Energy Efficiency Guide

DIGITAL ENERGY Revolution

Join The Revolution

Retail, Leisure and Entertainment

Contents

Get smart, save energy

There are almost as many ways for your organisation to reduce its energy costs as there are businesses included within our definition of the retail, leisure and entertainment sector (see right).

For retailers, heating and lighting are generally the biggest drivers of consumption – and, in some cases, refrigeration can also account for a big percentage of the costs. For the whole sector, varying occupancy levels (of staff and visitors) will affect key areas of usage – including heating, ventilation and air conditioning – and the subsequent costs.

In addition to focusing on these areas, there are some general ways to cut back on your usage too:

5 steps to reducing your energy consumption

1. Commit to continuous improvement – involve staff, set goals and track progress
2. Analyse your start point performance, develop benchmarks, and track improvements
3. Set realistic, measurable goals and target dates to see how you're doing
4. Choose the steps you'll take to achieve those goals and involve your employees
5. Implement and measure results, communicating all wins, no matter how small

What do we mean by retail, leisure and entertainment?

When referring to this sector, we're including:

- convenience stores
- larger retailers and supermarkets
- other retailers
- shopping malls
- sports and fitness centres
- cinemas
- theatres
- music venues
- libraries
- museums and galleries
- religious establishments
- other recreational centres

How your Retail, Leisure and Entertainment business can save energy

We've used the Carbon Trust's energy saving reports on retail and distribution , plus its research into sports and leisure and other areas, as sources of information for the following suggestions.

These tips highlight areas of consumption that, with improved efficiency, could deliver valuable savings; the amount you recoup depends upon your organisation and your investment.

To help with your budgeting and energy efficiency planning, the tips cover (where possible) three options: no-cost, low-cost, and long-term savings.

No cost

You can make these simple changes quickly - and it won't cost a thing.

Low cost

For a minimal spend you can soon achieve worthwhile savings - and relatively easily too.

Long-term savings

Make a more substantial investment now - and you'll see the returns over time

Heating

No-cost changes

- Although heating accounts for around 29% of energy costs in non-domestic buildings, you can be more efficient without affecting the comfort of your employees and customers: reducing the temperature by 1°C could mean an 8% energy saving
- Use time switches to automatically turn off heating and cooling systems outside opening hours and turn on before you re-open, adjusting with the season as needed
- If you have an open-door policy, limit it to busy times to prevent hot/cold air escaping
- A reduced temperature of 10°C is sufficient during the night for most buildings
- Reducing heating temperatures by just 1°C can cut fuel consumption by 8%

Low-cost changes

- If the location of your thermostats could affect their performance (e.g. because they're too close to sources of heat or heat loss), moving them - while implying an up-front cost - could improve accuracy, avoid raising or lowering the temperature unnecessarily, and save you money
- A regularly serviced boiler can save as much as 5% on annual heating costs.

Long-term savings

- Insulate pipes, boilers and tanks to minimise heat loss
- Upgrade your heating controls for a return on investment in about 2 years e.g. a compensator regulates the temperature of a building based on the weather outside; an optimum start controller optimises heating based on the time it takes to reach the desired temperature
- Create zones within your buildings, with different thermostats and different default temperature settings

Ventilation/air conditioning (VAC)

No-cost changes

- Take advantage of natural ventilation with open windows and doors (where safety isn't compromised)
- Plan for a temperature range (e.g. 19 - 24°C) when heating and cooling are both off

Low-cost changes

- Regular maintenance and performance reviews will ensure your VAC systems are operating at maximum efficiency

Long-term savings

- Consider interlocked control with time switches and sensors - will automatically turn off ventilation when specific equipment is turned off
- Energy efficient fans may have a significant upfront cost, but the longer term savings make them worthwhile

Lighting

No-cost changes

- Basic maintenance (keeping windows, skylights and light fittings clean) may reduce lighting costs by 15%
- Have a "switch off policy" and use simple light switch stickers so your people feel confident they're turning off the right lights

Low-cost changes

- Use blinds that redirect daylight to the ceiling or the wall rather than block it out completely, and open blinds when there's no glare
- Use timers to match artificial lighting to working hours and/or occupancy
- Replace conventional bulbs with compact fluorescent lamps (CFLs) – they last 8x longer and use 80% less energy
- Metal halide floodlighting for outdoor sports areas are efficient, but have a shorter life than alternatives including Sodium (SON) lamps, which produce a golden light and last longer
- See the Energy Saving Trust report: " The right light - selecting low energy lighting "

Long-term savings

- Sensors can achieve savings of up to 50% on lighting costs and are especially useful in stockrooms and storerooms, toilets, meeting rooms and areas where lightning is zoned.
- Install daylight sensors to turn off artificial light when there's enough daylight

Building fabric (walls/floors/ceilings)

No-cost changes

- In autumn, check your building(s) for damp, plus faulty gutters or downpipes
- Retain heat - keep windows/doors closed (unless you want natural ventilation) and close curtains/blinds at end of day

Long-term savings

- Insulate walls, roof spaces, cavity walls and pipes
- Consider sealing unused windows or improve glazing (triple glazing is the most efficient) to reduce draughts
- To reduce heat loss, install two sets of doors (one closes when other opens) in lobby area/entrance, or automate door

Leisure and fitness equipment (including pools)

No-cost changes

- Switch off fitness machines (and air conditioning in surrounding areas) at night - perhaps using programmed 7-day timers to do it automatically
- Refer to pool manufacturer's recommendations to avoid backwashing too often
- Keep pool temperature at 28 - 30°C and air temperature no more than 1°C above this (reducing condensation and unnecessary use of ventilation)

Long-term savings

- Buying a pool cover to maintain the heat and reduce ventilation costs could save tens of thousands of pounds, with a payback period of 18 - 36 months
- A humidistat will automate when ventilation is needed
- Consider solar thermal technology to heat the pool water (and the building)

Catering

No-cost changes

- You could reduce your energy bill by up to 30% just by raising awareness with your people and advising them to:
  - avoid switching on appliances before they're needed
  - avoid using the ovens to warm the kitchens
  - switch off cooking appliances after use, plus lights and extraction fans when not in use
  - keep the doors of refrigeration units closed, defrost them regularly, and ensure they're well-ventilated

Long-term savings

- Buy equipment with an A+ energy rating that (preferably) has built-in sensors that automatically switch off when not in use

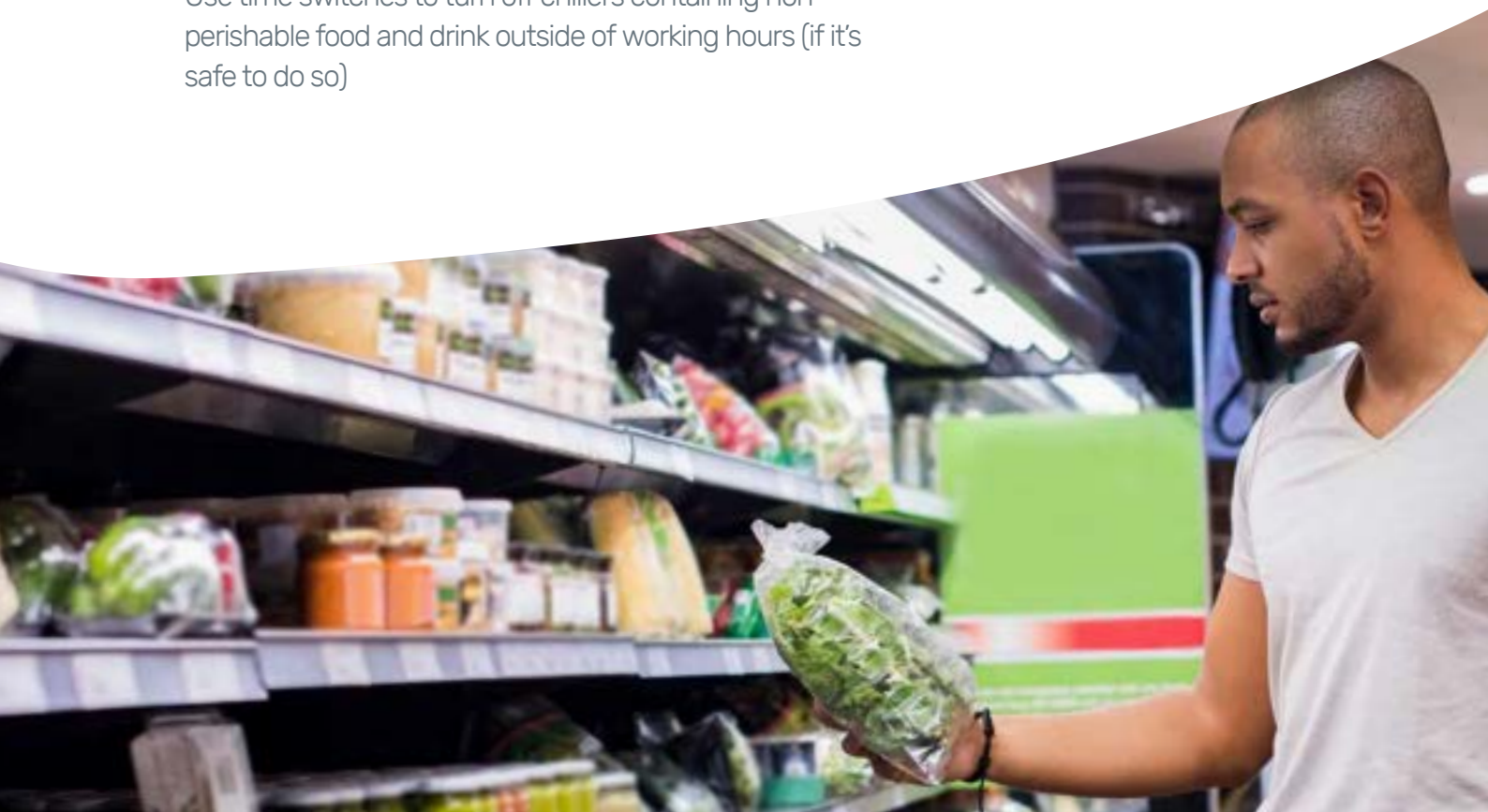
Refrigeration

No-cost changes

- Depending on your type of retail business, refrigeration could account for up to half of your energy bill – reduce the cost by:
  - Not over-filling shelves (which makes it harder to maintain right temperature)
  - Using insulating covers (if you already have them)
  - Switching off your chiller lighting when you're not open (the light generates heat) and keeping the chiller doors shut when possible
  - Creating a maintenance schedule that includes defrosting, checking door seals, cleaning condensers and checking refrigerant levels
  - Storing items in cool places to reduce the load when they're transferred to customer-facing chillers

Low-cost changes

- Installing strip curtains can help keep the warm air out; night blinds can keep the cold air inside open chillers when they're not in use
- Use time switches to turn off chillers containing non-perishable food and drink outside of working hours (if it's safe to do so)



What's next?

For further infomation email us at
hello@digitalenergyrevolution.co.uk

The cheapest unit of energy is the one you don't consume

www.digitalenergyrevolution.co.uk