

Lighten your overheads
with energy-efficient
lighting

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For retail businesses, installing
the right lights can reduce
energy costs by
up to 15%

In today's competitive retail environment, effective lighting is not only a customer expectation, but essential for achieving 'the right look' for a retail outlet.

While most retailers recognise the importance of lighting in providing a pleasant shopping and working environment, few merchandisers realise that it's possible to reduce up to 15% off their energy costs, by installing the right lighting technology.

The retail industry often demands bright, flattering lighting to draw customers and maximise sales but this is seldom very energy-efficient. Yet there are substantial savings to be made on both the shop floor and in the back office, with many simple and inexpensive ways to reduce the energy consumption and costs associated with high-impact lighting without compromising profits.

Saving energy in a retail business is one of the simplest ways to directly increase margins without the need to grow sales—in fact, a 20% cut in energy costs can represent the same bottom line benefit as a 5% increase in sales, making energy-saving the new profit centre for retail businesses.

It's estimated that a 20% saving in retail energy costs is achievable nationally in the UK, totalling some £340 million per year across the sector. And whilst energy costs may be only a small percentage of turnover, they represent a much larger proportion of profit.

By focusing on easily actionable measures you'll be amazed at how simple actions can save energy, cut costs and increase productivity with the quickest payback.

Many energy-saving opportunities are within the control of staff and easily achievable at little to no-cost, which is an ideal way of making energy conservation part of a collaborative staff effort.

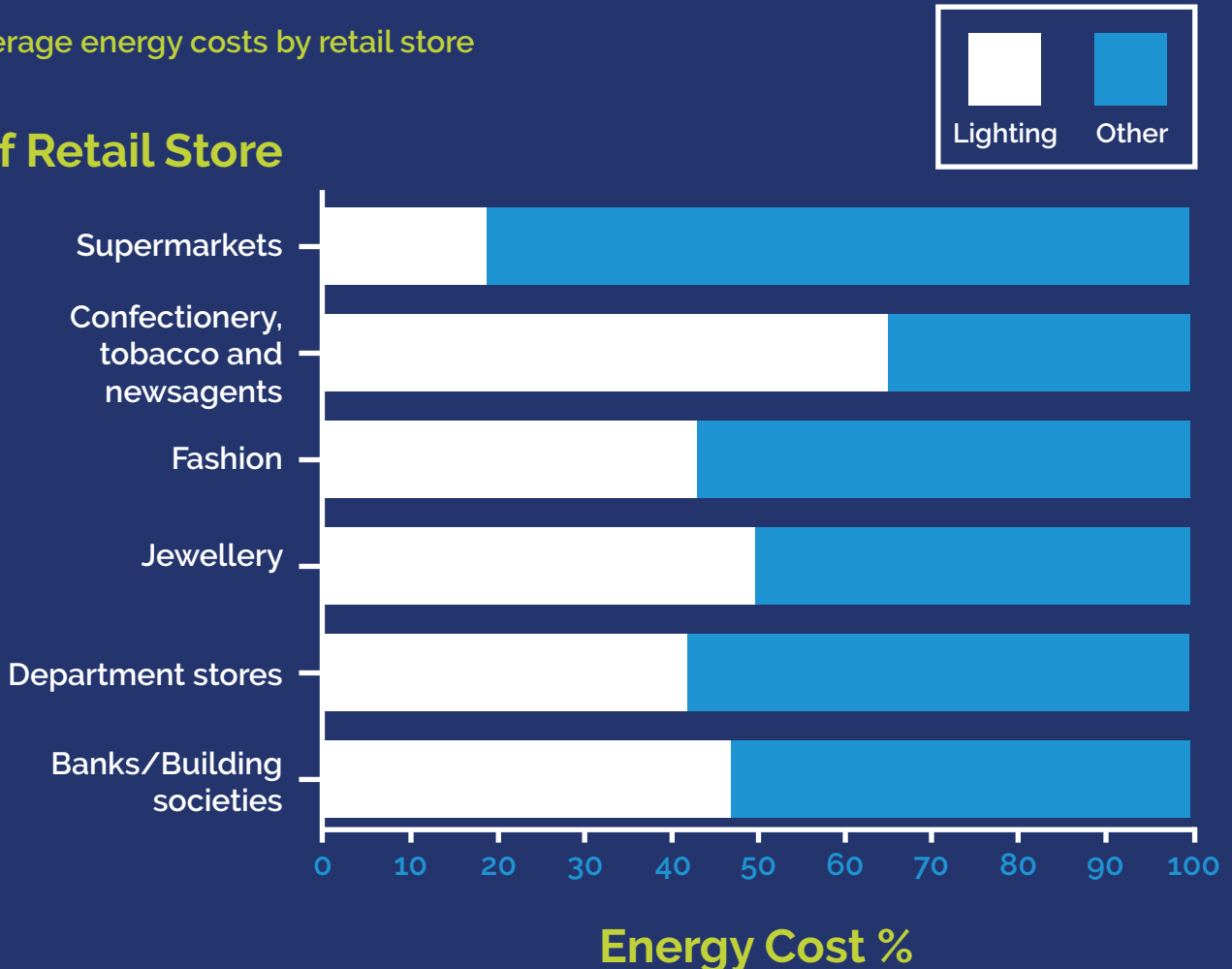
Low-to-no cost quick wins

Lighting accounts for anything from 15% to 70% of your total energy costs, depending on the type of store (* see diagram below), but there are several quick-fixes you can implement to enhance your energy efficiency and reduce your energy spend:

- Install energy-efficient lights—LED lights and compact fluorescent products use 80% less electricity than conventional light bulbs
- Use movement detectors, time switches and daylight sensors
- Encourage staff to switch lights off when they're not needed

Typical average energy costs by retail store

Type of Retail Store



Lighting's role in the retail environment

Beyond providing basic illumination and display functions, a well-designed lighting scheme must satisfy varied business needs in the retail environment:

- Sets the mood and atmosphere of the store so that customers will want to enter
- Directs the customers' attention to the merchandise and stimulates impulse buying
- Draws attention to the shop and its displays
- Helps to enhance the store's image
- Improves the use of space

From the perspective of the owners and staff of a retail outlet, a lighting scheme should:

- Provide adequate light to enable transactions to be completed efficiently, leading to fewer errors
- Provide favourable working conditions to minimise eye fatigue and general tiredness
- Help to create the brand image of a store or chain of stores
- Convey an inviting atmosphere within the store
- Provide an effective deterrent against crime

Selecting energy-efficient lighting

With the vast range of lighting sources, designs and controls now available, modern lighting techniques present abundant energy-saving opportunities, whilst achieving a greatly enhanced level of illumination and visual appeal at minimum cost.

Efficient lighting can:

- Lessen heat gain, leading to reduced air-conditioning demand
- Improve lighting distribution and control
- Increase customer and staff satisfaction
- Give your company 'green' appeal
- Help you comply with legislation
- Reduce maintenance costs
- Minimise energy costs

Did you know?

Replacing traditional bulbs with LED lighting replacement bulbs can decrease the heat emitted to only 2–3° above room temperature.

Making the switch to LEDs

Lighting accounts for about 20% of all electricity generated in the UK, but with most current lighting systems still reliant on inefficient light sources, moving to low-energy lighting such as Light Emitting Diodes (LEDs) has never been more critical in energy-saving initiatives.

Install low energy lighting

Originally developed for use in electronics, LEDs have in the last 10 years become the light source of choice, providing illumination at a fraction of the cost of legacy sources. LEDs have the highest efficacy and lamp life of all lighting types, are easy to control and have no warm-up period.

The cost of LEDs has come down significantly in recent years, whilst in parallel, technological developments have improved light output, efficacy and reliability. Combined, this has made LED technology the mainstream solution for most lighting applications in the UK.

They also provide superior colour and contrast, essential in helping to generate sales, particularly in fashion retail where the visual appearance of merchandise is critical, and in food retailing, where produce needs to look appealing.

LED fittings satisfy the demand for superior:

- > Cost, energy and carbon savings
- > Display illumination levels
- > Contrast and highlighting
- > Health and wellbeing
- > High efficacy ratings
- > Glare suppression
- > Colour rendering

Did you know?

LEDs don't produce electro-magnetic interference or use ballasts which produce harmonic noise or "hum".

LED cost benefits

In addition to providing direct energy savings, LEDs generate further cost savings from:

- Reduced heat gain: LEDs produce very little waste heat compared to conventional sources, reducing the need for additional cooling on warm days
- Longer lamp lifespan: this equates to lower and less frequent maintenance costs
- Better controllability: through dimming and instantaneous switch on and off.

The relative performance of LED fittings in comparison to existing lighting sources

	Lamp Life	Colour Temperature	Colour Rendering	Efficacy*
Standard Incandescent	2,000 - 3,000 Hours	2,500 - 3,000K	100 Ra	5-20 lm/W
Tungsten Halogen	2,000 Hours	3,200 Hours	100 Ra	15-24 lm/W
Tubular Fluorescent	10,000 - 20,000 Hours	2,700 - 6,500K	> 85 Ra	60-105 lm/W
Compact Fluorescent	6,000 - 15,000 Hours	2,700 - 4,000K	> 85 Ra	45-80 lm/W
High Pressure Sodium	12,000 - 30,000 Hours	2,000 - 2,700K	25 - 85 Ra	25 - 85 lm/W
Metal Halide	6,000 - 20,000 Hours	3,000 - 6,000K	65 - 93 Ra	50 - 113 lm/W
LED	25,000 - 75,000+ Hours	2,700 - 8,000K	65 - 97 Ra	70 - 150+ lm/W

*Refer to The Carbon Trust lighting guide for more information regarding LED criteria

Retrofitting luminaires with LED technology

It's possible to retrofit most luminaires with LED technology without altering the fitting. Whilst retrofitting lamps allows fittings to be upgraded as they fail, and offers a significant energy saving, it's less effective overall than full luminaire replacement to ensure that the fitting uses the correct wiring and control gear and that the correct amount of lighting is provided for the space.

Boost your energy-efficiency—and bottom line

There are varied other ways to bring your business energy bills down, by introducing energy-efficient best practices into your store without compromising service levels or health and safety concerns.

“Switch off” policy

Involve staff and increase awareness

- Involve staff at all levels in savings efforts by encouraging them to turn off light switches. This can be achieved by placing reminder stickers above light switches and putting up reminder posters around in-store service areas.
- Clearly label light switches to help employees know which ones they can turn off (especially when cleaning or restocking the store after hours).
- Switch off lights in unoccupied areas without compromising health and safety implications, particularly in corridors and stairwells.

Did you know?

A new generation of LED lighting, known as organic light emitting diodes (OLEDs), will soon be viable for commercial use as a lamp technology. Composed of thin organic layers sandwiched between two electrodes, OLED lighting will provide incredibly thin and flexible lighting solutions.

Maintenance

Without regular maintenance, light levels can fall by at least 30% in 2-3 years

Establishing a basic lighting maintenance programme can reduce costs by up to 15% while improving in-store appearance:

- ▶ Replace old, dim lamps, and keep controls in good working order by ensuring timers are set to match trading hours
- ▶ Ensure windows, skylights, light fittings and occupancy sensors are kept clean

Refurbishment

Design for adequate, but not excessive, levels of light

Specific display items that require high light levels will benefit from local task lighting, rather than illuminating the whole store to a high level.



Invest in sensors

Occupancy sensors

Using an occupancy sensor with a photocell override to give the option of keeping lights off on bright days can achieve savings of up to 50% on lighting costs. These automatically turn lights on when a room is occupied and turn them off after a period of vacancy. They are especially useful in:

- > Areas where lighting is zoned
- > Stockrooms and storerooms
- > Meeting rooms
- > Display lighting
- > Signage
- > Toilets

Daylight sensors

Light sensors or 'photocells' can be used to dim or turn off artificial lighting when there's sufficient natural daylight. As daylight hours vary throughout the year, sensors help to provide closer control and thus, substantial savings, and often pay back their costs in less than a year. They can be particularly useful externally for lighting car parks or signage. Both types of control are sometimes combined with time switches. Ensure the lighting type installed is suitable for dimming.

Simple energy solutions with a big payoff

Combined, these relatively simple solutions help you save money, increase your staff productivity, and reduce your carbon footprint—all of which enhances your Triple D bottom line.

As one of the UK's largest business-to-business utilities brokers, contact us here to get more expert advice on how you can save thousands on your utility bills with our smart energy solutions.

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