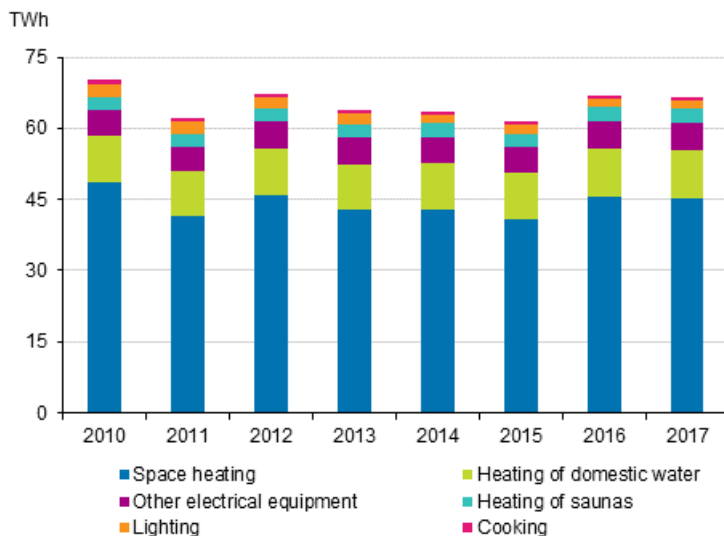


Energy consumption in households 2017

Energy consumption in households fell slightly in 2017

The energy consumed in housing amounted to good 66 terawatt hours (TWh) in 2017. Consumption fell slightly from the previous year, although the number and volume of dwellings grew by around one per cent. The weather was warmer in 2017 than in the previous year, which decreased the need for heating energy. Consumption of indoor space heating fell by one percent from 2016 to 2017. The energy consumption of household appliances went down by three per cent. The data are based on Statistics Finland's statistics on energy consumption in households.

Energy consumption in households 2010-2017



Heating of residential buildings amounted to sixty-eight per cent of energy consumption in housing, heating of domestic water fifteen per cent and heating of saunas five per cent. The share of electrical equipment, cooking and lighting was close on 13 per cent. Housing accounted, on average, for 20 per cent of the final energy consumption. Housing also includes free-time residences.

One-third of energy consumption in housing was electricity in 2017. Nearly one-third of consumption was district heat and good one-fifth wood. Close on 23 TWh of electricity was consumed; approximately the same amount as in 2016. Forty-eight per cent of electricity was used to heat indoor areas and 36 per cent to household appliances. The remainder of electricity was used to heat domestic water and saunas.

Heating of residential buildings consumed 45 TWh of energy in 2017. Consumption decreased by one per cent from the previous year. The most common sources of energy for indoor space heating were district heat, electricity and wood, the share of which totalled 82 per cent of the energy consumption for indoor space heating. The next most common energy source was heat pump energy.

The use of heat pumps for heating has grown significantly from the start of the millennium. This is visible in the statistics as growth in both heat pump energy and electricity use of heat pumps. Heat pump energy refers to the energy extracted with heat pumps from the environment. The electricity use of heat pumps is included in electricity consumption of heating in the statistics on 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. The year 2017 was 1.8 per cent warmer than 2016, although both were clearly colder than the record warm year 2015.

Around 3 TWh of energy was used for heating saunas in 2017. Nearly two-thirds of energy were wood and good one-third electricity. The energy consumption of heating domestic water was 10 TWh.

The energy consumption of household appliances, that is, cooking, lighting and other electrical equipment, was good eight TWh in 2017. Appliances accounted for good 12 per cent of the entire energy consumption of households. One per cent of this was used on cooking, that is, using cookers and ovens, and two-and-a-half per cent on lighting. The remaining nine per cent was used in other electrical equipment. They include small appliances for cooking, refrigeration equipment, washing machines, tumble dryers, televisions and computers with their accessories, lifts, and car interior heating.

A calculation model is used to decompose the total household energy consumption into end uses. These are space heating, household appliances and heating of saunas and domestic hot water. The model is calibrated using various sources of data. The availability of data varies by energy source and end use. Estimates are used for the years when data is not collected.

The concepts of the statistics correspond to the divisions of the European Union's Regulation on energy statistics concerning energy use in households. Based on the division, heating of indoor spaces and domestic water, cooking, electrical equipment, and heating of saunas are reported separately.

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Appendix table 1. Energy consumption in households 2010-2017, GWh

Data	Year							
	2010	2011	2012	2013	2014	2015	2016	2017
Space heating	48,765	41,419	45,928	42,739	42,831	40,804	45,692	45,349
Residential buildings proper, total	46,365	39,339	43,663	40,643	40,690	38,760	43,252	42,876
- Detached houses	29,101	25,091	27,641	25,595	25,967	24,507	27,373	27,504
- Terraced houses	4,462	3,767	4,215	3,972	3,925	3,816	4,208	4,127
- Blocks of flats	12,802	10,481	11,807	11,076	10,798	10,437	11,671	11,245
Free-time residential buildings	2,399	2,080	2,265	2,097	2,140	2,044	2,440	2,473
Household appliances ¹⁾	9,087	8,315	8,850	8,389	8,091	7,886	8,295	8,126
- Lighting	2,702	2,482	2,349	2,115	1,919	1,876	1,770	1,633
- Cooking	826	799	714	697	689	680	681	673
- Other electrical equipment	5,559	5,034	5,787	5,577	5,483	5,330	5,844	5,820
Heating of saunas	2,880	2,871	2,894	2,902	2,924	2,920	3,049	3,057
Heating of domestic water	9,522	9,584	9,658	9,727	9,789	9,850	9,961	9,954
Housing, total	70,254	62,189	67,330	63,757	63,635	61,460	66,997	66,486

1) Apart from electricity consumption, consumption of household appliances includes use of natural gas in cookers.

Appendix table 2. Energy consumption in households by energy source in 2017, GWh

Data	Energy source									
	Wood	Peat	Coal	Heavy fuel oil	Light fuel oil	Natural gas ¹⁾	Ambient energy ²⁾	District heat	Electricity ³⁾	Total
Housing, total	14,812	41	2	32	3,569	392	5,815	19,310	22,513	66,486
Heating of spaces	12,539	27	2	22	2,922	239	4,989	13,882	10,727	45,349
Residential buildings proper, total	11,171	27	2	22	2,880	238	4,814	13,879	9,843	42,876
- Detached houses	11,004	23	2	0	2,492	62	4,240	1,884	7,797	27,504
- Terraced houses	122	1	0	0	95	55	505	2,225	1,124	4,127
- Blocks of flats	45	3	0	22	293	121	69	9,770	922	11,245
Free-time residential buildings	1,368	0	0	0	42	1	175	3	884	2,473
Household appliances	..	..	..	..	..	92	..	..	8,034	8,126
- Lighting	..	..	..	..	..	..	..	..	1,633	1,633
- Cooking	..	..	..	..	..	92	..	..	581	673
- Other electrical equipment	..	..	..	..	..	..	..	..	5,820	5,820
Heating of saunas	1,835	..	..	..	..	..	..	..	1,222	3,057
Heating of domestic water	438	14	0	10	647	61	826	5,428	2,530	9,954

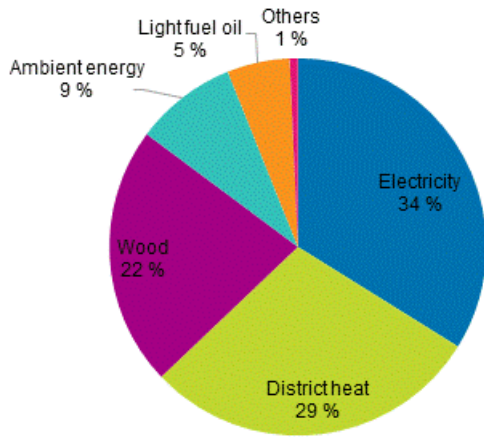
1) Includes liquid gas.

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

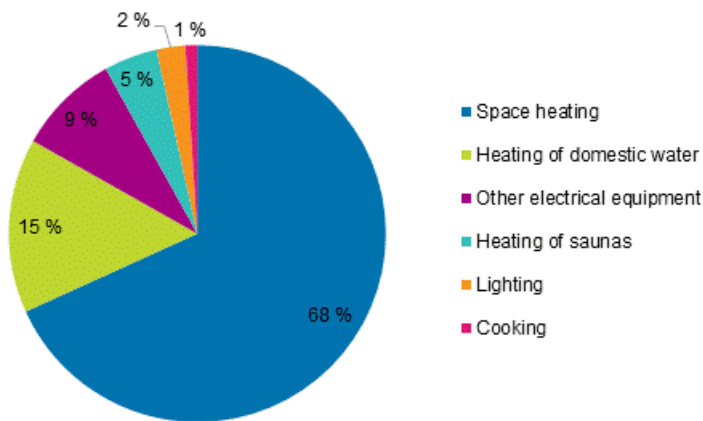
Appendix figure 1. Energy consumption in households by energy source in 2017



Used energy sources 66 TWh.

The group Others contains the following energy sources: natural gas and liquid gas 0.6 %, peat 0.06 %, heavy fuel oil 0.05 % and coal 0.003 % of energy consumption in households.

Appendix figure 2. Energy consumption in households by use in 2017



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Source: Energy consumption in households 2017, Statistics Finland