

CONSUMPTION TRACKING REPORT 2019

KESKO OYJ

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1. Introduction

This report presents the collected energy-consumption and consumption-tracking data of Kesko's stock of buildings. The purpose of the report is to afford a clear picture of the development that has taken place throughout Kesko's extensive stock of buildings. The data contained in this report is required for Kesko's social responsibility report and for evaluating the success of the company's energy management. This report has been compiled by EnerKey Oy.

2. Background

The stock of buildings managed by Kesko comprises real estate in Finland and abroad. Only the domestic stock of buildings managed by Kesko in 2019 has been taken into account in compiling this report. The consumption data of overseas properties is discussed in connection with the emissions calculation.

Specific consumptions have been calculated based on gross areas. This report uses the gross areas recorded for the properties in the customer's real estate management system. Where the gross area of a property was not known, it has been estimated from the property's floor area. The factors specified below have been used for the evaluation.

Table 1. Factors used in defining gross areas.

Facility type	Multiplier (Surface area * multiplier = Gross area)
K-citymarket	1,06
K-supermarket	1,06
K-market	1,06
K-service station	1,06
K-market, Siwa, Valintatalo (SLK)	1
K-Rauta, Rautia	1,19
Mako, Mara	1,39
Wholesale buildings	1,06
Onninen Express, Megaexpress	1,06
Office and warehouse buildings	1
Office buildings	1
Commercial centers	1
Others	1
VV-autotalot	1

From the perspective of energy consumption, the most important categories of properties include K-citymarkets, K-supermarkets and large wholesale and storage buildings. For these groups in particular, maximum comprehensiveness has been aimed for in the tracking of energy consumption.

The second principle of consumption tracking has been to include properties from all real estate categories. At present, a relatively small number of properties is being monitored in certain real estate categories. Even though the smallest properties in terms of size category do not play a significant role in total consumption figures, data on their level of consumption is still required in order to calculate the total consumption of Kesko's real estate stock.

The extent and development of the stock of real estate is presented in Table 2. The stock of buildings managed by Kesko has grown by 2.3% from 2018. The increase in real estate stock is primarily due to growth in the VV-autotalot car dealership real estate category.

Table 2. Development of Kesko's stock of real estate, 2017–2019.

Property type	2017 Gross area	2018 Gross area	2019 Gross area
K-citymarket	1 115 946	1 116 093	1 129 428
K-supermarket	583 271	596 707	613 130
K-market	230 843	227 598	231 920
K-service station	60 158	52 317	52 318
K-market, Siwa, Valintatalo (SLK)	260 483	236 436	216 929
K-Rauta, Rautia	415 702	408 363	407 691
Mako, Mara	19 912	17 265	0
Wholesale buildings	49 420	50 938	49 262
Onninen Express, Megaexpress	120 083	126 747	118 599
Office and warehouse buildings	216 379	211 937	225 876
Warehouse buildings	89 512	82 577	86 872
Office buildings	31 657	28 570	40 887
Industrial buildings	0	0	0
Commercial center *	448 744	453 665	442 904
VV-autotalot	82 896	85 296	159 306
Others	20 769	23 764	27 798
TOTAL	3 745 775	3 718 273	3 802 920
CHANGE		-0,7 %	2,3 %

* The group includes commercial centers and various retail stores

3. Consumption data measurement and calculation methods

3.1. Consumption tracking methods

The properties' consumption tracking is centralised in the EnerKey SaaS service. For consumption reporting, consumption data are collected to the service either by reading the meters remotely or by receiving consumption measurement data from property automation systems or energy companies via data transfer. Depending on the originating system, the frequency of data-collection varies from daily to weekly meter readings.

The largest properties have municipal heating and water consumption measurements linked to either separate remote access measurement systems or property automation systems. The same systems can be utilised, when needed, to measure own production or to take sub-measurements.

Sub-measurements are crucial in a major grocery and daily consumer goods company, as they enable the tracking of the consumption of different applications. Sub-measurements also help in the identification and location of any disruptions or failures that affect energy consumption. Refrigeration devices, for example, account for a significant proportion of total electricity consumption.

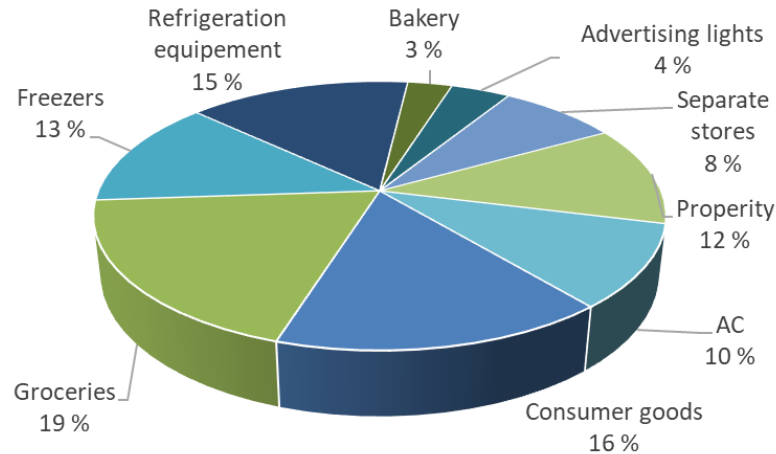


Figure 1. Distribution of electricity consumption at K-citymarkets.

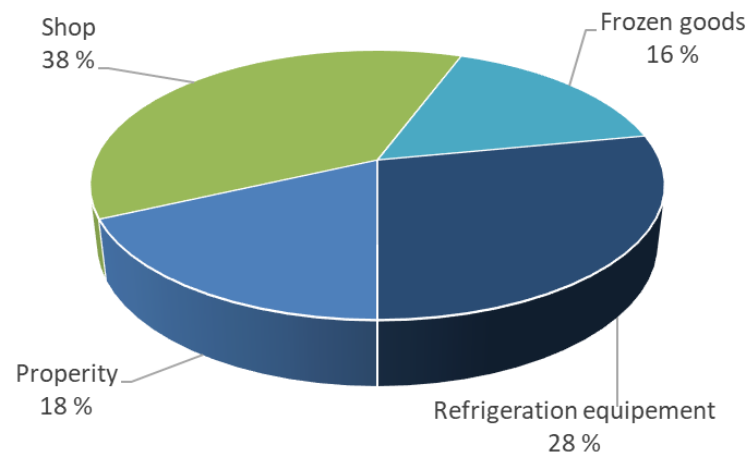


Figure 2. Distribution of electricity consumption at K-supermarkets.

In addition to remotely-read meters, the properties also include manually monitored measuring devices. Real estate management companies are responsible for collecting and recording readings from manually monitored properties and meters. As in the previous year, the recording of meter readings continued without issues in 2019.

The procedure for normalising heat consumption is to specify the amount of heating energy required monthly by each property for heating water. During the heating period, the proportion of consumption that exceeds this limit value represents heating the property and is adjusted by the degree day. In September 2019, the limit values were updated to match the most recent consumption data, and we have used the new values in calculating normalised consumption since October.

3.2. Tracking coverage

The coverage of consumption tracking has been evaluated by comparing the gross areas of tracked properties with the total gross area of the stock of buildings managed by Kesko. There are two levels of tracking:

- The consumption of electricity, heating energy and water is monitored in properties under multi-energy surveillance.
- In addition to the above, there are also properties in which only the consumption of electricity is monitored.

Table 3 presents the coverage of consumption tracking by real estate category. The coverage percentages of tracking have been calculated by comparing the gross areas of tracked properties with the total gross area of the real estate category in question.

From 2018, the coverage of multi-energy tracking exceptionally decreased slightly by 3% (78% -> 75%). The main reason for the decline in coverage was due to a decrease in facilities in the K-market, Siwa, Valintatalo (SLK) group.

Table 3. Consumption tracking coverage.

Property type	Multi-utility monitoring			Electricity monitoring			Total
	Number	Gross-m2	Scope	Number	Gross-m2	Scope	Scope
K-citymarket	73	1 079 612	96 %	3	37 561	3 %	99 %
K-supermarket	140	386 225	63 %	68	167 763	27 %	90 %
K-market	105	107 654	46 %	139	106 689	46 %	92 %
K-Service station	62	43 013	82 %	8	9 305	18 %	100 %
K-market, Siwa, Valintatalo (SLK)	143	84 976	39 %	242	119 661	55 %	94 %
K-Rauta, Rautia	42	388 275	95 %	1	9 089	2 %	97 %
Mako, Mara	0	-	0 %	0	-	0 %	0 %
Wholesale buildings	12	47 059	96 %	1	2 203	4 %	100 %
Onninen Express, Megaexpress	20	65 085	55 %	19	27 782	23 %	78 %
Office and warehouse buildings	5	184 887	82 %	1	18 405	8 %	90 %
Warehouse buildings	4	56 469	65 %	1	6 200	7 %	72 %
Office buildings	4	31 776	78 %	0	-	0 %	78 %
Other retail stores	23	312 150	70 %	8	50 704	11 %	82 %
VV-autotalot	6	69 650	44 %	19	79 537	50 %	94 %
Others	2	6 321	23 %	3	1 479	5 %	28 %
	641	2 863 150	75 %	513	636 378	17 %	92 %

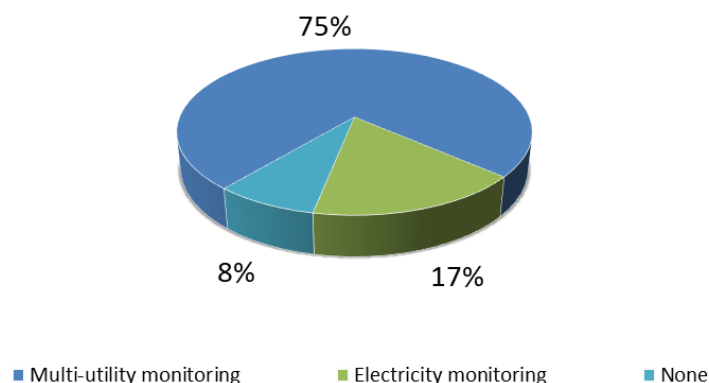


Figure 3. Tracking coverage.

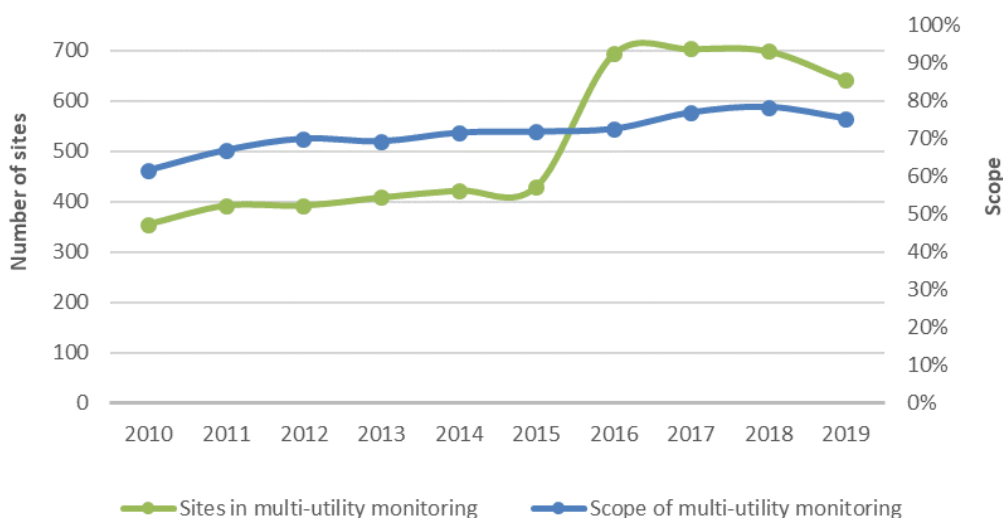


Figure 4. Development of tracking coverage, 2010–2019.

3.3. Overall consumption calculation method and the comparability of data

Kesko's overall consumption has been calculated by expanding the overall consumption of each real estate category by the consumption figures of tracked properties. In other words, we calculated specific consumption figures for tracked properties by real estate category (kWh/gr.m2 for electricity and municipal heating and l/gr.m2 for water). The resulting specific consumption figures are assumed to correspond to the average level of consumption in the real estate category, and this is multiplied with the gross area of the real estate category to obtain the overall consumption for the category in question. The specific consumption figures used as the basis for the calculations are presented in Sections 4–6 by form of energy.

The calculations for individual energy types do not include properties where more than 2% of month-specific hourly consumption data for 2019 were incomplete as of 19 January 2019.

4. Development of electricity consumption by real estate category, 2017–2019

The overall electricity consumption of Kesko's stock of buildings has been calculated on the basis of the tracked properties. Table 4 presents the specific consumption for each real estate category, and Table 5 presents the consumption expanded for the entire real estate mass. The properties for which the gross area and consumption were known have been included in the calculation of specific consumption.

In 2019, the overall electricity consumption calculated for the entire stock of real estate was 764 GWh, whereas the figure for 2018 was 780 GWh. Total calculated electricity consumption decreased by 2.1% from 2018.

Specific consumptions of comparable facilities decreased in all major real estate categories, with the exception of Office and warehouse properties. Average specific consumption for comparable real estate stock fell by 3.9% and calculated overall consumption by 2.1% from the previous year. The data is presented in the summary at the end of the report (paragraph 7).

Table 4. Electricity consumption of properties for which the gross area required for the calculation of specific consumption was known and coverage of consumption data was sufficient. The consumption of the entire stock of real estate presented in the table below has been calculated on the basis of the data contained in this table.

Facility type	Area [br-m ²]			Consumption, [kWh]			[kWh/br-m ²]			Change of specific consumption	
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017-2018	2018-2019
K-citymarket	1 088 566	1 085 907	1 104 379	212 478 449	210 057 354	209 061 488	195,2	193,4	189,3	-0,9 %	-2,1 %
K-supermarket	411 554	489 434	512 256	126 334 463	147 666 936	149 422 416	307,0	301,7	291,7	-1,7 %	-3,3 %
K-market	174 717	181 477	193 089	69 129 523	74 042 379	75 663 957	395,7	408,0	391,9	3,1 %	-4,0 %
K-service station	43 741	49 949	50 324	21 000 199	25 247 999	25 373 526	480,1	505,5	504,2	5,3 %	-0,3 %
K-market, Siwa, Valintatalo (SLK)	195 716	189 724	184 679	92 902 387	88 668 843	78 205 328	474,7	467,4	423,5		-9,4 %
K-Rauta, Rautia	388 498	390 186	397 364	27 353 823	26 836 451	26 806 695	70,4	68,8	67,5	-2,3 %	-1,9 %
Mako, Mara	6 853	8 945	-	421 340	393 466	-	61,5	44,0	0,0	-28,5 %	-100,0 %
Wholesale buildings	38 771	41 522	41 522	9 997 663	10 390 181	10 517 940	257,9	250,2	253,3	-3,0 %	1,2 %
Onninen Express, Megaexpress	57 682	76 204	81 833	3 595 453	4 553 581	4 874 237	62,3	59,8	59,6		-0,3 %
Office and warehouse buildings	250 025	265 669	203 292	41 091 227	44 581 677	35 931 159	164,3	167,8	176,7	2,1 %	5,3 %
Office buildings	12 395	6 811	31 721	1 875 311	1 162 633	3 937 302	151,3	170,7	124,1	12,8 %	-27,3 %
Commercial centers	348 017	300 968	324 633	28 964 582	25 501 429	21 304 143	83,2	84,7	65,6	1,8 %	-22,5 %
Others	953	6 560	7 441	224 037	547 907	1 594 257	235,1	83,5	214,3		156,5 %
VV-autotalot	60 691	70 679	82 414	8 181 917	9 177 553	10 483 611	134,8	129,8	127,2	-3,7 %	-2,0 %
TOTAL	3 078 178	3 164 033	3 214 946	643 550 373	668 828 387	653 176 060	209	211	203	1,1 %	-3,9 %

Table 5. Calculated energy consumption of the entire stock of real estate.

Facility type	Specific electricity consumption based on consumption monitoring [kWh/gross-m2]			Gross area of sites in consumption monitoring [gross-m2]			Total area of property type [gross-m2]			Calculatory total consumption [MWh]				
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	Muutos	2019	Change
K-citymarket	195	193	189	1 088 566	1 085 907	1 104 379	1 115 946	1 116 093	1 129 428	217 823	215 897	-0,9 %	213 803	-1,0 %
K-supermarket	307	302	292	411 554	489 434	512 256	583 271	596 707	613 130	179 046	180 032	0,6 %	178 847	-0,7 %
K-market	396	408	392	174 717	181 477	193 089	230 843	227 598	231 920	91 337	92 860	1,7 %	90 880	-2,1 %
K-service station	480	505	504	43 741	49 949	50 324	60 158	52 317	52 318	28 882	26 445	-8,4 %	26 379	-0,2 %
K-market, Siwa, Valintatalo (SLK)	475	467	423	195 716	189 724	184 679	260 483	236 436	216 929	123 646	110 500	-10,6 %	91 862	-16,9 %
K-Rauta, Rautia	70	69	67	388 498	390 186	397 364	415 702	408 363	407 691	29 269	28 087	-4,0 %	27 503	-2,1 %
Mako, Mara	61	44	0	6 853	8 945		19 912	17 265		1 224	759	-38,0 %		
Wholesale buildings	258	250	253	38 771	41 522	41 522	49 420	50 938	49 262	12 744	12 746	0,0 %	12 479	-2,1 %
Onninen Express, Megaexpress	62	60	60	57 682	76 204	81 833	120 083	126 747	118 599	7 485	7 574	1,2 %	7 064	-6,7 %
Office and warehouse buildings	164	168	177	250 025	265 669	203 292	305 891	294 514	312 748	50 273	49 422	-1,7 %	55 277	11,8 %
Office buildings	151	171	124	12 395	6 811	31 721	31 657	28 570	40 887	4 790	4 877	1,8 %	5 075	4,1 %
Commercial centers	83	85	66	348 017	300 968	324 633	448 744	453 665	442 904	37 348	38 440	2,9 %	29 066	-24,4 %
Others	235	84	214	953	6 560	7 441	20 769	23 764	27 798	4 883	1 985	-59,3 %	5 956	200,1 %
VV-autotalot	135	130	127	60 691	70 679	82 414	82 896	85 296	159 306	11 175	11 076	-0,9 %	20 265	83,0 %
TOTAL				3 078 178	3 164 033	3 214 946	3 745 775	3 718 273	3 802 920	799 924	780 700	-2,4 %	764 457	-2,1 %

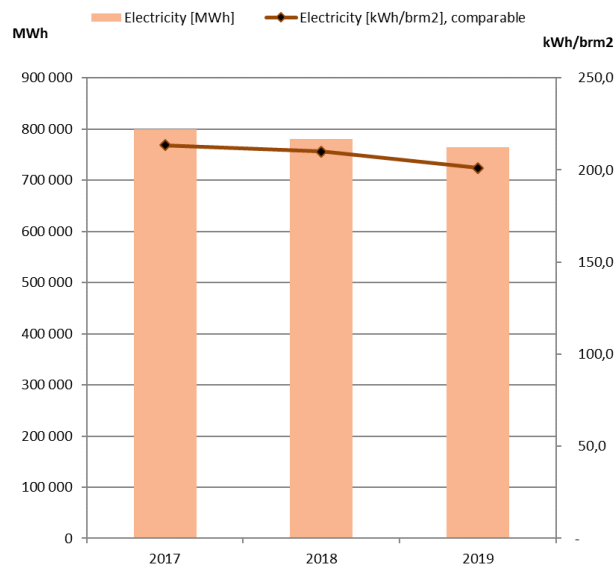


Figure 5. Development of the calculated overall consumption and specific consumption of electricity, 2017-2019.

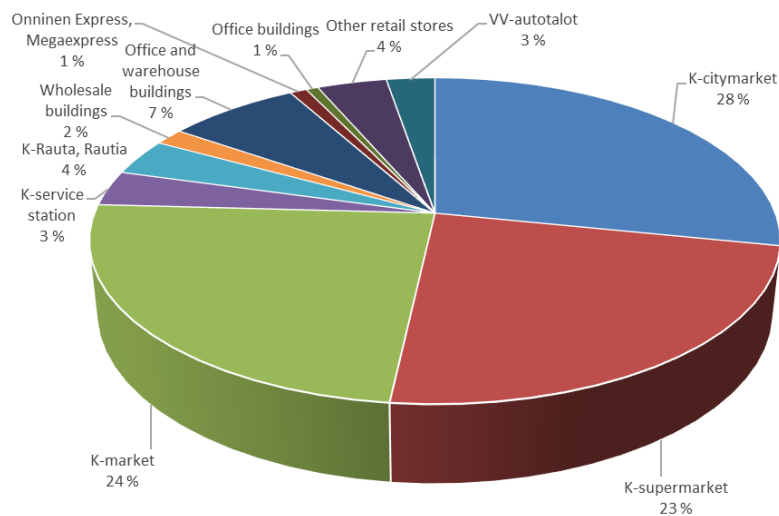


Figure 6. Distribution of overall electricity consumption by major real estate category

5. Development of heat consumption by real estate category, 2017–2019

As for electricity, the specific consumption of heat has been calculated by real estate category for all properties for which the calculation was possible (Table 6). The consumption for the entire mass of real estate and for the comparable mass of real estate was then calculated on the basis of these specific consumption figures (Table 7). The consumption figures presented in these tables represent measured, non-normalised consumption. Due to the limited database sample size, an estimate of specific consumption is used in the calculation for the category “other properties”.

Table 6. Heat consumption of properties, for which the gross area required for the calculation of specific consumption was known and comprehensive consumption data was available. The consumption of the entire stock of real estate presented in the table below has been calculated on the basis of the data contained in this table.

Facility type	Area [br-m ²]			Consumption, [kWh]			[kWh/br-m ²]			Change of specific consumption	
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017-2018	2018-2019
K-citymarket	975 211	984 614	857 939	66 322 673	71 346 244	60 753 207	68,0	72,5	70,8	6,5 %	-2,3 %
K-supermarket	258 971	277 530	305 354	27 922 741	31 607 797	33 904 008	107,8	113,9	111,0	5,6 %	-2,5 %
K-market	60 464	65 353	64 468	9 285 591	10 873 283	10 523 897	153,6	166,4	163,2	8,3 %	-1,9 %
K-service station	10 704	20 727	30 750	3 342 886	7 118 234	8 716 497	312,3	343,4	283,5	10,0 %	-17,5 %
K-market, Siwa, Valintatalo (SLK)	32 348	38 506	30 971	6 308 807	7 295 599	5 872 031	195,0	189,5	189,6	-2,9 %	0,1 %
K-Rauta, Rautia	359 595	348 587	368 351	11 627 227	11 811 781	12 124 232	32,3	33,9	32,9	4,8 %	-2,9 %
Mako, Mara	8 945	8 945	-	886 330	590 173	-	99,1	66,0	0,0	-33,4 %	
Wholesale buildings	34 084	36 835	34 084	2 918 727	3 143 962	2 954 993	85,6	85,4	86,7	-0,3 %	1,6 %
Onninen Express, Megaexpress	42 132	47 085	60 452	3 949 880	3 235 295	4 041 319	-	68,7	66,9		-2,7 %
Office and warehouse buildings	188 361	189 063	184 887	13 001 916	14 102 102	12 510 913	69,0	74,6	67,7	8,1 %	-9,3 %
Office buildings	6 671	6 671	6 341	316 204	297 512	280 308	47,4	44,6	44,2	-5,9 %	-0,9 %
Commercial centers	229 489	233 005	289 004	7 614 738	8 451 522	11 337 865	33,2	36,3	39,2	9,3 %	8,2 %
Others	-	-	5 440	-	-	189 166	-	-	34,77		
VV-autotalot	60 691	60 691	60 691	7 509 098	7 497 076	7 075 632	123,7	123,5	116,6	-0,2 %	-5,6 %
TOTAL	2 267 665	2 317 611	2 298 732	161 006 818	177 370 579	170 284 068	71	77	74	7,8 %	-3,2 %

Specific consumption decreased in all major real estate categories, with the exception of shopping centres. Average specific consumption rate measured for the comparable mass of real estate fell by 3.2% from 2018. Calculated overall consumption of Kesko's entire stock of real estate

decreased slightly from the previous year by 0.3% (Table 7). Normalised consumption of the Kesko's comparable facilities increased by 2.1% (Table 8).

Table 7. Calculated heat consumption and specific consumption of Kesko's entire stock of real estate.

Facility type	Specific heat consumption based on consumption monitoring [kWh/gross-m2]			Gross area of sites in consumption monitoring [gross-m2]			Total area of property type [gross-m2]			Calculatory total consumption [MWh]				
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	Muutos	2019	Change
K-citymarket	68	72	71	975 211	984 614	857 939	1 115 946	1 116 093	1 129 428	75 894	80 873	6,6 %	79 978	-1,1 %
K-supermarket	108	114	111	258 971	277 530	305 354	583 271	596 707	613 130	62 889	67 959	8,1 %	68 077	0,2 %
K-market	154	166	163	60 464	65 353	64 468	230 843	227 598	231 920	35 451	37 867	6,8 %	37 859	0,0 %
K-service station	312	343	283	10 704	20 727	30 750	60 158	52 317	52 318	18 787	17 968	-4,4 %	14 830	-17,5 %
K-market, Siwa, Valintatalo (SLK)	195	189	190	32 348	38 506	30 971	260 483	236 436	216 929	50 802	44 797	-11,8 %	41 129	-8,2 %
K-Rauta, Rautia	32	34	33	359 595	348 587	368 351	415 702	408 363	407 691	13 441	13 837	2,9 %	13 419	-3,0 %
Mako, Mara	99	66	0	8 945	8 945	-	19 912	17 265	0	1 973	1 139	-42,3 %	-	-100,0 %
Wholesale buildings	86	85	87	34 084	36 835	34 084	49 420	50 938	49 262	4 232	4 348	2,7 %	4 271	-1,8 %
Onninen Express, Megaexpress	94	69	67	-	47 085	60 452	120 083	126 747	118 599	11 258	8 709	-22,6 %	7 929	-9,0 %
Office and warehouse buildings	69	75	68	188 361	189 063	184 887	305 891	294 514	312 748	21 115	21 968	4,0 %	21 163	-3,7 %
Office buildings	47	45	44	6 671	6 671	6 341	31 657	28 570	40 887	1 501	1 274	-15,1 %	1 808	41,9 %
Commercial centers	33	36	39	229 489	233 005	289 004	448 744	453 665	442 904	14 890	16 455	10,5 %	17 375	5,6 %
Others	47	47	47	-	-	5 440	20 769	23 764	27 798	971	1 111	14,4 %	1 300	17,0 %
VV-autotalot	124	124	117	60 691	60 691	60 691	82 896	85 296	159 306	10 256	10 536	2,7 %	18 573	76,3 %
TOTAL				2 267 665	2 317 611	2 298 732	3 745 775	3 718 273	3 802 920	323 461	328 842	1,7 %	327 711	-0,3 %

Table 8. Normalised heat consumption and specific consumption of Kesko's comparable facilities.

Facility type	Area [br-m ²]			Consumption, [kWh]			[kWh/br-m2]			Change of specific consumption	
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017-2018	2018-2019
K-citymarket	975 211	984 614	857 939	70 934 935	73 870 839	65 624 978	72,7	75,0	76,5	3,1 %	2,0 %
K-supermarket	258 971	277 530	305 354	29 651 212	32 674 119	36 345 871	114,5	117,7	119,0	2,8 %	1,1 %
K-market	60 464	65 353	64 468	9 859 538	11 325 979	11 239 992	163,1	173,3	174,3	6,3 %	0,6 %
Neste Oil K-market	10 704	20 727	30 750	3 548 266	7 371 464	9 492 266	331,5	355,7	308,7	7,3 %	-13,2 %
K-market, Siwa, Valintatalo (SLK)	32 348	38 506	30 971	6 471 262	7 295 599	6 274 571	200,1	189,5	202,6	-5,3 %	6,9 %
K-Rauta, Rautia	359 595	348 587	368 351	12 518 595	12 612 136	13 189 935	34,8	36,2	35,8	3,9 %	-1,0 %
Mako, Mara	8 945	8 945	-	949 998	614 014	-	106,2	68,6	-	-35,4 %	-100,0 %
Wholesale buildings	34 084	36 835	34 084	3 122 623	3 264 320	3 195 571	91,6	88,6	93,8	-3,3 %	5,8 %
Onninen Express, Megaexpress	42 132	47 085	60 452	4 199 379	3 386 396	4 365 825	99,7	71,9	72,2	-27,8 %	0,4 %
Office and warehouse buildings	188 361	189 063	184 887	13 960 798	14 549 962	15 684 427	74,1	77,0	84,8	3,8 %	10,2 %
Office buildings	6 671	6 671	6 341	335 323	310 391	296 632	50,3	46,5	46,8	-7,4 %	0,5 %
Commercial centers	229 489	233 005	289 004	8 137 151	8 755 578	12 298 149	35,5	37,6	42,6	6,0 %	13,2 %
Others	-	-	5 440	-	-	208 694	-	-	38,4	-	-
VV-autotalot	60 691	60 691	60 691	8 188 846	7 789 742	7 852 412	134,9	128,4	129,4	-4,9 %	0,8 %
TOTAL	2 267 665	2 317 611	2 298 732	171 877 926	183 820 538	186 069 322	76	79	81	4,6 %	2,1 %

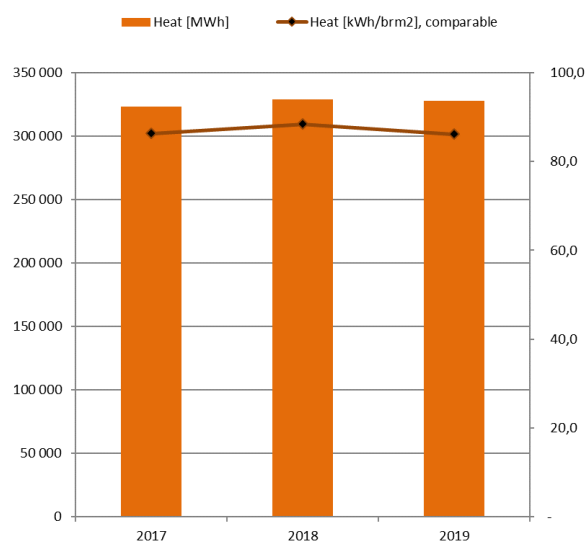


Figure 7. Development of the calculated overall consumption and specific consumption of heat, 2017–2019.

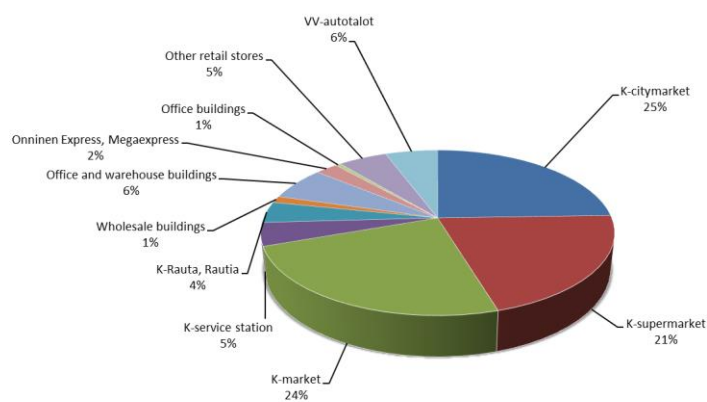


Figure 8. Distribution of overall heat consumption by major real estate category

6. Development of water consumption by real estate category, 2017–2019

The consumption and specific consumption of water have been examined according to the model described in the previous sections. The following table lists specific consumption in properties for which the gross area required for the calculation of specific consumption is known and comprehensive consumption data are available

Table 9. Water consumption at properties for which the gross area required for the calculation of specific consumption is known and comprehensive consumption data are available. The consumption of the entire stock of real estate presented in the table below has been calculated on the basis of the data contained in this table.

Facility type	Area [br-m ²]			Consumption, [m3]			[l/br-m2]			Change of specific consumption	
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017-2018	2018-2019
K-citymarket	991 566	942 312	841 153	203 025	225 917	203 553	204,8	239,7	242,0	17,1 %	0,9 %
K-supermarket	269 791	308 367	334 892	77 533	98 173	101 108	287,4	318,4	301,9	10,8 %	-5,2 %
K-market	82 681	81 544	91 335	18 130	19 770	21 966	219,3	242,4	240,5	10,6 %	-0,8 %
K-service station	19 019	33 532	38 858	91 443	188 720	191 975	4808,0	5628,2	4940,5	17,1 %	-12,2 %
K-market, Siwa, Valintatalo (SLK)	1 453	60 805	62 695	781	12 959	12 094	537,4	213,1	192,9	-60,3 %	-9,5 %
K-Rauta, Rautia	384 421	343 271	388 275	20 768	19 603	22 352	54,0	57,1	57,6	5,7 %	0,8 %
Mako, Mara	8 945	8 945	-	1 086	488	-	121,4	54,6	-	-55,0 %	
Wholesale buildings	37 267	36 204	33 453	4 108	4 364	4 394	110,2	120,5	131,3	9,3 %	9,0 %
Onninen Express, Megaexpress	43 939	39 173	53 396	3 210	2 498	2 819	73,0	63,8	52,8	-12,7 %	-17,2 %
Office and warehouse buildings	242 554	186 381	184 887	26 520	28 746	22 837	109,3	154,2	123,5	41,1 %	-19,9 %
Office buildings	1 300	1 300	1 300	177	176	176	136,0	135,4	135,7	-0,4 %	0,2 %
Commercial centers	230 384	234 522	224 641	28 168	31 127	34 004	122,3	132,7	151,4	8,6 %	14,0 %
Others	-	-	5 440	-	-	15	100,0	100,0	100,0	0,0 %	
VV-autotalot	46 742	46 742	60 691	24 308	26 014	27 434	520,0	556,5	452,0	7,0 %	-18,8 %
TOTAL	2 360 062	2 323 098	2 321 016	499 256	658 555	644 726	212	283	278	34,0 %	-2,0 %

In real estate categories with the highest water consumption, specific consumption fell from the previous year in K-liikenneasema service stations and K-supermarkets. Specific consumption in K-citymarkets rose slightly from the previous year, and the shopping centre real estate category saw

significant increase. Average specific consumption of comparable real estate stock fell by 2.0%. Calculated overall water consumption of Kesko's entire stock of real estate decreased from the previous year by 1.8% (Table 10).

Table 10. Water consumption and specific consumption figures calculated for Kesko's entire stock of real estate.

Facility type	Specific water consumption based on consumption monitoring [l/gross-m2]			Gross area of sites in consumption monitoring [gross-m2]			Total area of property type [gross-m2]			Calculatory total consumption [m3]				
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	Muutos	2019	Change
K-citymarket	205	240	242	991 566	942 312	841 153	1 115 946	1 116 093	1 129 428	228 492	267 580	17,1 %	273 314	2,1 %
K-supermarket	287	318	302	269 791	308 367	334 892	583 271	596 707	613 130	167 622	189 970	13,3 %	185 111	-2,6 %
K-market	219	242	240	82 681	81 544	91 335	230 843	227 598	231 920	50 618	55 179	9,0 %	55 776	1,1 %
K-service station	4808	5628	4940	19 019	33 532	38 858	60 158	52 317	52 318	289 238	294 448	1,8 %	258 476	-12,2 %
K-market, Siwa, Valintatalo (SLK)	250	213	193	1 453	60 805	62 695	260 483	236 436	216 929	65 121	50 389	-22,6 %	41 846	-17,0 %
K-Rauta, Rautia	54	57	58	384 421	343 271	388 275	415 702	408 363	407 691	22 457	23 320	3,8 %	23 470	0,6 %
Mako, Mara	121	55	0	8 945	8 945	-	19 912	17 265	-	2 417	943	-61,0 %	-	-
Wholesale buildings	110	121	131	37 267	36 204	33 453	49 420	50 938	49 262	5 448	6 139	12,7 %	6 470	5,4 %
Onninen Express, Megaexpress	73	64	53	43 939	39 173	53 396	120 083	126 747	118 599	8 772	8 082	-7,9 %	6 261	-22,5 %
Office and warehouse buildings	109	154	124	242 554	186 381	184 887	305 891	294 514	312 748	33 445	45 424	35,8 %	38 630	-15,0 %
Office buildings	136	135	136	1 300	1 300	1 300	31 657	28 570	40 887	4 307	3 870	-10,1 %	5 548	43,4 %
Commercial centers	122	133	151	230 384	234 522	224 641	448 744	453 665	442 904	54 866	60 213	9,7 %	67 043	11,3 %
Others	100	100	100	-	-	5 440	20 769	23 764	27 798	2 077	2 376	14,4 %	2 780	17,0 %
VV-autotalot	520	557	452	46 742	46 742	60 691	82 896	85 296	159 306	43 110	47 471	10,1 %	72 010	51,7 %
TOTAL				2 360 062	2 323 098	2 321 016	3 745 775	3 718 273	3 802 920	977 989	1 055 406	7,9 %	1 036 734	-1,8 %

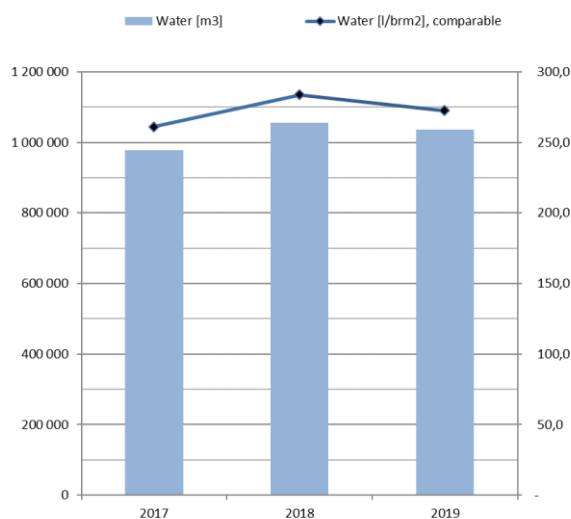


Figure 9. Development of calculated overall consumption of water, 2017–2019.

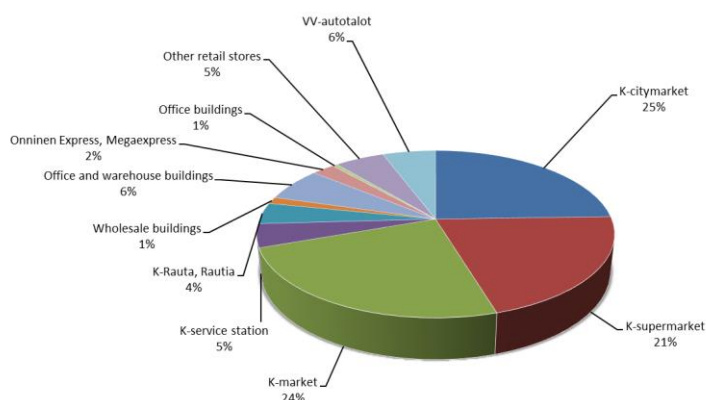


Figure 10. Distribution of overall water consumption by major real estate category.

7. Summary of consumption

The overall consumption and specific consumption figures of Kesko's stock of real estate are presented in Table 11.

Table 11. Development of consumption and specific consumption of Kesko's stock of real estate, 2017–2019.

Consumption	2017	2018	2019
Electricity [MWh]	799 924	780 700	764 457
Heat [MWh]	323 461	328 842	327 711
Heat, temp.adj. [MWh]	343 046	339 507	356 870
Water [m3]	977 989	1 055 406	1 036 734
Specific consumption			
Electricity [kWh/brm2]	213,6	210,0	201,0
Heat [kWh/brm2]	86,4	88,4	86,2
Heat, temp.adj. [kWh/brm2]	91,6	91,3	93,8
Water [l/brm2]	261,1	283,8	272,6
Total area [brm2]	3 745 775	3 718 273	3 802 920
Changes in consumption	2017-2018	2018-2019	
Electricity	-2,4 %	-2,1 %	
Heat	1,7 %	-0,3 %	
Heat, temp.adj.	-1,0 %	5,1 %	
Water	7,9 %	-1,8 %	
Changes in spec.consumption	2017-2018	2018-2019	
Electricity	-1,7 %	-4,3 %	
Heat	2,4 %	-2,6 %	
Heat, temp.adj.	-0,3 %	2,8 %	
Water	8,7 %	-4,0 %	
Changes in total area	2017-2018	2018-2019	
	-0,7 %	2,3 %	

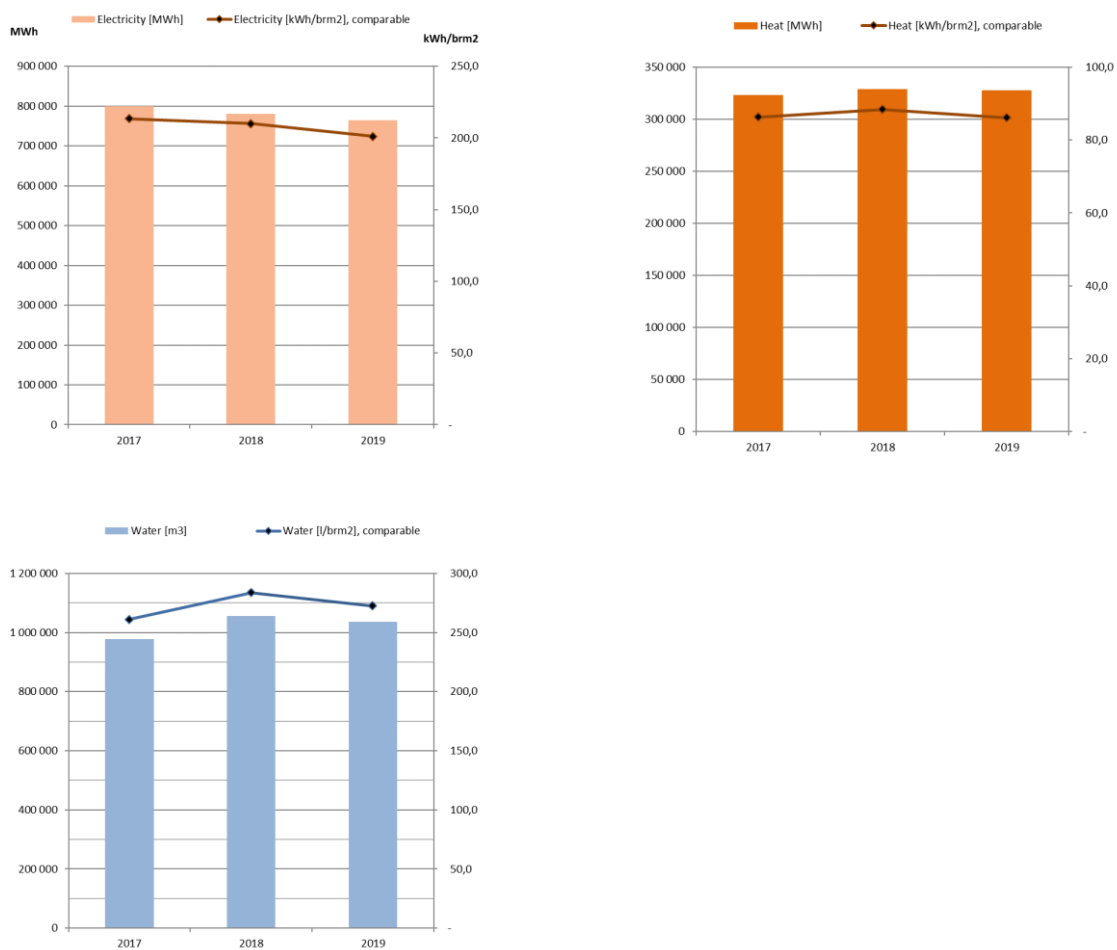


Figure 11. Kesko's overall energy and water consumption, 2017–2019.