HOW GREEN IS YOUR SUPERMARKET?
A Guide for Best Practice

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Supermarkets are not just an established part of everyday life, they are a sector so big that we now buy 88% of all our food from a handful of large chains.

Customers are nowadays asking more from their supermarkets than pile ‘em high and sell ‘em cheap. They want to know, for example, that these companies are taking a responsible attitude to the environment. This report seeks to answer that question.

I am grateful to the major supermarkets, all of whom have co-operated with my study. The information they have provided shows that the sector recognises the need to be responsive to its customers and does generally set a high benchmark on environmental performance. There is however still plenty of room for improvement, so this report sets out best practice and recommendations to follow.

All of us need to be conscious of the footprint we leave on the environment, and with supermarkets it is inevitably a large one. I hope this report will help the sector reduce the size of that footprint.

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Lib Dem Shadow Environment Secretary

Summary of Key Facts:

- There is now approximately 1 supermarket for every 10,000 people in the country.

- Supermarkets employ ¾ million people. However, according to studies the local communities could be losing inward investment of up to £100bn every year because of centralisation of related activities (such as printing) - £2000 for every person in the country[1].

- Over 15 billion plastic bags are given out annually by six supermarkets. For all nine supermarkets this equates to an estimated annual total of around 17½ billion plastic bags. This is enough plastic to cover an area the size greater than Sussex and Surrey put together, or the combined metropolitan areas of London, Liverpool, Manchester, Newcastle and West Yorkshire[2]. The whole of England would be covered in just over 21 years.

- Seven supermarket chains in the UK cover an area of four and a half square miles, the equivalent of 2,800 football pitches. Extrapolating for all nine supermarket chains, the total area is around six and one tenth square miles. With car parks the total area could be as much as twenty four and a half square miles. That's the equivalent of more than 15,000 football pitches.[3]

- 7% of the fruit and vegetables sold in these supermarkets is organic. The Government has set a target of 70% of organic food sales to be British grown, yet currently only around 55% does.

- Supermarket lorries travel 408 million miles a year. This is the equivalent of going around the M25 nearly 3 million times, or to the moon and back 442 times. This results in 600,000 tonnes of Carbon Dioxide emissions per year[4]. Extrapolating for the missing survey results (based on turnover) the total lorry mileage from all nine supermarkets is likely to be around 670 million miles – to the moon and back 723 times - two return trips per day.

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[1] Assumes a loss of £11 for every £10 sold, and total of around £90bn turnover for supermarkets (see section on local food – page 16)
[2] Average plastic bag = 0.35square metres of plastic – a total of 6125 square kilometres for 17.5bn bags.
[3] Estimated from an example of a Waitrose store in Waverly of 3405 sq metres, and taking up a total are of 1.02 hectares.
[4] Distance to moon (mean) = 384,467kms (NASA Figures); Converted from http://www.defra.gov.uk/environment/envrp/gas/10.htm

- Only three of the nine supermarket chains surveyed use rail to transport freight. However, even in these cases rail makes up only 4% of the total mileage.

- The average household spends £470 a year on packaging - one-sixth of its total food budget[5]. This means the total spent each year nationally on packaging by consumers could be as high as £15bn.

- The NFU found that only 26 per cent of the cost of a food shopping basket is accounted for by the actual food itself; the rest is packaging, processing, transport, store overheads, advertising and supermarket mark up, which is sometimes as high as 45 per cent.

- Supermarkets currently consume around 5% of the UK's annual energy consumption. The combined energy consumption (excluding transport) of five companies was 9,891 Gwh per year – a cost of around £171m per annum. This equates to emissions of Carbon Dioxide of 4.1m tonnes per annum – 3% of all UK emissions[6].

Key Recommendations:

- Corporate targets for environmental performance are essential and should be made mandatory.

- All supermarkets should report according to DEFRA guidelines on waste and energy and support targets on UK food sourcing.

- To meet the above recommendations, supermarkets – where they already have not done so – should develop Environmental Management Systems and fully engage with civil society led projects (such as "Race to the Top").

[5] Andrew Purvis. Loaded! Why the supermarkets are getting richer and richer. The Observer 25/01/04

[6] Figures from a number of sources: At an average cost of electricity of £17.30 per megawatt hour (figure for cost taken from http://www.screaming.net/cgi-bin/news/newswire.cgi/news/reuters/2003/02/07/business/britishenergyforgeselectricitydeal.html&template=/business/templates/newswire/business_news_story.html); Action Energy figures of amount of CO2 in electricity generation – see: http://195.92.173.165/ActionEnergy/); (Emissions of CO2 = 150.4MtC in 2002; target = 131.86MtC in 2010: http://www.sustainable-development.gov.uk/indicators/headline/data/pdf-031104.pdf)

INTRODUCTION

This report compiles the response of nine of the UK's top supermarket chains to a detailed questionnaire on their environmental performance. We thank ASDA, Co-op, Marks & Spencer, Morrison, Safeway, Sainsbury, Somerfield, Tesco and Waitrose for taking the time to complete this survey. We would also like to thank Race To The Top www.racetothetop.org for their assistance.

Responses to the questions are grouped by the following themes: Background; Packaging and Recycling (plastic bags, recycling, packaging waste, fresh produce packaging); Sourcing (organic produce, local food, and timber); and Energy (in-store and transport). This report focuses on environmental performance and does not purport to directly address wider issues such as the relationship between producers/workers and the supermarkets. Each section comprises the questions asked and some background information on the major issues, a summary of the responses, a section on those supermarkets showing best practice, and a section on recommendations to government and the supermarkets themselves.

It was agreed with the supermarkets that companies would not be mentioned to by name except with reference to best practice. The tabulated results therefore refer to supermarkets as 'A', 'B', 'C' etc.. and do not reflect any particular order, alphabetical or otherwise. Each table arranges the supermarkets in a different order so it is not possible to track the responses of any one company through the same column in every table.

KEY

The following symbols appear in the tables

N/a means 'not applicable' – the company concerned doesn't stock the item or run any scheme referred to in the question

? means that no data was supplied by the company for that question

1: BACKGROUND

	A	B	C	D	E	F	G	H	I	Total
No. stores UK	125	1,600	780	125	481	143	501	263	1275	5508
UK employees	50000	47399	221000	50000	87500	28312	145400	120000	5600	772,344
Turnover (£bn)	£4.3	£2.6	£28.6	£4.3	£9.6	£2.4	£18.5	£10.7	£4.6	£84.6bn
Average size (sq ft)	36000	3765	48000	36000	23000	17418	28887	?	?	4.4 sq miles

Questions asked

- How many stores do you have in the UK?
- How many people are employed in your stores in the UK?
- What was your turn over in the last financial year?
- What is your average store size in square feet?

The companies responding to our questionnaire own 5,508 supermarkets in the UK and employ 772,344 in their stores.

88% of food sold in the UK is through supermarkets [7]. The stores of the seven supermarkets who provided square footage information cover four and a half square miles. That's the equivalent of 2,800 football pitches. Extrapolating for all nine supermarket chains, the total area is likely to be around six and one tenth square miles. With car parks as well the total area could be as much as twenty four and a half square miles. That's the equivalent of more than 15,000 football pitches.

[7] Andrew Purvis. Loaded! Why the supermarkets are getting richer and richer. The Observer 25/01/04

2: PACKAGING AND RECYCLING

A) PLASTIC BAGS

	A	**B**	**C**	**D**	**E**	**F**	**Total**
No. plastic bags distributed annually	9bn	0.5bn	1.4bn	1.4bn	0.2bn	2.5bn	15bn

Questions asked?

- How many plastic bags were given out to customers at your stores last year?
- Are the bags you hand out biodegradable?
- Do you offer the sale of stronger, reusable carrier bags?
- Do you support the introduction of a tax, similar to that in Ireland of plastic bags?
- What measures are you taking to encourage reuse of plastic bags by customers at your stores?

Plastic bags are a highly visible form of litter and have always been received a lot of public interest. Most are discarded as waste after one use and can take more than 100 years to break down.

In the UK, the Local Government Association (LGA) has recently come out in favour of the plastic bag levy. The executive manager for waste at the LGA, Alice Roberts, agreed that the actual environmental benefits might not be the major selling point but said that "the scheme should be introduced on the basis of the awareness raising potential"[8] The British Retail Consortium (BRC) opposes such a tax on the basis that switching to bulkier paper bags results in more transport and storage problems, and that such a tax would undermine efforts made by retailers to make their carrier bags more sustainable, "A national campaign with one single message to deliver to consumers is the way to go" said Nigel Smith, BRCs Corporate Social Responsibility Director [9]. One supermarket consulted on this survey suggested that a tax be placed on all forms of 'virgin' carrier bags, whether paper or plastic. This would shift the emphasis of the campaign from a single material to the wider issue of reuse and consumer engagement.

[8] http://www.letsrecycle.com/materials/plastics/news.jsp?story=3023
[9] http://www.letsrecycle.com/materials/plastics/news.jsp?story=3031

In Australia the Federal Government commissioned a consultancy study on the options for reducing plastic bag use. The National Working Group on plastic bags concluded that although previous campaigns had been effective in raising awareness of the environmental impact of plastic bags, they are only effective in encouraging 'a small percentage of consumers in changing their behaviour by using alternatives, and/or reusing and recycling'[10] The consultants concluded in favour of a mandatory levy.

In Ireland plastic shopping bags were causing a major litter problem in the rural environment. This was having a negative impact on tourism, Ireland's 2nd biggest industry. A PlasTax of 0.15 euros on each new plastic bag was levied at the point of sale. The outcome has been a 90% drop in plastic bag consumption. The levy is broadly supported by the population. Paul Morrissey of the Environment Awareness Division of the Irish Government the surveys showing high public support demonstrate that 'the public may be unwilling to take action for the greater public good unless there is some form of financial incentive or punishment'

Summary

Information relating to the number of bags distributed was provided by six of the supermarkets questioned[11]. A 2002 estimate of plastic bags distributed by supermarkets stood at around 10bn[12]. This survey shows even with figures missing from 3 companies, 15bn bags are distributed by supermarkets in a year. For all nine supermarkets this equates to an estimated annual total of around 17½ billion plastic bags. This is enough plastic to cover an area the size greater than Sussex and Surrey put together, or the combined metropolitan areas of London, Liverpool, Manchester, Newcastle and West Yorkshire[13]. The whole of England would be covered in just over 21 years.

Half the companies questioned already offer some form of biodegradable plastic bag or are in the process of carrying out trials on their viability. All companies offer customers a larger reusable bag which is generally replaced free of charge

[10] National Plastic Bags Working Group, Report to the National Packaging Covenant Council, December 2002. plastic Shopping Bags – Analysis of Levies and Environmental Impacts, Final Report, NOLAN-ITU Pty Ltd, December 2002 http://www.deh.gov.au/industry/waste/plastic-bags/bags-analysis.html

[11] Three companies declined to respond

[12] Tax on Plastic bags considered 06/05/02 http://news.bbc.co.uk/1/hi/uk/1969997.stm

[13] Average plastic bag = 0.35square metres of plastic – a total of 6125 square kilometres for 17.5bn bags.

when it is worn out. Offering reusable bags and using such bags to convey messages on reuse was the preferred option for the majority of supermarkets.

There was support for some kind of ‘plastic bag’ tax, but not in the current Irish format. There was concern that charging the equivalent of 9p for each plastic bag had merely resulted in an increased sale of bin liners and paper carrier bags, which have a higher embedded energy cost to their production and transport than standard plastic carriers. It was clear from all supermarkets that their absolute support would depend on the regulatory detail of any incentive.

Best Practice

Co-op were the first supermarket to provide degradable bags and now offer biodegradable bags in 10% of their stores

Somerfield launched degradable bags in all their stores in November 2002. These were the first to be approved by the Soil Association

Sainsbury’s offer a 1p refund for reusing a bag or a box. This money contributed £750,000 to local charities in 2002/3.

Tesco provide recycling points for their carrier bags and export them to the Far East to be recycled in to film. Following a 3-month trial the company have decided to roll out degradable carrier bags to all its stores. The bags become brittle and begin to break down after 2 months, and in 18 – 24 months they break down completely

Recommendations

1. Government to commission a consultancy study on the options for reducing plastic bag use. Australia’s Nolan Report provided very detailed work upon which an informed policy decision could be made.

2. All supermarkets to have Bags for Life on visible display at checkout and promote their purchase

3. All supermarkets to have a ’please re-use this bag’ message printed on every bag

4. All supermarkets to offer plastic bag recycling points for their bags and offer financial incentives for their reuse.

5. All supermarkets to introduce biodegradable bags

6. Supermarkets to consider setting targets for the reduction in the number of bags distributed per year. This could be achieved through measures that many stores are already practicing; training of packers, customer awareness raising, incentives for bring back, and simply asking customers whether they need a bag or not.

B) RECYCLING

	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Total**
Vol and % paper and c'board packaging recycled	35,623t	120,000t	21,000t	108,466t	88,500t	52,000t (inc polythene)	178,000t 78%	15,466t 95%	619,055 t

Questions asked

- Is your business covered by the EU Packaging and Waste Directive?
- Did you meet the EU Packaging Directive recovery and recycling targets for businesses in 2002 for a) 59% recovery and b) 19% material specific recycling and what percentage rate did you achieve in each case?
- What a) volume and b) percentage of (i) cardboard and (ii) paper, you used was recycled last year?
- How many of your stores have recycling facilities for the following and what was the average volume per store recycled in this way for cans, paper, glass, plastic, polystyrene?
- What percentage of your packaging waste is a) incinerated b) landfilled and c) recycled?

<u>Summary</u>

All the companies surveyed meet the targets of the EU Packaging and Waste Directive, with at least 59% recovery and 19% specific material recycling. **Waitrose**, for example, were able to recycle up to 95% of their cardboard packaging.

Marks and Spencer were the only supermarket not to have recycling facilities for use by their customers but this was because their stores are situated in town and they don't have car parks. Only Safeway was able to provide aggregated information on the amount of specific materials collected from their stores recycling points. Very few companies were able to provide information on the volume of paper recycled; occasionally it was incorporated with the cardboard recycling.

Only four of the supermarkets responded on how packaging waste was disposed of, the remaining companies saying they recycled 'as much as possible' but did not record data in this way. Of those that did reply, the amount of packaging waste recycled varied from 70% to 93%. Two supermarkets gave figures for waste to landfill but no data on percentages of waste sent for incineration was provided.

Best Practice

Co-op reduce waste to landfill by collecting cardboard and plastic at store, returning them via the distribution system to be recycled, and reintroducing them in to the production of new cardboard and plastic for own brand products.

Co-op have closed the loop on paper waste by collecting waste office paper from head office and using it for the feed stock for own brand toilet tissue and kitchen towel.

Tesco have developed schemes for mobile phone and inkjet cartridge recycling.

ASDA have a cardboard recycling league table which helps to identify best practice at store level and share this practice across the chain.

Recommendations

7. All supermarkets to report on packaging waste separately to other waste streams.

8. Supermarkets to set targets on increasing the percentage of their packaging which is recycled and decreasing the percentage of packaging sent to landfill.

9. Supermarkets to report on paper recycled

10. Supermarkets to close the loop on office and store waste for production of own brand paper-based products

C) FRESH PRODUCE PACKAGING

Questions asked

- What % of fresh produce is a) packaged in plastic containers, b) packaged on a paper based card tray with cellophane wrap, c) packaged on polystyrene tray with cellophane warp, d) sold loose in bags and e) sold loose in plastic bags

The average household spends £470 a year on packaging - one-sixth of its total food budget[14]. An analysis of a typical Tesco or Asda shopping basket, carried out by the National Farmers Union, found that only 26 per cent of the cost is accounted for by food; the rest is packaging, processing, transport, store overheads, advertising and supermarket mark up, which is sometimes as high as 45 per cent

Summary

Co-op were the only company who supplied figures on fresh produce packaging, claiming that 90% of their fresh produce was sold loose in plastic bags.

Although companies often didn't record data in this way there was considerable interest in looking at ways to reduce packaging, or to develop biodegradable packaging, particularly for organic produce. Respondents also had some concerns that packaging and labelling legislation could restrict options for packaging reduction.

It was the supermarkets' opinion that customers 'expected' to have products from the bakery section packed to protect them from damage. Some supermarkets were considering reducing the packaging on such produce.

[14] Andrew Purvis. Loaded! Why the supermarkets are getting richer and richer. The Observer 25/01/04

Best Practice

Tesco introduced reusable plastic ‘green trays’ into the distribution system to deliver fresh products to stores. They are designed to last over 10 years and reduce the need for cardboard secondary packaging. This innovation was awarded the Queen’s Award for the Environment in 2000 and last year saved 69,000 tonnes of cardboard during over 170 million trips through the distribution chain.

Marks and Spencer has carried out a series of Life Cycle Assessments (LCA) as part of a packaging review. The work compared loose apples vs. four-packs of packaged fruit. They say that the two methods had very similar overall impact due to higher levels of wastage in loose varieties. However, loose packaging created the least non-biodegradable waste. They say that point of sale packaging does not necessarily reflect overall energy and waste implications

Recommendations

11. Government to investigate whether packaging legislation could be amended reduce the need for cardboard packaging. For example, could labels be placed on cling film of chilled produce rather than boxes.

12. Supermarkets to introduce ‘green trays’ as standard to minimise need for cardboard secondary packaging.

13. DEFRA to carry out more research on LCA of packaging options and look at how to minimise both energy and non-biodegradable waste.

14. Supermarkets to sell bakery products loose rather than in plastic boxes.

15. Supermarkets to continue working on increasing the usage of biodegradable packaging

3: SOURCING

A) ORGANIC PRODUCE

	A	B	C	D	E	F	Average
% fruit and veg sold organic	5%	1.6%	15%	8%	4.6%	?	7%
% from UK	?	60% 95% for processed	85% when in season	30%	40%	60% depending on season	55%
% from EU	?	20% 5% for processed	15% when in season	60%	40%	?	27%
% from outside EU	?	20% 0% for processed	0% unless can't be grown in the UK	10%	20%	?	12.5%

Questions asked

- What percentage of your a) fruit and b) vegetables products sold last year was organic?
- What percentage of your organic food is a) UK, b) EU and c) outside the EU in origin?

DEFRA has made clear its view the British organic sector should be able to achieve at least comparable levels of market share to the equivalent conventional product sector. In the Organic Action Plan, the Government says it believes that at least 70% of organic food sales should come from Britain. Given that approximately 80% of organic food is sold in supermarkets[15], these companies are clearly key players in achieving this target. In the Organic Action Plan of 2002 the supermarkets committed to "increasing the proportion of organic food which they source within the UK". The Action Plan Group plans to undertake work with British Retail Consortium and the major retailers to establish the extent of the opportunities which exist in particular product sectors.

[15] Soil Association Briefing Paper Action Plan to develop organic food and farming in England
- Summary and extracts http://www.soilassociation.org/web/sa/saweb.nsf/0/80256ad80055454980256c05002a3dc0?OpenDocument

Summary

For the six supermarkets who did supply answers to this question, an average of 7% of fruit and vegetable sales were organic. The range was 1.6 to 15%. The average % of this food that was UK in origin was 55%. The responses ranged from 30 – 85% and were dependent on season. Three of the supermarkets were unable to provide figures for sales and origin of organic produce.

Best Practice

Sainsbury's and **Waitrose** have committed to targets through the Organic Action Plan for sourcing UK organic produce.

Waitrose have set a target to source 100% of organic produce from the UK when in season and **Sainsbury's** are on track to meet their targets for meat sourcing.

Recommendations

16. All supermarkets to set a target for % of organic produce to be sourced from the UK and have it written into corporate policy.

17. Government to review progress of the Organic Action Plan and report on opportunities which exist in particular product sectors.

B) LOCAL FOOD

Questions asked

- What percentage of the a) meat, b) vegetables and c) fruit sold in your supermarkets do you estimate was sourced locally within a 30 mile radius of each supermarket last year?

- What percentage of the following were sourced from abroad and required air travel to be used for delivery a) strawberries b) asparagus c) apples d) lettuce e) grapes f) prawns g) chickens

Every £10 spent with a local food initiative is worth £25 to the local economy, compared with just £14 when the same amount is spent in a supermarket chain. This multiplier effect is due to small local businesses keeping related retail activities such as printing in the local area, thereby supporting other local businesses[16]. The Policy Commission for the Future of Farming and Food ("The Curry Commission")[17] concluded that local food will be the next major development in food retailing, and that the supermarket sector should re-examine its supply chains accordingly.

Despite such recommendations, few of the supermarkets have a commitment to local sourcing written into their corporate policy, and the majority of those who do fail to have targets set for local food procurement. In total, supermarkets make only 1%-2% of turnover from local food-providers, while this accounts for about 80% of the goods in urban independent shops.[18]

The huge market share of the major supermarkets combined with their regional distribution centres have allowed them to side-step the wholesale markets and purchase direct from suppliers. While this may well have offered a tangible benefit to consumers in terms of price and choice, it has led to a decline in wholesale markets. In France supermarkets are obliged to source a minimum percentage of their stock from wholesale markets. This has kept such markets alive and makes it possible for smaller independent high street stores to have adequate access to supplies.

Summary

The 30-mile definition used in the question was not favoured by many of the supermarkets, which made data collection difficult. Many of the companies have different definitions for ‘local’ and ‘locality’ foods and will base their judgment more on whether the brand has high customer recognition than whether it originated from within a 30-mile radius. For example,

[16] University of Nottingham Business School, Neighbourhood Shopping in the Millennium, October 1998
[17] Farming and Food A Sustainable Future, Policy Commission on the Future of Food and Farming, 2002 http://www.cabinet-office.gov.uk/farming/pdf/PC%20Report2.pdf
[18] Rachel Shabi, The Price Isn’t Right. The Guardian Unlimited – **Special Report: Supermarkets** 26/01/04

ASDA's local sourcing team define local produce as 'products made locally, grown locally or reared locally and is a local taste or delicacy, recognised as local and has a significant customer demand'

In answer to the questions on local procurement and air freight, only four of the companies could provide any answers. Of those who did respond, the **Co-op** revealed that sourcing has focused on regional rather than local sourcing i.e. milk sold in Scottish stores is Scottish. They also take the labelling down to individual farm or packer levels when logistics permit. Strawberries, asparagus, and grapes were the only products that any of the four responding companies said were air freighted, and percentages were low for all of these (0.5 – 5%), except for grapes which was 30%.

Best Practice

Marks and Spencer have taken on a PhD student to look at environmental, social and economic impacts of food sourcing. This will be used to inform how Marks and Spencer develop their supply chains.

Waitrose have recently developed a Locally Produced range to encourage sourcing within 30 miles of a branch. A new symbol: 'Waitrose Locally Produced' has been developed, and they have specialist buyer for local produce.

Co-op was the only retailer to give figures on local meat, fruit and vegetable procurement, stating that 55% of their produce sold was sourced within a 30-mile radius of the store.

Recommendations

18. Government to implement rules – similar to the duty of the BBC to use independent producers - that the supermarkets should buy a certain amount of local produce and source a certain amount from wholesale markets. This should start at 5% in 2005 and rise to 10% by 2010

19. Supermarkets to agree a common benchmark for the definition of 'local food' and to have a dedicated staff member for local buying

C) TIMBER

Questions asked

- What percentage of timber used in your products is sourced from a) the UK, b) the EU or c) outside the EU
- In respect of c) above, what steps do you take to ensure timber sourced from non-EU countries is a) not a species protected under the Convention on International Trade in Endangered Species (CITES) and b) always carries a Forest Stewardship Scheme (FSC) certified label?

Summary and Best Practice

Timber use is not very high in supermarkets. Supermarkets seem to be moving towards a more robust procurement policy for timber. Those who do not already have a policy are working with organisations like Pro Forest and the WWF +95 Group

Co-op and **Sainsbury's** were the only supermarkets to provide data on timber origin. **Co-op** procures 40% of timber from outside the EU and **Sainsbury's** source 60%. Membership of the WWF +95 Group hopefully ensures that species protected under CITES are not used.

Sainsbury's own brand timber products come from sources that are validated by the FSC and all their paper products also carry the logo.

Recommendation

20. All supermarkets to sign up to a procurement policy to FSC standards i.e. WWF +95 Group.

4: ENERGY

A) IN STORE

	A	B	C	D	E	F	G	H	I	All
Average energy use per sq ft	142kwh	140kwh	126kwh	123kwh	108kwh	74kwh	?	?	?	Average 128kwh[19]
Average energy use per store	0.54Gwh	3.2Gwh	2.2Gwh	5.9Gwh	3.1Gwh	2.7Gwh	6.4Gwh	?	?	Average 3.4 Gwh
Overall energy use by all stores	856Gwh	1554Gwh	313Gwh	4583Gwh	1558Gwh	905Gwh	1680Gwh	?	?	Total 11449 Gwh
Renewable energy	16GWh 3%	18Gwh 10% target	8Gwh 2.5%	? 90% CHP	? 10% Turbine	? 10% target	N/a	N/a	N/a	

Questions asked

- What was average energy consumption per store last year?
- What was the average total renewable energy consumption last year in Kwh per store?
- What steps have you implemented corporately to effect energy conservation and improve energy efficiency?

Summary

Supermarkets currently consume 5% of the UK's annual energy consumption[20]. This survey secured answers on energy consumption from seven of the supermarkets and used store size and number to convert to a figure for energy

[19] The figure for one store of 74kwh / sq ft was omitted from the calculation of this average because of a low percentage of floor space being used for food products in this case - so the figure was not representative of the rest of the sample.
[20] http://www.safeway.co.uk/cgi-bin/search.cgi?000012000005&location=000012

consumption across all stores. The combined energy consumption of these five companies is 9,891 Gwh. Per square foot the average energy consumption ranged from 108 -142kwh in stores selling mainly food products.

Government guidelines exist on the recording and reduction of energy consumption yet all not all of the supermarkets were recording data in this way. However, many supermarkets had a variety of projects in place to reduce energy consumption and investigate option for the use of renewable energy.

Best practice

Sainsbury's have set a target of reducing carbon dioxide emissions by 10% by 2005 per square metre and are on track to achieve that. They have carried out numerous trials on renewables, most notably at East Kilbride distribution depot - the single turbine there generates 20-40% of the energy required by the depot. Such schemes in 2003 have generated Sainsbury's first ever carbon credits.

Marks and Spencer have recently signed up to take 10% of total energy from renewable sources from April 2004. Store energy conservation officers were re-trained in 2001 and specialist consultants conduct store audits each month. In Oct 2001 they launched an incentive scheme allowing stores to keep the monetary equivalent of 10% of any energy savings they make over and above their targets.

Safeway was one of the 245 of the FT500 who responded to the Carbon Disclosure Project. They have also implemented Environmental Management Systems (EMS) ISO1400 in four of their regional distribution centres (RDCs). Bellshill RDC was the first Scottish retail outlet to receive such accreditation. The company has stated its aim to become 'the leader in energy management in the food retail sector' and are spearheading the research application concepts of Combined Heating Refrigeration and Power (CHRP) with a leading team of World Refrigeration Experts from Brunel University in London. Safeway is the only supermarket to report according to government guidelines on carbon dioxide and waste.

Tesco source 90% of their energy from high quality CHP schemes and have recently committed to saving 74,000 tonnes of greenhouse gases over five years as part of the UK Government Trading Emissions Trading Scheme involving 43 companies. It will receive payment for each tonne saved and the money will be put toward energy saving initiatives.

A number of companies monitor electricity and water usage in every store every half hour via computer so any appliances left on when not needed can be located. The leading supermarkets in their field must be commended for the innovative work they are carrying out in this area.

Recommendations

21. Government to oblige all supermarkets to record and report on energy consumption and set targets for reduction according to DEFRA guidelines. The Government should also set targets on carbon dioxide emissions which must also be recorded and reported.

22. DEFRA to set a best practice value for kwh/sq ft which supermarkets can aim towards.

23. All supermarkets to fully engage with civil society led benchmarking exercises (such as “Race to the Top”).

5: TRANSPORT

	A	B	C	D	E	F	G	H	I	Total
Annual lorry mileage	116 m	71 m	68m	55 m	50 m	38 m	10 m	?	?	408 m
Annual rail miles and as % lorry	4.5 m 3.7%	N/a	0.8 m 1.2%	1 m 1.8%	N/a	N/a	N/a	N/a	N/a	6.3 m

Questions asked

- What is your total annual lorry mileage?
- What is you average load (in terms of carrying capacity) in percentage terms for each lorry journey?
- What is the percentage of lorry journeys in which your vehicles run empty?
- What percentage of your goods was moved by rail last year
- What percentage and how many of your vehicles use biofuel as a percentage of your total fleet?
- What percentage of your stores have a) a Green Travel Plan and b) how may employees are estimated to have taken part the last year?
- How many of your stores a) operate car schemes to get to and from work and b) how may employees are estimated to have taken part in this last year?

Summary

Seven of the supermarkets gave their annual lorry mileage. This totalled 408 million miles per year, which is the equivalent of driving round the M25 about 3 million times, or to the moon and back 442 times. These journeys were running between 60 and 92% full. The most efficient distribution systems would ensure back-hauling of recycling and waste once produce had been delivered. Extrapolating for the missing survey results (based on turnover) the total lorry mileage from all nine supermarkets is likely to be around 670 million miles – to the moon and back 723 times, that's almost two return trips per day.

Only three supermarkets transported goods by rail. This accounted for 1.2 – 3.7% of their overall mileage

Half the companies questioned had Green Travel Plans (GTPs) in operation at their head offices, and were developing GTPs to be implemented in each store. Some companies were developing a system where by all new stores were obliged to implement a GTP.

Half the companies had carried out trials of biodiesel or other alternative fuels but these only made up 11% of their fleet.

Best Pratice

Safeway have one of the most efficient food distribution systems to reduce road miles and the number of vehicles on the road and have 11% of their fleet running on CNG.

Safeway have recently achieved ISO14001 accreditation for the entire Safeway Supply Division – 18 Regional Distribution Centres and supply head office.

ASDA have been working with the Strategic Rail Authority to develop their rail freight capacity. The system was trialled on clothing transport and was so successful that it has been extended to food transport.

Tesco have set a target for improving their “delivered units per trip” by 3.55% a year.

Tesco have a 25% stake in the renewable fuel company, Greenenergy, which produces fuel oil from waste oil and renewable sources such as rape-seed oil. There have been trials in the use of Greenenergy biodiesel for their customers at Hatfield store and for trucks from the Thurrock distribution centre.

Recommendations

24. Government to work with supermarkets via the Strategic Rail Authority to set targets for increasing rail freight miles

25. All supermarkets to set targets on reducing their lorry mileage and increasing delivered units per trip

26. All supermarkets to be obliged to develop a Green Travel Plan (GTP)

Full List of Recommendations:

1. Government to commission a consultancy study on the options for reducing plastic bag use. Australia's Nolan Report provided very detailed work upon which an informed policy decision could be made.

2. All supermarkets to have Bags for Life on visible display at checkout and promote their purchase

3. All supermarkets to have a 'please re-use this bag' message printed on every bag

4. All supermarkets to offer plastic bag recycling points for their bags and offer financial incentives for their reuse.

5. All supermarkets to introduce biodegradable bags

6. Supermarkets to consider setting targets for the reduction in the number of bags distributed per year. This could be achieved through measures that many stores are already practicing; training of packers, customer awareness raising, incentives for bring back, and simply asking customers whether they need a bag or not.

7. All supermarkets to report on packaging waste separately to other waste streams.

8. Supermarkets to set targets on increasing the percentage of their packaging which is recycled and decreasing the percentage of packaging sent to landfill.

9. Supermarkets to report on paper recycled.

10. Supermarkets to close the loop on office and store waste for production of own brand paper-based products.

11. Government to investigate whether packaging legislation could be amended reduce the need for cardboard packaging. For example, could labels be placed on cling film of chilled produce rather than boxes.

12. Supermarkets to introduce 'green trays' as standard to minimise need for cardboard secondary packaging.

13. The Government to carry out more research on LCA of packaging options and look at how to minimise both energy and non-biodegradable waste.

14. Supermarkets to sell bakery products loose rather than in plastic boxes.

15. Supermarkets to continue working on increasing the usage of biodegradable packaging.

16. All supermarkets to set a target for % of organic produce to be sourced from the UK and have it written into corporate policy.

17. Government to review progress of the Organic Action Plan and report on opportunities which exist in particular product sectors.

18. Government to implement rules – similar to the duty of the BBC to use independent producers - that the supermarkets should buy a certain amount of local produce and source a certain amount from wholesale markets. This should start at 5% in 2005 and rise to 10% by 2010.

19. Supermarkets to agree a common benchmark for the definition of 'local food' and to have a dedicated staff member for local buying.

20. All supermarkets to sign up to a procurement policy to FSC standards i.e. WWF +95 Group.

21. Government to oblige all supermarkets to record and report on energy consumption and set targets for reduction according to DEFRA guidelines. The Government should also set targets on carbon dioxide emissions which must also be recorded and reported.

22. DEFRA to set a best practice value for kwh/sq ft which supermarkets can aim towards.

24. All supermarkets to fully engage with civil society led benchmarking exercises (such as "Race to the Top").

23. Government to work with supermarkets via the Strategic Rail Authority to set targets for increasing rail fright miles

24. All supermarkets to set targets on reducing their lorry mileage and increasing delivered units per trip.

25. All supermarkets to be obliged to develop a Green Travel Plan (GTP).

For Further Information:

Please contact me if you would like any further information, or if have any updates or information that would be useful to inform the next update of this report.

By writing to: **Norman Baker MP**
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With grateful thanks to Miriam Turner, Forum for the Future Scholar for her help in compiling this report. The views contained in this report do not necessarily represent the views of Forum for the Future.