

Energy efficiency guide



Office-based organisations



drax

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Get smart, save energy

Many types of business come within our definition of office-based organisations (see right), yet it's still possible to identify key areas where energy efficiency could be improved.

Turning on the heating system and lighting – as well as the ventilation, air conditioning and office equipment – will comprise a large percentage of your energy 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

- 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 office-based organisations?

When referring to this sector, we're including:

- Professional service organisations
- Those engaged in office/administrative and general services
- Management companies and consultancies



How your office-based business can save energy



We've used the Carbon Trust's energy saving report for [office-based companies](#), and its research into [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 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

- Keep the temperature 21–23°C, the optimum range for sedentary work
- Reducing temperature by 1°C can save enough energy to print 40 million sheets of A4 paper
- Keep furniture and equipment away from radiators/vents to improve heat circulation



Low-cost changes

- Clean/replace heating filters as often as manufacturers recommend
- 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
- Service your gas boiler once a year and the oil boiler twice a year to save as much as 10% on 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

- Check that extraction fans and ventilation devices aren't left running unnecessarily (despite its small baseload, an extractor increases the need for heat by around 5%)
- Take advantage of natural ventilation by opening doors and windows where possible (and without posing a risk to your staff or others on your premises)
- Align cooling times with working hours and occupancy, so you don't over-cool out of hours
- Reduce AC use by minimising sources of unexpected and/or unnecessary heat (e.g. office equipment left on when not in use; artificial lighting when daylight available)
- Adopt 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

- Have a “switch off policy” and use simple light switch stickers so everyone feels confident they’re turning off the right lights
- Keep windows, skylights and light fittings clean to let through as much natural light as possible – without regular maintenance, light levels can drop up to 30% within 3 years
- Move people closer to daylight and have blinds open during the day



Low-cost changes

- Use blinds that redirect daylight to the ceiling or the wall rather than block it altogether 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
- See the Energy Saving Trust report: [“The right light – selecting low energy lighting”](#)



Long-term savings

- Occupancy sensors in toilets or less-used areas save up to 30% on lighting costs, while daylight sensors turn artificial light off when there’s enough daylight



Office and small power equipment



No-cost changes

- Office equipment is the fastest growing energy user in the business world; the electricity it consumes represents 15% of total energy consumption in offices. So encourage your people to turn off non-essential items at the end of the day to save energy, lower cooling costs and extend the lifespan of the equipment (a single computer left on 24/7 costs £45 per year; using turn off and standby could reduce it to less than £10 a year)
- Place heat-emitting equipment like printers in a cooler area of the office (e.g. north side of the building) with good ventilation
- Using less paper leads to a more efficient workspace and reduces printing (and damage to the environment)



Low-cost changes

- Inexpensive plug-in timers on non-essential equipment can be set to cut power automatically outside of working hours (let your people know in advance)
- Clean equipment parts regularly for optimum efficiency
- When buying new equipment, account for energy efficiency ratings (buying equipment rated at least A+) and not just the initial cost



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



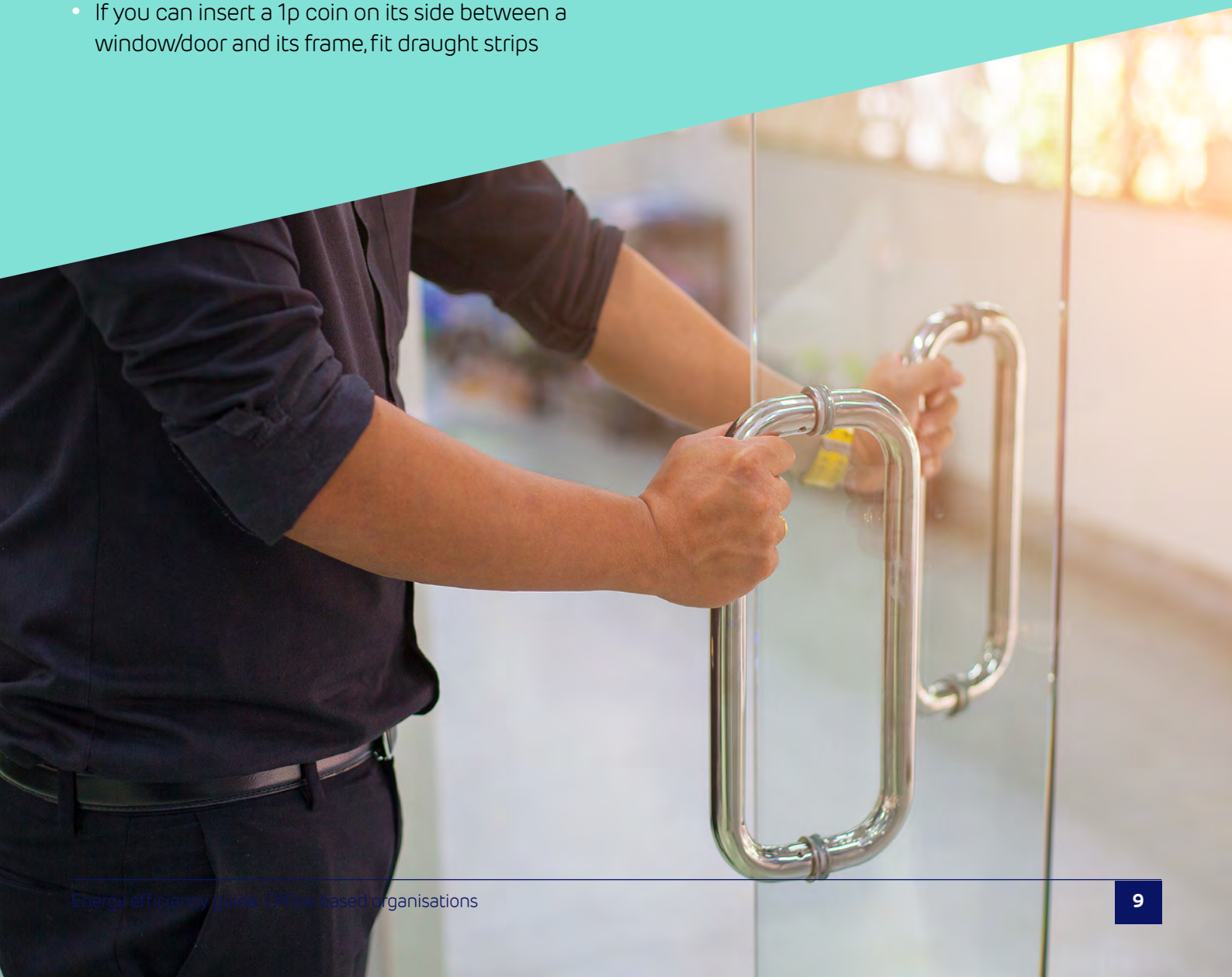
Low-cost changes

- If you can insert a 1p coin on its side between a window/door and its frame, fit draught strips



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 doors



Catering



No-cost changes

- You could reduce your energy bill 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
- Buy ovens with large double-glazing viewing windows (to reduce how often doors are opened, since this leads to heat loss)
- Consider installing heat recovery units in the kitchen to heat water



What's next?

If you've any questions,
call us on 01234 567890
or email smart@drax.com
energy.drax.com/smart



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