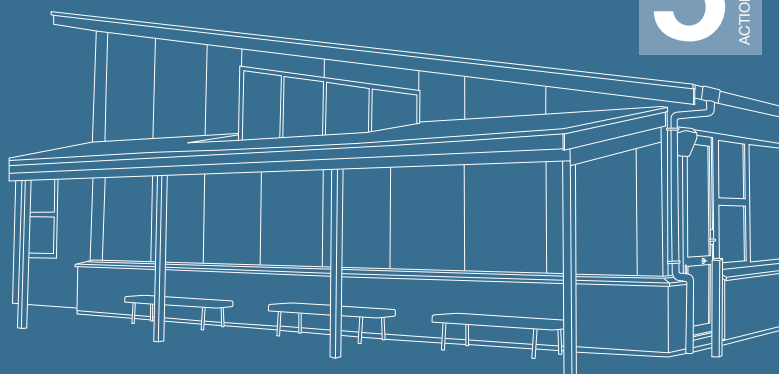


Saving energy in schools: equipment and appliances



On average, IT and appliances account for around 20% of school energy use¹.

Computers, imaging and audio-visual equipment are particularly energy-intensive because they are regularly left in standby mode – often when they don't need to be.

Upgrade to efficient models

When upgrading equipment, be sure to select energy efficient models and agree common sense policies on their use. Modern equipment and appliances are usually far more efficient than older counterparts.

For example new fridge/freezers can use up to half the electricity as their ten-year old equivalents. Flatscreen LCD monitors use around a third less energy than old CRT computer monitors. Laptops are 50 – 80% more efficient than a standard desktop computer and monitor, and they can easily be converted to desktop use with a docking station.

When comparing models, look for the ENERGY STAR® label – this guarantees that you'll be purchasing one of the most energy efficient products available in its category. All new whiteware in New Zealand also carries an energy rating label so you can compare any model for energy efficiency.



Use power management

Most computers and other equipment such as copiers and printers are equipped with a power management function, which automatically places them in 'sleep' mode after a period of inactivity. However, this function usually needs to be specifically enabled. Power management can reduce a computer's energy consumption by more than 30%. To find out about enabling power management, talk to your IT supplier or go to www.climatesaverscomputing.org/tools/applications.

Using equipment efficiently

Switching equipment off is the best energy-saver. Up to two thirds of a computer's energy goes to power the monitor – and screen savers don't save energy at all. Turning off a computer and monitor at the end of the day will save around \$120 a year, while switching off a photocopier every day for a year will save \$100. Over weekends and holidays you should have an agreed power-down policy, covering un-needed appliances as well.



¹ Based on analysis of energy audits at 20 secondary schools throughout New Zealand

Vending machines

Because they operate continuously, vending machines can use a surprising amount of energy. Switch vending machines off during school holidays unless the products they contain are perishable. Check with the supplier whether non-essential signage can be switched off permanently.

Action checklist

	Make sure all computers, copiers, printers and other IT and office equipment are turned off at the end of each day.
	Make sure power management is enabled wherever possible on computers and other equipment.
	Make it a school policy to turn off monitors whenever they're not in use for more than a few minutes.
	Avoid screen savers – they're not necessary on modern monitors and consume more energy than allowing the monitor to dim when not in use. Turn off monitors when not needed.
	Beware when browsing – some web pages have active banners or animations that don't allow the computer to revert to sleep mode – close these down at the end of each session.
	Talk to staff and agree on a shut down procedure for weekends and school holidays. If staff will be using office equipment over breaks, ask them to take responsibility for ensuring everything is switched off.
	Keep track of how much standby loads are using over time by reviewing your power bills and checking off-peak energy use, and by using an electronic power usage tool, e.g. www.esis.com.au/Loggerssmall/Power-Mate.htm . You could involve students in the process.
	Plug the electronics for each work station into one power strip and get users to turn the strip off when they have finished using the computer.
	Consider timer switches for areas where there are several pieces of equipment grouped together.
	Make it a school policy that all new equipment and appliances will be ENERGY STAR models.
	When upgrading, consider replacing desktop computers with laptops, and old CRT monitors with LCD screens.
	Encourage staff to be energy-efficient in the kitchen, such as not leaving fridge doors open, using the dishwasher only when full and turning appliances off at the wall.
	Ensure fridges aren't placed near a heat source, and that the door seals are still working well.
	Annually clean the refrigeration pipework on the back of fridges to ensure they are working as efficiently as possible.

For more information:

For information on ENERGY STAR visit <http://www.eeca.govt.nz/standards-and-ratings/energy-star>

To find out more about energy rating labels visit <http://www.eeca.govt.nz/standards-and-ratings/energy-rating-labels>

To find out more about saving energy at school, check out the other action sheets in this series or visit www.eecabusiness.govt.nz/how-to-be-energy-efficient/schools