

Energy Management and Gas Supply System in Poland in 2020

16.09.2021


3.5 %

An increase in consumption of gas from gas supply system per capita in urban areas

In Poland in 2020, consumption of gas from gas supply system per capita in urban areas increased by 54.3 kWh (by 3.5 %) and amounted to 1,611 kWh.

Gas supply system

As of the end of 2020, gas supply network in Poland reached the length of 162.1 thousand km (of which 140.4 thousand km accounted for distribution network). Compared to the previous year, the total length of gas supply network increased by 4.2 thousand km (by 2.7 %), while the number of connections increased by 111 thousand pcs (by 3.7 %).

Compared to 2019, the length of gas supply network increased by 2.7 %

Table 1. Gas supply network, consumers, and consumption of gas from gas supply system in households

Specification	2019	2018 = 100	2020	2019 = 100
Gas supply network in km (as of 31 December)	157 868	102.3	162 089	102.7
urban areas	65 551	102.5	67 244	102.6
rural areas	92 317	102.1	94 845	102.7
Connections leading to residential and non-residential buildings in thousand pcs (as of 31 December)	3 048.1	103.8	3 159.4	103.7
urban areas	1 793.9	103.8	1 850.4	103.2
rural areas	1 254.2	103.8	1 309.1	104.4
Consumers of gas from gas supply system in thousands (as of 31 December)	7 957	101.9	8 340	104.8
urban areas	6 799	101.2	7 047	103.7
rural areas	1 158	106.3	1 293	111.6
Consumption of gas from gas supply system (during the year) in GWh	47 855.3	102.0	50 293.3	105.1
urban areas	35 898.7	100.1	37 064.8	103.3
rural areas	11 956.5	108.3	13 228.5	110.6
Consumption of gas from gas supply system (during the year) per capita in kWh	1 246.7	102.1	1 311.3	105.2
urban areas	1 557.1	100.3	1 611.4	103.5
rural areas	779.8	108.2	861.6	110.5
Consumption of gas from gas supply system (during the year) per consumer in kWh	6 014.1	100.1	6 030.6	100.3
urban areas	5 279.8	98.9	5 259.6	99.6
rural areas	10 325.6	101.9	10 234.8	99.1

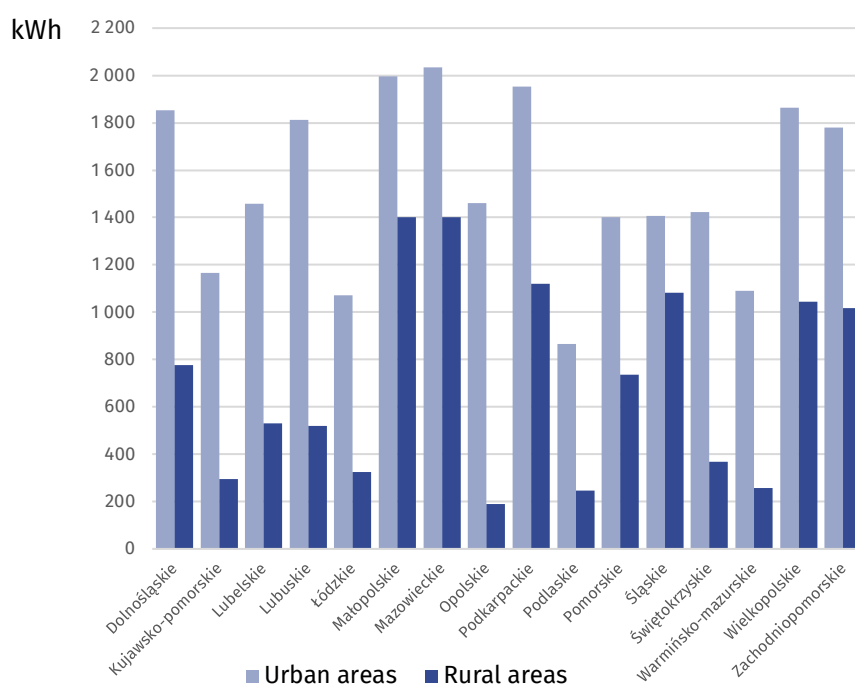
The length of gas distribution network in urban areas as of the end of 2020 increased by 1.6 thousand km (by 2.6 %) and reached 63.9 thousand km, while in rural areas – by 2.2 thousand km (by 3.0 %) and amounted to 76.5 thousand km.

The consumption of gas from gas supply system by households in Poland in 2020 rose by 5.1 %, compared to 2019, with a simultaneous increase in the number of consumers of 4.8 %. In urban areas there was a 3.3 % increase in consumption of gas together with a rise in the number of consumers of 3.7 %. In rural areas there was noted an increase in gas consumption – of 10.6 %, whereas the number of consumers rose by 11.6 %.

Compared to 2019, consumption of gas from gas supply system increased by 2 438.0 GWh and amounted to 6,031 kWh per consumer; in urban areas it was 5,260 kWh per consumer, while in rural areas – 10,235 kWh per consumer.

Consumption of gas from gas supply system in households increased by 5.1 %, compared to 2019

Chart 1. Consumption of gas from gas supply system in households per capita in 2020



Consumption of electricity in households

In 2020, household consumption of electricity in urban areas in Poland increased by 3.1 % compared to 2019 and amounted to 18,499 GWh, with simultaneous increase in the number of consumers (households) of 1.5 %.

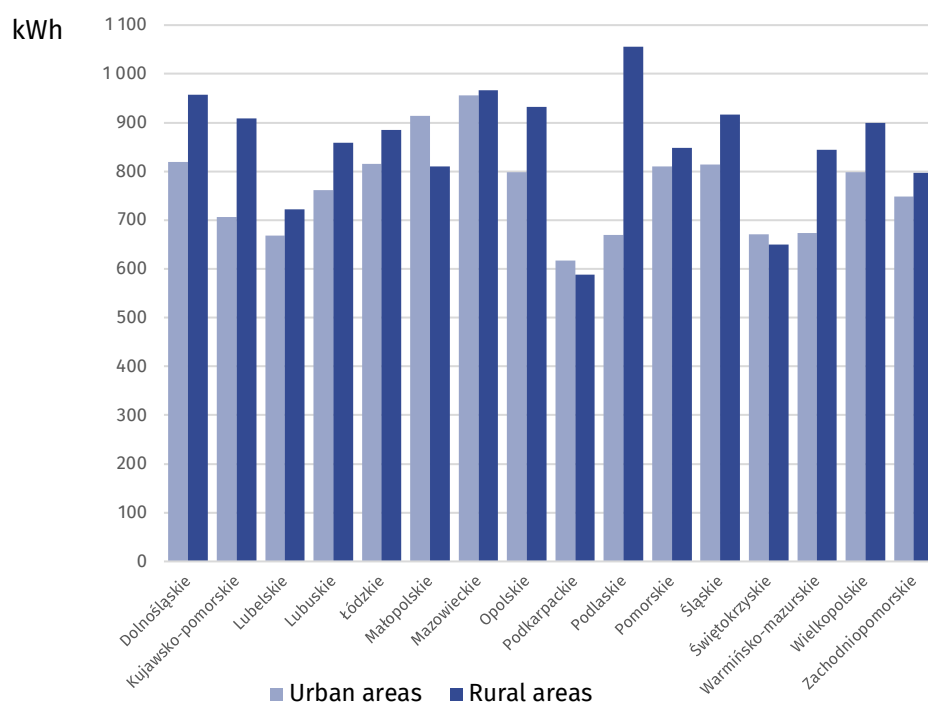
In 2020, household consumption of electricity per consumer increased by 1.6 %, compared to the previous year

Table 2. Consumers and households consumption of electricity

Specification	2019	2018 = 100	2020	2019 = 100
Consumption of electricity (during the year) in GWh	30 613.2	100.4	31 534.8	103.0
urban areas	17 936.0	99.9	18 499.0	103.1
rural areas	12 677.1	101.0	13 035.8	102.8
Consumers of electricity in thousands (as of 31 December)	15 588	101.2	15 799	101.4
urban areas	10 400	101.5	10 556	101.5
rural areas	5 188	100.7	5 243	101.1
Consumption of electricity (during the year) per consumer (household) in kWh	1 963.9	99.1	1 996.0	101.6
urban areas	1 724.6	98.4	1 752.5	101.6
rural areas	2 443.7	100.3	2 486.2	101.7
Consumption of electricity (during the year) per capita in kWh	797.5	100.4	822.2	103.1
urban areas	778.0	100.1	804.3	103.4
rural areas	826.8	100.9	849.1	102.7

In 2020, compared to the previous year household consumption of electricity per consumer in Poland increased by 1.6 % and amounted to 1,996.0 kWh; in urban areas the consumption was 1,752.5 kWh (an increase of 1.6 %), and in rural areas 2,486.2 kWh (an increase of 1.7 %).

Chart 2. Household consumption of electricity per capita in 2020



Heat supply system

The length of heat supply system in total as of the end of 2020 amounted to 25 326 km, of which the length of heat transmission and distribution network was 16 537 km, and the length of connections to buildings was 8 752 km.

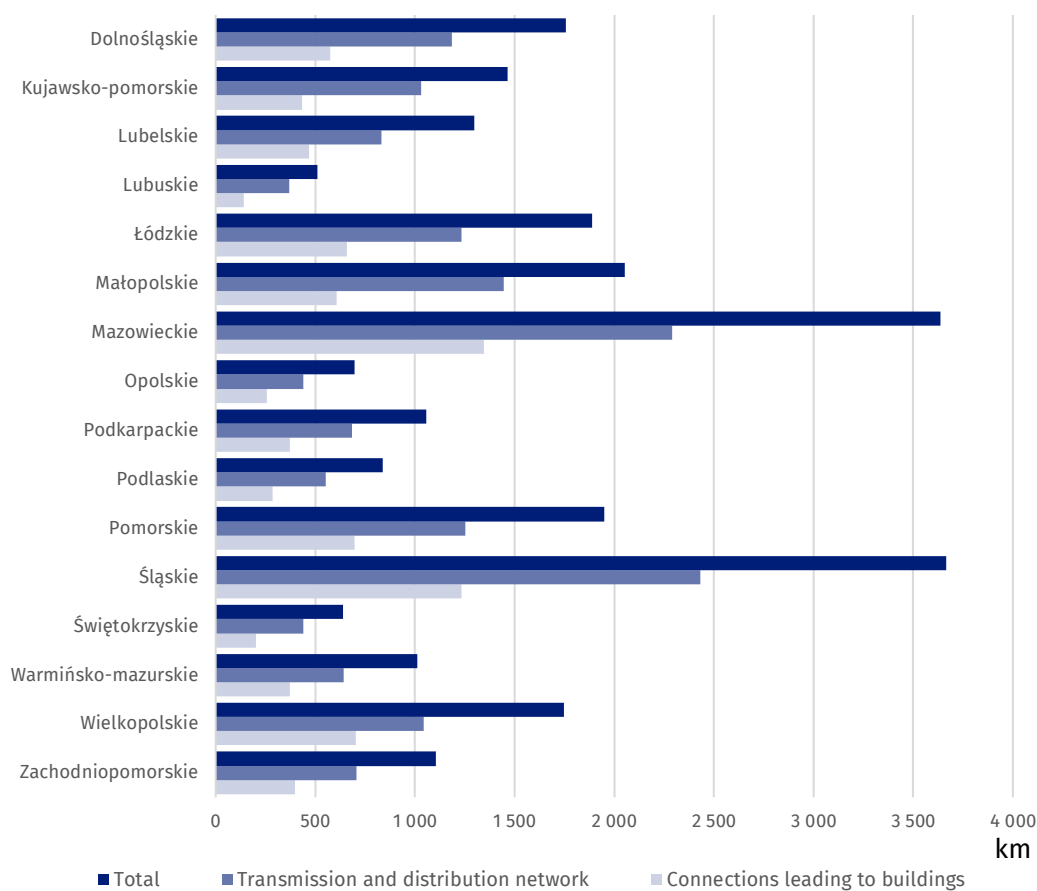
The highest density of heat supply system was observed in the areas of voivodships: Śląskie (29.7 km per 100 km²), Małopolskie (13.5 km per 100 km²), Pomorskie (10.6 km per 100 km²), Łódzkie (10.4 km per 100 km²), and Mazowieckie (10.2 km per 100 km²), while the lowest – in Lubuskie (3.6 km per 100 km²), Podlaskie (4.2 km per 100 km²), Warmińsko-mazurskie (4.2 km per 100 km²), and Zachodniopomorskie (4.8 km per 100 km²).

Heat supply system in Poland in 2020 reached the length of over 25 thousand km and its density was 8.1 km per 100 km²

Table 3. Heat supply system infrastructure and sale of heat energy

Specification	2019	2018 = 100	2020	2019 = 100
Heat supply network (total) in km (as of 31 December)	25 250.6	100.1	25 325.8	100.3
urban areas	24 118.9	100.6	24 224.6	100.4
rural areas	1 131.7	91.8	1 101.2	97.3
Heat supply network (transmission and distribution) in km (as of 31 December)	16 381.2	100.5	16 537.4	101.2
urban areas	15 649.2	100.8	15 861.7	101.4
rural areas	732.0	94.1	711.7	97.2
Connection to buildings in km (as of 31 December)	8 869.4	99.4	8 752.4	98.7
urban areas	8 469.7	100.0	8 362.9	98.7
rural areas	399.7	87.9	389.5	97.4
Sale of heat energy (during the year) in thousand TJ	191.2	98.3	183.7	96.1
urban areas	188.4	98.3	181.0	96.1
rural areas	2.7	97.6	2.7	98.8
Sale of heat energy for residential buildings (during the year) in thousand TJ	148.6	99.2	145.3	97.8
urban areas	146.8	99.1	143.6	97.8
rural areas	1.7	105.0	1.7	98.3

Chart 3. The length of heat supply system as of the end of 2020



In 2020, about 183.7 thousand TJ of heat energy was sold, of which 145.3 thousand TJ (79.1 %) for heating purposes in residential buildings. About 181.0 thousand TJ (98.5 %) of heat energy was sold to inhabitants of urban areas, of which approximately 143.6 thousand TJ for heating purposes in residential buildings.

More than 98 % of heat energy was sold to inhabitants of urban areas

In the structure of production of heat energy for heating purposes the largest share was solid fuel (62.5 %), and gas (36.0 %), whereas the least energy was produced using oil fuels (1.5 %).

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Data available in databases

[Local Data Base](#)

Terms used in official statistics

[Gas transmission network](#)

[Gas supply distribution network](#)

[Gas supply connection](#)

[Gas recipient](#)

[Consumption of gas in households](#)

[Distribution thermic-line](#)

[Transmission thermic-line](#)

[Energy consumption](#)