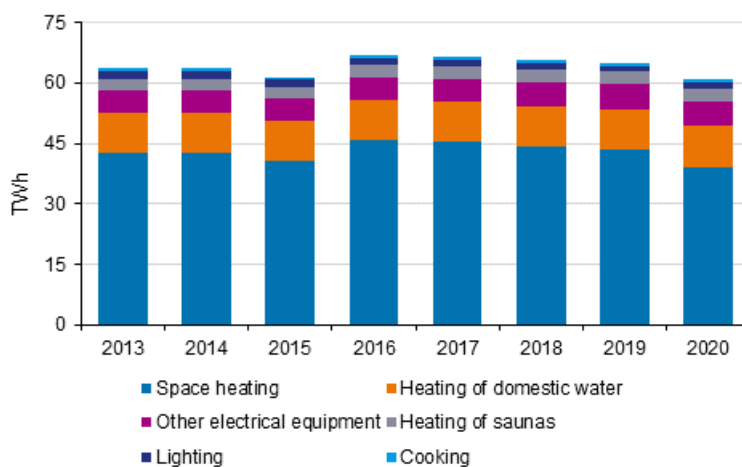


Energy consumption in households 2020

Decrease in heating consumption covered the effect of remote work on energy consumption in households in 2020

The year 2020 was record warm. Energy consumption in households fell by nearly four terawatt hours (TWh) from the previous year and the share of indoor space heating in energy consumption in households was exceptionally low, 64 per cent. The use of electricity for household appliances increased slightly. The energy consumed in households amounted to close on 61 TWh in 2020. The data are based on Statistics Finland's statistics on energy consumption in households.

Energy consumption in households in 2013 to 2020



Housing accounts, on average, for 20 per cent of the final energy consumption. Heating of indoor spaces consumes roughly two-thirds of the energy consumed in households. In 2020, the share of space heating was exceptionally low, 64 per cent. Good 39 TWh of energy was used to heat residential spaces. Heating consumption was ten per cent lower than the previous year's consumption. Energy consumption of free-time residences is also included in energy consumption in households.

In addition to the area to be heated and the energy efficiency of the building stock, the need for heating energy is also affected by the outdoor temperature. Its changes are monitored with heating degree days calculated for 16 localities. The year 2020 was the warmest year in the whole country during the reference period of the statistics.

In 2020, approximately 10 TWh, or 17 per cent of total household consumption, was used to heat domestic water. The share of electrical appliances, cooking and lighting was 14 per cent and rose by one percentage point from the year before. Remote work is estimated to have raised the electricity consumption of electrical appliances, such as computers and cookers. This is clearly visible in the consumption of cooking. The consumption of electrical appliances also includes car heating dependent on temperature. Its consumption dropped and cancelled out the increase in consumption caused by remote work. The remaining five per cent of energy consumption in households was used to heat saunas. Nearly two-thirds of the approximately three TWh used to heat saunas were wood and good one-third electricity.

Good one-third of energy consumption in households was electricity in 2020. Nearly one-third of consumption was district heat and good one-fifth wood. Around 22 TWh of electricity was consumed and consumption went down by only a couple of per cent from the previous year. Forty-five per cent of electricity was used to heat indoor areas and 39 per cent for household appliances. The remainder of electricity was used to heat domestic water and saunas.

Heating of residential buildings consumed 39 TWh of energy in 2020. The most common sources of energy for heating indoor spaces were district heat, wood and electricity, the share of which was 82 per cent of the energy consumption for heating indoor spaces. The next most common energy source was heat pump energy. The electricity use of heat pumps is included in electricity consumption of heating in the statistics on energy consumption in households.

The statistics on energy consumption in households are based on sales data collected from sellers of energy. Part of the data are received by sector and part by product. The breakdown required by the EU Regulation on energy statistics is produced with a calculation model. Several different data sources are exploited in the calculation model. Due to the production method of the statistics, growth in the consumption of electrical appliances cannot be directly verified from the data but is based on inferences made from observations. For example, according to the electricity statistics of the Finnish Energy Industries, the use of electricity in households in Helsinki grew by seven per cent from 2019 to 2020, while the number of household-dwelling units increased by close on two per cent. The dwellings of Helsinki, dominated by blocks of flats, are mainly heated with district heating, so the fall in electricity heating consumption does not cover the rise in electricity consumption caused by people working remotely from home.

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Appendix table 1. Energy consumption in households 2012-2020, GWh

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
Heating of spaces	45 502	42 739	42 831	40 804	45 692	45 349	44 343	43 370	39 220
Residential buildings proper, total	43 281	40 643	40 690	38 760	43 252	42 876	41 884	40 920	36 938
- Detached houses	27 265	25 595	25 967	24 507	27 373	27 504	26 993	26 294	23 899
- Terraced houses	4 210	3 972	3 925	3 816	4 208	4 127	4 033	3 956	3 595
- Blocks of flats	11 805	11 076	10 798	10 437	11 671	11 245	10 858	10 670	9 444
Free-time residential buildings	2 222	2 097	2 140	2 044	2 440	2 473	2 459	2 450	2 282
Household appliances ¹⁾	8 850	8 389	8 091	7 886	8 295	8 126	8 284	8 519	8 619
- Lighting	2 349	2 115	1 919	1 876	1 770	1 633	1 599	1 558	1 512
- Cooking	714	697	689	680	681	673	674	680	898
- Other electrical equipment	5 787	5 577	5 483	5 330	5 844	5 820	6 011	6 281	6 209
Heating of saunas	2 894	2 902	2 924	2 920	3 049	3 057	3 063	3 069	3 063
Heating of domestic water	9 658	9 727	9 789	9 850	9 961	9 954	9 977	10 022	10 082
Housing, total	66 904	63 757	63 635	61 460	66 997	66 486	65 667	64 980	60 984

Appendix table 2. Energy consumption in households by energy source in 2020, GWh

	Wood	Peat	Coal	Heavy fuel oil	Light fuel oil	Natural gas ¹⁾	Ambient energy ²⁾	District heat	Electricity ³⁾	Total
Housing, total	13 154	39	0	6	2 575	376	5 811	16 982	22 041	60 984
Heating of spaces	10 905	25	0	4	2 019	218	4 870	11 358	9 820	39 220
Residential buildings proper, total	9 734	25	0	4	1 982	217	4 623	11 344	9 007	36 938
- Detached houses	9 565	22	0	..	1 736	72	4 031	1 533	6 940	23 899
- Terraced houses	134	1	..	..	80	37	459	1 773	1 111	3 595
- Blocks of flats	36	2	..	4	166	108	133	8 038	956	9 444
Free-time residential buildings	1 170	0	0	..	37	1	247	13	813	2 282
Household appliances	..	..	..	..	..	100	..	..	8518	8 619
- Lighting	..	..	..	..	..	..	..	..	1512	1 512
- Cooking	..	..	..	..	..	100	..	..	798	898
- Other electrical equipment	..	..	..	..	..	..	..	..	6209	6 209
Heating of saunas	1 833	..	..	..	..	..	..	..	1 230	3 063
Heating of domestic water	416	13	0	2	556	57	941	5 625	2 472	10 082

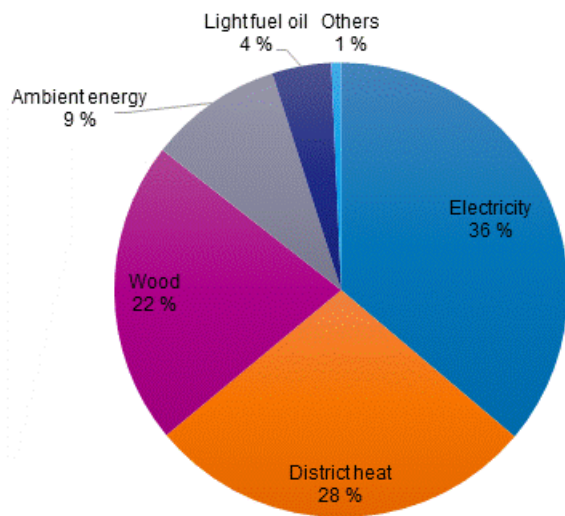
1) Includes liquid gas.

2) Ambient energy refers to energy extracted with heat pumps from the environment (ground, air or water) for space heating. Electricity spent by heat pumps in heating and cooling use is included in electricity consumption.

3) Electrical heating of residential buildings includes direct electrical heating, electric storage heating, additional heating and floor heating by electricity, electricity used by heat pumps, heating of domestic water by electricity, electric sauna stoves and electricity consumed by heating systems and heat distribution equipment.

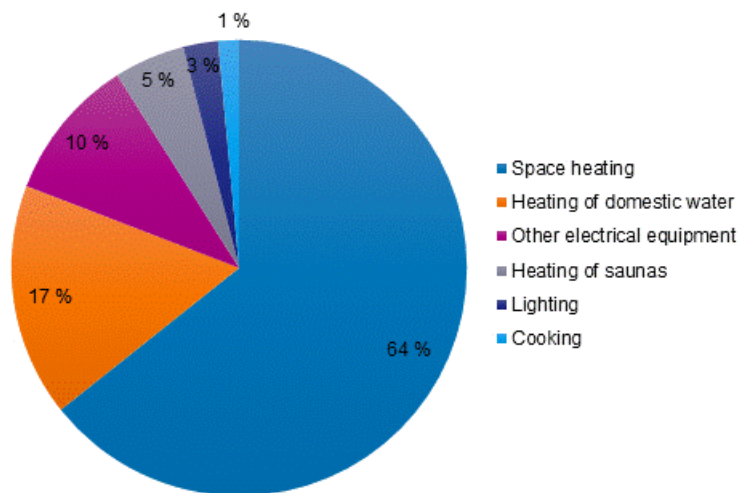
Appendix figures

Appendix figure 1. Energy consumption in households by energy source in 2020



Used energy sources 61 TWh. The group Others contains the following energy sources: natural gas and liquid gas 0.6 %, peat 0.06 %, heavy fuel oil 0.01 % and coal 0.002 % of energy consumption in households.

Appendix figure 2. Energy consumption in households by use in 2020



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Source: Energy consumption in households 2020, Statistics Finland