

ECA'S GUIDE TO ENERGY & COST SAVINGS

Using Effective Controls to Create Savings

LIGHTING CONTROLS

FACT: An average household could save 19% – equivalent to nearly £108 – on their total annual electricity bills by using both internal and external lighting controls and fitting energy-saving light bulbs.

This is a 64% saving on the average annual spend on lighting – reduced from £168 to £60.*

About lighting controls:

Internal and external lighting controls allow householders to regulate which lights in their homes are used at certain times, maximising comfort, ease of use and energy efficiency. Ranging from simple switches to sophisticated automated systems, the controls, they include: Motion sensors, Daylight sensors, Dimmer switches and Timers.

ECA's Head of Technical Services, Giuliano Digilio, said: "Lighting controls systems allow consumers to more effectively control their energy usage. Instead of wasting energy, for instance, by keeping outside security floodlights on overnight, dimmer switches would mean a lower wattage could be used; saving both energy and money.

"Effective controls are, essentially, a 'common sense' technology which makes consumers more conscious of their energy needs. As a result, they encourage consumers to tailor their usage to reflect their need.

"The zenith, when it comes to effective controls, are automated integrated systems, which include devices such as motion and occupancy sensors. These ensure that lighting systems are not consuming energy unnecessarily, and automatically switch on and off in line with the householders' needs."

**Follow how savings can be made – by investing in various energy saving methods – in Table 1: Lighting Controls – Savings ...*

Note, an average household's annual electricity bill is £560.00; typically, 30% of this is spent on lighting = **£168.00**

Table 1: Lighting Controls – Savings

Energy Saving Method	Energy Saving	Impact on Annual Bills
Replacing traditional light bulbs with energy-saving bulbs, (inside and outside homes, e.g. CFLs for internal use and LEDs for external security lighting.)	60% saving on annual lighting spend of £168.00 = saving of £100.80	Annual lighting spend reduced from £168.00 to £67.20 (i.e. £168.00 - £100.80)
In addition... Installing motion and daylight sensors	10% saving on annual lighting spend of £67.20 = saving of £6.72	Annual lighting spend with energy-saving bulbs and motion/daylight sensors installed = £60.48 (i.e. £67.20 - £6.72)
Grand total of savings after installation of energy-saving bulbs and motion/daylight sensors	Annual lighting spend = Annual saving of £107.52 (reduced from £168.00 to £60.48) = 64% saving	Annual electricity bill Reduced from £560.00 to £452.48 (£560 - £107.52) = 19% saving

HEATING CONTROLS

FACT: The average householder could save 59% – equivalent to £300 – on their annual gas bill by using heating and hot water boiler controls, upgrading to a condensing boiler and ensuring room controls such as thermostats are set correctly.

This is a 48% saving on the average annual spend on heating and hot water – reduced from £629 to £329.*

About heating and hot water controls

Heating and hot water controls allow householders to choose when their heating and hot water is on, how warm it is and, for heating, where they want the warmth. Controls will also make sure that the boiler is only turned on when it needs to be.

Giuliano Digilio, ECA's Head of Technical Services, explains: "Most people leave their immersion heater and boiler on at all times, but this is an ineffective and unnecessary use of energy, and a complete waste of money. "Simple timer systems allow householders to set their hot water and heating equipment to come on at the times they need. For example, most people will use their hot water and heating on weekday mornings and evenings, but may not be at home in between these times, whereas at weekends heating may be necessary for longer periods of time. By examining their energy usage and setting controls to match regular behaviour and routines, householders can avoid wasting energy and save money.

"As with lighting controls, automated integrated systems can also be installed, which control heating to match consumers' needs. For instance, heating equipment can be linked to thermostats so that they warm up automatically if temperatures fall below a certain level."

**Follow how savings can be made – by investing in various energy saving methods – in Table 2: Heating Controls – Savings...*

Note, an average household's annual gas bill is £740.00; typically, 85% of this is spent on heating and hot water = **£629.00**

Table 2: Heating Controls – Savings

Energy Saving Method	Energy Saving	Impact on Annual Bills
Using heating and hot water boiler controls	17% saving on annual heating and hot water spend of £629.00= saving of £106.93	Annual spend on heating and hot water reduced from £629.00 to £522.07 (i.e. £629.00 - £106.93)
In addition... Upgrading boiler from a G-rated system to a condensing boiler	Typical annual saving of £128.00.	Annual spend on heating and hot water using condensing boiler and boiler controls = £394.07 (i.e. £522.07 - £128.00)
In addition... Setting thermostat correctly (between 18 and 21degrees centigrade)	Typical annual saving of up to £65.00.	Annual spend on heating and hot water using correct thermostat settings, boiler controls and condensing boiler = £329.07 (i.e. £394.07 - £65.00)
Grand total of savings after installation of condensing boiler, using heating and hot water controls and adjusting thermostat settings:	Annual spend on heating and hot water = Annual saving of £299.93 (reduced from £629.00 to £329.07) = 47.68% saving	Annual gas bill Reduced from £740.00 to £440.07 (£740.00 - £299.93) = 59.46% saving

The importance of finding the right – and competent – trades person for the job

Giuliano Digilio, ECA's Head of Technical Services, explains: "As technology becomes increasingly an integral element of energy- and money-saving equipment, the need for a fully qualified and competent electrical tradesperson will become even more important.

"All ECA members are professionally qualified, and any work carried out by them is covered by guarantees backed by insurers, minimising risk to customers. In addition, the ECA's assessment process ensures all members have a commitment to quality and customer care, ensuring the highest standards of workmanship, compliance and customer relationships."

To find an ECA member near you, see the website:

<http://www.eca.co.uk/FindAMember/search.asp>

Top Tips on getting the right electrician from the Electrical Contractors' Association:

- Domestic electrical work must comply with Part P of the building regulations. Unless completed by an electrician qualified under a Part P Competent Person scheme, work has to be notified to Local Authority Building Control.
- Log onto www.eca.co.uk, for a listing of electricians registered with a Government-approved Part P scheme.
- **Credentials** - check qualifications and ensure your electrician is registered with the ECA or an equivalent industry body
- **Word of mouth** - ask friends and family for recommendations
- **Never pay up front** - a reputable electrician would never expect you to
- **Put it on paper** – Draw up a contract specifying the work, cost, payment schedule, start date and estimated completion date
- **Report cowboys** - to the Office of Fair Trading at www.offt.gov.uk

GRANTS FOR HOUSEHOLDERS:

Householders are generally unaware about the grants on offer that will help soften the initial investment in energy-saving technology. These grants include:

(i) Warm Front

A government-funded initiative, managed by Eaga. 'Warm Front' can provide up to £3,500 (or £6000 if oil central heating is recommended) to improve energy efficiency in homes in terms of insulation and heating improvements. The amount of money that can be claimed is dependent on personal circumstances.

Applications are welcomed for the following technologies and energy-saving measures:

- **Energy efficient lamps**
- **Gas, electric, or oil central heating replacement and controls**
- Loft insulation
- Draft proofing
- Cavity wall insulation
- Hot water tank insulation
- Glass-fronted fire

Further alternative technologies can be applied for, but enquiries need to be made with Warm Front. For more information and an application form, visit <http://www.warmfront.co.uk/index.htm>, or telephone: 0800 316 2805.

(ii) Decent Homes Programme:

A government-funded scheme, run through the department of communities and local government, which aims to ensure that 95% of social housing meets the 'decent homes standard' by 2010. In order to be classed as 'decent', a home must be warm and weatherproof, with reasonably modern facilities.

For further details, see: <http://www.homesandcommunities.co.uk/decenthomes>

(iii) Northern Ireland Energy (NIE):

For householders in Northern Ireland, NIE have advice and information about various available funding routes, along with links to partners offering special offers on energy-saving technology and equipment.

For further details, see: <http://www.nie-yourenergy.co.uk/grants.php>