

Finland - Energy System Overview



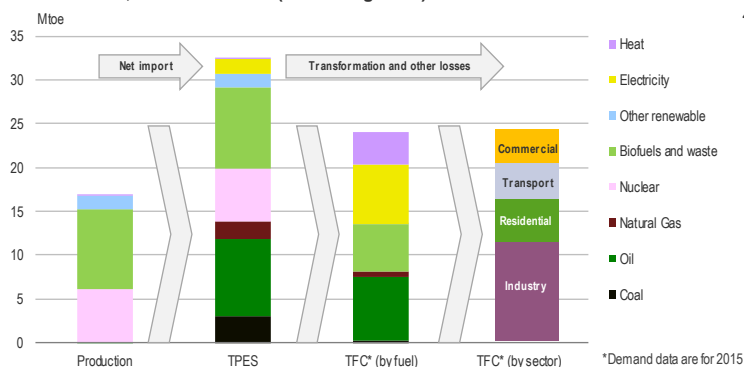
General information

Finland		
Country size	305 000 km ²	11th compared to IEA countries
Population (2016)	5.5 million	0.4% of IEA population
GDP (2016)	211 billion USD 2010 prices and PPPs	* PPP = Purchasing Power Parities

Energy system transformation

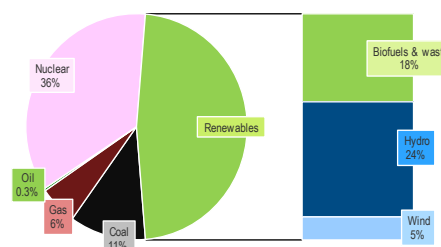
SUPPLY AND DEMAND 2016

TPES: 33.9 Mtoe, 32% renewables (IEA average 10%)



ELECTRICITY GENERATION: 68.6 TWh

45% renewables (IEA average: 24%)

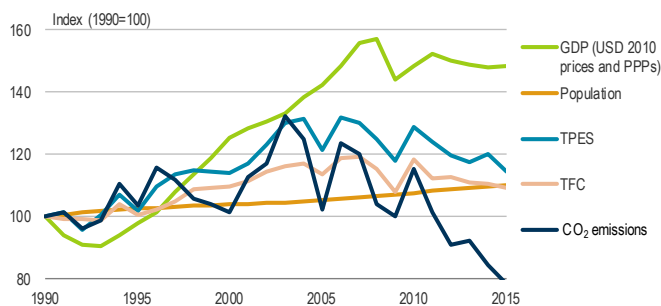


Fuel shares compared to IEA average

Fuel	TPES (%)	IEA average* (%)	IEA range (%)	Electricity (%)	IEA average (%)	IEA range (%)
Coal	9	17	0-69	11	28	0-84
Oil	26	36	7-58	0	2	0-10
Gas	6	27	2-40	5	27	1-51
Hydro	4	2	0-43	23	13	0-96
Nuclear	18	10	0-44	34	19	0-73
Biofuels	27	6	2-27	18	3	0-26
Wind	1	1	0-7	4	6	0-42
Geothermal	0	1	0-23	0	0	0-18
Solar	0	1	0-3	0	2	0-13

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

KEY ENERGY INDICATOR DEVELOPMENT, 1990-2015



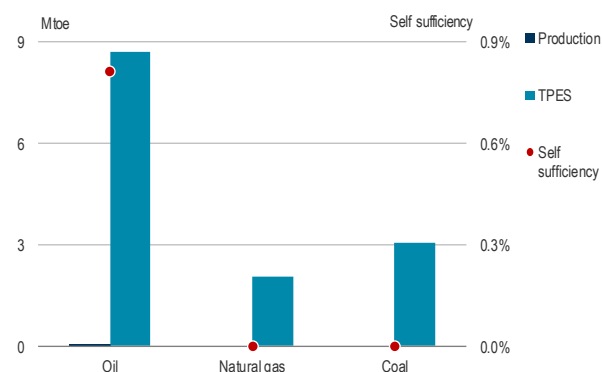
ENERGY AND CARBON INTENSITY (2016)

	Finland	IEA average
TPES per capita (toe/cap)	6.16	4.42
Electricity consumption per capita (MWh/cap)	15.49	8.69
Emissions* per capita (tCO ₂ /cap)	7.68	9.88
Energy intensity (TPES) (Mtoe/USD PPP million)	160	96
Emission* intensity (tCO ₂ / USD PPP million)	202	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	12.2 Mt	Russian Federation (88.1%)
Exports	0 Mt	-
Oil Products		
Imports	5.9 Mt	Russian Federation (44.2%)
Exports	8.9 Mt	Netherlands (20.2%)
Natural gas		
Imports	2.5 bcm	Russian Federation (100%)
Exports	0 bcm	-
Coal		
Imports	3.9 Mt	Russia Federation (64.2%)
Exports	0 Mt	-
ELECTRICITY		
Imports	21.5 TWh	Sw eden (80.9%)
Exports	5.1 TWh	Estonia (98.3%)

Note: 2016 data are estimated

Source: IEA World Energy Balances 2017