

## Energy Efficiency Fact Sheet: FAQ's

These are some of the frequently-asked questions from the 3E Project's energy efficiency workshops.

### **Why do electricity prices keep rising?**

Electricity price increases are decided by the Independent Pricing and Regulatory Tribunal (IPART), who have scheduled annual increases for the foreseeable future. Read the Consumer fact sheet at the IPART website [www.ipart.nsw.gov.au](http://www.ipart.nsw.gov.au) for more information.

### **Why is the Solar feed-in tariff very low compared to the price paid for electricity?**

The Feed-in-Tariff was originally as high as 60c/kWh (gross metered) to promote the uptake of solar PV systems. Once the market became established and the cost of PV solar systems came down, the tariff dropped to the current rate of 8c/kWh (net metered). The average payback for solar systems can be as low as 3-5 years when off-setting on-site energy usage, which makes it economical without any feed-in tariff.

### **Is the initial cost of an energy efficiency upgrade the best way to evaluate the upgrade?**

The payback time is a much better indicator than 'initial cost' of the affordability of an energy efficiency upgrade. Payback time takes into account both capital cost and the realised energy savings, reducing over time as long as electricity prices increase. A retrofit investment is usually a good idea if the payback time is less than 5 years, with or without financial assistance.

### **At what temperature should hot water systems operate?**

The factory default temperature for most hot water systems is 60°C, however 40 °C is sufficient for most non-drinking applications. An adjustable thermostat can be fitted to enable the user to change the water temperature. Commercial dishwashers are required to use water at 80°C for hygiene reasons but they typically have their own heating element. Waste heat from high-usage commercial dishwashers can be recovered and used to pre-heat the cold water going into other hot water systems, or for space heating.

**💡 How do I check the seals on refrigeration units?**

Three ways: 1. Close the door on a \$5 note. If it comes out easily then the seal is not effective. For cool rooms and freezer rooms, dangle a tissue close to the seal all around the doors when the evaporator fans are on. If the tissue blows outwards, the seal is ineffective in that spot. 2. Examine the seal with your fingers, checking for cracks and holes. 3. Use a thermal imaging camera to detect temperature differentials around doors.

**💡 At what temperature it is more economical to run air conditioners?**

In summer, 24-27°C is recommended. In winter, 18-22°C is recommended.

**💡 Why are air curtains used?**

Air curtains create an air barrier against hot air infiltration/exfiltration - i.e. they stop hot air coming in or going out when the door below is left open.

**💡 Should lighting be turned off when leaving for short time?**

Turning lights off at any time will save energy, so in general it is a good idea. Occupancy sensors with adjustable duration controls are a good solution for intermittent-usage areas. Modern lights and light fittings can usually be switched on and off around 5000 times before they start to degrade.

**💡 What type of lighting is environmentally friendly?**

It's probably better to couch this in terms of what ISN'T environmentally friendly. Anything with high levels of mercury should be avoided if possible, which includes the older fluorescent lights and even some newer ones, including CFL's. Most consumer electrical products have some toxic elements in them, so it's a good idea to treat them all as potentially harmful and dispose of them carefully using local e-waste facilities.

**💡 What lux levels are needed for comfortable lighting at a work place?**

The Australian Standards minimum for office desks is 320 lux. Most offices have lights that produce up to around 450-600 lux, which suggests that most can afford to lose 25-40% of electric light without becoming uncomfortable. Visit [steplight.com.au/digital-light-level-lux-meter/](http://steplight.com.au/digital-light-level-lux-meter/) for a handy guide on appropriate lighting levels.

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