

Japan - Energy System Overview



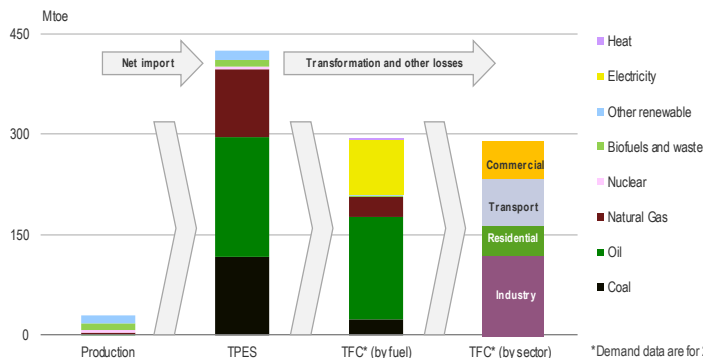
General information

Japan		
Country size	377 000 km ²	8th compared to IEA countries
Population (2016)	126.8 million	11.2% of IEA population
GDP (2016)	4496 billion USD 2010 prices and PPPs	* PPP = Purchasing Power Parities

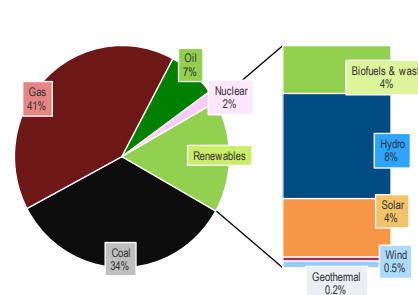
Energy system transformation

SUPPLY AND DEMAND 2016

TPES: 423.8 Mtoe, 5% renewables (IEA average 10%)



ELECTRICITY GENERATION: 1017.8 TWh
16% renewables (IEA average: 24%)

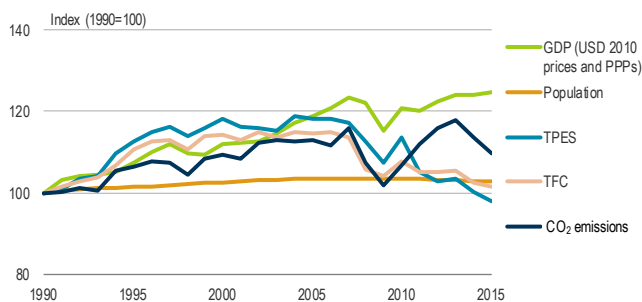


Fuel shares compared to IEA average

Fuel	TPES (%)	IEA average* (%)	IEA range (%)	Electricity (%)	IEA average (%)	IEA range (%)
Coal	28	17	0-69	34	28	0-84
Oil	42	36	7-58	7	2	0-10
Gas	24	27	2-40	41	27	1-51
Hydro	2	2	0-43	8	13	0-96
Nuclear	1	10	0-44	2	19	0-73
Biofuels	2	6	2-27	4	3	0-26
Wind	0	1	0-7	1	6	0-42
Geothermal	0	1	0-23	0	0	0-18
Solar	1	1	0-3	4	2	0-13

* IEA Average - total supply per fuel / TPES for 29 IEA countries

KEY ENERGY INDICATOR DEVELOPMENT, 1990-2015



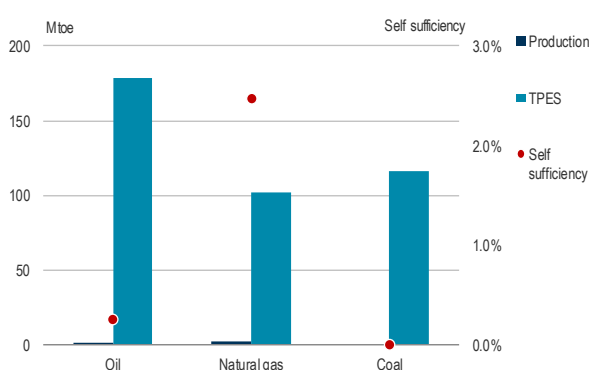
ENERGY AND CARBON INTENSITY (2016)

	Japan	IEA average
TPES per capita (toe/cap)	3.34	4.42
Electricity consumption per capita (MWh/cap)	7.75	8.69
Emissions* per capita (tCO ₂ /cap)	8.99	9.88
Energy intensity (TPES) (Mtoe/USD PPP million)	94	96
Emission* intensity (tCO ₂ /USD PPP million)	256	193

* CO₂ emissions from fuel combustion (2015 data)

Energy Security

PRODUCTION AND SELF SUFFICIENCY, 2016



ENERGY IMPORT/EXPORT

FUEL	QUANTITY	IMPORT/EXPORT COUNTRY
Crude Oil		
Imports	162.1 Mt	Saudi Arabia (37.7%)
Exports	0 Mt	-
Oil Products		
Imports	39.5 Mt	United States (20.7%)
Exports	18 Mt	Australia (24.9%)
Natural gas		
Imports	116.5 bcm	Australia (27.7%)
Exports	0 bcm	-
Coal		
Imports	189.4 Mt	Australia (63.7%)
Exports	0 Mt	Indonesia (100%)
ELECTRICITY		
Imports	0 TWh	-
Exports	0 TWh	-

Note: 2016 data are estimated

Source: IEA World Energy Balances 2017