

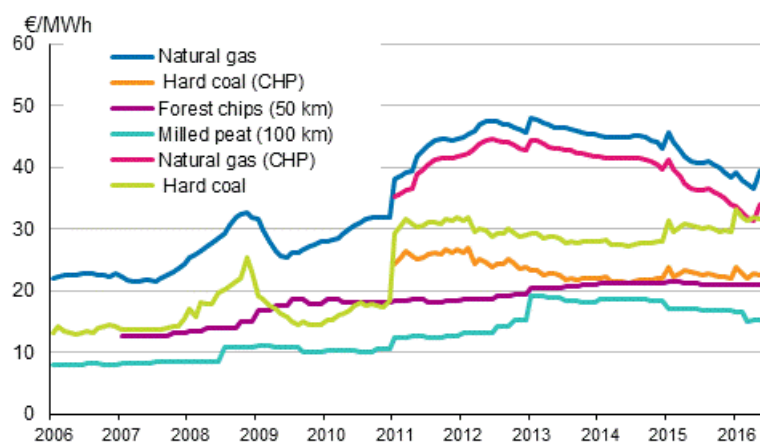
Energy prices

2016, 2nd quarter

The drop in energy prices tapered off in the second quarter

According to Statistics Finland's data, prices of energy products continued declining in the second quarter of 2016 compared with the corresponding quarter of the previous year. The drop in energy prices did not, however, continue as steep as in the first quarter of 2016. The price of electricity in the Nordic electricity exchange actually made a clear upturn compared to one year ago, which has not been witnessed in a long time.

Fuel Prices in Heat Production



Prices of oil products imported to Finland remained at a low level like the world market price of oil in the second quarter, which was also visible in the consumer prices of liquid fuels. In June, the price of motor gasoline was eight per cent lower and diesel oil ten per cent lower than one year earlier. Despite the tax increase at the beginning of the year, the price of light fuel oil was ten per cent lower in June than twelve months ago.

The tax of hard coal and natural gas used in heat production was raised at the beginning of 2016. In the second quarter, the price of hard coal was four per cent higher than one year previously. In turn, the price of natural gas declined by six per cent because the price of natural gas has traditionally followed the changes in the world market price of oil. As a result of the tax cut in March, the price of milled peat went

down by ten per cent from one year back. Correspondingly, the price of forest chippings fell by one per cent. The price of wood pellets used by consumers was the same in May as one year earlier.

In the second quarter, the monthly average for the system price of the Nordic electricity exchange derived from the sell and buy bids on the exchange rose from one year back for the first time in nearly 2.5 years. In June, the average price was EUR 26.53 per MWh, which was 84 per cent higher than one year ago. Due to electricity transmission restrictions, the Finnish area price was one-third higher in June than the system price, that is, EUR 35.41, increasing by 65 per cent from one year ago.

The changes in electricity exchange prices typically have a delayed effect on end-user prices. The prices of electricity for households decreased in the second quarter by an average of one per cent year-on-year. This was also the case for the electricity prices of smaller enterprise and corporate customers, consuming less than 20 gigawatt hours per year. For larger enterprise and corporate customers, consuming more than 20 gigawatt hours per year, the prices were on average three per cent lower than twelve months earlier. The rise in electricity exchange prices was already visible in their June prices that increased by six per cent on average from one year ago.

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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	-	-	-
Energy content tax⁸⁾													
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	-	-	-	-	-	-
Carbon dioxide tax⁹⁾													
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	-	-	-	-	-	-
Energy tax⁷⁾													

Date	Fuels ¹⁾									Electricity				
										Consumption		Production		
	Motor-gasoline, unleaded ²⁾	Diesel fuel ³⁾	Light fuel oil ¹²⁾	Liquefied petroleum gas	Heavy fuel oil	Hard coal ¹¹⁾	Natural gas	Peat	Electricity, I ⁴⁾	Electricity, II ⁵⁾	Nuclear power	Hydro power	Imports	
c/l			c/kg			€/t	€/MWh	c/kWh						
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 2016

Energy source	¹⁾ Price €/MWh	Annual change-%
²⁾ Hard coal (VAT 0%)	32.21	6.0
Natural gas (VAT 0%)	39.34	-3.2
Forest chips (VAT 0%)	21.07	-1.2
Milled peat (VAT 0%)	15.38	-9.5

1) Inclusive of excise duties.

2) The price is preliminary.

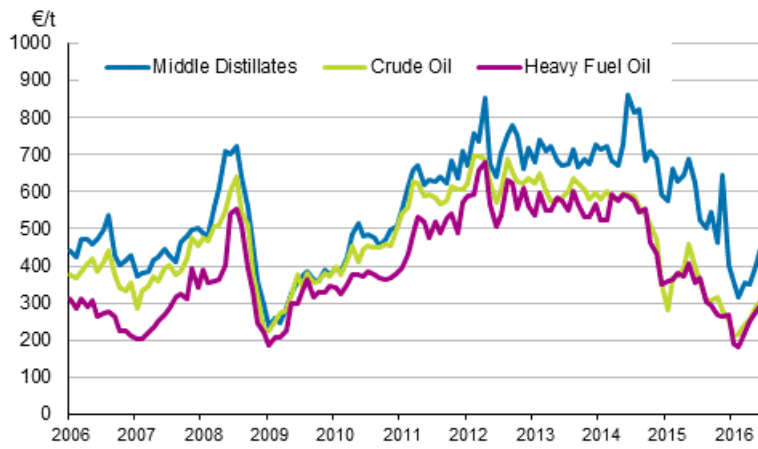
Appendix table 3. Consumer prices of heating energy in June 2016

Energy source	¹⁾ Price €/MWh	Annual change-%
Light fuel (VAT 24%)	81.3	-9.7
Household electricity, K2 (VAT 24%)	116.5	-1.8
Wood pellet (VAT 24%)	58	0.2
District heat, terraced house / low-rise block of flats (VAT 24%)	77.15	-0.7

1) The price of wood pellet is from May and district heat January 2016

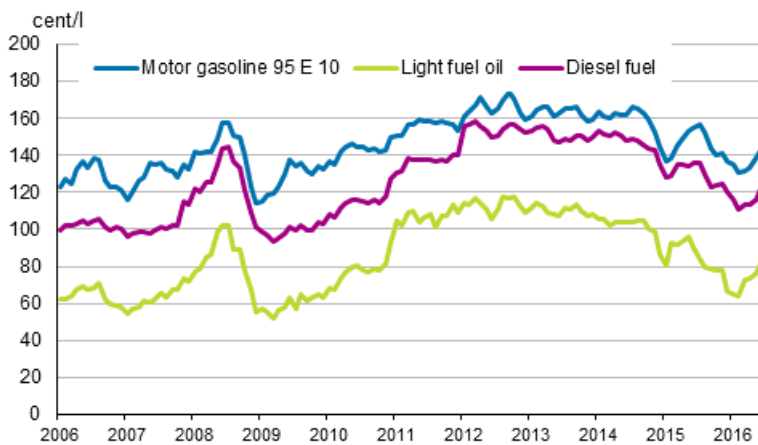
Appendix figures

Appendix figure 1. Import prices of oil



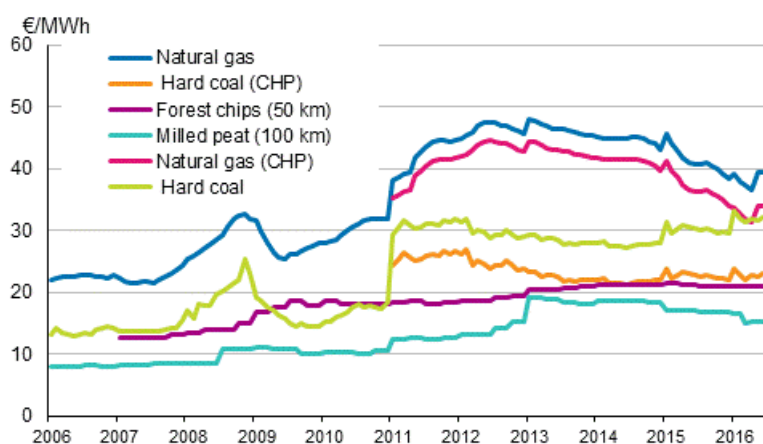
Source: Finnish Customs/Foreign Trade Statistics

Appendix figure 2. Consumer prices of principal oil products



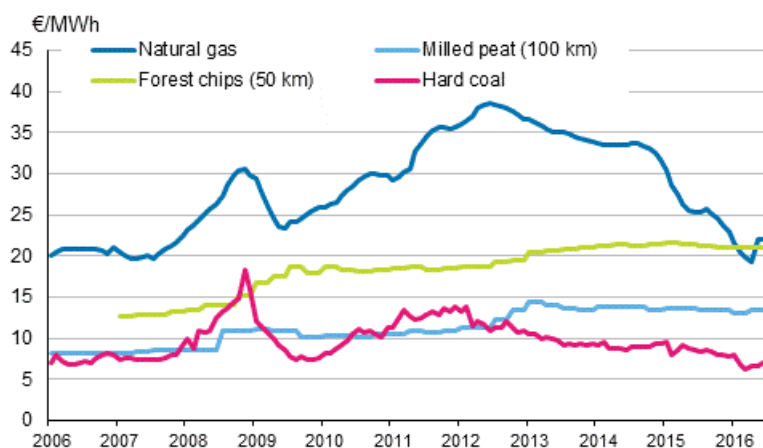
Source: Finnish Petroleum and Biofuels Association

Appendix figure 3. Fuel prices in heat production



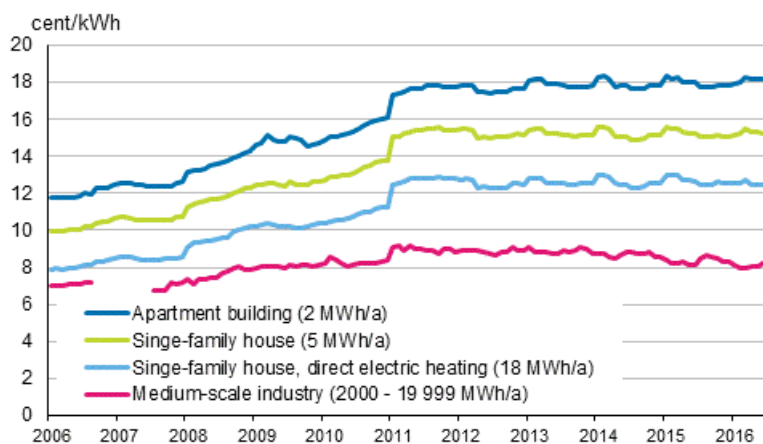
The prices include excise duties (VAT 0%). The carbon dioxide tax on natural gas and hard coal used in combined heat and power production was halved from the beginning of 2011. Sources: Finnish Customs/Foreign Trade Statistics, Energy Authority/Gasum Oy, The Bioenergy Association of Finland/Association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

Appendix figure 4. Fuel prices in electricity production



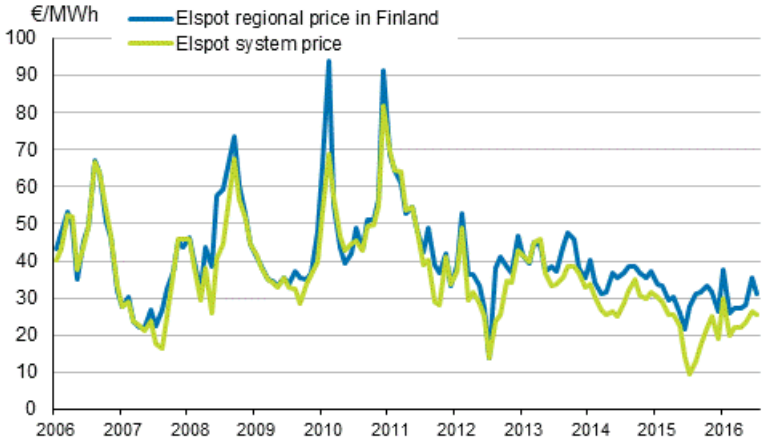
The fuels of electricity production are exclusive of tax. Sources: Finnish Customs/Foreign Trade Statistics, Energy Authority/Gasum Oy, The Bioenergy Association of Finland/ Association of Finnish Peat Industries, Finnish Petroleum and Biofuels Association

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

Inquiries

Ville Maljanen 029 551 2691
Director in charge:
Ville Vertanen

energia@stat.fi
www.stat.fi
Source: Statistics Finland, Energy prices