

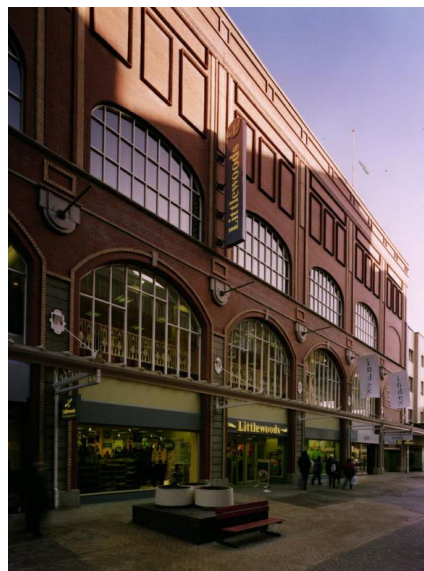
Energy efficiency action pack - for retail premises



ENERGY EFFICIENCY

BEST PRACTICE
PROGRAMME

INTRODUCTION



How this pack can help you

This action pack is for the 'energy champion' in your organisation. Everyone knows retailing is a highly competitive business. This pack describes actions you can take to improve your competitiveness – by ensuring lighting, heating, and energy-consuming equipment are all used efficiently.

The contents of the pack will help you to:

- raise awareness of energy issues among staff and motivate them to reduce waste
- provide training for key staff in the responsible use of energy
- assess current performance by comparing it with industry norms
- set targets and monitor and evaluate consumption
- inspect your premises and identify opportunities for improving operating practices.

Actions taken by three retail organisations – Littlewoods, Midland Bank and Waitrose – illustrate proven ways to encourage energy efficiency.

In the back of this action pack you will find blank forms for monitoring energy consumption, checklists for inspecting your premises, and advice for your chief executive officer. Pass each of these to the most appropriate person in your organisation.

WHY IT IS IMPORTANT TO USE ENERGY EFFICIENTLY

REDUCING COSTS AND INCREASING PROFITABILITY

Energy costs may be small in relation to your turnover, but they look very much bigger when viewed against your profits. Estimates suggest about 20% of energy costs are wasted, and reducing this figure can have a major impact on profitability and competitiveness.

IMPROVING CUSTOMER COMFORT

- Comfortable temperatures and lighting that enhances the appearance of the merchandise are likely to generate higher sales and greater customer loyalty.

IMPROVING WORKING CONDITIONS FOR STAFF

- A well lit and comfortable working environment for staff will help to show your commitment to their welfare as well as maintaining their productivity.

PROTECTING THE GLOBAL ENVIRONMENT

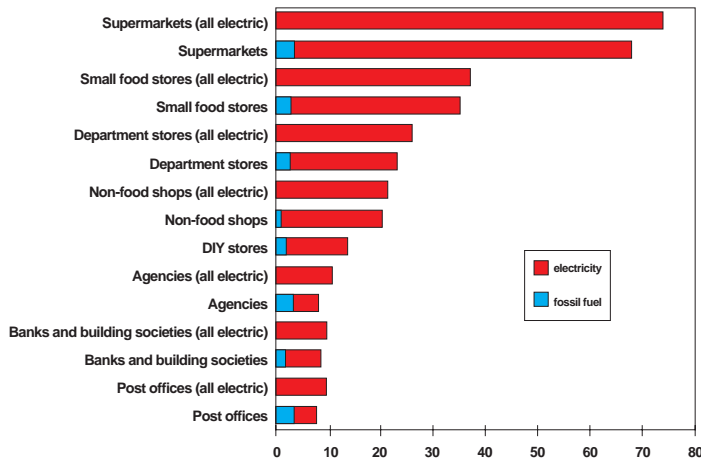
- Burning fossil fuels releases carbon dioxide (CO₂) and other pollutants into the atmosphere. The environmental consequences include acid rain and global warming – with damaging effects to life on earth.

The UK is committed to stabilising its CO₂ emissions at their 1990 levels by the year 2000. Everyone has a part to play in achieving this target.



ASSESSING AND MONITORING PERFORMANCE

Typical annual energy costs in £ per square metre (1992)



KNOWING WHAT YOU ARE USING

It is often said that you cannot manage what you cannot measure. To find out what you are spending:

- obtain your fuel bills for the past year
- work out your expenditure on electricity and, separately, fossil fuel (gas, oil, coal)
- compare this with the typical costs per m² for your type of premises, shown opposite.

If your energy costs are higher than shown, there is scope to reduce them. Even if they are typical, some savings are still possible.

To assess energy consumption figures – rather than cost – use the loose-leaf insert at the back of this guide. It also contains advice on tariffs.



Griffin Energy Management's calendar highlights meter reading days and incorporates a table for Midland Bank's branch energy managers to enter meter readings and calculate consumption.

MONITORING ENERGY USE

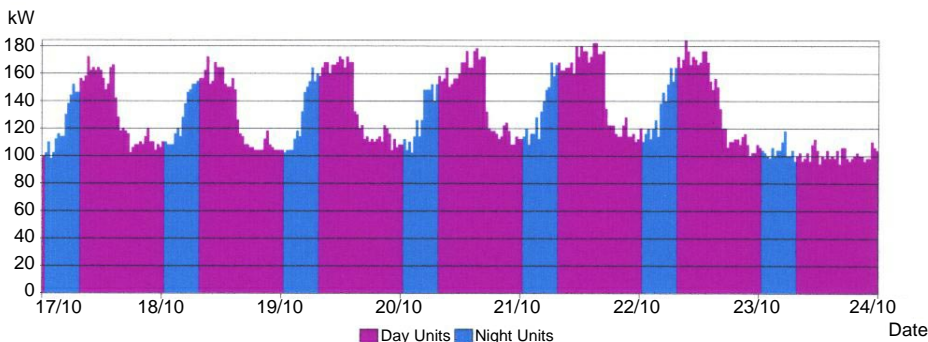
Monitoring energy use regularly will enable you to:

- check utility invoices and ensure you pay only for fuel actually used
- compare current use with previous years
- assess the seasonal pattern of consumption
- set targets and measure your performance.

A routine for reading utility meters – monthly or, if your consumption is high, weekly – will help you identify exceptional consumption levels and rectify the causes.

A blank form to record meter readings is included in this action pack.

Monitoring will help in your campaign to motivate staff. By measuring performance against a target consumption figure, you can keep staff informed of progress.



Half-hourly graphs of electricity consumption are reviewed by Waitrose's electrical services manager to identify what causes peaks – so that current practices can be improved.

CONDUCTING AN ENERGY INSPECTION

Inspecting your premises regularly will help you to identify:

- where energy is used
- whether it is being wasted
- what opportunities exist for improving current practice
- minor and major items for attention.

This action pack contains:

- a good housekeeping checklist
- a repairs and maintenance checklist
- a refrigeration checklist.

Use these to check all areas – both inside the building and externally. Stagger the times you inspect – before opening, lunch-time, during re-stocking and cleaning periods, and over the weekend.

Ask staff representatives to accompany you – both to help identify problems and opportunities, and to ensure they feel part of the assessment process. Encourage them to identify problems and solutions.

Working from the checklists, draw up an energy action plan identifying what needs to be done.

A blank form to help you draw up an energy action plan – based on the results of your inspection – is included in this pack.

Try not to be too ambitious at this stage. It may be better to identify a few achievable actions and implement them successfully. Later you can build on this success and introduce additional changes.



MOTIVATION AND COMMITMENT

'WHAT'S IN IT FOR ME?'

Obtaining the commitment of your staff and motivating them to use energy efficiently is crucial to achieving success.

Influencing people's actions often involves concentrating on 'what's in it for them'. People are motivated by many different factors, such as:

- incentives, rewards and challenges
- personal satisfaction or sense of achievement
- desire to ensure company or branch profitability
- approval from work colleagues
- desire for personal development
- loyalty to the organisation
- opportunities to help others
- the chance to set a positive example.

INVOLVING STAFF

To encourage staff to participate in the campaign to save energy:

- ask them to help identify actions that need to be taken
- establish with them clear and achievable targets
- agree how responsibilities for particular tasks should be allocated.

By acting without consultation you may discourage participation.

SUSTAINING YOUR CAMPAIGN

Staff need frequent motivation if good practices are to continue. Make sure you acknowledge suggestions, report back regularly on progress, and give recognition to achievements.

Vary the elements of your campaign and initiate a regular flow of fresh ideas:

- devise new posters and move existing ones to new locations
- identify new targets for action while ensuring the old ones are still being met.

If you depend on store energy managers to implement your programme, ensure you maintain regular contact to demonstrate your interest in their progress and success.

COMPETITIONS AND INCENTIVES

Competitions can help to sustain a campaign.

They may be run for individual members of staff or shop-by-shop.

Incentives for reducing energy consumption – whether given to individuals or groups, in cash or in kind – may be appropriate in some cases.

Allowing staff to choose how to spend a proportion of the savings may be easier to administer than individual incentives.

Remember, if all the savings are clawed back, there will be little incentive for staff to save money.

Every branch should have an energy champion who promotes good practice



COMMUNICATION

LITTLEWOODS STORES' MOT CERTIFICATE

To sustain its energy efficiency campaign, Littlewoods uses competitions. In one, staff were asked to devise a slogan for a poster promoting energy efficiency.

Its latest initiative begins with staff training, and is supported by a good practice information pack. Stores are asked to devise their own specific package of measures for reducing energy. Three basic approaches are being promoted:

- **M**otivating staff to be vigilant
- reviewing **O**perational procedures to ensure energy is used wisely
- checking that **T**echnical settings reflect business needs.

Stores submitting a valid programme will qualify for an MOT certificate. This is expected from all stores, while the most successful will be awarded a financial contribution to the staff social fund.

**INFORMING YOUR STAFF**

Depending on their individual motivations, staff need to be kept informed through:

- **education** about our impact on the global environment and the individual action needed to reduce it
- **information** to help them appreciate the link between energy efficiency and the continuing success of the company
- **training** to equip them with day-to-day solutions for reducing electricity and fossil fuel consumption
- **advice** on what they can do at home to save energy – this will encourage them to apply the same principles at work.

Opportunities for introducing energy issues to staff include:

- induction courses
- staff training courses
- staff newspaper or newsletter.

In addition, consider company posters, stickers, or leaflets featuring good housekeeping practices.

INFORMING YOUR CUSTOMERS

Promoting your energy efficiency campaign beyond your own organisation may help to raise your profile as a retailer who is taking action to save the earth.

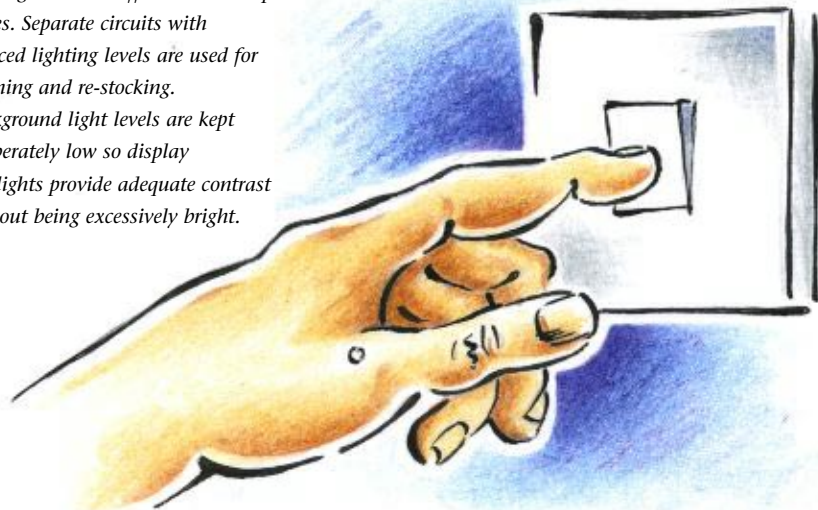
Examples include:

- information leaflet for customers describing current environmental issues, including government proposals for combating global warming, what actions your organisation has taken, what results you have achieved, and what your customers can do at home to use energy efficiently
- talks and visits to schools – including the provision of posters, teachers' notes, and leaflets.



LIGHTING AND HEATING – SOME THINGS YOU CAN DO

At Littlewoods Stores, lights are switched on one minute before opening time and off when the shop closes. Separate circuits with reduced lighting levels are used for cleaning and re-stocking. Background light levels are kept deliberately low so display spotlights provide adequate contrast without being excessively bright.



LIGHTING

Getting lighting costs under control should be among your first steps in energy management.

Some simple things you and your staff can do:

- make the best use of daylight
- switch off lights when not required
- turn off display lights out of hours
- use reduced lighting for shelf-stocking and cleaning.

It is more economical to switch off fluorescent lights – even for short periods – than to leave them on.

Do not reduce lighting levels to the extent that you compromise health and safety standards - especially on stairways.

HEATING AND VENTILATION

- Ensure time switches and thermostats are set to provide heat only when, where and to the extent required.
- Ensure radiators are free of all obstructions.
- Consider reducing temperatures by 1°C.
- Consider providing staff with company sweatshirts so temperatures can be lowered.
- If you have an open door policy, keep external doors open only at busy times.
- Ensure warm air curtains operate only when needed.
- Discourage staff from using supplementary heaters or fans.
- Ensure main ventilation plant and toilet extracts are switched off outside occupancy hours.

DOORS AND WINDOWS

- Check draught proofing around doors and windows.
- Check self-closing mechanisms on doors.
- Stop draughts in loading bays by use of docking seals.



REFRIGERATION AND EQUIPMENT

REFRIGERATION

In supermarkets refrigeration can represent 70–80% of the electricity bill, mostly at on-peak rates. If the store is too hot, cabinets have to work harder – and give off more heat to keep chilled and frozen foods cold.

Some things you can do:

- avoid over-filling shelves as cold air spills out and is wasted
- clean condenser grilles regularly
- ensure door seals are in good condition
- ensure defrosting uses off-peak electricity
- use insulating blinds at night, if available
- fit clear strip-blinds to cabinets for daytime use
- fit covers to chest freezers.



Waitrose undertook a research project to evaluate the cost and benefits of night blinds on refrigerated cabinets. The study showed them to be highly cost-effective
See Good Practice Case Study 223, full reference back cover

OFFICE EQUIPMENT

- Encourage staff to switch off equipment, such as computers and photocopiers when not in use.

BAKERY

- Estimate oven warm-up times accurately.
- Ensure equipment is turned off after use.

CUSTOMER OR STAFF RESTAURANT

- Turn on ovens, hobs and cooking equipment only when they are required for use.
- Switch off after use.
- Ensure dishwashers are run only when fully loaded.



It could be your door seals that need checking

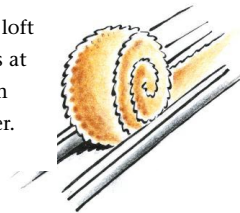
ENERGY SAVING IN THE HOME

It is possible to cut energy use by up to at least 20% – without affecting comfort or lifestyle – by using energy more efficiently.



Use only the heating, lighting and appliances you need – by adjusting the boiler timer/programmer and thermostats, and by switching off.

Check your loft insulation is at least 150mm thick all over.



Ensure your hot water cylinder is well lagged.



Fit draughtstripping to windows and doors – to reduce draughts and heat losses.



OTHER THINGS YOU CAN DO

- If your boiler is poorly controlled, fit an air thermostat, thermostatic radiator valves and a timer/programmer.
- Lag hot water pipes – to avoid wasting heat.
- Consider secondary double glazing to reduce draughts and cut down heat losses.
- If your central heating boiler is old, consider fitting a new, more efficient model.
- If you have cavity walls, seek advice and if appropriate install cavity wall insulation.

'WASTING ENERGY COSTS THE EARTH'

Three colour booklets promoting energy efficiency in the home are available free of charge from: Wasting Energy Costs The Earth, P O Box 200 Stratford-upon-Avon, Warwickshire CV37 9ZZ telephone 01345 247347.

LOW ENERGY LIGHTS

Low energy lights are comparatively expensive to buy – between £5 and £12 each. But they give the same light output as a normal tungsten lamp using five times as much electricity and they last eight times longer. Fit them initially in the lamps you use most often.

- Compact fluorescent 20 W 1 lamp lasts 8000 hours. So the cost to operate for 8000 hours is:

1 lamp @ £10

electricity @ £12

total cost £22



- Conventional 100 W tungsten 1 lamp lasts 1000 hours; 8 lamps needed to operate for 8000 hours so the cost to operate for 8000 hours is:

8 lamps @ 50p

electricity @ £60

total cost £64

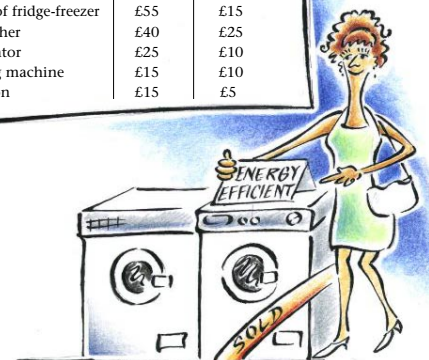


ENERGY EFFICIENT APPLIANCES

Considerable savings can be made by:

- using appliances sensibly, for example, with washing machines avoid unnecessarily hot wash cycles
- maintaining correctly, such as regular boiler servicing
- using night rate electricity wherever possible
- selecting energy saving appliances when you replace your old ones.

SPECIAL OFFERS		
Annual energy cost	Current models	Best available
Electric cooker	£60	£25
Freezer of fridge-freezer	£55	£15
Dishwasher	£40	£25
Refrigerator	£25	£10
Washing machine	£15	£10
Television	£15	£5



The pocket of this Guide contains the following inserts:

- Guide for chief executives
- Typical consumption in shops and stores
- Energy monitoring form (meter reading advice on reverse)
- Good housekeeping checklist
- Repairs and maintenance checklist
- Refrigeration checklist
- Energy action plan
- Case studies of good practice



SOURCES OF FURTHER INFORMATION AND ADVICE

Other Guides in this series are in preparation.

THE FOLLOWING PUBLICATIONS ARE AVAILABLE FROM BRECSU

General Information Reports

- 12 Organisational aspects of energy management, 1993
- 13 Reviewing energy management, 1993

Good Practice Case Studies

- 148 Energy management, J Sainsbury, 1994

Introduction to Energy Efficiency in Buildings Series

- 2 Introduction to energy efficiency in catering establishments, 1994
- 3 Introduction to energy efficiency in shops and stores, 1994
- 10 Introduction to energy efficiency in post offices, banks, building societies and agencies, 1994

THE FOLLOWING PUBLICATIONS ARE AVAILABLE FROM ETSU

Good Practice Guides

- 84 Managing and motivating staff to save energy, 1993
- 85 Energy management training, 1993

Good Practice Case Studies

- 27 Compressor motor controllers on refrigeration plant, 1991
- 182 Energy efficiency motivation campaign in a multi-site organisation, 1993
- 223 Night blinds on refrigerated cabinets, 1994

Making a Corporate Commitment campaign

The campaign seeks board-level commitment to energy efficiency. It encourages directors to sign a

Declaration of Commitment to responsible energy management, prepare a business plan for energy efficiency and ensure that it becomes an item that is considered regularly by the main board.

Further information is available from the Department of the Environment, telephone 0171 276 4613.

The DOE has also produced a series of 15-minute videos on 'Managing Energy', which cover a range of topics including heating, boilers, ventilation, insulation, metering, lighting, energy awareness and training.

Regional environmental and energy management contacts provide a local point of contact and source of information and support.

Scotland.....	0131 244 7137
North East.....	0191 202 3614
Yorkshire and Humberside.....	0113 283 6376
North West.....	0161 952 4282
East Midlands.....	0115 971 9971
West Midlands.....	0121 212 5300
Wales.....	01222 823126
Eastern.....	01234 796194
South West.....	0117 900 1700
South East.....	01483 882255
Northern Ireland.....	01232 529900

Energy Systems Trade Association

This is a trade association of suppliers of services and equipment for improving energy efficiency – including energy consultants, heating, ventilation and air conditioning, boilers, lighting, control equipment, metering and monitoring, building energy management systems, contract energy management, combined heat and power systems, and heat recovery.

The Government's Energy Efficiency Best Practice programme provides impartial, authoritative information on energy efficiency techniques and technologies in industry and buildings. This information is disseminated through publications, videos and software, together with seminars, workshops and other events. Publications within the Best Practice programme are shown opposite.

Visit the website at www.energy-efficiency.gov.uk
Call the Environment and Energy Helpline on **0800 585794**

For further specific information on:

Buildings-related projects contact: Industrial projects contact:
Enquiries Bureau Energy Efficiency Enquiries Bureau

BRECSU

BRE
Garston, Watford WD25 9XX
Tel 01923 664258
Fax 01923 664787
E-mail brecsuenq@bre.co.uk

ETSU

Harwell, Oxfordshire
OX11 0RA
Tel 01235 436747
Fax 01235 433066
E-mail etsuenq@aeat.co.uk

Energy Consumption Guides: compare energy use in specific processes, operations, plant and building types.

Good Practice: promotes proven energy-efficient techniques through Guides and Case Studies.

New Practice: monitors first commercial applications of new energy efficiency measures.

Future Practice: reports on joint R&D ventures into new energy efficiency measures.

General Information: describes concepts and approaches yet to be fully established as good practice.

Fuel Efficiency Booklets: give detailed information on specific technologies and techniques.

Introduction to Energy Efficiency: helps new energy managers understand the use and costs of heating, lighting, etc.