

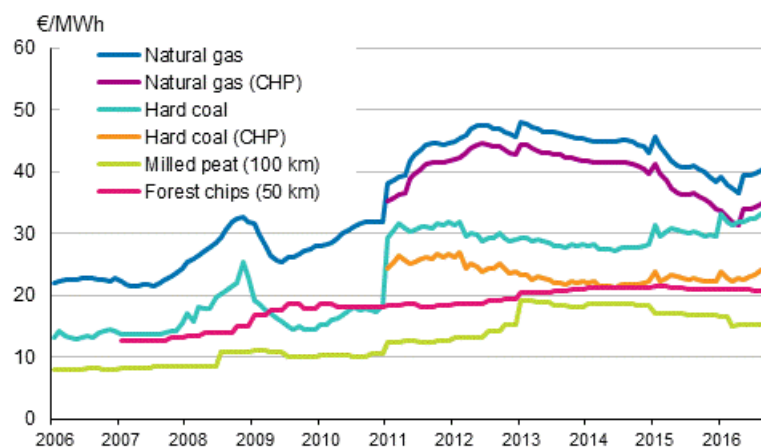
Energy prices

2016, 3rd quarter

Drop in energy prices levelled off in the third quarter

According to Statistics Finland's data, the prolonged decline in the prices of energy products levelled off in the third quarter of 2016. The price of electricity in the Nordic electricity exchange has been clearly on the rise since summer. The consumer prices of liquid fuels also rose close to the prices of one year ago.

Fuel Prices in Heat Production



The attempts of oil producer countries to limit oil production in the third quarter of the year raised the prices of oil products imported to Finland. The consumer prices of liquid fuels also rose from the second quarter, but still stayed slightly lower than a year earlier. The price of motor gasoline was four per cent lower and diesel oil three per cent lower in September than one year earlier. Despite the tax increase at the beginning of the year, the price of light fuel oil was two per cent lower in September than twelve months ago.

The tax of hard coal and natural gas used in heat production was raised at the beginning of 2016. Compared to the situation last year, the price of hard coal was 11 per cent higher in September while the price of natural gas remained nearly unchanged. In turn, the tax was lowered for milled peat used in heat production in March, due to which its price was ten per cent lower in the third quarter than one year before. The price of forest chips went down by two per cent. Similarly, the price of wood pellets used by consumers was

two per cent lower in August than one year ago. The price of district heating in July was on level with the previous year.

The system price of the Nordic electricity exchange derived from the sell and buy bids on the exchange went up in the third quarter. The decline of nearly 2.5 years in the system price appears to have stopped in summer and prices are now clearly rising, which is affected by the poorer water situation than average in Nordic countries. In September, the average for the system price was EUR 25.19 per megawatt hour, which was 44 per cent more than one year earlier. Due to electricity transmission restrictions, the Finnish area price was, on average, 29 per cent higher than the system price, that is, EUR 32.52 per megawatt hour, rising by two per cent from one year ago.

In September, the prices of electricity for household customers were nearly on level with one year before. The prices for enterprise and corporate customers fell by around three per cent for the smallest consumers but rose by three per cent for the biggest consumers.

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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 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 September 2016

Energy source	¹⁾ Price €/MWh	Annual change-%
²⁾ Hard coal (VAT 0%)	33.51	11.2
Natural gas (VAT 0%)	40.65	0.2
Forest chips (VAT 0%)	20.69	-2.1
Milled peat (VAT 0%)	15.20	-10.2

1) Inclusive of excise duties.

2) The price is preliminary.

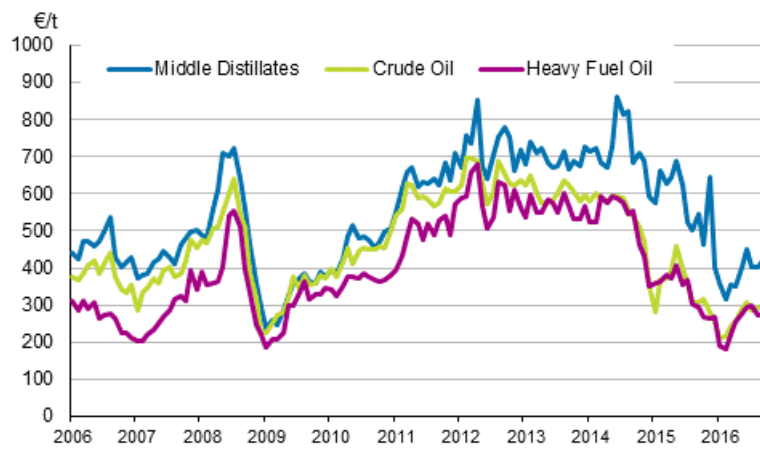
Appendix table 3. Consumer prices of heating energy in September 2016

Energy source	¹⁾ Price €/MWh	Annual change-%
Light fuel (VAT 24%)	77.5	-1.6
Household electricity, K2 (VAT 24%)	116.8	0.0
Wood pellet (VAT 24%)	57	-1.7
District heat, terraced house / low-rise block of flats (VAT 24%)	77.36	0.4

1) The price of wood pellet is from August and district heat July 2016

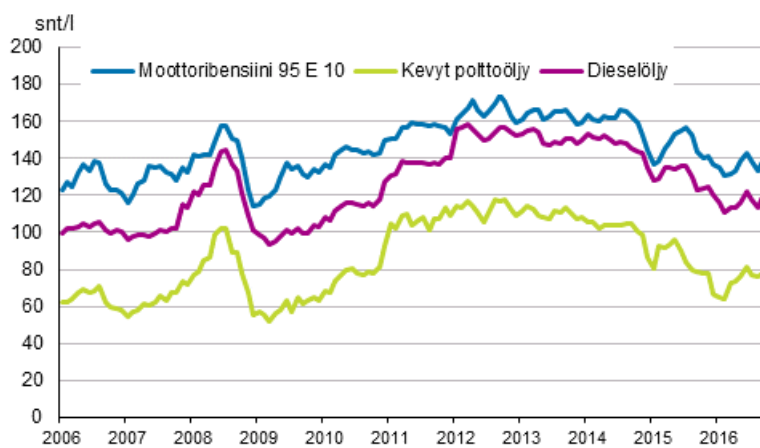
Appendix figures

Appendix figure 1. Import prices of oil



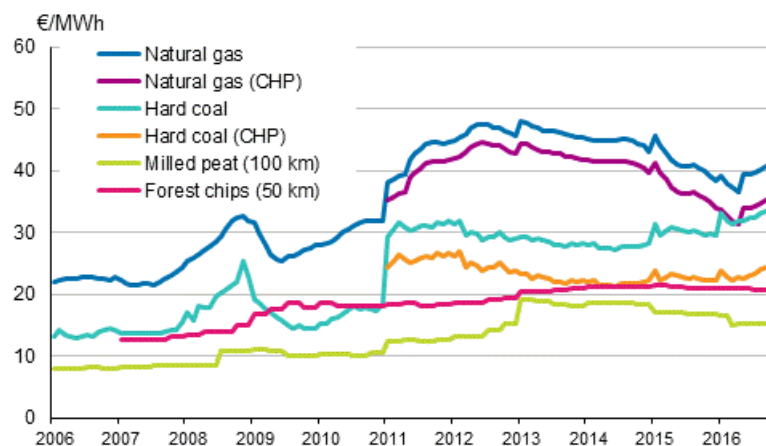
Source: Finnish Customs/Foreign Trade Statistics

Appendix figure 2. Consumer prices of principal oil products



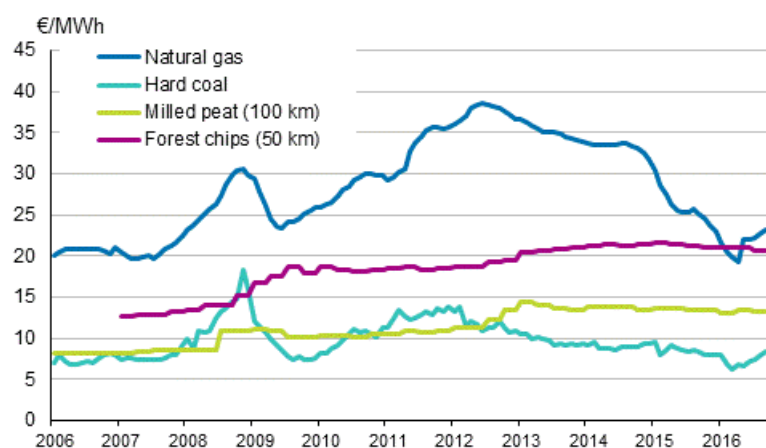
Source: Finnish Petroleum and Biofuels Association

Appendix figure 3. Fuel prices in heat production



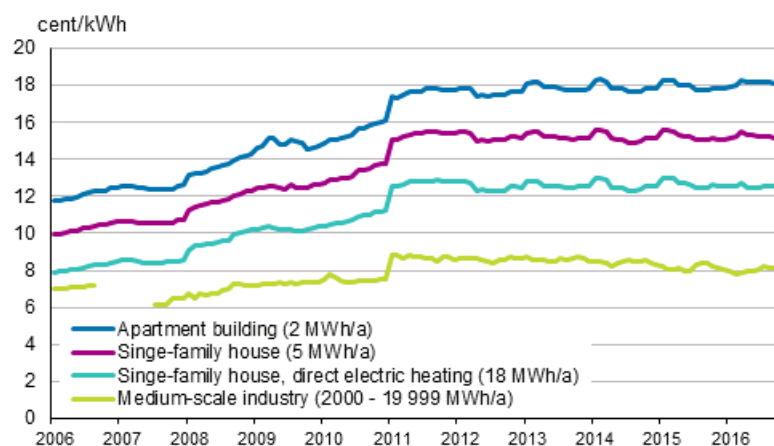
The prices include excise duties (VAT 0%). The carbon dioxide tax on natural gas and hard coal used in combined heat and power production was halved from the beginning of 2011. Sources: Finnish Customs/Foreign Trade Statistics, Energy Authority/Gasum Oy, The Bioenergy Association of Finland/Association 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 figure was corrected on 17 February 2017)



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