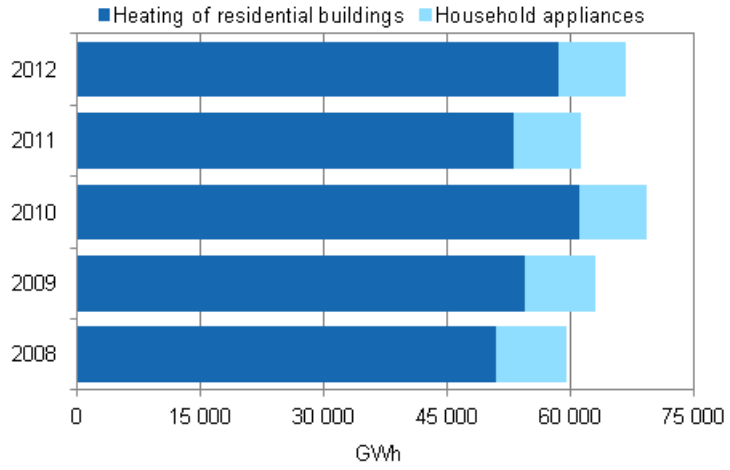
Energy consumption in households 2012

Energy consumption in households grew in 2012

Energy consumption in households, that is, heating of residential buildings and household appliances amounted to 66,682 gigawatt hours (GWh) in 2012. Consumption grew by nine per cent from the year before. The consumption of heating energy grew by 11 per cent but the energy consumption of household appliances went down by two per cent. In 2012, the most common energy source for heating of residential buildings was district heat, the consumption of which grew by ten per cent. The data are based on Statistics Finland's statistics on energy consumption in households.

Energy consumption in households



In 2012, electricity used on housing amounted to 22,240 gigawatt hours (GWh), which is five per cent more than in the year before. Electricity consumption represents 33 per cent of the energy consumption in households. The next most used was district heat, 29 per cent, and wood, 23 per cent. Housing accounted, on average, for 20 per cent of the final energy consumption.

Heating of residential buildings consumed 58,600 gigawatt hours (GWh) of energy in 2012. The most common energy source for heating was district heat, of which 19,346 gigawatt hours (GWh) were used. Wood and electricity were the next most consumed sources. These three energy sources accounted for

over 80 per cent of the consumption of heating energy for residential buildings.The use of heat pumps for heating of residential buildings has been growing in recent years. Ambient energy accounted for seven per cent of heating energy in 2012. Ambient energy refers to energy extracted with heat pumps from the environment used for space heating. In the statistics, the cooling use of air heating pumps is not included in heating energy.

Outdoor temperature has an effect on the annual need for heating energy. Heating degree day is used to follow changes in that. According to the Finnish Meteorological Institute, after the uncommonly warm year 2011, the year 2012 was typical. However, February 2012 was exceptionally cold, which increased the need for heating energy. Heating energy of residential buildings comprises the energy of the main heating system and those of other forms of supplementary heating.

The energy consumption of household appliances was 8,082 gigawatt hours (GWh) in 2012. Electricity is mainly used as an energy source for household appliances, and 8,072 GWh of electricity was consumed. In addition, ten gigawatt hours (GWh) of natural gas were used for cooking. Of the energy of household appliances, one per cent less energy was used on cooking and two per cent less energy on lighting than in the year before.

The consumption of other electrical equipment went down by two per cent. Other electrical equipment includes refrigeration equipment, washing machines, tumble dryers, televisions and computers with their accessories, lifts, and vehicle engine blocks and interior heating. According to Adato Energia Oy's survey on households' electricity use in 2011, the fall in the consumption of cooking is explained by the decrease in the amount of food prepared from scratch at home. In turn, the transition to energy-efficient lamps has decreased the electricity need of lighting. The fall in the consumption of other electrical equipment is due to the lower stand-by consumption of televisions and their accessories, for example.

With respect to the consumption of heating energy in residential buildings, the statistics are based on Statistics Finland's calculation model where various sources were utilised. Data on energy consumption of household appliances from 2011 are based on Adato Energia Oy's survey on households' electricity use in 2011. Data for other years were estimated based on the surveys on households' electricity use in 2006 and 2011.

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Appendix table 1. Energy consumption in households 2008-2012, GWh

	2008	2009	2010	2011	2012
Heating of residential buildings	50,984	54,435	60,963	52,989	58,600
Residential buildings proper, total	48,475	51,782	58,068	50,401	55,805
- Detached houses	28,319	30,576	34,893	30,205	33,724
- Terraced houses	5,250	5,511	5,991	5,289	5,773
- Blocks of flats	14,906	15,695	17,184	14,907	16,308
Free-time residential buildings	2,509	2,653	2,895	2,588	2,795
Household appliances[1)]	8,582	8,610	8,326	8,221	8,082
- Lighting	3,037	2,866	2,654	2,590	2,538
- Cooking	712	713	711	701	694
- Other electrical equipment	4,833	5,031	4,961	4,930	4,850
Housing, total	**59,566**	**63,045**	**69,289**	**61,210**	**66,682**
Of heating of residential buildings					
- Heating of saunas	2,853	2,870	2,880	2,871	2,895
- Heating of domestic water	9,418	9,474	9,522	9,584	9,658

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 2012, GWh

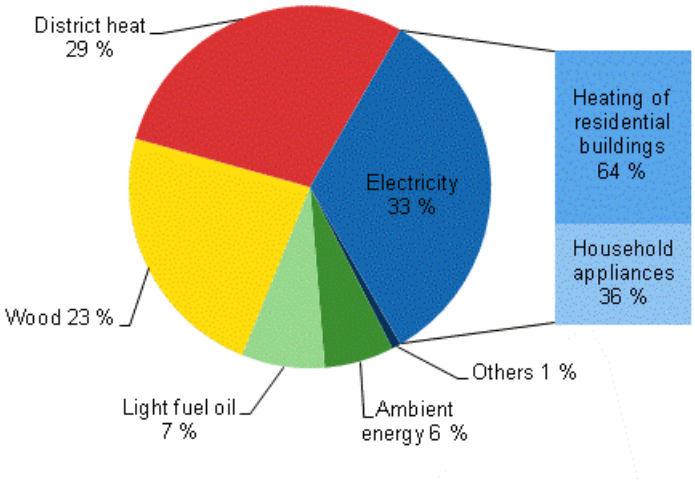
	Wood	Peat	Coal	Heavy fuel oil	Light fuel oil	Natural gas	Ambient energy[1)]	District heat	Electricity[2)]	Total
Housing, total	**15,462**	**57**	**5**	**96**	**4,951**	**387**	**4,138**	**19,346**	**22,240**	**66,682**
Heating of residential buildings	**15,462**	**57**	**5**	**96**	**4,951**	**377**	**4,138**	**19,346**	**14,168**	**58,600**
Residential buildings proper, total	13,646	56	4	96	4,903	376	4,011	19,344	13,369	55,805
- Detached houses	13,414	50	4	–	3,882	115	3,760	2,187	10,312	33,724
- Terraced houses	136	1	–	–	331	84	239	3,070	1,912	5,773
- Blocks of flats	96	5	–	96	690	177	12	14,087	1,145	16,308
Free-time residential buildings	1,816	1	1	–	48	1	127	2	799	2,795
Household appliances	**–**	**–**	**–**	**–**	**–**	**10**	**–**	**–**	**8,072**	**8,082**
- Lighting	–	–	–	–	–	–	–	–	2,538	2,538
- Cooking	–	–	–	–	–	10	–	–	684	694
- Other electrical equipment	–	–	–	–	–	–	–	–	4,850	4,850
Of heating of residential buildings										
- Heating of saunas	1,778	–	–	–	–	–	–	–	1,117	2,895
- Heating of domestic water	473	16	1	25	915	72	522	5,009	2,625	9,658
Explanation of symbols: – = Magnitude zero 0 = Magnitude less than half of unit employed										

1) 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 of heating.

2) 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 2012



Used energy sources 66,682 GWh. The group Others contains the following energy sources: natural gas 0.6 %, peat 0.1 %, heavy fuel oil 0.1 % and coal 0.01 % of energy consumption in households.

Statistics Finland

Energy 2013

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