

Changing behaviour to reduce energy consumption – offices

JRP Solutions are experts in investigating and assessing energy performance in the workplace and provide guidance on making improvements. Here are our top tips for changing behaviour to reduce energy consumption in an office environment:

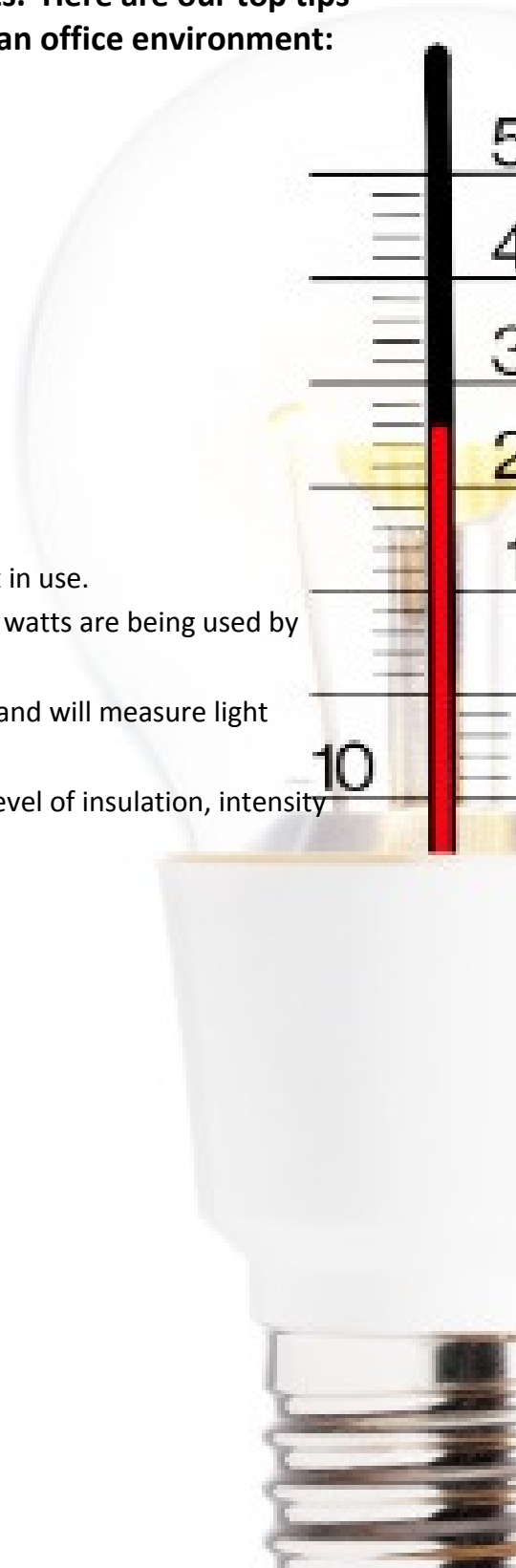
The Four Rules

1. Understand what you've got.
2. Understand how it is used.
3. Pick the most appropriate technology for the job.
4. Control the technology in the most efficient way.

Top Tips

Monitoring & Measuring

1. Find out your baseload energy use when the workplace is not in use.
2. Plug-in electrical meters cost £10-£15 and tell you how many watts are being used by an appliance.
3. A calibrated 'Environmental 4 in 1 Tester' costs around £150 and will measure light levels.
4. Consider all the factors that affect energy efficiency such as level of insulation, intensity of use and the lifetime energy use.
5. When reviewing office energy use consider the following:
 - Lighting
 - Heating
 - Ventilation
 - Air handling units
 - Air conditioning units
 - Cooking and chilling
 - Small power equipment (including computers)
 - Pumps, motors, drives
 - Compressed air units
 - Tools
 - Services



Equipment Use

1. Room temperature should be 23/24°C when cooling. An air conditioning setting of 23/24°C feels like heating on 19/20°C. Adjust the settings for different times of year. If air con needs to be adjusted on sunny days then the unit is not fit for the size of room. A 1°C increase in the set cooling temperature reduces energy consumption by 10% and likewise a 1°C decrease in the heating temperature reduces energy consumption by 10%.
2. Shredders use approx. 20 watts and microwaves use approx. 45 watts on standby but do nothing for 90% of the time, so get them switched off at the plug!
3. Digital projectors use 50-70 watts on standby but often cannot easily be switched off.
4. Turning off at the plug makes equipment last longer.
5. Older appliances use more energy so upgrade where possible.
6. Turning on low energy light bulbs for less than 5 seconds is the only time when they use more energy to turn on than to be in use.
7. Split heating into zones that are appropriate to each area.
8. A flickering tube strip light wastes lots of energy so replace quickly.

Employees

1. Your employees can be your most powerful asset in achieving and sustaining energy and cost savings. They will know your business processes and operations better than an outside consultant, and can be best placed to identify and implement energy saving opportunities.
2. Training will encourage and empower staff to take ownership of implementing identified energy saving opportunities.
3. Trained Energy Champions can support their colleagues and management to identify, implement and sustain energy saving improvements.
4. There is no such thing as a stupid question when it comes to finding out how things work and how people use them. People often don't know from an energy perspective why they are doing things!
5. Clearly labelling wall switches empowers people to turn things off.
6. Enable people to make suggestions and change things (e.g. turning off lights and pulling up blinds).

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7. Encourage staff to boil only what water they need in a kettle. If appropriate for the number of employees and high volume of water used investigate Zip Taps for instant hot water.
8. Making reference to equipment in the home environment when explaining energy use of workplace technology can help people understand the issue.
9. A lack of time is often the reason employees don't switch things off at the plug, people are usually in a rush at the end of the day! Use the analogy that 'You wouldn't leave your car running all night just in case you need it' to help people understand the importance of switching off at the plug.

These notes are very general, only relevant for an office environment and are in no way meant to replace energy awareness training. Each organisation is different. The training we deliver is tailored to an individual organisation's needs and is hands on in identifying specific energy saving opportunities in that organisation.

We know our training is very effective at delivering real energy savings: we achieved a 7.5% energy saving in one global power systems manufacturing company for a 1/10th of the cost of delivering a capital equipment project that achieved the same results.

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