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HOT WATER

Energy smart tips for business

Businesses use hot water for many purposes, yet often face similar challenges and opportunities for energy savings. The type and usage patterns of hot water systems can have substantial bearing on the running costs and lifespan of that system.

There are many ways businesses can reduce energy used to heat water, from quick wins, to substantial investments with significant long-term payoffs. Businesses have a real opportunity to use less water, improve the efficiency of their current hot water system, or install a more efficient one – enjoying cost benefits and lowering their end-use energy impact on the environment.

Improving the efficiency of a business' hot water system offers cost and environmental benefits:



Cost benefits

- lower running costs and associated energy expenditure
- reduced maintenance costs on equipment
- a longer lifespan for hot water system equipment.

Environmental benefits

- water savings
- reduced or avoided emissions, including greenhouse gases, through energy conserving products and actions
- resource conservation through increasing the lifespan of existing hot water system devices, equipment and appliances with regular maintenance, repairs and improvements.

Quick tips

▪ Choose the right location

Installing a hot water system close to kitchen or bathroom facilities or utilities that require regular hot water means taps do not have to run cold water for too long before hot water comes through. Keeping pipe runs as short as possible can help to minimise heat loss from pipes.

▪ Insulate effectively

Insulate hot water pipes between the tank and the taps to help minimise heat loss from the pipes. Synthetic rubber insulation is best for this purpose, covering of at least 10mm thick for hot pipes for at least two metres, and cold water pipes for at least one metre from the water heater. Also insulate hot water storage tanks and shelter them from the weather in cold climates. This will help reduce heat loss from the hot water system. About 30 per cent of the energy used to heat water in a storage system is wasted due to heat loss from the tank and associated pipe-work. Ensuring that your insulation is adequate can save up to five per cent in energy costs.¹

▪ Educate employees

Ensure employees know how to use the hot water system more

▪ Check the hot water temperature

The temperature on many water heaters is set too high. Check the thermostat is set at a level appropriate for its required purpose. If the hot water system has an adjustable thermostat, adjust the setting to provide the minimum hot water temperature required, to help save energy. The optimum water temperature for storage hot water systems is between 60–65°C in the tank and instantaneous hot water systems should be set to no more than 50°C.² Internal thermostat adjustments must be carried out by a qualified electrician or registered gas fitter.

▪ Choose the right fittings

Install water-efficient fittings, such as showerheads and taps. Using flow control valves can also help save water and energy.

▪ Check for leaks

Ensure the entire hot water system is checked regularly and that leaks are repaired immediately. Fix dripping hot water taps and replace any leaking plugs.

▪ Position solar panels to extract the most energy from the sun

effectively and in line with your energy management plan. These behavioural changes can lead to environmental and cost benefits.

- **Turn off when not in use for extended periods**

Consider turning your hot water system off if it's not needed for extended periods of time, such as during non-trading periods or holidays. And if water heaters are dedicated to specific tasks, rather than heating water needlessly, only switch on these units when needed. Adding a timer to electric water heating units to automatically turn the system on and off depending on when hot water is required makes this process simple.

Be mindful that turning hot water systems off can lead to bacterial risks - refer to local health and plumbing authorities for advice. In the event that you do turn your hot water system off, it's recommended you delay using hot water until the water in the system has heated to at least 60°C to kill Legionella bacteria.¹

If you have solar panels for your hot water system, face them due north in full sun and positioned at the correct angle. Seek advice from your installer.

- **Ensure regular maintenance**

Gas water heater burners should be cleaned and tested periodically to ensure the gas is being burned as efficiently as possible. Ensure the hot water system is installed by a registered plumber or electrician, perform regular maintenance and ensure it is serviced according to the manufacturer's instructions to maintain efficiency and longevity.

Did you know?

The amount of water wasted while the hot water gets from the water heater to the tap depends on the distance from the water heater to the outlet.

Long term solutions

- **Buy a new system with a high star rating**

Purchasing a new gas or solar hot water heater with a high star rating is a good way to achieve energy savings. Similarly, when purchasing equipment such as dishwashers or washing machines that use hot water, choose energy smart models and make sure they have a high water-efficiency rating. The initial outlay for more energy efficient systems may be higher; however a higher energy star rating may offer better savings in the long-term, such as lower running costs, as well as environmental benefits.

- **Go for gas**

Gas systems typically produce less greenhouse gas emissions and may be cheaper to operate compared to electric systems.

- **Invest in green energy**

Choosing Government-accredited Origin GreenPower can benefit everyone and is one of the simplest things your business can do to reduce its impact on the environment. We give you the choice of accredited new renewable energy from environmentally friendly sources such as solar and wind energy. For more information about Origin GreenPower, visit www.originenergy.com.au/GreenBusiness

- **Install dedicated units**

If different parts of your business require significantly different water temperature, it may be more efficient to install separate heaters for high temperature and low temperature areas. This will reduce costs associated with heating large quantities of water to higher temperatures than required.

- **Choose the right size unit**

When selecting the size of the water heating unit, consider the maximum number of hot water outlets likely to be in use simultaneously. Ideally, select a capacity that will meet demand without wasting energy heating excessive amounts of water.

- **Relocate the water heater**

Relocating the water heater as close as possible to the main point of use may see significant savings by reducing heat loss from pipes and by minimising the length of hot water pipes that transport the water from the heater. This may mean a reduction in the temperature needed to heat the water before it reaches its point of use.

Contact us

To find out if Origin has an energy deal that suits your business, contact Origin's Business Centre, a dedicated team providing advice on the best energy options to suit your business.

Call **1300 661 544** weekdays 8am to 6pm AEST.

References

