

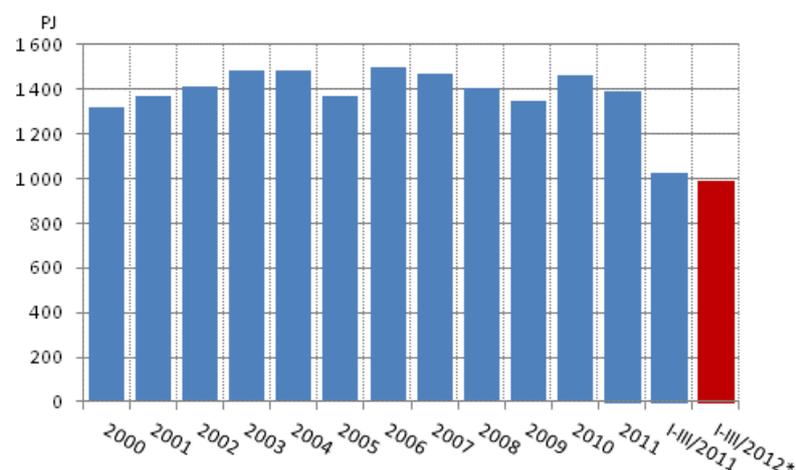
Energy supply and consumption

2012, 3rd quarter

Total energy consumption fell by 5 per cent in January to September

According to Statistics Finland's preliminary data, total energy consumption in the January to September period of 2012 amounted to around 989 PJ, which was five per cent less than in the corresponding period of 2011. The share of renewable energy of total energy consumption grew as the consumption of fossil fuels decreased and correspondingly, that of hydro and wind power increased. Total electricity consumption amounted to 62 TWh, which was over one per cent less than one year earlier. Electricity consumption decreased because around six per cent less electricity was used in manufacturing. However, electricity consumption started to grow in September. Carbon dioxide emissions from the production and use of energy decreased by 12 per cent.

Total energy consumption, PJ



Almost one-quarter of Finland's total energy consumption was covered by wood fuels. According to preliminary data, total consumption of wood fuels has decreased by almost one per cent in the January to September period as one year before. Among individual energy sources, the largest reduction of 23 per cent (around 27 PJ) was seen in the consumption of coal, while the second largest reduction of 20 per cent (approx. 20 PJ) was recorded in the consumption of natural gas. The consumption of peat fell by 19 per

cent. Increase in the consumption of hydro and wind power amounted to over 13 PJ, or 43 per cent, due to better than average water reserves.

Total electricity consumption went down by over one per cent, which was caused by an around six per cent decrease in electricity consumption in manufacturing. Domestic production of electricity declined by eight per cent and combined heat and power production by 16 per cent. Combined heat and power production decreased by 12 per cent in industry's combined power plants and by 19 per cent in district heating plants. The production of condensate power declined by 54 per cent, because domestic production of electricity was replaced particularly with Nordic electricity imports. Net imports of electricity from the Nordic countries to Finland covered 18 per cent of total electricity consumption. Imports of electricity from Russia have been fairly steady in earlier years, but now imports have declined to nearly one third compared with the previous years. In the January to September period, imports of Russian electricity have diminished by 64 per cent compared with the corresponding period of the previous year. Net imports of electricity amounted to 13.2 TWh. Nearly 24 per cent of the electricity consumed in Finland was covered with imported electricity.

The value of diverse energy products imported into Finland in the January to September period was EUR 9.9 billion, which figure was unchanged from the corresponding period of 2011. Respectively, diverse energy products were exported from Finland to the value of EUR 4.7 billion, which was 13 per cent up on 2011. The biggest changes in the import and export values of energy products concerned coal, medium distillates and gas condensates. In September, stocks of coal amounted to some 30 TWh, which was over 11 per cent less than one year earlier. Correspondingly, stocks of peat were around 12 TWh, or almost one-third lower at the end of September than twelve months earlier.

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

Energy source ⁴⁾	I-III/2012*	Annual change-%*	Percentage share of total energy consumption*
Oil	241,579	-4	24
Coal ¹⁾	88,262	-23	9
Natural gas	80,674	-20	8
Nuclear Energy ²⁾	177,028	0	18
Net Imports of Electricity ³⁾	47,489	31	5
Hydro and Wind Power ³⁾	44,714	43	5
Peat	52,879	-19	5
Wood fuels	231,132	-1	23
Others	25,623	-4	3
TOTAL ENERGY CONSUMPTION	989,380	-5	100
Bunkers	23,145	-13	.
CO2 emissions from energy sector	34	-12	.

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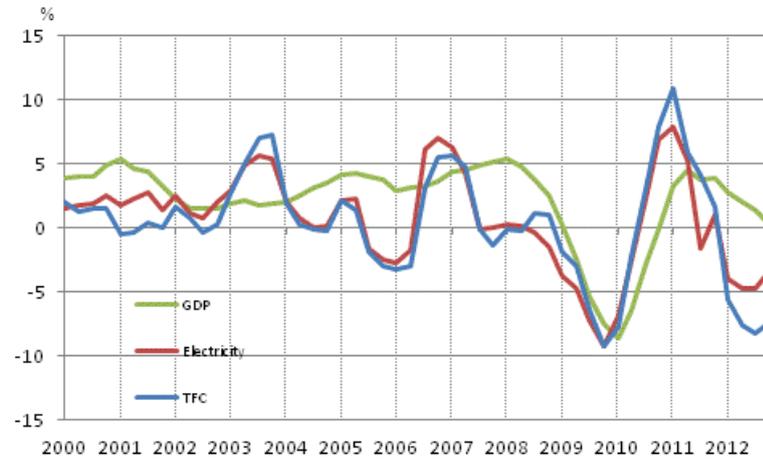
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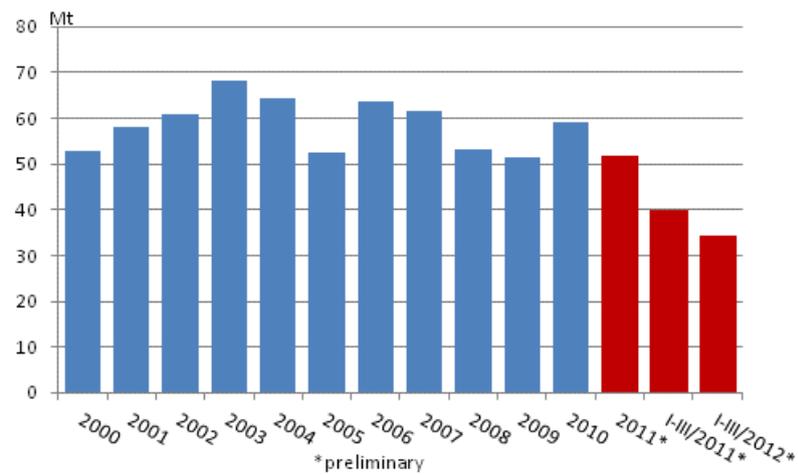
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Appendix figure 1. Changes in GDP, Final energy consumption and electricity consumption

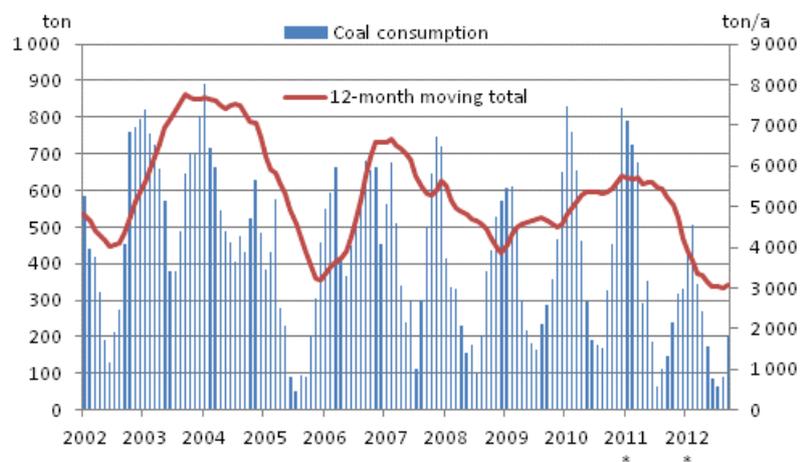


Appendix figure 2. Carbon dioxide emissions from fossil fuels and peat use



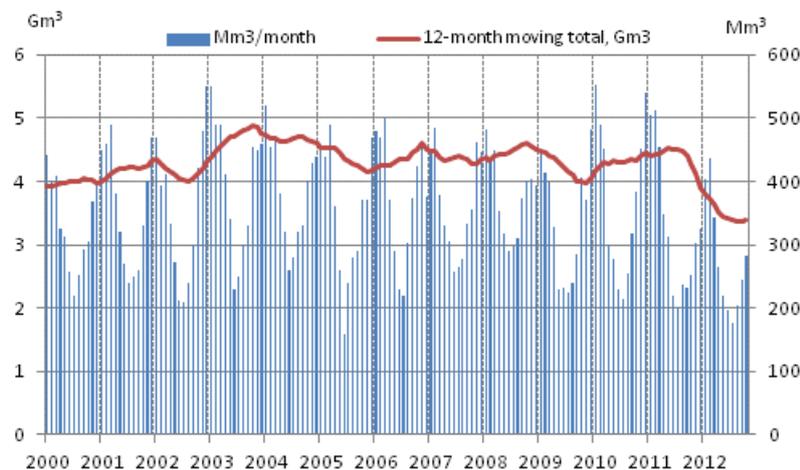
Source: Statistics Finland

Appendix figure 3. Coal consumption



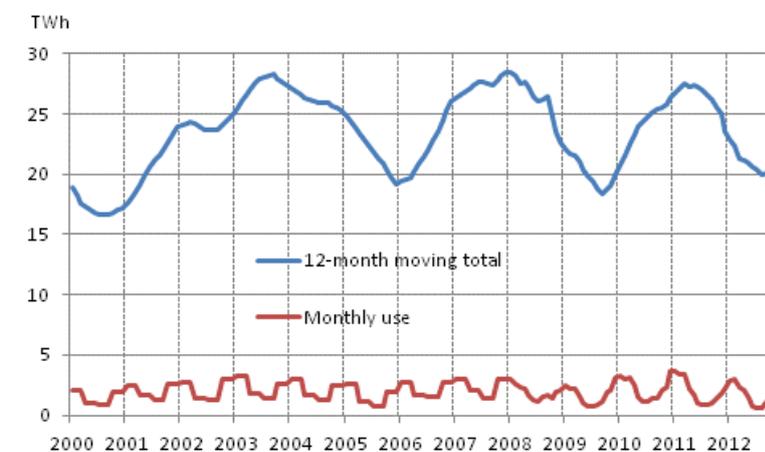
Source: Statistics Finland, Finnish Energy Industries Federation, 12-month moving total

Appendix figure 4. Consumption of natural gas



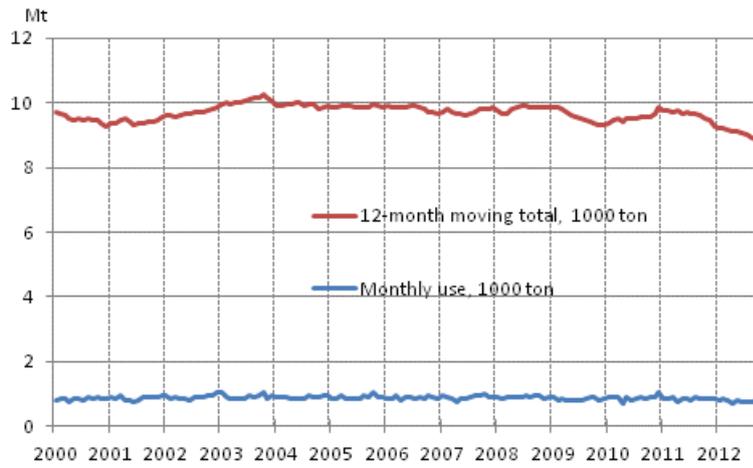
Source: Finnish Petroleum Federation, 12-month moving total

Appendix figure 5. Peat consumption



Source: Bioenergy, 12-month moving total

Appendix figure 6. Domestic oil deliveries



Source: Finnish Petroleum Federation, 12-month moving total

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Source: Energy supply and consumption. Statistics Finland