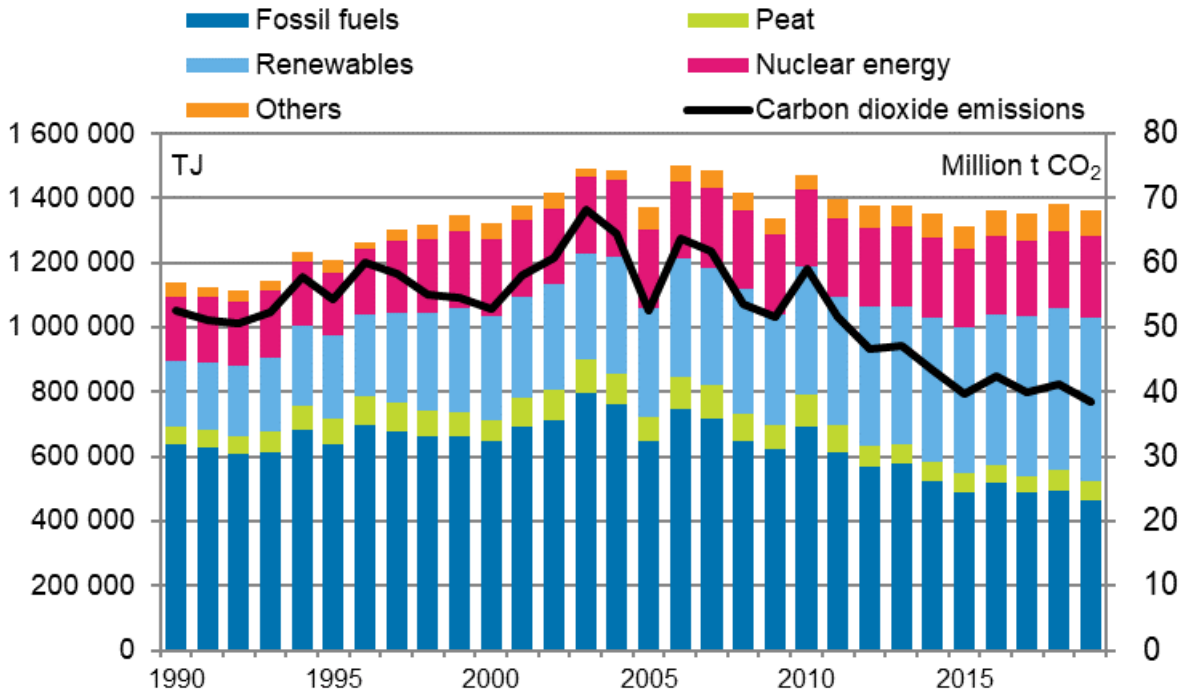
Energy supply and consumption

2019, 4th quarter

Consumption of fossil fuels decreased by 6 per cent in 2019

According to Statistics Finland's preliminary data, total consumption of energy in 2019 amounted to 1.36 terajoule (TJ), which corresponded to a drop of one per cent compared with the previous year. The fall was particularly caused by lower consumption of fossil fuels and peat. Carbon dioxide emissions from energy use of fuels decreased by nearly seven per cent as a result of fallen consumption of coal. Total consumption of electricity went down by two per cent to 86 terawatt hours (TWh).

Total energy consumption and carbon dioxide emissions 1990–2019*



The use of renewable energy sources grew by one per cent in 2019 and they covered 37 per cent of total energy consumption. The consumption of wood fuels grew for the fourth consecutive year and their consumption again rose record high in 2019. The use of wood fuels grew most in manufacturing and energy production, by three per cent. With their share of 28 per cent, wood fuels were the most used energy

source in Finland. The production of hydro power decreased for the fourth year in a row. The production of wind power continued to rise, breaking the production record of the previous year after a growth of two per cent.

The use of fossil fuels and peat went down by six per cent from the year before. The share of fossil fuels and peat in total energy consumption was 38 per cent, which was two percentage points lower than in the year before. The consumption of coal fell by 21 per cent, which was mainly due to decreased energy use of hard coal in combined heat and power production, separate production of electricity and manufacturing. The consumption of oil remained almost unchanged from the year before. The consumption of natural gas and peat declined by four and nine per cent, respectively. The fallen consumption of fossil fuels and peat was partly influenced by a considerable fall in separate production of electricity, tax increases concerning fuels at the beginning of the year and higher prices of emission rights.

Domestic production of electricity in 2019 was 66 TWh, which was two per cent less than one year ago. The production of nuclear power grew by five per cent and it covered 35 per cent of domestic production of electricity. The next most electricity was produced with combined production of electricity and heat, 33 per cent. The increase in the production of nuclear power covered for the fall in the production of hydro power and condensate power. Condensate power production decreased by 48 per cent from the previous year and its share of total electricity production was four per cent. Solar power production nearly doubled from the previous year, but its share of total electricity production was just three per mil. Hydro power accounted for 19 per cent and wind power for nine per cent of electricity production. In addition to domestic electricity production, total electricity production includes electricity imported from abroad. The volume of net imports of electricity remained almost unchanged in 2019. Altogether, 23 per cent of total electricity consumption was covered with net imports.

Final consumption of energy went down as a whole by two per cent. The fall was biggest in manufacturing, three per cent. The share of manufacturing in total final consumption stood at 45 per cent. The consumption of heating energy for buildings fell by one per cent from the previous year and its share of total energy consumption was 26 per cent. For transport, final energy consumption fell by one per cent and its share was 17 per cent.

Last year, diverse energy products were imported into Finland to the value of EUR 10.2 billion, which was 4 per cent less than one year earlier. Most energy products were imported from Russia, whose share of the value of imports was around 64 per cent. Respectively, energy products were exported from Finland to the value of EUR 5.6 billion, which was 3 per cent up on the year before.

Total energy consumption by source (TJ) and CO2 emissions (Mt)

Energy source, TJ[4)]	2019*	Annual change-%*	Percentage share of total energy consumption*
Oil	308,493	0	23
Coal[1)]	90,025	-21	7
Natural gas	72,752	1	5
Nuclear energy[2)]	250,102	5	18
Net imports of electricity[3)]	72 151	1	5
Hydro power[3)]	44,231	-7	3
Wind power[3)]	21,420	2	2
Peat	56,308	-9	4
Wood fuels	377,726	1	28
Others	68,580	3	5
TOTAL ENERGY CONSUMPTION	1,361,787	-1	100
Bunkers	49,018	6	.
CO2 emissions from fuel combustion	39	-7	.

1) Coal: includes hard coal, coke, blast furnace gas and coke oven gas.

2) Conversion of electricity generation into fuel units: Nuclear power: 10.91 TJ/GWh (33% total efficiency)

3) Conversion of electricity generation into fuel units: Hydro power, wind power and net imports of electricity: 3.6 TJ/GWh (100%)

4) *Preliminary

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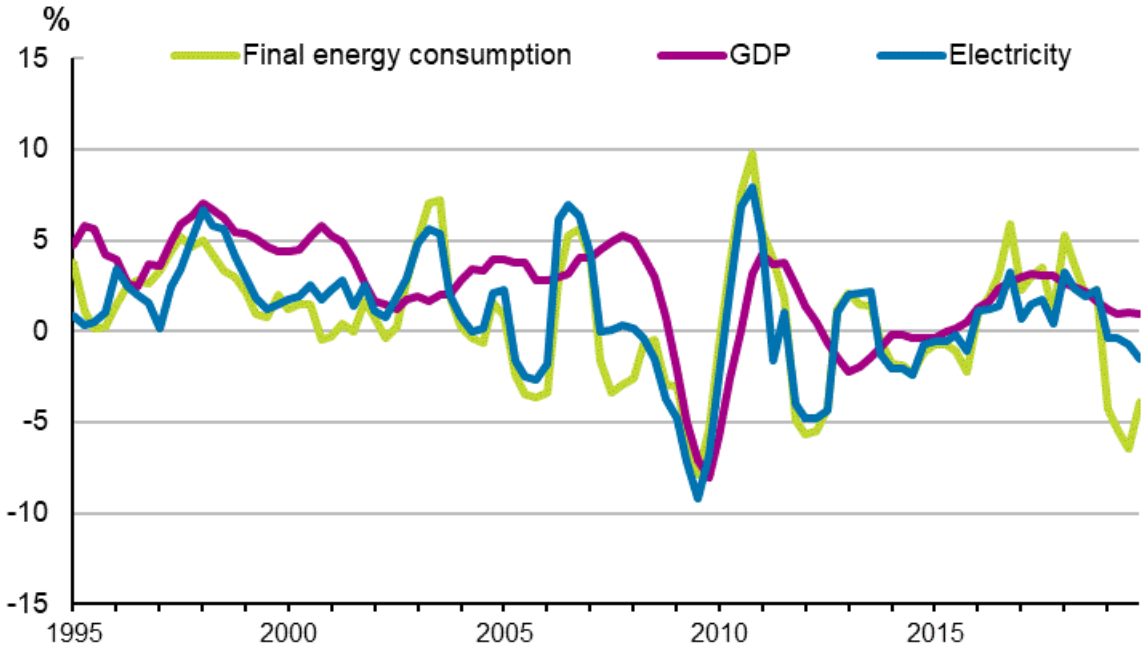

*preliminary

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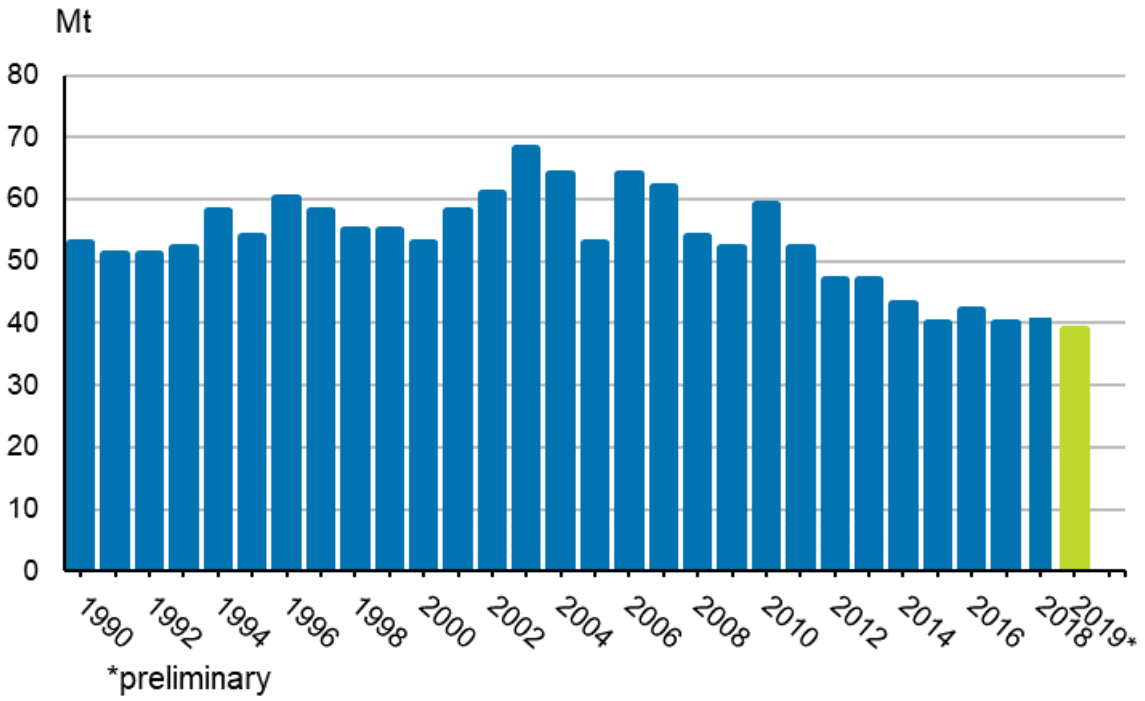

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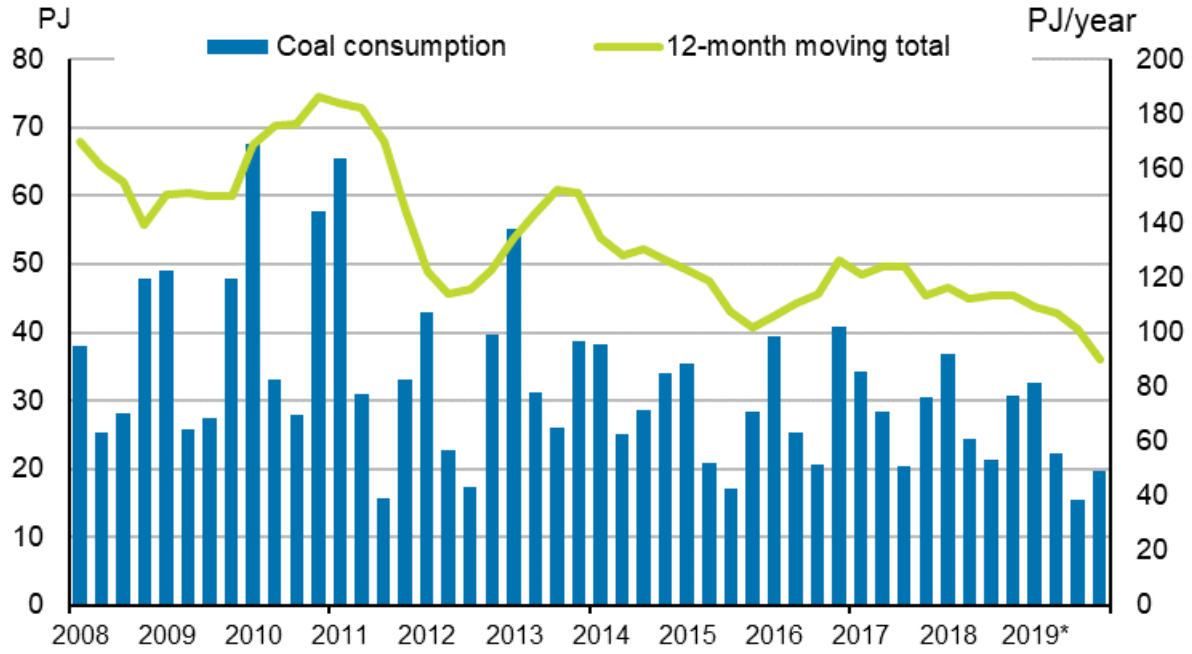

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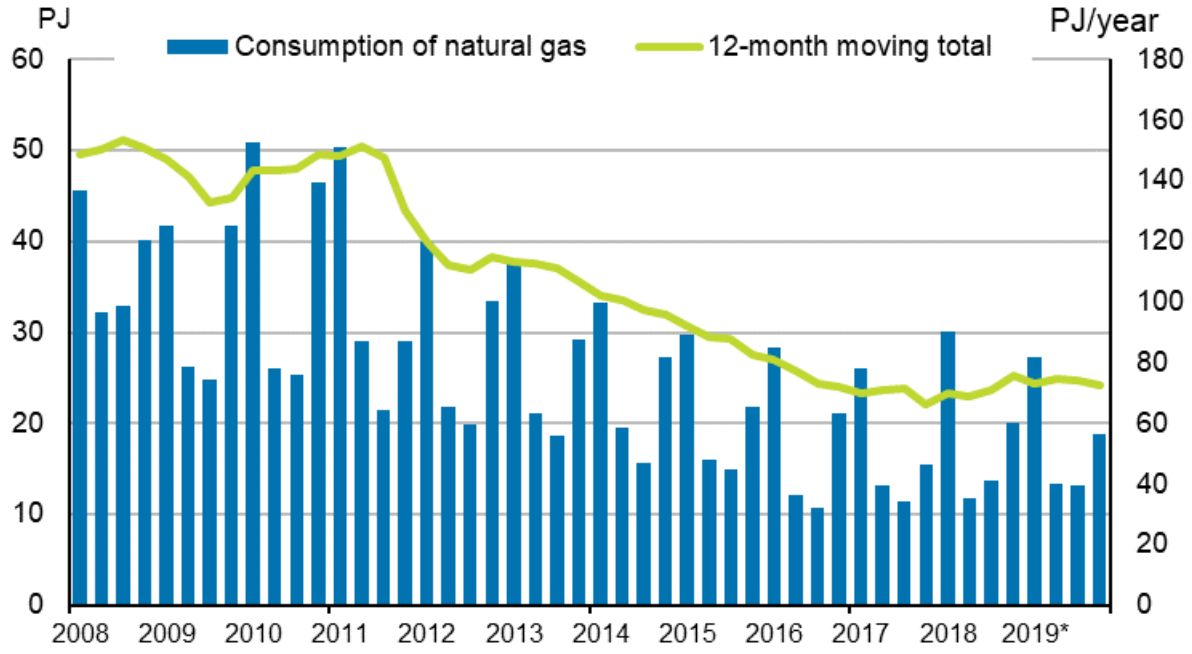

Source: Gasum Oy, *preliminary

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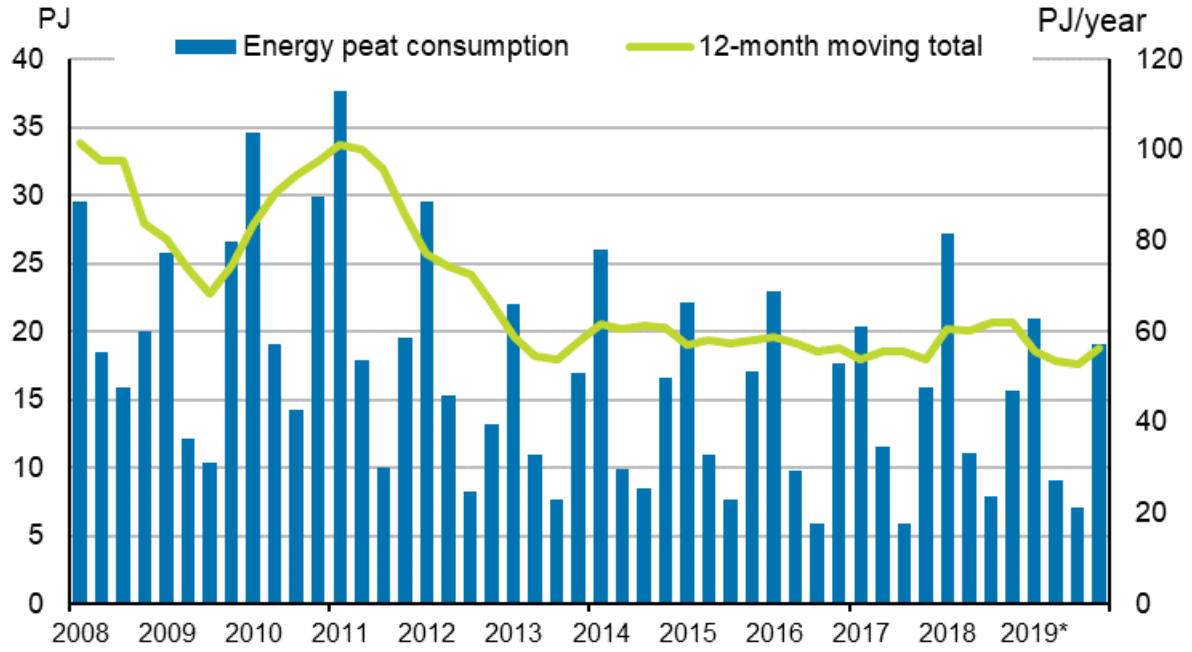

Source: The Bioenergy Association of Finland, *preliminary

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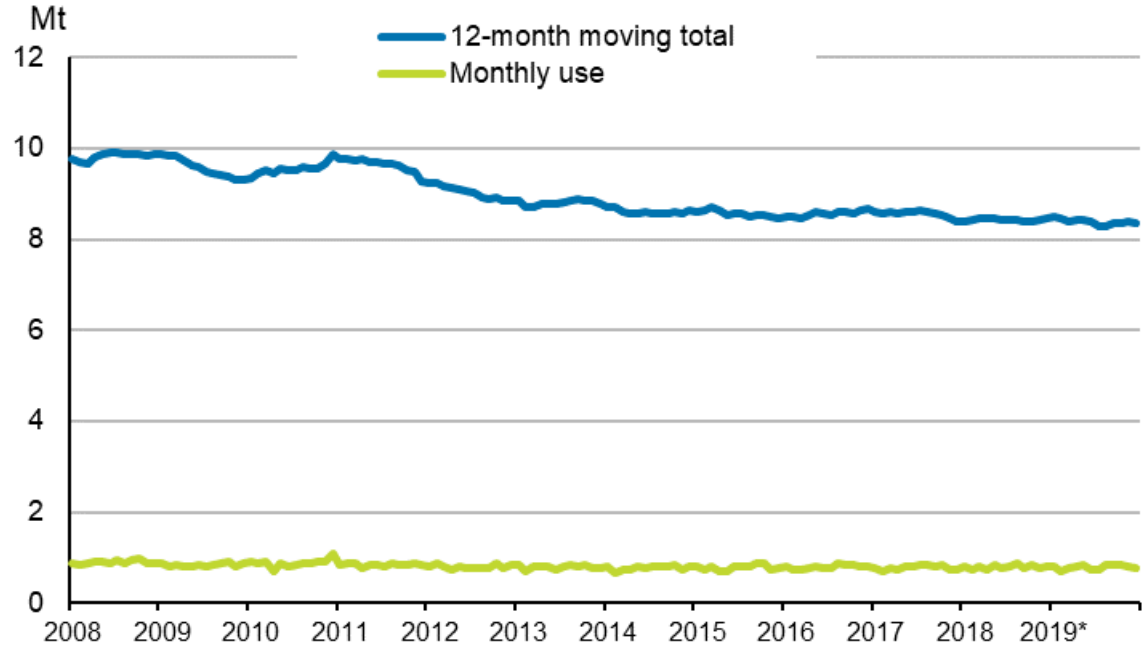

Source: Finnish Petroleum and Biofuels Association

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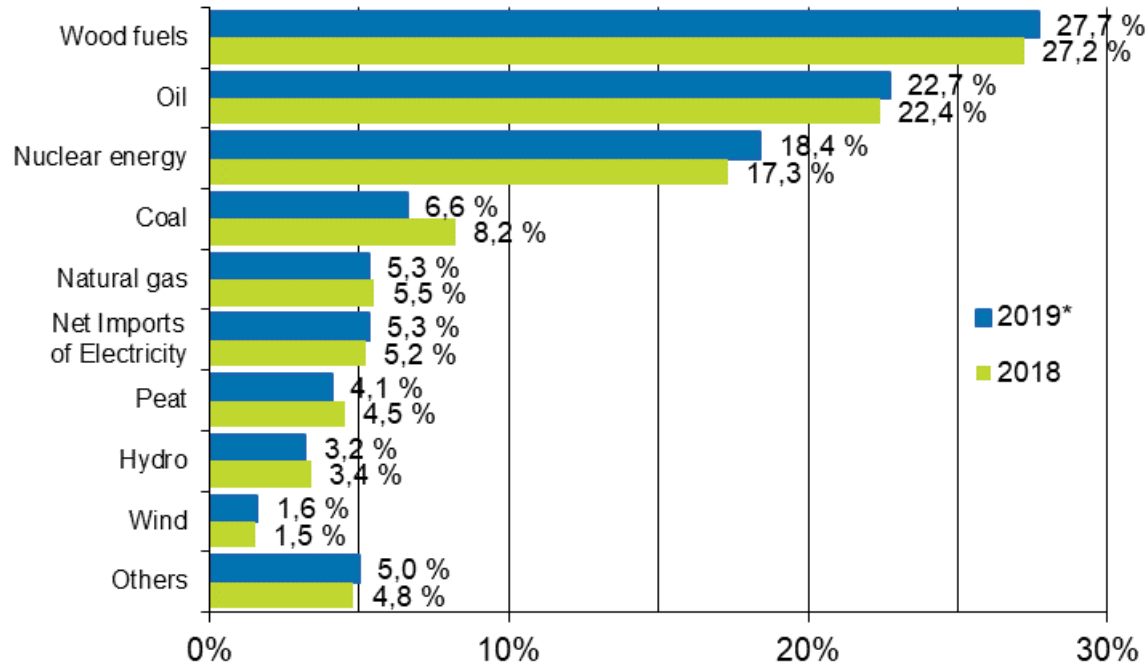

*preliminary

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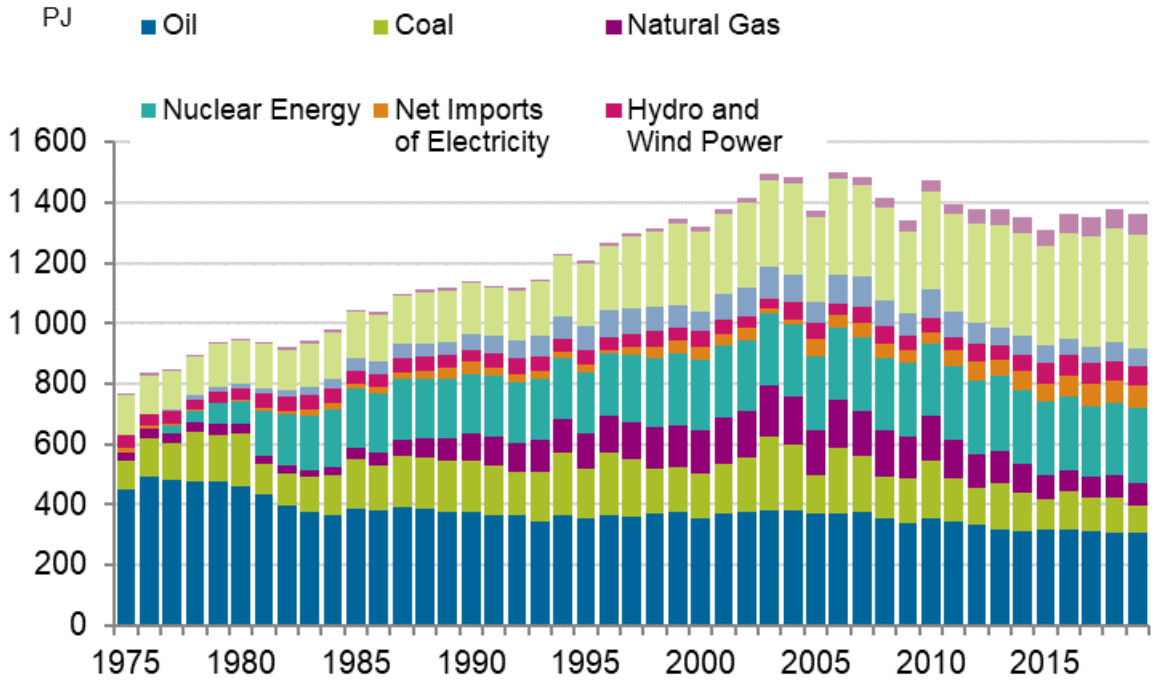

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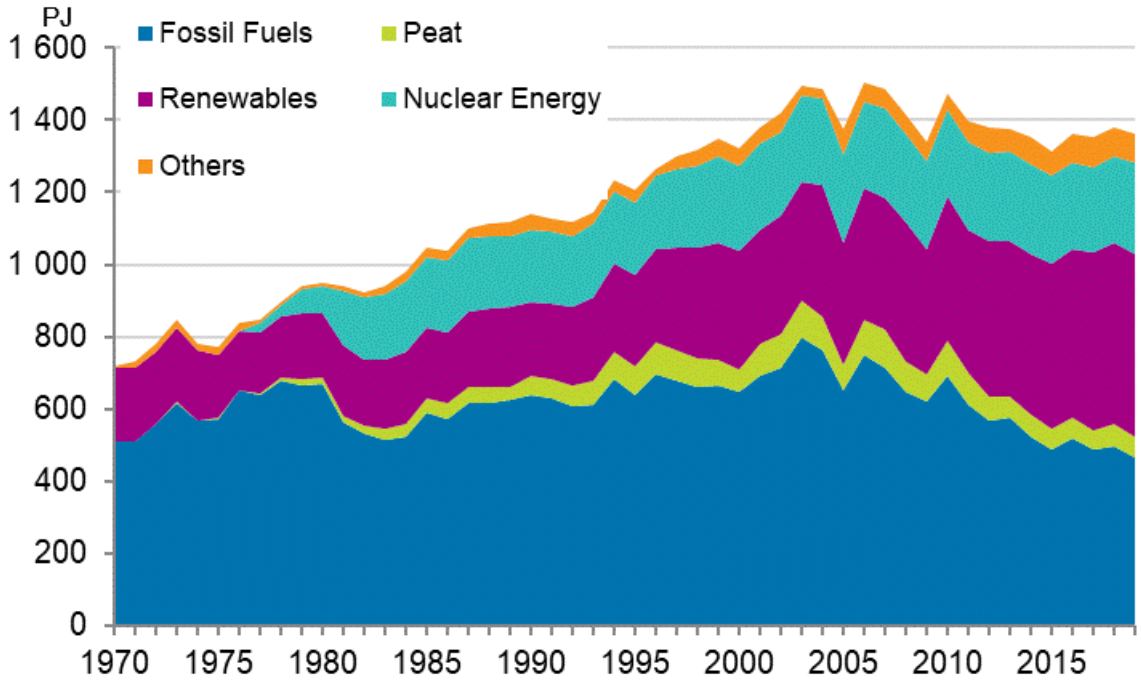

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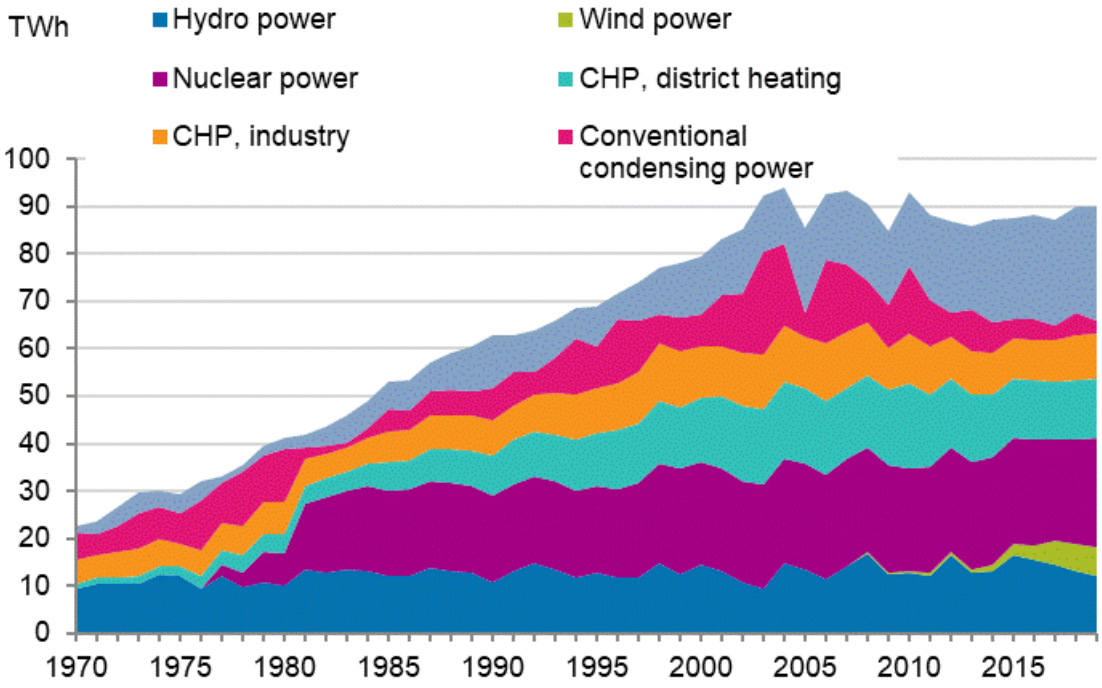

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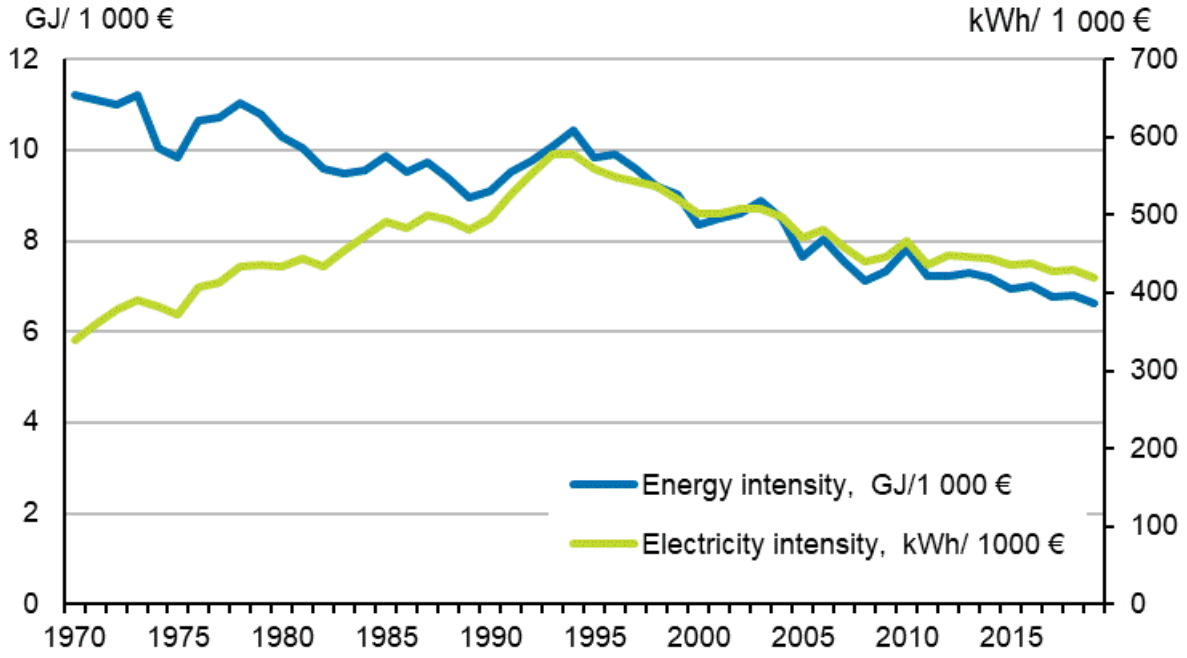

*year 2016 preliminary

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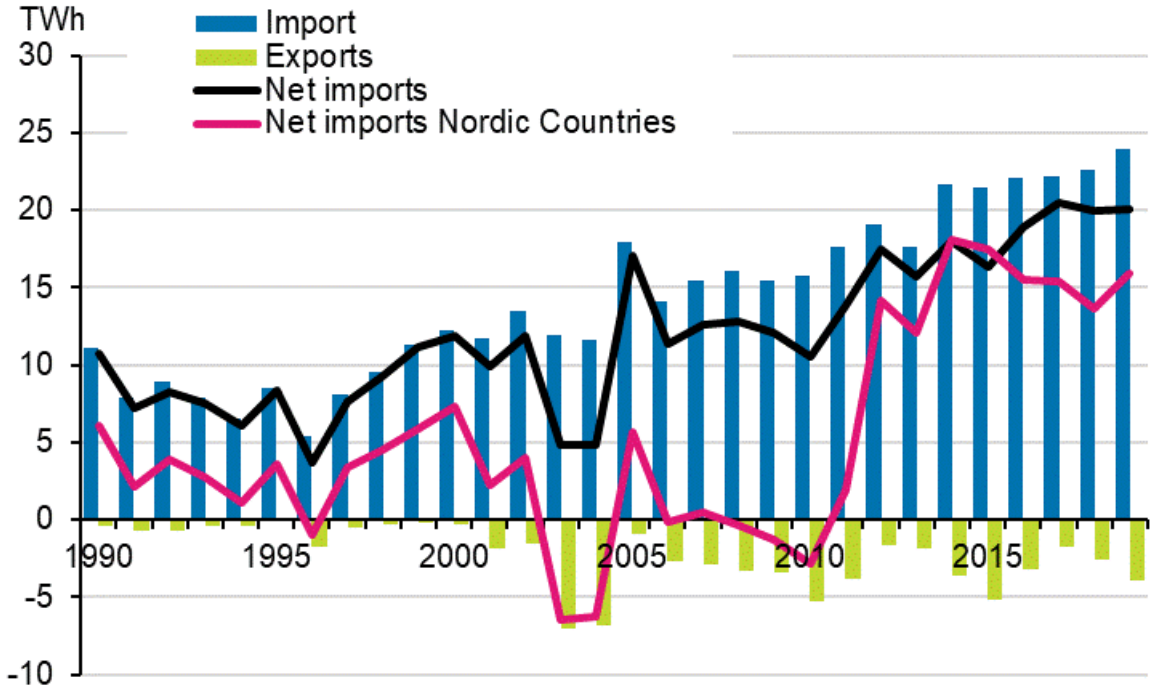

Source: Finnish Energy Industries, *preliminary

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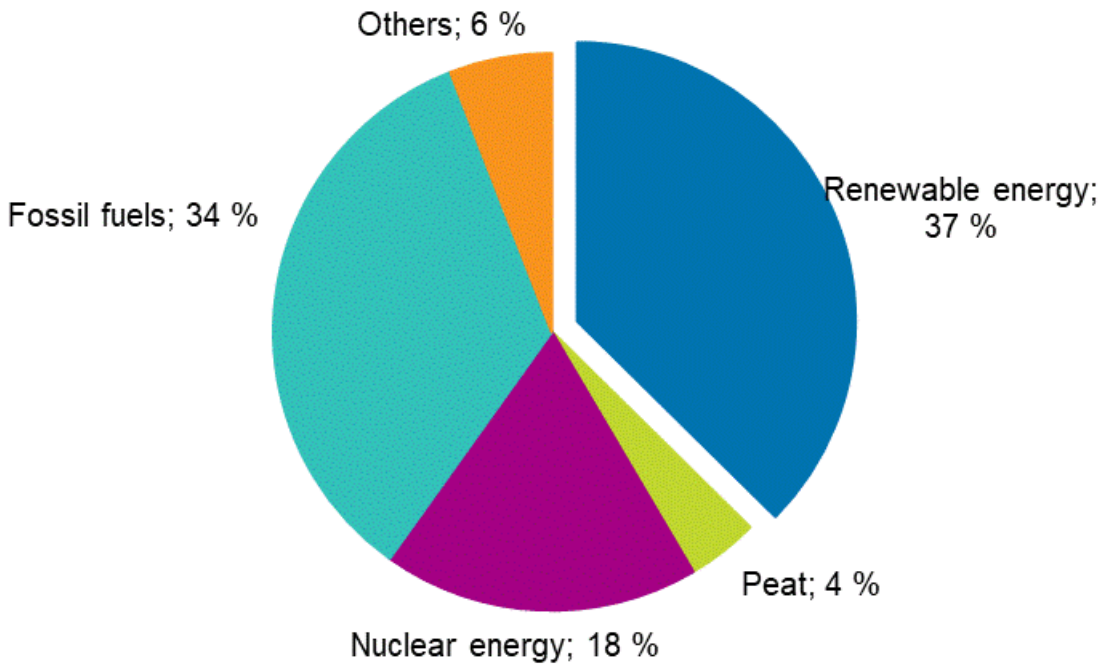

*preliminary

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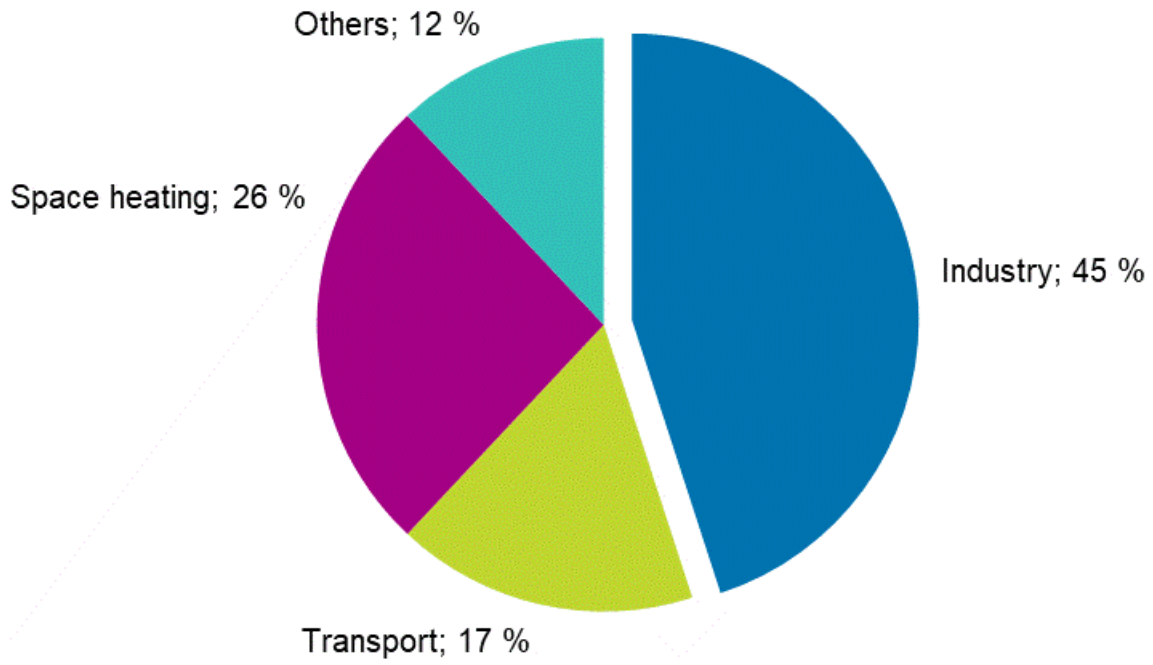

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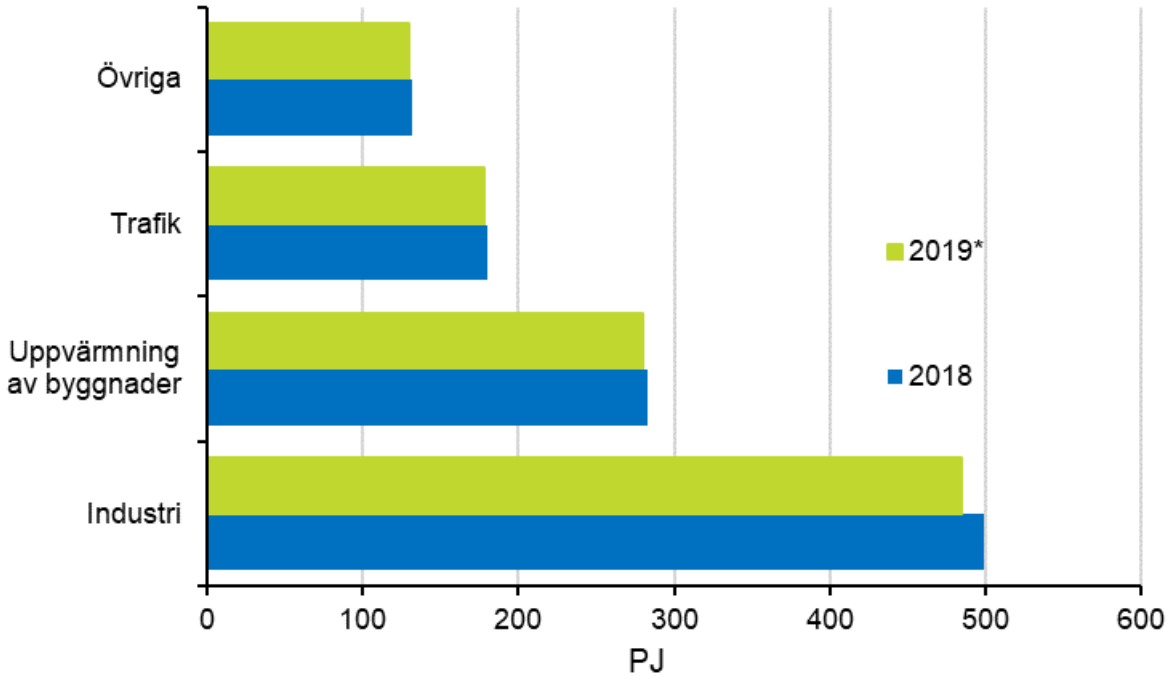

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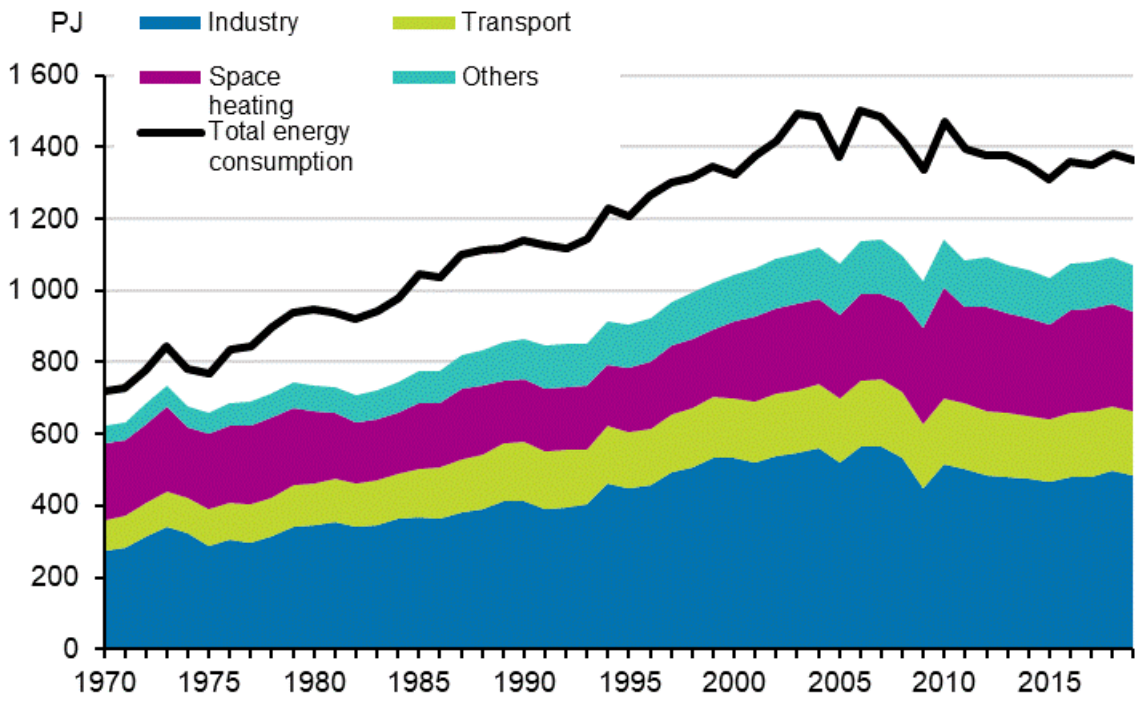

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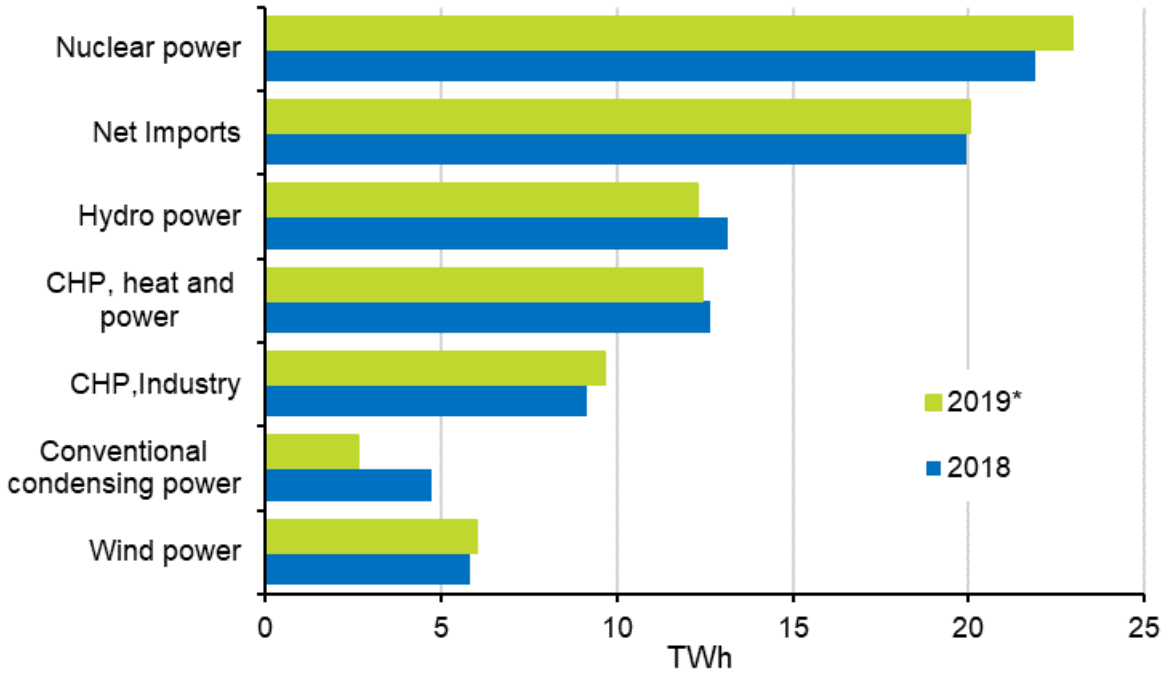

Source: Finnish Energy Industries, *preliminary

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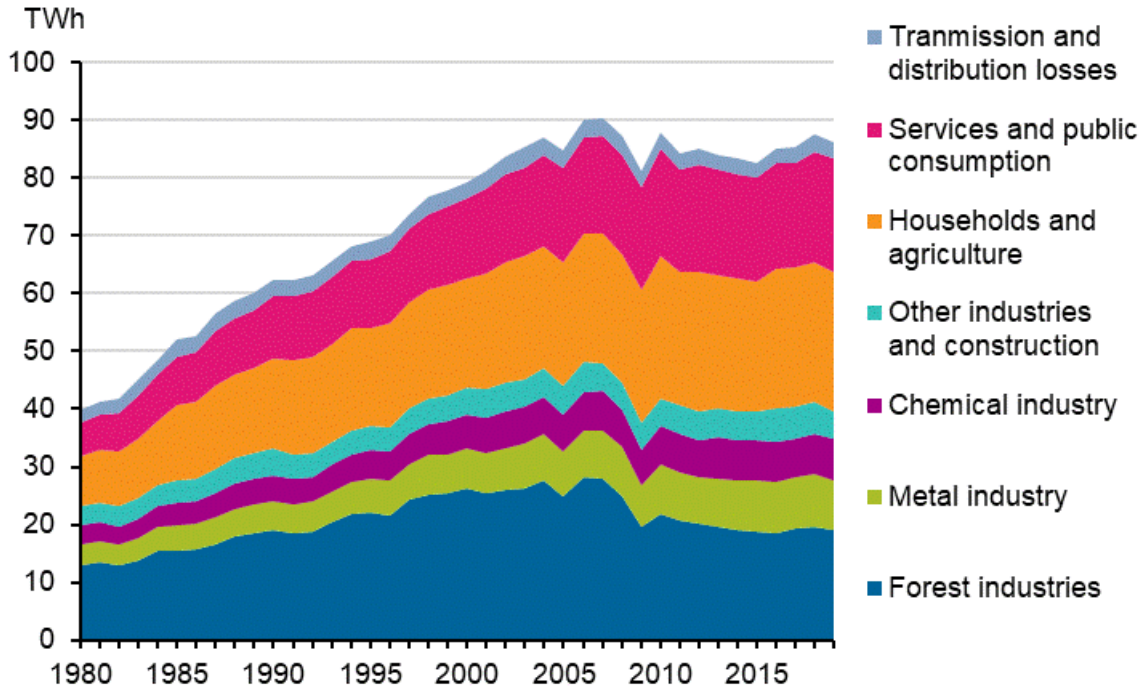

Source: Finnish Energy Industries, *preliminary

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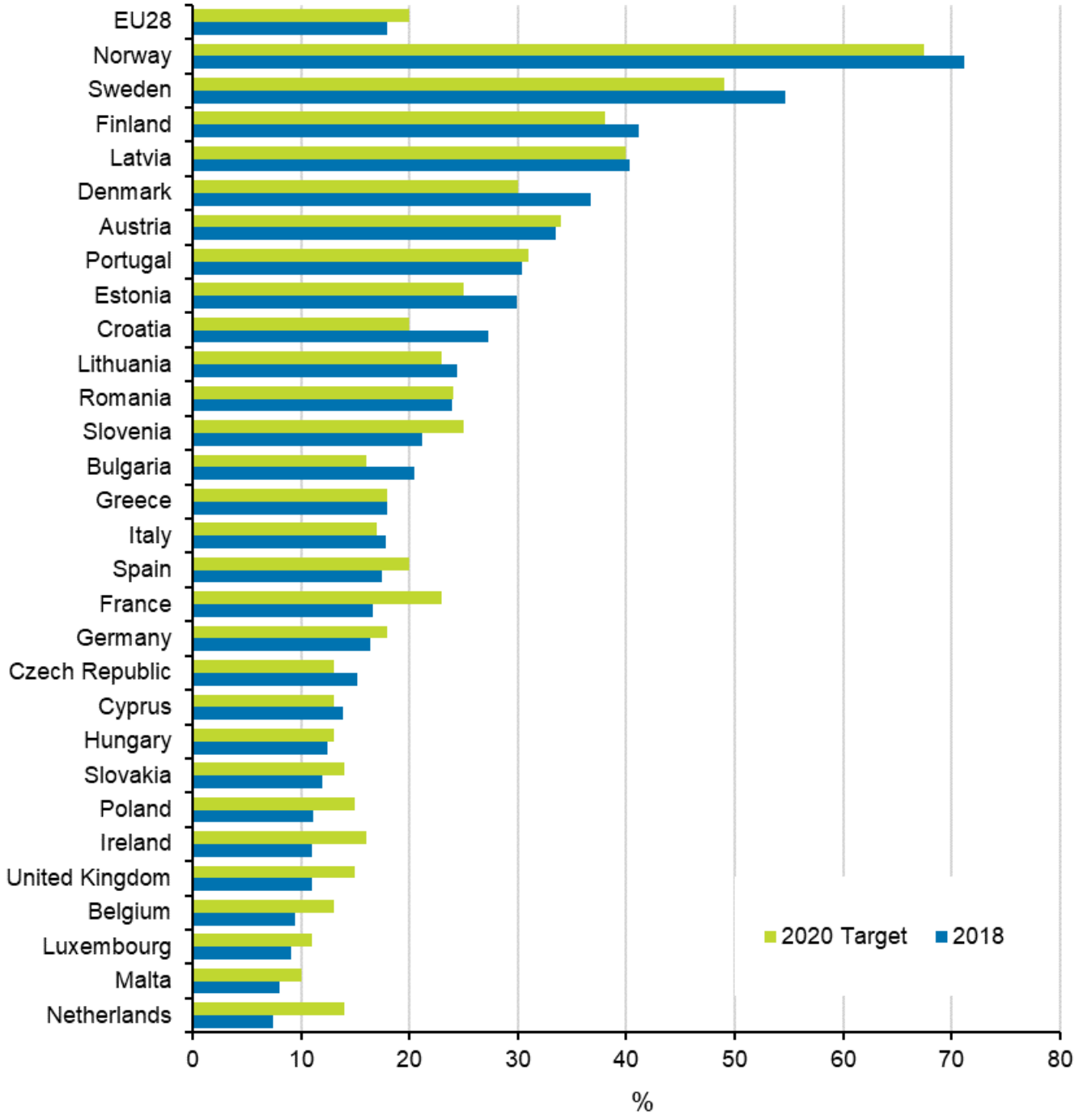

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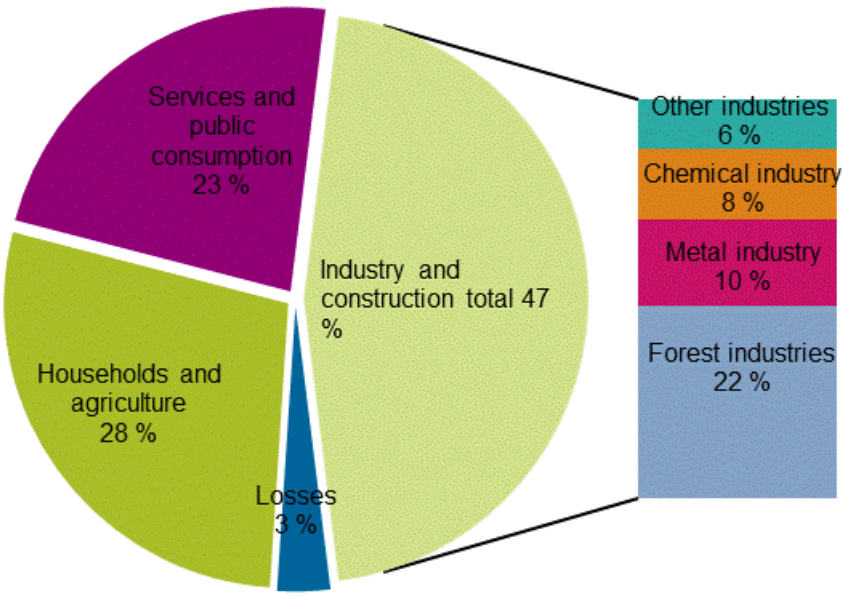

Source: Statistics Finland, *preliminary

Revisions in these statistics

The data of the statistics have become revised according to the table below. For more information about data revisions, see Section 3 of the quality description (only in Finnish).

Revisions to data on annual changes in total energy consumption[1)]

Total energy consumption and quarter		Annual change (%)		Revision (%-point)
		1st release	Latest release 17th April 2020 (%)	
	I-IV 2019	.	-1	.
	I/2019	-9	-6	3
	II/2019	-3	1	4
	III/2019	-4	0	4
	IV/2019	.	1	.

1) The revisions describe the difference between the annual change percentages of the latest and first releases in percentages. The first release refers to the time when preliminary data for the statistical reference quarter in question were released for the first time.

Statistics Finland

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Finlands officiella statistik
Official Statistics of Finland

Energy 2020

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