

Industry and sales markets

KOGENERACJA S.A. is the main **producer of heat** in Wrocław and a **producer of electricity**.

Heat market

At KOGENERACJA S.A., network heat is produced together with electricity in a **a high-efficiency cogeneration process** at the following three plants: two CHP plants (EC Wrocław and EC Zawidawie) and a CHP plant in Siechnice (EC Czechnica).

KOGENERACJA S.A. production plants



EC Wrocław Coal-fired unit

812 MWt

263 MWe

Local distributor's (Fortum) heat distribution network

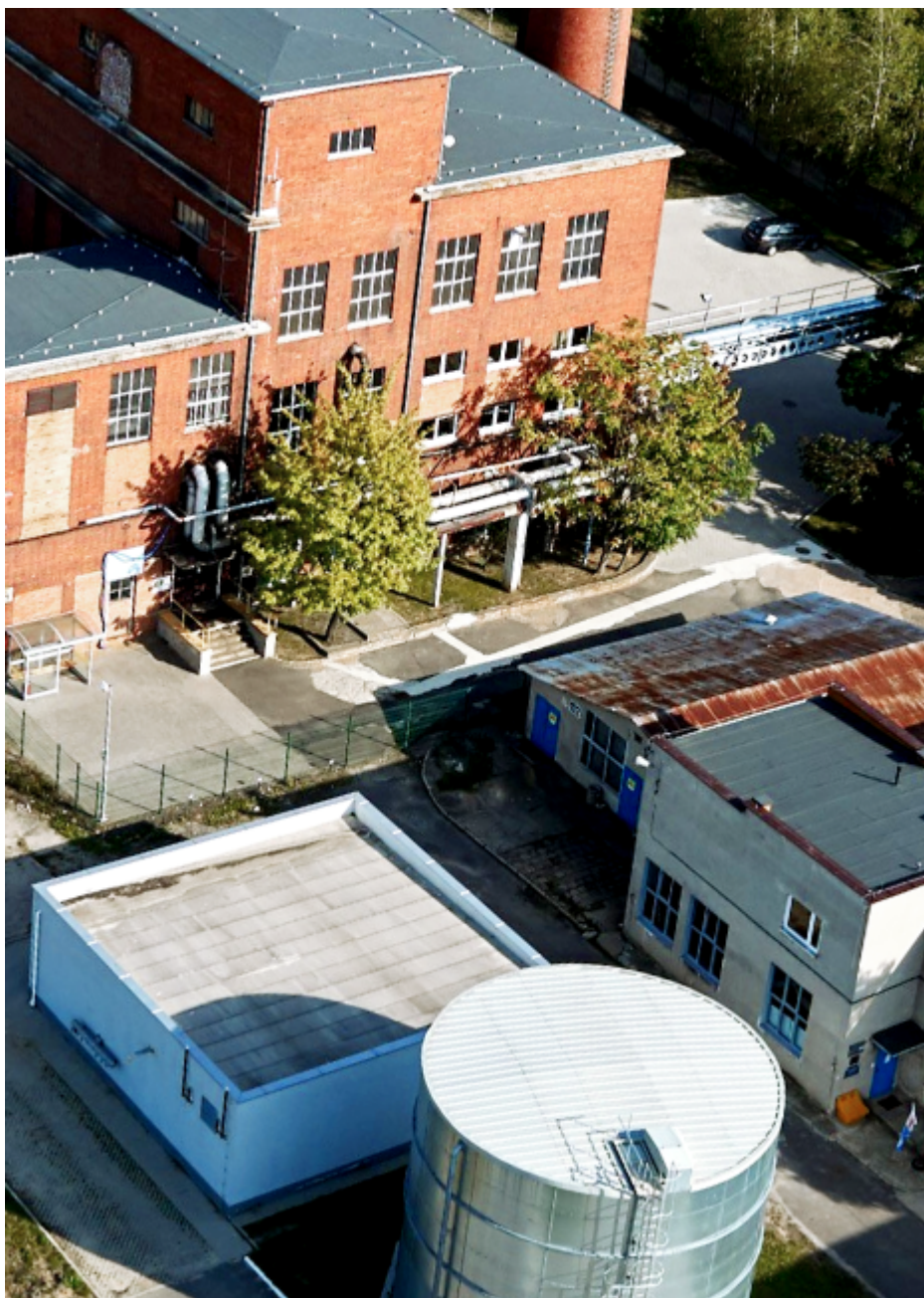


EC CZECHNICA Coal-fired unit

247 MWt

100 MWt

Heating network: network of a local heat distributor (Fortum) and 34 km of its own network supplying customers from Siechnice



EC ZAWIDAWIE Gas-fired unit

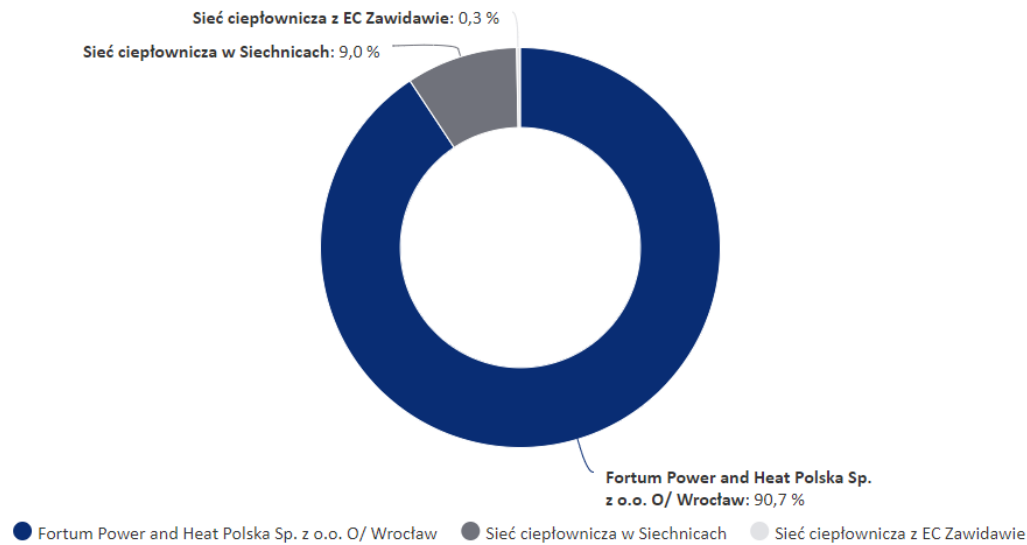
21 MWt

3 MWt

Heating network: Fortum network and 4.7 km of own network in Wrocław-Zawidawa area

The price of heat is regulated (heat tariffs are subject to approval by the President of URE). The development of the heat market is mainly the result of new connections made as new buildings are constructed and as local boiler plants and individual furnaces are put out of use under low-emission programs implemented in cooperation with local authorities.

Chart. Buyers connected to heat distribution systems



Electricity market

In 2019, the annual electricity consumption in Poland has fallen 0.9% and amounted 169,4 TWh (vs. 170.9 TWh in 2018 and 168.1 TWh in 2017).

Electricity production in Poland is mainly based on hard coal and lignite, which makes the domestic power industry vulnerable to changes in CO₂ emission allowance prices and coal prices. The year of 2019 was characterized by high dynamics of volatility of wholesale prices of CO₂ emission allowances, the price of which oscillated during the year from 18.71 euro per ton of CO₂ to 29.77 euro per ton of CO₂ with an arithmetic mean of 24.5 euro per ton. This was influenced by the Brexit turmoil and the price of energy resources.

Capacity market

The capacity market was launched in Poland by force of the Act of 8 December 2017. According to the provisions of the Act, capacity is treated as a commodity which can be purchased and sold. Power Generating Units ("PGU") will receive compensation for their readiness to supply electric capacity to the system at rates determined in the course of an auction. On 27 July 2018, an intra-group Agreement was signed on Capacity Market Management by PGE Group Companies, including KOGENERACJA S.A. and EC Zielona Góra S.A. Under the agreement, all activities related to the capacity market will be

centrally coordinated and managed by PGE S.A. The companies will generate additional revenues in return for their commitment to supply capacity to the system which will facilitate the implementation of the Group's business strategy and carry out the planned investment programs.

In November and December 2018, three auctions were held on the capacity market for supplies to be executed in 2021, 2022 and 2023. In December 2019 an auction of the power market for supply capacity from 2024 onwards took place. The results of the initial auctions were announced to the public in the current reports of PGE S.A. no. 33,35, 38-42/2018 and 36-37/2019 available at <https://www.gkpge.pl/Relacje-Inwestorskie/Raporty-biezace>.

Units pledged by KOGENERACJA S.A. for the capacity market auctions

2021	power offered (MW)	contract length (year)
Wrocław B3*	66	7
Czechnica	25,5	1

* Unit B3 has won a 7-year contract in 2021 and therefore it will not take part in auctions for capacity supply over the next 7 years; the settlement summary for the period between 2022-2023 shows the contract from the first auction.

2022	power offered (MW)	contract length (year)
Wrocław B1	21,878	1
Wrocław B2	66	1
Wrocław B3	66	7
Czechnica	25,5	1

2023	power offered (MW)	contract length (year)
Wrocław B1	21,878	1
Wrocław B2	66	1
Wrocław B3	66	7

2024	power offered (MW)	contract length (year)
Wrocław B1	21,878	1
Wrocław B2	66	7
Wrocław B3	66	7

Czechnica CHP did not take part in the auction for 2023, as it will be replaced by a new generation unit. EC Zawidawie unit did not take part in any of the auctions as its role is to support high-efficiency cogeneration.

The unit from EC Zawidawa did not take part in any of the auctions, as this unit is designed for the support system for high-efficiency cogeneration.

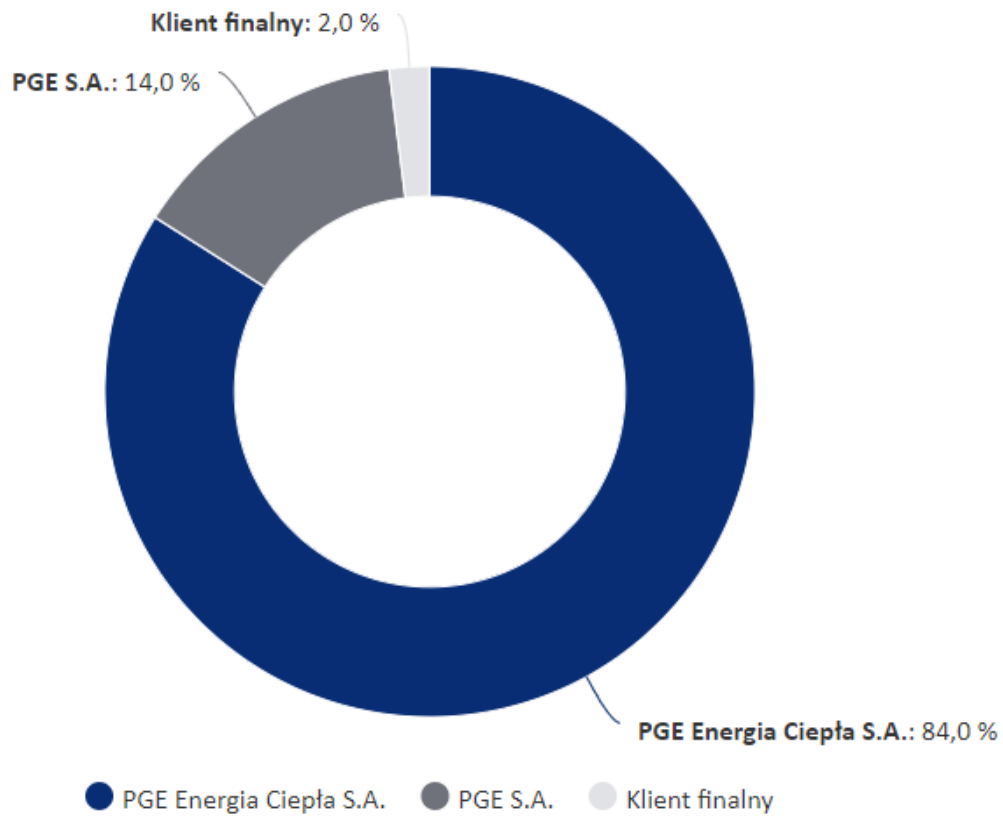
The power generating units of KOGENERACJA S.A. which have not qualified for the capacity market will be subject to direct settlements as part of PGE Group for the provision of capacity pledging services.

Electricity consumers

KOGENERACJA S.A. is the largest producer of heat and electrical energy for Wrocław. Wrocław Heat and Power Plant has concessions for the production of electricity of 263 MWe. The Czechnica Heat and Power Plant holds concessions for the generation of 100 MWe of electricity.

The electricity generated by KOGENERACJA S.A. is generated simultaneously with the network heat in the process of highly efficient cogeneration. Its part is produced using renewable energy sources (RES). Biomass is burned in dedicated installations replacing coal and thus reducing CO₂ emissions.

Chart. Electricity consumers



KOGENERACJA S.A. also provides plant availability services (ancillary services) to PSE-Operator S.A.