

Jersey Energy Trends 2005

Headlines

- In 2005 total final energy demand in Jersey was 187 million toe (2,170, 900 MWh) an increase of 0.1% on 2004.
- Final consumption of electricity grew by 1.2% between 2004 and 2005. Over the same period road fuel use fell 1.4% (unleaded down 1.3%, diesel up 1.8%) heating oil use fell by 5.4% but consumption of gas oil, excluding electricity generation, grew by 1%. Consumption of aviation fuel was up over 25% whilst heavy fuel oil fell by the same amount.
- On-Island oil fired electricity generation at 12,300 MWh was over 50% lower in 2005 than 2004.
- Essentially all of Jersey's primary energy needs and 96% of electricity (98% of Public electricity Supply) are imported.
- Two thirds of all energy used is a kind of petroleum product, with road fuels (petrol and diesel) accounting for nearly a quarter of final energy demand.
- The impact of global increases in energy prices remains very evident in Jersey with average domestic energy bills up 9.7% for electricity, 9% for gas¹ between 2005 and 2006. The cost of heating oil in spring 2006 was 20% higher than in spring 2005 and 9% higher than the average for 2005.
- Household energy consumption was 1.5% lower than in 2004, reflecting a decrease of 5.4% in heating oil and an increase of 4.1% in electricity use.
- Provisional data show that energy related carbon emissions decreased by 7.4% between 2004 and 2005, half of which was due to less oil-fired electricity generation.

Introduction

This report² examines energy use in Jersey. It describes the supply of energy through imports and production and how energy is used by final consumers.

¹ Based on tariffs in force up to May 2006.

² Data presented here are derived from a new annual energy inquiry which was launched in 2004 to replace the former quarterly inquiry. This change was introduced to produce a more accurate measure of energy use in Jersey. To provide a longer-term view of energy demand data going back to 1991 are presented; however, these data are not as accurate as those for 2001 onwards.

The analysis uses an energy balance, which shows how the raw fuel or primary energy is supplied, and how this fuel is then transformed or distributed before being used by the final consumers. Energy balances for Jersey in 2004 and 2005 are presented at Annex A. The report also looks in more detail at the consumption of individual fuel, energy consumption in the domestic (household) sector and the cost of energy.

Total Primary Energy Supply

Total primary energy supply (TPES) is the energy that a country makes from its own natural resources or imports. For example, coal (whether burnt by households or in power stations) is a primary energy, whilst the electricity produced from burning coal is not. Imported electricity, however generated in the exporting country, is a primary energy.

In 2005 Jersey's TPES was 195,000 tonnes of oil equivalent (toe³) or 2,269,300 MWh a decrease of 2% on 2004. The vast majority of TPES was imported, with just 1% (around 1,500 toe) produced in Jersey, through electricity generated from the waste to energy plant at Bellozane.

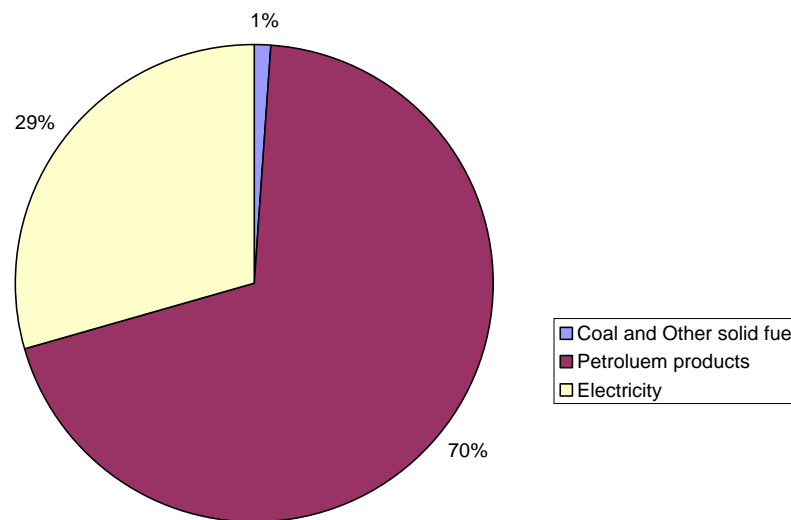
As Jersey has no fossil fuel natural resources it is not surprising that imports account for almost all of primary energy. However, by international standards this is a very high level of import dependency; for example across all OECD countries the average is around 30% of TPES coming from imports, although with considerable variation between current net exporters of energy (like Norway) and high importers such as Japan (82% imports) and Germany (60%).

The decrease in TPES was largely a result of oil companies and the JEC building fuel stocks, accumulating 5,900 toe of stock. This is in contrast to 2004 when 4,800 toe of stock were consumed. As a result, despite lower consumption, imports of petroleum products actually rose by 3.7%.

As chart 1 shows petroleum products (petrol, diesel, heating oil, aviation fuel and liquefied petroleum gas, etc) account for 70% of Jersey's TPES, with the remainder mainly coming from electricity (imports from France and energy from waste) apart from the 1% that is coal. This represents quite a low level of diversity by European standards, although, as a result of the electricity interconnector from France, oil fired generation within Jersey has reduced and diversity, if measured by the share of largest fuel type, has increased (in the 1990's around 85 to 90% of Jersey's TPES was from oil, with electricity around 10% and coal less than 5%). However, if the share of the two largest fuel types is considered there has been very little change in diversity. Jersey has yet to exploit its indigenous resources such as tidal and wind power and these sources could make a contribution to future energy diversification.

³ A toe (tonne of oil equivalent) is a unit of measurement used when aggregating different energy sources. As different fuel sources provide different amounts of energy, a pure volume measure such as tonnes will not represent the energy values of the fuels; instead, each fuel is converted into toe based on its calorific value. A toe is a measure of energy = 10 million kilocalories or 11,630 kWh.

Chart 1: Jersey's total primary energy supply, by fuel type 2005



Transformation

Transformation of energy means turning energy from one form to another that is normally easier to use. For example crude oil contains a great deal of energy, but this can only be harnessed when the oil is refined into other products such as petrol or heating oil.

Within Jersey there is relatively little transformation as most of the fuel imported is in the form that consumers want. Oil is still used to produce electricity, although now at much reduced rates. In 2005 3,600 tonnes of oil were used to generate 12,300 MWh of electricity (about 2% of which was at Bellozane). This represents a significant decrease compared to 2004 when 8,750 tonnes of oil produced 27,600 MWh of electricity. This continues the long term trend of decline, with the 1990's seeing around 80,000 tonnes of oil used for electricity generation. In 2005 oil generation accounted for about 2% of total electricity compared to 37% in 1991. In pure energy terms approximately 3,800 toe of oil was needed to produce 1,100 toe of electricity in 2005.

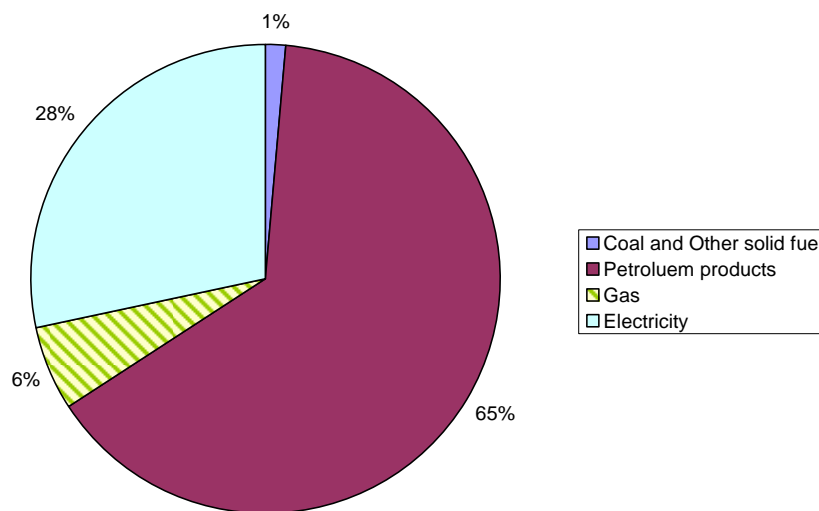
The other form of energy transformation that occurs in Jersey is to change Liquefied Petroleum Gas (LPG) into a gaseous form so it can be piped through the gas network. Compared to generating electricity or refining crude oil, this gas transformation loses very little energy for example just under 200 toe was consumed in converting 11,000 toe of LPG to gas.

Final energy Consumption

In 2005 total final energy consumption⁴ (FEC) in Jersey was 187 million toe (2,170,900 MWh) a slight increase of 0.1% on 2004 and 9% higher than in 1991.

The high degree of dependence on petroleum products remains evident in final consumption with Petroleum Products accounting for 65% of final consumption in 2005. Chart 2 also shows that electricity accounts for about a quarter, with gas 6% (7% if the gas which is consumed as LPG is included), and coal 1%.

Chart 2: Jersey's total final energy consumption, by fuel type 2005



Final energy consumption can also be considered in terms of who actually consumes the energy⁵. In 2005 around a third of Jersey's energy was consumed in each of domestic (i.e. the energy we use in our homes) and transport uses (road, air⁶, and marine) with industry consuming around a quarter and government 6% (chart 3). Compared to 2004, final transport energy use has increased by 5.6% (3,342 toe) largely as a result of greater use of aviation fuel whilst industry and government use has decreased by 3.5% (2,167 toe).

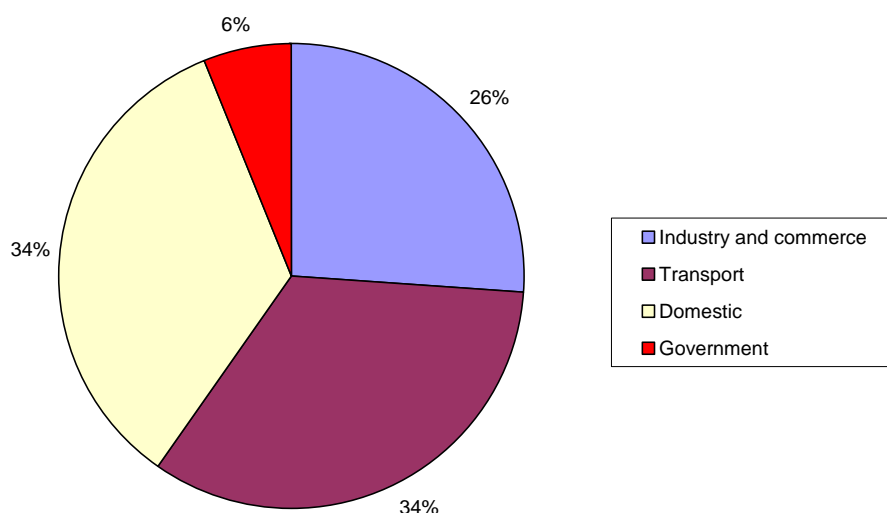
Domestic (household) consumption fell by 1.5% reflecting a decrease of 5.4% in heating oil and an increase of 4.1% in electricity use. In 2005 46% of domestic energy use was petroleum products, 40% electricity, 10% gas and 4% coal.

⁴ As the name suggests final energy consumption refers to the use of energy in its final form by the consumer (i.e. the energy that is used by the ultimate consumer in heating their home, lighting a shop, powering a computer, driving a car, etc).

⁵ Most energy suppliers classify customers by volume of energy consumed (i.e. small, medium, large etc) as such an accurate sectoral classification between industry and government is not possible for all suppliers. Similarly there may be slight definitional issues between the classification of small industrial users and domestic consumers.

⁶ Air only covers fuel that is consumed in Jersey i.e. supplied to airlines and for private use whilst in Jersey.

Chart 3: Jersey's total final energy consumption, by user 2005



Total final energy consumption has been relatively flat over the past 5 years, especially if allowance is made for warmer and colder winters. However the consumption of individual fuels has differed, for example electricity consumption has increased by 14% between 2000 and 2005, whilst consumption of road fuels has fallen by 6% and coal by 34%. The total final energy consumption in 2005 remained at a similar level to that seen in 2004, increasing by just 0.1%. Electricity consumption was 1.2% greater in 2005 and other petroleum products were up 11%. In contrast coal and other solid fuel were down by 7.4%, total road fuel by 1.4%, gas by 0.5% and heating oil use down by 5.4%. Final energy consumption for 2004 and 2005 is shown in table 1 and covered in more detail in the remainder of the report and annexes.

Table1: Jersey's total final energy consumption, by fuel type

	Tonnes of oil equivalent (toe)							
	Road fuels	Gas oil	Heating oil	Other petroleum products	Gas	Coal and other solid fuel	Electricity	Total
2004	43,730	19,100	35,760	19,720	13,260	2,530	52,400	186,490
2005	43,120	19,300	33,840	21,880	13,200	2,340	53,030	186,661
% change	-1.4	1.0	-5.4	11.0	-0.5	-7.4	1.2	0.1

In 2005 road fuels were split as: Lead Replacement 750 toe, Unleaded 31,340 toe, Diesel 11,030 toe. Gas includes manufactured and final consumption of LPG. Electricity includes final consumption at Bellozane site.

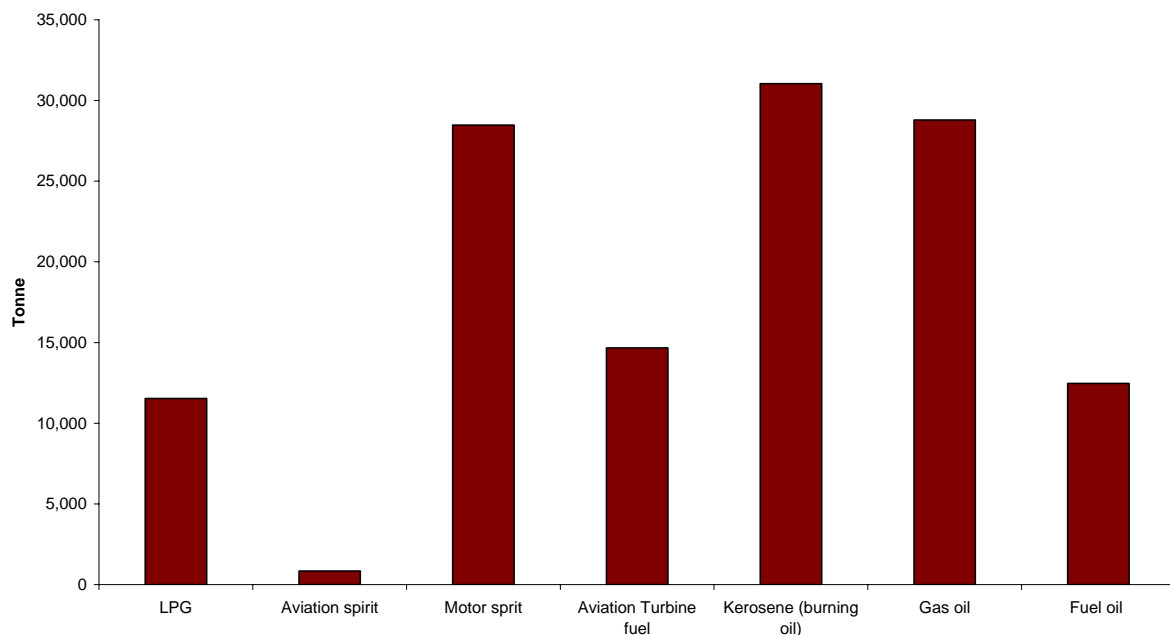
Petroleum products and gas

All the petroleum products used in Jersey are imported and, as described above, these products make up a large share of Jersey's energy use (probably because oils are an easy fuel to transport). However, petroleum products cover a range of fuels that are all made from crude oil, but are used by different consumers.

A specific feature of the Jersey energy market is that the gas used is all sourced from LPG (a petroleum product). In 2005 13,200 toe of gas was consumed, a decrease of 0.4% on 2004. Of the total around 80% (123,100MWh or 10,600 toe) is supplied as manufactured gas (via pipes) with the remaining 20% supplied as LPG (2,200 tonnes or 2,600 toe).

Chart 4 shows imports of different fuels in 2005. Three categories: motor spirit (petrol); Kerosene (heating oil used in homes); and gas oil (diesel and oil used by industry) make up the majority of fuel imported, at around 30,000 tonnes per year each. Overall, as noted above, total imports of petroleum products were higher in 2005 than in 2004 (141,300 toe compared to 136,300 toe) despite an overall fall in consumption, with the surplus being used to build up stock levels.

Chart 4: Imports of Petroleum products in 2005



The largest change within the overall consumption of petroleum products in Jersey has been the decline in oils (fuel oil and gas oil) used to generate electricity, as shown in chart 5. In much of the early 1990's around 80,000 tonnes of oil per year was used to generate electricity, but with the enhanced interconnector to import electricity this had fallen to 19,000 tonnes by 2002 and further to a low of a little over 3,000 in 2003. Although there was an increase to nearly 9,000 tonnes in 2004 this was followed by a decrease to 3,600 tonnes in 2005. These recent fluctuations are likely to be a feature of future oil use, with generation in Jersey being determined by

the combination of electricity prices in the Jersey and European market and oil prices in addition to availability through the interconnectors.

Chart 5 also shows, that electricity generation aside, there has been very little change in total consumption of other oil products, although in 2005 there was a decrease in the consumption of both heating oil and fuel oil and an increase in aviation fuel.

Chart 5: Final consumption of petroleum products

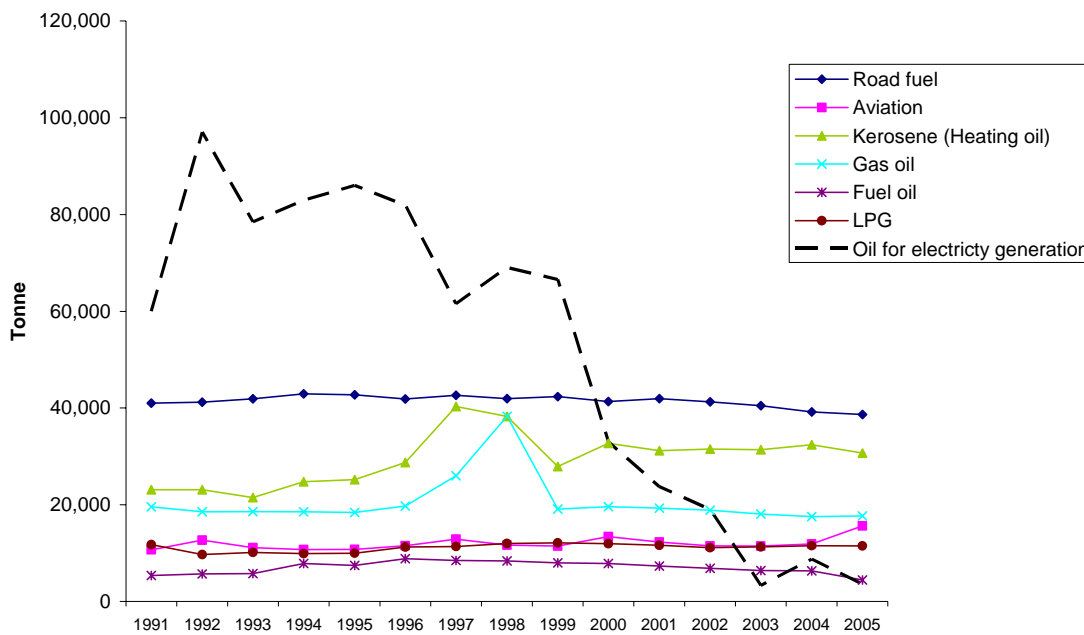


Table 2: Final consumption of petroleum products 2005 and % change on 2004
tonnes

Aviation	Petrol	Diesel	Heating oil	Gas oil	Fuel oil	Oil for elec gen
15,600	28,500	10,100	30,700	17,700	4,500	3,600
31.1	-2.5	1.8	-5.4	0.8	-29.3	-58.6

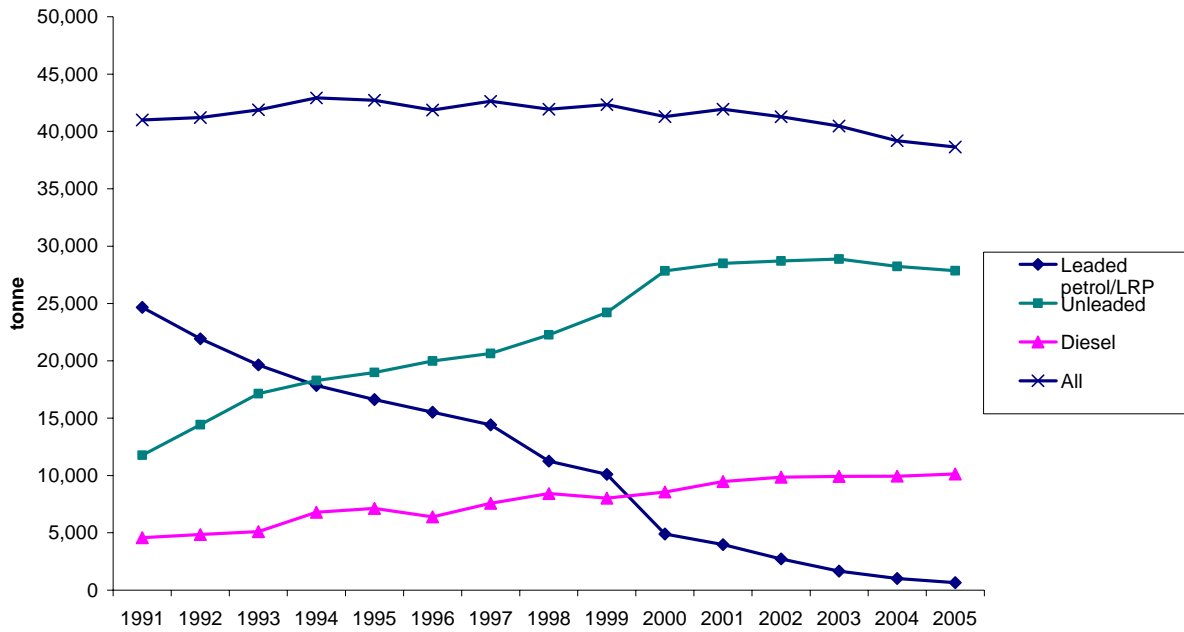
Gas oil and fuel oil excludes consumption for electricity generation

At a broad level total consumption of road fuels has been fairly flat for the past decade although there has been considerable change in its make up. As chart 6 shows, the relative importance of leaded and unleaded petrol has been completely reversed. In 1991 leaded fuel made up 60% of all road fuel with unleaded around 30% and diesel 10%. By 2005 unleaded accounted for 72%, diesel for around 26% and leaded (lead replacement fuel) just under 2%.

However, between 2001 and 2005 there has been a decrease of around 3,300 tonnes (8%) made up of falls in LRP and super unleaded of 3,310 tonnes and 1,370 tonnes respectively and an increase in premium unleaded and diesel of 730 tonnes and 660 tonnes respectively. These changes highlight the phasing out of leaded fuel and increased efficiency in engine design but also the growth in diesel as diesel-fuelled vehicles become more widely used. In 2005 Jersey consumed 38,600 tonnes of motor spirit (660 tonnes of LRP, 3,100 Super unleaded, 24,800 unleaded) and

10,100 tonnes of diesel. In total this represents a fall of 1.4% on 2004 made up of an increase of 1.8% in diesel and a fall of 1.3% in unleaded.

Chart 6: Road fuel consumption



Coal

Coal use in Jersey has declined for most of the past 10 years (chart 7) mirroring that seen in the UK. In 2005 some 3,100 tonnes of coal and other solid fuel were consumed by domestic households, around two thirds of which was coal. This is almost four times lower than in 1991 when total consumption was some 11,200 tonnes and represents a 7.4% decrease on 2004.

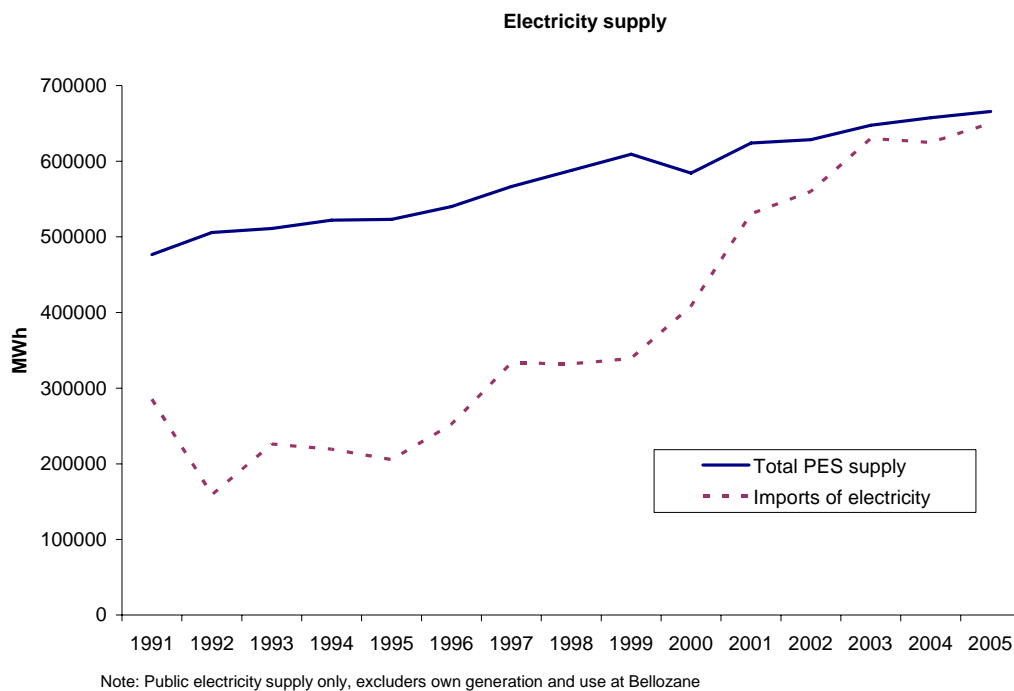
Chart 7: Final coal consumption



Electricity

Electricity demand in Jersey has grown steadily over the past 14 years, by an average of about 2.2% per year. In 2005 around 603,200 MWh were consumed compared to 446,000 in 1991 (including the electricity used at the Bellozane site total consumption in 2005 was 616,500 MWh). However, as chart 8 shows the most dramatic change within the electricity sector has been the growth in imports. Throughout most of the 1990's imports accounted for between 40% and 60% of public electricity supply⁷, but in 2005 this had risen to 98%.

Chart 8: Total public electricity supply (PES) and imports



Of all electricity consumed, just under a half (296,200 MWh) is consumed within private homes, including power for heat supplied to States housing. This is an increase of 4.1% on 2004 when the domestic component accounted for 284,500 MWh. Of the remaining electricity consumed, the wholesale and retail sector consumed around 15% with finance 10%. Total government consumption was also about 10% comprising 46,900 MWh from JEC plus around 13,300 MWh at Bellozane.

⁷ Public electricity supply (PES) is electricity provided through the JEC network and excludes consumption at Bellozane.

Table 3: Electricity consumption by sector, 2005

Sector	Consumption (MWh)
Agriculture	5,400
Manufacturing and construction	15,300
Energy and water	1,600
Wholesale and Retail	93,000
Hotel and catering	54,500
Transport and Communications	27,800
Finance	62,500
Government	60,200
Domestic (Private households)	296,200
Total	616,500

Government includes consumption at Bellozane.

Energy use in homes

The availability of fuel in Jersey will of course determine the energy sources people use in their homes. Therefore, average electricity consumption is higher in Jersey than in the UK (just over 6,500 kWh per year for standard tariff consumer compared to around 3,300 kWh in the UK) whilst average gas consumption is lower (8,000 kWh compared to around 18,000 kWh per year). Although it is more difficult to measure average consumption of heating oil, average consumption is likely to be higher in Jersey than in the UK. The relative importance of heating oil can be gauged by the fact that Jersey's consumption of heating oil is 1% of the total for the UK, whilst its consumption of electricity and motor fuel are 0.2% and 0.1% respectively, much more in line with the relative sizes of the populations (Jersey's is 0.15% of the UK's).

Table 4: Household energy consumption and bills

Fuel	Total domestic consumption	Average per consuming household per year	Average annual bill /price in April 2006
Electricity – all domestic consumers	296,200 MWh	7,700kWh	
Electricity – Standard tariff		6,500 kWh	£602
Electricity comfort heat		9,000 kWh	£504
Gas – all homes	71,800 MWh	8,000 kWh	£614
Heating oil (kerosene)	26,600 tonnes (32.8 million litres)	n/a	37p/litre

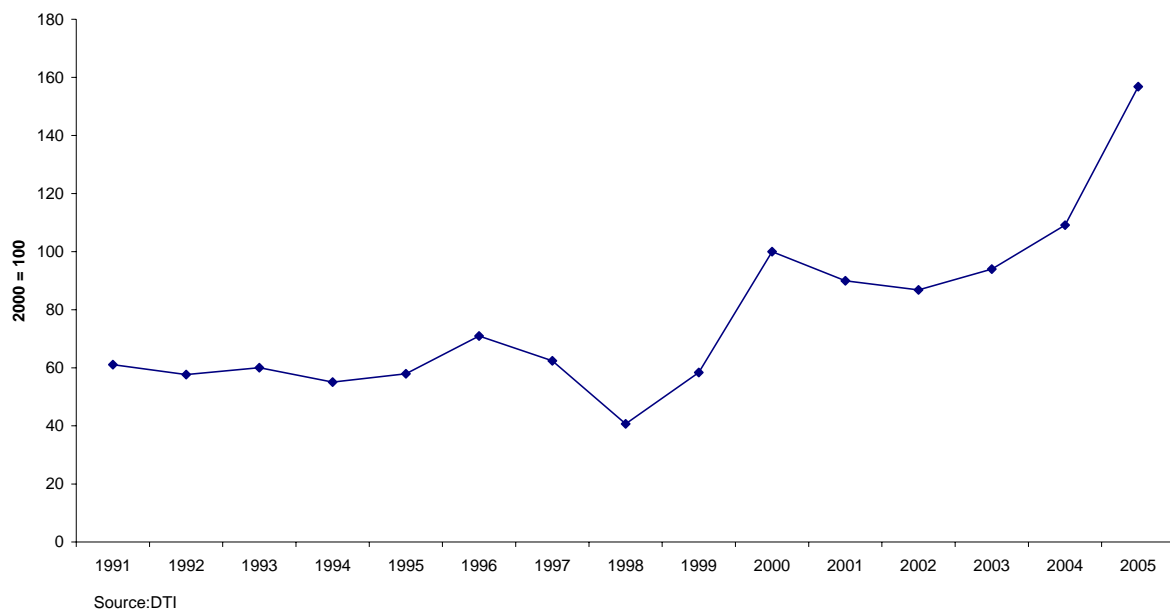
Electricity comfort heat assumes 90% use is for heating. Greater non heating use would increase the annual cost. Electricity bills are based on average consumption in 2003 in order to reflect price changes. Average consumptions in 2005 were 6,800 for standard tariff and 10,000 for comfort heat. Gas covers mains supplies only. Gas tariff used is Super Economy. Heating oil price is average price for deliveries of 2250 litres, price as of March 2006.

Energy prices

Oil

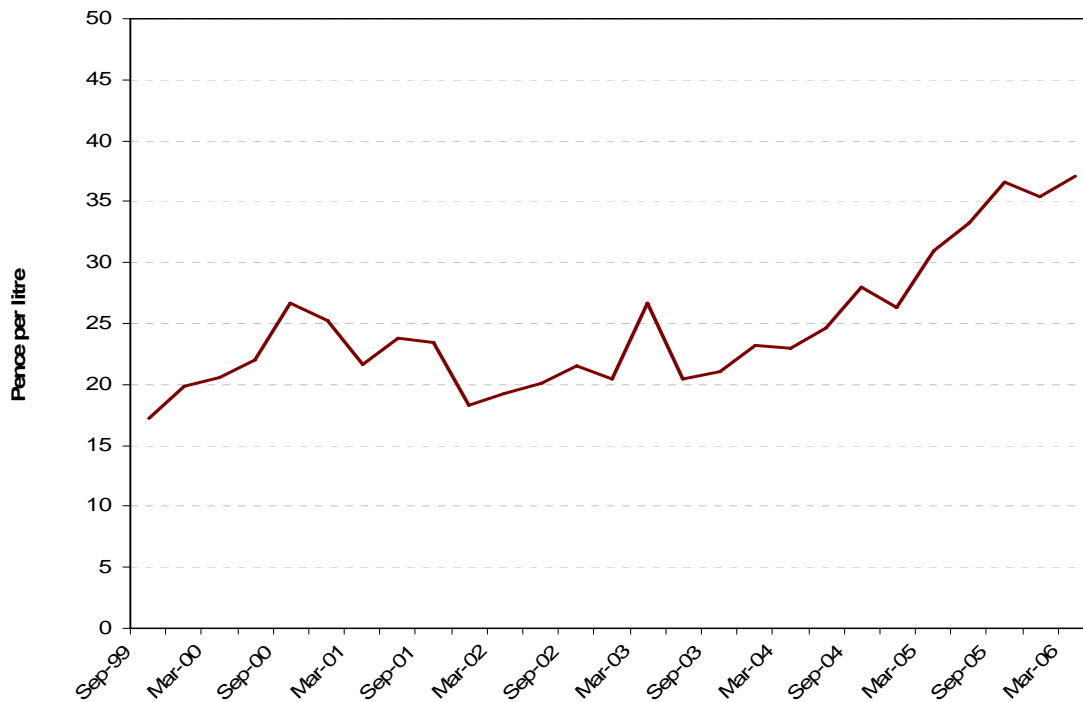
A consequence of Jersey being virtually solely dependent on imports of energy is that Jersey is an energy price taker (i.e. the price here is largely determined by global energy markets, although local suppliers are still responsible for local costs). Specifically, given that around 70% of primary energy is a derivate of crude oil, the price of oil has a major impact on household and business energy costs in Jersey. As chart 9 illustrates the past few years have seen crude oil prices far higher than they have been for over a decade and during 2005 they reached levels not seen in real terms since the oil crisis of the early 1970's. In early 2006 oil prices reached \$70 per barrel.

Chart 9 Crude oil index (Average price of crude oil as purchased by UK refineries)



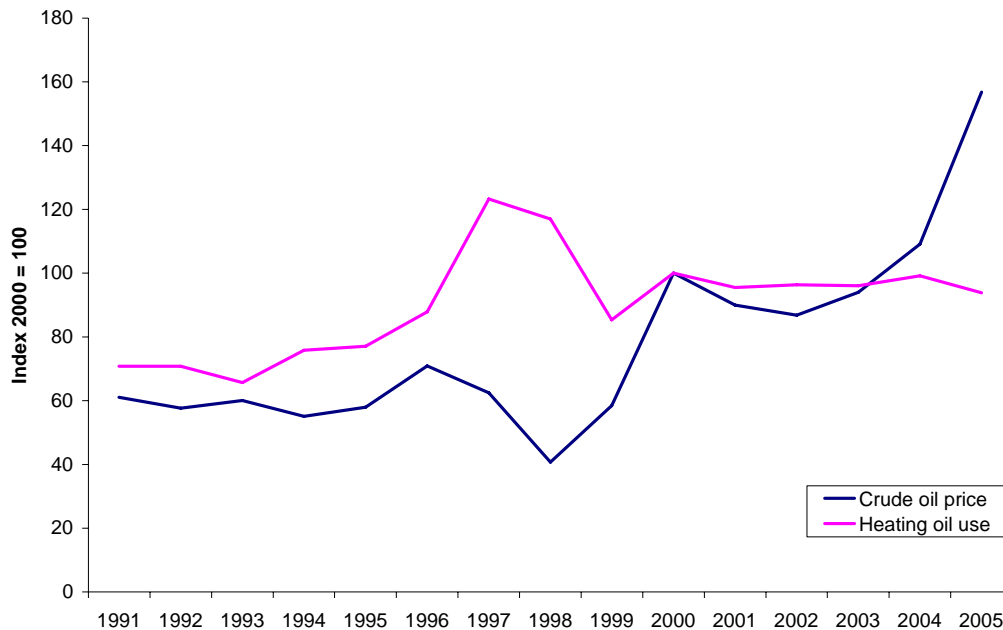
Therefore, as global oil prices have risen so has the cost of domestic heating oil in Jersey as chart 10 shows. In March 2006 prices were 20% higher than in March 2005, 81% higher than in March 2000 and 189% higher than in March 1999. To put these increases into context a household buying 1000 litres of fuel would be paying around £370 in March 2006 compared to £310 in March 2005, and £205 in March 2000. Whilst the level of oil prices in the future is unknown, it is likely in the short to medium term at least that the current factors surrounding uncertainty of supply and strong demand in the developing economies will continue to have an upward rather than a downward pressure on prices.

Chart 10: Average domestic heating oil prices in Jersey



Given the increases in oil prices it may be expected that consumers would have sought to use energy more efficiently and thus reduce their exposure to rising costs. Up until 2004 there was no evidence of this occurring, though a slight decrease in consumption was seen over 2005. However, given the reduction in consumption was 5% compared to the approximate 20% price increase between winter 2004 and winter 2005, it remains to be seen whether this is a reaction to increasing oil prices or whether consumption was lower as a result of other factors such as climate conditions. Chart 11 plots the crude oil index against consumption of heating oil as an index.

Chart 11: Crude oil prices and heating oil consumption



Taking crude oil as a good indicator for heating oil prices (to maximise the run of data that can be considered) chart 11 shows when oil prices were low in the mid to late 1990's oil consumption increased (this explains the peaks seen in these consumption plots above and in chart 5). However as oil prices started to rise there was only a small initial reduction back to around trend level and recent increases in costs have had no impact on consumption up until 2005. Future data will determine whether the slight decrease seen in 2005 is a result of consumers consciously beginning to use less fuel.

Gas

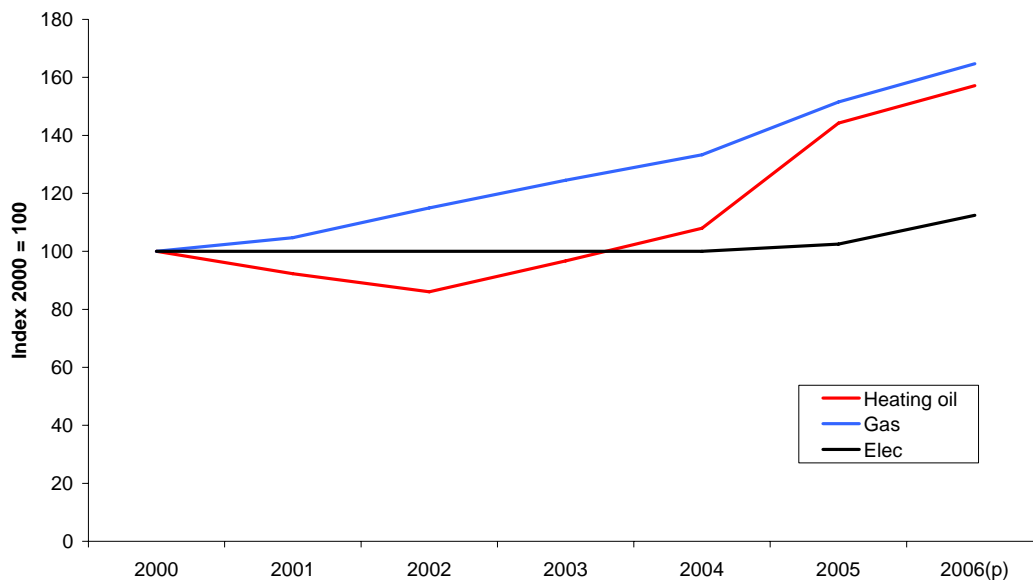
Increases in oil prices also feed through into the cost of gas whether supplied as LPG or manufactured as in the case in Jersey (or natural gas in many other countries). Thus as the cost of LPG (which is a petroleum product) has increased so have gas tariffs in Jersey. As a result an average consumer will be paying about 9% more in 2006 than they would have done in 2005 (£614 compared to £564 based on annual bills for a Super Economy consumer using 8,000 kWh reflecting tariff changes that occurred until May 2006).

Electricity

With the decrease in oil fired electricity generation seen recently in Jersey, electricity prices here have become more insulated from increases in oil prices. As a result electricity prices remained unchanged between October 2000 and January 2005. In January 2006 JEC increased prices for all consumers by 9.7% meaning that the bill for a standard credit consumer using 6,500kWh increased from £549 to £602, whilst that for a Comfort heat consumer on 9,000 kWh increased from £460 to £504.

Looking ahead it would again be unwise to predict changes in electricity prices, but with the need for increased investment in most of the European electricity market and increasing costs, it is likely that future movements in electricity prices will be upward.

Chart 12: Domestic energy costs



Electricity is annual bill for credit consumer using 6,500kWh, Gas Super economy consumer using 8,000 kWh, Heating oil is average p/litre for deliveries of 2250litres.

So for all (domestic and commercial) consumers of gas and electricity, the situation is very similar as for oil. Prices are more likely to go up rather than down (as such the trends seen in chart 12 are likely to continue), therefore the importance of using energy efficiently as a means of limiting exposure to increased costs becomes more important.

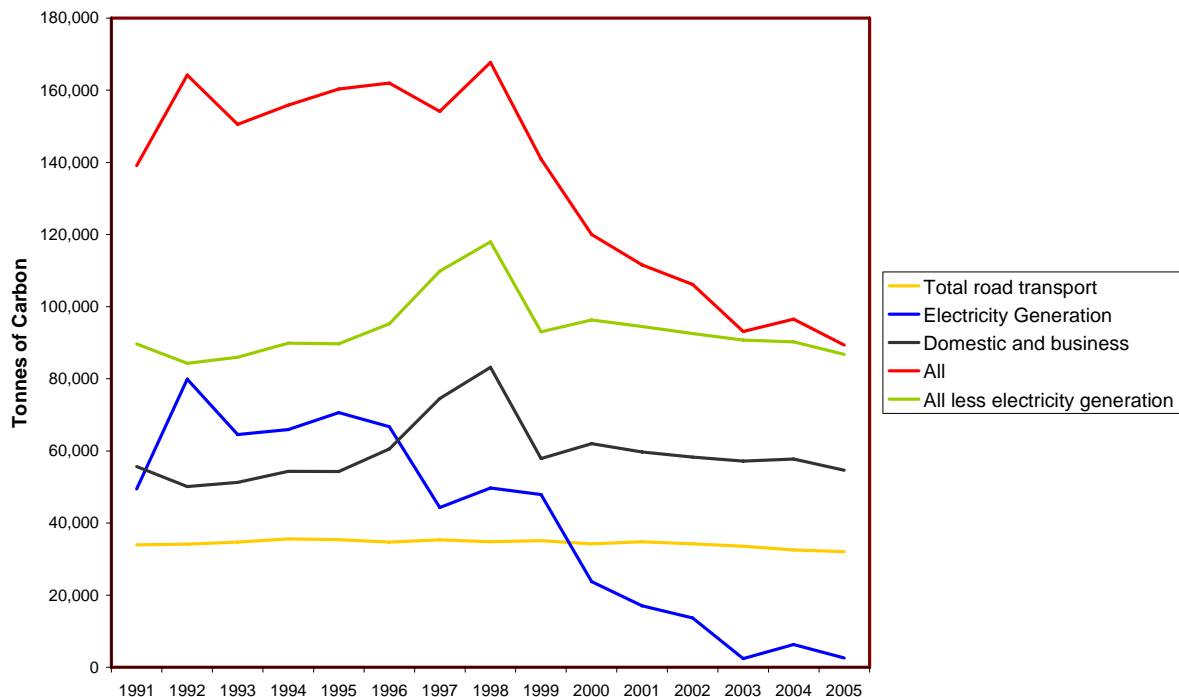
Energy related carbon emissions

Across Europe and indeed in most countries greater attention is being placed on the impact our activity has on the environment and in particular on efforts to reduce carbon emissions. Jersey is a signatory to the UN Convention on Climate Change, but has no specific carbon reduction target. In a global sense carbon emissions in Jersey are tiny, but with the energy data it is now possible to calculate carbon emission from energy consumption in Jersey. Carbon emissions from land use change (the conversion of countryside to building use) and agriculture are not included, nor at present are the carbon emissions from waste burning/electricity generation at Bellozane. In addition as currently there is no international agreement on the treatment of aviation emissions these are also excluded. It is also important to keep in mind that the energy data for 1991 to 2000 is not as accurate as that for the most recent years.

However, with all that in mind, overall *provisional* energy related carbon emissions have fallen sharply, by around 36%, in Jersey between 1991 and 2005 from 139,000 tonnes to 89,000 tonnes. The cause of this reduction is the switch from on-Island electricity generation to importing electricity from France as shown by chart 13.

Excluding electricity generation whilst there have been year on year fluctuations overall there has been very little change in carbon emissions over the past 14 years with the 2005 level 3% below the 1991 level.

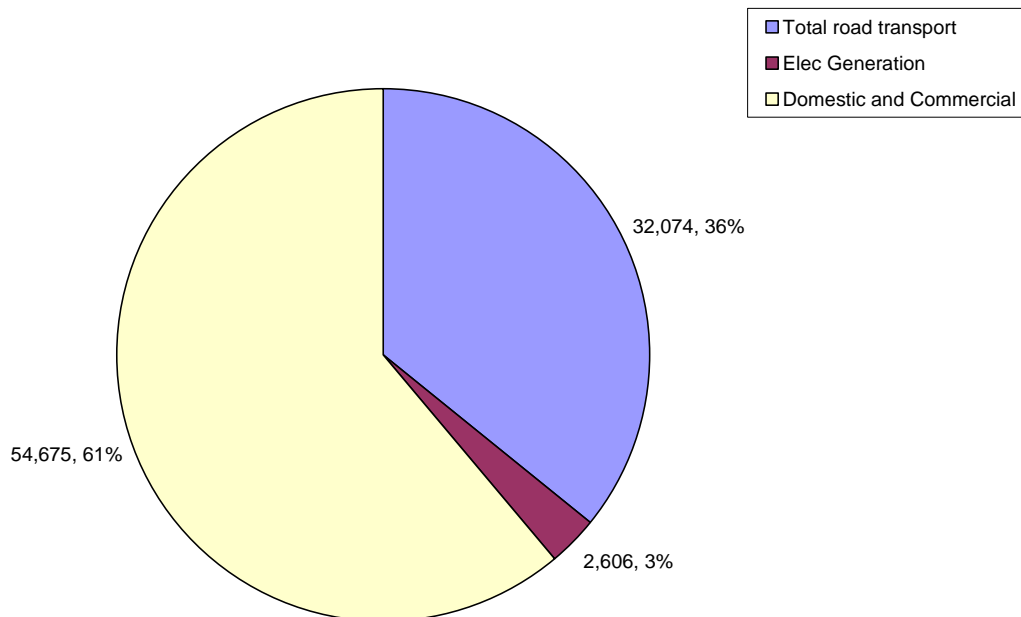
Chart 13: Energy related carbon emissions



The reduction in emissions resulting from the change in generation is what is called a one-off reduction, because once that change is made and the reduction achieved it can't happen again – although emissions can rise if it is reversed, even in part, as was seen in 2004. As a result of lower oil generation in 2005 carbon emissions decreased by 7.4% between 2004 and 2005.

The largest sources of energy related emissions are now road transport and domestic and commercial energy use which includes marine transport (chart 14). Road emissions have decreased very gradually over the past decade as a result of greater efficiencies in engines, the phasing out of older less efficient cars and the growth in diesel (which is marginally less carbon intensive than petrol, but does cause other emissions). However, the overall trend of emissions and consumption of fuel, does perhaps suggest that Jersey is near a maximum level of road use and that whilst technical improvements are helping to reduce emissions, there is no evidence of significant behavioural change.

Chart 14: Energy related carbon emissions by source



Electricity generation excludes the energy from waste plant
Figures show tonnes of carbon and percentage of total

Emissions from domestic and commercial energy use fell by 5% between 2004 and 2005 and road emissions also decreased slightly by 1%. However, once again, despite the peaks in the late 1990's driven by increased use of cheap oil products, the overall picture of these emissions is again one of relative stability.

International Comparisons

In making comparisons a range of factors have to be taken into account, such as the nature of industry, size of country, temperature, availability of energy sources and fuels used. All of these factors make international comparisons of energy use very difficult for Jersey, especially given the lack of comparable energy data for other islands that are similar to Jersey. As such although a few comparisons are provided against the UK below and in Annex B, they should be considered more as a guide to the type of comparisons that can be made.

In terms of Total Primary Energy Supply per head of population, Jersey is considerably below the UK, at 2.2 toe/capita compared with 4.1 in the UK. However, as almost all the energy Jersey uses is imported in its final usable form whereas a large amount of processing occurs in the UK (final energy consumption is 70% of primary for the UK, but almost 100% in Jersey), the ratio of Final energy consumption per head of population in Jersey at 2.1 toe/capita is still below the 2.9 in the UK, but is closer.

In terms of individual fuels, the total final consumption across all sectors of electricity per head of population is higher in Jersey than in the UK (7,000 kWh/capita, compared to 5,700 in the UK), whilst total consumption per head of heating oil is nearly 10 times greater in Jersey than in the UK (0.3 tonnes to 0.04 tonnes),

compensated for by much lower per capita consumption of gas (1,400 kWh per head in Jersey 11,300 in the UK). Consumption of road fuels is 0.63 tonnes/capita in the UK compared to 0.44 tonnes/capita in Jersey, which is closer than may be imagined especially given the differences in road use i.e. very few large lorries in Jersey and size of the two islands.

The Department of Trade and Industry in the UK published in 2004 regional energy data, which allows for closer comparisons between Jersey and the UK. Two areas where electricity consumption data are published for are the Isles of Scilly and the Orkney Isles both of which can be directly compared with Jersey as, unlike the UK mainland, they do not have mains natural gas. As table 5 shows it is actually the southern islands which consume most electricity per household, again perhaps highlighting that energy efficiency is not as high a priority in those islands as it could be.

Table 5: Island domestic electricity consumption

Island	Number of households	Domestic electricity consumption (MWh)	Average domestic consumption (kWh)
Jersey (2005)	38,376	296,200	7,720
Isles of Scilly	1,000	8,000	7,644
Orkney Isles	11,900	83,000	7,019

Number of households refers to the number of metered supply points identified as domestic

Annex A

Table A1: Jersey Energy Balance 2005

Tonnes of oil equivalent (toe)

	Coal and Other Solid Fuel	Petroleum products	Gas	Electricity	total
Production				1,471	1,471
Imports	2,340	141,327		55,883	199,549
stock change		-5,894		0	-5,894
Primary supply	2,340	135,433		57,354	195,126
Transfers					
Electricity generation		-3,779		1,054	-2,725
Gas supply		-10,942	10,746		-197
Available supply	2,340	120,711	10,746	58,407	192,204
Energy industry own use and losses			161	5,381	5,543
<u>Consumption</u>					
Industry and government		27,827	4,413	27,555	59,796
Air and marine		19,607			19,607
Road		43,116			43,116
Domestic	2,340	30,162	6,171	25,471	64,143
Final consumption	2,340	120,711	10,585	53,026	186,661

To avoid disclosure some cells have been aggregated.

Table A2: Final energy consumption in original units 2005

	Coal and Other Solid Fuel (tonnes)	Petroleum products (tonnes)	Gas (MWh)	Electricity (MWh)	Total (MWh)
Industry and government		24,000	51,300	320,200	
Air and marine		17,800			
Road		38,600			
Domestic	3,100	26,600	71,800	296,200	
Final consumption	3,100	107,100	123,100	616,500	2,170,900

Table A3: Jersey Energy Balance 2004

	Tonnes of oil equivalent (toe)				
	Coal and Other Solid Fuel	Petroleum products	Gas	Electricity	total
Production				1,660	1,660
Imports	2,526	136,287		53,727	192,540
stock change		4,772		0	4,772
Primary supply	2,526	141,059		55,387	198,972
Transfers					
Electricity generation		-9,133		2,375	-6,758
Gas supply		-11,060	10,857		-203
Available supply	2,526	120,866	10,857	57,762	192,010
Energy industry own use and losses			163	5,358	5,520
<u>Consumption</u>					
Industry and government		29,658	4,365	27,940	61,963
Air and marine		15,647			15,647
Road		43,734			43,734
Domestic	2,526	31,826	6,329	24,464	65,145
Final consumption	2,526	120,866	10,694	52,404	186,490

To avoid disclosure some cells have been aggregated.

Table A4: Final energy consumption in original units 2004

	Coal and Other Solid Fuel (tonnes)	Petroleum products (tonnes)	Gas (MWh)	Electricity (MWh)	Total (MWh)
Industry and government		25,900	50,800	324,500	
Air and marine		14,200			
Road		39,200			
Domestic	3,400	28,100	73,600	284,500	
Final consumption	3,400	107,400	124,400	609,000	2,168,900

Chart A1: Change in final energy consumption 2004 - 2005

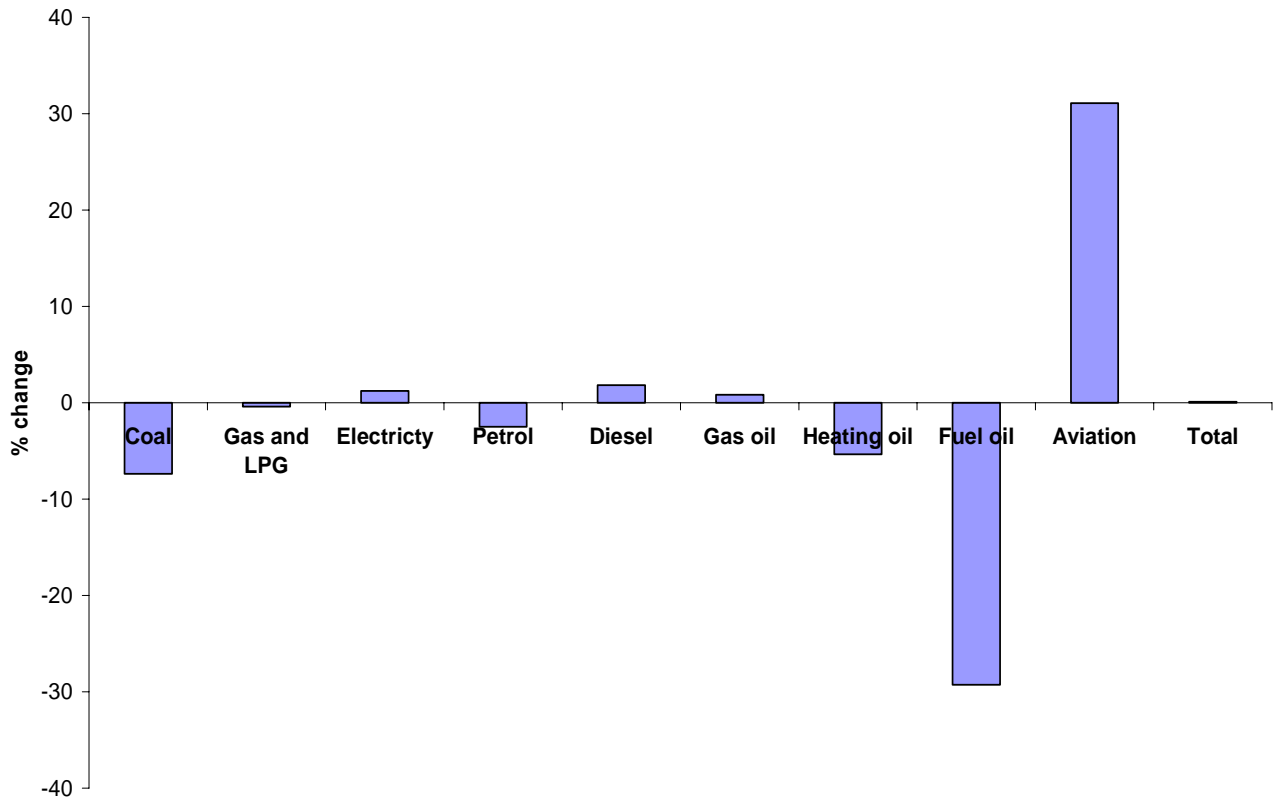
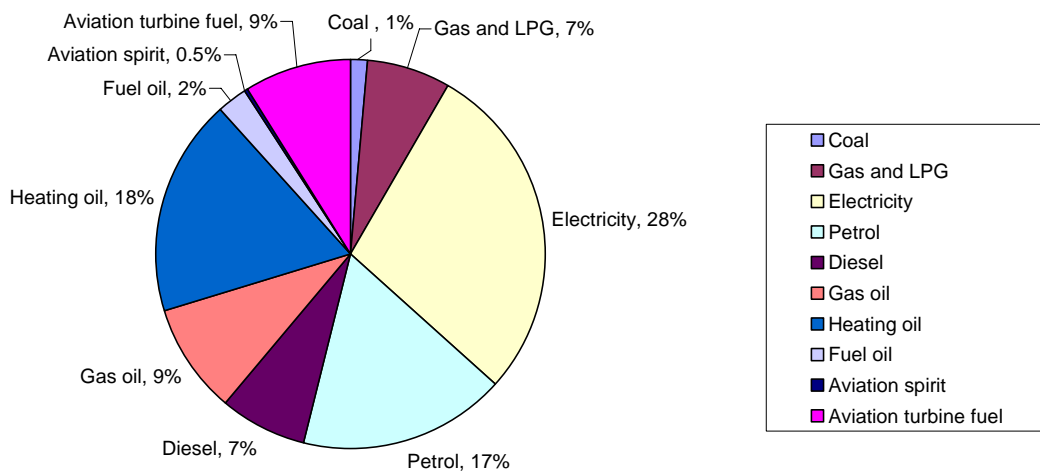


Chart A2: Final energy consumption by fuel 2005



Annex B

Table B1: UK/Jersey Comparison of Energy supply and use

	Jersey	UK (2003)
TPES/population	2.2 toe/capita	4.1 toe/capita
FEC/population	2.1 toe/capita	2.9 toe/capita
FEC as % TPES	96%	70%
Total electricity use all sectors/population	7,000 kWh/capita	5,700 kWh/capita
Total Motor fuel/population	0.44 tonnes (approx 600 litres) /capita	0.63 tonnes (approx 800 litres) /capita
Total Heating oil/population	0.3 tonnes/capita	0.04 tonnes/capita
Total gas use all sectors/population	1,400 kWh/capita	11,300 kWh/capita