Jersey Energy Trends 2016

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Overview

This report examines supply and use of energy in Jersey through the importation, distribution and consumption of fuels such as petroleum products and electricity.

The focus of the report is on energy supply and use in 2016. Figures are also presented for calendar years 2012 to 2015. Longer term trends, going back to 1991, are shown for road fuel consumption and for electricity importation and generation.

The energy data presented in this report provides the basis for calculating carbon emissions for Jersey. Through the UK, Jersey is a signatory to the Kyoto Protocol; the document "Pathway 2050: An Energy Plan for Jersey"[1] outlines how the Island intends to reduce its carbon emissions in line with the commitments of the UK and other European nations.

Jersey's energy data is submitted annually to the compilers of the UK's national greenhouse gas inventory, Aether, who independently verify and validate the data using internationally agreed methodologies. The resultant emissions calculated for Jersey are published by Aether[2] and submitted to the international inventories as part of the UK's national inventory.

Summary - for 2016

Supply

- almost all of Jersey's energy supply was imported; about 2% was produced on-Island as electricity generated by the energy-from-waste plant
- petroleum products accounted for almost two-thirds (65%) of Jersey's energy supply; electricity (imported and on-Island generated) accounted for the remainder (35%)
- Jersey's total primary energy supply (TPES) was 3% higher than in 2015, driven by an increase in the importation of petroleum products used for on-Island electricity generation

Use

- total final energy consumption (FEC) was 2% higher than in 2015
- energy consumption per head of resident population was 1.5 toe[3] and was below that of the UK (2.1 toe)
- more than a third (37%) of energy used was consumed by households, a similar proportion (35%) was used for transportation (predominantly road transport) and over a quarter (28%) was used by industry and government

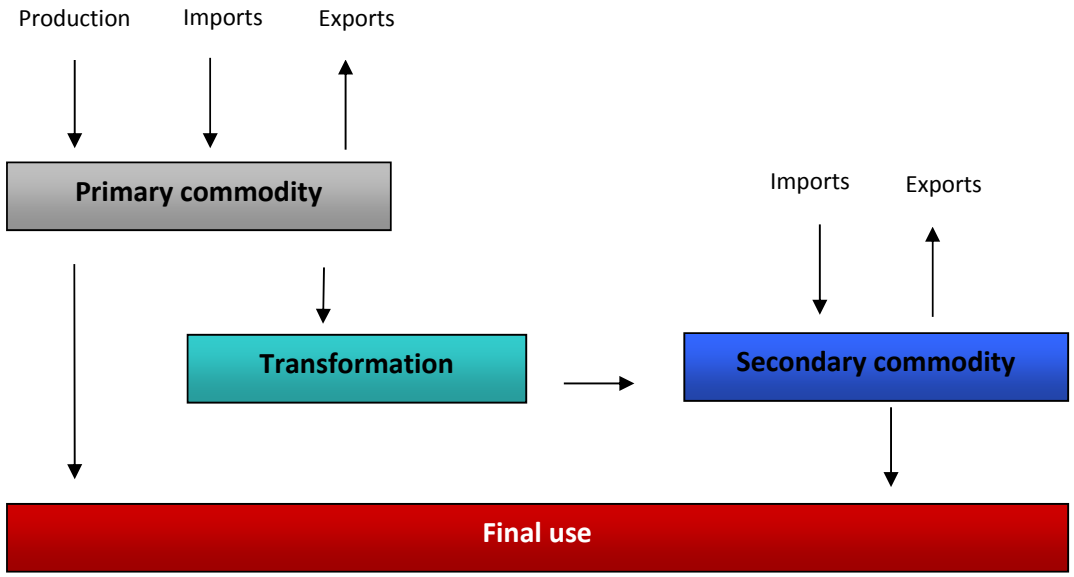
[1] www.gov.je/government/pages/statesreports.aspx?reportid=1039
[2] https://www.gov.je/Environment/GenerateEnergy/Pages/GreenhouseGasEmissions.aspx
[3] A toe (tonne of oil equivalent) is a unit of energy which represents the quantity of energy released through burning one tonne of crude oil; 1 toe =11,630 kWh or 10 million kilocalories.

Introduction

Energy is supplied to Jersey predominantly through imports; there is also a small amount of on-Island production. The primary supply of energy is either distributed to consumers in its original form or is transformed into different sources of energy; for example, petroleum products can be burned to generate electricity. Some energy is also used in such transformation processes and some is lost during transmission and distribution to consumers. The final uses of energy include consumption by households, industry, government and for transportation.

The supply and use of each individual type of fuel ('commodity') may be considered by means of a commodity balance. Figure 1 outlines a commodity balance, showing how a primary commodity may be either used directly by consumers or transformed into a secondary commodity before then being used.

Figure 1 - Commodity Balance outline



Energy balance

The overall flow of energy in Jersey may be examined by combining all of the individual commodity balances into an "energy balance" which shows the energy flows from production to final use, including movements between fuel categories.

Units

Since different fuel types provide different amounts of energy, volume or mass measures (such as litres or tonnes) do not enable fuels to be compared directly from the perspective of energy supply and use. In order to compare and aggregate different fuels within a single framework (the energy balance) fuel quantities are converted into a standardised unit based on calorific value (see Glossary).

The standardised unit of energy used in an energy balance is the toe (tonne of oil equivalent). A toe represents the quantity of energy released through burning one tonne of crude oil; 1 toe = 11,630 kWh or 10 million kilocalories.

Total Primary Energy Supply, TPES

Total primary energy supply (TPES) is defined as the total energy which a jurisdiction imports and produces from its own natural resources, accounting for any changes in stock and subtracting any exports.

TPES for Jersey predominantly consists of imported petroleum products and imported electricity. Imported electricity is treated as a primary energy supply because it is originally generated outside of the Island. There is also a small contribution to TPES from electricity generated on-Island by the energy-from-waste (EFW) plant (2% of TPES in 2016).

Table 1 shows TPES for each year from 2012 to 2016. Petroleum products accounted for almost two-thirds (65%) of Jersey's TPES in 2016, electricity (imported and on-Island generated) accounted for the remainder (35%) – see Figure 2[4].

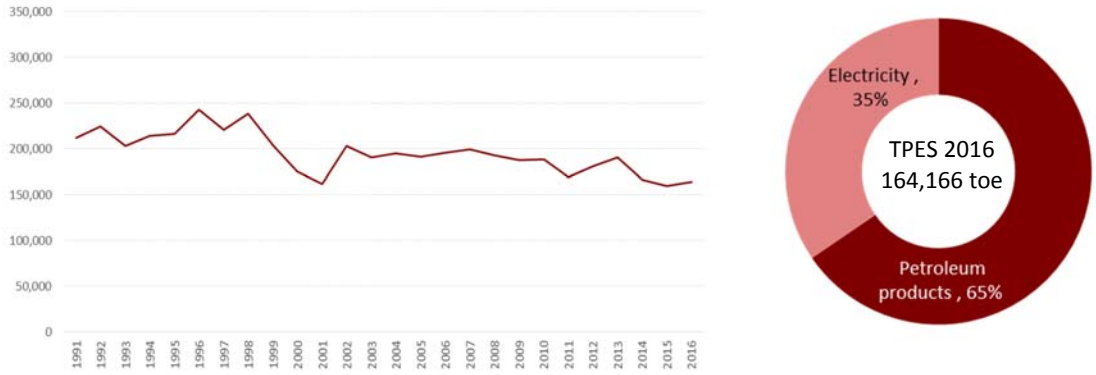
Table 1 - Jersey's total primary energy supply (TPES) 2012–2016; *toe*

	2012	2013	2014	2015	2016
TPES	181,177	190,424	166,287	159,699	164,166

TPES in 2016 was 3% higher than in the previous year (2015), driven by an increase in the importation of petroleum products used for on-Island electricity generation. The larger TPES seen in 2012 and 2013, was predominantly due to increased importation of petroleum products for on-Island electricity generation in these two years[5].

The longer term behaviour of Jersey's TPES is shown in Figure 2.

Figure 2 - Jersey's total primary energy supply (TPES), 1991–2016; *toe*



[4] Throughout this report:

- coal and other solid fuels are not included due to the lack of available data. In 2007, the last year for which such data was compiled, the contribution from coal and other solid fuels to TPES was less than 1%
- electricity generated from private generators (wind, solar etc.) is not included

[5] In June 2012 the original submarine cable, used by Jersey Electricity (JE) to import electricity from France, failed and was removed from service. JE subsequently started generating a greater proportion of its electricity supply in Jersey from petroleum products, in order to supplement reduced levels of imported electricity until a third submarine cable could be installed. The third cable started working in parallel with the existing second submarine cable in October 2014:
Jersey Electricity Report and Accounts 2014 and 2015.

Figure 2 shows that there are two principal features in the longer term behaviour of Jersey's TPES:

- a reduction in level, from between 200,000 and 250,000 toe during most of the 1990s to between 150,000 and 200,000 toe since the turn of the millennium. A key factor in this reduction in the level of TPES has been the increase in imported electricity and the complementary decrease in imported petroleum products for on-Island electricity generation
- a generally downward trend in TPES since around 2007 due to a range of factors, including a reduction in the use of kerosene for domestic heating and of motor fuels for transportation

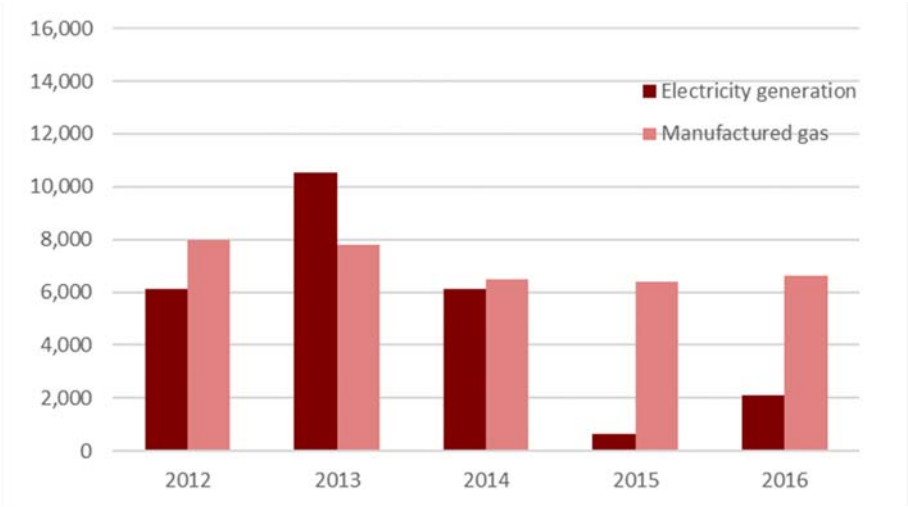
Transformation

Transformation is the process of converting fuel from one form into another which is better suited for specific uses. There is little transformation carried out in Jersey since most fuel is imported in the form that the consumer requires. Transformation processes that do occur in Jersey are:

- the generation of electricity from petroleum products
- the conversion of Liquefied Petroleum Gas (LPG) into a gaseous form (referred to as "manufactured gas") which can then be piped through the Island's gas network

The supply of energy produced by on-Island transformation in each year from 2012 to 2016 is shown in Figure 3.

Figure 3 - Energy supply produced by transformation processes, 2012–2016; *toe*



The increase in electricity generated on-Island from 2012 to 2014 through the burning of petroleum products reflects the reduction in imported electricity in these years (see footnote 5). More recently, in 2016, JE used 6,190 toe of petroleum products to generate almost 2,100 toe of electricity.

The quantity of manufactured gas produced in 2016 was a sixth (17%) lower than in 2012 (6,620 toe produced in 2016 compared with 8,000 toe in 2012). During the previous decade, from 2001 to 2010, the quantity of manufactured gas produced each year in Jersey was around 10,000 to 11,000 toe.

Final Energy Consumption

Final energy consumption (FEC) refers to the use of energy by final consumers, either as a primary commodity or as a secondary commodity after any transformations have occurred. The use of energy by the energy industry itself and losses due to transmission and distribution of energy are excluded from FEC.

Table 2 shows Jersey's FEC for each year from 2012 to 2016 and also FEC per head of resident population (FEC per capita).

Table 2 - Jersey's final energy consumption (FEC) and per capita 2012–2016; *toe*

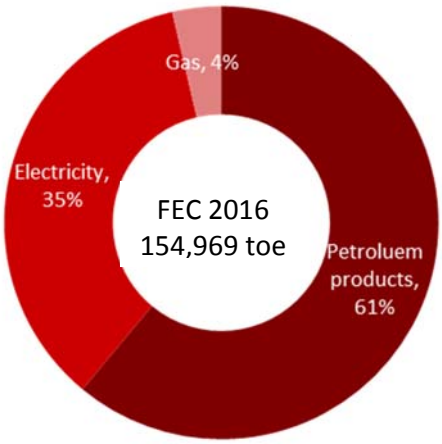
	2012	2013	2014	2015	2016
FEC	159,422	160,043	148,824	152,491	154,969
FEC per capita	1.61	1.60	1.47	1.48	1.49

In 2016 final energy consumption in Jersey was 2% higher than in 2015. However, over the five years from 2012 to 2016 FEC has been relatively flat at around 150,000 to 160,000 toe, especially if allowance is made for warmer or colder winters (see Appendix Table A5).

FEC per capita in Jersey has been relatively flat from 2012 to 2016, at around 1.5 to 1.6 toe. Energy consumption per head of population in Jersey in 2016 was below that of the UK (2.1 toe[6]).

In 2016 petroleum products (such as road fuels and heating oil) accounted for three-fifths (61%) of Jersey's FEC (see Figure 4). Electricity accounted for over a third (35%) and manufactured gas for the remaining 4%.

Figure 4 - Jersey's total final energy consumption (FEC) by fuel type, 2016; *toe*



[6] FEC per capita for the UK has been derived from:

- FEC: "Energy Consumption in the UK", Department for Business, Energy & Industrial Strategy, July 2017
- Population: 2016 mid-year estimate, Office for National Statistics, June 2017.

Jersey's FEC broken down by fuel type for each year from 2012 to 2016 is shown in Table 3.

Table 3 - FEC by fuel type, 2012-2016; *toe*

	2012	2013	2014	2015	2016
Petroleum products	96,645	96,321	90,005	92,799	94,585
Gas	7,223	7,309	5,985	6,217	5,636
Electricity	55,555	56,414	52,835	53,475	54,748
Total FEC	**159,422**	**160,043**	**148,824**	**152,491**	**154,969**

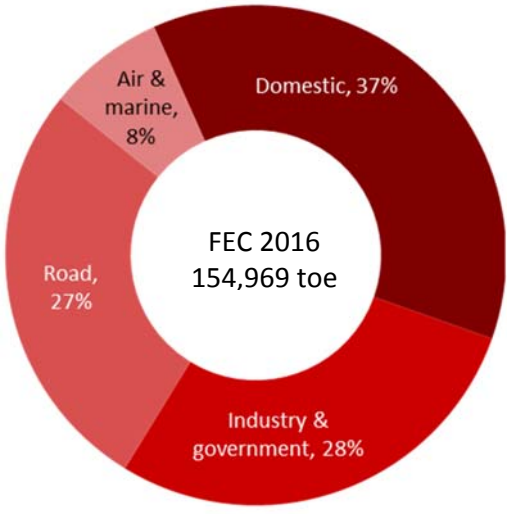
FEC may also be considered in terms of final end-use sectors such as households, industry, government and transportation, as shown in Table 4.

Table 4 - FEC by final end-use sector, 2012-2016; *toe*

	2012	2013	2014	2015	2016
Industry and government	45,358	44,946	42,963	42,786	43,843
Air and marine	12,896	11,938	11,323	11,779	11,735
Road	42,219	41,784	41,396	41,787	41,931
Domestic	58,949	61,375	53,143	56,140	57,460
Total FEC	**159,422**	**160,043**	**148,824**	**152,491**	**154,969**

In 2016, more than a third (37%) of Jersey's energy was consumed by households (the domestic sector), a similar proportion (35%) was used for transport (road, air and marine[7]) and over a quarter (28%) was consumed by industry and government – see Figure 5.

Figure 5: FEC by final end-use sector, 2016; *toe*



[7] 'Air & marine' covers fuel that is supplied in Jersey, i.e. supplied to commercial airlines and also for private air or marine use whilst in Jersey. The category 'marine' includes both marine diesel and petrol. 'Air' accounts for around three-quarters of the final energy consumption of the 'Air & marine' sector shown in Table 4 and Figure 5.

Energy Balance

An energy balance shows the flows of all forms of energy within a jurisdiction in one common unit of measurement (toe[1]), from supply to final consumption, including transformations, losses and the energy industry's own use[8].

Table 5 shows the energy balance for Jersey for 2016; energy balances for each year from 2012 to 2015 are presented in Appendix Tables A1 to A4.

Table 5 - Energy Balance for Jersey, 2016; *toe*

	Petroleum products	Gas	Electricity	Total
Production	0	0	3,884	3,884
Imports	114,503	0	52,811	167,314
Stock change	-7,032	0	0	-7,032
Primary supply	**107,471**	**0**	**56,695**	**164,166**
Statistical difference[9]	52	887	32	971
Primary demand	**107,419**	**-887**	**56,663**	**163,195**
Transformations				
Electricity Generation	-6,185	0	2,099	-4,086
Gas supply	-6,649	6,622	0	-26
Energy industry own use and losses	**0**	**99**	**4,014**	**4,113**
Final consumption	**94,585**	**5,636**	**54,748**	**154,969**
Industry and government	13,829	2,807	27,206	43,843
Air and marine	11,735	0	0	11,735
Road[10]	41,931	0	0	41,931
Domestic	27,089	2,829	27,542	57,460

Numbers have been rounded independently to the nearest integer. Hence, rows and columns may not sum to totals.

[8] See Glossary for definition of terms. For methodology used to construct the energy balance see "Energy Balance: methodology note", UK Department Business, Energy and Industrial Strategy, 2010 at: https://www.gov.uk/government/publications/energy-balance-methodology-note.

[9] Statistical difference is defined as Primary supply minus Primary demand (see Glossary).

[10] Electricity consumed in charging electric vehicles is included under Domestic and Industry & government consumption; it is not included under road consumption.

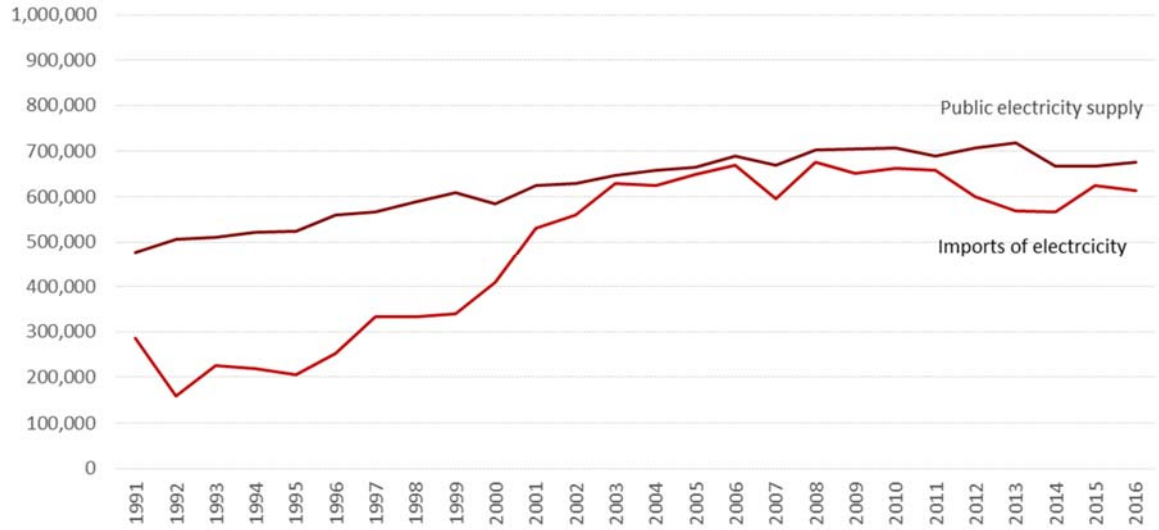
Individual fuel types

This section looks at individual fuels in more detail and in units which are specific to each type of fuel, e.g. electricity in MWh and petroleum products in tonnes.

Electricity

Since 1991, the overall public electricity supply[11] and the proportion of electricity imported into Jersey have increased – see Figure 6.

Figure 6 - Public electricity supply and imports of electricity, 1991–2016; *MWh*



Throughout the 1990s imported electricity accounted for between 40% and 60% of Jersey's public electricity supply; this proportion had increased to over 90% by 2016.

Petroleum products

The category 'petroleum products' covers a range of fuels derived from crude oil. Such products accounted for three-fifths (61%) of Jersey's final energy consumption (FEC) in 2016 – see Figure 4.

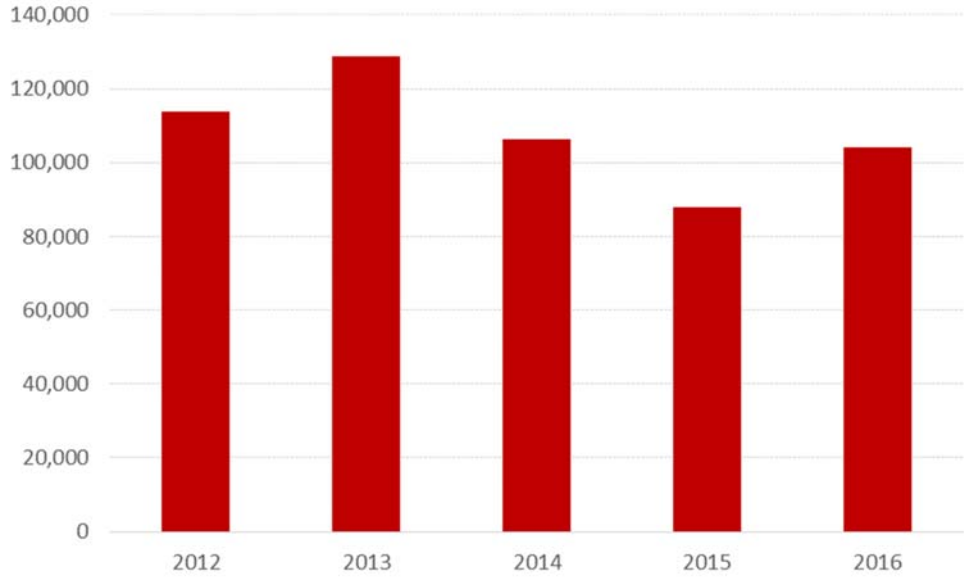
All of the petroleum products supplied and used in Jersey are imported; some 104,000 tonnes of petroleum products were imported in 2016[12]. This total was a sixth (18%) greater than in 2015 and was at a similar level as that in 2014.

The imported quantities of various petroleum products in each year from 2012 to 2016 are shown in Figure 7 (see Glossary for description of products included in each category).

[11] Public electricity supply (PES) is electricity provided to consumers through the JE network. PES is the sum of imported electricity (pre-transmission losses) and electricity produced in Jersey (both by JE and the EFW plant).

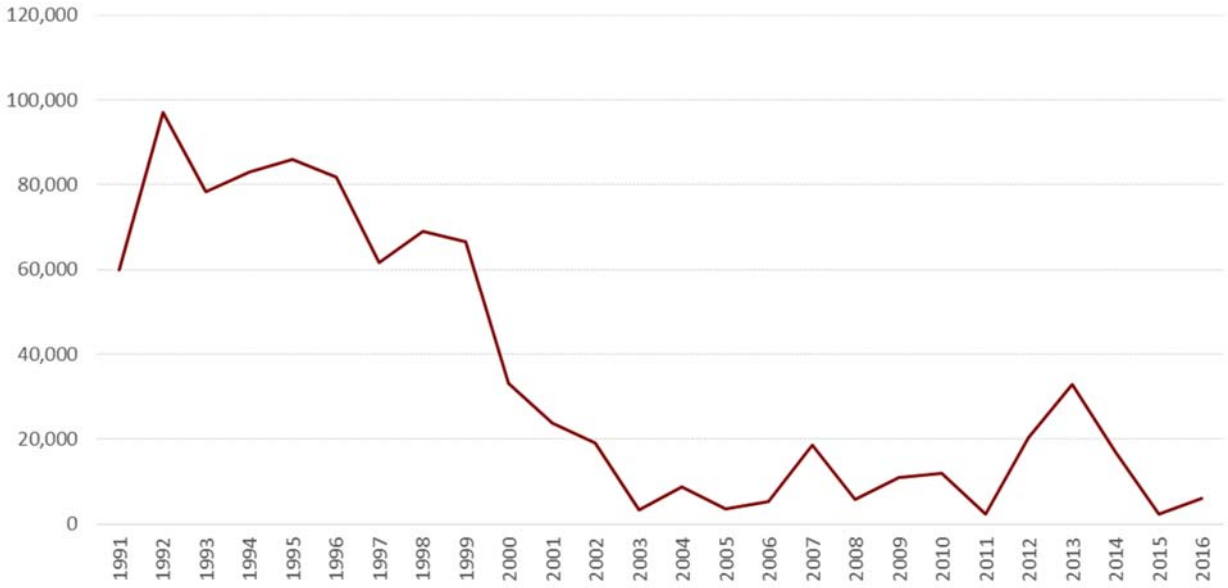
[12] Quantities of commodities that pass through Jersey on their way to a final destination in another jurisdiction are excluded from import totals.

Figure 7 - Imports of petroleum products, 2012-2016; *tonnes*



Since the 1990s there has been a considerable reduction in the use of petroleum products (specifically of fuel oil and gas oil) to generate electricity in Jersey, as a result of the increased importation of electricity through submarine cables – see Figure 8.

Figure 8 - Oil used for electricity generation, 1991-2016; *tonnes*



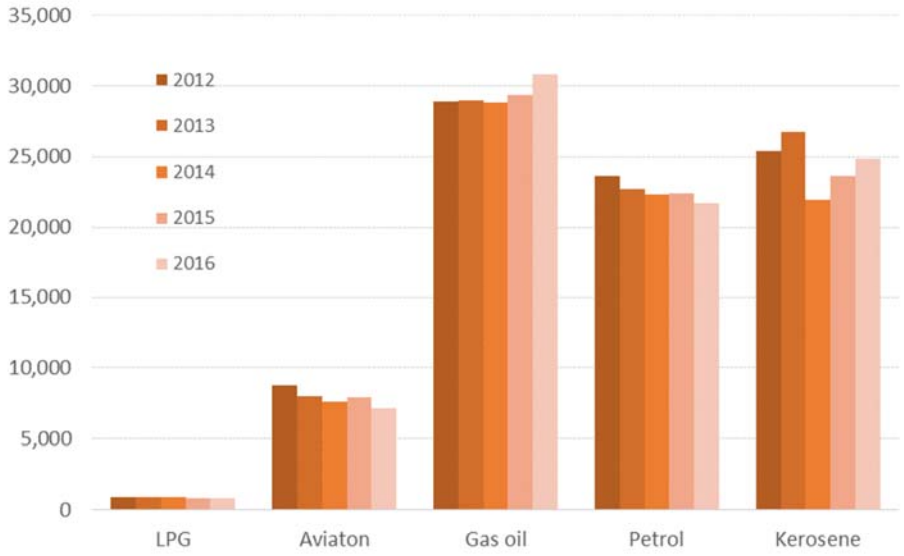
Includes fuel oil and gas oil used JE and the EFW plant.

In the early 1990s around 80,000 tonnes of oil were used each year to generate electricity on-Island; by 2011 this had reduced to less than 2,500 tonnes.

The final consumption of individual petroleum products in each year from 2012 to 2016 are shown in Figure 9. When interpreting the relationship between imports and final consumption of petroleum product (from Figures 7 and 9, respectively) it should be recognised that the final consumption excludes fuel consumed in transformation processes, notably fuel oil and gas oil used for electricity generation and LPG used to make manufactured gas.

During the five-year period shown in Figure 9, gas oil (which includes motor diesel used as a road fuel), kerosene and petrol accounted for the greatest levels of final consumption of petroleum products.

Figure 9 - Final consumption of petroleum products, 2012-2016; *tonnes*



The final consumption of kerosene (particularly used for domestic heating) has fluctuated due to variations in average monthly winter temperatures during the five-year period covered by Figure 9. Over the longer term, the level of kerosene consumption has reduced compared with the previous decade, from around 30,000 tonnes per year between 2001 and 2010 to around 25,000 tonnes per year more recently. A significant factor in the lower level of kerosene used in recent years has been a move from this particular fuel to electricity for heating social housing.

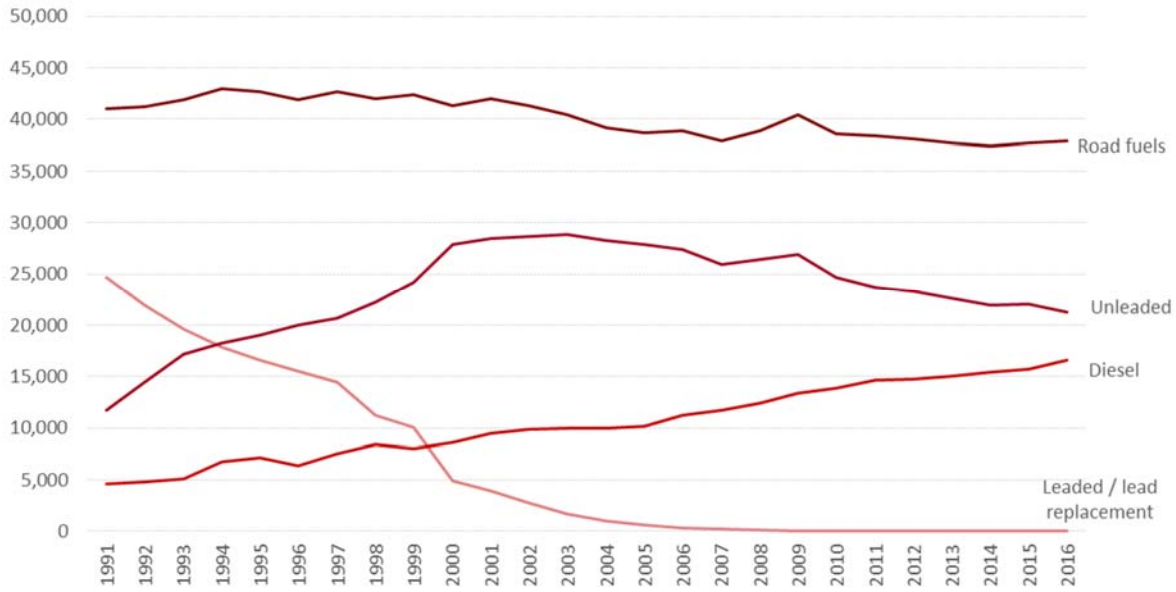
A generally downward trend in the consumption of petrol since 2012 is apparent in Figure 9 and in Table 6, which also shows a complementary increase in the consumption of diesel as a road fuel during this period.

Table 6 - Road fuel consumption, 2012-2016; *tonnes*

	2012	2013	2014	2015	2016
Unleaded petrol	23,327	22,667	21,946	21,997	21,303
Motor diesel	14,732	15,035	15,425	15,731	16,612
Leaded petrol / Lead Replacement Petrol	16	0	0	0	0
Total road fuels	**38,075**	**37,702**	**37,371**	**37,728**	**37,915**

The short-term changes in the consumption of petrol and motor diesel reflect the longer-term trends apparent in Figure 10. Since the mid-1990s there has been a generally downward trend in the overall consumption of road fuel in Jersey.

Figure 10 - Road fuel consumption, 1991-2016; *tonnes*



Energy use in homes

Table 7 shows final energy consumption by households in Jersey over the period from 2012 to 2016, broken down by fuel type. Variations in average monthly winter temperatures are a factor in annual fluctuations.

Table 7 - Household final energy consumption, 2012-2016; *toe*

	2012	2013	2014	2015	2016
Petroleum products	27,886	29,282	24,337	26,050	27,089
Manufactured gas	3,697	3,869	3,009	2,984	2,829
Electricity	27,365	28,224	25,796	27,107	27,542
Total household consumption	**58,949**	**61,375**	**53,143**	**56,140**	**57,460**

In 2016 electricity consumption accounted for approximately half of total domestic consumption (48%); petroleum products accounted for 47% and gas accounted for the remainder.

Statistics Jersey

June 2018

Appendix[12]

Table A1 - Jersey Energy Balance, 2015; *toe*

	Petroleum products	Gas	Electricity	Total
Production	0	0	3,497	3,497
Imports	97,139	0	53,743	150,881
Stock change	5,320	0	0	5,320
Primary supply	**102,459**	**0**	**57,239**	**159,699**
Statistical difference	665	85	-94	656
Primary demand	**101,794**	**-85**	**57,334**	**159,043**
Transformations				
Electricity Generation	-2,453	0	636	-1,817
Gas supply	-6,542	6,397	0	-144
Industry own use and losses	**0**	**96**	**4,494**	**4,590**
Final consumption	**92,799**	**6,217**	**53,475**	**152,491**
Industry and government	13,184	3,233	26,369	42,786
Air and marine	11,779	0	0	11,779
Road	41,787	0	0	41,787
Domestic	26,050	2,984	27,107	56,140

Table A2 - Jersey Energy Balance, 2014; *toe*

	Petroleum products	Gas	Electricity	Total
Production	0	0	3,141	3,141
Imports	116,720	0	48,686	165,406
Stock change	-2,260	0	0	-2,260
Primary supply	**114,460**	**0**	**51,827**	**166,287**
Statistical difference	147	393	-8	532
Primary demand	**114,314**	**-393**	**51,835**	**165,755**
Transformations				
Electricity Generation	-17,718	0	6,132	-11,587
Gas supply	-6,591	6,475	0	-116
Industry own use and losses	**0**	**97**	**5,131**	**5,229**
Final consumption	**90,005**	**5,985**	**52,835**	**148,824**
Industry and government	12,949	2,975	27,039	42,963
Air and marine	11,323	0	0	11,323
Road	41,396	0	0	41,396
Domestic	24,337	3,009	25,796	53,143

[13] Previously published figures for calendar years 2012 to 2014 have been re-analysed based on revised return periods.

Table A3 - Jersey Energy Balance, 2013; *toe*

	Petroleum products	Gas	Electricity	Total
Production	0	0	2,943	2,943
Imports	140,259	0	48,799	189,058
Stock change	-1,577	0	0	-1,577
Primary supply	**138,682**	**0**	**51,742**	**190,424**
Statistical difference	313	390	-231	472
Primary demand	**138,370**	**-390**	**51,973**	**189,953**
Transformations				
Electricity Generation	-34,130	0	10,546	-23,584
Gas supply	-7,919	7,816	0	-103
Industry own use and losses	**0**	**117**	**6,106**	**6,223**
Final consumption	**96,321**	**7,309**	**56,414**	**160,043**
Industry and government	13,316	3,439	28,190	44,946
Air and marine	11,938	0	0	11,938
Road	41,784	0	0	41,784
Domestic	29,282	3,869	28,224	61,375

Table A4 - Jersey Energy Balance, 2012; *toe*

	Petroleum products	Gas	Electricity	Total
Production	0	0	3,725	3,725
Imports	124,736	0	51,673	176,409
Stock change	1,044	0	0	1,044
Primary supply	**125,780**	**0**	**55,398**	**181,177**
Statistical difference	-138	654	121	637
Primary demand	**125,918**	**-654**	**55,276**	**180,540**
Transformations				
Electricity Generation	-21,146	0	6,113	-15,034
Gas supply	-8,127	7,997	0	-130
Industry own use and losses	**0**	**120**	**5,834**	**5,954**
Final consumption	**96,645**	**7,223**	**55,555**	**159,422**
Industry and government	13,644	3,525	28,189	45,358
Air and marine	12,896	0	0	12,896
Road	42,219	0	0	42,219
Domestic	27,886	3,697	27,365	58,949

Table A5 - Average (mean) daily air temperature in Jersey, 1999-2016; degrees Celsius, ^{o}C

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Jan	8.1	6.9	6.6	7.5	6.4	8.0	8.0	5.6	8.8	8.1	4.5	4.4	6.6	8.2	6.3	8.3	7.7	7.8
Feb	7.3	8.6	7.3	8.8	6.2	7.0	5.8	5.4	9.0	7.8	6.1	6.0	8.5	5.7	5.3	8.3	6.3	7.6
Mar	9.4	9.2	8.8	9.9	10.0	7.8	8.6	7.0	9.0	8.3	8.8	7.8	9.0	10.3	6.1	9.5	8.8	7.8
Apr	11.0	9.7	10.0	11.9	11.6	10.7	10.9	10.3	13.4	10.3	11.2	11.3	13.8	9.7	9.2	11.8	12.4	9.8
May	14.8	13.9	13.9	14.1	13.5	13.9	13.3	13.6	13.9	15.8	13.5	13.0	14.0	13.3	12.0	13.8	13.4	13.9
Jun	15.8	16.5	16.3	15.9	17.8	17.1	17.4	17.5	16.5	16.1	16.8	16.7	15.6	16.1	14.7	17.1	16.6	16.0
Jul	19.0	17.2	18.6	17.5	19.2	17.3	18.5	20.8	17.0	18.1	18.1	18.7	17.0	18.1	19.2	19.1	18.4	17.8
Aug	18.8	18.6	19.1	18.2	20.9	19.0	18.2	18.0	17.4	17.7	18.3	17.5	17.5	18.6	18.7	17.4	18.0	18.9
Sep	18.0	17.2	15.8	17.2	17.6	17.2	17.5	18.3	16.1	15.3	16.8	16.1	17.5	15.7	16.6	18.5	15.4	18.1
Oct	13.2	12.9	15.5	13.8	12.4	13.3	15.5	15.7	13.2	12.3	14.2	13.6	14.6	13.3	14.9	15.7	13.5	13.1
Nov	10.0	9.7	9.6	11.5	10.9	10.7	9.6	11.3	10.1	9.9	11.4	9.0	12.4	9.4	9.6	11.7	12.6	9.8
Dec	8.1	8.7	6.4	8.6	7.6	7.2	6.5	8.1	7.0	6.2	6.9	4.2	9.0	8.3	8.5	8.8	11.6	8.2
Year	**12.8**	**12.4**	**12.3**	**12.9**	**12.8**	**12.4**	**12.5**	**12.6**	**12.6**	**12.2**	**12.2**	**11.5**	**13.0**	**12.2**	**11.8**	**13.3**	**12.9**	**12.4**

Glossary of terms

Petroleum products

Aviation spirit - a light hydrocarbon oil product used to power piston-engine aircraft.

Aviation turbine fuel – used in aircraft jet and gas-turbine engines, consisting of either kerosene or a mixture of naphtha and kerosene; also known as 'jet fuel'.

Fuel oil - used in furnaces and boilers of power stations and in industry.

Gas oil - used in industry, diesel engines and as marine diesel, burned in central heating systems.

Kerosene - known as burning oil or heating oil, used for lighting and heating.

Ultra low sulphur Petrol (ULSP) - motor spirit with a sulphur content of less than 0.005 per cent.

Ultra low sulphur Diesel (ULSD) – motor diesel which has a sulphur content of less than 0.005 per cent.

Lead Replacement Petrol (LRP) - contains an additive different to lead for lubrication**.**

Gas

LPG – liquefied petroleum gas; a mixture of gaseous hydrocarbons that is changed into liquid form under pressure. LPG may converted (transformed) into a gaseous form (manufactured gas) and is also used in portable cooking stoves and heaters and to power some vehicles.

Manufactured gas - used as a fuel in homes for cooking and heating; made by converting (transforming) LPG into a gaseous form which can be piped through a gas network.

Energy balance

Calorific value - the calorific values assigned to each fuel are from the tables "Estimated average calorific values of fuels 2015 (DUKES A1-A3)" published by the UK Department for Business, Energy & Industrial Strategy: https://www.gov.uk/government/statistics/dukes-calorific-values.

Supply - the sum of production, imports and other sources, accounting for exports and stock changes; commodities that pass through Jersey on their way to a final destination in another jurisdiction are excluded.

Transformation - activities that transform the original primary (and sometimes secondary) commodity into a form which is more suited for specific uses, e.g. burning petroleum products in order to generate electricity; converting LPG into a gaseous state which can then be pumped through a gas network.

Available supply – the sum of supply and transformation.

Public electricity supply - the sum of electricity produced in Jersey, imported electricity (pre-transmission losses) and exports.

Demand - the sum of transformations, energy industry use, losses and final consumption, including non-energy use.

Final consumption - energy consumption by final users; does not include energy used in transformation processes, energy industry own use or losses.

Energy industry use - consumption to support transformation processes e.g. for lighting, operating compressors and cooling systems, but not for transformation itself.

Losses - the intrinsic losses that occur during the transmission and distribution of electricity and gas.

Statistical difference - the excess of supply over demand. A statistical difference arises when figures are gathered from a variety of independent sources and reflect differences in timing, definition of coverage, commodity definition and also in metering and accounting. A non-zero statistical difference is generally expected.