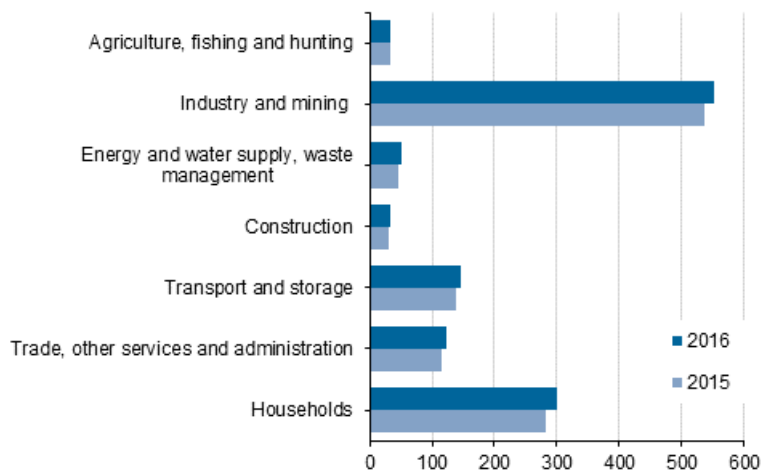


Energy accounts 2016

Households' energy consumption grew in 2016

The final consumption of energy products by Finns in Finland and abroad grew by five per cent from the previous year to 1.2 million terajoules in 2016. The growth was biggest for households that consumed seven per cent more energy than in the year before. Households consumed 300 thousand terajoules of energy, which corresponds to one quarter of final energy consumption. In the industry of transportation and storage, energy consumption grew by six per cent, being 146 thousand terajoules. The final consumption of energy products in manufacturing went up by three per cent. The share of manufacturing in total final energy consumption stood at 44 per cent.

Final consumption of energy by industry in 2015 and 2016, petajoules



The consumption of oil products grew by five per cent from the previous year to 537 thousand terajoules. The main reason for the growth was the fall in the share of biofuels in transport fuels, which increased the consumption of fossil transport fuels. This was particularly visible in the industry of land transport, where the consumption of oil products grew by 22 per cent compared with the previous year. The volume of oil products consumed by households also grew by six per cent from the previous year. The consumption of crude oil went up by 15 per cent from the year before.

In turn, the consumption of biofuels went down by two per cent from the year before, which was visible as the fall in processing use in manufacturing and the decrease in final consumption especially in land transport. The consumption of biofuels in land transport went down by 75 per cent from the year before. However, the consumption of biofuels grew for households by five per cent from the previous year, which was primarily due to increased wood combustion in heating of buildings. The consumption of wood fuels in energy supply also increased, which was visible as a four per cent growth in the consumption of biofuels in the industry.

Six per cent more electricity and heat were used than in the previous year. The growth was biggest for households that used electricity and heat eight per cent more than in the previous year. Households consumed nearly one-third of all electricity and heat. Manufacturing consumed four per cent more electricity and heat than one year earlier.

Total supply and consumption of energy products by industry in 2016, TJ

Industry (TOL2008)	Supply	Use
Agriculture, fishing and aquaculture, hunting	1 604	28 704
Forestry	199 729	4 462
Mining and quarrying	280 750	8 786
Food industry	239	17 181
Forest industry	146 307	272 609
Oil refining and manufacture of chemicals	693 105	848 947
Manufacture of basic metals and fabricated metal products	14 963	91 775
Other industries	.	30 185
Energy management	448 878	624 521
	.	4 406
Construction	.	33 384
Trade	.	22 035
Land transport	.	62 230
Water transport	.	34 748
Air transport	.	43 305
Support activities for transportation, postal activities	.	5 500
	.	18 108
	.	82 666
Households	.	300 785
Change in Inventories	.	53 433
Rest of the World	1 113 365	411 384
Statistical Differences	.	6 646
TOTAL	2 898 942	2 898 942

Energy accounts are part of the second stage of the European Union's Regulation concerning environmental accounts that became legally valid in June 2014 ((EC) No 538/2014). The Regulation obliges the Member States to compile statistics and report annually on energy accounts.

The goal of environmental accounts is to describe the interaction between the environment and the economy by mainly using the same basic concepts and classifications as national accounts (ESA 2010). In the energy accounts, the supply and use of energy are presented in accordance with the industrial classification and domicile principle used in national accounts. Thus, the data of the statistics can be connected to various monetary variables of national accounts, such as total output and value added. The energy accounts' data on the supply and use of energy can also be combined with the data of the statistics on environmental taxes and emissions into air by industry.

Unlike other statistics on energy, energy accounts also contain the supply and consumption of energy by Finns abroad, in accordance with the framework of national accounts. Correspondingly, the supply and consumption of energy by foreigners within Finland are subtracted from energy accounts. Unlike in national accounts, statistics describing the physical flows of environmental accounts, including energy accounts, do not take into account global factoryless production and merchanting.

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Appendix tables

Appendix table 1. Households' consumption of energy products in 2011 to 2016, TJ

	2011	2012	2013	2014	2015	2016
Total fuels	285 530	299 952	288 174	288 199	281 879	300 785
Hard coal and peat products	210	211	173	159	150	189
Oil products	86 886	87 118	86 615	85 825	85 178	89 917
Bio fuels excl. peat	56 750	61 083	55 748	58 565	55 361	57 866
Natural gas (without bio)	1 295	1 395	1 233	1 200	1 100	1 122
Electrical energy	77 133	80 575	77 436	76 553	75 311	81 080
Heat	63 255	69 570	66 969	65 894	64 777	70 608

Appendix table 2. Consumption of energy products by industry in 2016, TJ

	Total fuels	Hard coal and peat products	Oil products	Bio fuels excl. peat	Crude oil, NGL, and other hydrocarbons (excl. bio)	Natural gas (without bio)	Nuclear fuel	Electrical energy	Heat
Agriculture, fishing and aquaculture, hunting	28 704	1 950	14 145	6 339	.	43	.	5 677	549
Forestry	4 462	.	4 410	51	.	.	.	0	.
Mining and quarrying	8 786	.	1 878	51	.	.	.	6 735	121
Food industry	17 181	552	1 721	203	.	674	.	6 138	7 893
Forest industry	272 609	8 621	9 147	150 563	.	16 247	.	66 763	21 266
Oil refining and manufacture of chemicals	848 947	39 841	197 398	9 816	540 997	17 862	.	24 829	18 201
Manufacture of basic metals and fabricated metal products	91 775	50 045	6 699	15	.	2 443	.	25 341	7 229
Other industries	30 185	3 010	6 869	352	.	1 562	.	12 256	6 134
Energy management	624 521	132 172	14 704	138 111	.	44 528	250 592	19 700	24 711
Water supply and waste management	4 406	2	2 260	182	.	33	.	1 763	164
Construction	33 384	.	31 523	363	.	.	.	1 497	.
Trade	22 035	18	2 192	739	.	219	.	11 748	7 117
Land transport	62 230	3	54 498	2 424	.	161	.	4 439	703
Water transport	34 748	1	33 431	77	.	76	.	757	403
Air transport	43 305	0	42 208	158	.	11	.	628	297
Support activities for transportation, postal activities	5 500	5	690	187	.	60	.	3 253	1 302
Real estate activities	18 108	10	1 294	403	.	124	.	6 635	9 640
Other service activities and administration	82 666	56	22 087	2 819	.	671	.	35 858	21 173
Households	300 785	189	89 917	57 866	.	1 122	.	81 080	70 608
Change in Inventories	53 433	44 876	11 121	.	2 563	.	0	.	.
Rest of the World	411 384	2 933	395 737	1 327	.	13	.	11 372	.

	Total fuels	Hard coal and peat products	Oil products	Bio fuels excl. peat	Crude oil, NGL, and other hydrocarbons (excl. bio)	Natural gas (without bio)	Nuclear fuel	Electrical energy	Heat
Statistical Differences	6 646	1 854	9 711	176	5 233	646	0	613	1 121
TOTAL	2 898 942	196 392	931 407	372 232	538 328	86 502	250 592	327 091	196 394

Appendix table 3. Consumption of oil products and crude oil in 2011 to 2016, TJ

Industry (TOL2008)	2011	2012	2013	2014	2015	2016
Agriculture, fishing and aquaculture, hunting	16 990	17 207	16 917	15 074	14 820	14 145
Forestry	4 260	4 246	4 361	4 248	4 201	4 410
Mining and quarrying	2 479	2 610	2 580	2 414	2 562	1 878
Food industry	2 385	2 380	2 157	2 035	1 884	1 721
Forest industry	9 850	8 785	8 580	8 114	7 721	9 147
Oil refining and manufacture of chemicals	212 561	195 136	194 232	181 112	197 280	197 398
Manufacture of basic metals and fabricated metal products	16 608	12 049	9 630	8 925	11 822	6 699
Other industries	7 722	7 941	7 506	7 169	6 687	6 869
Energy management	14 378	14 173	9 749	10 356	11 564	14 704
Water supply and waste management	1 726	1 864	2 043	1 936	1 918	2 260
Construction	29 660	27 944	32 075	29 419	28 944	31 523
Trade	1 619	1 783	1 619	1 992	1 876	2 192
Land transport	59 785	62 221	55 332	44 954	44 749	54 498
Water transport	33 550	34 141	31 213	25 310	27 129	33 431
Air transport	40 980	35 770	41 548	41 264	42 972	42 208
Support activities for transportation, postal activities	435	468	588	690	591	690
Real estate activities	1 509	1 382	1 128	1 173	1 110	1 294
Other service activities and administration	19 060	17 780	19 111	18 851	18 248	22 087
Households	86 886	87 118	86 615	85 825	85 178	89 917
Change in Inventories	8 380	17 515	29 655	3 013	16 952	11 121
Rest of the World	320 480	336 612	401 075	378 297	305 631	395 737
Statistical Differences	33 524	19 198	3 109	41 741	2 323	9 711
TOTAL	924 837	873 303	954 615	907 899	836 173	931 407

Appendix table 4. Consumption of biofuels (excl. peat) by industry in 2011 to 2016, TJ

Industry (TOL2008)	2011	2012	2013	2014	2015	2016
Agriculture, fishing and aquaculture, hunting	6 109	7 115	7 927	7 666	6 918	6 339
Forestry	139	87	66	113	110	51
Mining and quarrying	14	45	56	37	50	51
Food industry	275	259	246	314	165	203
Forest industry	125 445	127 646	131 470	138 761	141 926	150 563
Oil refining and manufacture of chemicals	9 735	9 705	11 574	23 017	22 907	9 816
Manufacture of basic metals and fabricated metal products	4	4	13	15	17	15
Other industries	390	435	473	411	356	352
Energy management	133 425	139 291	147 002	141 413	134 044	138 111
Water supply and waste management	256	287	239	433	419	182
Construction	642	450	629	1 331	1 363	363
Trade	619	864	808	975	890	739
Land transport	2 777	2 800	3 741	9 346	9 531	2 424
Water transport	48	68	84	172	178	77
Air transport	129	152	232	390	360	158
Support activities for transportation, postal activities	231	248	198	202	159	187
Real estate activities	751	485	450	473	430	403
Other service activities and administration	2 484	2 930	2 892	4 806	4 607	2 819
Households	56 750	61 083	55 748	58 565	55 361	57 866
Change in Inventories	.	.	.	433	.	.
Rest of the World	8 986	10 966	14 331	14 178	1 738	1 327
Statistical Differences	1 358	2 098	2 310	1 235	97	176
TOTAL	347 860	367 026	380 495	404 296	381 636	372 232

Appendix table 5. Final consumption of electricity and heat by industry in 2011 to 2016, TJ

Industry (TOL2008)	2011	2012	2013	2014	2015	2016
Agriculture, fishing and aquaculture, hunting	5 768	6 219	5 907	6 030	5 976	6 226
Forestry	.	.	.	0	0	0
Mining and quarrying	4 108	5 143	5 238	5 424	5 686	6 856
Food industry	11 818	11 104	11 853	12 571	13 105	14 031
Forest industry	110 596	105 010	100 567	90 540	90 321	88 029
Oil refining and manufacture of chemicals	39 002	40 735	40 240	37 178	36 500	43 030
Manufacture of basic metals and fabricated metal products	28 402	28 103	29 026	31 536	33 651	32 571
Other industries	16 896	15 993	16 337	17 444	14 432	18 391
Energy management	47 772	48 867	42 766	42 146	39 703	44 412
Water supply and waste management	3 492	3 466	2 309	1 988	1 948	1 928
Construction	1 256	1 324	1 360	1 558	1 339	1 497
Trade	15 840	22 313	21 388	19 798	18 828	18 865
Land transport	4 070	5 549	5 471	5 357	5 140	5 142
Water transport	608	1 136	1 105	1 107	1 121	1 161
Air transport	347	931	1 005	993	918	925
Support activities for transportation, postal activities	5 413	4 911	4 284	4 718	4 111	4 555
Real estate activities	23 151	14 955	16 329	16 553	15 161	16 275
Other service activities and administration	51 968	57 331	55 245	56 007	54 131	57 031
Households	140 388	150 145	144 405	142 447	140 088	151 688
Rest of the World	13 694	5 922	6 753	13 158	18 439	11 372
Statistical Differences	8 537	7 274	3 324	1 085	1 230	508
TOTAL	516 061	521 890	508 270	507 645	501 835	523 485

Appendix table 6. Consumption of other energy products by industry in 2011 to 2016, TJ

Industry (TOL2008)	2011	2012	2013	2014	2015	2016
Agriculture, fishing and aquaculture, hunting	2 071	2 220	1 983	1 856	1 694	1 993
Food industry	2 261	2 221	1 874	1 797	1 222	1 226
Forest industry	29 740	27 804	27 746	27 189	25 767	24 868
Oil refining and manufacture of chemicals	65 089	64 637	64 673	62 941	60 405	57 703
Manufacture of basic metals and fabricated metal products	47 109	42 816	43 824	45 360	46 964	52 488
Other industries	6 567	4 864	4 601	4 561	4 349	4 572
Energy management	518 628	465 428	488 246	454 764	415 453	427 293
Water supply and waste management	84	75	52	39	36	35
Trade	271	300	315	262	245	238
Land transport	357	366	291	294	173	165
Water transport	7	15	16	15	15	77
Air transport	7	12	15	14	12	12
Support activities for transportation, postal activities	109	90	84	73	59	66
Real estate activities	338	165	177	145	132	134
Other service activities and administration	771	787	832	748	709	727
Households	1 505	1 606	1 406	1 360	1 251	1 311
Change in Inventories	11 968	39 417	3 514	30 321	30 646	44 876
Rest of the World	1 653	2 190	2 268	2 223	3 818	2 947
Statistical Differences	15 616	1 379	861	4 461	6 153	2 500
TOTAL	704 158	574 809	635 757	629 508	537 818	533 487

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Source: Energy Accounts 2016, Statistics Finland