

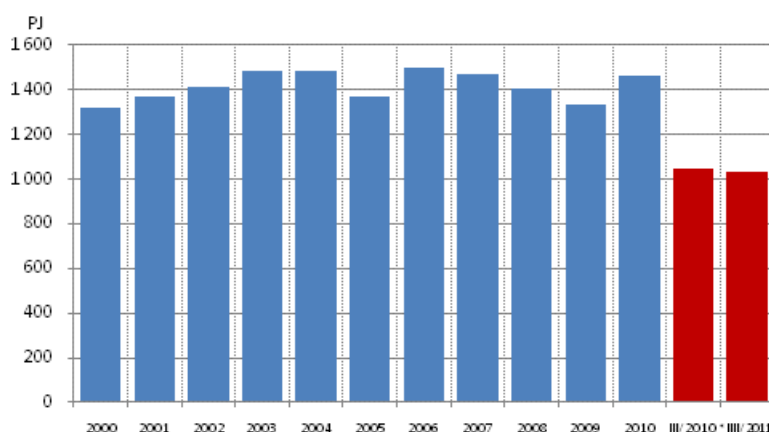
Energy supply and consumption

2011, 3rd quarter

Total energy consumption fell by 2 per cent in January to September

According to Statistics Finland's preliminary data, total energy consumption in the January to September period of 2011 amounted to nearly 1,029 PJ (petajoule), or 286 TWh (terawatt hours), which was two per cent less than in the corresponding period of 2010. Total electricity consumption amounted to 62.8 TWh, which was 0.7 per cent less than one year earlier. Electricity consumption diminished mainly as the consumption of electricity in the forest industry went down by two per cent. Carbon dioxide emissions from the production and use of energy decreased by four per cent.

Total energy consumption, PJ



Among individual energy sources, the largest reduction of ten per cent (12.6 PJ) was seen in the consumption of coal, while the second largest reduction of four per cent (9.9 PJ) was recorded in the consumption of oil. The consumption of nuclear power went up by 2.2 PJ, i.e. by over one per cent and the consumption of peat grew by 1.7 PJ, or by nearly three per cent. The production of wind power grew by 67 per cent. Wind power accounted for 0.1 per cent of total energy consumption. Over one fifth of Finland's total energy consumption was covered with wood fuels. Net imports of electricity to Finland rose in all by 25

per cent, which was caused by growing imports of electricity from Sweden. Net imports of electricity amounted to nearly 11 TWh.

Sixteen per cent of the electricity consumed in Finland was covered with imported electricity. Domestic production of electricity increased by nearly five per cent. Combined heat and power production went up by over one per cent. Combined heat and power production increased by 16 per cent in industry's combined power plants, but decreased by over seven per cent in district heating plants. The production of electricity by hydro power in Finland decreased by 16 per cent from one year earlier. The production of condensate power declined by 18 per cent, which was partly due to larger hydro power production in Sweden and Norway. Exports of electricity from Finland turned into net imports of electricity from the Nordic countries as well. Imports of electricity from the Nordic countries grew by nearly 130 per cent in the January to September period.

Various energy products were imported to Finland to the tune of EUR 9.9 billion between January and September, which was 44 per cent more than in the corresponding period one year previously. Correspondingly, energy products were exported from Finland to the value of EUR 4.1 billion, which was 27 per cent more than one year previously. Compared with the previous year, more coal and oil products were imported and more refined oil products were exported from Finland. The stocks of coal were in September around 34 TWh, or ten per cent larger than one year earlier. The stock situation of peat was in September over 17 TWh, which was around 15 per cent smaller than one year ago because of the changeable weather during the production season and the exhaustion of stocks in spring.

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

Energy source ⁴⁾	I-III/2011*	Annual change-%*	Percentage share of total energy consumption*
Oil	244,872	-4	24
Coal ¹⁾	117,565	-10	11
Natural gas	100,099	-2	10
Nuclear Energy ²⁾	177,042	1	17
Net Imports of Electricity ³⁾	36,357	25	4
Hydro and Wind Power ³⁾	31,288	-11	3
Peat	67,344	3	7
Wood fuels	230,038	0	22
Others	24,745	-3	2
TOTAL ENERGY CONSUMPTION	1,029,350	-2	100
Bunkers	26,539	15	
CO ₂ emissions from energy sector	40	-4	

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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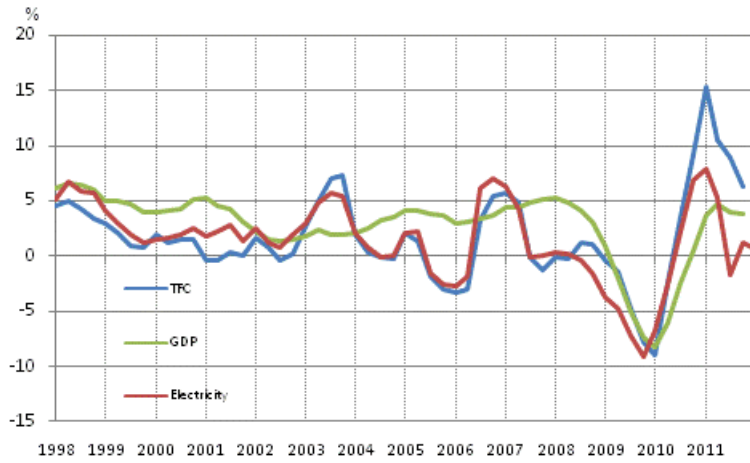
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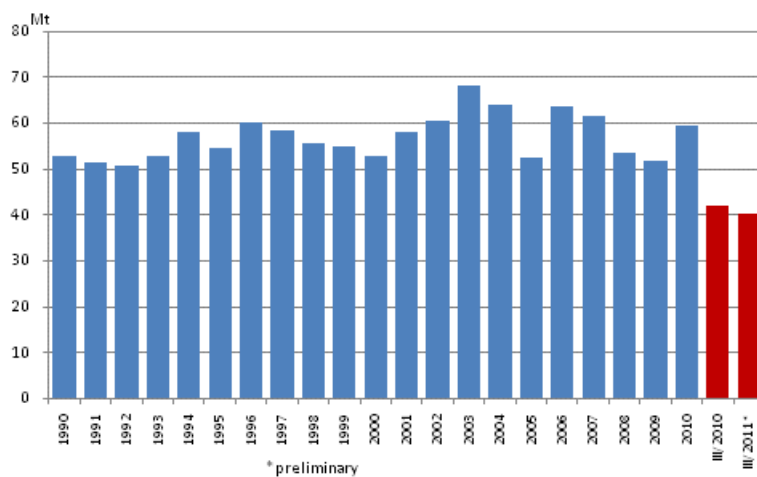
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Appendix figure 1. Changes in GDP, Final energy consumption and electricity consumption

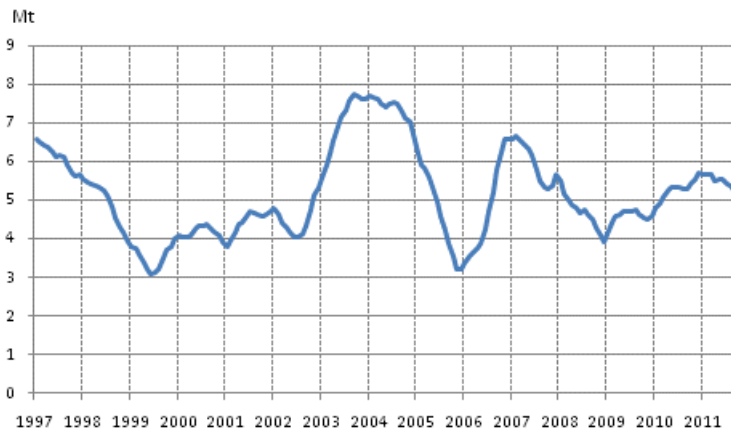


Appendix figure 2. Carbon dioxide emissions from fossil fuels and peat use



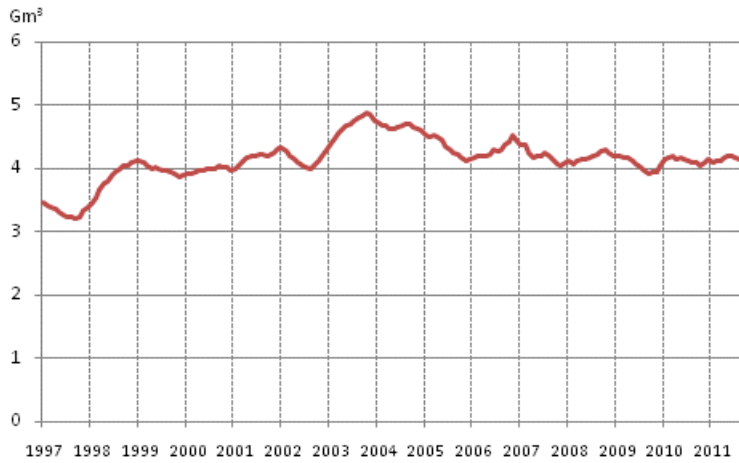
Source: Statistics Finland, 12-month moving total

Appendix figure 3. Coal consumption



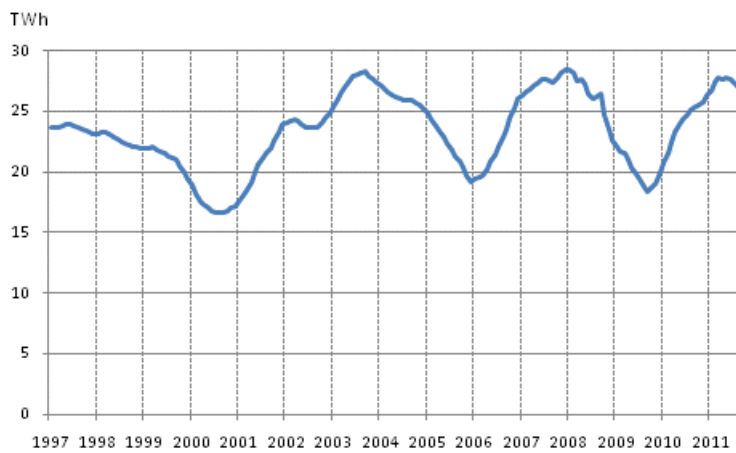
Source: Statistics Finland, Finnish Energy Industries Federation, 12-month moving total

Appendix figure 4. Consumption of natural gas



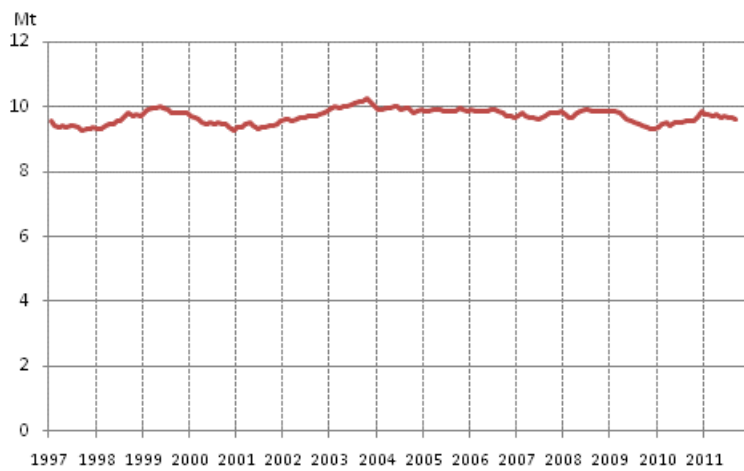
Source: Finnish Petroleum Federation, 12-month moving total

Appendix figure 5. Peat consumption



Source: Association of Finnish Peat Industries 12-month moving total

Appendix figure 6. Domestic oil deliveries



Source.: Finnish Petroleum Federation, 12-month moving total

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Source: Statistics Finland, Energy supply and consumption