

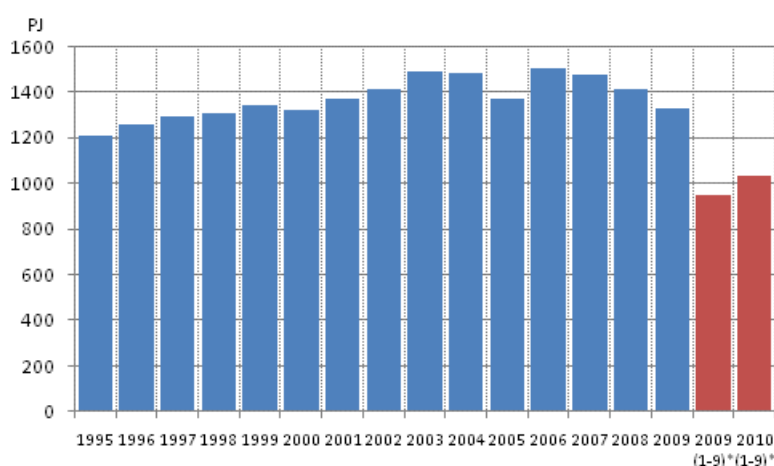
Energy supply, consumption and prices

2010, 3rd quarter

Total energy consumption went up by 8.8 percent in January to September

According to Statistics Finland's preliminary data, over the January to September period of 2010 total energy consumption amounted to 1,032 petajoule, or 287 TWh, which was 8.8 per cent more than in the corresponding period of the year before. In the first three quarters of the year, the consumption of electricity totalled 63.5 TWh, which was 8.2 per cent more than in the previous year. Energy consumption was put up by the cold weather in the early part of the year and by the recovery of industrial production. The increased use of fossil fuels and peat put carbon dioxide emissions from the production and use of energy up by 15.3 per cent from the previous year. Fuel prices have risen almost to the level of 2008. The prices of domestic fuels have risen more moderately.

Total energy consumption, PJ



Examined by energy source, the consumption of coal grew by most, 26,400 TJ of 25.1 per cent from the year before and the second largest increase of 26,200 TJ, or 14.6 per cent, was recorded in the energy

derived from black liquor from forestry. The use of peat also increased considerably, by 20,100 TJ, or 44.9 per cent.

The consumption of electricity went up by most in the metal industry and the forest industry. Domestic production of electricity increased by 12 per cent over the January to September period. Nearly 60 per cent more electricity than in the previous year was also produced for exports to the Nordic market. However, the exports to the Nordic market turned into imports in July-August when imports of electricity from Russia were low. Net imports of electricity declined by 11 per cent in all. Growth of electricity production applied especially to condensate power, which grew by 59 per cent from the previous year over the January to September period. Nuclear power generation decreased by 3.6 per cent.

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

Energy source* ⁵⁾	1-9 / 2009*	1-9 / 2010*	Yearly change-%*	% from total consumption*
	245543	256154	4,3	25
Coal ¹⁾	105232	131666	25,1	13
Natural gas	92802	102305	10,2	10
Nuclear Energy ²⁾	181517	174906	-3,6	17
Net Imports of Electricity ³⁾	32595	28994	-11,0	3
Hydro and Wind Power ⁴⁾	35748	35270	-1,3	3
Peat	44850	64997	44,9	6
Black liquor and other concentrated liquours	179822	205999	14,6	20
Others	30640	32106	4,8	3
Energy total consumption	948748	1032396	8,8	100
Bunkers	24117	22792	-5,5	
CO2 emissions from energy sector	37	42	15,3	

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

5) *Preliminary — includes all wood-based fuels

Energy prices on the rise

Prices have risen more moderately for domestic fuels than for imported fuels. The price of milled peat has fallen due to improved supply. In the third quarter of the year, the prices of peat, and forest processed chips and chippings have fallen by around 3.5 per cent from twelve months back. The price of consumer pellets fell by 1.2 per cent in November.

Over the first three quarters of the year, the consumption of oil went up by 4.3 per cent from twelve months back. The prices of motor gasoline and diesel fuel have been approaching the 2008 peak prices, having gone up by 12 to 15 per cent from last year. The prices of heavy and light fuel oils have risen by most, or by around 30 per cent.

The cold winter, the poor water situation in the Nordic countries and growth in demand raised the market price of electricity strongly. Over the January to September period, the area price for Finland on the Nordic electricity market has been nearly 50 per cent up, on the average, on the year before. Consumer prices have risen more slowly but gone up by ten per cent or so in the autumn from the respective time period of the previous year. The price of coal has been rising throughout the year but is still lower than towards the end of 2008. The price of natural gas has gone up by approximately 20 per cent and reached the level of late 2008. Change in the value added tax rate partly put consumer prices up from the beginning of July.

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Appendix tables

Appendix table 1. Energy taxes, precautionary stock fees and oil pollution fees

Date	Fuels ¹⁾							Electricity					
	Motor gasoline, unleaded ²⁾	Diesel fuel ³⁾	Light fuel oil	Heavy fuel oil	Hard coal	Natural gas	Peat	Consumption		Production			
								Electricity, I ⁴⁾	Electricity, II ⁵⁾	Nuclear power	Hydro power	Imports	
	c/l			c/kg	€/t	c/nm ³	€/MWh	c/kWh					
Excise taxes													
1.1.1990	21,53	16,82	0,34	0,34	2,69	0,17	0,34	-	-	-	-	-	-
1.1.1991	26,57	17,49	0,35	0,35	2,83	0,18	0,35	-	-	-	-	-	-
1.1.1992	28,26	17,49	0,35	0,35	2,83	0,18	0,35	-	-	-	-	-	-
1.8.1992	31,62	17,49	0,35	0,35	2,83	0,18	0,35	-	-	-	-	-	-
1.1.1993	39,52	19,17	1,41	1,12	5,61	0,35	0,70	0,25	0,25	0,10	-	0,10	-
1.7.1993	39,52	16,65	1,41	1,12	5,61	0,35	0,70	0,25	0,25	0,10	-	0,10	-
1.1.1994	40,05	17,29	2,05	1,98	11,30	1,09	0,35	-	-	0,35	0,03	0,22	-
1.1.1995	45,12	27,50	3,02	3,12	19,53	0,94	0,59	-	-	0,40	0,07	0,37	-
1.1.1996	51,85	27,50	3,02	3,12	19,53	0,94	0,59	-	-	0,40	0,07	0,37	-
1.1.1997	51,85	27,50	4,88	3,72	28,42	1,19	0,71	0,40	0,4	-	-	-	-
1.4.1997	51,85	27,50	4,88	3,72	28,42	1,19	0,71	0,56	0,24	-	-	-	-
1.1.1998	55,22	30,02	5,50	4,34	33,40	1,40	0,82	0,56	0,34	-	-	-	-
1.9.1998	55,22	30,02	6,37	5,40	41,37	1,73	1,51	0,69	0,42	-	-	-	-
1.1.2003	58,08	31,59	6,71	5,68	43,52	1,82	1,59	0,73	0,44	-	-	-	-
1.7.2005	58,08	31,59	6,71	5,68	43,52	1,82	-	0,73	0,44	-	-	-	-
1.1.2007	58,08	31,59	6,71	5,68	43,52	1,82	-	0,73	0,22	-	-	-	-
1.1.2008	62,02	36,05	8,35	6,42	49,32	2,016	-	0,87	0,25	-	-	-	-
Strategic stockpile fees													
1.7.1984	0,72	0,39	0,39	0,32	1,48	-	-	-	-	-	-	-	-
1.1.1997	0,68	0,35	0,35	0,28	1,18	0,084	-	0,013	0,013	-	-	-	-
Oil pollution fees⁶⁾													
1.1.1990	0,28	0,031	0,031	0,037	-	-	-	-	-	-	-	-	-
1.1.2005	0,038	0,042	0,042	0,050	-	-	-	-	-	-	-	-	-
1.1.2010	0,113	0,126	0,126	0,150	-	-	-	-	-	-	-	-	-

1) Fuels in electricity production tax-exempt since 1 January 1997

2) Reformulated, since 1 January 1993, also sulphur-free since 1 September 2004

3) Sulphur-free, sulphur content < 50 ppm since 1 July 1993, sulphur content < 10 ppm since 1 September 2004

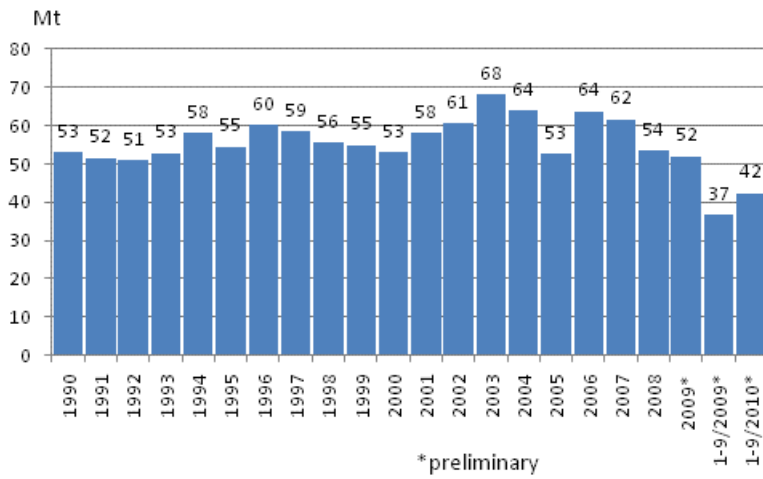
4) Tax class I: others

5) Tax class II: industry and professional greenhouses

6) Fee for imported oil and oil products: 1,50 €/t

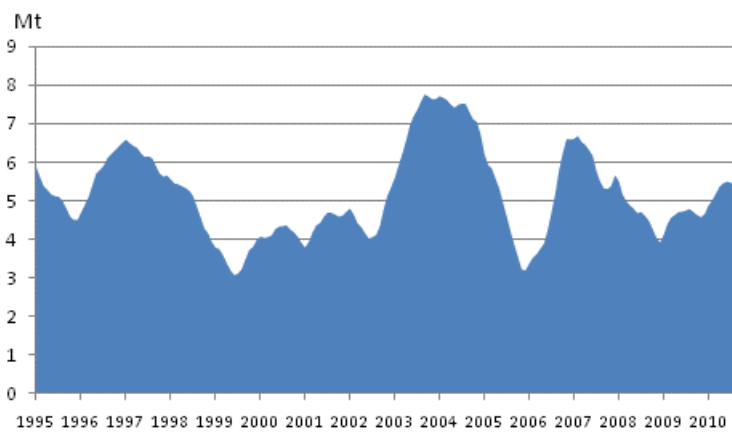
Appendix figures

Appendix figure 2. Carbon dioxide emissions from fossil fuels and peat use 1990-, Mt



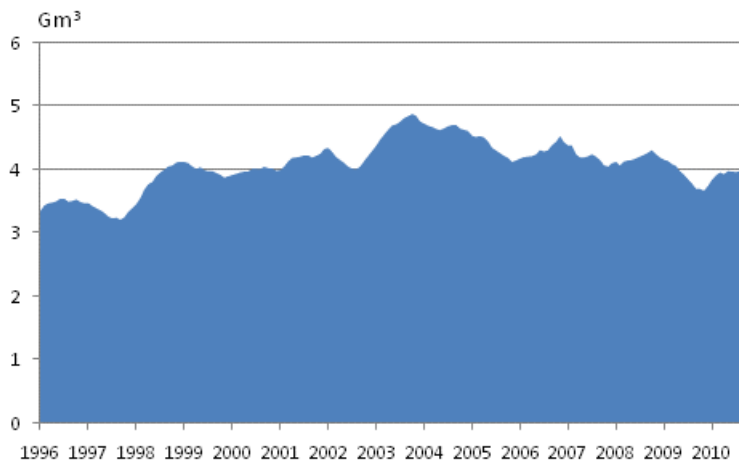
12-month moving total, Source: Statistics Finland

Appendix figure 3. Coal consumption 1995-, mill. t



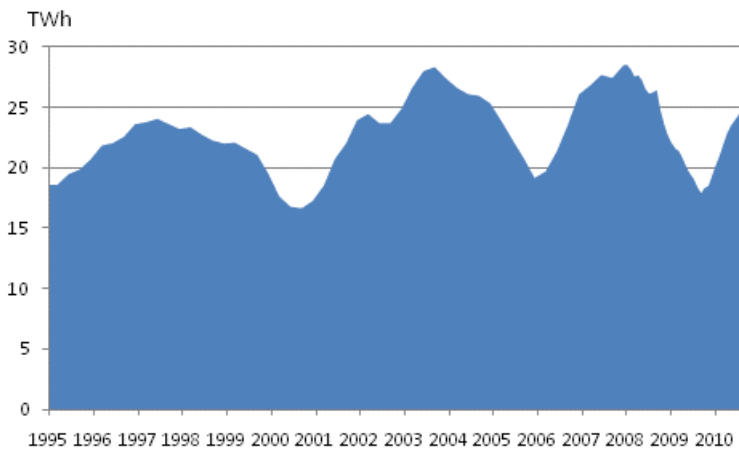
12-month moving total, Source: Statistics Finland, Finnish Energy Industries Federation

Appendix figure 4. Consumption of natural gas 1995-, bn m3



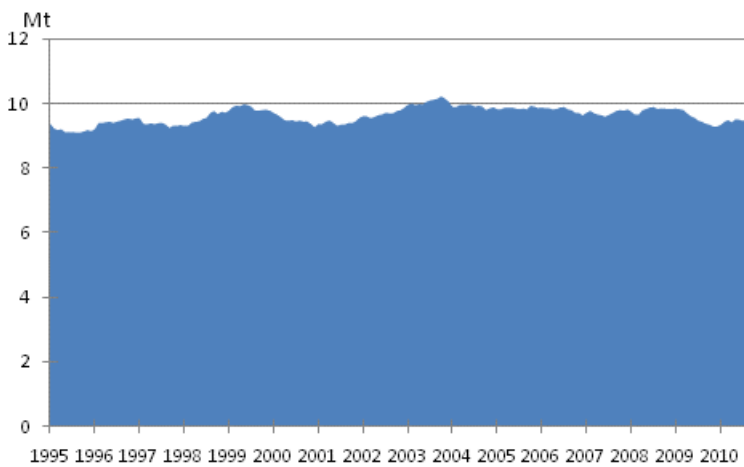
12-month moving total, Source: Finnish Oil and Gas Federation

Appendix figure 5. Peat consumption 1995-, TWh



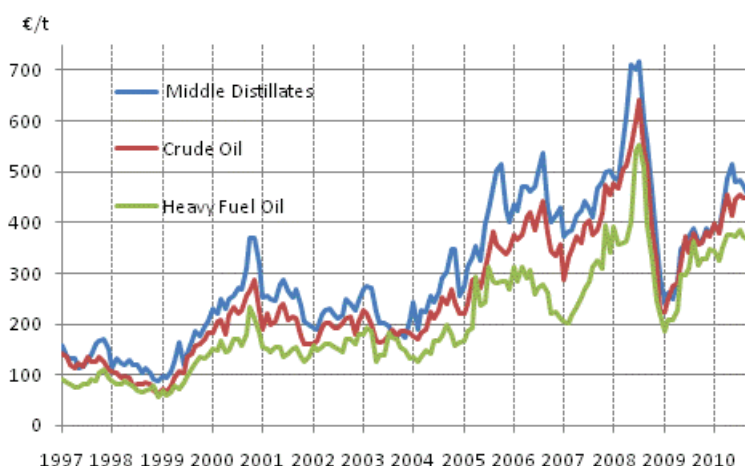
12-month moving total, Source: Association of Finnish Peat Industries

Appendix figure 6. Domestic oil deliveries 1995-, mill. t



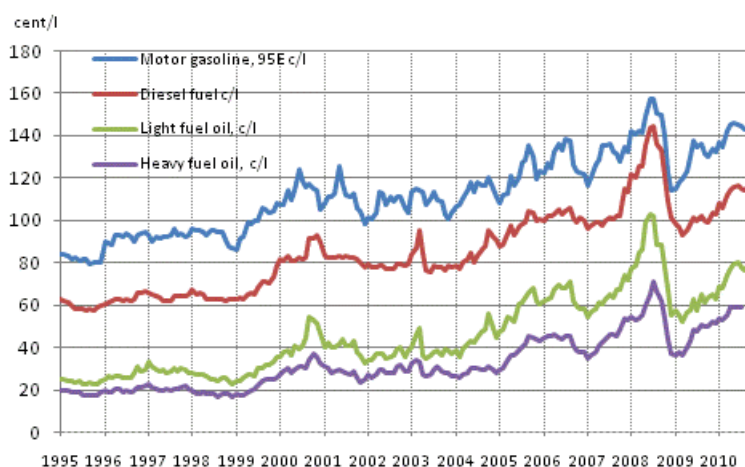
12-month moving total Source,; Finnish Oil and Gas Federation

Appendix figure 7. Import prices of oil 1997-, €/t



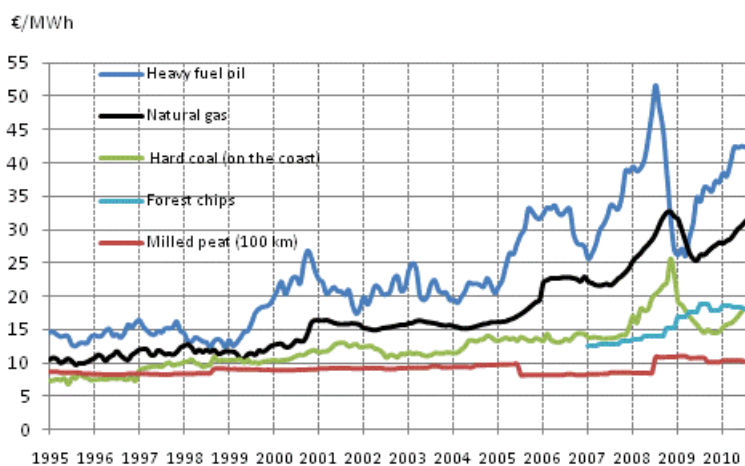
Source: National Board of Customs/Foreign Trade Statistics

Appendix figure 8. Consumer prices of principal oil products 1995-, c/l



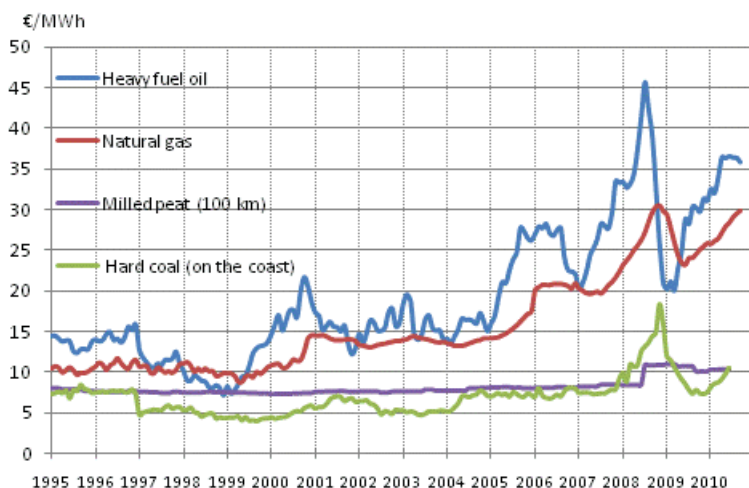
Source: Finnish Oil and Gas Federation

Appendix figure 9. Fuel Prices in Heat Production 1995-, €/MWh



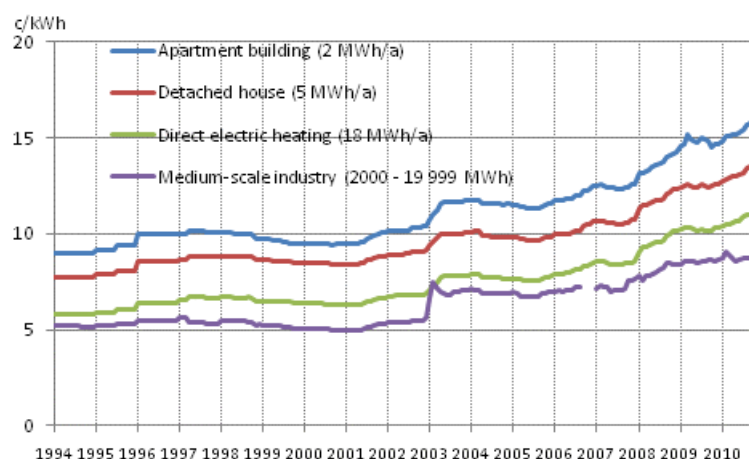
Sources: National Board of Customs/Foreign Trade Statistics, Gasum Oy, Association of Finnish Peat Industries, Finnish Oil and Gas Federation

Appendix figure 10. Fuel prices in electricity production 1995-, €/MWh



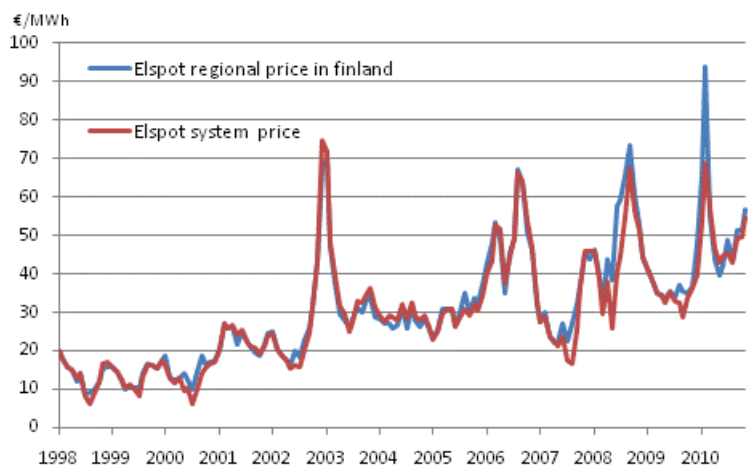
Sources: National Board of Customs/Foreign Trade Statistics, Gasum Oy, Association of Finnish Peat Industries, Finnish Oil and Gas Federation

Appendix figure 11. Price of electricity by type of consumer 1994-, c/kWh



Source: Energy Market Authority

Appendix figure 12. Average monthly spotprices at the Nord Pool Spot power exchange 1998-, €/MWh



Source: Nord Pool Spot

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Source: Statistics Finland, Energy supply, consumption and prices