

Kogeneracja S.A.



Fair value: PLN 150.30

Initiating Coverage

Rating: n.a.

Kogeneracja S.A. is a Polish producer and distributor of electricity and heat. The company currently operates four thermal power plants (gas-, coal- and biomass-fired) in Wrocław, Siechnica and Zielona Góra with a total capacity of 616 MWe of electricity and 1,383 MWt of heat. The company is completing another gas-fired production facility, which will be completed in H1/24E in Siechnica. While the new efficient gas plant will visibly reduce Kogeneracja's CO2 emissions, we expect significantly higher profitability from 2024E due to the elimination of the one-off windfall tax that affects results this year and high energy prices. With net cash (incl. cash pool) of PLN 654.6m and our EBITDA and EPS estimates for 2023E of PLN 727.5m and PLN 29.22 respectively, the stock is currently trading at a negative EV/EBITDA 2023E and P/E 2023E of just 1.4x. Our DCF-based FV for Kogeneracja equals PLN 150.30. The main risks, which we see, are 1. increasing coal, gas and CO2 prices, 2. the unpredictability of the owner (indirectly the Polish state), and 3. changes of regulations.

Despite both improving results and rapidly increasing energy prices, Kogeneracja, which until 2017 was owned by French EDF, is currently trading >50% below the level 6 years ago. In 2012-2022, the company's top-line grew at a CAGR of 5% to PLN 1.18bn, while its EBITDA improved at an average yearly rate of 4.4% to PLN 363.8m. Over the same period, the operating cash flow increased at a CAGR of 6.4% to PLN 425.6m. In our view, Kogeneracja is one of the most misunderstood and most undervalued stocks on the Warsaw Stock Exchange.

As EU member, Poland has committed to the EU Green Deal, which foresees the achievement of CO2 neutrality by 2050E. The Polish government wants to close all coal-fired energy & heat generation units only by 2049E. In 2022, coal- and gas-powered production units generated 126.8 TWh (78.7%) of the total 161.1 TWh of electricity produced. Of the total energy production capacity of c. 61.5 GW, conventional power plants accounted for c. 36.2 GW (c. 59%).

in PLNm	2020	2021	2022	2023E	2024E	2025E
Net sales	1,183.44	1,434.51	1,812.20	3,423.53	3,353.91	4,093.53
EBITDA	318.83	252.74	363.76	727.53	1,169.70	1,292.14
EBIT	157.09	66.80	160.77	513.53	902.20	1,019.29
Net income	125.95	56.79	151.98	435.40	738.88	827.24
EPS	8.32	3.78	10.04	29.22	49.59	55.52
DPS	0.00	0.32	0.00	0.00	0.00	0.00
Dividend yield	0.00%	0.81%	0.00%	0.00%	0.00%	0.00%
RoE	7.50%	3.26%	8.07%	18.78%	24.17%	21.30%
Net gearing	-35.38%	-31.60%	-22.17%	-19.60%	-35.79%	-50.81%
EV/Sales	-0.05x	-0.04x	-0.03x	-0.02x	-0.02x	-0.02x
EV/EBITDA	-0.20x	-0.25x	-0.17x	-0.09x	-0.05x	-0.05x
P/E	4.77x	10.50x	3.95x	1.36x	0.80x	0.72x

Company profile

Kogeneracja, which through its majority shareholder PGE S.A. is indirectly state-owned, produces and distributes electricity and heat in Wrocław, Siechnica and Zielona Góra.

Date of publication	23 Nov 2023 / 6:30 am
Website	www.kogeneracja.com.pl
Sector	Energy
Country	Poland
ISIN	PLKGNRC00015
Reuters	KG.N.WA
Bloomberg	KG.N.PW

Share information

Last price	39.70
No of shares (m)	14.90
Market cap. (PLNm)	591.53
Market cap. (EURm)	132.93
52-week range	PLN 44.80 / PLN 20.90
Avg. volume (3-months)	6,399

Performance

4-weeks	10.28%
13-weeks	4.47%
26-weeks	42.29%
52-weeks	89.95%
YTD	85.42%

Shareholder structure

PGE Energia Ciepła S.A.	58.07%
Allianz Pension Fund	9.99%
PZU Pension Fund	8.03%
NN Pension Fund	5.01%
Free Float	18.90%

Financial calendar

9M/23 report	November 21, 2023
--------------	-------------------

Analyst

Adrian Kowollik
a.kowollik@eastvalueresearch.com

Content

Investment Case	2
Valuation	4
H1/23 results	7
Our forecasts	10
Business description	13
Market environment	20
Profit and loss statement	23
Balance sheet	24
Cash Flow Statement	25
Financial ratios	25
Disclaimer	26

Investment Case

- Kogeneracja S.A. (KGN) is a Wrocław-based producer and distributor of electrical energy and heat that is majority-owned by the state-owned and listed largest Polish utility PGE S.A. Currently, the company operates four 100%-owned thermal power plants: Wrocław (263 MWe of electricity, 812 MWt of heat), Wrocław-Zawidawie (2.67 MWe, 21.35 MWt), Siechnica (100 MWe, 247 MWt) and Zielona Góra (198 MWe, 303 MWt). After 21/2 years of construction, in H1/24E Kogeneracja will launch a new, efficient gas-powered plant in Siechnica (179 MWe, 163 MWt), which costs in total c. PLN 1.5bn and should help to lower its carbon emissions significantly and thus CO₂ costs in the coming years.
- Wrocław, where the company has a market share of c. 60%, is one of the most dynamic economic centers in Poland. While the EU puts a strong pressure on member states to significantly reduce the use of fossil fuels, Kogeneracja is set to benefit from a growing demand for energy and increasing prices for electricity and heat in the coming years. Even after accounting for the one-off windfall tax, this year the company should generate an EBITDA that is higher than its current market capitalisation.
- Like no other in Europe, the Polish energy market is dominated by fossil fuels. Approx. 59% of all electricity generation units are powered by either coal or gas. In 2022, 78.7% of all energy produced stemmed from fossil fuels. While as an EU member Poland has to comply with the EU Green Deal that foresees CO₂ neutrality in Europe by 2050E, representatives of the Polish government have publicly stated that the country will only close its coal-powered power plants by 2049E. A scenario developed by GlobEnergia.pl foresees that by 2030E the production of electricity from coal & gas will decline from 126.8 TWh in 2022 to 58.8-76 TWh. In order to prepare for a "fossil-free world", Kogeneracja will invest in low-emission and emission-free technologies such as PV-powered industrial heat pumps.
- Since 2012, Kogeneracja has grown at a CAGR of 5% and 4.4% respectively on top-line and EBITDA level. Last year, ROCE equalled 5.2% and the operating cash flow, which amounted to PLN 425.6m, was 175.6% above 2020 level. In H1/23, revenues advanced by 89.2% y-o-y to PLN 1.7bn and EBITDA improved by 101.2% to PLN 379.2m. Including the cash pool, which relates to liquidity management within the PGE Group, Kogeneracja's net cash as of 30/06/2023 equalled PLN 654.6m, which is more than its current market capitalisation. Based on our EBITDA estimates, which account for the fact that this year the company has to pay a windfall tax of PLN >300m that is limited until December 2023E, the stock is currently trading at an EV/EBITDA 2023E & 2024E of -0.09x and -0.05x respectively.
- We initiate coverage of Kogeneracja S.A. with a DCF-based FV of PLN 150.30 (current share price: PLN 39.70). Based on our estimates, the company is currently trading at a P/BVPS of 0.3x and EV/Sales, EV/EBITDA and P/E 2023E-2025E multiples that are more than 80% below its Polish and international peers. In our view, Kogeneracja is a massively undervalued stock, which is completely misunderstood by the market. While the risk-return-ratio seems very attractive, we would like to emphasize the risks, which investors should bear in mind: 1. A highly unpredictable owner 2. Volatility of market prices of especially coal, gas and CO₂ certificates and 3. Changing regulations.

SWOT Analysis

Strengths

- Kogeneracja is the largest supplier of electricity and heat in the agglomerations of Wrocław (>500k inhabitants) and Zielona Góra (>138k)
- Strong majority owner PGE, which is the largest Polish utility and has own production assets and distribution network
- Hist. revenue and EBITDA CAGR of c. 5%
- Significant net cash position and growing operating cash flows
- In 2022, ROCE was higher than at most Polish and international peers
- Long-term oriented Polish pension funds have a combined stake of c. 29.7% in the company

Opportunities

- Increasing demand for electricity & heat due to economic growth, new apartments, connection of apartments with a coal heating to the heat distribution network, and increasing average apartment sizes. In Wrocław c. 25k new apartments are constructed per year, in Zielona Góra c. 1.6k
- Start of operations of the new gas plant in Siechnice, which should help to achieve the goal of 15% lower CO₂ emissions by 2026E (and thus also the volume of purchases of CO₂ certificates per year)
- Investments in low- and zero-emission technologies e.g. industrial heat pumps that are powered by PV in the thermal power plant in Wrocław (is currently running on coal) in the next 5 years
- As a country, Poland only plans to withdraw from using coal in 2049E
- Dividend payouts in the long run

Weaknesses

- The Polish state is (indirectly) majority owner
- Weak communication with capital market participants
- Seasonality of business: Between October and April, the demand for heat is much higher than in other months
- There are several trade unions at Kogeneracja

Threats

- Lower demand for heat due to higher energy efficiency of buildings and installations
- Strongly increasing prices of coal, gas and biomass
- Changing regulations
- Pressure due to the EU Green Deal, which foresees CO₂ neutrality in Europe by 2050E, among others through a strong reduction of energy production from fossil fuels
- Increasing prices of CO₂ certificates, which are one of the EU's instruments to make fossil energy and emission-intensive production less attractive
- More ambitious climate goals of the new Polish government

Valuation

We have valued Kogeneracja S.A. by using a DCF model only as in our view there are no listed peers, which are 100% comparable to the company in terms of their business model. Our approach derives a fair value for the stock of PLN 150.30, which is c. 3.8 times above the company's current share price.

Below are the key assumptions of our WACC calculation:

- (1) *Risk-free rate*: Current yield of Polish long-term government bonds with maturity in 2047E is 6.1% (Source: www.boerse-stuttgart.de)
- (2) *Beta*: 4y average unlevered beta of companies from the Utility (General) sector of 0.49x (Source: www.damodaran.com)
- (3) *Equity risk premium (Poland)*: 7.40% (Source: www.damodaran.com)
- (4) *Effective tax rate*: 19%
- (5) *Target equity ratio*: 100%
- (6) *After-tax debt costs*: 6.9%
- (7) *WACC = Equity costs*: 9.7%

DCF model

in PLNm	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Net sales	3,423.53	3,353.91	4,093.53	3,881.92	3,912.90	3,944.55	3,976.89	4,009.93	4,043.71
(y-o-y change)	88.9%	-2.0%	22.1%	-5.2%	0.8%	0.8%	0.8%	0.8%	0.8%
EBIT	513.53	902.20	1,019.29	698.75	579.11	449.68	314.17	168.42	103.11
(EBIT margin)	15.0%	26.9%	24.9%	18.0%	14.8%	11.4%	7.9%	4.2%	2.6%
NOPLAT	415.96	730.78	825.62	565.98	469.08	364.24	254.48	136.42	83.52
+ Depreciation & amortisation	214.00	267.50	272.85	278.31	283.87	289.55	295.34	301.25	307.27
= Net operating cash flow	629.96	998.28	1098.47	844.29	752.95	653.79	549.82	437.67	390.80
- Total investments (Capex and WC)	-693.60	-412.93	-272.99	-339.20	-343.80	-802.91	-812.45	-822.46	-341.97
Capital expenditure	-949.33	-367.50	-322.85	-328.31	-333.87	-789.55	-795.34	-801.25	-308.27
Working capital	255.72	-45.43	49.86	-10.89	-9.93	-13.36	-17.11	-21.21	-33.69
= Free cash flow (FCF)	-63.64	585.36	825.49	505.09	409.15	-149.12	-262.63	-384.79	48.83
PV of FCF's	-62.52	524.06	673.54	375.59	277.27	-92.10	-147.83	-197.39	22.83
PV of FCFs in explicit period 1,373.44									
PV of FCFs in terminal period 12.83									
Enterprise value (EV) 1,386.27									
+ Net cash / - net debt (30 June 2023) 654.63									
+ Investment / - minorities 0.00									
Shareholder value 2,040.91									
Number of shares outstanding (m) 14.90									
WACC 9.7%									
Cost of equity	9.7%								
Pre-tax cost of debt	8.5%								
Normal tax rate	19.0%								
After-tax cost of debt	6.9%								
Share of equity	100.0%								
Share of debt	0.0%								
Fair value per share in PLN (today)	136.97								
Fair value per share in PLN (in 12 months)	150.30								

		Terminal EBIT margin							
		-0.5%	0.6%	1.6%	2.6%	3.6%	4.6%	5.6%	
WACC	5.7%	31.20	73.04	114.89	156.74	198.58	240.43	282.27	
	6.7%	63.25	93.79	124.33	154.88	185.42	215.96	246.50	
	7.7%	83.18	106.54	129.89	153.25	176.60	199.96	223.31	
	8.7%	96.44	114.87	133.30	151.74	170.17	188.60	207.04	
	9.7%	105.63	120.52	135.41	150.30	165.18	180.07	194.96	
	10.7%	112.18	124.42	136.66	148.90	161.13	173.37	185.61	
	11.7%	116.93	127.13	137.33	147.53	157.73	167.93	178.13	

Source: East Value Research GmbH

Peer Group Analysis

We have found the following listed European companies, which operate in the same sector as Kogeneracja. We would like to emphasize that CEE-based utilities have in general much lower multiples than Western ones as most of them are state-owned and usually have weak corporate governance standards.

Peers from CEE:

- (1) *PGE S.A.*: PGE, which is based in Lublin/Poland, is the largest producer and supplier of electricity in Poland and one of the largest companies in the electricity sector in CEE. By combining its own fuel resources (brown coal), energy production and final distribution networks, PGE supplies electricity to over 5m homes, companies and institutions. In 2022, the annual production of electricity & heat in the PGE Group amounted to 66.1 TWh and 51.3 PJ respectively. The PGE Capital Group employs over 46,000 employees and has 17.8 GW of installed generation capacity. In 2022, PGE, which currently has a market cap of PLN 15.6bn, generated revenues of PLN 73.4bn and an EBITDA margin of 11.4%. Its ROCE equalled 4.9%.
- (2) *ENEA S.A.*: ENEA, which is based in Poznan/Poland, is the 2nd largest utility in Poland. In 2022, it produced 26 TWh of electricity and had production assets with 6.3 GW. The company serves 2.8m Polish clients. In 2022, ENEA, which currently has a market cap of PLN 3.8bn, generated revenues of PLN 30.1bn and an EBITDA margin of 7.3%. Last year, its ROCE equalled 2.4%.
- (3) *ZE PAK S.A.*: ZE PAK, which is based in Konin/Poland, is the largest privately-owned energy company in Poland. The company operates thermal coal mines, coal & biomass power plants and photovoltaic plants. The respective capacity equals 1,118 MW (thermal coal-powered power plant in Patnow consisting of two blocs), 105 MW (heat and electricity plant in Konin) and 70 MWp (photovoltaic plants in the Brudzew area). In 2022, ZE PAK, which currently has market cap of PLN 996m, generated revenues of PLN 4.1bn and an EBITDA margin of 6.5%. Last year, its ROCE equalled 7.4%.
- (4) *TAURON Polska Energia S.A.*: TAURON, which is based in Katowice/Poland, supplies >51 TWh of electrical energy per year to >5.6m end-customers. The company, which controls c. 20% of all coal resources in Poland, produces coal, electricity & heat from coal, biomass and photovoltaic plants and distributes it to clients. In 2022, TAURON, which currently has a market cap of PLN 6.3bn, generated revenues of PLN 36.8bn and an EBITDA margin of 8.4%. Last year, its ROCE equalled 2.3%.
- (5) *CEZ a.s.*: CEZ, which is based in Prague/the Czech Republic, is a vertically integrated energy company with operations in Czechia, Germany, Slovakia, Poland, Hungary, Italy and France. The company operates nuclear and fossil fuel-powered power plants, renewable and hydro power plants and in addition generates revenues from trading and mining. Its installed capacity comprises 11.8 GW, of which 57% nuclear, 33% lignite & hard coal, 6% hydro & renewables and 5% natural gas. In 2022, CEZ, which currently has a market cap of CZE 535.2bn, generated revenues of CEZ 285.5bn and an EBITDA margin of 46.6%. Last year, its ROCE equalled 13.3%.

Company	EV/Sales			EV/EBITDA			P/E			P/BVPS		EBITDA margin	Net gearing
	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	Latest	Last FY	Latest	
PGE S.A. (PLN)	0.25x	0.30x	0.28x	2.41x	2.91x	2.62x	3.60x	4.06x	3.65x	0.29x	11.42%	13.72%	
ENEA S.A. (PLN)	0.17x	0.27x	0.28x	1.77x	3.60x	3.26x	7.72x	5.50x	3.92x	0.26x	7.25%	25.98%	
ZE PAK S.A. (PLN)	0.07x	0.11x	0.23x	1.73x	1.76x	1.79x	7.26x	6.01x	n.a	1.76x	6.50%	-112.42%	
TAURON Polska Energia S.A. (PLN)	0.46x	0.62x	0.64x	3.33x	4.67x	4.28x	2.82x	3.54x	3.09x	0.35x	8.35%	83.74%	
CEZ a.s. (CZK)	1.79x	1.67x	1.79x	4.94x	4.16x	4.63x	14.94x	14.61x	15.90x	2.40x	46.63%	19.11%	
Median	0.25x	0.30x	0.28x	2.41x	3.60x	3.26x	7.26x	5.50x	3.79x	0.35x	8.35%	19.11%	
Kogeneracja S.A. (PLN)	-0.02x	-0.02x	-0.02x	-0.09x	-0.05x	-0.05x	1.36x	0.80x	0.72x	0.28x	20.07%	-0.31x	
Premium/Discount	-107.5%	-106.2%	-105.6%	-103.6%	-101.5%	-101.5%	-81.3%	-85.5%	-81.1%	-19.0%			
Fair value Kogeneracja (PLN)	189.07												

Source: CapitalIQ, marketscreener.com, banker.pl, East Value Research GmbH

Western European peers:

(6) *Fortum Oy.*: Fortum, which is based in Helsinki/Finland, is the leading utility in the Nordics. It has a installed capacity of 8.98 GW in Sweden, Finland, Denmark and Poland, of which hydro accounts for 51.8%, nuclear for 35.9%, combined heat plants for 6% and others for 6.3%. In 2022, the company produced 44.2 TWh of power and 5.3 TWh of heat. Last year, Fortum, which currently has a market cap of EUR 9.7bn, generated revenues of EUR 8.8bn and an EBITDA margin of 27.4%. Its ROCE equalled 11.1%.

Fortum is a competitor of Kogeneracja in the Wroclaw region, however according to our research will likely sell its activities in the near future due to the pressure by its owner - the Finish government - to focus on renewable energy sources.

(7) *Iberdrola SA*: Iberdrola, which is based in Bilbao/Spain, is an energy company with operations on all continents. Its installed capacity equals 60.76 GW (thereof: 40.1 GW renewables) and in 2022 it produced 163 GWh (74.7 GWh). Last year, Iberdrola, which currently has market cap of EUR 64.7bn, generated revenues of EUR 53.9bn and an EBITDA margin of 22.7%. Its ROCE equalled 4.7%.

(8) *Public Power Corporation.*: Public Power Corporation (PPC), which is based in Athens/Greece, is the largest power generation and supply company in Greece engaged in the generation, distribution and sale of electricity to 5.6m consumers. Its installed capacity equals 11.1 GW of thermal, hydro and renewable power plants and in 2022 it generated 30 TWh of electricity. HEDNO S.A., its 51% subsidiary, is the owner and operator of the electricity distribution network of Greece. For last year, PPC, whose current market cap is EUR 3.3bn, reported revenues of EUR 11.3bn and an EBITDA margin of 8.5%. Its ROCE equalled 1.9%.

(9) *EDP – Energia de Portugal S.A.*: EDP, which is based in Lisbon/Portugal, is the largest utility in Portugal with operations in Europe, the Americas and Asia. It has 5.6 GW of thermal installed capacity and 22.2 GW of renewable one, whereby it plans to become CO2 neutral by 2030E. Last year, it produced 45.2 GWh of renewable and supplied 65.9 TWh of thermal energy. For 2022, EDP, whose current market cap equals EUR 15.6bn, reported revenues of EUR 20.7bn and an EBITDA margin of 15.5%. Its ROCE equalled 3.5%.

Company	EV/Sales			EV/EBITDA			P/E			P/BVPS	EBITDA margin	Net gearing
	2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E	Latest	Last FY	Latest
Fortum Oy (EUR)	1.59x	1.72x	1.82x	5.68x	6.55x	6.82x	8.32x	9.49x	10.21x	1.26x	27.42%	25.94%
Iberdrola SA (EUR)	1.96x	1.94x	1.88x	7.48x	7.10x	6.67x	14.01x	13.47x	12.35x	1.51x	22.73%	103.11%
Public Power Corporation SA (EUR)	0.85x	0.95x	1.01x	4.95x	4.60x	4.33x	19.28x	13.73x	10.66x	0.78x	8.50%	64.58%
EDP (EUR)	1.80x	1.77x	1.72x	7.16x	6.82x	6.56x	13.85x	12.47x	12.06x	1.46x	15.53%	180.71%
Median	1.69x	1.74x	1.77x	6.42x	6.68x	6.62x	13.93x	12.97x	11.36x	1.36x	19.13%	83.85%
Kogeneracja S.A. (PLN)	-0.02x	-0.02x	-0.02x	-0.09x	-0.05x	-0.05x	1.36x	0.80x	0.72x	0.28x	20.07%	-31.02%
<i>Premium/Discount</i>	<i>-101.1%</i>	<i>-101.1%</i>	<i>-100.9%</i>	<i>-101.4%</i>	<i>-100.8%</i>	<i>-100.7%</i>	<i>-90.2%</i>	<i>-93.8%</i>	<i>-93.7%</i>	<i>-79.4%</i>		
Fair value Kogeneracja (PLN)	481.62											

Source: CapitalIQ, marketscreener.com, bankier.pl, East Value Research GmbH

H1/23 results

Revenues and Profitability

In H1/23, Kogeneracja generated revenues of PLN 1.7bn, which corresponds to a y-o-y growth of 89.2%. Thereof, Kogeneracja S.A. (thermal power plants in Wroclaw, Siechnice and Zawidawie) accounted for PLN 916m (+59.3% y-o-y) and EC Zielona Gora S.A. for PLN 726.3m (+136%).

	Heat (TJ)		Electricity	
	H1/23	change y-o-y	H1/23	change y-o-y
Kogeneracja S.A.	5,463	-3.5%	619	-2.2%
EC Zielona Gora	711	0.3%	758	29.8%

Source: Company information, East Value Research GmbH

On Group level, sales of electricity improved by 100.3% y-o-y to PLN 1.06bn especially due to higher prices and volumes at 100%-subsidiary EC Zielona Gora S.A., where from May 2022 the gas turbine was not working for 120 days due to modernization. In this segment, we have also included PLN 33.8m (H1/22: PLN 32m) from the Capacity Market, which relates to a Polish law from 2017 that allows energy suppliers to offer the energy network operator PSE S.A. the obligation to supply power for a certain period; and "Sales from re-selling of electricity" (+207.4% y-o-y to PLN 71.1m), which result from re-selling of electricity that the Group purchases on the market if market prices are significantly below its contracted sale prices.

In H1/23, the fastest-growing segment was "Sales from support of co-generation" (+225.6% y-o-y to PLN 4.2m), which stem from state support for highly-effective gas co-generation based on a law from 2018.

According to the company, the main reason for the 69.7% increase of sales in the "Sales from production & distribution of heat" segment were higher prices. Compared to last year, volumes declined following higher average temperatures, especially in January 2023. Because of a law from 2022 that established a maximum price for heat due to the energy crises, Kogeneracja received a compensation – which is the difference between the maximum price set by law and the market price – of PLN 23.2m.

In H1/23, Kogeneracja produced 39.3 GWh (H1/22: 35 GWh) of electricity. Biomass, which is another fuel that is used in the company's thermal power plant in Siechnica, allows the company to reduce the volume of CO2 certificates/allowances that it has to buy each year.

in PLNm	H1/23	H1/22
Sales from production & distribution of electricity*	1,132.45	553.10
<i>Share in total sales</i>	<i>65.9%</i>	<i>61.0%</i>
Sales from production & distribution of heat	564.66	332.75
<i>Share in total sales</i>	<i>32.9%</i>	<i>36.7%</i>
Sales from support of gas co-generation	4.15	1.27
<i>Share in total sales</i>	<i>0.2%</i>	<i>0.1%</i>
Other sales (e.g. leasing of real estate, CO2 certificates)	15.98	20.28
<i>Share in total sales</i>	<i>0.9%</i>	<i>2.2%</i>
Total sales	1,717.24	907.39

* incl. sales related to the Power Market and re-selling of energy

Source: Company information, East Value Research GmbH

in PLNm	H1/23	H1/22	change y-o-y
Net sales	1717.24	907.39	89.2%
EBITDA	379.17	188.44	101.2%
<i>EBITDA margin</i>	<i>22.1%</i>	<i>20.8%</i>	
EBIT	272.05	87.56	210.7%
<i>EBIT margin</i>	<i>15.8%</i>	<i>9.7%</i>	
Net income	228.48	77.98	193.0%
<i>Net margin</i>	<i>13.3%</i>	<i>8.6%</i>	

Source: Company information, East Value Research GmbH

Between January and June 2023, Kogeneracja's EBITDA went up by 101.2% to PLN 379.2m. Although the share of distribution expenses increased from 2.2% in H1/22 to 18.9%, this was more than offset by a much lower share of other expense categories e.g. CoGS (excl. D&A) – 57.1% vs. 74.7% in H1/22.

It has to be noted that the CoGS do not just include direct costs of sales & personnel, costs of fuel and expenses related to provisions for CO2 certificates but also revenue/costs related to KDT compensations that stem from coverage of costs of EC Zielona Góra S.A. related to early termination of long-term contracts for sales of power and electricity. These compensations are paid out by the Polish government as quarterly advance payments with adjustments at the end of each year and the KDT agreement.

In addition, the difference between distribution costs in H1/23 and H1/22 mainly stems from a windfall tax worth PLN 290.2m that holds for the period 1/12/2022-1/12/2023. It is calculated based on the following formula: *volume of sold electricity x (volume-weighted average sale price of electricity – volume-weighted average price cap that is determined by the energy regulator URE).*

In H1/23, the company's fuel costs – are included in CoGS - increased significantly (PLN 211.2m vs. PLN 169.2m). While biomass was 71% more expensive compared to the previous year, the average price of coal was 25% and of gas 122% above H1/22.

Balance sheet and Cash flow

At the end of June 2023, Kogeneracja had equity (excl. minorities) of PLN 2.1bn, which corresponds to an equity share of 57.1%. Until last year, there were also minorities as back then Kogeneracja only owned 98.4% in EC Zielona Gora S.A.

The largest balance sheet position were fixed assets (PLN 2.4bn), which reflect the company's production plants for heat and electricity (Wroclaw, Siechnica, Wroclaw-Zawidawie, Zielona Gora). This includes assets of PLN 2.3bn, rights-to-use-assets of PLN 123.3m and investment property (PLN 13m). Receivables resulting from cash pooling agreements – relate to complex liquidity management of all companies from the PGE Group incl. Kogeneracja – equalled PLN 756.8m. We estimate the interest-bearing debt at PLN 118.2m (thereof: 6.3% short-term). Net cash incl. cash and receivables from cash pooling agreements amounted to PLN 654.6m (net gearing: -31%).

In Jan-Jun 2023, Kogeneracja generated an operating cash flow of PLN 435.3m compared to PLN 216.1m in H1/22. The main reasons were a significantly higher net profit and cash inflow from working capital (PLN 226.7m vs. PLN 32.4m in H1/22). Cash flow from investing equalled PLN -420.3m (H1/22: PLN -229.8m) and was the result of both investments and a higher contribution to the cash pool. Between January and June 2023, Kogeneracja conducted the following investments among others: 1. Acquisition of the remaining 8,849 shares (PLN 9.8m) in EC Zielona Gora S.A. as part of a compulsory buyout 2. Acquisition of fixed assets for PLN 325.4m for the project EC Czechnica 2 in Siechnice, modernisation and repair of boilers, generators, turbines, blocs, heat systems & networks. Since August 2021 – when it paid a first prepayment of PLN 142m - until the end of June 2023, the company already paid in total PLN 666.5m for EC Czechnica 2.

Cash flow from financing amounted to PLN -4.1m (H1/22: PLN -4.2m). In total, since January 2023 Kogeneracja's cash position (excl. the cash pool) increased by PLN 10.9m to PLN 16m.

Our forecasts

Revenues and Profitability

Our detailed model of Kogeneracja's revenues and gross margins until 2031E includes the thermal heat plants Wroclaw, Czechnica (in Siechnice) and Zielona Gora. We have excluded Zawidawie from our calculation as we believe that it only accounts for c. 2% of KGN's total sales.

EC Zielona Gora	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Number of hours	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Heat (TJ)	1,872	1,382	1,382	1,382	1,382	1,382	1,382	1,382	1,382
Electricity (GWh)	2,400	1,440	1,440	1,440	1,440	1,440	1,440	1,440	1,440
Volume Heat + Electricity (TJ)	10,512	6,566	6,566	6,566	6,566	6,566	6,566	6,566	6,566
Price of an ordered MWT	181	184	188	192	196	200	204	208	212
Price of heat (GJ)	95	97	99	101	103	105	107	109	111
Revenues from heat (PLNk)	197,728	154,240	157,325	160,472	163,681	166,955	170,294	173,700	177,174
Price of electricity (MWh)	435.1	600	644	580	580	580	580	580	580
Revenues from electricity (PLNk)	1,044,240	864,000	927,360	835,200	835,200	835,200	835,200	835,200	835,200
Total revenues (PLNk)	1,273,968	1,050,240	1,116,685	1,027,672	1,030,881	1,034,155	1,037,494	1,040,900	1,044,374
Revenues from electricity (PLNk)	1,044,240	864,000	927,360	835,200	835,200	835,200	835,200	835,200	835,200
Revenues from heat (PLNk)	197,728	154,240	157,325	160,472	163,681	166,955	170,294	173,700	177,174
Capacity Market (PLNk)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000
Co-generation premium (PLNk)	0	0	0	0	0	0	0	0	0
CoGS (PLNk)	750,338	474,328	499,778	516,901	539,617	563,343	588,126	614,013	633,614
Costs of fuel (gas / coal / biomas)	125	130	135	141	146	152	158	164	171
Costs of a ton of CO2	86	94	104	109	115	120	126	133	135
Fuel	463,607	289,291	300,862	312,897	325,413	338,429	351,966	366,045	380,687
CO2	286,732	185,037	198,915	204,004	214,204	224,914	236,160	247,968	252,927
Others	0	0	0	0	0	0	0	0	0
Gross profit (PLNk)	523,630	575,912	616,908	510,771	491,264	470,811	449,368	426,887	410,760
<i>Gross margin</i>	<i>41.1%</i>	<i>54.8%</i>	<i>55.2%</i>	<i>49.7%</i>	<i>47.7%</i>	<i>45.5%</i>	<i>43.3%</i>	<i>41.0%</i>	<i>39.3%</i>

Source: TGE, Tariffs of the thermal power plants, UKE, ICE.com, East Value Research GmbH

EC Czechnica	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Number of hours	8,000	4,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Heat (TJ)	2,304	1,152	2,304	2,304	2,304	2,304	2,304	2,304	2,304
Electricity (GWh)	880	720	1,440	1,440	1,440	1,440	1,440	1,440	1,440
Volume Heat + Electricity (TJ)	5,472	3,744	7,488	7,488	7,488	7,488	7,488	7,488	7,488
Price of an ordered MWT	200	204	208	212	216	221	225	230	234
Price of heat (GJ)	95	97	99	101	103	105	107	109	111
Revenues from heat (PLNk)	278,880	172,829	290,147	295,950	301,869	307,906	314,064	320,345	326,752
Price of electricity (MWh)	435.1	600	644	580	580	580	580	580	580
Revenues from electricity (PLNk)	382,888	432,000	927,360	835,200	835,200	835,200	835,200	835,200	835,200
Total revenues (PLNk)	725,768	668,829	1,281,507	1,195,150	1,201,069	1,207,106	1,213,264	1,219,545	1,225,952
Revenues from electricity (PLNk)	382,888	432,000	927,360	835,200	835,200	835,200	835,200	835,200	835,200
Revenues from heat (PLNk)	278,880	172,829	290,147	295,950	301,869	307,906	314,064	320,345	326,752
Capacity Market (PLNk)	64,000	64,000	64,000	64,000	64,000	64,000	64,000	64,000	64,000
Co-generation premium (PLNk)	8,200	50,400	50,400	50,400	50,400	50,400	50,400	50,400	50,400
CoGS (PLNk)	524,055	449,221	941,365	975,927	1,017,164	1,060,161	1,104,993	1,151,740	1,192,460
Costs of fuel (gas / coal / biomas)	280	291	303	315	328	341	354	368	383
Costs of a ton of CO2	86	94	104	109	115	120	126	133	135
Fuel	410,667	349,440	726,835	755,909	786,145	817,591	850,294	884,306	919,678
CO2	113,388	99,781	214,530	220,018	231,019	242,570	254,698	267,433	272,782
Others	0	0	0	0	0	0	0	0	0
Gross profit (PLNk)	201,713	219,607	340,141	219,223	183,905	146,945	108,271	67,806	33,492
<i>Gross margin</i>	<i>27.8%</i>	<i>32.8%</i>	<i>26.5%</i>	<i>18.3%</i>	<i>15.3%</i>	<i>12.2%</i>	<i>8.9%</i>	<i>5.6%</i>	<i>2.7%</i>

Source: TGE, Tariffs of the thermal power plants, UKE, ICE.com, East Value Research GmbH

EC Wrocław	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Number of hours	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Heat (TJ)	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Electricity (GWh)	900	900	900	900	900	900	900	900	900
Volume Heat + Electricity (TJ)	12,240	12,240	12,240	12,240	12,240	12,240	12,240	12,240	12,240
Price of an ordered MWt	150	153	156	159	162	166	169	172	176
Price of heat (GJ)	93	95	97	99	101	103	105	107	109
Revenues from heat (PLNk)	942,000	960,840	980,057	999,658	1,019,651	1,040,044	1,060,845	1,082,062	1,103,703
Price of electricity (MWh)	435.1	600	644	580	580	580	580	580	580
Revenues from electricity (PLNk)	391,590	540,000	579,600	522,000	522,000	522,000	522,000	522,000	522,000
Total revenues (PLNk)	1,383,590	1,550,840	1,609,657	1,571,658	1,591,651	1,612,044	1,632,845	1,654,062	1,675,703
Revenues from electricity (PLNk)	391,590	540,000	579,600	522,000	522,000	522,000	522,000	522,000	522,000
Revenues from heat (PLNk)	942,000	960,840	980,057	999,658	1,019,651	1,040,044	1,060,845	1,082,062	1,103,703
Capacity Market (PLNk)	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Co-generation premium (PLNk)	0	0	0	0	0	0	0	0	0
CoGS (PLNk)	938,436	1,011,040	1,088,934	1,141,069	1,212,578	1,288,818	1,370,120	1,456,835	1,525,304
Costs of fuel (gas / coal / biomass)	25	27	29	31	34	37	40	43	46
Costs of a ton of CO2	86	94	104	109	115	120	126	133	135
Fuel	382,500	413,100	446,148	481,840	520,387	562,018	606,979	655,538	707,981
CO2	555,936	597,940	642,786	659,229	692,191	726,800	763,140	801,297	817,323
Others	0	0	0	0	0	0	0	0	0
Gross profit (PLNk)	445,154	539,800	520,723	430,589	379,073	323,226	262,725	197,227	150,399
<i>Gross margin</i>	<i>32.2%</i>	<i>34.8%</i>	<i>32.3%</i>	<i>27.4%</i>	<i>23.8%</i>	<i>20.1%</i>	<i>16.1%</i>	<i>11.9%</i>	<i>9.0%</i>

Source: TGE, Tariffs of the thermal power plants, UKE, ICE.com, East Value Research GmbH

The financial models of all thermal heat plants start with the average number of working hours per year, which is 8,000. In case of Czechnica, we have assumed that due to shut off of the old thermal plant and the launch of the new one the average working hours will equal 4,000 in 2024E.

The next two positions are the heat and electricity volumes produced in the thermal plants per year. We have summed them up by multiplying the volume of electricity times 3.6.

The prices of ordered MWt and heat are according to tariffs, whereby for all plants we have assumed that by 2031E they will grow at an average rate of 2%. The price of electricity is from the Polish energy exchange TGE. In this case, we have set the long-term CAGR at 3.7%.

When it comes to the calculation of CoGS, two factors are important: the cost of fuel and the cost of a ton of CO2. Their prices are market-based and we have set the CAGR 2023E-2031E at 4% and 5.8% respectively. An exception is the coal-fired plant in Wrocław, where we have assumed that the price of coal will increase at 8% on average.

The costs of fuel are calculated according to the following formula:

$$\text{Volume of heat \& electricity} \times \text{degree of efficiency} \times \text{avg. market price of fuel}$$

We have assumed that EC Zielona Gora has an efficiency degree of 64.7%, Siechnica 60% and Wrocław 80%.

CO2 costs are based on the following formula:

$$\text{Volume of electricity} \times \text{degree of efficiency} \times 200 \text{ kg/94 kg CO}_2 \text{ per 1 MWh gas/coal} \times \text{avg. market price per ton of CO}_2 \times \text{PLN/EUR FX rate}$$

For the PLN/EUR exchange rate, we have assumed on average 4.50 in 2023E, 4.40 in 2024E, 4.30 in 2025E and 4.20 afterwards.

in PLNm	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Sales from production & distribution of electricity*	1,964.72	1,982.00	2,580.32	2,338.40	2,338.40	2,338.40	2,338.40	2,338.40	2,338.40
Share in total sales	57.4%	59.1%	63.0%	60.2%	59.8%	59.3%	58.8%	58.3%	57.8%
EC Zielona Gora	1,076,240	896,000	959,360	867,200	867,200	867,200	867,200	867,200	867,200
EC Czechnica	446,888	496,000	991,360	899,200	899,200	899,200	899,200	899,200	899,200
EC Wroclaw	441,590	590,000	629,600	572,000	572,000	572,000	572,000	572,000	572,000
Sales from production & distribution of heat	1,418.61	1,287.91	1,427.53	1,456.08	1,485.20	1,514.90	1,545.20	1,576.11	1,607.63
Share in total sales	41.4%	38.4%	34.9%	37.5%	38.0%	38.4%	38.9%	39.3%	39.8%
EC Zielona Gora	197,728	154,240	157,325	160,472	163,681	166,955	170,294	173,700	177,174
EC Czechnica	278,880	172,829	290,147	295,950	301,869	307,906	314,064	320,345	326,752
EC Wroclaw	942,000	960,840	980,057	999,658	1,019,651	1,040,044	1,060,845	1,082,062	1,103,703
Sales from support of gas co-generation	8.20	50.40	50.40	50.40	50.40	50.40	50.40	50.40	50.40
Share in total sales	0.2%	1.5%	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%	1.2%
Other sales (e.g. leasing of real estate, CO2 certificates)	32.00	33.60	35.28	37.04	38.90	40.84	42.88	45.03	47.28
Share in total sales	0.9%	1.0%	0.9%	1.0%	1.0%	1.0%	1.1%	1.1%	1.2%
Total sales	3,423.53	3,353.91	4,093.53	3,881.92	3,912.90	3,944.55	3,976.89	4,009.93	4,043.71
change y-o-y	88.9%	-2.0%	22.1%	-5.2%	0.8%	0.8%	0.8%	0.8%	0.8%

* incl. sales related to the Power Market and re-selling of energy

Source: East Value Research GmbH

in PLNm	Q1/20	Q2/20	Q3/20	Q4/20	2020
Net sales	308.43	245.12	200.13	429.77	1183.44
change y-o-y	-17.1%	15.1%	18.7%	26.9%	8.3%
EBITDA	202.83	43.25	12.68	60.07	318.83
EBITDA margin	65.8%	17.6%	6.3%	14.0%	26.9%
EBIT	164.24	1.69	-28.14	19.30	157.09
EBIT margin	53.3%	0.7%	-14.1%	4.5%	13.3%
Net income	132.32	1.68	-23.78	15.74	125.95
Net margin	42.9%	0.7%	-11.9%	3.7%	10.6%

in PLNm	Q1/21	Q2/21	Q3/21	Q4/21	2021	Q1/22	Q2/22	Q3/22	Q4/22	2022	Q1/23	Q2/23
Net sales	470.28	275.31	220.60	468.32	1434.51	589.20	320.44	271.96	630.60	1812.20	1112.49	609.12
change y-o-y	52.5%	12.3%	10.2%	9.0%	21.2%	25.3%	16.4%	23.3%	34.7%	26.3%	88.8%	90.1%
EBITDA	131.06	58.31	26.68	36.69	252.74	140.21	48.22	42.46	132.87	363.76	313.55	65.63
EBITDA margin	27.9%	21.2%	12.1%	7.8%	17.6%	23.8%	15.0%	15.6%	21.1%	20.1%	28.2%	10.8%
EBIT	87.71	16.73	-15.51	-22.13	66.80	92.02	-4.46	-8.43	81.64	160.77	259.53	12.52
EBIT margin	18.7%	6.1%	-7.0%	-4.7%	4.7%	15.6%	-1.4%	-3.1%	12.9%	8.9%	23.3%	2.1%
Net income	69.64	12.64	-13.78	-11.71	56.79	74.99	1.79	-0.24	75.44	151.98	213.59	13.87
Net margin	14.8%	4.6%	-6.2%	-2.5%	4.0%	12.7%	0.6%	-0.1%	12.0%	8.4%	19.2%	2.3%

Source: East Value Research GmbH

CAPEX and Working capital

For 2023E, we have assumed gross CAPEX of PLN 949.3m, which will be spent mainly on the new gas-powered thermal plant in Siechnice. While from 2024E yearly gross CAPEX should be in the range of 8-11% of yearly sales, we expect significant investments in 2028E-30E (PLN 500m per year), when the plant in Wroclaw will likely be modernized.

When it comes to the cash conversion cycle, we expect that it will decline from -2 days in 2022 to 30 days in the long run.

Business description

Kogeneracja S.A., which is headquartered in Wrocław/Poland, is a producer and distributor of electricity and heat in Wrocław, Siechnice (13 km in the south-eastern direction from Wrocław), Wrocław-Zawidawie and Zielona Góra. The company's majority owner is PGE S.A., the largest vertically-integrated utility in Poland, which is controlled by the Polish state. Through its subsidiary PGE Energia Ciepła S.A., it controls c. 25% of the Polish market for heat from co-generation, operates 16 thermal heat plans with a combined capacity of 6.9 GWt (heat) and 2.6 GWe (electricity) and heat distribution networks of >700 km. Kogeneracja has been listed on the Warsaw Stock Exchange since 2000 and currently has 549 employees.

Company history

- c. 1900: Start of construction of a coal power plant on today's ul. Lowiecka in Wrocław (then Breslau).

- 1901: The power plant starts delivering electricity to the inhabitants of Breslau.

Foundation of the Elektrizitätswerke Schlesien (EWS), which started the construction of the coal power plant in Siechnice (then Tschechnitz).

- 1911: The power plant in Tschechnitz starts delivering electricity.

- 1914 - Further expansion of the Tschechnitz power plant.

- 1945: After German defeat, the Polish administration takes over the Wrocław power plant from the Soviet army.

- 1947: The EC Czechnica in Siechnice is being handed over to the state-owned Polish ZEOD by the Soviets.

- 1951: Merger of the power plants in Wrocław and Siechnice, which in 1958 was dissolved.

- 1976: Re-merger of both to Zakłady Energetyczne Okręgu Dolnośląskiego (ZEOD), which now also produces heat.

Merger with the ZEOZ in Poznań.

- 1989: Foundation of the state-owned company Zespół Elektrociepłowni Wrocław (ZEW), which includes the power plants in Wrocław and Siechnice.

- 1991: ZEW becomes a joint-stock company owned by the Polish state.

- 2000: IPO on the Warsaw Stock Exchange, which is accompanied by a share sale (3.92m existing shares/36% of all shares outstanding at PLN 45.10-49 per share) by the previous 100% owner, the Polish state. During the IPO German EnBW buys 9.2% of Kogeneracja's shares and Elektrociepłownia Krakow (then owned by French EdF) 6.91%.
- Issue of 4m shares to French EdF and EnBW, which as a result increase their combined stake to c. 40%.
- 2010: In order to optimize its costs structure, Kogeneracja starts the separation of production-related activities e.g. the ash removal and coaling area and the transfer of auxiliary areas to a Shared Services Center. The process was completed in 2014.
- 2011: As a result of its purchase of EnBW's 32.45% stake in ERSA, the electricity producer in Rybnik, and 15.59% stake in KGN, EdF becomes a majority owner (50% + 1 share) of Kogeneracja S.A. without the need to announce a public tender offer.
- 2017: The state-owned Polish utility PGE buys 8 thermal power plants from state-owned French EdF for PLN 4.51bn. The transaction comprises the thermal power plants in Krakow, Gdańsk, Gdynia, Torun, Wrocław, Zielona Góra, Siechnice and Zawidawie as well as heat distribution networks in Torun and Rybnik.
- 2021: Start of construction of the new gas-fired thermal power plant in Siechnice, which comprises (a) a gas-steam block with a capacity of 179 MWe (electricity) and 163 MWt (heat), heat accumulator as well as 4 water boilers with a combined capacity of 152 MWt. They are supposed to replace the old coal-fired thermal plant.
- 2023: Kogeneracja buys the remaining 1.6% stake in EC Zielona Gora, in which it invested for the first time in 2001.

Mr Andrzej Jedut, who had been Kogeneracja's CEO since 2020, resigns. He is replaced by Mr Dominik Wadecki.

Kogeneracja's production units

Currently, Kogeneracja operates four thermal power plants: in Wrocław, Siechnice, Wrocław-Zawidawie and – indirectly through the 100%-owned subsidiary EC Zielona Gora S.A. - Zielona Gora. In 2022, all together produced 11,056 TJ of heat (in the form of hot water) and 2,273 GWh of electricity. The combined installed capacity of all thermal power plants amounts to 616 MWe of electricity and 1,383 MWt of heat. Regarding distribution, the access to the networks for electricity and heat is open for all market participants and is regulated by the Polish URE (Urząd Regulacji Energetyki).

Thermal power plant in Wrocław

Shortly after construction in 1900, it had a capacity of only 6.17 MW, which due to high demand was increased to 57 MW around 1930. In 2014-2015, the coal-fired plant was equipped with a flue gas desulfurization and denitrification installation.

Today, the plant, which comprises three heat blocks and two water boilers, has a capacity of 263 MWe (electricity) and 812 MWt (heat).



Source: Wikipedia, East Value Research GmbH

Thermal power plant "Czechnica" in Siechnice

The combined capacity of the (currently) coal-fired plant, which delivers heat mainly to Wrocław, equals 100 MWe of electricity and 247 MWt of heat. The plant comprises 3 boilers, 1 fluid boiler for biomass and 2 turbine sets.

The coal-fired unit is supposed to be replaced by a gas-powered one in 2024E (total costs (incl. servicing): PLN 1.57bn gross), which should reduce CO₂ emissions by >60%. The new unit, whose construction started in 2021 and is conducted by the state-own construction company Polimex-Mostostal S.A., will have a capacity of 179 MWe of electricity and 163 MWt of heat (315 MWt incl. the reserve-peak boiler room). It has been co-financed by a PLN 30m EU grant and a PLN 350m preferred loan from the Polish National Fund for Environmental Protection and Water Management (NFOSiGW) that has a duration until 2036E and has to be repaid in quarterly installments from March 2025. The majority (c. PLN 898m) will be financed from Kogeneracja's equity and the cash pool of the PGE Group.

The buildings of the old coal-fired unit will be revitalized and converted e.g. into a hotel, aquapark and multimedia center.



Source: Wikipedia, East Value Research GmbH

Thermal power plant "Zawidawie" in Wrocław-Zawidawie

The combined capacity of the gas-fired plant equals 2.67 MWe of electricity and 21.35 MWt of heat. It comprises 2 gas boilers and one co-generation aggregate.



Source: Wikipedia, East Value Research GmbH

In 2022, the three thermal power plants – Wrocław, Siechnice and Zawidawie – generated revenues from the sale of products of PLN 1.08bn, of which 48.4% stemmed from electricity.

Thermal power plant in Zielona Gora

The gas-fired unit was established in 1974. Since 2004, when the gas-steam bloc was installed, EC Zielona Gora has mainly produced electricity (79.2% of its total sales from products of PLN 651.5m in 2022). Its combined capacity corresponds to 198 MWe of electricity and 303 MWt of heat. It consists of a gas-steam bloc, a turbine gas set, a recovering boiler and a steam turbine set.



Source: Wikipedia, East Value Research GmbH

Access to fuel

Together with its owner the PGE Group, Kogeneracja buys hard coal from external sources, mainly Polish coal mines but also foreign ones.

In terms of gas deliveries, Kogeneracja's supplier is the largest gas utility in Poland PGNiG (now owned by the state-owned Polish Orlen Group). The current contract, which is the basis for deliveries to Kogeneracja's thermal power plants, has a duration of 3 years (until 2025E) and was signed by PGE Group, which due to its size – it is the largest producer of electricity and heat in Poland – is able to negotiate very good terms.

EC Zielona Gora uses nitrogen-rich gas from a local source, to which it is connected through a dedicated pipeline. This makes this thermal power plant independent from the availability of gas in the Polish Gas System (= Krajowy System Gazu).

In its thermal power plant in Siechnica, Kogeneracja also uses biomass as fuel, which it buys from local farmers. This allows the company to credit CO₂ emissions and thus reduce the required volume of yearly purchases of CO₂ certificates.

Distribution & clients

Kogeneracja S.A. (Wrocław, Siechnice, Zawidawie) mainly distributes heat as hot water through the distribution network of Fortum Heat & Power Sp. z.o.o, which in 2022 had a share of 83% in its revenues. In Wrocław, the company also distributes heat through own networks, of which the network in Siechnice is the most important one (6% share in revenues in 2022). Housing cooperatives accounted for 11% of Kogeneracja S.A. sales from heat in 2022. When it comes to electricity, in 2022 the by far most important customer of Kogeneracja S.A. was the PGE Group (96% share in total sales from products), with the remainder stemming from individual customers.

At EC Zielona Gora, which also has its own heat distribution network with a length of 128 km, the main clients for heat in 2022 were housing cooperatives (70%), retail centers and public administration (27%). When it comes to electricity sales, the energy trading exchange TGE S.A. (65%) and PGE Group (35%) were the most important customers.

Management

Dominik Wadecki (CEO): Mr Dominik Wadecki has been the CEO of Kogeneracja S.A. since July 2023. Previously, he worked among others as Internal Audit Manager at PGE S.A., Internal Audit Director at gas supplier PGNiG S.A., Head of Internal Audit at the National Fund for Environmental Protection and Water Management (NFOSGW) and COO and Vice President of the Management Board at the utility Energa S.A. Mr Wadecki is a graduate of the Faculty of Law at the Catholic University in Lublin. He completed his audit apprenticeship at the Supreme Audit Office with distinction and also completed postgraduate studies at the Warsaw School of Economics.

Krzysztof Kryg (Member of the Management Board): Mr Krzysztof Kryg has been with Kogeneracja since 1988. He has been performing managerial functions in the area of production, renovation, internal control and audit. In 2005 – 2007, he was a Member of the Supervisory Board of Kogeneracja by employees' choice. In 2008 – 2010, he served as Deputy Production Director and since 2012 he has been managing the renovation services at the company. Mr Kryg is a graduate of the Faculty of Mechanical and Power Engineering of the Wrocław University of Science and Technology. He also completed postgraduate studies in "Management Systems and New Technologies in Energy and Heating" at the Wrocław University of Science and Technology.

Market environment

The energy sector in Poland

The Polish energy sector is still dominated by fossil fuels, especially coal, which in 2022 accounted for 72% of the total energy demand. Of the total installed capacity of c. 61.5 GW, coal- and gas-powered plants accounted for c. 59%. Based on data from GlobEnergia, in 2022 brown and hard coal as well as gas power plants produced in total 126.8 TWh of electricity, which corresponded to a share of 78.7% in the total production of 161.1 TWh.

However, it is clear that the share of fossil fuels in the total energy mix will have to decline significantly in the coming years as Poland is member of the European Union and as such has to act according to EU climate policy. In the basis scenario of GlobeEnergia, the production from coal & gas power plants will decline by 2030E to 76 TWh or 40.3% of the total. In the most optimistic scenario, it will even go down to 58.8 TWh (31.1% share).

As the Polish government has promised to make Poland CO2 neutral by 2050E, all coal & gas power plants that are currently in operation, will be put out of service by then. According to Wikipedia, there are currently 19 power plants in Poland. With 5.1 GWe and 4 GWe, the coal power plants in Belchatow and Kozienice are by far the largest ones. There are also 38 thermal power plants. In addition to investments in renewable energy generation, the Polish government plans to construct two nuclear power plants, which are also emission-free. The first one is supposed to be launched in 2033E and will be built based on the technology of the US firm Westinghouse Nuclear. The second is scheduled for completion in 2043E. Each nuclear power plant is supposed to have three reactors (Source: money.pl).

Overview over power plants and thermal power plants in Poland

Number of power plants	Top 3	Coal only	Coal & biomass	Coal & gas	Biomass only		
19	Belchatow (5.1 GWe), Kozienice (4 GWe), Opole (3.3 GWe)	13	4	1	1		
Number of thermal power plants	Top 3	Coal only	Coal & biomass	Coal & gas	Biomass only	Gas only	Gas & oil
38	Warszawa-Siekierki (Electricity: 622 MWe, Heat: 2.07 GWt), Bialystok (Electricity: 530 MWe, Heat: 520 MWt), Krakow (Electricity: 480 MWe, Heat: 1.1 GWt)	20	8	3	1	4	2

Source: Wikipedia, East Value Research GmbH

The European Green Deal & the EU Emission Trading System

With its „Green Deal“ from 2020, the EU has set the goal to make Europe the first CO2 neutral continent by 2050E. Compared to their level in 1990, it wants to reduce carbon emissions by at least 55% until 2030E. By 2030E, the share of fossil fuels in total energy production is supposed to decline from 78% in 2022 to 60% EU-wide and the consumption of energy by 36-39%.

The measures, with which the above-mentioned goals are supposed to be achieved, include e.g. investments in the modernization of buildings, reforestation, significant increase of energy production from renewable sources but also the introduction of tradeable CO₂ certificates for all industries that emit greenhouse gases.

The objective of CO₂ certificates is to introduce a price per ton of CO₂. All companies that emit greenhouse gases have to buy the equivalent of their annual CO₂ emissions on the market, which makes environmentally-unfriendly businesses much less profitable. The objective of this is to bring down greenhouse emissions and generate revenues for financing the European Green Deal. Since 2013, CO₂ certificates have generated >EUR 152bn in revenues for the EU member states.

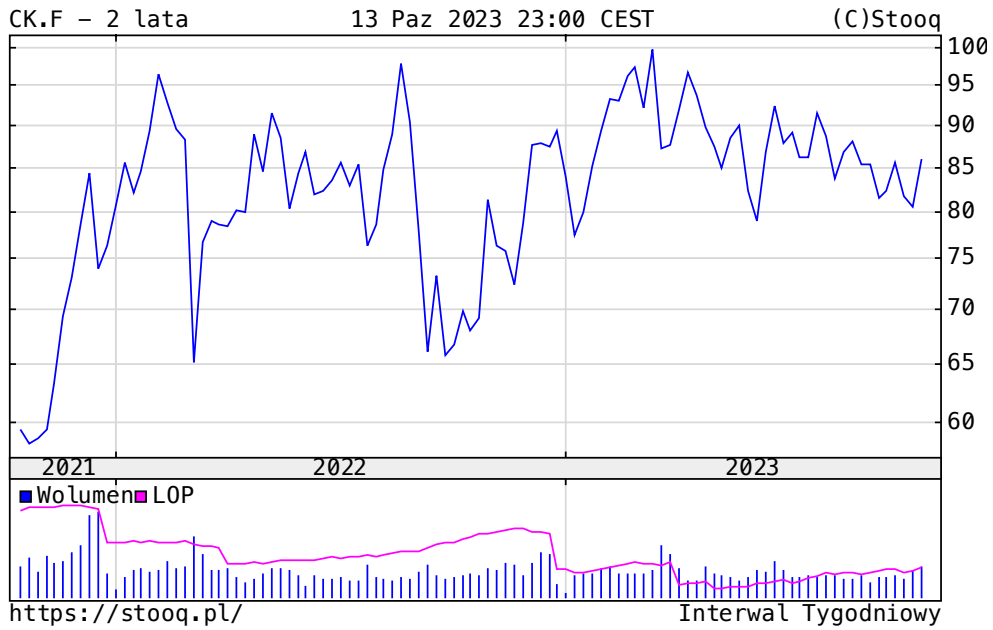
The EU Emissions Trading System (EU ETS) – has existed since 2005 - has been introduced as a marketplace, where CO₂ certificates can be acquired or sold. It covers emissions from c. 10,000 installations in the energy sector and energy-intensive industries (from 2024E, also the maritime transport sector), as well as aircraft operators flying within the EU and departing to Switzerland and the United Kingdom. These industries are responsible for c. 40% of all emissions in the EU.

The EU ETS works according to the “cap and trade” principle. The cap, which is set by the EU, corresponds to a limit on the total amount of greenhouse gases that can be emitted by the companies covered by the system per year. It is reduced every year in-line with the EU’s climate target – currently, by 2.2%/year, 4.3%/year from 2024 and 4.4%/year from 2028E - and thus ensures that CO₂ emissions decrease overtime. By 2030E, the cap is supposed to decline by 62% compared to its 2005 level.

Each year, all companies that are covered by the EU ETS have to buy enough CO₂ certificates (= allowances) to cover their annual emissions. However, some allowances are also given out for free. If a company reduces its emissions, it can either keep the spare certificates for the future or sell them to others. If it emits more than its certificates, it will have to pay a fine, which corresponds to EUR 100 per excess ton of CO₂.

For road transport, buildings and small industry sectors, the EU will introduce a separate ETS in 2028E at the latest.

ICE EUA CO2 Futures (reflect the market price in EUR of 1 tonne of CO2)



Source: stooq.pl, ICE, East Value Research GmbH

Profit and loss statement

in PLNm	2020	2021	2022	2023E	2024E	2025E
Revenues	1,183.44	1,434.51	1,812.20	3,423.53	3,353.91	4,093.53
Cost of goods sold	-881.46	-1,105.18	-1,339.50	-2,212.83	-1,934.59	-2,530.08
Gross profit	301.98	329.33	472.70	1,210.70	1,419.32	1,563.45
Other operating income	120.83	21.48	17.24	10.00	2.00	2.02
Distribution costs	-26.43	-31.74	-62.08	-418.50	-167.70	-184.21
Administration costs	-63.88	-62.66	-60.36	-65.00	-71.50	-78.65
Other operating expenses	-13.67	-3.66	-3.74	-9.67	-12.42	-10.47
EBITDA	318.83	252.74	363.76	727.53	1,169.70	1,292.14
Depreciation & amortisation	-161.74	-185.93	-202.99	-214.00	-267.50	-272.85
EBIT	157.09	66.80	160.77	513.53	902.20	1,019.29
Net financial result	0.68	5.97	28.77	24.00	10.00	2.00
EBT	157.77	72.77	189.54	537.53	912.20	1,021.29
Income taxes	-31.81	-15.99	-37.56	-102.13	-173.32	-194.04
Minorities	0.00	0.00	0.00	0.00	0.00	0.00
Net income / loss	125.95	56.79	151.98	435.40	738.88	827.24
EPS	8.32	3.78	10.04	29.22	49.59	55.52
DPS	0.00	0.32	0.00	0.00	0.00	0.00
Share in total sales						
Revenues	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Cost of goods sold	-74.48 %	-77.04 %	-73.92 %	-64.64 %	-57.68 %	-61.81 %
Gross profit	25.52 %	22.96 %	26.08 %	35.36 %	42.32 %	38.19 %
Other operating income	10.21 %	1.50 %	0.95 %	0.29 %	0.06 %	0.05 %
Distribution costs	-2.23 %	-2.21 %	-3.43 %	-12.22 %	-5.00 %	-4.50 %
Administration costs	-5.40 %	-4.37 %	-3.33 %	-1.90 %	-2.13 %	-1.92 %
Other operating expenses	-1.16 %	-0.26 %	-0.21 %	-0.28 %	-0.37 %	-0.26 %
EBITDA	26.94 %	17.62 %	20.07 %	21.25 %	34.88 %	31.57 %
Depreciation & amortisation	-13.67 %	-12.96 %	-11.20 %	-6.25 %	-7.98 %	-6.67 %
EBIT	13.27 %	4.66 %	8.87 %	15.00 %	26.90 %	24.90 %
Net financial result	0.06 %	0.42 %	1.59 %	0.70 %	0.30 %	0.05 %
EBT	13.33 %	5.07 %	10.46 %	15.70 %	27.20 %	24.95 %
Income taxes	-2.69 %	-1.11 %	-2.07 %	-2.98 %	-5.17 %	-4.74 %
Minorities	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
Net income / loss	10.64 %	3.96 %	8.39 %	12.72 %	22.03 %	20.21 %

Balance sheet

in PLNm	2020	2021	2022	2023E	2024E	2025E
Assets						
Cash and equivalents	14.08	21.92	5.17	77.08	690.65	1,545.18
Cash pooling	630.66	583.02	524.74	535.23	545.93	556.85
Short-term financial assets	9.12	2.73	0.00	0.00	0.00	0.00
Inventories	120.30	63.97	94.03	158.37	141.11	188.01
Trade accounts and notes receivables	167.82	208.76	239.41	433.52	406.32	473.50
CO2 certificates for redemption	59.08	202.50	168.65	5.00	5.50	6.05
Other current assets	7.24	118.31	134.91	135.41	135.91	136.41
Current assets, total	1,008.30	1,201.21	1,166.91	1,344.61	1,925.43	2,906.00
Property, plant and equipment	1,693.74	1,742.46	2,156.48	2,891.80	2,991.80	3,041.80
Other intangible assets	0.95	3.78	2.67	2.67	2.67	2.67
Goodwill	54.51	54.51	54.51	54.51	54.51	54.51
Other long-term assets	19.71	131.15	77.16	78.70	80.27	81.88
Deferred tax assets	77.12	73.76	73.12	0.00	0.00	0.00
Non-current assets, total	1,846.02	2,005.65	2,363.93	3,027.68	3,129.25	3,180.86
Total assets	2,854.31	3,206.86	3,530.84	4,372.28	5,054.68	6,086.86
Liabilities						
Trade payables	172.71	388.35	279.82	431.94	351.13	424.55
Other short-term liabilities	123.62	133.34	223.13	421.53	412.96	504.02
Short-term financial debt	3.22	2.34	7.66	8.00	7.50	7.00
Provisions	208.11	252.81	515.43	513.43	511.43	510.43
Current liabilities, total	507.66	776.83	1,026.04	1,374.89	1,283.01	1,446.00
Long-term financial debt	56.39	55.63	104.92	150.00	135.00	121.50
Other long-term liabilities	483.90	526.46	459.06	504.97	555.46	611.01
Provisions	37.47	27.75	24.39	24.29	24.19	24.09
Deferred tax liabilities	83.18	73.79	24.52	0.00	0.00	0.00
Long-term liabilities, total	660.93	683.63	612.88	679.26	714.65	756.60
Total liabilities	1,168.59	1,460.46	1,638.92	2,054.15	1,997.66	2,202.60
Shareholders equity, total	1,679.54	1,739.63	1,882.74	2,318.13	3,057.02	3,884.26
Minority interests	6.19	6.77	9.19	0.00	0.00	0.00
Total equity and liabilities	2,854.31	3,206.86	3,530.84	4,372.28	5,054.68	6,086.86

Cash Flow Statement

in PLNm	2020	2021	2022	2023E	2024E	2025E
Net income / loss	125.95	56.79	151.98	435.40	738.88	827.24
Depreciation	161.74	185.93	202.99	214.00	267.50	272.85
Change of working capital	-125.89	-36.70	-161.23	255.72	-45.43	49.86
Others	-7.42	74.23	231.81	-46.51	2.10	1.10
Net operating cash flow	154.39	280.25	425.56	858.62	963.06	1,151.06
Cash flow from investing	-162.04	-339.14	-629.69	-949.33	-367.50	-322.85
Free cash flow	-7.65	-58.89	-204.13	-90.71	595.56	828.21
Cash flow from financing	5.54	66.73	187.38	162.61	18.02	26.32
Change of cash	-2.11	7.84	-16.75	71.91	613.57	854.53
Cash at the beginning of the period	16.19	14.08	21.92	5.17	77.08	690.65
Cash at the end of the period	14.08	21.92	5.17	77.08	690.65	1545.18

Financial ratios

Fiscal year	2020	2021	2022	2023E	2024E	2025E
Profitability and balance sheet quality						
Gross margin	25.52%	22.96%	26.08%	35.36%	42.32%	38.19%
EBITDA margin	26.94%	17.62%	20.07%	21.25%	34.88%	31.57%
EBIT margin	13.27%	4.66%	8.87%	15.00%	26.90%	24.90%
Net margin	10.64%	3.96%	2.70%	12.72%	22.03%	20.21%
Return on equity (ROE)	7.50%	3.26%	8.07%	18.78%	24.17%	21.30%
Return on assets (ROA)	4.39%	1.58%	3.49%	9.41%	14.42%	13.56%
Return on capital employed (ROCE)	5.34%	2.15%	5.20%	13.88%	19.38%	17.79%
Economic Value Added (in PLNm)	-102.82	-184.22	-113.39	124.43	363.95	374.25
Net debt (in PLNm)	-594.25	-549.70	-417.33	-454.31	-1,094.08	-1,973.53
Net gearing	-35.38%	-31.60%	-22.17%	-19.60%	-35.79%	-50.81%
Equity ratio	58.84%	54.25%	53.32%	53.02%	60.48%	63.81%
Current ratio	1.99	1.55	1.14	0.98	1.50	2.01
Quick ratio	1.62	1.05	0.75	0.76	1.28	1.78
Net interest cover	-232.04	-11.19	-5.59	-21.40	-90.22	-509.64
Net debt/EBITDA	-1.86	-2.17	-1.15	-0.62	-0.94	-1.53
Tangible BVPS	107.34	112.17	120.77	151.92	201.51	257.03
CAPEX/Sales	13.79%	16.55%	33.99%	27.73%	10.96%	7.89%
Working capital/Sales	4.30%	-3.24%	-0.05%	-7.49%	-6.30%	-6.38%
Cash Conversion Cycle (in days)	30	-54	-2	1	5	8
Trading multiples						
EV/Sales	-0.05	-0.04	-0.03	-0.02	-0.02	-0.02
EV/EBITDA	-0.20	-0.25	-0.17	-0.09	-0.05	-0.05
EV/EBIT	-0.40	-0.94	-0.39	-0.12	-0.07	-0.06
P/Tangible BVPS	0.37	0.35	0.33	0.26	0.20	0.15
P/E	4.77	10.50	3.95	1.36	0.80	0.72
P/FCF	-77.28	-10.05	-2.90	-6.52	0.99	0.71

Disclaimer

This document (prepared on 20 October 2023) does neither constitute an offer nor a request to buy or sell any securities. It only serves informational purposes. This document only contains a non-binding opinion on the mentioned securities and market conditions at the time of its publication. Due to the general character of its content this document does not replace investment advice. Moreover, in contrast to especially approved prospectuses, it does not provide information, which is necessary for taking investment decisions.

All information, which have been used in this document, and the statements that have been made, are based on sources, which we think are reliable. However, we do not guarantee their correctness or completeness. The expressions of opinion, which it contains, show the author's personal view at a given moment. These opinions can be changed at any time and without further notice.

A liability of the analyst or of the institution, which has mandated him, should be excluded from both direct and indirect damages.

This confidential study has only been made available to a limited number of recipients. A disclosure or distribution to third-parties is only allowed with East Value Research' approval. All valid capital market rules, which relate to the preparation, content as well as distribution of research in different countries, should be applied and respected by both the supplier and recipient.

Distribution in the United Kingdom: In the UK this document shall only be distributed to persons who are described in Section 11 (3) of the Financial Services Act 1986 (Investment Advertisements) (Exemptions) Order 1996 (as amended). This research may not be distributed and forwarded directly or indirectly to any other group of individuals. The distribution of this document in other international jurisdictions may be restricted by law and individuals who possess this study should inform themselves about any existing restrictions and comply with them.

Neither this document nor any copy of it may be taken or sent to the United States of America, Canada, Japan or Australia or distributed, directly or indirectly, in the United States of America, Canada, Japan or Australia or to any resident thereof. Any failure to comply with these restrictions may constitute a violation of United States, Canadian, Japanese or Australian securities laws or the law of any other jurisdiction.

Declaration according to § 34b WpHG and FinAnV on potential conflicts of interest (As of July 24, 2013): East Value Research has been commissioned to prepare this report by a group of investors of Kogeneracja S.A.

Declaration according to § 34b WpHG and FinAnV on additional disclosures (As of July 24, 2013):

It is the sole decision of East Value Research GmbH whether and when a potential update of this research will be made.

Relevant basis and measures of the valuations, which are included in this document:

The valuations, which are the basis for East Value Research` investment recommendations, are based on generally-accepted and widely-used methods of fundamental analysis such as the Discounted-Cash-Flow method, Peer Group comparison, or Sum-of-the-Parts models.

The meaning of investment ratings:

Buy: Based on our analysis, we expect the stock to appreciate and generate a total return of more than 10% over the next twelve months

Add: Based on our analysis, we expect the stock to appreciate and generate a total return between 0% and 10% over the next twelve months

Reduce: Based on our analysis, we expect the stock to cause a negative return between 0% and -10% over the next twelve months

Sell: Based on our analysis, we expect the stock to cause a negative return exceeding -10% over the next twelve months

The respective supervisory authority is:

Bundesanstalt für Finanzdienstleistungsaufsicht
Lurgiallee 12
60439 Frankfurt