



# Office-based organisations



# Contents

Get smart, save energy	3
Heating	5
Ventilation/air conditioning (VAC)	6
Lighting	7
Office and small power equipment	8
Building fabric (walls/floors/ceilings)	9
Catering	10
What's next?	11

# 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

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 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



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

- 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

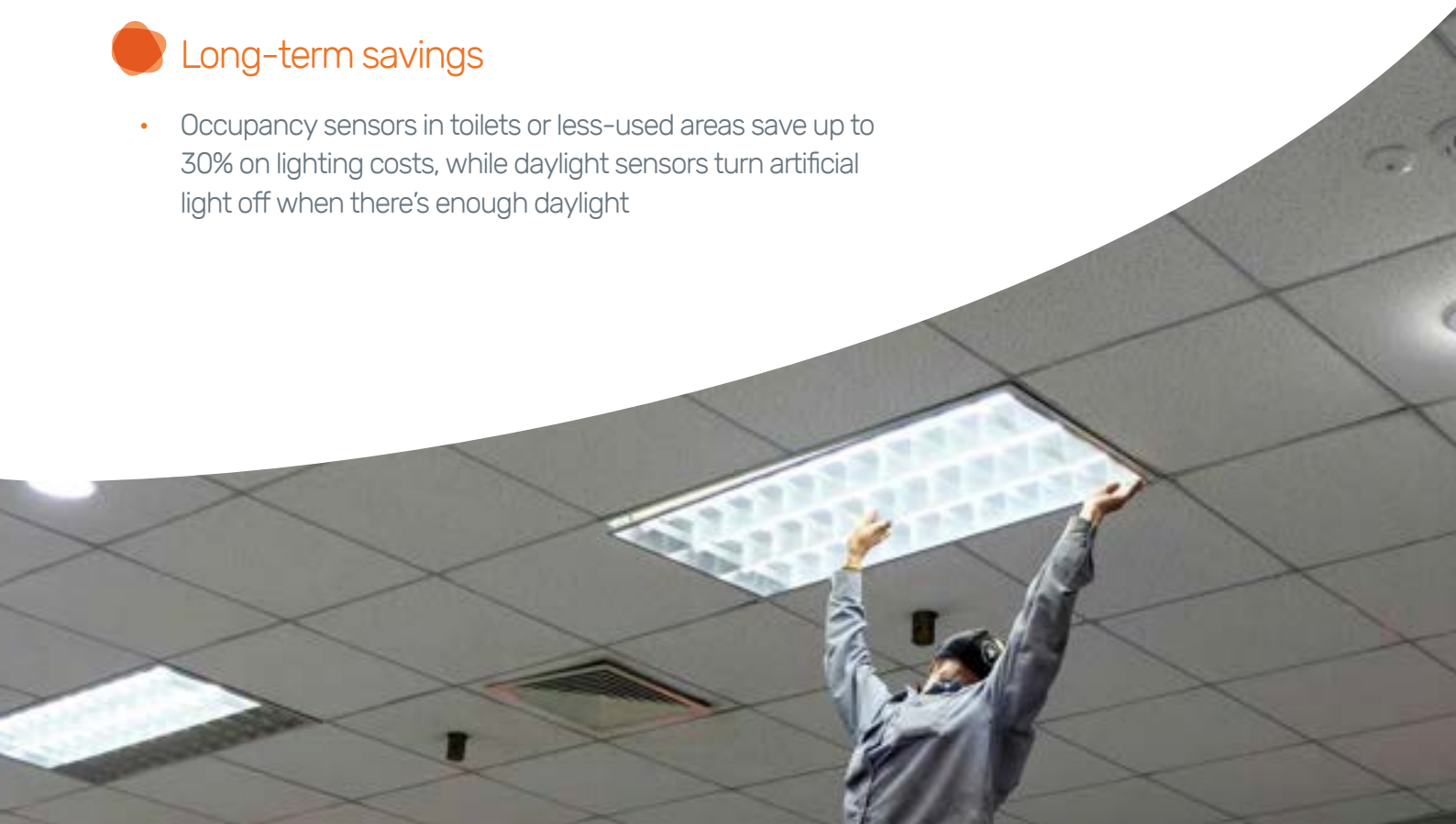
- Have a “switch off policy” and use simple light switch stickers so everyone feels confident they’re turning off the right lights
- Keep windows, skylights and light fittings clean to let through as much natural light as possible
- Move people closer to daylight and have blinds open during the day

## 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 compact fluorescent lamps (CFLs) – they last 8x longer and use 80% less energy
- 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

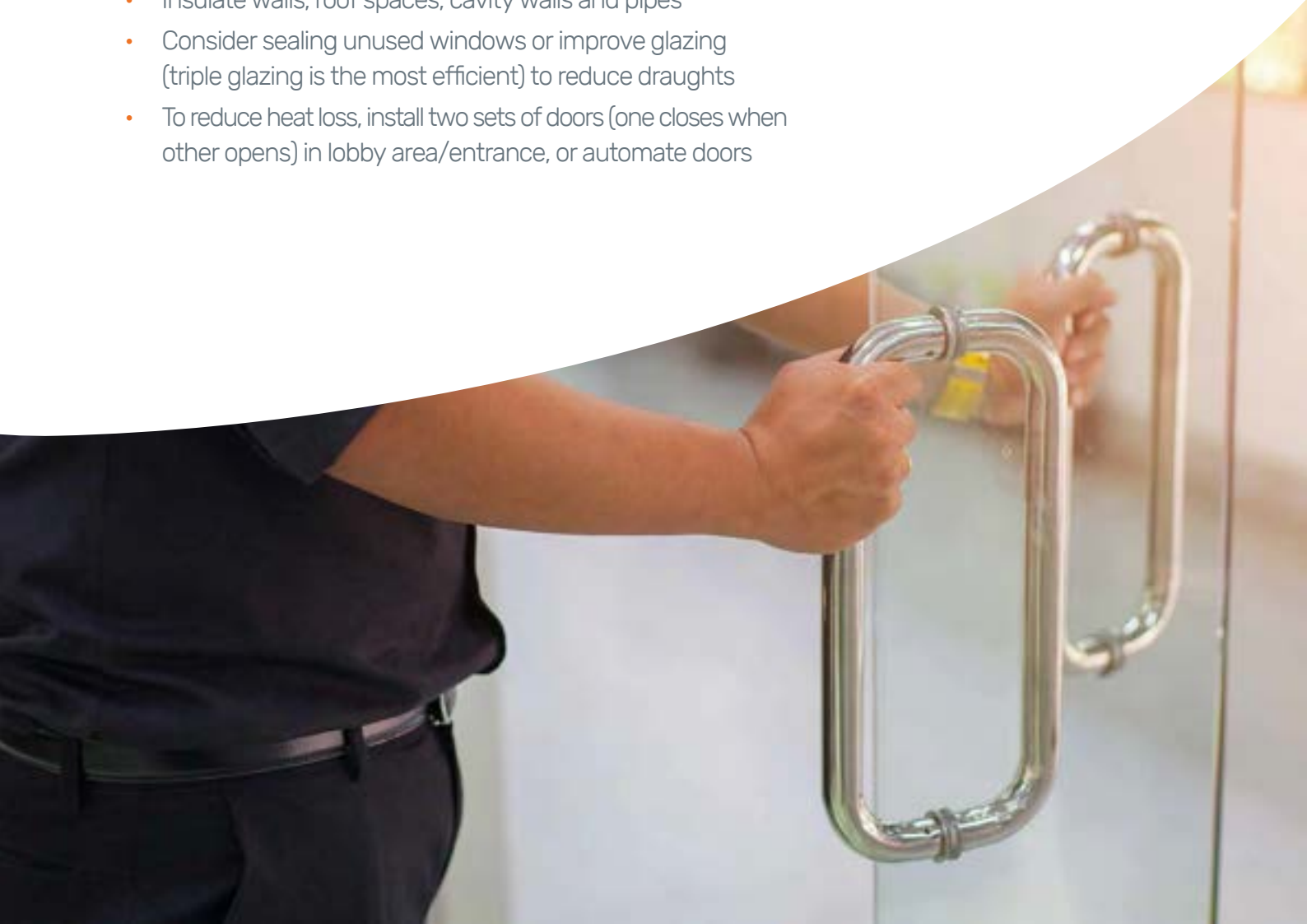
- In autumn, check your building(s) for damp, plus faulty gutters or downpipes
- Retain heat - keep windows/doors closed (unless you want natural ventilation) and close curtains/blinds at end of day

## 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?

---

For further information email us at  
[hello@digitalenergyrevolution.co.uk](mailto:hello@digitalenergyrevolution.co.uk)

The cheapest unit of energy is the one  
you don't consume  
[www.digitalenergyrevolution.co.uk](http://www.digitalenergyrevolution.co.uk)