.**

A hot air capture and recycle devise.



Franciscus Henri's idea to make Canberra useful....

Managing your Heating (cont)

... The "value" of heating the house is significantly reduced if we are leaving in 10 minutes time..

factor when calculating the value of the government insulation programs. Halving the heat loss in a house will halve the energy used to heat it to the same temperature. However it won't halve the energy usage since people heat to a higher temperature. The reduction is less because people convert some of the savings to a higher comfort level.

In summer, insulation can actually lead to higher energy consumption. If you have no insulation, it is not worth having an air conditioner. Once you insulate the house, air conditioning becomes viable and you use more energy than you did before.

Lets look at "Value". When there is no one in the house, "Value" is zero, so we turn off the heater when we leave the house. At night time when we are in bed, the "value" of heating the house from 17 to 18 degrees is zero, so we turn down the heater.

One thing that is often ignored is the number of people in the house. If there are 4 people in the house, the "value" is increased by a factor of 4, so you should increase the thermostat when every one is home. Conversely, you should reduce it when only one person is present.

When it is cold and wet outside, we tend to turn the thermostat up. Why is this? On cold days, our body radiates heat through the windows much more than on a warm day so we feel colder and "value" having the air warmer in the house. This effect can be reduced by closing the curtains. This reduces radiant heat and we don't need to turn up the thermostat.

Activity also affects our "value". If we are sitting in a chair, we value a warmer room. If we are active, we don't appreciate a warmer house and so should turn down the thermostat.

The "value" of heating the house is significantly reduced if we are leaving in 10 minutes time. Therefore turn off the thermostat an hour before leaving. In the mornings if you are only present for an hour, heat it to a much lower temperature, or don't heat it at all.

Having an automated thermostat is good to set general temperatures, but overriding it depending on the circumstances can also make a big difference.

