

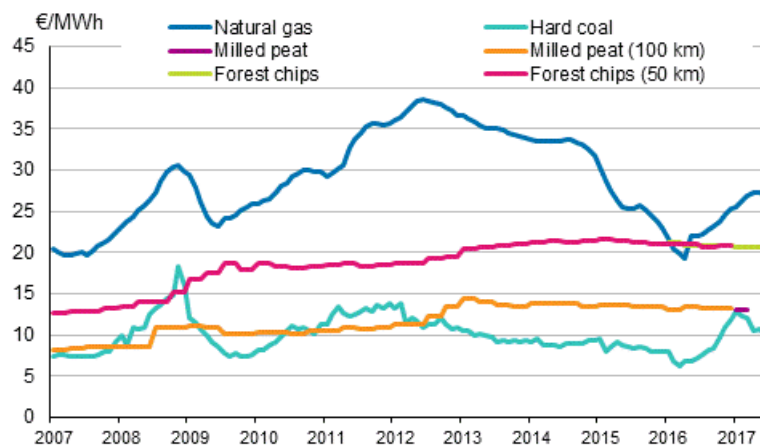
Energy prices

2017, 2nd quarter

Rise in energy prices slowed down in the second quarter

The rise in energy prices that started at the end of last year continued in the second quarter as well. According to Statistics Finland's data, this was due to tax increases at the start of the year, but most of all to higher prices of imported fuels. However, the rise was already clearly slower than in the first quarter of the year.

Fuel Prices in Electricity Production



The fall in the world market price of oil in the second quarter was also reflected in the prices of oil products imported to Finland. Consumer prices of liquid fuels were, in turn, slightly elevated compared with the situation a year earlier, which was due to the tax increases at the beginning of the year. In June, fuel oil went up by one per cent, diesel oil by three per cent and motor gasoline by two per cent.

The price of coal rose steeply at the end of 2016, but it has again fallen slightly over this year. The tax-free price of hard coal used in electricity production was in June this year 42 per cent higher than one year previously. The price of natural gas has been on the rise for over a year and its tax-free prices rose by 23 per cent in June from one year ago. In Finland, the fuels for electricity production are tax-free while excise duty is paid on fuels used in heat production.

The taxable prices of coal and natural gas used in heat production were raised by higher prices of excise duties and tax-free prices. Changes in tax-free prices influence taxable prices increasingly less due to the growing share of taxes in the past few years. Compared to the situation one year earlier, the price of hard coal was 15 per cent higher in June and the price of natural gas 16 per cent higher.

The improved water situation in Nordic countries had an impact on the fall in the system price of the Nordic electricity exchange derived from the sell and buy bids on the exchange. In June, the average system price was seven per cent and the average for the Finnish area price was 14 per cent lower than one year ago.

The prices of electricity for household customers went up in all consumer groups and were, on average, five per cent higher in June than one year earlier. Of enterprise and corporate customers, electricity prices for the smallest consumers were in June on level with the corresponding period of last year, for medium size consumers, prices fell by three per cent and for the biggest consumers, prices went down by five per cent.

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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 ¹²⁾	Liquefied petroleum gas	Heavy fuel oil	Hard coal ¹¹⁾	Natural gas	Peat	Consumption		Production		
									Electricity, I ⁴⁾	Electricity, II ⁵⁾	Nuclear power	Hydro power	Imports
c/l			c/kg		€/t	€/MWh		c/kWh					
Excise taxes ¹⁰⁾													
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	0,40	-	-	-
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	-	-	-
1.1.2011	62,02	36,05	15,70	-	18,51	126,91	8,94	1,90	1,69	0,69	-	-	-
1.1.2012	64,36	46,60	15,70	-	18,51	126,91	8,940	1,90	1,69	0,69	-	-	-
1.1.2013	64,36	46,60	15,99	-	18,93	131,53	11,38	4,90	1,69	0,69	-	-	-
1.1.2014	66,61	49,31	15,99	-	18,93	131,53	11,38	4,90	1,89	0,69	-	-	-
1.1.2015	67,45	50,26	18,39	-	21,84	153,24	15,36	3,40	2,24	0,69	-	-	-
1.1.2016	67,45	50,26	21,05	24,82	25,08	177,36	17,34	3,40	2,24	0,69	-	-	-
1.3.2016	67,45	50,26	21,05	24,82	25,08	177,36	17,34	1,90	2,24	0,69	-	-	-
1.1.2017	69,57	52,67	22,52	26,54	26,96	189,84	18,53	1,90	2,24	0,69	-	-	-
Energy content tax ⁸⁾													
1.1.2011	50,36	-	7,70	-	8,79	54,54	3,00	-	-	-	-	-	-
1.1.2012	50,36	30,70	7,70	-	8,79	54,54	3,00	-	-	-	-	-	-
1.1.2013	50,36	30,70	6,65	-	7,59	47,10	4,45	-	-	-	-	-	-
1.1.2015	51,20	31,65	6,65	-	7,59	47,10	6,65	-	-	-	-	-	-
1.1.2016	51,20	31,65	6,65	8,50	7,59	47,10	6,65	-	-	-	-	-	-
1.1.2017	52,19	32,77	7,05	9,01	8,05	49,93	7,05	-	-	-	-	-	-
Carbon dioxide tax ⁹⁾													
1.1.2011	11,66	-	8,00	-	9,72	72,37	5,94	-	-	-	-	-	-
1.1.2012	14,00	15,90	8,00	-	9,72	72,37	5,94	-	-	-	-	-	-
1.1.2013	14,00	15,90	9,34	-	11,34	84,43	6,93	-	-	-	-	-	-
1.1.2014	16,25	18,61	9,34	-	11,34	84,43	6,93	-	-	-	-	-	-
1.1.2015	16,25	18,61	11,74	-	14,25	106,14	8,71	-	-	-	-	-	-
1.1.2016	16,25	18,61	14,40	16,32	17,49	130,26	10,69	-	-	-	-	-	-

Date	Fuels ¹⁾								Electricity				
	Consumption			Production					Electricity, I ⁴⁾	Electricity, II ⁵⁾	Nuclear power	Hydro power	Imports
	Motor-gasoline, unleaded ²⁾	Diesel fuel ³⁾	Light fuel oil ¹²⁾	Liquefied petroleum gas	Heavy fuel oil	Hard coal ¹¹⁾	Natural gas	Peat					
c/l			c/kg		€/t	€/MWh		c/kWh					
1.1.2017	17,38	19,90	15,47	17,53	18,78	139,91	11,48	-	-	-	-	-	-
Energy tax ⁷⁾													
1.1.2011	-	-	-	-	-	-	-	1,90	1,69	0,69	-	-	-
1.1.2013	-	-	-	-	-	-	-	4,90	1,69	0,69	-	-	-
1.1.2014	-	-	-	-	-	-	-	4,90	1,89	0,69	-	-	-
1.1.2015	-	-	-	-	-	-	-	3,40	2,24	0,69	-	-	-
1.1.2016	-	-	-	-	-	-	-	3,40	2,24	0,69	-	-	-
1.3.2016	-	-	-	-	-	-	-	1,90	2,24	0,69	-	-	-
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	-	-	-
1.1.2016	0,68	0,35	0,35	0,11	0,28	1,18	0,084	-	0,013	0,013	-	-	-
Oil pollution fees ⁶⁾													
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. Fossil fuel

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

4) Tax class I: others

5) Tax class II: industry and professional greenhouses

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

7) Energy tax included in excise taxes

8) Energy content tax included in excise taxes

9) Carbon dioxide tax included in excise taxes

10) Excise taxes contain energy content tax, carbon dioxide tax, and energy tax.

11) Excise taxes for hard coal is in the heat production. In CHP use excise tax is lower.

12) Fossil fuel. Sulphur-free.

Appendix table 2. Energy prices in heat production in June 2017

Energy source ³⁾	¹⁾ Price €/MWh	Annual change-%
²⁾ Hard coal (VAT 0%)	37.13	14.8
Natural gas (VAT 0%)	45.67	16.1
Forest chips (VAT 0%)	20.60	-1.4
Milled peat (VAT 0%)	.	.

1) Inclusive of excise duties.

2) The price is preliminary.

3) Sources: Energy Authority, Finnish Customs, FOEX Indexes Ltd, The Bioenergy Association of Finland,

Appendix table 3. Consumer prices of heating energy in June 2017

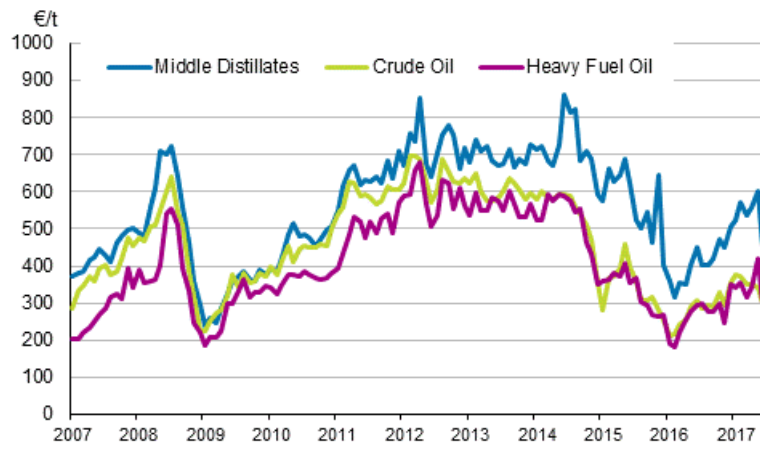
Energy source ²⁾	¹⁾ Price €/MWh	Annual change-%
Light fuel (VAT 24%)	81.9	0.9
Household electricity, K2 (VAT 24%)	121.9	4.6
Wood pellet (VAT 24%)	56	-2.6
District heat, terraced house / low-rise block of flats (VAT 24%)	78.28	1.5

1) The price of wood pellet is from May 2017 and district heat January 2017

2) Sources: Finnish Energy Industries, Energy Authority, Petroleum and Biofuels Association of Finland, Statistics Finland

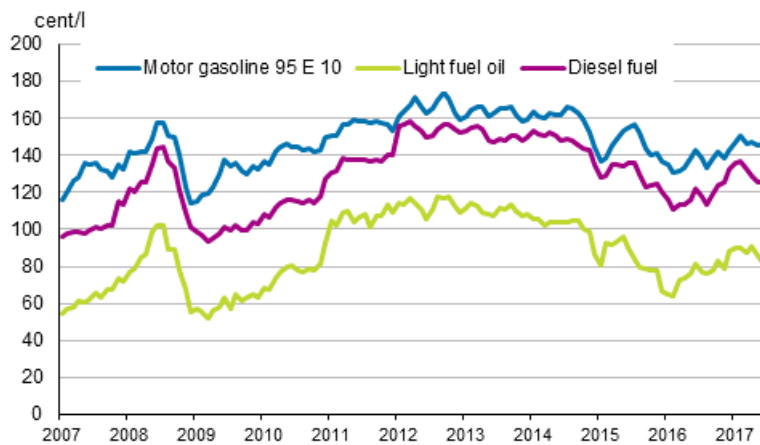
Appendix figures

Appendix figure 1. Import prices of oil



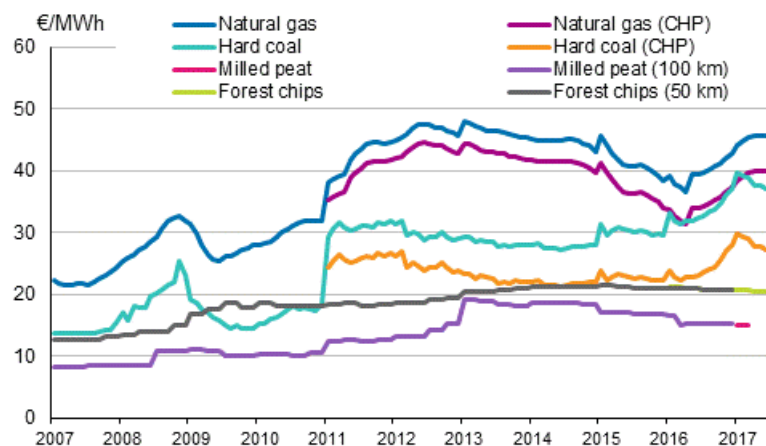
Source: Finnish Customs

Appendix figure 2. Consumer prices of principal oil products



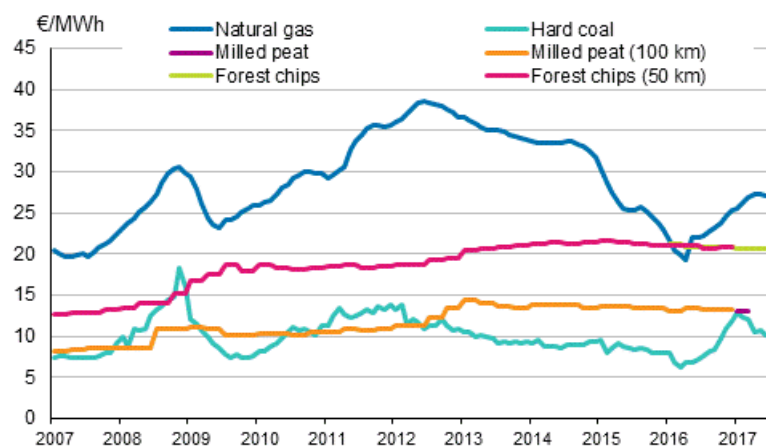
Source: Finnish Petroleum and Biofuels Association

Appendix figure 3. Fuel prices in heat production



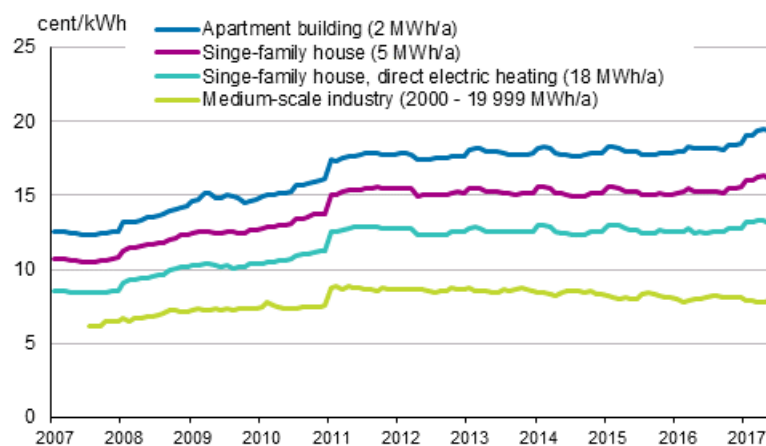
The prices include excise duties (VAT 0%). The carbon dioxide tax on natural gas and hard coal used in combined heat and power production was halved from the beginning of 2011. Sources: Finnish Customs, Energy Authority, The Bioenergy Association of Finland, Finnish Petroleum and Biofuels Association, FOEX Indexes Ltd

Appendix figure 4. Fuel prices in electricity production



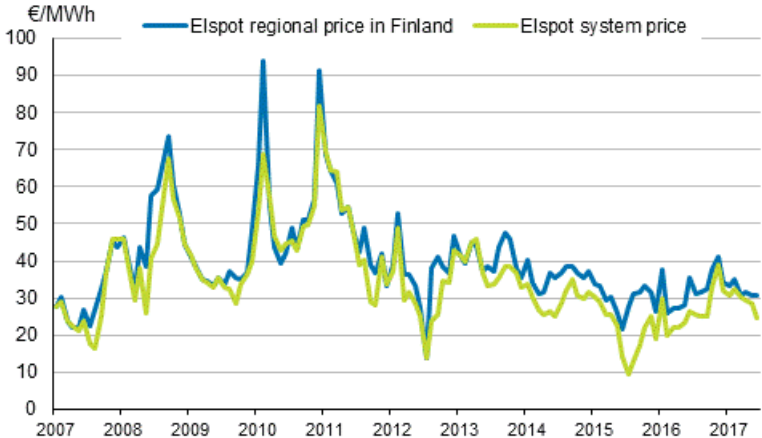
The fuels of electricity production are exclusive of tax. Sources: Finnish Customs, Energy Authority, The Bioenergy Association of Finland, Finnish Petroleum and Biofuels Association, FOEX Indexes Ltd

Appendix figure 5. Price of electricity by type of consumer



The prices include electrical energy, transmission fee and taxes. Source: Energy Authority, Statistics Finland

Appendix figure 6. Average monthly spotprices at the Nord Pool Spot power exchange



Source: Nord Pool Spot

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Source: Statistics Finland, Energy prices