# Energy supply and consumption

2012, 2nd quarter

# *Total energy consumption decreased by 5 per cent in January to June*

According to Statistics Finland's preliminary data, in the January to June period of 2012, total energy consumption amounted to around 705 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 those of hydro and wind power, and wood fuels increased. Total electricity consumption amounted to 43.5 TWh, which was 2.4 per cent less than one year earlier. Electricity consumption decreased because nearly seven per cent less electricity was used in the forest industry. Carbon dioxide emissions from the production and use of energy diminished by nearly one-fifth.



### Total energy consumption, PJ

Almost one-quarter of Finland's total energy consumption was covered by wood fuels. In January to June, total consumption of wood fuels increased by almost five per cent from twelve months back. Among individual energy sources, the largest reduction of 35 per cent (around 35 PJ) was seen in the consumption of coal, while the second largest reduction of 25 per cent (approx. 21 PJ) was recorded in the consumption of natural gas. The consumption of peat fell by 20 per cent. Increase in the consumption of hydro power amounted to 9 PJ, or nearly 43 per cent, due to better than average water reserves.

Total electricity consumption decreased by 2.4 per cent due to almost 10 per cent reduction in the forest industry's electricity consumption and nearly five per cent reduction in the chemical industry's electricity consumption. Domestic production of electricity decreased by 12 per cent. Combined heat and power production went down by 17 per cent. Combined heat and power production decreased by 16 per cent in industry's combined power plants and by 19 per cent in district heating plants. The production of condensate power declined by 64 per cent, especially because domestic production of electricity was replaced with Nordic electricity from Sweden. For the first time, imports of electricity from Russia contracted by almost 60 per cent from the respective period of the previous year. Net imports of electricity amounted to 8.6 TWh in the first half of the year. Nearly 20 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 June period was EUR 6.5 billion, which was six per cent higher than in the same period of 2011. Correspondingly, energy products were exported from Finland to the value of EUR 3.1 billion, which was 16 per cent more than during the respective period of the previous year. The energy products for which the biggest changes in import and export values were recorded were coal, medium distillates and electricity. In June, stocks of coal amounted to some 32 TWh, or over 30 per cent more than one year earlier. Respectively, stocks of peat were around 7.9 TWh, or almost one-quarter down at the end of June. Stocks of peat were considerably lower than last year due, among other things, to difficult production year.

Energy source <sup>4)</sup>	I-II/2012*	Annual change-%*	Percentage share of total energy consumption*
Oil	156,864	-5	22
Coal <sup>1)</sup>	65,497	-35	9
Natural gas	61,091	-25	9
Nuclear Energy <sup>2)</sup>	120,821	1	17
Net Imports of Electricity <sup>3)</sup>	30,858	78	4
Hydro and Wind Power <sup>3)</sup>	29,654	41	4
Peat	45,891	-20	7
Wood fuels	171,049	5	24
Others	23,270	12	3
TOTAL ENERGY CONSUMPTION	704,994	-5	100
Bunkers	15,176	-13	
CO2 emissions from energy sector	25	-19	

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

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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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: Bioenergy, 12-month moving total

### Appendix figure 6. Domestic oil deliveries



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

## Statistics Finland

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