

Business strategy for 2022-2026

Capital Group KOGENERACJA S.A.

adopted on October 6, 2022



ZESPÓŁ ELEKTROCIEPŁOWNI WROCŁAWSKICH

KOGENERACJA SA

KOGENERACJA S.A. and EC “Zielona Góra” S.A. are part of the PGE Capital Group

KOGENERACJA S.A. and its subsidiary EC Zielona Góra S.A., which are **leaders in sustainable district heating** in local markets, are pursuing the mission and vision of the PGE Capital Group and its strategy aiming at **decarbonisation of generation and climate neutrality by 2050**.



PGE CG's
Mission

Providing energy
for a safe future



PGE CG's
Vision

Leader of sustainable energy
transition in Poland

PGE wants to **drive the transition and development of the domestic district heating sector**, contributing to the improvement of environmental quality, the competitiveness of the economy and the level of social welfare, as well as energy security at the local and national level.

The goals of the KOGENERACJA S.A. Group are derived from the PGE Group Strategy in the area of sustainable heating

The overriding goal of the KOGENERACJA Group is to achieve the expected return for shareholders by conducting business in compliance with the principles of social responsibility.



Climate neutrality by 2050



Supporting the local community



Zero accidents at work



Environmentally friendly energy

Transformation of generation assets

A gradual transition from the use of hard coal to other, more environmentally friendly fuels. Reduction and ultimately complete elimination of greenhouse gas emissions using low- and zero-carbon technologies.

100%
by 2030

Low-carbon sources in the portfolio

>15%
by 2026

Reduction of CO₂ emissions (compared to 2021)

Business development and diversification

Developing sales in cooperation with a district heating distributor in the Wrocław area and developing the local heat market in Zielona Góra. Increasing and diversifying the customer base by implementing new product offerings and developing energy efficient services.

85 MW
by 2026

Contracted capacity from new connection projects

100
by 2026

Number of new customers outside the district heating network area

Improving operational efficiency

Seeking additional sources of revenue or opportunities to reduce costs by focusing on the company's core business and taking advantage of opportunities arising from the transformation of generation assets.

1000
toe
by 2026

White certificates obtained

>5%
by 2026

Reduction in fixed costs (compared to 2021, effective)



Modern energy services



Efficient and effective organisation

Transformation of generation assets: strategic initiatives

Initiative	Schedule
Construction of the New Czechnica Combined Heat and Power Plant Replacement of the existing coal-fired heat and power plant (100 MWe/247 MWt) with a low-carbon unit consisting of a gas-steam unit, a peak and reserve boiler plant and a heat accumulator (179 MWe/315 MWt).	H1 2024
Construction of new generation units at Zawidawie combined heat and power plant Construction of two cogeneration units with a total electric and thermal capacity of min. 2 MWe/2.5 MWt and the installation of solar panels with a capacity of min. 100 kW, which will contribute to maintaining the status of an efficient district heating system and developing the power supply area of the Zawidawie CHP plant.	2023
Modernisation of the gas-steam unit at the "Zielona Góra" CHP Plant Replacement of the gas turbine in the gas-steam unit (135 MWt/198 MWe) with a new one, including the installation of a new combustion system. The new gas turbine will ensure compliance with NOX emission standards of less than 30 mg/Nm ³ . The efficiency of electricity generation will be raised, which will enable greater production of electricity for the power market increasing sales revenues in this segment.	Q1 2023
Development of an investment plan for the Wrocław Combined Heat and Power Plant Development of an optimal design for a new generation source based on zero- and low-carbon technologies. The asset transformation plan will be prepared taking into account the "do no significant harm" criteria within the framework of sustainable financing regulations and increasing the share of RES in district heating.	2024*

* Making the final investment decision

Transformation of generation assets: strategic initiatives

Initiative	Schedule
<p>Restoration of existing generating capacity at the “Zielona Góra” Combined Heat and Power Plant</p> <p>Use of hybrid fuel types (gas/hydrogen) in the existing gas-steam unit, which will contribute to a significant reduction in emissions. Monitoring of the market and regulatory environment with an assessment of available modern technologies for the use of hydrogen as a fuel of the future.</p>	Q4 2024*
<p>Analysis of the development of generation capacities at Zielona Góra CHP Plant</p> <p>Analysis of the construction of a hydrogen-fired cogeneration source with an installed thermal capacity of about 25 MWt and an electrical capacity of 45–48 MWe.</p>	H1 2025*
<p>Increasing the security of electricity supply from the “Zielona Góra” Combined Heat and Power Plant to the Polish Power System</p> <p>Ensuring continuity and uninterrupted supply of electricity in emergency situations by implementing stand-alone start-up solutions, i.e. setting up a dedicated power line that can be used to supply power to the system power plants in the event of a power failure.</p>	H2 2023*

* Carrying out analyses with indication of source of funding

Business development and diversification: strategic initiatives

Initiative	Schedule
<p>Implementation of connection projects</p> <p>Development of own district heating networks in Zielona Góra, Siechnice Municipality and the Zawidawie area through the development of distribution infrastructure, connections and district heating substations. Investments will be carried out with maximum use of external financing from programmes of the National Fund for Environmental Protection and Water Management.</p> <p>In the Wrocław area, cooperation with Fortum Power and Heat Polska sp. z o.o. will be developed in terms of joint implementation of connection projects based on heat sales intensification agreements.</p>	2022–2026
<p>Construction of innovative product and service offerings</p> <p>Sales of new products and services aimed at individual customers not connected to the district heating network or for whom connection to it is impossible for technical or economic reasons.</p> <p>Intensification of cooperation with real estate developers to attract new multifamily and public utility construction clients.</p> <p>Increase of margins from the acquisition of energy efficiency certificates (white certificates) for our own assets and external customers.</p>	2022–2026
<p>Connection of Zawidawie Heat and Power Plant with the district heating network of Wrocław</p> <p>Connecting two district heating systems to enable optimum use of the new generation assets at Zawidawie in the process of decarbonising heat and power production for Wrocław.</p>	2028*

* Expected date of project implementation

Business development and diversification: strategic initiatives

Initiative	Schedule
<p>Construction of distributed sources of generation in locations distant from the district heating network in Wrocław and Zielona Góra</p> <p>Supplying heat to facilities remote from the district heating network through the construction of gas cogeneration sources, gas engines, heat pumps, and solar panels. Sales of services to customers not connected to the district heating network due to the inability to meet technical and economic conditions.</p>	2023*
<p>Use of hybrid substations in the district heating system in Wrocław and Zielona Góra</p> <p>The use of hybrid solutions based on the cooperation of the district heating system with a heat pump, PV, storage tank and a thermal substation in a multifamily building using all or selected elements of the supply system. The solution is likely to meet the <i>Fit for 55</i> legislative requirements for defining efficient district heating systems after 2035. The project is dedicated to both single-family homes and multi-family buildings. The benefits of the implemented solutions include maintaining existing customers and attracting new ones, increasing the share of RES in the district heating system, and lower heating costs.</p>	2023*
<p>Product development "district heating cooling" using adsorption and absorption generation technologies</p> <p>Construction of cooling units in public facilities in Wrocław and Zielona Góra and generation of cooling using mains water at a temperature of 65 °C. The use of district heat to provide cooling will increase heat production during the summer season, which will improve the efficiency of equipment generation.</p>	2025**

* Performance of analyses with indication of source of funding

** Expected date of project implementation

Improving operational efficiency: strategic initiatives

Initiative	Schedule
<p>Asset management of the old Czechnica Combined Heat and Power Plant</p> <p>Revitalising and repurposing the CHP plant facilities will enable them to be reused, sold or donated for socially useful purposes, reducing maintenance costs and potentially generating additional revenue.</p>	2024*
<p>Utilisation of the area of the "Zielona Góra" Combined Heat and Power Plant</p> <p>Development of vacant land and building roofs with photovoltaic panels to partially cover the electricity needs of the CHP's own needs.</p> <p>Installation of car charger facilities in the main car park of the CHP plant on ul. Zjednoczenia. The chargers will be powered by the distribution system of the Zielona Góra Combined Heat and Power Plant.</p> <p>Electricity demand will be partially covered by a photovoltaic system installed at the CHP plant.</p>	2023–2024**
<p>Development of landfill sites</p> <p>Development and implementation of a plan to reclaim the landfill sites in Kamień and Siechnice and to give these sites new, environmentally friendly functions once the transformation of the generation assets is complete. The possibility of using landfilled combustion by-products, such as for road construction purposes, will be analysed.</p>	2023*

* Performance of analyses with indication of source of funding

** Expected date of project implementation

Improving operational efficiency: strategic initiatives

Initiative	Schedule
<p>Review of strategic options for the assets of the Młoty peak and pumped storage power plant</p> <p>The analysis of strategic options for the project's assets will allow the development of the optimal operating scenario from the perspective of increasing the company's value.</p>	2023*
<p>Optimisation of the process of electricity and heat generation at the "Zielona Góra" CHP Plant</p> <p>Development of an investment plan for improving the efficiency of electricity and heat generation at the gas/steam unit in terms of heat recovery from cooling water, which will reduce evaporation losses and water consumption in the cooling process in summer, and the use of modern cooling solutions for the air intake of the gas turbine, which will increase electricity production during high external temperatures.</p>	H2 2024*

* Performance of analyses with indication of source of funding

** Expected date of project implementation

Conducting business in accordance with the principles of social responsibility



Building partnership relations with the region's residents and authorities

Cooperation on ensuring energy security for residents by supplying the municipality with heat at a price acceptable to consumers, including implementing joint projects that contribute to sustainable urban development.



Improving air quality

An extensive asset transformation program facilitating the reduction of greenhouse gas emissions into the atmosphere. The innovative offer aimed at individual customers will have a positive impact on reducing the phenomenon of so-called low-stack emission.



Support for socially vulnerable customers

We are working with local authorities and local charities as part of the "Share the Heat" programme. Its aim is to support the most in-need consumers of district heating by subsidising their heat and hot water bills.

Conducting business in accordance with the principles of social responsibility



Developing a culture of safety

Minimising worker and contractor accidents by ensuring a safe work environment and requiring contractors to meet minimum standards in this regard, including building awareness through targeted information campaigns and training seminars.



Strategic initiatives in the area of Human Capital Management

Developing the competencies and qualifications of employees, managing generational change, and engaging in dialogue with the public. In view of the planned evolution of the technological process, the development of employees' competencies and qualifications will be focused on the area of low- and zero-carbon energy and modern energy services.



Support for talented students

The PGE Józef Pupka Foundation for the Development of Science, established by KOGENERACJA, supports talented students from deprived backgrounds.

UN Sustainable Development Goals

The KOGENERACJA S.A. Group supports the UN Sustainable Development Goals:

Transformation of generation assets



Improving operational efficiency



Business development and diversification



Conducting business in accordance with the principles of social responsibility





Leading in the green transition



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