

What is the difference between Economical, efficiency and effectiveness?

## Economy, Efficiency, Effectiveness. An explanation

For the purpose of this explanation you need to imagine we are trying to heat 3 identical rooms that are 10m<sup>2</sup> (3.2m X 3.2m). Each room is being used as a study, so requires decent heating for someone who is going to be stationary, but mentally active, for long periods of time. It needs to be heated to 22 – 25 degrees. We would recommend a 1KW. Neater Heater.

### **EFFECTIVENESS**

Room A is being heated by an oil-filled heater bought from a Ferreteria for less than €100. The room, on a cold day, is being heated to 24 degrees. This is acceptable, so this heater is effective. It does the job.

Room B is being heated by a 1KW Neater Neater, again it is effective as it is registering 24degrees.

Room C is being heated by a 600W “Eco Heater” working flat-out, it is barely reaching 16 degrees. Not at all effective. (I know this from personal experience)

### **ECONOMICAL (Remember; the most economical heater is any one you don't turn on).**

Room A The Oil-Filled heater is rated at 2kw. The thermostat reduces its consumption to the equivalent of 1.75 KW. At the cost of 20 cents/Kw/hour it costs 35 cents/hour to run.

Room B The Neater Heater is a P10; 1KW. The thermostat reduces its consumption to the equivalent of 0.8 KW. At 20cents/KW/Hour this is 16 cents/hour. This makes it twice as economical as the oil filled heater.

Room C The Eco Heater is only 600 watts. It doesn't have a thermostat so there is no reduced consumption, but at 12 cents/hour it is more economical to run than either of the other heaters. You may still be cold, but at least you are spending less money – but not much less!

### **EFFICIENCY**

Room A The Oil-Filled Heater is doing the job, but at twice the cost of the Neater Heater. It is therefore less efficient.

Room B The Neater Heater is also doing the job, but at half the consumption of the Oil-filled heater in Room A. It is therefore much more efficient.

Room C The Eco Heater is not doing the job. That is the worse kind of inefficient. (Had it been a 900 Watt model it still wouldn't have done the job – I know from experience).

### **VALUE-FOR-MONEY and AFFORDABILITY**

Some people opt for the “cheaper” option of the Oil-filled heater and the Eco-Heater (both around €75 from the Ferreteria) when told that they must pay nearly €200 for a Neater Heater. On the above figures, which are extremely conservative, I can prove the following statements.

1. Don't even consider the Eco-Heaters, they are useless. I know, I had one.
2. The person who bought a Neater Heater for Room B would, after two winters, be €45 better off than the person who bought an oil-filled heater for Room A. This includes the initial price of the heaters.
3. If the oil-filled heater was still working after 5 years, when the warranty runs out on the Neater Heater, its owner will have paid nearly **€300 more** to heat Room A than the Neater Heater owner will have paid to heat Room B. This also includes the initial price of the respective heaters.

**NB** The Thermostats on cheap Oil-filled heaters usually don't work as well as I have suggested in this example, while the Neater Heaters often perform better than I have suggested.