Municipal infrastructure - energy and gas in 2023

16.09.2024

1,0%

Decrease in the household consumption of electricity in 2023 in comparison to 2022

In Poland in 2023, a decrease in consumption was recorded: electricity in households by 1.0%, heat for residential buildings by 4.0% and gas from gas supply network by 4.1%.

Electricity

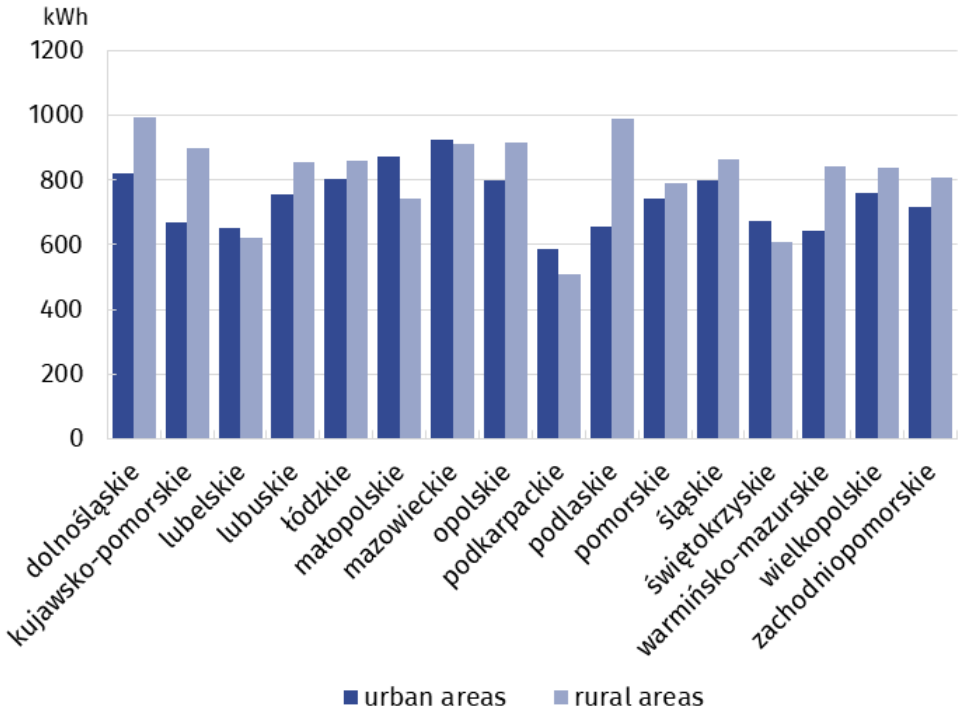
In 2023, household consumption of electricity in Poland decreased by 1.0% compared to 2022 and amounted 29,774.5 GWh, with an increase in the number of consumers (households) of 0.6%.

In 2023 compared to the previous year, consumption of electricity per consumer (household) in Poland decreased by 1.5% and amounted to 1,819.9 kWh, whereas in urban areas amounted to 1,611.7kWh (decrease of 2,3%), and in rural areas - 2,231.3 kWh (decrease of 0,5%).

Table 1. Consumers and household consumption of electricity

Specification	2022	2021 = 100	2023	2022 = 100
Consumption of electricity in GWh (during the year)	30,062.0	95.0	29,775.0	99.0
urban areas	17,855.9	96.4	17,507.0	98.0
rural areas	12,206.1	93.0	12,267.1	100.5
Consumers of electricity in thousands (as of 31 December)	16,270	101.8	16,361	100.6
urban areas	10,828	98.7	10,863	100.3
rural areas	5,442	101.7	5,498	101.0
Consumption of electricity per consumer in kWh (during the year)	1,847.7	93.3	1,819.9	98.5
urban areas	1,649.1	97.6	1,611.7	97.7
rural areas	2,242.8	91.4	2,231.2	99.5
Consumption of electricity per capita in kWh (during the year)	794.7	95.8	789.8	99.4
urban areas	791.3	97.6	780.0	98.6
rural areas	799.7	93.4	804.3	100.6

Chart 1. Household consumption of electricity per capita in 2023



Heat energy

At the end of 2023 the length of the heat supply network in Poland amounted to 25,718.7 km, of which 96.0% was located in urban areas.

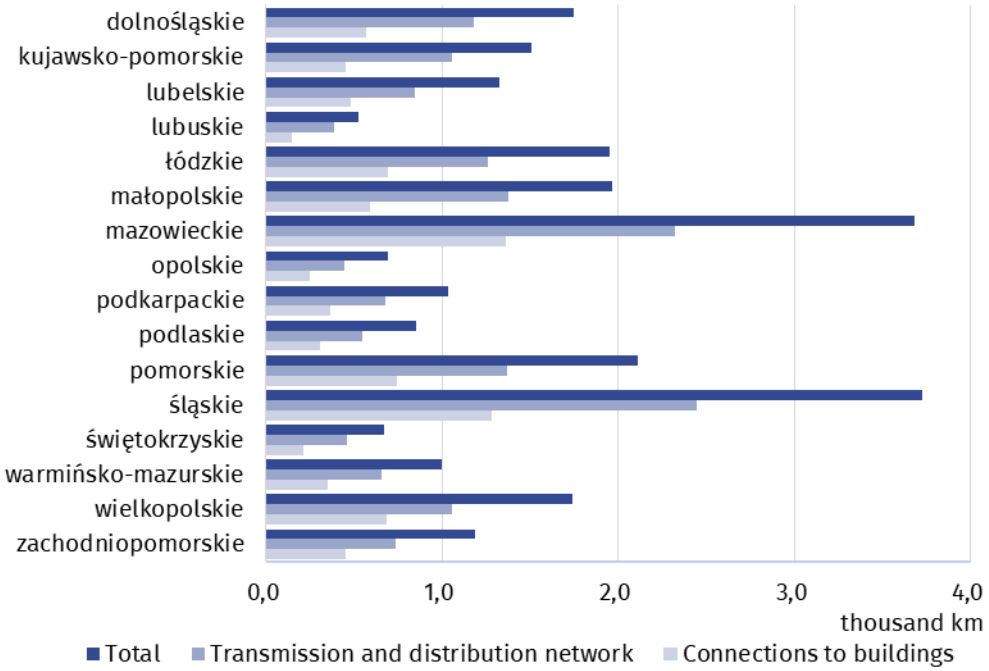
At the end of 2023, 4% of the length of the heating network was located in rural areas.

The highest density of heat supply network was observed in the following voivodships: Śląskie (19.8 km per 100 km^2), followed by Małopolskie (9.1 km per 100 km^2), Pomorskie (7.0 km per 100 km^2), Łódzkie (6.9 km per 100 km^2) and Mazowieckie (6.5 km per 100 km^2), while the lowest density – in the following voivodships: Podlaskie and Warmińsko-Mazurskie (2.7 km per 100 km^2) and Lubuskie (2.8 km per 100 km^2).

Table 2. Heat supply system infrastructure and sale of heat energy

Specification	2022	2021 = 100	2023	2022 = 100
Heat supply network (total) in km (as of 31 December)	25,469.9	100.9	25,718.7	101.0
urban areas	24,441.5	101.1	24,693.2	101.0
rural areas	1,028.4	96.0	1,025.5	99.7
Heat supply network (transmission and distribution) in km (as of 31 December)	16,679.3	100.9	16,796.2	100.7
urban areas	16,017.3	101.1	16,133.0	100.7
rural areas	662.0	96.6	663.2	100.2
Connections to buildings in km (as of 31 December)	8,790.6	100.9	8,922.5	101.5
urban areas	8,424.2	101.2	8,560.2	101.6
rural areas	366.4	94.9	362.3	98.9
Sale of heat energy in PJ (during the year)	194.0	91.6	184.4	95.1
urban areas	191.3	91.7	181.9	95.0
rural areas	2.7	90.0	2.6	96.1
Sale of heat energy for residential buildings in PJ (during the year)	151.7	91.1	145.6	96.0
urban areas	150.1	91.2	144.2	96.0
rural areas	1.6	85.0	1.5	93.4

Chart 2. The length of heat supply network – as of 31.12.2023



In 2023. 184.4 PJ of heat energy was sold of which 145.6 PJ (i.e. 79.0%) for heating purposes in residential buildings. About 181.9 PJ (i.e. 98.6%) of heat energy was sold to inhabitants of urban areas, of which 144.2 PJ for heating purposes in residential buildings.

In 2023, there was a decrease by 4.0% in the sale of heat energy to residential buildings compared to 2022

In 2023 in the structure of fuels used for production of heat energy for heating purposes, the largest share constituted solid fuels (60.7%), followed by gaseous fuels (36.7%), whereas the least heat energy for heating purposes was produced using oil fuels (2.6%).

Gas supply system

As of the end of 2023 gas supply network in Poland reached the length of 174.3 thousand km, the number of connections to buildings amounted to 3.477.0 thousand pcs. Compared to the previous year, the length of gas supply network increased by 3.1 thousand km (i.e. 1.8%), whereas the number of connections to buildings – by 78.3 thousand pcs. (i.e. 2.3%).

At the end of 2023, 59% of the length of the gas network was located in rural areas and 41% in urban areas

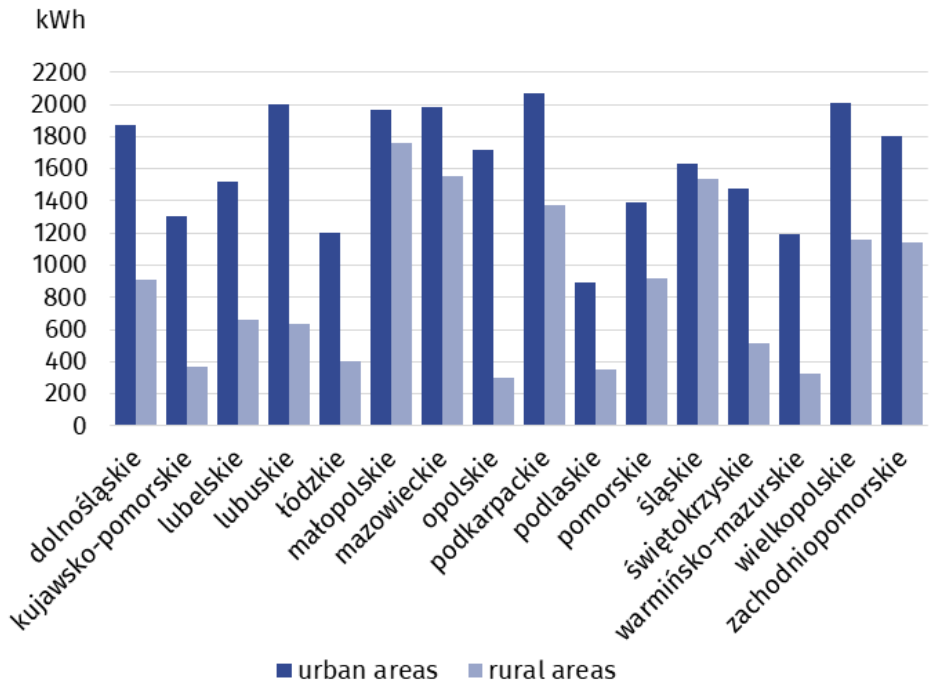
The household consumption of gas from gas supply system in Poland in 2023 compared to 2022 decreased by 4.1%, while the number of customers increased by 2.0%. In urban areas gas consumption decreased by 4.9%, while the number of customers increased by 1.3%. In rural areas, gas consumption decreased by 2.4%, while the number of recipients increased by 5.4%.

In relation to 2022, households consumption of gas from gas supply system decreased by 2,330.6 GWh and amounted 6,071.3 kWh per consumer, with 5,155.0 kWh per consumer in urban areas and in rural areas 10,490.4 kWh per consumer.

Table 3. Gas supply network consumers and consumption of gas from gas supply system in households

Specification	2022	2021 = 100	2023	2022 = 100
Gas supply network in km (as of 31 December)	171.179.2	103.3	174.257.4	101.8
urban areas	70.909.1	103.1	72.031.0	101.6
rural areas	100.270.1	103.4	102.226.4	102.0
Connections leading to residential and non-residential buildings in thousand pcs (as of 31 December)	3.398.8	103.5	3.477.0	102.3
urban areas	1.966.1	103.0	2.002.7	101.9
rural areas	1.432.6	104.1	1.474.3	102.9
Consumers of gas from gas supply system in thousands (as of 31 December)	8.735.1	102.2	8.908.2	102.0
urban areas	7.283.8	101.6	7.378.3	101.3
rural areas	1.451.2	104.9	1.529.8	105.4
Consumption of gas from gas supply system in GWh (during the year)	56.414.4	94.9	54.083.7	95.9
urban areas	39.976.9	95.4	38.034.9	95.1
rural areas	16.437.5	93.8	16.048.8	97.6
Consumption of gas from gas supply system per capita in kWh (during the year)	1.491.4	95.3	1.434.6	96.2
urban areas	1.771.7	96.0	1.694.5	95.6
rural areas	1.077.0	93.9	1.052.3	97.7
Consumption of gas from gas supply system per consumer in kWh (during the year)	6.458.4	92.9	6.071.3	94.0
urban areas	5.488.4	93.9	5.155.0	93.9
rural areas	11 .326.7	89.4	10.490.4	92.6

Chart 3. Household consumption of gas from gas supply system per capita in 2023



When quoting Statistics Poland data please provide the information: “Source of data: Statistics Poland” and when publishing calculations made on data published by Statistics Poland please include the following disclaimer: “Own study based on figures from Statistics Poland”.

Prepared by:
Statistical Office in Rzeszów

Director Marek Cierpiał-Wolan
Office: (+48 17) 853 52 10
(+48 17) 853 52 19

Issued by:
Press Office

Mobile: +48 695 255 032
Phone: +48 22 608 38 04, +48 22 449 41 45,
+48 22 608 30 09
e-mail: obslugaprasowa@stat.gov.pl

stat.gov.pl/en/
@STATPOLAND
@GlownyUrzadStatystyczny
gus_stat
glownyurzadstatystycznygus
glownyurzadstatystyczny

Related information

Energy management and gas supply system in Poland in 2022

Housing Economy and Municipal Infrastructure in 2022

Data available in databases

Local Data Base

Knowledge Databases Municipal and Dwelling Infrastructure

Terms used in official statistics

Energy consumption

Consumers of electric energy in households

Distribution heat network

Transmission heat network

Gas supply network

Gas supply connection

Consumer of gas from gas supply system

Consumption of gas in households