Cabinet Office

Energy Trends 2024

August 2025

Government of Jersey

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[1].

The focus of the report is energy supply and use in 2024. Figures are also presented for the last five calendar years. Longer term trends going back to the 1990s are shown for primary energy supply, road fuel consumption, and 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. Jersey's "Carbon Neutral Roadmap" [2] was published in 2022 and sets out the Island's journey to carbon neutrality in line with commitments under the Paris Agreement.

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 and submitted to the international inventories as part of the UK's national inventory.[3]

Energy Trends reports up to and including the report for 2023 were produced by Statistics Jersey. Responsibility for producing the report for 2024 has transferred to the Cabinet Office and the same underlying methodology has been maintained. Changes in the 2024 report are limited to a revision to consuming sectors[4] and some additional detail by type of liquid fuel.

Every Energy Trends report relies on data provided by the entities involved with the supply of energy within Jersey. Some have taken the opportunity to update data provided for previous years and Appendix Table A2 contains an updated energy balance for 2023.[5] Once again thanks are due to those in Jersey's energy industry who have provided data and assistance.

[1] Throughout this report:

- Numbers have been rounded independently to the nearest integer, hence contributions shown may not sum to their total.
- 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%

[2] Carbon Neutral Roadmap

[3] Greenhouse gas emissions

[4] The consuming sector 'Residential' reflects households; 'Commercial' includes government; 'Air', 'Marine' and 'Agriculture' are shown separately. Changes for 2024 report will assist the compilation of the greenhouse gas emissions.

[5] References to 2023 in this report have been updated to reflect new data that has become available since the 2023 report was published.

Summary for 2024

Supply

- Total primary energy supply has a decreasing trend over several decades.
- Jersey's total primary energy supply (TPES) in 2024 was 1% lower than in 2023.
- In 2024 almost all of Jersey's energy supply was imported; about 3% was produced on-Island as electricity generated by the Energy Recovery Facility and Jersey Electricity solar panels.
- Liquid fuels[6] accounted for almost three-fifths (59%) of Jersey's energy supply; electricity (imported and on-Island generated) accounted for the remainder (41%).

Use

- Total final energy consumption (FEC) was 0.5% lower than in 2023.
- Energy consumption per head of resident population remained at 1.3 tonnes of oil equivalent ('toe') which is lower than that of the UK (1.8 toe).
- Of total energy used, 39% was for residential use, 33% for transportation (predominantly road) and 28% for commercial, government and agriculture use.
- The reduction in consumption of petrol and motor diesel continued in 2024.
- For the first time the report includes data on non-fossil fuels consumed for road use.

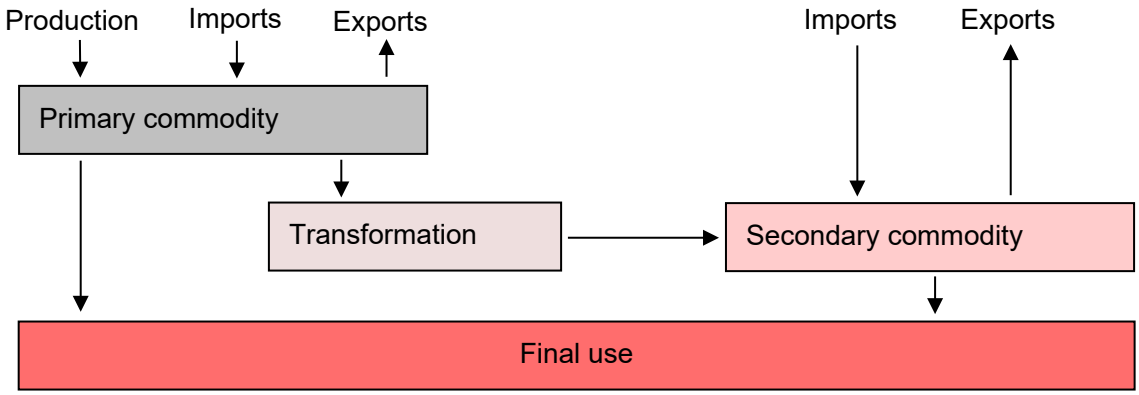
[6] 'Liquid fuels' includes both petroleum and non-fossil fuel (Hydrotreated Vegetable Oil).

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: The commodity balance consists of the supply and use of different types of fuel
Illustration of a commodity balance



Energy balance

The overall flow of energy in Jersey may be examined by combining all 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[7] into a standardised unit based on calorific value.

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.

[7] Conversion factors used were from: Digest of UK Energy Statistics (DUKES) 2024 - GOV.UK (UK Government Department for Energy Security & Net Zero, July 2024)

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 liquid fuels (primarily petroleum products) and imported electricity. There is also a small contribution (around 3%) to TPES from electricity generated within Jersey by the Energy Recovery Facility (formerly known as Energy from Waste) and Jersey Electricity solar panels.[8]

Table 1 shows TPES for each year from 2020 to 2024. Liquid fuels accounted for just under three-fifths (59%) of Jersey's TPES in 2024. Electricity (imported and on-Island generated) accounted for the remainder (41%).

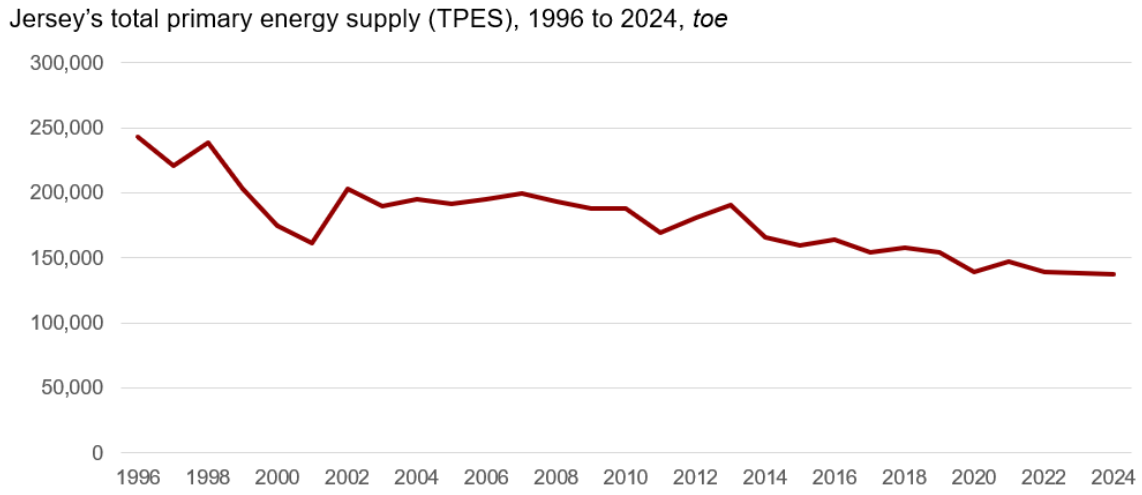
Table 1: Jersey's total primary energy supply (TPES) 2020 to 2024; toe

	2020	2021	2022	2023[5]	2024
Total primary energy supply	138,926	147,572	139,055	138,255	137,139

TPES in 2024 was 1% lower than in 2023.

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

Figure 2: TPES has a decreasing trend over several decades



[8] Electricity generated from private generation (eg solar or wind) is not metered by Jersey Electricity and is not included.

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

- a decreasing level, from between 200,000 and 250,000 toe during the 1990s to between 150,000 and 200,000 toe since the turn of the millennium to 2019. The decrease has been less pronounced in recent years, though continues. A key factor in this decrease 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. TPES has remained below 150,000 toe since 2020.
- a downward trend in TPES since around 2007 due to a range of factors, including a decrease in the use of kerosene for domestic heating and of motor fuels for transportation.

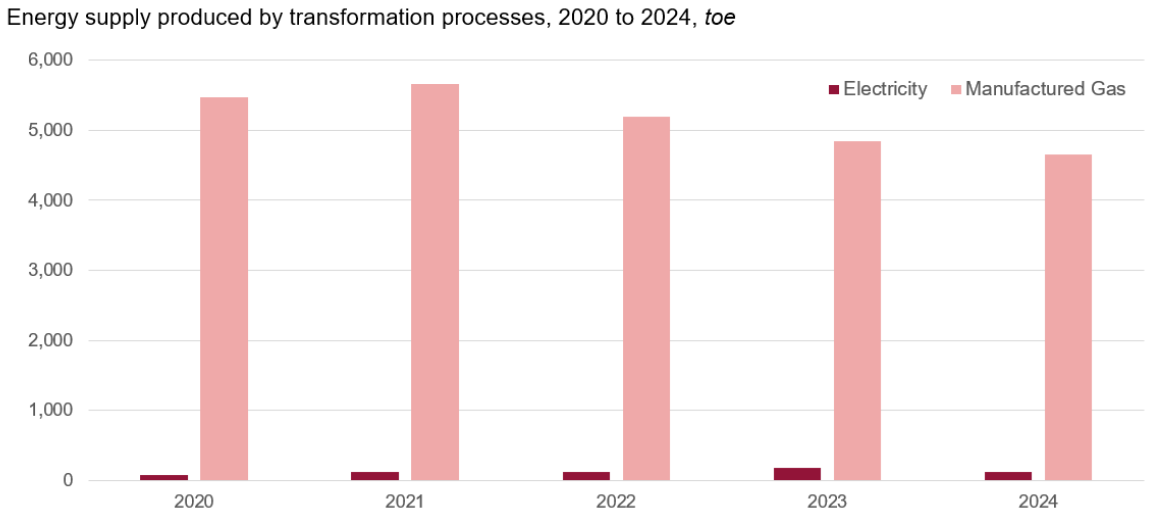
Transformation

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 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 generation of electricity from petroleum products, although the amounts produced from this are very small

The supply of energy produced by on-Island transformations each year from 2020 to 2024 is shown in Figure 3.

Figure 3: Energy supply produced by the transformation process was 5% lower than 2023



The quantity of manufactured gas produced in 2024 was 4,653 toe, which is 4% lower than in 2023. Over the last 5 years, quantities of manufactured gas produced have decreased from a little under 5,500 toe in 2020 to a little over 4,500 toe in 2024.

In 2024, Jersey Electricity used 396 toe of petroleum products to generate 122 toe of electricity.

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 2020 to 2024 and FEC per head of resident population.

Table 2: Final energy consumption and per head of population 2020 to 2024, *toe*

	2020	2021	2022	2023[5]	2024
FEC	134,753	143,041	135,976	133,431	132,776
FEC per head of population	1.3	1.4	1.3	1.3	1.3

FEC in 2024 was the lowest level in the last five years.

FEC per head of population in Jersey from 2020 to 2024, has been either 1.3 or 1.4 toe. Energy consumption per head of population in Jersey in 2024 continued to be lower than that of the UK (1.8 toe).[9]

Jersey's FEC, broken down by fuel type for each year from 2020 to 2024, is shown in Table 3.

Table 3: FEC by fuel type, 2020 to 2024; toe

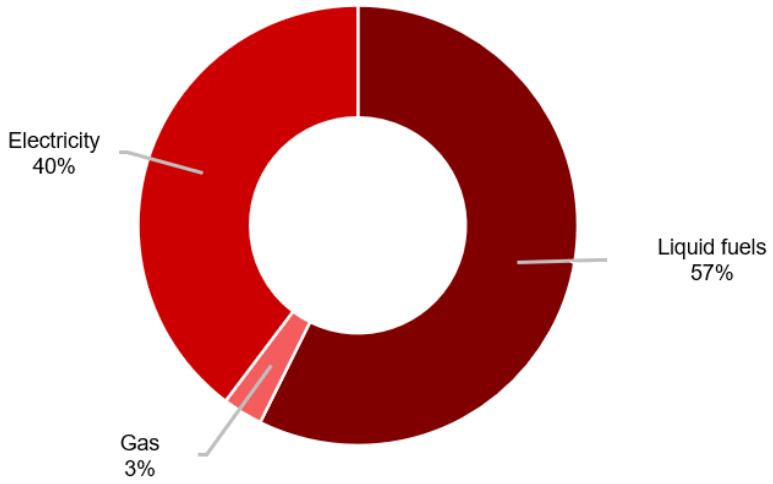
	2020	2021	2022	2023[5]	2024
Liquid fuels	76,864	83,368	79,487	77,142	76,128
Gas	4,961	4,965	4,283	4,110	3,921
Electricity	52,928	54,708	52,206	52,179	52,727
Total FEC	**134,753**	**143,041**	**135,976**	**133,431**	**132,776**

[9] FEC per head of population for the UK has been derived from

- FEC: ECUK_2024: Energy Consumption in the UK (Table C1) and
- Population: United Kingdom population mid-year estimate - Office for National Statistics which provided the most current figures available at the time this report was published.

Figure 4: The majority of Jersey's FEC was accounted for by liquid fuels in 2024 (57%)

Jersey's total final energy consumption (FEC) by fuel type, 2024, *toe*



Liquid fuels accounted for just under three-fifths (57%) of consumption. Electricity accounted for two-fifths (40%) and manufactured gas the remainder (3%).

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

Table 4: FEC by final end use sector, 2020 to 2024; toe

	2020	2021	2022	2023[5]	2024
Residential	58,190	60,346	52,017	51,552	51,631
Commercial[10]	37,100	38,566	36,588	35,744	35,519
Road[11]	34,308	36,441	34,802	33,719	33,012
Air and marine[12]	5,154	7,687	12,568		
Air				7,456	7,552
Marine				3,657	3,779
Agriculture[13]				1,302	1,283
Total FEC	**134,753**	**143,041**	**135,976**	**133,431**	**132,776**

[10] 'Commercial' data includes consumption by government. Prior to 2023 it also includes Agriculture.

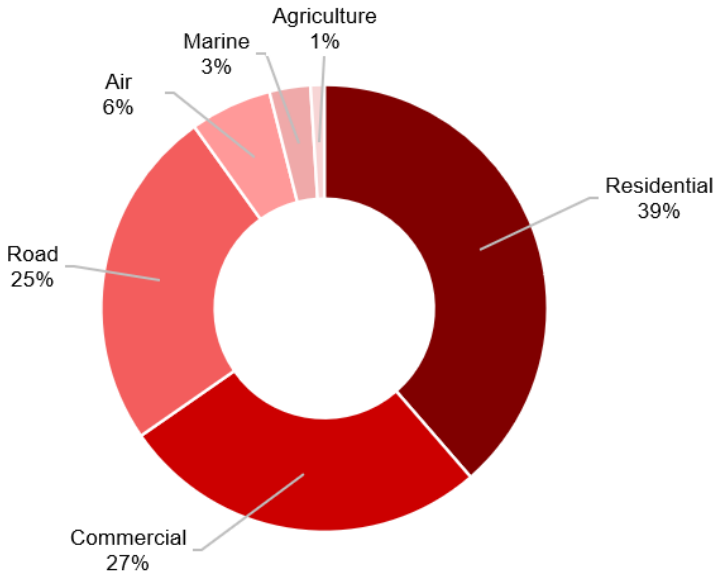
[11] 'Road' includes an amount for electricity delivered through specific charging schemes across both public and home-charging. An unknown amount of electricity from standard Residential supply may also be used to charge vehicles for Road use. The amount of electricity shown for Road use should therefore be considered as a known minimum.

[12] 'Air' and 'Marine' categories both cover 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.

[13] Agriculture is the volume through known schemes. There may be amounts included in other categories.

Figure 5: The Residential sector was the largest consumer of energy in Jersey in 2024

FEC by final end use sector, 2024, *toe*



In 2024, almost two-fifths (39%) of Jersey's energy was consumed by the residential sector, around a third (33%) was consumed for transportation (road, air and marine) and the remainder (28%) was consumed for commercial, government and agricultural[13] purposes.

Energy balance

An energy balance shows the flows of all forms of energy within a jurisdiction, from supply to final consumption. This includes transformations, losses and the energy industry's own use, presented in one common unit of measurement (toe).[14]

Table 5: Energy Balance for Jersey, 2024; *toe*

	Liquid fuels	Gas	Electricity	Total
Production	0	0	3,690	3,690
Net Imports[15]	79,271	0	52,756	132,027
Stock change	1,422	0	0	1,422
Primary supply	**80,693**	**0**	**56,446**	**137,139**
Statistical difference[16]	-355	225	130	0
Primary demand	**81,048**	**-225**	**56,316**	**137,139**
Transformations				
Electricity Generation	-396	0	122	-274
Gas supply	-4,524	4,653	0	129
Energy industry own use and losses	0	507	3,711	4,218
Final consumption	**76,128**	**3,921**	**52,727**	**132,776**
Commercial	10,743	2,628	22,149	35,519
Residential	19,838	1,293	30,500	51,631
Road[11]	32,933	0	79	33,012
Air[12]	7,552	0	0	7,552
Marine[12]	3,779	0	0	3,779
Agriculture[13]	1,283	0	0	1,283

Appendix Table A1 contains a further breakdown of liquid fuels by consuming sector in 2024.

[14] 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: www.gov.uk/government/publications/energy-balance-methodology-note

[15] Net Imports is the sum of imports minus exports

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

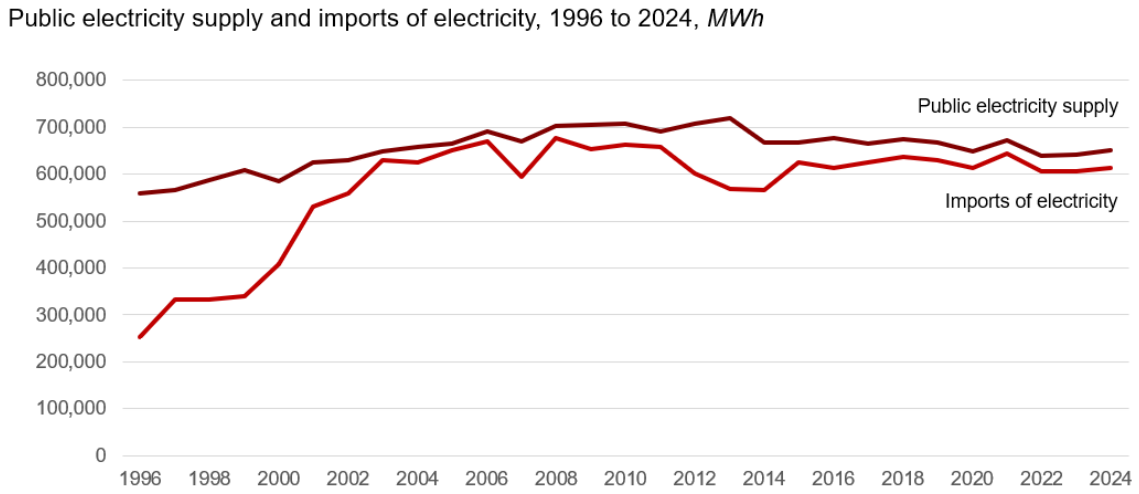
Individual fuel types

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 liquid fuels in tonnes.

Electricity

Since 1994, the overall public electricity supply (PES)[17] and the proportion of electricity imported into Jersey has increased. Since 2014 decreases in PES have been partly reversed by increases over the last two years. Overall public supply of electricity in 2024 was 1.3% higher than in 2023. See Figure 6.

Figure 6: Imported electricity accounted for 94% of Jersey's electricity supply in 2024



Throughout the 1990s imported electricity accounted for between 40% and 60% of Jersey's public electricity supply. Since 2017 it has been between 94% and 96%. In 2024 it was 94%.

Liquid fuels

The category 'liquid fuels' covers a range of fuels, the majority of which are derived from crude oil. Such products accounted for over half (57%) of Jersey's overall final energy consumption (FEC) in 2024, see Figure 4.

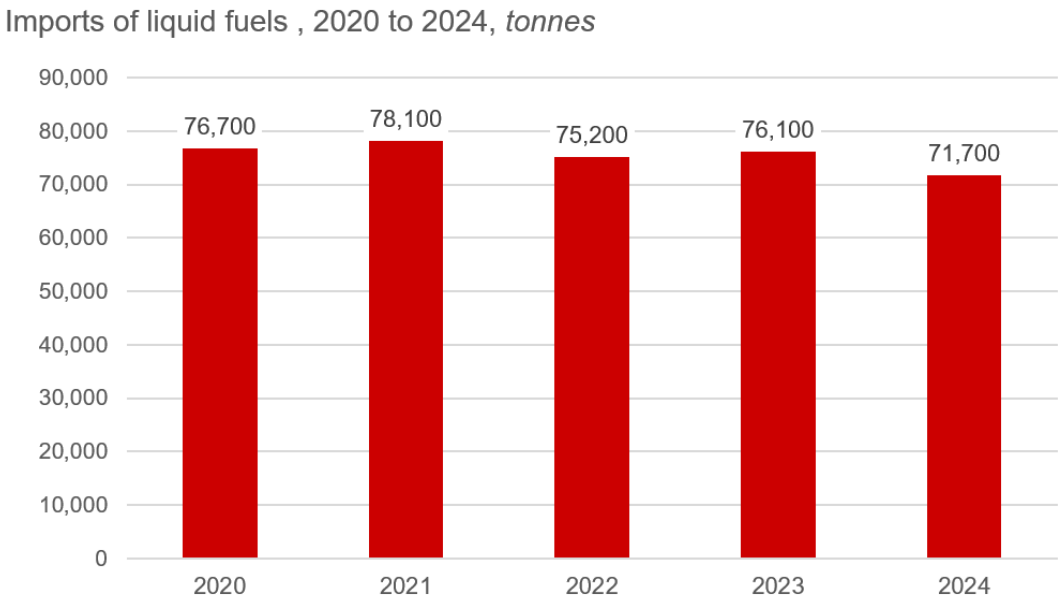
All the liquid fuels supplied and used in Jersey are imported; around 72,000 tonnes of liquid fuels were imported in 2024, which is 6% lower than 2023.[18]

[17] 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 Energy Recovery Facility).

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

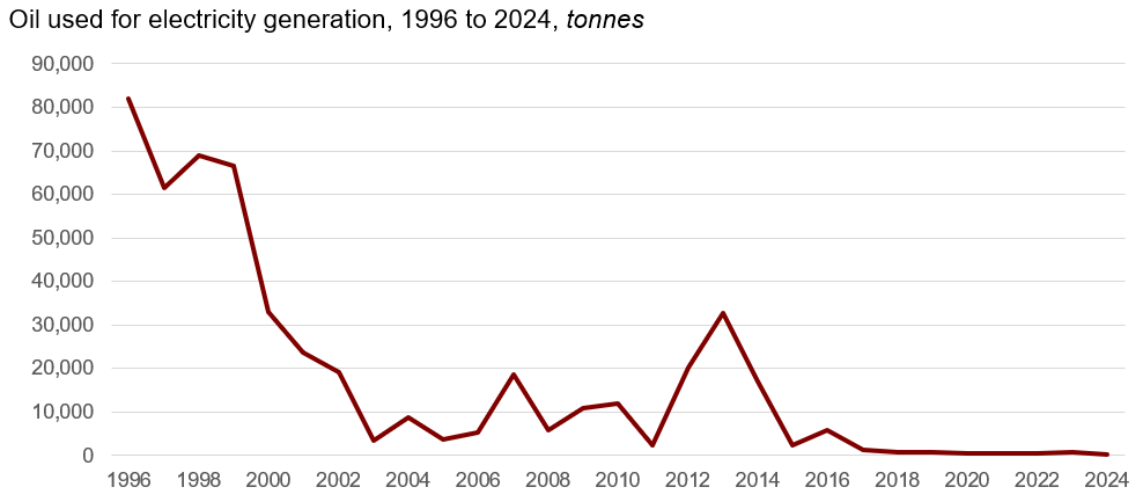
The imported quantities of liquid fuels in each year from 2020 to 2024 are shown in Figure 7 (see Glossary for descriptions of products included).

Figure 7: In 2024, Imports of liquid fuels were 4,400 tonnes (6%) lower than in 2023



Some of these imports were used to generate electricity and produce manufactured gas. Since the 1990s, there has been a considerable reduction in the use of petroleum liquid fuels to generate electricity in Jersey. This was a result of the increased importation of electricity through submarine cables, see Figure 8.

Figure 8: In 2024, the amount oil used to generate electricity was lower than in 2023

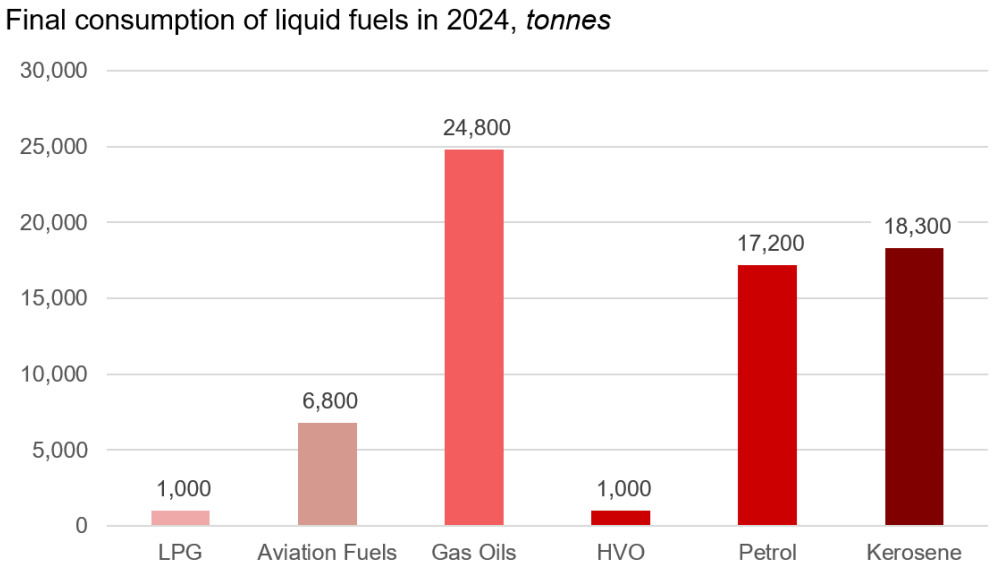


In the 1990s around 80,000 tonnes of oil were used each year to generate electricity on-Island. In 2024 this figure had reduced to 366 tonnes.

Liquid fuels that are not used in transformations constitute the final consumption. Of the final consumption of liquid fuels in 2024, gas oils (including road diesel, marine diesel and other gas oil) accounted for 36%, and kerosene for 26%. Sales of petrol accounted for around a quarter

(25%), with aviation fuels (10%), LPG (1%) and Hydrotreated Vegetable Oil (HVO) (1%) making up the remainder. See Figure 9.

Figure 9: Over a third (36%) of the final consumption of liquid fuels was in gas oils



Petrol and motor diesel consumption has decreased by 6% from 2020 to 2024. Data on consumption of HVO and electricity for Road use[11] is included in this report for the first time.

Note that Table 6 shows volumes in toe so that electricity can be included alongside the liquid fuel types.

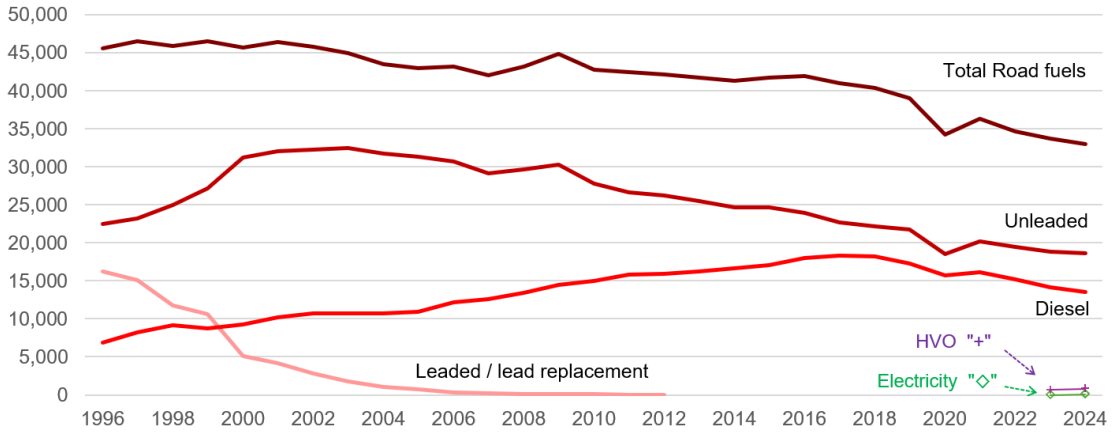
Table 6: Road fuel consumption, 2020 to 2024; *toe*

	2020	2021	2022	2023[5]	2024
Unleaded petrol	18,522	20,183	19,476	18,829	18,622
Motor diesel	15,694	16,152	15,182	14,151	13,514
HVO				722	798
Electricity				17	79
Total road fuels	**34,216**	**36,335**	**34,658**	**33,719**	**33,012**

Overall, there has been a decrease in the long-term consumption of petrol and motor diesel since the 1990s (see Figure 10).

Figure 10: The reduction in consumption of petrol and motor diesel continued in 2024

Road fuel consumption, 1996 to 2024, *toe*



Energy use in homes

Table 7 shows final energy consumption by households in Jersey over the period from 2020 to 2024, broken down by fuel type. Variations in weather temperatures[19] are a factor in annual fluctuations.

Table 7: Household final energy consumption, 2020 to 2024; toe

	2020	2021	2022	2023[5]	2024
Liquid fuels	25,023	25,747	21,010	20,166	19,838
Manufactured gas	2,516	2,335	1,635	1,371	1,293
Electricity	30,652	32,264	29,372	30,015	30,500
Total household consumption	**58,190**	**60,346**	**52,017**	**51,552**	**51,631**

In 2024 electricity consumption accounted for over half of total domestic consumption (59%); liquid fuels accounted for 38%; and gas accounted for the remainder (3%).

[19] Information on temperatures in Jersey is available at Jersey Met climate page.

Appendices

Table A1: Liquid fuels consumption, by product and consuming sector in 2024, *toe*

	Commercial	Residential	Road	Marine	Air	Agriculture	All sectors
Gas oil	7,948	338	22	0	0	1,283	**9,591**
Diesel (100% mineral)	621	0	10,549	0	0	0	**11,170**
Diesel blends	0	0	2,943	0	0	0	**2,943**
Marine diesel	0	0	0	3,170	0	0	**3,170**
Petrol (100% mineral)	64	0	15,343	486	0	0	**15,892**
Petrol blends	0	0	3,279	124	0	0	**3,403**
LPG[20]	236	943	0	0	0	0	**1,178**
HVO	176	95	798	0	0	0	**1,069**
Aviation spirit	0	0	0	0	145	0	**145**
Aviation turbine fuel	0	0	0	0	7,407	0	**7,407**
Kerosene	1,698	18,462	0	0	0	0	**20,160**
Total	**10,743**	**19,838**	**32,933**	**3,779**	**7,552**	**1,283**	**76,128**

[20] LPG in the table represents “bottled” products.

Table A2 Energy Balance for Jersey, 2023 (updated); *toe*

The balance for 2023 has been updated since the publication of the report for 2023 in order to reflect new data that has become available.

	Liquid fuels	Gas	Electricity	Total
Production	0	0	3,427	3,427
Net Imports[15]	84,382	0	52,134	136,517
Stock change	-1,689	0	0	-1,689
Primary supply	**82,694**	**0**	**55,561**	**138,255**
Statistical difference[16]	129	209	-104	234
Primary demand	**82,565**	**-209**	**55,665**	**138,020**
Transformations				
Electricity Generation	-731	0	182	-549
Gas supply	-4,691	4,847	0	156
Energy industry own use and losses	0	528	3,668	4,196
Final consumption	**77,142**	**4,110**	**52,179**	**133,431**
Commercial	10,859	2,738	22,147	35,744
Residential	20,166	1,371	30,015	51,552
Road[11]	33,702	0	17	33,719
Air[12]	7,456	0	0	7,456
Marine[12]	3,657	0	0	3,657
Agriculture[13]	1,302	0	0	1,302

Table A3: Liquid fuels consumption, by product and consuming sector in 2023, *toe*

	Commercial	Residential	Road	Marine	Air	Agriculture	All sectors
Gas oil	7,877	229	20	0	0	1,302	**9,428**
Diesel (100% mineral)	839	1	10,436	0	0	0	**11,275**
Diesel blends	0	0	3,695	0	0	0	**3,695**
Marine diesel	0	0	0	3,057	0	0	**3,057**
Petrol (100% mineral)	95	0	15,754	487	0	0	**16,336**
Petrol blends	0	0	3,075	113	0	0	**3,189**
LPG[20]	84	1,058	0	0	0	0	**1,143**
HVO	149	82	722	0	0	0	**953**
Aviation spirit	0	0	0	0	150	0	**150**
Aviation turbine fuel	0	0	0	0	7,306	0	**7,306**
Kerosene	1,815	18,796	0	0	0	0	**20,611**
Total	**10,859**	**20,166**	**33,702**	**3,657**	**7,456**	**1,302**	**77,142**

Glossary

Fossil fuel - a material formed naturally in the Earth's crust from the buried remains of prehistoric organisms (animals, plants or microplanktons), a process that occurs within geological formations. For example coal, petroleum and natural gas.

Liquid Fuels

The following are included within the definition of liquid fuels:

Aviation spirit– a light hydrocarbon oil product used to power piston-engine aircraft; also known as 'Av Gas'**.**

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' or 'JET A1'

Biodiesel - A form of diesel fuel, produced from vegetable oils or animal fats by mixing them with ethanol or methanol to break them down.

Diesel blend – a motor diesel fuel which includes a proportion of biodiesel, such as B7

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.

Hydrotreated Vegetable Oil (HVO) - a biofuel made from vegetable oil.

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

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

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

Petrol blend – a motor spirit which includes a proportion of ethanol, such as E10.

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.

Gas

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

Available supply – the sum of supply and transformation.

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

The prior year's calorific values are used due to their availability at time of analysis.

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

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

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

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

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

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. Non-zero statistical differences are generally expected within the balance.

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.