

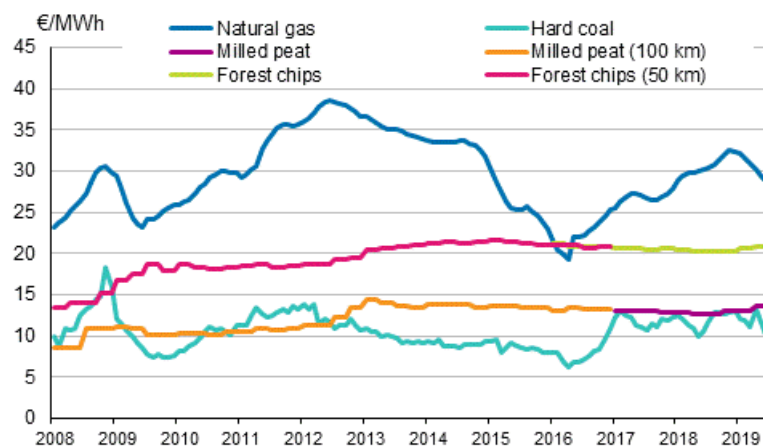
Energy prices

2019, 2st quarter

Prices of imported fuels decreased in the second quarter

According to Statistics Finland's data, prices of imported fuels decreased in nearly all energy products in the second quarter of the year. The exchange price of electricity continued the fall that started at the beginning of the year.

Fuel Prices in Electricity Production



The fall in the world market price of oil in May was also reflected in the consumer prices of liquid fuels. Despite tax increases, the price of light fuel oil was seven per cent lower in June compared to one year before. For motor gasoline and diesel, the price increases stalled. In June, the price of motor gasoline was two per cent higher and the price of diesel on the same level compared to the year before.

The tax-free prices of hard coal and natural gas used in energy production were five and four per cent lower respectively in June compared to the previous year. The taxation for combined heat and power production was changed from the beginning of the year. The halving of carbon dioxide tax was abandoned, but it was replaced with lower energy content tax for fuels used in combined production. The changes tighten the taxation of coal and lighten the taxation of natural gas in combined production.

Prices of domestic fuels rose from the previous year. The taxable prices of forest chippings and milled peat were three and 14 per cent higher in June than one year ago. The price increase of milled peat was boosted by tax increases at the beginning of the year.

The system price of the Nordic electricity exchange derived from the sell and buy bids on the exchange continued falling in the second quarter of the year. In June, the average system price was 38 per cent lower than in the previous year. The average Finnish area price decreased correspondingly by 35 per cent from the year before. In January, the average system price was the highest since 2011. The price increase was influenced by rising prices of emission permissions and worse than normal hydro resources in the Nordic countries.

There were no significant changes to the electricity prices for household customers in the second quarter of the year. Compared to March of this year, prices remained almost unchanged. Compared to June 2018, the prices for household customers were 11 to 14 per cent higher depending on consumption category. Household customers' electricity prices are based on the obligation to deliver prices published by the Energy Authority, while the prices of enterprise and corporate customers are based on Statistics Finland's price inquiry on electrical energy. The obligation to deliver price reacts slowly to changes in electricity prices on the Nordic electricity exchange.

Contents

Tables

Appendix tables

Appendix table 1. Energy taxes, precautionary stock fees and oil pollution fees	4
Appendix table 2. Energy prices in heat production in June 2019.....	6
Appendix table 3. Consumer prices of heating energy in June 2019.....	6

Figures

Appendix figures

Appendix figure 1. Import prices of oil	7
Appendix figure 2. Consumer prices of principal oil products	7
Appendix figure 3. Fuel prices in heat production (The figure was corrected on 5 November 2019).....	8
Appendix figure 4. Fuel prices in electricity production	8
Appendix figure 5. Price of electricity by type of consumer.....	9
Appendix figure 6. Average monthly spot prices at the Nord Pool Spot power exchange	9

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	-	-	-
1.1.2017	69,57	52,67	22,52	26,54	26,83	189,84	18,53	1,90	2,24	0,69	-	-	-
1.1.2018	69,57	52,67	24,04	28,32	28,64	202,69	19,78	1,90	2,24	0,69	-	-	-
1.1.2019	69,57	52,67	24,53	27,90	27,23	200,58	20,57	3,00	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	-	-	-	-	-	-
1.1.2017	52,19	32,77	7,05	9,01	8,05	49,93	7,05	-	-	-	-	-	-
1.1.2018	52,19	32,77	7,50	9,58	8,56	53,13	7,50	-	-	-	-	-	-
1.1.2019	52,19	32,77	7,63	9,81	8,56	52,77	7,63	-	-	-	-	-	-
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	-	-	-	-	-	-

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					
1.1.2013	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	-	-	-	-	-	
1.1.2017	17,38	19,90	15,47	17,53	18,78	139,91	11,48	-	-	-	-	-	
1.1.2018	17,38	19,90	16,54	18,74	20,08	149,56	12,28	-	-	-	-	-	
1.1.2019	17,38	19,90	16,90	18,09	18,67	147,81	12,94	-	-	-	-	-	
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	-	-	
1.1.2019	-	-	-	-	-	-	-	3,00	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 2019

Energy source ³⁾	¹⁾ Price €/MWh	Annual change-%
²⁾ Hard coal (VAT 0%)	39,38	-1,7
Natural gas (VAT 0%)	49,52	-1,0
Forest chips (VAT 0%)	20,85	2,8
Milled peat (VAT 0%)	16,55	13,5

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 2019

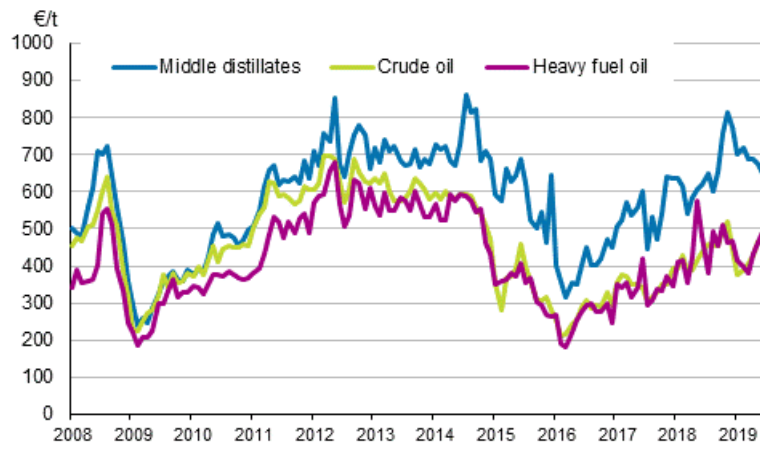
Energy source ²⁾	¹⁾ Price €/MWh	Annual change-%
Light fuel (VAT 24%)	94,2	-7,6
Household electricity, L2 (VAT 24%)	140,1	13,9
Wood pellet (VAT 24%)	58	2,2
District heat, terraced house / low-rise block of flats (VAT 24%)	81,88	4,1

1) The prices do not take into account energy conversion losses. The price of district heat is from January 2019.

2) Sources: Finnish Energy, Energy Authority, Statistics Finland

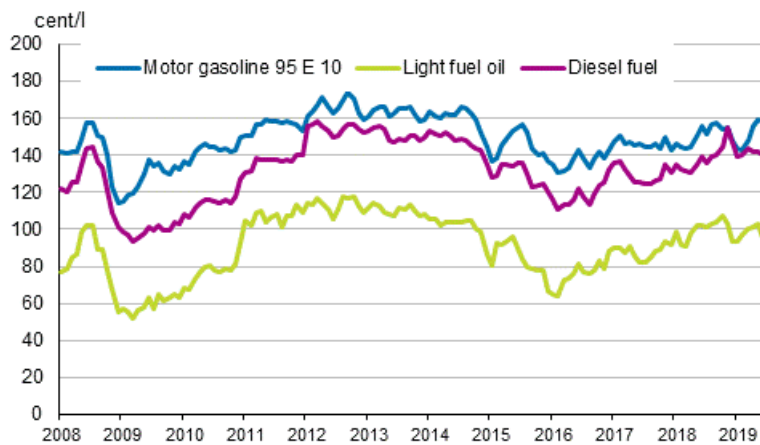
Appendix figures

Appendix figure 1. Import prices of oil



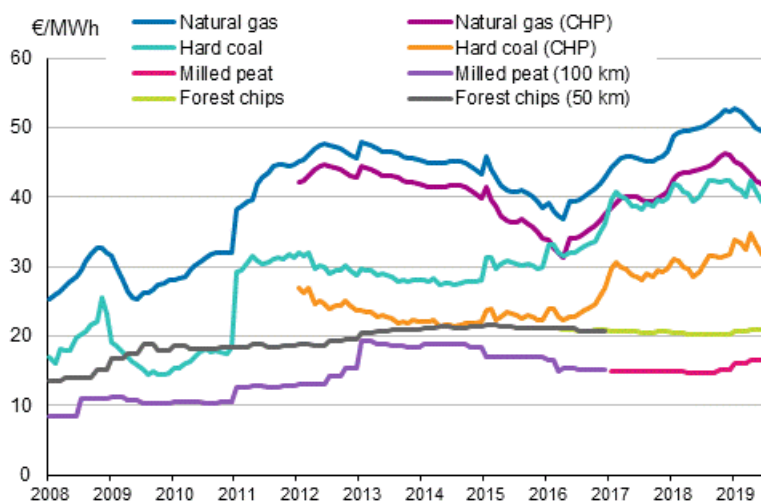
Source: Finnish Customs

Appendix figure 2. Consumer prices of principal oil products



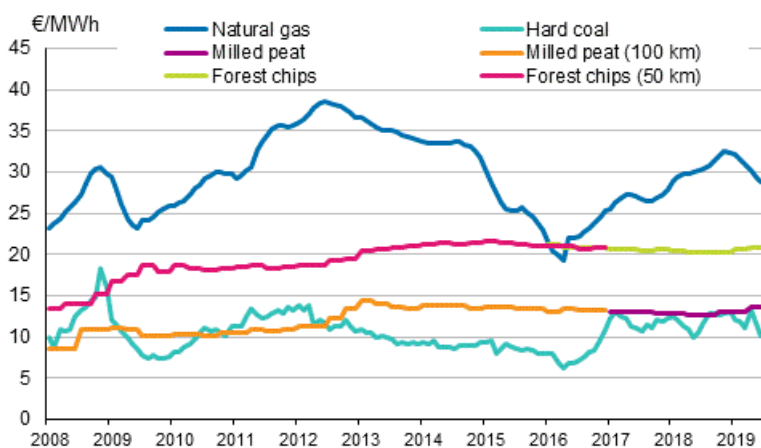
Source: Finnish Petroleum and Biofuels Association (-11/2018), Statistics Finland (12/2018-).

Appendix figure 3. Fuel prices in heat production (The figure was corrected on 5 November 2019)



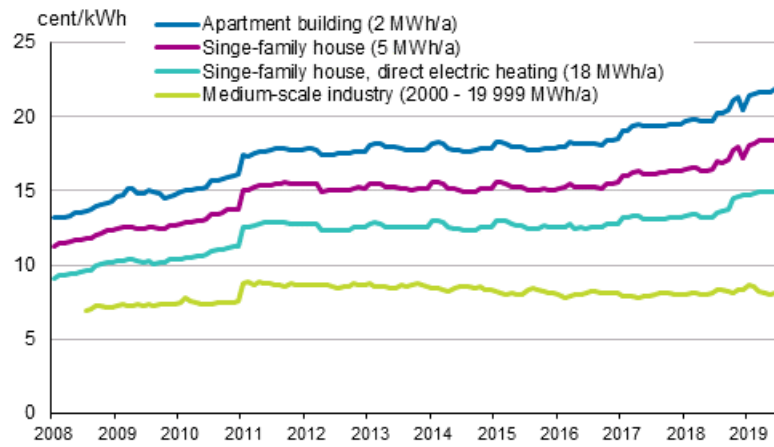
The prices include excise duties (VAT 0%). The energy content tax on natural gas and hard coal used in combined heat and power production has been reduced by € 7,63 per MWh from the beginning of 2019. Sources: Finnish Customs, Energy Authority, The Bioenergy Association of Finland, Statistics Finland, FOEX Indexes Ltd.

Appendix figure 4. Fuel prices in electricity production



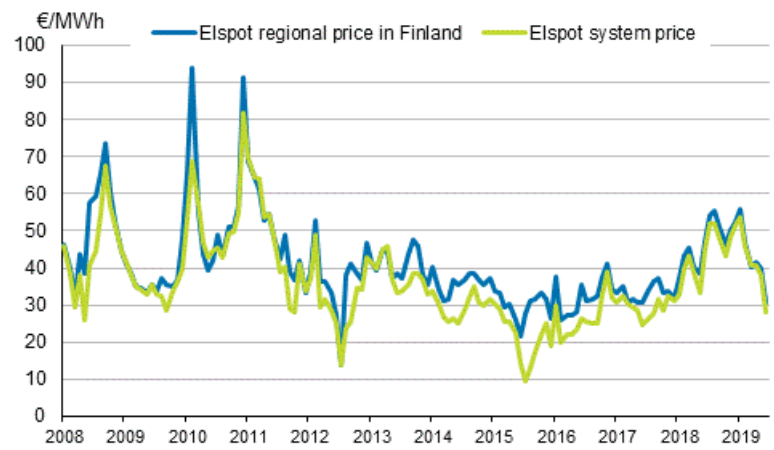
The fuels of electricity production are exclusive of tax. Sources: Finnish Customs, Energy Authority, The Bioenergy Association of Finland, Statistics Finland, FOEX Indexes Ltd.

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 spot prices at the Nord Pool Spot power exchange



Source: Nord Pool Spot

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Source: Statistics Finland, Energy prices