

Annex 3A

How lifestyles affect energy demand

Introduction

3A.1 The decisions that people make in how they live their lives are based on a complex mixture of different factors. However the choices that people make have an impact on the amount of energy that they consume. So the size and location of house that we choose to live in affects the amount of energy needed to heat and light it, the number of appliances that we require and the distances we need to travel in order to go to work, to the shops or to take children to school. The decision to purchase a car will affect choices in how we travel, which can make public transport an unattractive alternative compared with the convenience and perceived safety and cost-effectiveness of travelling by car.

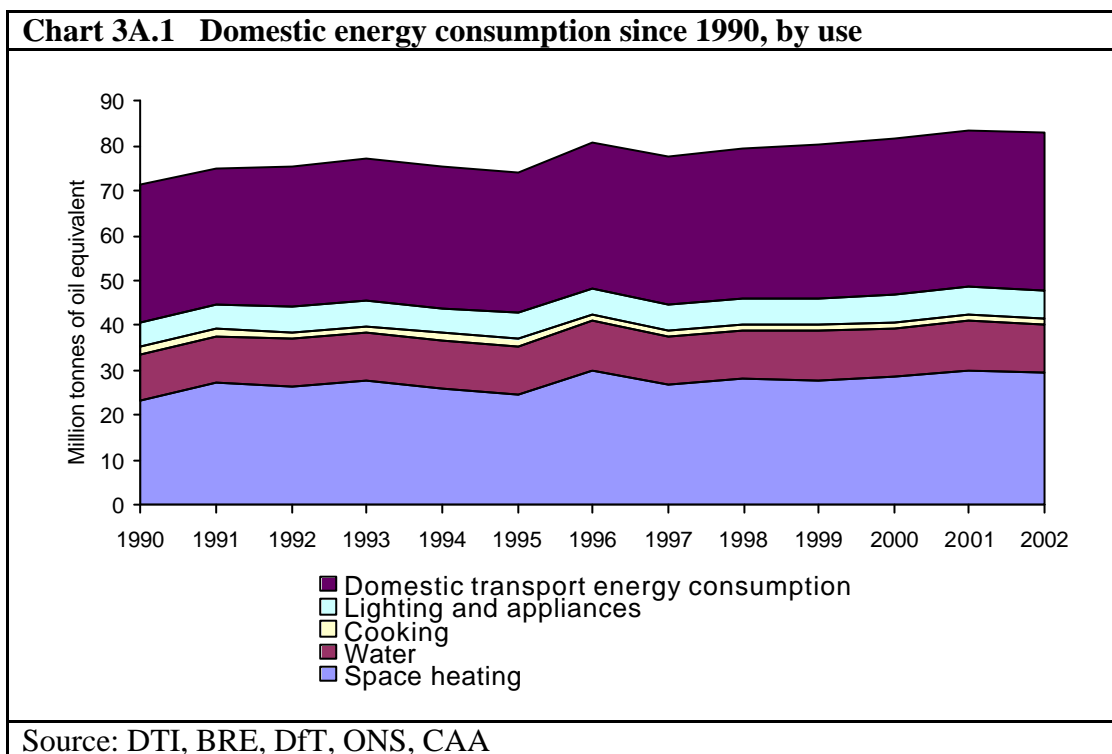
3A.2 Energy efficiency savings in heating water and space, improvements in the efficiency of individual appliances, particularly those in the cold sector, greater use of insulation and fuel efficiencies in cars have all ensured that energy consumption has not risen purely in line with demand. However, overall domestic energy consumption has been increasing at a steady 1.3 per cent per year since 1990. The cause of the increase can be attributed to a number of different things – an increase in the number of households, increases in household wealth, resulting in higher ownership of a wider range of appliances, and increases in car use and foreign travel. People’s expectations of what they are able to do are very high and we have come to expect a wide range of choice, whether it be choosing additional safety features for our cars when we buy them, choosing from a wider range of goods in the supermarket that are available all year round or demanding increased functionality in any appliances we use. All of these choices carry additional energy considerations. Add-ons to cars result in heavier vehicles that consume more fuel, while beans that have been flown in from Kenya require more fuel to transport them than those that are home grown, but would only be available at certain times of year.

3.A3 After looking at some overall trends in domestic energy consumption, the rest of the annex will focus on how lifestyle choices in where we live, how we keep ourselves warm, how we work, eat, travel, holiday and use new technology affect the amount of energy we use. Also considered will be some changes over time.

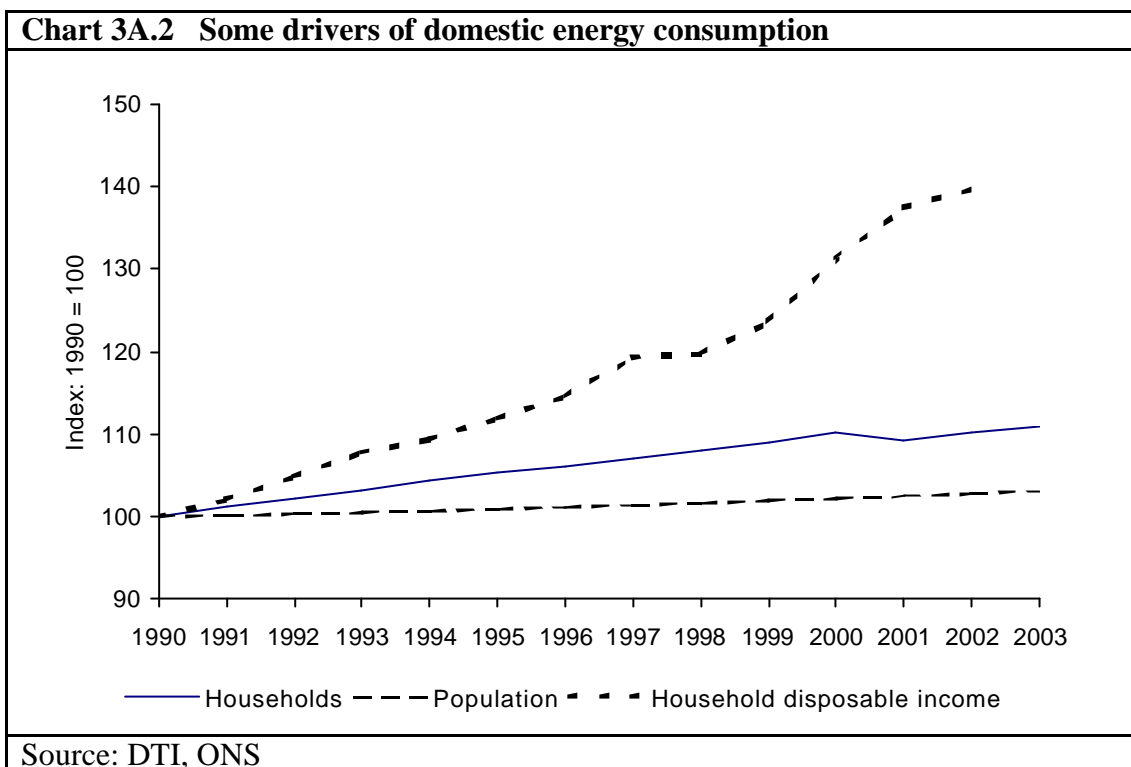
Overall domestic energy consumption

3A.4 Since 1990, domestic energy consumption has increased by 18 per cent and by 30 per cent since 1970. Within the domestic sector, the largest increase

has been for space heating, which increased by 26 per cent between 1990 and 2002, while the amount of energy consumed for heating water increased by 13 per cent, for lighting and appliances by 7 per cent and for cooking by 2 per cent. If the amount of energy attributed to the transport sector is re-allocated to the domestic, industrial and service sectors, then the amount allocated to the domestic sector would account for 42 per cent of all energy consumed by households in 2002, having increased by 15 per cent since 1990. Chart 3A.1 shows how domestic energy consumption has changed since 1990 and how it breaks down into the end uses that it was put to.



3A.5 Although the population of the UK has only increased by 3 per cent since 1990, the number of households has increased by 11 per cent and household disposable income by 44 per cent (in constant prices). The growth in the number of households is due to the increasing number of single person households, particularly those containing the elderly and divorced, the increased number accounting for much of the increase in space heating required. Higher incomes mean that households can afford to purchase more appliances and more cars, which consume more energy. Chart 3A.2 shows how these ‘drivers’ of energy consumption have changed since 1990. Energy consumption per household has been almost static since 1990.



Where people live

3A.6 The decision of where to live is based on a number of factors, including the number of people who need to be housed and the location of workplace and schools. It is the sort of decision that is made rarely, usually between 5 and 50 years, but has a big impact on any subsequent decisions. So, from an energy perspective, how insulated the house or flat is, how large it is, what the weather is like and how hot the inhabitants like to be will largely determine the amount of energy required to heat it. How long people intend to stay in a house will affect the sorts of energy efficiency measures that they are likely to make. So, if they do not intend to be there for long, then they are probably unlikely to install any energy efficiency measures, such as additional insulation since they may not be able to recoup the full value of the investment through either savings on energy bills or in a higher sale price.

3A.7 In 2003, 81 per cent of all households lived in houses, while the remaining 19 per cent lived in flats or individual rooms. Table 3A.1 shows some of the key changes in household characteristics since 1971. A third of all households in Great Britain in 2003 lived in semi-detached houses, over a quarter in terraced housing and just over a fifth in detached houses. A detached house typically consumes twice as much energy as a flat, due to its size and number of inhabitants. Detached houses tend to have greater heat loss than other dwellings and a greater floor area. However, owner-occupiers, who

usually live in larger houses, tend to invest in more energy efficiency measures. The Standard Assessment Procedure (SAP) provides a means of rating the energy efficiency of a dwelling and is based on estimates of space and water heating costs, with a rating of 100 to 120 indicating an extremely efficient house. Based on this system, overall household efficiency is improving and passed the 50 mark in 2003 (see table 3A.1 below). Landlords may not be motivated to take energy saving measures since their tenants pay the energy bills themselves, although the rental sector has shrunk significantly since 1971.

Table 3A.1 - Some household characteristics, 1971 to 2003

	1971	1981	1991	2003 ¹
Average household size (no. of people)	2.91	2.70	2.48	2.32
Average number of people per room	-	0.56	0.50	0.45
Percentage of over 16s living alone	-	-	14%	16%
SAP rating	15.1	30.0	40.9	51.4
Percentage of households:				
in detached houses	16%	16%	19%	22%
in semi-detached houses	33%	32%	32%	32%
in terraced houses	30%	31%	29%	27%
in flats or maisonettes	19%	20%	18%	19%
Owner occupiers	49%	54%	67%	69%
Renting	51%	46%	33%	31%
Without access to a car	48%	40%	32%	26%

¹ Based on weighted data, apart from the SAP rating.

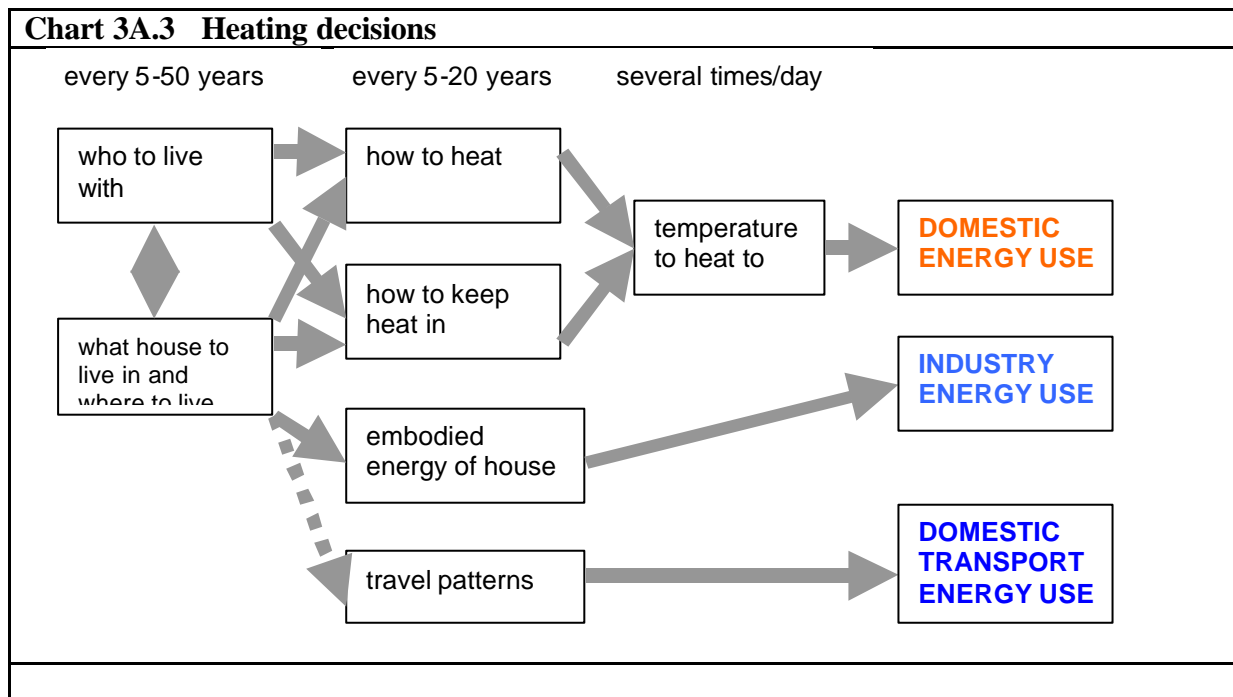
Source: ONS

3A.8 An aging population will also affect the amount of energy that is consumed in the home, simply because as we get older we spend more time there. The proportion of those aged 85 and over in the population has increased over the last 40 or so years, from 0.7 per cent of the UK population in 1961 to 1.9 per cent in 2002. This proportion is expected to increase to 3.8 per cent by 2031. Whereas those who are older tend to own and live in their own home, many live alone. Of those who lived in private households in Great Britain in 2001, 71 per cent of women aged 85 and over and 42 per cent of men of the same age lived alone.

3A.9 Each year around 10 to 11 per cent of the working age population change their address and around two per cent move to a different region. People are most likely to move away from London, the North West, West Midlands, North East and Northern Ireland to the South West, South East and East. The decision on where to move depends on the stage that people are at. The people who are most likely to move into London are young twenty-something adults, whereas

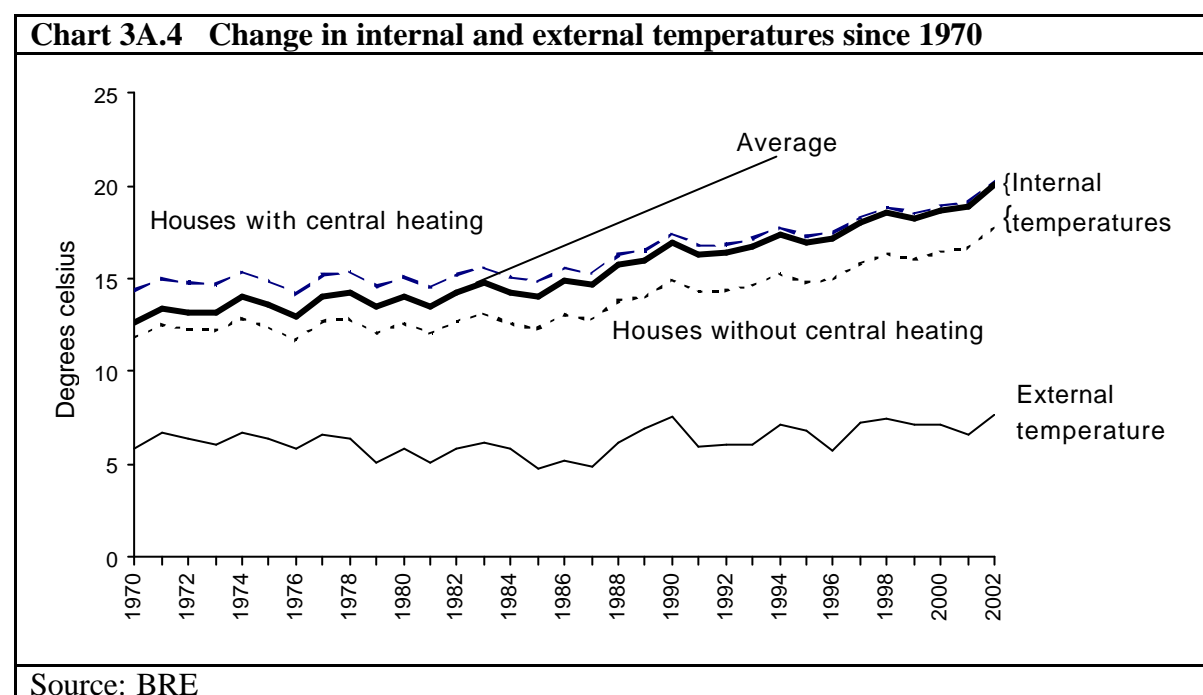
when they form partnerships and have children they relocate, mainly to the South East, East, South West and East Midlands. Whereas many workers move south to find employment, students are more likely to move north to study. The effects on energy consumption of this migration are potentially on heating demand, which may decrease as more people end up in the warmer south, where the seasons when people require central heating tend to be shorter. However, there may be a potential for increased demand for air conditioning. The use of fans and air conditioning is still low in the domestic sector, although sales of domestic air-conditioning units have already increased by one quarter since 1996 and prices have halved. Air conditioning is very energy intensive - in the US, it consumes about one-sixth of all electricity.

How people keep warm



3A.10 How people heat their houses is dependent on what sort of house they choose to live in and who they live with and are the sorts of decisions that the majority of people make only rarely (maybe every 5 to 50 years). Once the householders have moved in, decisions on what sort of boiler to install and how to keep heat in, in the form of insulation, follow, but are also made rarely (maybe every 5 to 20 years). Then, once the heating infrastructure is installed, decisions on how to use it are made daily, and sometimes several times a day. Chart 3A.3 shows how these different decisions inter-relate. All of these decisions will affect how much energy is consumed.

3A.11 The number of houses with central heating increased during the 1970s and 1980s. In 2002, 91 per cent of households had central heating and the ease with which people can now heat their homes at the flick of a switch means that people can affordably heat more rooms than they actually require and can heat them to a consistently higher temperature than at any time over the last thirty years. This is not the case, however, for the fuel poor, who struggle to keep warm at affordable costs. More information on the profile of the fuel poor is given in the annex on [who are the fuel poor](#). Changes in the weather also influence heating demand. It takes around 50 per cent more energy to heat a house to 18 degrees (the average temperature in 2000) than to heat it to 13 degrees (the average in 1970). Chart 4 shows how internal and external temperatures have changed since 1970.



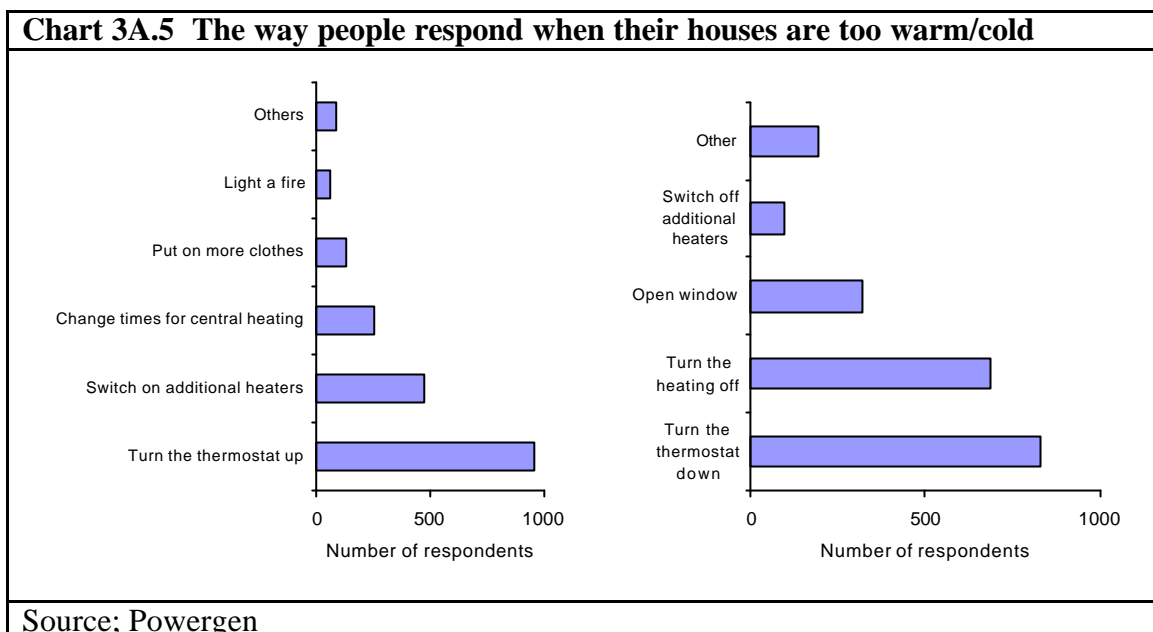
3A.12 The choice of type of heating system has a strong influence on energy use, since different fuels have different levels of primary, delivered and useful energy. Since gas central heating typically costs half to two thirds of electric heating (and has lower carbon emissions), 93 per cent of all homes in Great Britain had gas heating in 2003. Although gas-fired heating systems have higher embodied energy than electric ones, due to the extra equipment required, this is recovered in about a year as a result of greater efficiency in use.

3A.13 However, although the amount of energy required to heat homes has increased, there have been substantial, unseen, savings due to large improvements in energy efficiency. Figures from DEFRA show that improvements in the efficiency of heating water and space raised energy efficiency by around 10 per cent between 1990 and 2003, with a further rise of

10 per cent from better insulation, particularly loft and cavity wall insulation. Building regulations now have higher requirements for energy efficiency and have ensured that the efficiency of an average house is rising, even though annual new house completions represent less than 1 per cent of the housing stock. Among the existing housing stock, most homes (more than 90 per cent) are fitted with loft insulation and the thickness has been increasing, as people realise the potential to save energy and money. 57 per cent of all those with loft insulation in 2002 had installed a layer thicker than 10cm, compared with 48 per cent in 1990 .

3A.14 People's motivations to save energy vary. According to a DEFRA survey of public attitudes in 2001, two in five people in England claimed to have cut down their use of electricity and gas, and 80 per cent of those who had made cuts had done so to save money. A 2003 Powergen survey also identified 'comfort levels' as being a major motivator to make changes. At present, those around mid-life tend to have the highest levels of ownership of energy efficiency measures and equipment.

3A.15 Although many energy efficiency improvements have been made, the way that people respond to different temperatures were recorded by the 2003 Powergen Energy Monitor which asked respondents about their attitudes to energy use and the environment. Respondents were asked how they would react to warm and cold indoor temperatures in the winter. The results are shown in Chart 3A.5 and shows that when faced with cold houses, the most popular reactions are to turn the thermostat up and switch on additional heaters rather than choose the options that consume less energy such as make a warm drink or put on more clothes. The option of turning up the thermostat is likely to be less feasible for the fuel poor, who may be concerned about how they can pay for the additional energy they will consume. When a house is too hot, the most popular responses are to turn the thermostat down, switch the heating off and open a window rather than wear lighter clothing. Behaviour is more likely to be driven by issues of convenience (the quickest and easiest action) and perception (this is what I wear indoors) is also important.



3A.16 The availability of grants to invest in energy efficient boilers and appliances can also encourage greater energy efficiency behaviour, although people are not always aware of existing grant schemes such as EECs and Warm Front, which are described in more detail in Chapter 4. The Warm Front scheme was set up in June 2000 and over 900,000 households had received assistance under it by November 2004. A review in 2003/04 of Warm Front by the National Audit Office and DEFRA showed that although Warm Front has made a difference to a large number of households in England, areas for improvement were identified with respect to targeting, eligibility and the measures offered under the scheme. The Government response to these comments is given in 'Fuel Poverty in England: The Government's Plan for Action'. Other methods to encourage behaviour change may include raising and enforcing standards for manufacturers; increasing support such as training for retailers and installers which improves the market infrastructure; and other measures to overcome barriers and identifiable market failures.

3A.17 There is great potential to make energy efficiency savings through improved insulation, particularly through cavity wall insulation where three quarters of potential houses are not insulated. A quarter of the UK's boilers are over 20 years old. Under the EEC, electricity and gas suppliers are required to achieve targets for installing energy efficiency measures in the household sector. The targets do not prescribe how suppliers should attain these improvements, and they can fulfil their obligations by carrying out any combination of approved measures including insulation or supplying low-energy light bulbs, high efficiency appliances or boilers. However, fewer options may be available in older properties, which may be occupied by the fuel poor, and unavoidable

energy use may have to be addressed in other ways, such as introducing less expensive, low carbon renewable alternatives.

How people work

3A.18 More than a quarter of women and around a sixth of men had flexible working patterns in 2003, with the most common method being flexible working hours. Term time working for part-time female employees was also a popular choice. About 3 per cent of the UK workforce always work from home and 5 per cent more work from home at least one day a week. Although home working reduces the frequency of commuter trips, this reduction is often offset by an increase in the length of commute where people choose to live further from the workplace, while the number of smaller trips to run errands increases. Additional energy may also be required to heat the house during the day and to run appliances. Some of these may be offset by energy savings in the office if a substantial number of staff work elsewhere.

3A.19 By 2000, there were 12.5 million women in employment in the UK, 843,000 more than in 1990 and there has been an increase in the number of women working who have small children over the last 15 years. For those with a dependent child under the age of 5, 41 per cent worked in 1990, compared with 54 per cent by 2001. This may result in less energy being consumed in houses during the day, but more is required to transport people to work. For those with children aged between 5 and 10, 66 per cent worked in 1990 and 70 per cent in 2001. For all women, regardless of whether they have children or not, 67 per cent were in employment in 1990, compared with 69 per cent in 2001.

3A.20 The number of people normally working over 45 hours a week rose between 1992 and 1997, but has been steadily declining ever since. However there is a perception that the UK has become more ‘24/7’ over the last 5 years. As demand for services increase, for example, supermarket opening hours lengthen and banks employ people to man their telephone services to cover ever longer days, more energy is consumed to heat and light these places and to transport employees who may have to travel at awkward times.

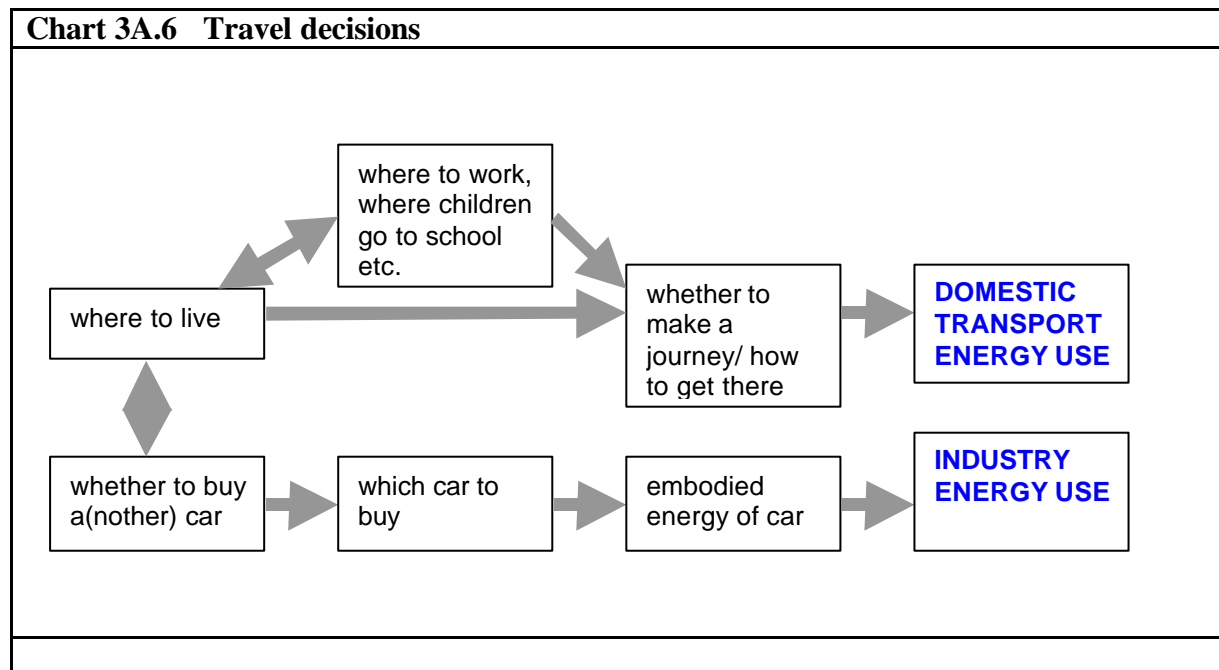
How people eat

3A.21 People’s eating habits have changed significantly over the last 20 years. We are spending less time cooking, using more ready-made meals and other types of convenience food and eat out regularly. In 2003, of the average weekly spend on food of £24.79, £7.53 is spent on eating out. Although that results in

less energy being consumed at home for cooking, heating and lighting, more energy can be consumed in getting there and back. The energy required to provide the meal would appear under the service sector.

3A.22 The decisions that we make when we buy food in shops are no longer based on local availability, but on ease of use, nutritional values, production methods and aesthetic appeal. We eat fresh strawberries from Spain and green beans from Kenya without necessarily considering the energy that was used to transport them. We drink bottled water from Scotland, Derbyshire, Wales and France despite reassurances that there are no health or taste differences between bottled and tap water.

How people travel day-to-day



3A.23 How people travel is dependent on where they live and work and where their children go to school. All of which are decided on rarely. For many people, the decision on where to live is made every 5 to 50 years, whereas decisions on where to work and which school to send the children to are made perhaps every 2 to 12 years. The day-to-day decisions on how they choose to travel is motivated by perceived convenience – availability, time, ease, image and perceived safety. Chart 3A.6 shows the links between these various decisions that can make a big difference to how much energy we consume on a daily basis. Access to services and public transport appear to be minor factors in people’s choice of home. People also influence others through the choices that they make. For example, when fewer people decide to take the bus, the drop in

ticket income reduces the service available resulting in fewer people deciding to take the bus because of its perceived inconvenience.

3A.24 Where we live is probably the biggest factor affecting domestic transport patterns. Whether we live in a rural or urban area, near a bus stop or a train station, and near local services or not affects how far we travel, whether we buy a car and the number and types of journeys we make, and therefore how much energy we consume as a result. A change of job does not always result in a house move closer to the office since people establish deep roots in an area. This is particularly true when jobs are short-term or insecure.

Table 3A.2 Distance travelled per person per year by purpose and main mode: 1989/91 to 2002/03

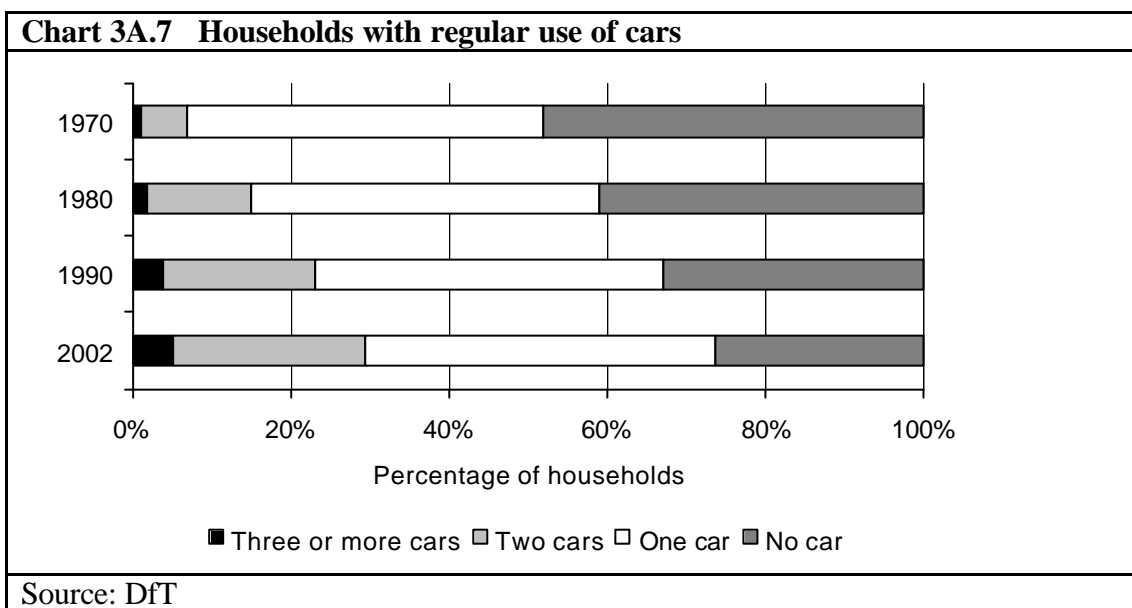
	Miles				
	Car	Walk & Bicycle	Other private transport	Other public transport	All modes
1989/91					
Commuting/ business	1,571	33	45	325	1,975
Education/ escort education	110	29	30	61	230
Shopping	570	54	5	117	747
Other escort/ personal business	690	28	15	64	796
Leisure	2,138	56	102	373	2,669
Other	16	40	-	2	58
All purposes	5,095	240	199	942	6,475
2002/03					
Commuting/ business	1,537	28	41	356	1,962
Education/ escort education	159	31	39	76	305
Shopping	714	32	4	94	843
Other escort/ personal business	839	26	12	65	942
Leisure	2,293	46	93	328	2,760
Other	4	39	-	-	42
All purposes	5,545	201	189	919	6,855

Source: National Travel Survey, DfT

3A.25 Cars remain a popular choice for personal transport and people use their cars for many reasons: for work, shopping, education, or to visit friends. The Department for Transport's National Travel Survey shows that in Great Britain in 2002/2003, travel by car accounted for four fifths of the total distance travelled per person and the distance travelled has increased by ten per cent since 1989/1991. Table 3A.2 shows how the total distance travelled for various

activities by different modes of transport has changed since 1989/1991, including travel by car.

3A.26 A major motivation to use a car is for convenience, even for short journeys. Cars are used for 15 per cent of the trips that people take that are less than one mile and for half of all trips of between 1 and 2 miles. When people change the way that they travel it usually has more to do with a change in circumstances rather than a desire to change for the sake of saving energy. Driving is also perceived as being safer than walking or cycling, despite evidence to the contrary, a powerful incentive to choose it over the potentially less energy-intensive choice of public transport.



3A.27 Cars are purchased for all sorts of reasons and the need for a car varies from household to household, for example, the elderly and small households may choose not to own a car. Travel patterns for those households with a car differ greatly from those without. Once a household has gone through the expense of buying a car, car travel is perceived as being cheaper than other forms of transport. People in households without access to a car make about two thirds the number of trips as people in households with access to a car, and make twice as many journeys by foot and almost five times as many journeys by bus. Chart 3A.7 shows how the proportion of households without a car has fallen since 1970, while the proportion having access to two or more cars has increased. The average number of cars per household increased from 0.97 in 1992 to 1.09 in 2002 and 74 per cent of households had access to a car in 2002 compared with 68 per cent in 1992. This has led to a large increase in the amount of energy consumed by cars over the same period. Those living in rural areas are more likely to own a car than those in urban areas and more likely to need to travel further for local amenities. In rural parishes in 2000, 86 per cent

had no GP in the parish, 71 per cent had no general store, 46 per cent had no post office and 76 per cent had no daily bus service. The trend is that these rural services are declining. However, the growth in out-of-town stores and shopping centres has also increased the distances travelled by urban drivers.

3A.28 The sort of car that people choose to buy is dependent on a wide number of factors, including what sort of journey the vehicle is needed for, cost, perceptions of safety, personal taste and what others drive. In recent years there has been large growth in the purchase of 4x4s and Sports Utility Vehicles. The annual purchase of 4x4s has nearly doubled over the last six years. Owners like them because they provide more space, make them feel safer and look good, despite their petrol consumption being typically between 15 and 28 miles per gallon. Although cars have progressively become more fuel efficient per unit of car weight, car weight has increased as demand for additional safety features and items such as air conditioning have eaten up much of the energy saved.

3A.29 When it comes to personal travel, results from a Department for Transport funded survey show that two in five people claimed they deliberately used public transport, walked or cycled instead of using a car or cut down the use of a car for short journeys in 2001. The main reason was to get more exercise (59 per cent), while other reasons included saving money (25 per cent), to help the environment/reduce pollution (17 per cent, equivalent to seven in every 100 people over the entire population) and to save petrol (17 per cent). Those with energy saving motivations tended to be older (19 per cent of 25-64 year olds compared with 10 per cent of 18-24 year olds) and held higher qualifications (28 per cent were educated to degree level, compared with 15 per cent of those educated to A-level). Results from the 2002/03 National Travel Survey show that there has been little change since the 1999/2001 results in the number of trips made by car under 2 miles.

3A.30 During the September 2000 fuel ‘crisis’ when the UK experienced blockages of oil refineries in response to rising fuel prices, travel activity by car was curtailed. More people worked from home, made greater use of public transport, shared cars with others, walked children to school and made greater use of local shops for groceries.

How people holiday

3A.31 The journeys that the average UK resident takes for holidays are different to their day-to-day journeys. They are one-offs, influenced by our aspirations. More people are choosing to holiday abroad rather than in the UK and they are choosing to fly, which has had an impact on the amount of energy consumed for

air travel. Our holidays add roughly 1,500-3,000 kilometres of air travel per person to the 11,000 kilometres that on average we travel by other modes annually. The cost of air travel is now within the reach of most people due to the rise of ‘no-frills’ airlines which have substantially lower costs and fares than traditional airlines, increased competition resulting from additional airport capacity and the development of new, large aircraft.

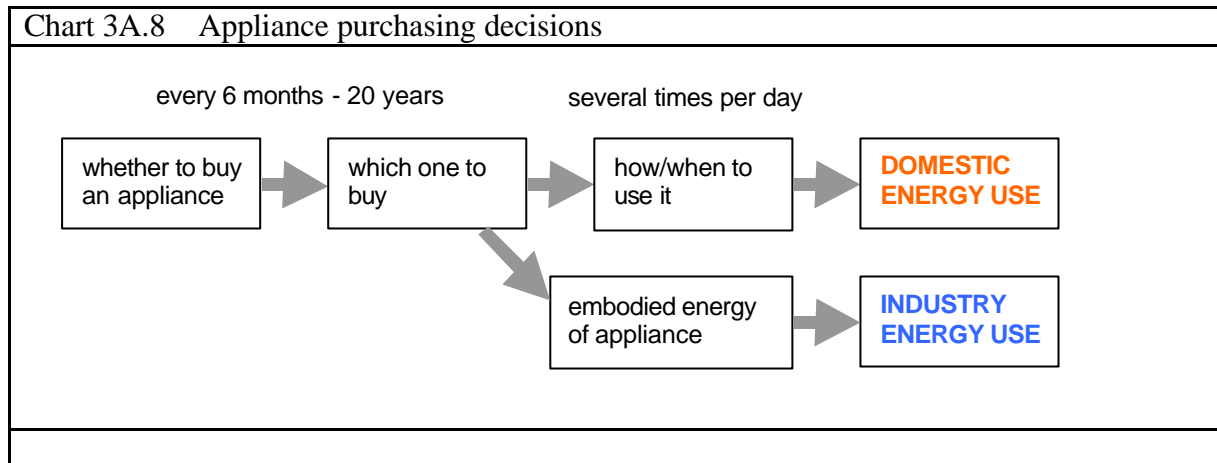
3A.32 Between 1999 and 2003 visits by UK residents overseas increased by 14 per cent, from 53.9 million to 61.4 million, mainly for holidays and visiting friends and relatives. The falling cost and increased availability of flights have enabled us to take more than one holiday a year. The most popular area of the world for UK visitors is EU Europe, with Spain being the number one choice. The number of visits to the USA fell between 1999 and 2003 whereas there were increases in the number of visits to Africa, Central and Southern America, Australia and the Caribbean. Table 3A.3 shows how many visits were made to the most popular destinations between 1999 and 2003. The total number of visits made by air increased by 26 per cent between 1999 and 2003, whereas the number of visits made by sea and the Channel Tunnel fell by 12 per cent and 14 per cent respectively over the same period. This growth in international travel results in more energy being consumed to get people to the places that they want to visit.

Table 3A.3 Where people holiday

	Visits (thousands)		Change between 1999 and 2003
	1999	2003	
North America	4,733	4,142	-12%
Of which:			
USA	4,058	3,613	-11%
EU Europe	39,500	45,090	14%
Of which:			
Spain	10,373	13,763	33%
France	11,946	11,957	0%
Irish Republic	4,233	3,913	-8%
Non EU Europe	4,120	5,577	35%
Other countries	5,529	6,615	20%
Of which:			
Caribbean	783	817	4%
North Africa	625	714	14%
Total world	53,881	61,424	14%

Source: International Passenger Survey, ONS

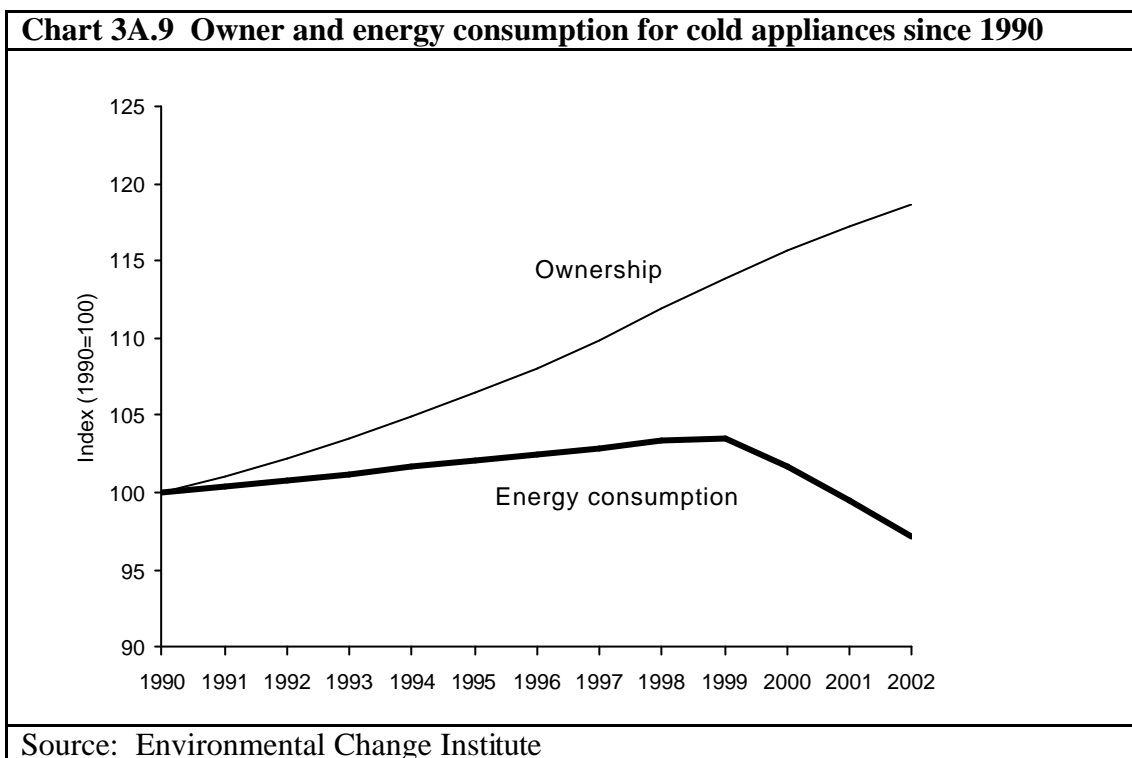
How people interact with new technology



3A.33 Most households own a number of different appliances, whether they are fridges, washing machines, kettles, televisions or vacuum cleaners. The decision to buy an appliance and which model to buy is made every 6 months to 20 years. Decisions on how to use it and how often to use it are made on a daily basis. Chart 3A.8 shows the order in which these decisions are typically made. The amount of energy consumed by each appliance depends on all of these factors.

3A.34 Ownership of appliances is affected by people's lifestyle choices and in turn affects other people's lifestyle choices. For example, people increasingly expect others to be contactable by mobile phone and e-mail; DVDs and MP3 files are displacing CDs in the same way that CDs displaced tapes and records, requiring new appliances to play them. Some appliances are seen as being more essential than others, although perceptions of need change over time. Evolving technology affects the purchase and use of appliances.

3A.35 Generally the energy consumption of individual household appliances is not significant and is going down, but ownership of larger and different types of appliances is going up. Chart 3A.9 shows how energy consumption and ownership levels of cold appliances have changed since 1990. Most of the energy currently associated with appliances is in their operation, rather than in production or distribution. However, mobile phones use more energy during their production than operation because their operational life is so short.



3A.36 The rapid rise in mobile phone ownership has affected the way that people function on a social level. Three quarters of adults owned or used a mobile phone in May 2003, including 21 per cent who used the mobile as their main method of telephony. This has resulted in the removal of some public phone boxes in rural areas which in turn puts pressure on others to purchase a mobile phone for themselves. Other recent cultural shifts that have occurred and resulted in a greater need to keep up with new technology have been the growth of e-mail replacing personal letters and of broadband where the growing assumption is that people are able to receive large files. This can be particularly difficult for lower income households which are less likely to have access to things like the internet from home.

3A.37 The purchase of one appliance can also trigger the need to purchase another. For example, old televisions are not always compatible with new appliances such as DVD players and iPods may not work with an old computer. Another trigger for buying a new appliance is the ‘just in case’ scenario, for example, a large freezer is perceived to be required just in case everyone shows up at Christmas.

3A.38 Improving the energy efficiency of appliances is an attractive way of reducing energy use because it does not require any difficult behavioural changes. DEFRA estimate that electrical appliance efficiency improved by around 20 per cent between 1990 and 2003. However, the way that people use

appliances does change and their increased use results in higher levels of energy consumption overall (despite the fall in consumption for cold appliances).

3A.39 Appliances are relatively cheap and they are getting cheaper. The relative price of household durables fell by about 30 per cent between 1975 and 1999. It can be cheaper to buy a new appliance than to have the old one repaired. However, many appliances are not replaced very often which means that older, less energy-efficient appliances are in operation.

3A.40 Energy labelling on appliances means that consumers can make an informed choice when it comes to purchasing new appliances, though choice may actually reflect special offers, price subsidies and which appliances are available at the time. DEFRA found that a third of respondents regularly use low-energy light bulbs, nearly twice the proportion claiming to have used them eight years earlier. Better design, rapidly falling prices and widely available free offers from energy suppliers have all contributed to their increased use.

3A.41 Many appliances in the home have a standby function including televisions, videos, microwaves and stereo systems. It is estimated that standby energy consumption accounts for about 1 per cent of domestic energy use in the UK, equivalent to 6 per cent of domestic electricity consumption. People are often unaware of how much energy is consumed while these products are in their stand-by mode and the perceived inconvenience of reformatting clocks and other functions, and the convenience of being able to switch the TV off from the armchair can make the prospect of turning the appliance completely off unattractive. However, the Powergen Energy Monitor showed that two thirds of consumers never use the standby function at all.

What people do in their spare time

3A.42 How people use their appliances is determined by their lifestyles. The most popular pastimes in Great Britain in 2002 were watching television, listening to the radio, records and tapes and visiting friends. Even these small everyday decisions have energy consumption implications. Television watching for example, may require additional lighting, while travelling to visit friends may require the use of a car. People spent on average 168 minutes a day watching television and listening to the radio in 1999, an increase of 11 minutes on 1995 levels. Table 3A.4 shows how much time people spent on various activities in a typical day in 1999. Obviously some of these activities will take up more time on some days than others. Working, eating, cooking and travel are covered in more detail from paragraphs 3A.18 to 3A.30.

Table 3A.4 How much time people spend on different activities

	Minutes
	1999
Sleep	509
TV,radio	168
Paid Work	145
Eating at home	61
Travel	74
Cooking, baking, washing up	48
Washing,dressing	45
Visiting friends	40
Shopping, appointments	33
Cleaning house, tidying	33
Gardening, Pet care	29
Eating,drinking out, (pubs, restaurant)	28
Talking,visited by friends,telephone calls	28
Reading	26

Source: Time Use Survey, ONS

Conclusions

3A.43 Lifestyles have a big impact on energy demand, and any changes in the way that we live can make a big difference to the way that we use energy. An aging population and the increased popularity of flexible working enabling people to work from home bring their own pressures on the amount of energy that is consumed in the home during the day, although some will be offset against savings that are made from lower demand for transport and office needs. The big decisions in life that are only made occasionally also have a big impact on the amount of energy that people consume. The interrelated choices of who to live with and the type and size of house to live in can easily double or halve the energy used to keep a household warm, as can subsequent decisions about heating systems, insulation and the small daily decisions on whether to turn the heating up or down. However, energy efficiency is unlikely to be a decisive factor in how people live their lives, for example, whether they live together, divorce or have a child. Our decisions can also have a big impact on the way that others around us use energy. For example, by avoiding public transport, we may be making it less accessible to others when the service is reduced.

3A.44 Domestic energy consumption has been increasing steadily, despite energy efficiency savings that have ensured that consumption has not risen directly in line with demand. It is likely that demand will continue to increase, since our engrained habits are difficult to change and we expect a lot, whether it

be in the range of choice that we demand, what our appliances are able to do or how flexibility we are able to work and travel. Wherever the demand comes from, it is certain that the likely increase will require even greater efforts to improve energy efficiency if consumption is to be kept stable.

Sources/further reading:

[Focus on Personal Travel, DfT, 2005](#)

[Energy Sector Indicators, DTI, 2004](#)

[Energy consumption in the UK, DTI, 2004](#)

[Social Trends 35, ONS, 2005](#)

[Powergen Energy Monitor, Powergen, 2003](#)

[Survey of public attitudes to quality of life and to the environment, DEFRA, 2001](#)

[Fuel Poverty in England: The Government's Plan for Action, DEFRA](#)