

## Switch off for holidays!

Schools are about to close. When you are closing for mid-term, Summer, Christmas or Easter holidays it is important for your school to properly close down. Completely switch off as much energy consuming equipment as is practical to save money and save energy. A large school could waste over €1,000 on electricity over the summer.

Essential services such as fire alarm systems, security systems, CCTV, etc. must remain operational. But switching off non-essential equipment is a good idea. Make sure someone is designated to switch off and unplug each system.

To see how much you are going to save, it is a good idea to take electricity meter readings. When your school is ready to close, take two readings separated by 1 hour, then switch items of equipment off in accordance with this guidance sheet, then take another two readings. How much did the usage drop? In a large school you might find you used 8 units of electricity in the hour before you switched items off (8 kWh), and 3 units (3 kWh) after you switched most equipment off. Sustained over a 16 day break, several hundred euro would be saved.

If an hour is too long, use 15 minutes. Make sure lights are off before you begin. If your meter is digital and hard to read, you could just time how long it takes for the digital meter's LED to flash 10 or 20 times before and after the switch off campaign. If it takes twice as long for 10 flashes after the switch off, you have halved your electricity consumption. Take readings at the end of the break too, to see how much electricity has been used during the closure period.

## Electrical equipment

Schools use an increasing amount of electrical equipment. Although a lot of this equipment has an automatic standby mode, it is important that, over the holidays, as much of the equipment has been fully switched off (at the socket) as practical. When switching off electrical equipment for the holidays make sure you include:

- Computers and their screens
- Servers, switches, routers, and WiFi devices
- Photocopiers and printers
- Fax machines, scanners, shredders, etc.
- Projectors, smart boards, and laptops
- TVs, DVD players, amplifiers, stereos
- Public address systems, class change systems
- Chargers/ adaptors for phones, laptops, speakers etc.
- Defrost and switch off fridges, leaving the door open
- Exhaust fans including those on time switches
- Domestic hot water heaters
- Water boilers, switch off and drain (use a kettle)
- Vending machines, destock and switch off
- External lighting

### Computers, Screens, Servers, Switches, Routers, WiFi

It is best to choose the "Shut Down" option, and when the PC is powered down, to switch it off at the socket. The screen should also be switched off at the socket. Wasted energy in a poorly managed computer room could cost €300 over the summer. Your IT person should be asked which servers could be switched off. They should consider powering down routers, switches and WiFi devices, if servers can tolerate this. Some servers have UPS systems (battery backup). UPS systems continue to use significant energy even if the associated server is off. Switch off the UPS at the device first and then at the socket.

### Teaching Aids

Switch off smart boards etc. at the device using the power button, then switch off or unplug at the electrical socket.

### Office Equipment

Visit each room and look for anything which is plugged into a socket. Unplug it or switch it off at the socket, if practical. Some devices have no "off" switch on them at all, and can only be completely switched off at the electrical socket. The public address system can be switched off. Consider systems in the PE Hall or GP Hall too.

### Small Items

Switch off small items, or unplug them. A lot of devices now have a transformer either at the socket or on the cable, such as mobile phone chargers, PC speakers, and laptops. The transformer still uses energy unless it is switched off or unplugged.

### Refrigerators and Freezers, Vending Machines

Destock and defrost fridges and freezers before the end of term. Switch off as many as possible, leaving the doors open to ventilate the interior. Follow manufacturer's instructions on defrosting. Empty and switch off vending machines.

### Mechanical Ventilation

Ventilation fans may be under time-clock control. Make sure they will not come on over the holidays, unless needed.

### External Lighting

External lighting might be on a time clock and/or light sensor. Is it needed over the holidays? Switch off if practical.

## Energy for heating

### Domestic Hot Water

Switch off local electric water heaters. This can be done at a switch on the wall near the heater. If the school's water is heated in a boiler house, switch this off too. The school may need to leave one or two local heaters on for use by office staff and caretakers, but they should switch them off each day, even in term time.



Local electric water heaters can be hidden away in store rooms, in cupboards below sinks, and even above ceilings. Local heaters should be controlled by time clocks. Consider having 7-day time clocks fitted over the summer. Can the running hours on existing time clocks be reduced?

### Water Boilers and Chillers

Switch off water boilers used for making tea. Drain them. If boiling water is required for one or two staff members over the holiday, use a domestic kettle instead. If the school has water coolers, read the instruction manual and see if they can be safely switched off too.

### Space Heating

Space heating has probably already been switched off. Some schools have a "holiday/term" switch which must be switched to "holiday" position. The school may also have a "summer/winter" switch, and this should be switched to "summer" throughout summer, even during term time.

In the boiler house, make sure there are no space heating pumps left running unintentionally. This could happen, for example, if switches on the main boiler house control panel are left in the "hand" position. In small schools, there might just be a switch similar to the photograph above on the wall in the boiler house. On inspecting a boiler house, pumps and boilers may be off under automatic controls and could come on the next day. Be careful to make sure pumps do not run unintentionally over the summer.

The summer time is the best time to have the school's heating system given an annual maintenance check by a plumber. It is also a great time to take a gas meter reading, if you use gas.

Are there any storage or convector heaters which could come on? Switch them off.

## Water conservation

Make sure all taps are closed fully. If the school has urinals, but does not have automatic systems to switch the water off when the urinals are not being used, consider turning the water off at the urinal cistern. If the school is occupied over the holidays, the urinals can be switched on as needed, or WCs used instead.

Take water meter readings at the beginning and end of summer and other breaks. It might show that you have a water leak and help avoid a big bill from Irish Water. For more information, refer to the water conservation factsheet on the energy in education web site:

[www.energyineducation.ie](http://www.energyineducation.ie)

## Other items

### Windows and Doors

Close all windows. Make sure that window latches are closed. This will provide greater security. Close any blinds, particularly on south facing windows and ground floor windows. This will reduce overheating, and discourage security breaches. Close and secure all external doors, and close all internal doors including corridor fire doors. Lock any internal doors with locks, except corridor escape route doors.

These actions will improve security, and reduce the possibility of spread of fire. Ensure attic hatches are closed for similar reasons.

## Special systems which must be left on

Under no circumstances should anyone switch off or isolate in any way any device which relates to security or safety. The list below is not exhaustive, but covers most items:

- Fire Detection and Alarm Systems
- Access Control and Security Systems
- Emergency Exit Signs
- Emergency egress lighting
- CCTV cameras and their recording device
- The phone system
- Frost protection i.e. heating controls in winter

## Special systems which can be switched off

The screen associated with a CCTV system can and should be switched off. The CCTV system will continue to record. The screen is of no benefit if there is no one in the school to observe the screen.

## Summary

Schools can waste a lot of energy, especially electricity, over the holiday periods. It is important from a cost and environmental point of view to minimise this unnecessary energy use where practical by switching off items. Essential systems such as fire alarm and security must, of course, be left running. Most other items can be switched off at the socket. Not only will this save money, but it will also reduce the risk of fire from faulty electrical equipment.