Energy efficiency guide

Retail, leisure and entertainment

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Contents

Get smart, save energy	3
Heating	5
Ventilation / air conditioning (VAC)	6
Lighting	7
Building fabric (walls, floors and ceilings)	8
Leisure and fitness equipment (including pools)	9
Catering	10
Refrigeration	11

Get smart, save energy

Our definition of the retail, leisure and entertainment sector covers a broad range of organisations (see right). However, we've identified lots of ways to reduce energy costs that they're all likely to have in common.

For retailers, heating and lighting are generally the biggest drivers of consumption. 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. Whatever your retail, leisure and entertainment organisation type, follow our five steps below to plan your consumption cuts.

5 steps to reducing your energy consumption

01 Commit to continuous improvement – involve staff, set goals and track progress

02 Analyse your start point performance, develop benchmarks and track improvements

03 Set realistic, measurable goals and target dates to see how you're doing

04 Choose the steps you'll take to achieve those goals and involve your employees

05 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 retail and distribution energy saving reports and its research into areas such as sports and leisure as sources of information for our 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 changes

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

Low-cost changes

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 about 29% of energy costs in non-domestic buildings, it's possible to 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 necessary.
- 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.

Low-cost changes

- The location of your thermostats could affect their performance, for example if they're too close to sources of heat or heat loss. In these instances, moving them - while requiring an upfront 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 two years. Compensators regulate the temperature of a building based on the weather outside. Optimum start controllers optimise 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 this doesn't compromise safety.
- 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 controls with time switches and sensors. These will automatically turn off ventilation when you turn specific equipment off.
- Look for energy efficient fans. Despite their higher purchase prices, they'll save you money in the long-run.

Lighting

No-cost changes

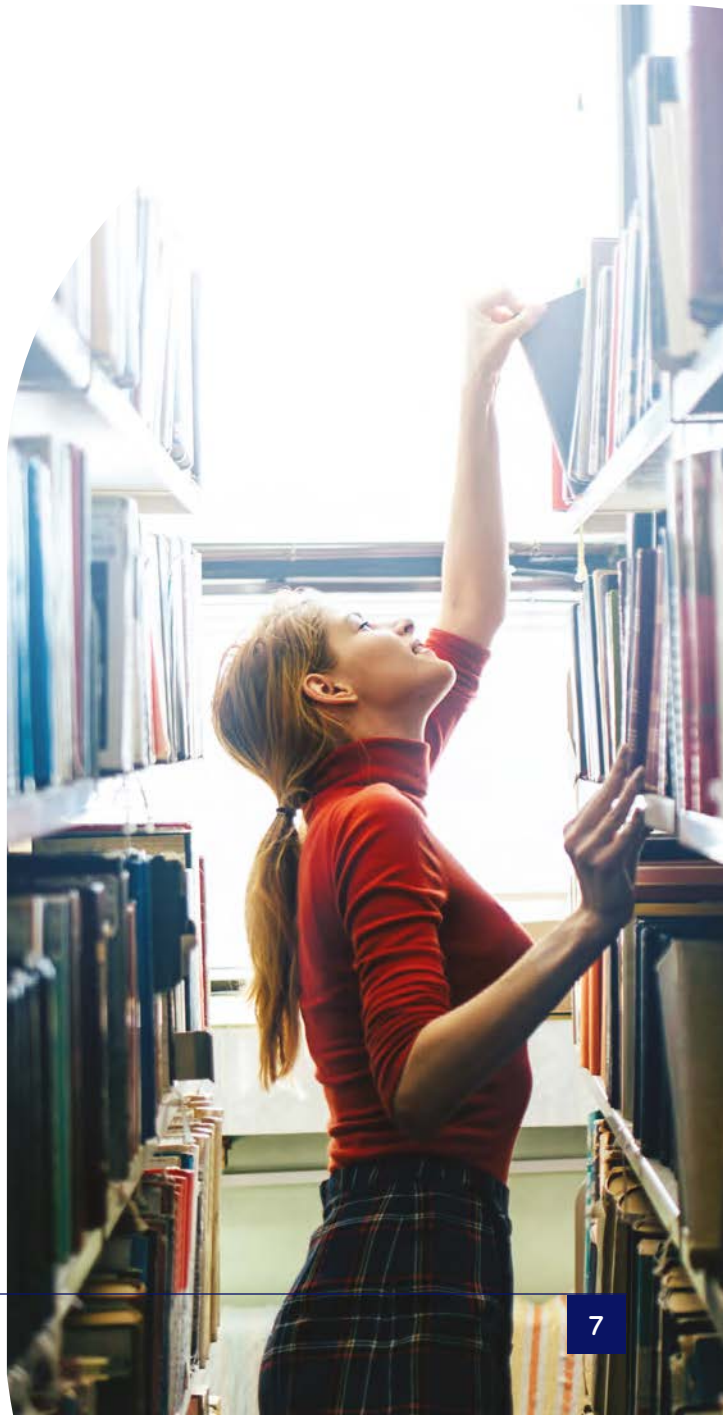
- Basic maintenance (keeping windows, skylights and light fittings clean) may reduce lighting costs by 15%.
- Have a 'switch off policy' and use simple light switch stickers so your people feel confident they're turning off the right lights.

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 lights when there's enough daylight.

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 LEDs.
- 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'.



Building fabric (walls, floors and ceilings)

No-cost changes

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

Long-term savings

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

Leisure and fitness equipment (including pools)

No-cost changes

- Switch off fitness machines (and air conditioning in surrounding areas) at night. Consider using programmed 7-day timers to do it automatically.
- Refer to the pool manufacturer's recommendations to avoid backwashing too often.
- Keep the pool temperature at 28–30°C and air temperature no more than 1°C above this to reduce 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.
- Install a humidistat to automate ventilation only when it's necessary.
- 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 among your employees 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 to 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 your costs by:
    - Not over-filling shelves (which makes it harder to maintain the 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 you transfer them to customer-facing chillers

Long-term savings

- 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?

Smart meters are the first step towards energy efficiency, automating your readings and enabling insights into your energy use. But they can also support you on your journey to net zero, too.

Join the smart revolution by registering your interest in smart meters today. Call 01473 617213 or email smart@drax.com.

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