



Management Board's report on activities of the PGE Capital Group for the 6-month period

ended June 30, 2021



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## **KEY FINANCIAL RESULTS OF THE PGE CAPITAL GROUP**

		Period ended	Period ended	% change
Key financial data	Unit	June 30, 2021	June 30, 2020	70 change
Sales revenues	PLN million	21 908	22 776	-4%
EBIT	PLN million	3 158	271	1 065%
EBITDA	PLN million	5 254	2 805	87%
EBITDA margin	%	24%	12%	
Recurring EBITDA	PLN million	4 290	3 117	38%
Recurring EBITDA margin	%	20%	14%	
Net profit/loss	PLN million	2 719	-637	-
Capital expenditures	PLN million	2 247	2 504	-10%
Net cash from operating activities	PLN million	3 290	5 309	-38%
Net cash from investing activities	PLN million	-2 076	-3 449	-40%
Net cash from financial activities	PLN million	12	-1 153	-

Key financial data		As at June 30, 2021	As at December 31, 2020	% change
Working capital	PLN million	1 360	71	1 815%
Net debt */LTM EBITDA**	x	0.71	1.22	

<sup>\*</sup> In order to standardise the reporting of net debt (adjustment to the method of calculating covenants in loan agreements), starting from the results for H1 2021, there's been a change in the presentation, which also results in a change in the comparable periods (as at December 31, 2020), i.e. restricted cash items include only the funds in PGE Dom Maklerski S.A. clients' accounts as collateral for settlements with IRGIT (the Warsaw Commodity Clearing House.

<sup>\*\*</sup>LTM EBITDA - Last Twelve Months EBITDA.

One-offs affecting EBITDA	Unit	As at June 30, 2021	As at June 30, 2020	% change
Change in reclamation provision	PLN million	932	-434	-
Change in actuarial provision	PLN million	17	-40	-
Provision reversal - Voluntary Leave Program	PLN million	11	-	-
LTC compensations	PLN million	4	41	-90%
Release of the provision for the risk of returning the equivalent of the CO <sub>2</sub> emission allowances received at Dolna Odra power plant	PLN million	-	121	-
Total	PLN million	964	-312	-



## 1. PGE Capital Group

#### 1.1. Characteristics of activities

Capital Group of PGE Polska Grupa Energetyczna S.A. ("PGE Capital Group", the "Capital Group", "PGE Group", the "Group") is the largest vertically integrated producer of electricity and heat in Poland. With a mix of own fuel sources, generation assets and distribution network, PGE Group provides a safe and reliable supply of electricity to more than five million households, businesses and institutions. Moreover, PGE Group is the largest heat producer in the country.

The parent company of PGE Capital Group is PGE Polska Grupa Energetyczna S.A. (also "PGE S.A.", "PGE", the "Company). PGE Group organizes its activities in seven operating segments:



## **CONVENTIONAL GENERATION**

Core business of the segment includes extraction of lignite, production of electricity and heat from conventional sources.



#### **DISTRICT HEATING**

The core business of the segment includes production of electricity and heat from conventional sources as well as transmission and distribution of heat.



## **RENEWABLES**

The core business of the segment includes electricity generation from renewable sources and in pumped-storage power plants and provision of ancillary services.



#### **SUPPLY**

The core business of the segment includes wholesale trading of electricity on domestic and international market, sale of electricity to final off-takers, trading of  $CO_2$  allowances and energy certificates and fuels and provision of services of the Corporate Centre to companies from the PGE Group.



## **DISTRIBUTION**

The core business of the segment includes supply of electricity to final off-takers through the grid and HV, MV and LV infrastructure.



#### CIRCULAR ECONOMY

The core business of the segment is the management of combustion by-products.



## OTHER OPERATIONS

Other operations include provision of services, through the subsidiaries, to PGE Group, which include organisation of capital raising in form of Eurobonds (PGE Sweden), provision of IT, payroll and HR services, transportation, management of investment funds and investing in start-ups.

The composition of the Capital Group is presented in note 1.3 to the consolidated financial statements.



# 2. Risks in the PGE Group's operations

PGE S.A., as the Corporate Centre managing the Group, creates and implements integrated risk management architecture at PGE Group. In particular, it shapes PGE Group's risk management policies, standards and practices, designs and develops internal IT tools to support these processes, specifies global risk appetite and adequate limits as well as monitors their levels.

PGE Capital Group companies, as well as other entities from the electrical and power sector, are exposed to a number of risks and threats resulting from the specific operating activities and operating in specific market and regulatory environment.



In PGE Group risk management process is pursued based on the GRC (Governance - Risk - Compliance) model. It allows adaptation and integration of each of the operational areas at all levels of management. Having established a top-level Risk Committee, which reports directly to the Management Board, supervision over the effectiveness of risk management in the Group is ensured. Function definition within corporate risk management allows an independent assessment of particular risks, their impact on PGE Group and limiting and controlling major risks using dedicated instruments. Formation of a separate compliance function within the Group guarantees that PGE Group's activities are in line with legal conditions and ensures observance of the adopted internal standards.



The PGE Capital Group has consequently developed a comprehensive risk management system. The Group measures and assesses risks in the key companies of the Group. Mechanism allowing identification of areas exposed to risk and risk level measurement methods are constantly verified and developed. Thanks to that, the significant risks concerning various areas of operations are identified and kept within the assumed limits by reducing negative effects of such risks and by taking preventive or corrective measures, in accordance with the presented cycle.

All identified and assessed risks relating to the Group's current activities are recorded in the risk register (risk books) maintained by the Risk and Insurance Department in PGE S.A. Risk books reflect changes in the value of particular risk parameters along with information on implemented mitigating activities (reducing the probability of occurrence and minimising negative consequences of a risk).

The table below presents the most significant risks identified in the PGE Capital Group together with their assessment in 2022 perspective (12 months i.e. until the end of 2022). A risk level indicates a risk's potential financial impact on the Group's results, and a risk prospect (trend) indicates the probable direction of risk development. Potential events determining risk assessments in the previous report are now partially described in other sections of this report as period events. The assessment of the described risks takes into account the impact of the COVID-19 pandemic on them. This fact is not analysed as a separate risk.

The current scenario does not include the carve-out of PGE Group's coal assets (Conventional Generation segment).



## 2.1. Current outlook

The main risks and threats of PGE S.A. and the PGE Group are presented below along with their assessment and outlook for year 2022.

Risk level  Risk outlook in the next period  Low level  Medium level  High level	Risk which needs prepa	medium  7 growth eat and may be tolerated ration of the proper reacti	e on analy	Mitigating actions  and main tools used for the management of the risk  sis of costs and benefits g simultaneously to limitation of possible consequences and of probability of occurrence thereof
Market and product risks Related to prices and volumes of offered products and services	Gross margin on electri assets of the PGE Capit in related products - its uncertainty as to the fu of market prices (electr of key energy products particular hard coal, gas certificates)  Electricity sales volume uncertainty related to ti macroeconomic indicat	city from the production al Group and on trading amount results from the true levels and volatility city prices and the prices CO <sub>2</sub> , fuels, including in and the prices of  s – this risk derives from the development of the development of the coronavirus dial actions taken  s) – resulting from the trates for distribution and heat prices for	71 A <sup>1</sup>	<ul> <li>Most important actions:</li> <li>Optimization of generation assets - definition of production scenarios for updated market parameters of electricity, CO<sub>2</sub> and fuels.</li> <li>Using consistent guidance in respect of process organisation in the context of commercial strategy and midterm planning (strategy for hedging key exposures in the area of electricity and related product trading that correspond to the adopted risk appetite in the mid-term).</li> <li>Establishing position hedging levels with consideration given to the results of analysing pricing risk in respect of electricity and related products, VaR-based. Target hedging levels are specified taking into consideration the Group's financial standing, including in particular its strategic objectives.</li> <li>Monitoring exposures for individual areas in relation to the set limits and hedging strategies defined by the Risk Committee or the Management Board of PGE S.A. through operational reports prepared by the Department of Risk and Insurance</li> <li>Research, monitoring and analysing the electricity markets and sector trends in order to optimally use generation and selling capacities.</li> <li>Using the administrative appeal path provided for in the Energy Law and the Code of Civil Procedure.</li> <li>Acquiring new customers - diversification of channels to reach final off-takers and diversification of target groups by maintaining an extensive product portfolio and adapting offering to market.</li> </ul>

<sup>&</sup>lt;sup>1</sup> The change in the risk outlook (trend) results from the growing demand for electricity in the National Energy System ("PPS"). In February 2021, the demand for power in the Polish power system reached a record level. On February 12, 2021, 27 617 MW was recorded, which was the highest level in the history of the Polish power industry.

<sup>&</sup>lt;sup>2</sup> The change in the risk outlook is due to the qualification of carry-over in the tariff of all justified costs for investments.



	I			- Constitution of the contract
	The Capacity Market – resulting from uncertainties related to withholding of payments from the Capacity Market and threats related to compliance with the capacity obligations of Capacity Market Units	•••	<b>7</b> 13	<ul> <li>Current clients retention - a diversified portfolio of customer loyalty schemes and client-acquisition activities and special offers dedicated to former clients who moved over to the competitors.</li> <li>Care for a high level of customer service by developing employees' competences and building relations with business and retail clients.</li> <li>Use of tools to supporting customer relations processes allows the Group better sales planning and organisation of sales.</li> <li>Conducting lobbying activities within the framework of the proceedings conducted before the CJEU.</li> <li>Ensuring the expected level of operational readiness of the individual capacity market units.</li> </ul>
Property risks Related to development and maintenance of the assets	Failures and damage to property — connected with the operation and degradation over time of energy equipment and facilities and protection of energy equipment and facilities against destructive factors (including fire, effects of weather phenomena, intentional damage).		↔4	Most important actions:     Diversification of the current structure of the production sources, Introducing a technology reducing the negative impact of atmospheric factors.     Active pursuing of a strategy for building up and modernization of the production capacities.     Performing maintenance repairs in line with the highest sector standards.     Insurance of the most important production assets in the event of breakdown and property damage. Assets
	Investment and development – connected with strategic plans for expanding the generation, distribution and sales potential as well as ongoing investments.		.71 <sup>5</sup>	<ul> <li>are insured based on an analysis of insurance costs, capabilities of insurance markets for specified risks or for particular types of assets, costs related to asset replacement and potential lost revenue.</li> <li>The reliability of the power supply to the end users has been systematically improved through modernization of the distribution grid.</li> <li>Continuous monitoring of environmental laws and regulations regarding environmental protection, and the energy policy.</li> </ul>
Operational risks  Related to pursuing of ongoing economic processes	Electricity and heat production – connected with production planning and negative impact of the factors that determine production capacities.	•••	$\leftrightarrow$	Most important actions:  Optimisation of equipment lifecycles and the availability of key assets.  Timely inspections, repairs and modernisation of the existing assets.  Optimisation of costs inter alia through monitoring of fuel prices and reserves and securing supply through
	Fuel management — connected with uncertainty regarding the costs, quality, timeliness and volumes of fuel supply (mainly coal) and production raw material as well as the effectiveness of inventory management processes.		$\leftrightarrow$	<ul> <li>Optimisation of costs little and through monitoring of fuel prices and reserves and securing supply through long-term contracts with suppliers and through price fixing formulas.</li> <li>Monitoring of legal changes and changes in technical standards in the field of by-products.</li> <li>Investments in improving the efficiency of the combustion process.</li> <li>Constant monitoring of service availability.</li> <li>Creating Business Continuity Plans for critical systems, developing and testing emergency procedures.</li> </ul>

<sup>&</sup>lt;sup>3</sup> The change in the risk outlook results from the improvement of the situation regarding the complaint against the Polish Capacity Market (see the case of the British Capacity Market). On June 24, 2021, the Sejm adopted a draft act amending the Act on the Capacity Market and certain other acts. The new regulations will ensure, inter alia, efficient operation of the Capacity Market and compliance with EU emission limits.

<sup>&</sup>lt;sup>4</sup> The change in the risk outlook results from adjusting the insurance cover as well as deepening cooperation with insurers and taking active actions, positively affecting the adequacy of the valuation of losses and compensations due under the insurance contracts concluded by the PGE Capital Group. The failure rate of devices does not change abruptly and is expected to be at a stable level.

<sup>&</sup>lt;sup>5</sup> The change in the risk outlook results from the parallel investment activities and preparations for the separation of coal assets. An important risk in this context is the human resources factor.



	By-products and services - related to the management of production waste		$\leftrightarrow$	<ul> <li>Ongoing monitoring of changes in legal regulations.</li> <li>Training in regulations preventing money laundering and terrorist financing.</li> <li>Requirement to read Best Procurement Practices and the Code of Conduct for Business Partners of PGE Group companies.</li> <li>The approval path and internal regulations concerning the purchasing process.</li> </ul>
	Cybersecurity – the risk of deliberate disruption of the proper functioning of the information processing and exchange space created by IT systems operating at the PGE Capital Group	•••	71	<ul> <li>Control of the work environment.</li> <li>Training of employees in the field of occupational health and safety.</li> <li>Informing about threats, restrictions and rules related to the COVID-19 (dedicated tab on the Intranet).</li> <li>Conducting an intensive and effective dialogue in order to avoid escalation of potential disputes with the social partners and to work out the most favourable solutions with regard to employment and employment costs</li> </ul>
	Procurement - related to the ineffectiveness and uncorrectness of the purchasing process		$\leftrightarrow$	within PGE Capital Group connected therewith.  PGE Group's active participation in internship programmes and cooperation with educational institutions in order to secure a pipeline of qualified personnel.
	Employee safety - related to lack of ensuring safe working conditions		И	Assessment and training of personnel in order to make optimal use of it within the Group's structures .
	Human Resources — pertaining to difficulties in provision of personnel with the relevant experience, competences and ability to perform specific tasks		71	
	Social dialogue – related to the failure to reach an agreement between the Group's management and the social partners, which could lead to strikes / collective disputes	•••	71	
Regulatory and legal risks Related to compliance with external and	Legal changes in support systems – connected with uncertainty as to the future shape of the support system for production of certified energy		$\leftrightarrow$	Most important actions:  Monitoring of the changes being introduced or proposed provides that our operations in key business segments are carried in compliance with the law and that PGE Capital Group has solutions which take into
internal legal provisions	Environmental protection – resulting from industry regulations specifying which "environmental" requirements energy installations should meet and what are the principles for using the natural environment	•••	7	<ul> <li>account potential changes in the legal environment.</li> <li>Social dialogue and advertising campaigns.</li> <li>Exercising operational supervision of planned and ongoing investment and modernisation measures respect to their compliance with environmental requirements.</li> </ul>



	Climate – commitments on the EU and national level and under strategic objectives arising from the EU's climate and energy policy	•••	⊿6	<ul> <li>Implementation of the investment plan intended to adapt installations to requirements arising from the BAT conclusions, as planned. Failure to meet the requirements arising from BREF/BAT conclusions may lead to refusal to issue a decision on the award or amendment of integrated permits.</li> <li>Improvement of activities aimed at protecting and improving the state of the environment by implementing technological and organisational solutions ensuring efficient and effective management in this area.</li> <li>Reduction in the emission intensity of PGE Group's generating assets, development of low- and zero-carbon</li> </ul>
	Concessions – resulting from the statutory requirement to hold concessions with regard to conducted operations	•••	7	energy generation sources.  Adaptation of internal regulations and practices to make sure that the activities are in compliance with the power sector regulations and binding law.
	Taxes – related to uncertainty surrounding the future shape of tax regulations and their interpretation		7	<ul> <li>Active participation of PGE S.A. as the member of the Polish Electricity Committee that opened its office in Brussels. Through the Committee's operations, the Company actively influences proceeding and shaping of EU law and engages a dialogue with the EU institutions.</li> <li>Effective raising of external financing and state aid for the development of planned low- and zero-carbon investments by PGE Group.</li> </ul>
Financial risks Related to finance management	Credit risk – connected with the counterparty default, partial and/or late payment of receivables or a different type of breach of contractual conditions (for example failure to deliver/collect goods or failure to pay for any associated damages or contractual penalties)	•••	↔7	Most important actions:  Prior to executing a transaction, a counterparty assessment is carried out and forms a base for applying credit limits, that are regularly updated and monitored. Exposures that exceed established limits are hedged in accordance with the Group's credit risk management policy. The level of utilisation of limits is monitored on a regular basis, payment of receivables is monitored on an ongoing basis and early recovery procedures are in
	Liquidity risk – connected with the possibility of losing the ability to meet current liabilities and obtaining financing sources for business operations	•••	<b>⇔</b>	place.  Applying a central financing model, which assumes – as a rule – that external capital is raised by PGE S.A. PGE Group subsidiaries use a variety of intra-group financing sources and liquidity risk is monitored using periodic planning for operating, investing and financing activities.
	Interest rate risk – resulting from the negative impact of changes in market interest rates on PGE Group's cash flows		$\leftrightarrow$	<ul> <li>As regards currency risk and interest rate risk, PGE Group has implemented internal management procedures.</li> <li>PGE Group companies execute derivative transactions involving interest rate- and/or currency-based instruments (IRS, CCIRS, FX Forward) only in order to hedge identified risk exposures. Regulations in force at</li> </ul>
	Foreign exchange risk – resulting from negative impact of exchange rate movements on PGE Group's cash flows denominated in currencies other than domestic currency		7	the PGE Group do not allow, with regard to derivative transactions based on interest rates and currencies, to enter into speculative transactions, i.e. transactions which would be aimed at generating additional gains resulting from changes in the level of interest rates and changes in exchange rates, while exposing the Group to the risk of incurring a potential loss on this account.

<sup>&</sup>lt;sup>6</sup> The change in the risk outlook results from the growing global climate pressure (FiT 55), growing requirements from financial investors, emerging new guidelines and obligations resulting from them, e.g. non-financial reporting, carbon footprint disclosure, having a diversity policy.

<sup>&</sup>lt;sup>7</sup> The change in the risk outlook results from an improvement in the situation of ongoing analyzes of the timeliness of payments made by contractors. The negative impact of COVID-19 related to the repayment of receivables is currently not monitored.



### 2.2. Long-term outlook

The purpose of the assessment is determined by the challenges and threats that will arise for the PGE Group in the next decade. Each of the long-term risks is assessed in terms of its impact on the achievement of business goals, the company's image and business continuity. The presented result is the dominant (value most often appearing in the results) of these three aspects.

The results of this assessment are broken down into the following categories:

Assets	Law and regulations	Operating activities	Market and products	Finance
<ul><li>Cybersecurity</li><li>Forces of nature</li></ul>	<ul><li>Law</li><li>Environmental restrictions</li></ul>	<ul> <li>Vision for the developement of the power sector</li> <li>Human resources</li> <li>Safety of employees and customers</li> </ul>	<ul><li>Competition</li><li>Technological revolution</li></ul>	<ul><li>Macroeconomics</li></ul>

<u>Cybersecurity</u> - risk of deliberate disruption of the proper functioning of the information processing and exchange space created by IT systems operating in the PGE Capital Group (interference with any element of the PGE Group infrastructure resulting in disruption of the IT and OT (Operational Technology - industrial networks) infrastructure, and thus disruption of the process supported thereby).

<u>Forces of nature</u> - risk of intensification of extreme weather conditions affecting the price and volume of electricity and heat, costs of their distribution and production (increase in the frequency of extreme weather conditions, as a result of which the assets of the PGE Capital Group may be damaged and climate changes affecting the demand for electricity and heat).

<u>Law</u> - risk of instability of the national law defining the rules for the conduct of the PGE Group's operations and an increase in the number and scope of EU regulations affecting the Group (a situation in which the regulations governing the activities of the PGE Group will change more and more often, there will be more and more stringent regulations, and the quality of the law will not grow).

<u>Environmental restrictions</u> - risk related to tightening restrictions in the area of electricity and heat generation and mining activities in the PGE Group (new provisions on climate protection, environmental protection, which constitute additional barriers (increasing costs) to operate on the electricity and heat market).

<u>Vision for the development of the power sector</u> - risk of changing the concept of shaping the energy sector in Poland and the role played by the PGE Capital Group in it (administrative activities that have or may have an impact on changing the direction of development of the PGE Capital Group).

<u>Human resources</u> - risk related to difficulties in providing staff with appropriate experience, competences and abilities to perform specific tasks.

<u>Safety of employees and customers</u> - risk associated with unexpected events that generate irreversible material losses and heavy injuries or deaths.

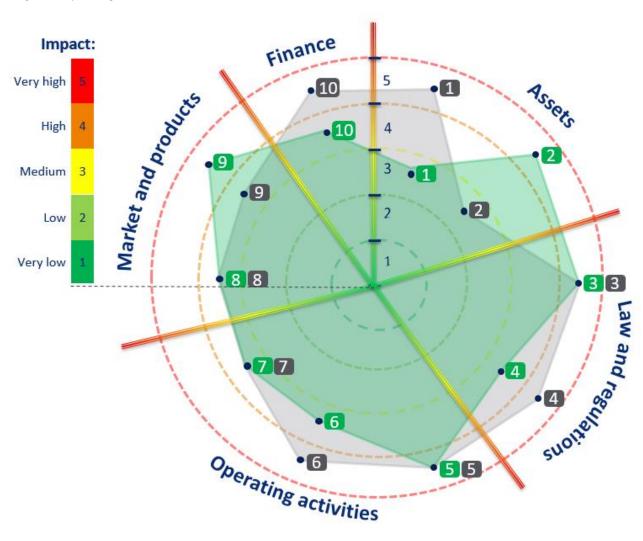
<u>Competition</u> - risk of dynamic development of competitors' product offers and their structural strengthening, which reduces the share of the PGE Capital Group in the energy market.

<u>Technological revolution</u> - risk of technological change causing a decrease in electricity and heat production in baseload assets and their distribution using grid assets owned by PGE Group.

<u>Macroeconomics</u> - risk associated with changes in economic situation, causing swings in macroeconomic indicators and commodity prices that have impact on PGE Group's activities (economic changes that may affect the deterioration of the financial ratios of PGE Group companies).



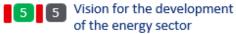
Diagram: Map of long-term risks















Source: Own work









The assessment of long-term risks was performed in two scenarios: (I) taking into account and (II) not taking into account the spin-off of coal assets from the PGE Capital Group. The location on the map and the differences in valuation between these scenarios show the significance level of a given risk / issue for the PGE Capital Group.

The map of long-term risks was prepared based on the elements dominating in the responses, according to the subjective perception of the development of these risks in the assessments of the top management of the PGE Capital Group (Management Board Members and Division Directors). The scenario where the carbon assets are not allocated outside the Group is associated with greater uncertainty and therefore more risk categories are exposed to very high risk.



## 3. Electricity market and regulatory and business environment

#### 3.1. Macroeconomic environment

PGE Group's main operating area is Poland, and the domestic macroeconomic backdrop has a substantial impact on Group's results. At the same time, the condition of Poland's economy remains largely tied to the situation across the European Union and in global markets. The Group's financial results are affected by both the situation in specific segments of the economy and the financial markets, which affect the terms of PGE Group's debt financing.

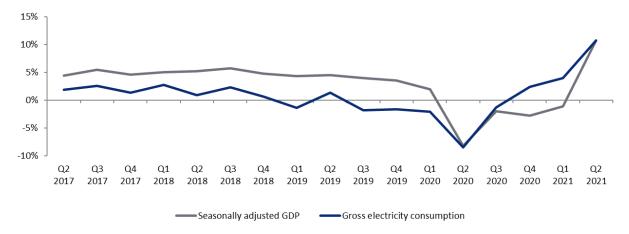
As a rule of thumb, there is a historical correlation between change in electricity demand and change in the rate of economic growth in Poland. Considering PGE Group's position on the Polish power generation market, as well as its substantial share in the electricity sales and distribution market, changes in power and heat demand may have a significant impact on the Group's results.

The socioeconomic situation in the country in the first half of 2021 remained under the influence of the COVID-19 pandemic. The pandemic restrictions introduced in the winter period were gradually lifted starting in April 2021, which steadily improved results in comparison with the previous year.

An improvement in the socioeconomic situation and lower air temperatures in the winter period led to an increase in gross electricity consumption in the first half of 2021 by more than 7% y/y.

Economic trends in the first half of 2021 were still driven by pandemic restrictions, which mainly affected the services sector. However, a gradual lifting of restrictions means that there is consensus among analysts that 2021 should be a time of economic recovery globally and in Poland. Central Statistical Office of Poland announced that after the GDP decline was slowed down in the first quarter of 2021 to -1.2% y/y, in the second quarter of 2021 GDP grew by 10.7% y/y. The European Commission has raised its estimate for Poland's GDP growth in 2021 from 4.0% to 4.8% y/y. Any further impact of the pandemic on GDP will depend on its duration and the time it takes to full efficiency, especially in services and manufacturing.

Chart: Seasonally adjusted GDP change vs. change in domestic gross electricity consumption.

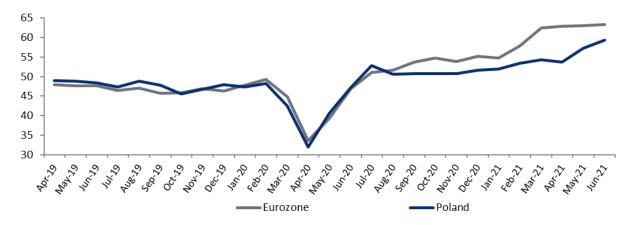


Source: EC, Central Statistical Office of Poland, PSE S.A.

The Purchasing Managers' Index ("PMI") reflects the positive impact of the efforts being undertaken to rebuild the economy following the COVID-19 pandemic. The manufacturing PMI figures for Poland in the first half of 2021 showed optimism in the industry. The PMI posted record figures in May and June 2021, reaching 57.2 points and 59.4 points, respectively. The June PMI figure was the highest recorded since 1998, when the survey had been launched. The average manufacturing PMI in Poland in the first half of 2021 was 55.0 points, denoting a 28% y/y increase. A score above 50.0 points means that the surveyed managers expect the situation in the sector to improve. Polish industry is influenced by the condition of industry in the Eurozone, where PMI in the first half of 2021 reached 60.8 points, compared to 43.6 points last year (up by 39.4% y/y). In June 2021, manufacturing PMI for the Eurozone reached 63.4 points, the highest level in history. The growth rate of this indicator reflects a fast improvement in the sector. At the same time, the expanding economic activity is being blocked by extended delivery times for raw materials and components, resulting from market shortages due to both strong demand for industrial goods and disruptions in logistics stemming from COVID-19 restrictions.



Chart: Manufacturing PMI in Poland and Eurozone (in points).



Source: Markit Economics

Development in the Polish economy is reflected by inter alia dynamics in overall industrial production. In the first half of 2021, industrial production sold was higher than in the same period of last year (when it recorded a decline), which was due to its stronger dynamic in the second quarter of 2021. In the first half of 2021, industrial production sold grew in comparison with the same period of last year by 18.2% (vs. a 6.3% decline in the preceding year). In the first quarter of 2021, production went up by 7.8%, and in the second quarter of 2021 by 30.3% (following a deep decline in the previous year). Sales grew in most sections of industry (aside from mining and extraction). Production sold increased the most in the industrial processing segment, which had experienced an above-average decline last year. Sales in all key industrial groupings increased in comparison with the first half of 2020; the highest growth was recorded in the production of durable consumer goods.

#### 3.2. Market environment

## SITUATION IN THE NATIONAL POWER SYSTEM (NPS)

Table: Domestic electricity consumption (GWh).

	H1 2021	H1 2020	% change
Domestic electricity consumption	86 365	80 640	7%
Wind farms	6 762	7 859	-14%
Industrial thermal hard-coal fired power plants	44 696	33 835	32%
Industrial thermal lignite fired power plants	21 210	18 669	14%
Industrial gas-fired power plants	6 437	6 633	-3%
International trading balance	3 272	6 547	-50%
Other (industrial plants, hydro power plants, other RES) <sup>8</sup>	3 988	7 097	-44%

Source: PSE S.A. data

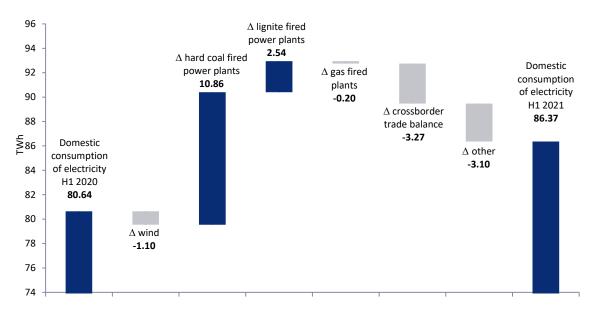
<sup>&</sup>lt;sup>8</sup> From January 1, 2021, power stations located at industrial complexes are classified as utility thermal power stations. It is not possible to historically classify them this way, which is why 2021 should be treated as a transitional period. The new classification results from changes introduced to PSE S.A.'s IT systems in connection with the necessity to introduce changes resulting from the following documents approved by the President of the Energy Regulatory Office ("URE"): Amendments no. 1/2020 of Balancing Terms, Update Sheet no. CK/13/2020 for the Transmission Network Code ("IRIESP") – Terms for use, operation and planning of network development, and Update Sheet no. CB/28/2020 IRIESP – System balancing and managing system constraints.



#### H1 2021

Domestic consumption electricity increased in the first half of 2021 (mainly due to low temperatures and an increase in the Polish economy's energy demand due to the lesser impact of the coronavirus pandemic) by 5.7 TWh compared to the base period. Due to weak windiness, wind generation decreased by 1.1 TWh y/y. In addition, due to the situation in neighboring countries, net imports decreased by 3.3 TWh y/y. As a result, more energy produced in utility hard coal-fired power plants (approx. +10.9 TWh) and lignite-fired power plants (approx. +2.5 TWh) was needed to balance the power system.

Chart: Energy balance in the NPS in the first half of 2021 y/y (TWh).



Source: own work based on data from PSE S.A.

### **ELECTRICITY PRICES – DOMESTIC MARKET**

## Day-ahead market (RDN)

Market/measure	Unit	H1 2021	H1 2020	% change
RDN – average price	PLN/MWh	284	179	59%
RDN – trading volume	TWh	15.1	14.4	5%

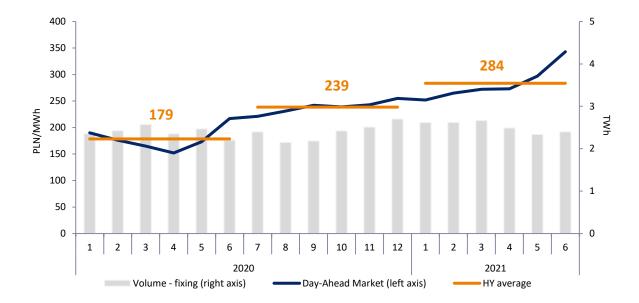
#### <u>Analysis – selected price factors affecting RDN quotations</u>

Factor	Unit	H1 2021	H1 2020	% change
CO <sub>2</sub> emission rights	EUR/t	44.57	21.71	105%
Polish Steam Coal Market Index PSCMI-1	PLN/GJ	11.44	12.00	-5%
Wind generation NPS	TWh	6.8	7.9	-14%
Ratio: wind generation/ NPS consumption	%	8%	10%	
Ratio: international trading/ NPS consumption	%	4%	8%	

In the first half of 2021, the average electricity price on the day-ahead market was PLN 284/MWh and was higher by 59% than average price (PLN 179/MWh) in same period in the preceding year. The increase in energy prices was attributable to the increased energy demand for electricity (by 5.7 TWh), net imports lower by 50% compared to the first half of 2020 and decrease by 14% in generation from NPS wind sources.



Chart: Average monthly prices at the day-ahead market in 2020-2021 (TGE).\*



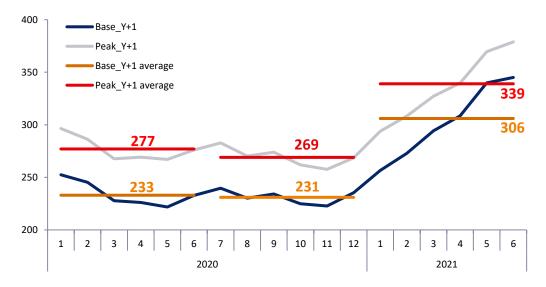
<sup>\*</sup> Average monthly RDN prices calculated on the base of hourly quotations (fixing).

## Forward market

Market/measure	Unit	H1 2021	H1 2020	% change
BASE Y+1 – average price	PLN/MWh	306	233	31%
BASE Y+1 – trading volume	TWh	45.14	69.77	-35%
PEAK5 Y+1 – average price	PLN/MWh	339	277	22%
PEAK5 Y+1 – trading volume	TWh	5.30	6.45	-18%

Electricity prices on forward market are shaped by the similar fundamental factors, as the prices on the Day-Ahead Market described above. The observed forward market price increase y/y for the whole year for BASE\_Y+1 is related to increased demand for electricity and very high prices of CO<sub>2</sub>.

Chart: Average monthly prices on the forward market in 2020-2021 (TGE).\*



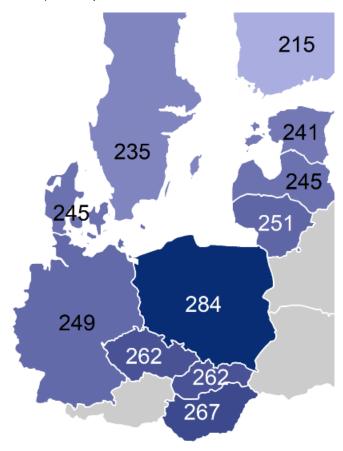
<sup>\*</sup> Monthly average index level for forward contracts for the next year (Y+1), baseload and peak, weighted by the trading volume.



## International market

## Wholesale market (comparison of day-ahead markets)

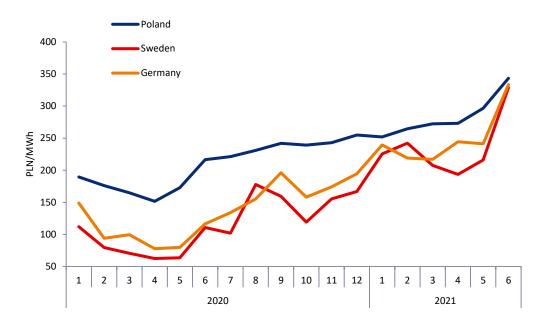
Chart: Comparison of average electricity prices on Polish market and on European markets in the first half of 2021 (prices in PLN/MWh, average exchange rate EUR/PLN 4.54).



Source: TGE, EEX, Nordpool



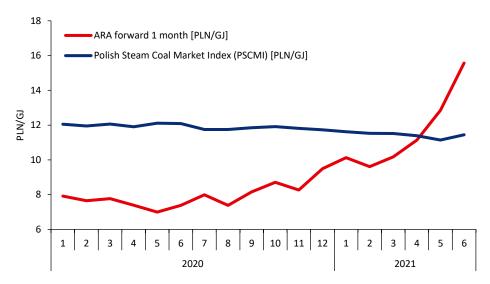
Chart: Evolution of spot market prices.



Source: TGE, EEX, Nordpool

In the first half of 2021, the y/y increase in prices on neighbouring markets ranged between PLN 146 and PLN 153/MWh (i.e. approx. 243-284%), whereas in Poland the average prices were higher by PLN 105/MWh y/y (approx. 59%). The price spread between Poland and neighbouring countries is largely due to differences in realized coal prices in the country and abroad. The price of hard coal in ARA (Amsterdam-Rotterdam-Antwerp) ports rose by 54% y/y, while the domestic PSCMI-1 decreased by 5% over the same period. Transmission capacities on cross-border connections, which increased in the second half of 2019, enabled the import of higher volumes of cheap energy which contributed to higher correlation of wholesale prices observed in Poland and abroad and in domestic prices approaching the level recorded on neighbouring markets.

Chart: Hard coal indices ARA vs PSCMI 19.



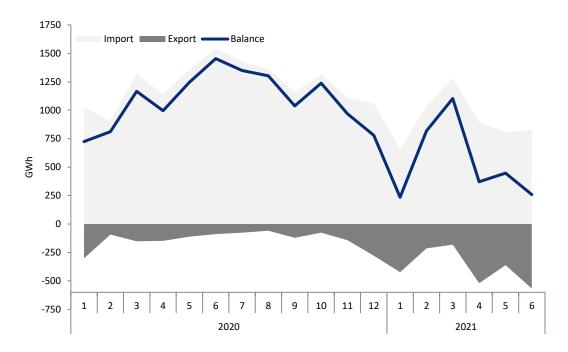
Source: ARP, Bloomberg (API21MON OECM Index), own work.

<sup>&</sup>lt;sup>9</sup> The comparison is illustrative only. Methodologies of counting the ARA and PSCMI1 indexes are different. Among other things, the ARA index includes insurance and delivery costs. The PSCMI 1 is an ex-mine index without insurance and delivery costs. Standards for calculating the caloric values are also different (ARA – 25.12 GJ/t vs. PSCMI1 caloric value - range 20-24 GJ/t). The aim is to compare the trend and not the absolute level. For illustration purposes ARA index is recalculated from USD/t to PLN/GJ.



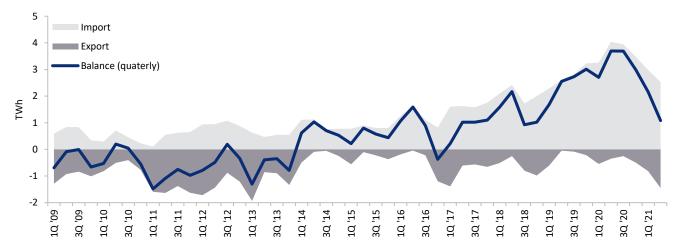
#### International trading

Chart: Monthly imports, exports and cross-border exchange balance in 2020-2021.



Source: own work based on PSE S.A. data.

Chart: Quarterly trading volumes – import, export and international trading balance in years 2009-2021.



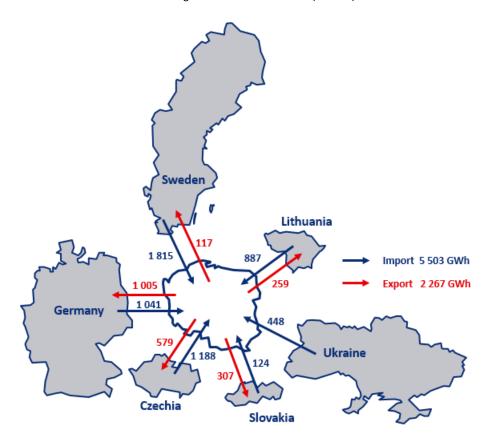
Source: own work based on PSE S.A. data.

In the second quarter of 2021, Poland remained a net importer of electricity, and the trade balance was 1.1 TWh (import 2.5 TWh, export 1.4 TWh) and was lower by 2.6 TWh y/y (i.e. by approx. 71% y/y). The international trading balance was impacted mostly by import from Sweden (0.9 TWh), Germany (0.6 TWh) and Lithuania (0.4 TWh).

In the first half of 2021, the trade balance was 3.2 TWh (import 5.5 TWh, export 2.3 TWh) and was lower by approx. 3.2 TWh y/y (i.e. by approx. 49% y/y). The international trading balance was impacted mostly by import from Sweden (1.8 TWh), Czechia (1.2 TWh) and Germany (1.0 TWh).

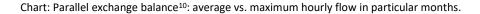


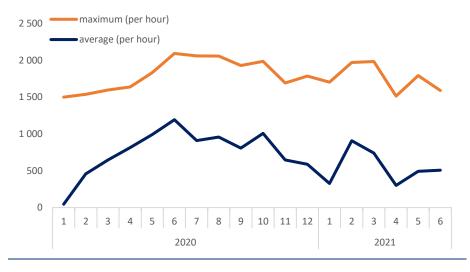
Chart: Geographical structure of commercial exchange in the first half of 2021 (in GWh).



Source: own work based on PSE S.A. data.







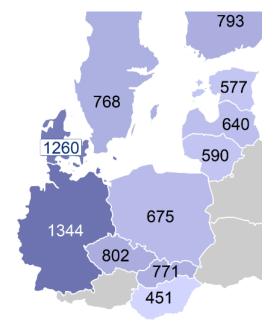
Source: own work based on PSE S.A. data.

Global increase in fuel prices (which translate into an increase in the costs of electricity production from natural gas and hard coal) and, additionally, lower windiness translated into an increase in energy prices in neighboring countries, which in turn limited electricity imports to Poland.

## Retail market

The diversity of electricity prices for retail customers in the European Union depends both on the level of the wholesale prices of electricity and fiscal system, regulatory mechanism and support schemes in particular countries. In Poland in the second half of 2020<sup>11</sup> an additional burden (over sale price and cost of electricity distribution) for individual customers accounted for 37% of the electricity price and in comparison to EU average of 40%. In Denmark and Germany the proportion of additional charges in the price of electricity exceeded 50%.

Chart: Comparison of average prices for individual customers in selected EU countries in the second half of 2020 (prices in PLN/MWh, average exchange rate EUR/PLN 4.47).



Source: own work based on Eurostat data.

 $<sup>^{10}</sup>$  Parallel exchange – exchange between synchronised system on borders with Germany, Czechia and Slovakia.

<sup>&</sup>lt;sup>11</sup> Eurostat data on retail market are published in semi-annual intervals, at publication date no data availbale for H1 2021.



Chart: The share of additional charges in electricity prices for the individual customers in selected EU countries in the second half of 2020 (prices in PLN/MWh, average exchange rate EUR/PLN 4.47).

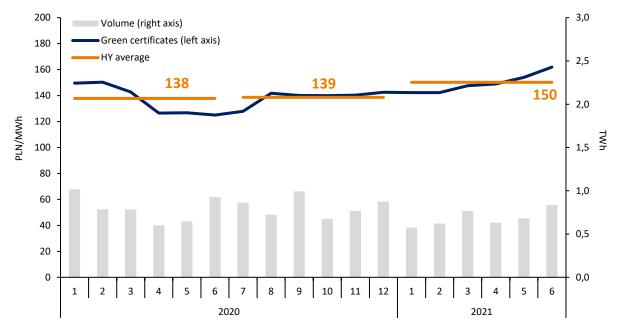


Source: own work based on Eurostat data.

## 3.3. Prices of certificates

In the first half of 2021 the average price of green certificates (index TGEozea) reached PLN 150.21 PLN/MWh and was higher by 9% compared to the analogical period of the previous year. An obligation to redeem green certificates has remained at the same level (19.5%) as in 2020. The decreased demand for certificates is related mainly to lower pace of electricity contractation for final off-takers and uncertainty with regard to the redemption requirement in 2022. Moreover, a 15-year support period for first installations that had entered the system in 2005, ended in 2020.

Chart: Average quarterly prices of green certificates (TGEozea).



Source: Own work based on TGE quotations.

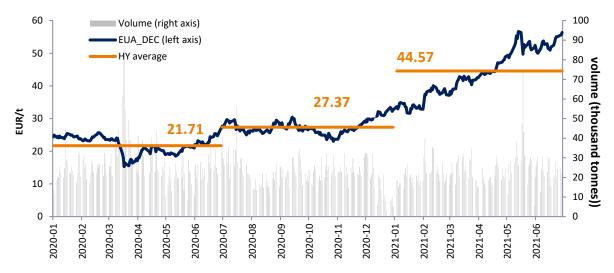


### 3.4. Prices of CO2 emission rights

EUA (European Union Allowances) prices are one of the key factors determining wholesale energy prices and PGE Group's financial results. Installations emitting  $CO_2$  in the process of electricity or heat production bear the expenses for purchasing EUA allowances to cover the deficit (i.e. the difference between  $CO_2$  emissions at PGE Group's generating units and the free-of-charge allowances received under derogation in accordance with the National Investment Plan). Wherein, last allocations granted free of charge were planned for realisation of investment tasks for 2019. It means that the free allocations for electricity generation, in accordance with the currently used method, ended when 2019 allowances were received.

Following a sharp slump caused by the outbreak of the COVID-19 pandemic in mid-March 2020, the prices of CO<sub>2</sub> emission allowances began recovering until reaching dynamic growth from November 2020. In the first half of 2021, the weighted average price of EUA DEC 21 was EUR 44.57/t and was considerably higher (by 105%) than the average price of EUR 21.71/t for the EUR DEC 20 instrument in the similar period of the previous year.

Chart: Prices of CO<sub>2</sub> emission rights.



Source: own work based on ICE exchange quotations.

#### CO2 EMISSION RIGHTS GRANTED FREE OF CHARGE

The Group received emission allowance allocations for heat generation for 2020 on April 23, 2021, after verification of asset and financial reports for investments included in the National Investment Plan. Allocations for electricity producers are no longer awarded from 2020.

On July 7, 2021, the climate minister published a list of installations along with the final volume of  $CO_2$  emission allowances allocated for the production of heat for 2021-2025 in accordance with the Act of June 12, 2015 on the ETS scheme.

The publication of this list is the final step in the process of determining the allocation of emission allowances on the basis of reports concerning key data submitted by installation operators by June 30, 2019. The input data for the allocation concerned the period 2014-2018.

The publication of the list completes the process of determining the final volume of emission allowances allocated to installations in accordance with Commission Delegated Regulation (EU) 2019/331 of December 19, 2018 determining transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council.

The final volume of emission allowances published is subject to adjustment based on the average level of production in the two years preceding the year for which emission allowances are granted. Data on production levels is provided by March 31 of each year starting from 2021 in ALC reports. Based on this data, emission allowance allocations are either decreased or increased if the average production level in the past two years exceeds the ±15% threshold (if the threshold is exceeded, the threshold in the following years will be ±5 percentage points above 15%). The final volume of emission allowances granted to an installation is determined on this basis. The adjustment will be performed on an annual basis in accordance with rules specified in Commission



Delegated Regulation (EU) 2019/1842 of October 31, 2019. The ALC reports submitted by installation operators will be approved by the European Commission, which will issue a decision approving the final volume of emission allowances. The allowances will be transferred to the installation's account in the EU register in 2021. The European Commission plans to issue the decision approving the grant of emission allowances for 2021 in the fourth quarter of 2021.

The climate minister will publish in the Public Information Bulletin (BIP) the approved final annual volume of emission allowances resulting from ALC reports pursuant to the Act of June 12, 2015 on the ETS scheme.

Table: Emission of  $CO_2$  in the first half of 2021 broken down into electricity and heat production compared to the allocation of  $CO_2$  emission allowances for 2021 (in tonnes).

Product	CO₂ emissions in H1 2021*	Allocation of CO₂emission rights for 2021
Electricity	30 848 494	-
Heat	3 065 144	667 856
TOTAL	33 913 638	667 856

<sup>\*</sup> Estimates, emissions not verified - the emissions will be settled and certified by the authorised verifier of  $CO_2$  emission on the ground of yearly reports of volume of  $CO_2$  emissions.



# 3.5. Regulatory environment

## DOMESTIC REGULATORY ENVIRONMENT

PGE Group operates in an environment with a significant impact of domestic and foreign regulations. Presented below is a summary of the most significant decisions, which took place in 2021 and which could have an impact on PGE Group's operations in the coming years.

Segments	Regulation	Regulation objectives	Latest conclusions	Next stage	Impact on PGE Group
PGE Polska Grupa Energetyczna	The bill on the amendment to the Energy Law.  CM list: UC 17  Parliamentary document: 808  Act of May 20, 2021 on amendment of the act – Energy Law, and certain other acts.	The amendment to the Energy Law contains a number of changes of systemic importance, including:  comprehensive arrangements concerning the energy storage issue,  the introduction of the obligation to install remote reading meters,  the appointment of an energy market information operator whose role will be to establish and develop a central market information system.	The act entered into force on July 3, 2021 with certain exceptions when the vacatio legis period was extended to 12, 24, 30, 36 months.	-	The proposed solutions will affect all operating segments of the PGE Group, in particular the Supply and Distribution segments. The draft prepares the market for the further implementation of directive 2019/944 on common rules for the internal market for electricity.
PGE Polska Grupa Energetyczna	The bill on the amendment to the Energy Law and the Renewable Energy Sources Act. GLC list: UC 74	The draft act includes, in particular, proposals for provisions implementing into the Polish legal system Directive (EU) 2019/944 of the European Parliament and of the Council of June 5, 2019 on common rules for the internal market in electricity and amending Directive 2012/27/EU.  The draft expands on the directions of changes in regulations initiated in the act of May 20, 2021 on amendment of the act – Energy Law, and certain other acts. These include:  the technical ability to change electricity supplier within 24 hours, starting from 2026,  implementation of civic institutions of energy communities,  the customer's right to voluntarily and temporarily reduce electricity consumption ("DSR"), aggregation, contracts with dynamic electricity prices,  definition of the aggregator's function on the electricity market, along with its tasks and authorisations,  definition of demand response and active customer on the energy market,  allow DSOs and TSOs to own certain energy storage installations, expand the Energy Regulatory Office's authority,  regulations concerning system services, flexibility services and changes in balancing,  introduction of provisions introducing the separation of transmission and distribution activities from energy storage - (an	The deadline for submitting comments was June 23, 2021.	Publication of draft following consultations, sent to Council of Ministers for further work.	The proposed solutions will have an impact on all of PGE Group's operating segments, especially the Supply and Distribution segments. The draft introduces or applies numerous EU laws addressing the electricity market, including directive 2019/944 on common rules for the internal market for electricity, and grid codes.



	energy system operator, with the exceptions provided for in the draft, cannot be the owner of and cannot build, operate or manage an energy storage system).			
The bill on the amendment to the Energy Law and the Renewable Energy Sources Act GLC list: UD 162	The bill includes proposals for legislation to abolish the exchange obligation and to tighten liability for electricity market manipulations. The ERO President will have at their disposal appropriate tools to prevent abuses and attempted abuses in the electricity market. According to the explanatory memorandum to the bill, the abolition of the obligation is included in the Polish Electricity Market Reform Implementation Plan.	Comments submitted during public consultations were published on <b>April 8, 2021.</b>	Submitted for further work in the Council of Ministers.	The proposed change to abolish the exchange obligation will have no adverse impact on the PGE Group's operations .
Act amending the Act on the Capacity Market and certain other acts .	The bill promoter's intention is to align the Act on the capacity market to the provisions of Regulation (EU) 2019/943 of the European Parliament and of the Council of June 5, 2019 on the internal market for electricity and to improve the capacity mechanism taking into account lessons learned from organisation of capacity auctions to date and the associated processes (promulgation of regulations and rules, definition of auction parameters, certification processes).	On July 22, 2021 the parliamentary commission for Energy, climate and state assets recommended that the amendments proposed by the Senate be adopted.  On August 7, 2021, the law was signed by the President. It entered into force on September 1, 2021, with the exception of Art. 6, which comes into force on July 1, 2024.	-	The amendment is of key importance for PGE Group, the holder of a significant stake in the capacity market.
Act of December 17, 2020 on promoting electricity generation in offshore wind farms.	The Act provides for enabling the development of offshore wind power generation. Offshore wind farms are important for the fulfilment of international commitments in the field of renewable energy in the long term. The key to these is to create legal regulations that will stimulate the growth of this sector.  The Act provides for:  A support system for the offshore technology, adjusted to its technical and economic conditions, consisting in granting the so-called right to cover the negative balance to be calculated on the basis of the offshore installation's LCOE.  modifications of administrative procedures related to the investment process, taking into account the specificity of the project to construct offshore wind farms.	On January 22, 2021 the act was signed by the President of Poland. It entered into force on February 18, 2021.	-	The act is of key importance for the development of offshore wind farms and thus for PGE Baltica sp. z o.o., a company responsible for the implementation of the Offshore Programme at the PGE Group and coordinating preparations for the construction of offshore wind farms.
The bill amending the Act on renewable energy sources and certain other acts.  GLC list: UD 107  Parliamentary document: 1 129	The bill envisages in particular:  abolishing the concession obligation for facilities below 1MW,  extending the life of the discount/FIT (guaranteed tariff scheme)/FIP (surcharge to the market price) support system by 5 years (possibility to enter the system while retaining a 15 years' period of support),  introducing the obligation for the Minister of Climate to publish, in advance, RES energy volumes to be subject to support over the next 4 years,	The third reading and adoption of the act by the Parliament took place on August 11, 2021.  The act was sent to the Senate on August 13, 2021.  On September 9, 2021 the Senate presented its position on the draft.	Sending to the President of the Republic of Poland for signature.	The bill regards mainly the RES segment, extending the period within which new RES projects may apply for support. It also facilitates planning the development of this segment by introducing the obligation for the Minister of Climate to publish the schedule and



		<ul> <li>increasing the PV capacity threshold for PV above which it is required to include facilities and protection zones around them in local zoning plans.</li> <li>possibility of executing lease contracts for the State Treasury's agricultural property without a tender between the National Center for Agricultural Support ("KOWR") and capital companies, as referred to in art. 1 sec. 1 of the Act of March 18, 2010 on the special powers of the Minister responsible for state assets and their implementation in certain capital companies or groups operating in the electricity, crude oil and gaseous fuels sectors in order to build, modernise or expand equipment or installations related to generation of electricity, ensuring safety and maintaining the functionality of property disclosed in the uniform list of facilities, installations, devices and services being part of critical infrastructure.</li> </ul>	On September 17, 2021 the Parliament adopted the Senate's editorial corrections and rejected the amendment on deletion of a provision allowing the non-tender lease of the State Treasury's agricultural property to State Treasury companies for the purpose of generating electricity.		capacity volumes for RES which may apply for support in the next 4 years.
	Amendment of the act on investment in wind farms. GLC ref. no. UD207	Modification of rule 10H - mitigation by allowing municipalities to define in local spatial development plans (after consultation with local communities) a distance less than the statutory distance for wind farms from residential buildings, but not less than 500 m.	The deadline for submitting comments to the draft act was June 4, 2021.	Publication of draft after consultations, further public consultations or submission of draft to Council of Ministers for further work.	The draft is of significance to the development of the Renewable Energy segment.
<b>美</b>	The Act of April 15, amending the Act on the greenhouse gas emissions trading scheme and certain other acts.	The Act is meant to transpose Directive (EU) 2018/410 of the European Parliament and of the Council of March 14, 2018 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, and Decision (EU) 2015/1814 ("Directive 2018/410"), which establishes the so-called Modernisation Fund to operate in 2021-2030 and finance the modernisation of large power facilities as well as smaller-scale projects (insulation of single-family dwellings, modernisation of district heating sources and systems, development of low-carbon dispersed generation). Although the Act does not prejudge what projects will receive financing, it provides that the function of the national operator of the Modernisation Fund will be held by the National Fund for Environmental Protection and Water Management (Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej, NFOŚiGW). In consequence, the Fund will provide project financing within the framework of the NFOŚiGW's priority programmes.	On April 15, 2021 the bill was passed by the Sejm, aside from exceptions, the Act went into effect on June 25, 2021.	-	The Act can open the way to apply for financing for PGE Capital Group investment projects.
[号]赛	The bill on amendments to the Electromobility and Alternative Fuels Act and certain other acts.	Within the scope of its regulations, the bill transposes into Polish law a number of EU directives, including in particular Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market in electricity and amending Directive 2012/27/EU, as regards the construction of charging stations	The draft was sent to the Legal Committee on July 2, 2021. A Legal Committee meeting was held on July 19-22, 2021,	Draft sent to Parliament.	The proposed regulations will have no adverse impact on the operations of the PGE Group. The removal of the so-called intervention mechanism is



		by DSOs. The proposed act in its latest wording provides for the removal of the so-called intervention mechanism for building the charging infrastructure. According to the proposed act, DSOs will not be responsible for the construction of missing charging points in municipalities that were required by the Act on electromobility to reach a certain number of charging points.	where changes were introduced to the draft act. The applicant was required to develop a draft law taking into account the arrangements made at the meeting of the Legal Committee.	associated with the abolition of obligations imposed on PGE Dystrybucja and PGE Obrót.
	The regulation of the Council of Ministers on the maximum quantity and value of electricity from renewable energy sources that may be sold by auction in 2021.	The aim of this regulation is to enable auctions to take place in 2021, thus continuing the upward trend in the use of renewable energy sources, which will contribute to the fulfilment of new EU obligations.	The draft regulation was published on December 22, 2020 and, bypassing public consultations, was promulgated on December 28, 2020.  The regulation entered into force on January 12, 2021.	The regulations will make it possible to place the Group's photovoltaic projects in auctions scheduled for 2021.
	Regulation of the Minister of Climate and Environment on reference price for electricity from renewable sources in 2021 and periods applicable to producers that win auctions in 2021.	Important parameters for renewables auctions that are to be held in 2021. Small changes in relation to the 2020 prices.	Regulation adopted on April 16, 2021.	Important from the point of view of planning and development of RES investments in the PGE Capital Group.
	Regulation of the Minister of Climate and Environment amending regulation on detailed rules for setting and calculating tariffs and settlements concerning heat supplies.	The Regulation introduces the possibility of a one-time, quick change of tariff for heating, calculated using the cost method due to the considerable change in $CO_2$ emission allowance prices. The proposed solution provides a simplified procedure, without the necessity to examine and analyse the entire tariff for heating.	Regulation signed on April 24, 2021. Published on April 28, 2021, entered into force on the next day after publication.	The regulation has a positive impact on the District Heating segment, and particularly on heat generation at heating plants. Indirectly, the regulation has a positive impact on revenue from heat from cogeneration units.
(八)	Act amending the Act on disclosure of information about the environment and its protection, public involvement in environmental protection and environmental impact studies and certain other acts.	The Act aims to transpose the EIA Directive (specifying the principles of environmental impact assessment) as regards Article 11(1) and (3), i.e. regulations concerning public access to justice in the area of the environment by granting environmental organisations new powers affecting the possibility to use decisions on environmental conditions of projects significantly affecting the environment and to obtain further investment decisions in the investment and construction process.	Regulation signed on April 20, 2021 by the President of Poland. Published on April 28, 2021, entered into force after 14 days after publication.	The Act affects all business segments of the PGE Group that implement infrastructural investments.





Act amending the Energy Efficiency Act and certain other acts.

The draft introduces a number of amendments dictated by the need to implement Directive 2018/2002/EU (EED). From the point of view of PGE Group, the most important amendments:

- introduction of additional (in addition to energy efficiency certificates) measures to achieve the energy saving target. These include programmes and financial instruments for projects aimed at improving energy efficiency on the part of final off-takers,
- creating opportunities for obligated entities to implement cofinancing programmes, in order to finance or co-finance projects aimed at improving energy efficiency. The beneficiaries of such programmes may include final off-takers. Obligated entities holding a license to trade in gaseous fuels, electricity and heat may implement subsidy programmes to finance or co-finance: replacement of furnaces or boilers fired with solid fuels, thermal upgrading of buildings, upgrade of lighting, connection to the heating network.

The bill was signed by the President of Poland . Published on May 7, 2021, entered into force after 14 days after publication .

The amendment will have a neutral impact on companies from the PGE Capital Group. The proposed changes may have a positive impact on the achievement of the goal specified in the EED Directive.



Regulation of the Minister of Climate and Environment on the change in the volume share of electricity resulting from redeemed certificates of origin confirming the production of electricity from renewable energy sources in 2022.

Climate and Environment Ministry list: 638 The regulation specifies the level of the obligation to redeem certificates of origin for energy from renewable sources ("PM OZE") for the so-called obligated entities in 2022. The regulation reduces the level of the obligation for PM OZE (the so-called green certificates) by 1pp-from 19.5% to 18.5% - compared to the level in effect in 2021. At the same time, the justification to the regulation provides for the possibility of further lowering the level of the obligation in the coming years.

The regulation was published in the Journal of Laws and went into effect on August 28, 2021.

The reduced level of the obligation may slow down the growth in Renewables-segment revenue from the sale of PM OZE. At the same time, it reduces the burden on the Supply segment with the need to purchase a certain amount of PM OZE in relation to the volume of electricity traded.



Draft regulation of the Minister of Climate and Environment on technical requirements, connection conditions and cooperation of micro-installations with the power system

Government Legislation Centre list: UD 19 The draft regulation implements the authorisation contained in art. 9 sec. 4a of the act - Energy Law, which imposes an obligation on the Minister responsible for climate to determine:

- technical requirements for connecting micro-installations to the grid and the conditions for its cooperation with the power system,
- conditions for connecting micro-installations to the grid and the mode of:
  - issuing connection conditions for this installation,
  - notifying the connection of the micro-installation.

In accordance with the guidelines contained in the statutory authorisation, when specifying the above-mentioned elements, the need to increase the share of electricity generated by renewable energy prosumers in micro-installations in the country's energy balance, safety and reliable operation of the power system, as well as requirements for

On June 28, 2021 following negotiations the draft was sent to be examined by the Legal Committee at the Government Legislation Centre.

Examination of the draft by the Legal Committee and submission of the draft for signature by the Minister.

The draft regulation has a significant impact on the Distribution segment as regards the connection of microinstallations to the distribution grid and the Supply segment as regards prosumers' settlements, including for sellers obligated to purchase electricity introduced to the distribution grid from microinstallations.

The Distribution segment will be required to register and



		the construction and operation of devices, installations and grids were taken into account.  The main purpose of the regulation is to reduce and simplify formalities related to connecting micro-installations, and thus to make the investment process in this type of installation more attractive.  The draft introduces, among other things: a standardised form of micro-installation notification, as well as a template of an application for a micro-installation connection conditions.  Detailed technical requirements for connecting micro-installations to the grid and conditions for its cooperation with the power system and detailed conditions for connecting micro-installations to the grid are set			share metering data on the surplus energy generated in the micro-installation and fed into the distribution grid.  Companies in the Supply segment will be required to settle surplus energy generated in micro-installations and fed into the distribution grid under the agreement.
	Draft regulation of Climate and Environment Minister regarding energy market processes  Government Legislation Centre list: UD 603	out in an appendix to the regulation.  Draft regulation of Climate and Environment Minister regarding energy market processes implements the statutory delegation contained in art. 11zh sec. 1 of the act - Energy Law. The draft regulation is to enable the preparation of IT systems (remote reading systems for electricity distribution system operators and the central energy market information system) in connection with new challenges on the electricity market. The definition of a full catalogue of energy market processes is necessary to ensure the transparency of obligations of all energy market participants, both electricity system users obligated to implement energy market processes through the central energy market information system ("CSIRE"), and for the energy market information operator ("OIRE") so that it is possible to assess the fulfilment by the above-mentioned entities of the obligations imposed on them.  The regulation will define a catalogue of energy market processes, the implementation of which through CSIRE will be obligatory for system users. The catalogue of energy market processes includes the basic processes currently implemented on the electricity market, taking into account the greatest usefulness of CSIRE for system users.	The draft regulation was published on June 24, 2021 along with a justification and Regulatory Impact Assessment. Comments to the draft were published in July and August 2021.	Accept / disregard comments to the draft. Publication of amended draft and submission of modified draft for further work of Council of Ministers / for meeting of Legal Committee at Government Legislation Centre.	The regulation will have a significant impact primarily on the Distribution segment, but also on the following segments: Conventional Generation and Supply.
<u>秦</u> <u>几</u>	Draft regulation of Climate and Environment Minister regarding metering system Government Legislation Centre list: UD 507	account the greatest usefulness of CSIRE for system users.  The draft regulation implements the statutory delegation contained in art. 11x sec. 2 of the act - Energy Law, which which imposes on the minister responsible for energy the obligation to regulate therein, in consultation with the minister responsible for computerisation, the detailed requirements and standards to be met by the metering system. In addition, the draft regulation satisfies the obligation specified in art. 19 sec. 3 of Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market in electricity and amending Directive 2012/27 / EU, according to which Member States joining the introduction of smart metering systems adopt and publish minimum requirements functional and technical related to smart metering systems to be introduced in their territories.	The draft regulation was published on June 24, 2021 along with a justification and Regulatory Impact Assessment.  Comments to the draft regulation from negotiations, public consultations and commenting were published on July 14, 2021.	Accept / disregard comments to the draft. Publication of amended draft and submission of modified draft for further work of Council of Ministers / for meeting of Legal Committee at Government Legislation Centre.	The regulation will have a significant impact primarily on the Distribution segment, but also on the following segments: Conventional Generation and Supply.  As regards the DSO's activities, it will be necessary to clarify requirements for metering systems, including electricity meters and metering system.
	Draft regulation of the Minister of Climate and	The draft regulation implements the delegation contained in art. 46 sec. 5 and 6 of the act of April 10, 1997 - Energy Law (Polish Journal of Laws	The draft regulation was published on August 5, 2021	Accept / disregard comments to the	The regulation has a positive impact on the District Heating

Environment amending the of 2021, item 716, as amended). Pursuant to the provisions of the along with a justification and draft. Publication of segment, both on heat



regulation on detailed rules for the formation and calculation of tariffs and settlements for heat supply  Government Legislation Centre list: 641	Energy Law, the minister responsible for energy, after consulting the President of the Energy Regulatory Office, defines, by way of a regulation, detailed rules for shaping and calculating tariffs and settlements for heat supply. The need to issue the proposed amendment to the regulation, preceded by the Regulation of the Minister of Climate of April 23, 2020 on the detailed principles of shaping and calculating tariffs and settlements for heat supply (Polish Journal of Laws, item 718 and of 2021, item 158 and item 788), is the result of challenges faced by district heating, including climate policy and decreasing heat demand.  The necessity to amend the regulation also results from implementation of Poland's Energy Policy 2040 ("PEP 2040"), which	Regulatory Impa	amended draft and submission of modified draft for further work of Council of Ministers / for meeting of Legal Committee at Government Legislation Centre.	generation in heating plants and cogeneration units. Positive changes in the tariff process may become an additional investment impulse.
	implementation of Poland's Energy Policy 2040 ("PEP 2040"), which provides for an increased use of district heating. This makes it necessary to develop a new heat market model, with the need to take into account the acceptability of heat prices by consumers, and at the same time to enable energy companies to cover justified costs along with a return on invested capital.			



## INTERNATIONAL REGULATORY ENVIRONMENT

Segments	Regulation	Regulation objectives	Latest conclusions	Next stage	Impact on PGE
			European Green Deal/ Fit for 55 package		
PGE Polska Grupa Energetyczna	Regulation of the European Parliament and of the Council establishing the framework for achieving climate neutrality (European Climate Law).	Enshrining the 2050 climate-neutrality objective in EU law and definition of the new 2030 emission reduction target.	On 10-11 December 2020, the European Council adopted an emission reduction target of at least 55% by 2030 compared to the 1990 level.  A provisional agreement on the European Climate Law was reached at a trilogue on April 21, 2021.  COREPER (Committee of the Permanent Representatives of the Governments of the Member States to the European Union) approved the adoption of the agreement on May 5, 2021.  The European Parliament's Committee on Environment approved the agreement on May 10, 2021. In this situation, the final adoption of the text	Expected publication of relevant legislative proposals implementing the European Climate Law (the Fit for 55 package) took place on July 14, 2021.	Improved competitiveness of renewable sources and, in the short term, of gas units, at the expense of high-carbon fuel-based generation units.  Increase in operating
			of the agreement during a PE plenary session on June 24, 2021, and in the Council on June 28, 2021, was a formality.  The European Climate Law was published in the EU Official Journal on July 9, 2021 and entered into force on July 29, 2021.  The key conclusions include:		costs of conventional electricity generation.
			<ul> <li>A climate neutrality target by 2050 specified for the entire EU. After 2050, the EU should strive for negative emissions,</li> <li>The 2030 target was confirmed as "at least 55% compared to 1990 levels by 2030," with contribution of net removals by carbon sinks to this target limited to 225 MtCO2Eq,</li> </ul>		
			Establishment of an indicative greenhouse gas budget for the entire EU for 2030-2050, specifying the volume of greenhouse gases that the EU can emit without putting at risk its commitments under the Paris Agreement, which will be published by the European Commission together with a proposed target for 2040 (most likely in 2024).		
# # ! 	Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the EU	Combating climate change and performance of obligations resulting from the Paris	<ul> <li>On July 14, 2021 the European Commission presented a draft reform of ETS and MSR decision (relevant legislative proposals), including the following proposals:</li> <li>increase the linear reduction factor (LRF) from 2.2% to 4.2% a year after the directive enters into force (i.e. from 2024, according to EC assumptions),</li> </ul>	The legislative proposal is being proceeded in accordance with the regular procedure by the European Parliament and Council.  The EC expects that negotiations at EU institutions may last until 2023, so that the higher EU targets can be implemented from 2024.  The deadline to transpose the changes in the ETS directive as stated in the draft is December 31, 2023.	competitiveness of renewable sources and – in short-term- gas units to the detriment of generation assets using high-emission fuels.
	(ETS Directive) as well as implementing and delegated acts, Decision (EU)	Agreement. Development of investment incentives through	<ul> <li>a one-off reduction in the quantity of allowances available in the entire EU ETS system by a quantity that the increased LRF would decrease it by if it would have been applied from 2021, alongside an increase by a quantity of allowances corresponding to the maritime transport</li> </ul>		Increase in operating costs for conventional generation of electricity.
	2015/1814 of the European Parliament and of the Council concerning the	a CO <sub>2</sub> price signal to develop low- emission sources.	emissions to be included in the EU ETS,  maintain the 24% level of allowances transferred to reserve in a situation when the total number of allowances in circulation (TNAC) exceeds 1 096 million allowances. When TNAC will be between 833 million and 1 096 million, allowances in excess of 833 million will be put into reserve.		Option to obtain direct investment support from 2021 from the Modernisation Fund and Innovation Fund.



Segments	Regulation	Regulation objectives	Latest conclusions	Next stage	Impact on PGE
	establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme (MSR Decision).		Cancelling allowances in MSR above the 400 million threshold (lower MSR threshold), further reduction in the overall market surplus. Include a wider pool of allowances used for calculating TNAC,  increase the Modernisation Fund (MF) by 2.5% of allowances from the entire auction pool in 2024-2030 with a new allowance allocation key, include transport and buildings in a new subsystem with a separate CO <sub>2</sub> price and MSR dedicated to these sectors,  increase the benchmarks for district heating to 2.5% annually, without LRF being applied to these allowances,  all budget proceeds from the sale of allowances in auctions are to be used for implementing ETS directive objectives,  increase the Innovation Fund by 200 million allowances, make it more difficult to reduce the capacity of installations in order to get them out of ETS.		Another revision of the ETS Directive and MSR decision is likely to cause a further increase in prices of emission allowances.
Polska Grupa Energetyczna	Directive 2018/2001 on the promotion of the use of energy from renewable sources (Renewable Energy Directive).	To adapt legislation related to increased share of renewables in reference to EU's new higher GHG reduction target by 2030.	On July 14, 2021 as part of Fit for 55 the European Commission presented a legislative proposal that includes a draft amendment to the renewables directive, containing the following proposed new targets for existing and new sectors:  • overall target – 40% binding on the EU level,  • buildings – 49% indicative target on the EU level,  • industry – indicative target of 1.1% annually until 2030 and a 50% target share of renewable non-biological fuel by 2030,  • heat and cool – binding target on national level of 1.1 percentage point annually in the years 2021-2025 and 2026-2030 (currently indicative). Aside from the minimum annual growth, indicative national targets are proposed,  • district heating and cooling – indicative target of 2.1 percentage points annually in the periods 2021-2025 and 2026-2030 (currently indicative target of 1.0pp annually),  • transport – binding national target of 13% reduction in GHG by 2030, target for non-biological renewable fuel of 2.6% by 2030.  The criteria of sustainability and GHG reduction will be strengthened by lowering the threshold (from 20 to 5 MWt) for installations that need to comply with the criteria for combustion of biomass-based fuel and by introducing stricter criteria for forest biomass. The possibility of providing support for installations that combust biomass fuel and produce electricity only will also be reduced from 2026.  In accordance with the EC's proposal, by December 31, 2025 every member state will implement at least one joint renewables project with	The legislative proposal has been sent for further work at the Council and European Parliament.  The proposed deadline for transposing the proposal into national law is December 31, 2024.	Improvement in the competitiveness of low-emission sources of energy in comparison with high-emission sources.  Larger share of renewable sources in the Polish energy mix by 2030.



Segments	Regulation	Regulation objectives	Latest conclusions	Next stage	Impact on PGE
		ONJECUTED.	Member states connected with a sea basin are also required to specify the targets for developing offshore renewable energy by 2050, with intermediate stages in 2030 and 2040.		
PGE Polska Grupa Energetyczna	Directive 2012/27/EU on energy efficiency (EED Directive).	To adapt legislation related to energy efficiency improvements in reference to EU's new higher GHG emission reduction target by 2030.	<ul> <li>On July 14, 2021 as part of Fit for 55 the EC presented a legislative proposal concerning a draft amendment of the EED directive, which covers a full review of the directive and proposed new targets for energy efficiency improvements:</li> <li>a binding EU target for energy consumption reduction of at least 9% by 2030, in comparison with 2020. In 2030, the EU's final energy consumption is to reach 787 Mtoe, and primary 1 023 Mtoe. Referencing this data to the existing target of 32.5%, this would mean that the target would be increased to 36% for final energy and to 39% for primary energy,</li> <li>member states would need to specify their contributions and trajectories for reaching them in their integrated national plans for energy and climate in accordance with a new methodology,</li> <li>the current target for annual final energy savings of 0.8% of the average three-year consumption in 2016-2018 would be binding until 2023. From 2024, a higher target is proposed – 1.5% of the new annual final energy savings in reference to the average from years 2017-2019. This will be binding until 2040.</li> <li>Significant changes are introduced to the definition of "efficient heating and cooling system." From 2035, heating systems will not be considered as efficiently solely on the basis of the share of high-efficiency cogeneration, rather solely on the basis of the share of renewables and waste heat.</li> <li>As regards meeting the eligibility of cogeneration as high-efficiency cogeneration, the existing criteria include a new criterion for the limit of direct CO<sub>2</sub> emissions (for units using fossil fuels), amounting to less than 270 g CO<sub>2</sub> per 1 kWh of cogenerated energy. Particular attention is paid to the implementation of the "energy efficiency first" principle into the directive, including taking this aspect into account when determining network tariffs by the regulator.</li> </ul>	The legislative proposal has been sent for further work at the Council and European Parliament.  The published draft does not include a deadline for transposing the directive into national law.	Improvement in the competitiveness of low-emission sources of energy in comparison with high-emission sources, particularly in heating systems.  A faster phase-out of coal-based cogeneration from heating systems in connection with the introduction of a new emission criterion.  A higher factor for annua final energy savings will result in an increase in burdens on the energy efficiency certificate system.
PGE Polska Grupa Energetyczna	Directive 2003/96/EC restructuring the Community framework for the taxation of energy products and electricity (ETD Directive).	To adapt legislation related to tax on energy products and electricity to the EU's new higher GHG emission target by 2030.	<ul> <li>On July 14, 2021 as part of Fit for 55 the EC presented a legislative proposal that includes a draft revision of the ETD directive. In accordance with the draft:</li> <li>minimum tax rates will apply not to the volume of a given energy product but to its energy value; new rates are also specified,</li> <li>the difference between rates in the case of commercial and non-commercial use of an energy product/electric energy is to be removed,</li> <li>a transitional period (2023-2033) will apply to the minimum tax rates,</li> </ul>	The legislative proposal has been sent for further work at the Council.  The proposal deadline for transposing the directive is January 1, 2023.	Negative impact on PG Group resulting from a increase in the minimur tax rates for energ products.



Segments	Regulation	Regulation objectives	Latest conclusions	Next stage	Impact on PGE
			<ul> <li>the minimum tax rates specified in the directive will be indexed by inflation starting from January 1, 2024,</li> <li>member states can apply exemptions and tax rate reductions, including for: electricity from renewable sources, generated from sustainable biomass and generated in high-efficiency cogeneration in accordance with the definition specified in the EED directive,</li> <li>member states can apply reduced rates, which will not be lower than the minimum rates, for: energy products and electricity used in cogeneration and energy-intensive industry,</li> <li>energy products and electricity used by households considered as sensitive may be subject to exemption from taxation for a maximum period of 10 years from the ETD directive's entry into force. Sensitive households are defined as being below the threshold constituting 60% of the median domestic disposable income.</li> </ul>		
	Alternative Fuels Infrastructure Regulation (AFIR Regulation).	regulation, which	<ul> <li>On July 14, 2021 as part of Fit for 55 the EC presented a legislative proposal covering the AFIR Regulation. In accordance with this draft:</li> <li>obligations concerning sufficient charging network density, charging point and charger capacity and the separation of light and heavy vehicles may be imposed on member states,</li> <li>the largest charging stations are to reach 3.5 MW in output capacity by 2035,</li> <li>charging station operators should have the ability to purchase electricity from every vendor located in the EU,</li> <li>progress will be monitored based on domestic policy frameworks for the development of the alternative fuels market in the transport sector and the dislocation of appropriate infrastructure,</li> <li>rules for gathering and transferring data and common technical specifications for charging points will be specified,</li> <li>the first targets are to be reached by 2025.</li> </ul>	The legislative proposal has been sent to the Council and European Parliament for further work.	The necessity to prepare the power grid to perform obligations resulting from the AFIR Regulation in the distribution area.



Segments	Regulation	Regulation objectives	Latest conclusions	Next stage	Impact on PGE
大 奏	Regulation on guidelines for trans-European energy infrastructure (revision of the TEN-E Regulation).	Establishing guidelines for the development of trans-European energy infrastructure areas contributing to the achievement of the EU's climate targets by 2030 and climate neutrality by 2050.  Establishing new criteria for projects of common interests ("PCI").	On December 15, 2020, the EC presented a legislative proposal to revise the TEN-E Regulation. The regulation provides a framework for identifying so-called PCIs that can receive financial support under the "Connecting Europe" facility. The draft includes new solutions for the development of offshore infrastructure and changes in the area of smart power grids. The deadline for submitting amendments to the draft ITRE report on TEN-E passed on April 21, 2021. Opinions on the legislative proposals were submitted by ENVI, TRAN and REGI. Then, work continued on compromise proposals.  On June 11, 2021, the Transport, Telecommunications and Energy Council adopted a general approach that is the basis for the Council's positions in trilogues. The main area of changes proposed by the Council are issues related to further support for natural gas infrastructure under TEN-E. The Council decided to end support for new natural gas and oil projects (with the exception of Cyprus and Malta). EU funding for projects that adapt pipelines for hydrogen transmission would be in effect until the end of 2027. No major changes were introduced for energy projects.	The report is expected to be adopted by the European Parliament's ITRE in 2021.  Trilogues could begin in the fourth quarter of 2021.  The new rules would come into force as of January 1, 2022.	Defining rules for the implementation of projects of commor interest — a potentia opportunity to obtain support for PGE CG investments.
Polska Grupa Energetyczna	Regulation of the European Parliament and of the Council 2021/241 establishing a Recovery and Resilience Facility.	Providing a financial framework for recovery of the EU economy after the COVID-19 pandemic and and implementing reforms aimed at increasing its resilience to economic shocks.	On 12 February 2021, the EC published technical guidelines to this Regulation with respect to the "do no harm" principle. According to these guidelines, support from the Recovery and Resilience Facility may be granted to investments in gas-based generation sources and gas-fired cogeneration in Member States facing significant challenges in moving away from coal, provided that:  this support will contribute to the achievement of the EU decarbonisation objectives for the years 2030 and 2050;  such sources will emit less than 250 g CO2e/kWh or will be adapted to use renewable or decarbonised gases.  The Regulation was published on February 18, 2021 and entered into force on February 19, 2021.  On April 30, 2021, Poland's National Recovery Plan (NRP) was approved at a Council of Ministers meeting and subsequently submitted to the European Commission.	Waiting on the EC to issue an opinion on Poland's national recovery plan.	A chance for co-financin, of projects submitted to NRP.



Segments	Regulation	Regulation objectives	Latest conclusions	Next stage	Impact on PGE
PGE Polska Grupa Energetyczna	The Regulation of the European Parliament and of the Council (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment, changing the regulation (EU) 2019/2088 (the Taxonomy Regulation) and delegated act to this regulation determining technical screening criteria.	Facilitation of funding for sustainable economic growth in EU.	The Taxonomy Regulation was published in the Official Journal of the European Union on June 22, 2020 and entered into force on July 12, 2020. On April 21, 2021 the European Commission initially adopted delegated act establishing detailed technical screening criteria on the basis of which economic activities will be assessed to determine whether an activity is environmentally sustainable in relation to climate change prevention and adaptation. This act does not contain technical screening criteria for gas and nuclear power.  On June 4, 2021 the EC published the above-mentioned delegated act in the national languages, thus launching the four-month period (with an option to extend it by another two months) to lodge an objection to the delegated act by the EP and Council.  On July 2, 2021 the EC published an opinion by an expert group formed pursuant to art. 31 EUROATOM and an opinion of SCHEER experts regarding the JRC report concerning nuclear energy assessment in terms of sustainability.  On July 6, 2021 the EC published a delegated act under art. 8 of the taxonomy regulation, specifying rules for reporting participation in trade, CAPEX and OPEX of environmentally sustainable activities.	Expected completion of the legislative process for a delegated act setting out the detailed technical screening criteria and a delegated act under Art. 8 of the Taxonomy Regulation – Q4 2021.  Expected preparation by the EC of an additional delegated act specifying detailed technical screening criteria for gas and nuclear energy – Q4 2021.  Further out, legislation is expected on financial support for certain activities, mainly in the power sector (especially gas), that will contribute to greenhouse gas emission reductions by supporting the transition to a climate-neutral economy.  Publication by the Platform on Sustainable Finance of a report on the taxonomy of harmful activities and activities having no significant environmental impact, report on social taxonomy and report on technical screening criteria for further environmental objectives – Q4 2021.	Impact on availability and cost of funding obtained by PGE Group companies for investments. The matter of recognising nuclear power and gas as environmentally sustainable will be resolved under the additional delegated act.  The obligation to include information on the share in the trade, CAPEX and OPEX of environmentally sustainable activities in the statement on non-financial information or consolidated statement on non-financial information.



Segments	Regulation	Regulation objectives	Latest conclusions	Next stage	Impact on PGE	
PGE Polska Grupa Energetyczna	European Commission Revised Climate, Energy and Environmental Aid Guidelines 2022 (CEEAG)	Definition of new rules for award of state aid, adapted to EU's new reduction targets resulting from the Climate Law.	<ul> <li>On June 7, 2021 the EC published a draft of new CEEAG guidelines, which are to replace the existing guidelines. Public consultations will end on August 2, 2021.</li> <li>The draft proposes the following:         <ul> <li>a wide range of changes in the new guidelines, intended to achieve climate targets,</li> <li>inclusion of mechanisms for financing earlier closure of coal-based plants in the new guidelines,</li> <li>changes in conditions for awarding support for nearly all types of energy generation, especially gas-based investments and linking availability of public aid with rules specified in legislation concerning EU taxonomy.</li> </ul> </li> </ul>	Public consultations and formal completion, as declared by EC, of legislative process in the first half of 2021.  The entry into force of new aid rules is planned for the beginning of 2022.	A change in conditions fo obtaining state aid in PGI Group's segments. Some of the provisions introduce stricter criteria for obtaining state aid, other clarify rules for obtaining it	

# ADDITIONAL INFORMATION WITH REGARD TO INTERNATIONAL REGULATORY ENVIRONMENT

Segments	Proceeding	Objective of the action brought	Key events	Next stage	Impact on PGE Group	
Action brought						
	Proceedings brought by Tempus Energy Germany and T Energy Sweden against the European Commission (case file no. T-167/19).	The objective of the action is to annul the European Commission's Decision not to raise objections to the Polish Capacity Market (SA. 46100) issued as part of the aid procedure.	On March 14, 2019 Tempus Energy Germany and T Energy Sweden brought an action against the EC decision concerning the Polish Capacity Market (case T-167/19). The summary of main reproaches and arguments brought up in the complaint was published in the EU Official Journal on May 6, 2019. From the published abstract it results, that in their action brought they argue that the EC failed, in particular, to initiate formal investigation proceedings (the second stage of the capacity evaluation mechanism) and that the demand side response (DSR) suffered alleged discriminatory treatment within the Polish Capacity Market.	The outcome of the proceedings before the Court of Justice in the case of Tempus Energy and Tempus Energy Technology against the EC in the case concerning the British capacity market (case C-57/19 P) may have an impact on the examination of the complaint. In this case, on September 2, 2021, the Court ruled in favour of the European Commission, which overruled the judgement of the EU Court in the first instance and dismissed the appeal of Tempus Energy and Tempus Energy Technology. A judgement on the complaint of Tempus Energy Germany and T Energy Sweden can be expected in 2021.	Depending on the outcome of the dispute, the case may have an impact on the conditions for the performance of and entering into the capacity contracts within Polish Capacity Market.	



Segments	Proceeding	Objective of the action brought	Key events	Next stage	Impact on PGE Group					
Complaint against Poland lodged by Czechia (Case C-121/21) including an application for interim measures										
	Proceeding in the case Czechia vs Poland (Case C 121/21).	<b>i.</b>	On February 26, 2021 Czechia ledged an interstate complaint against Poland with the Court of Justice concerning the prolongation of the mining concession for KWB Turów. The complaint was accompanied by an application for interim measures in the form of an immediate half of KWB Turów's operation.  A summary of the complaint and key arguments was published in the Official EU Journal on April 19, 2021.  On May 21, 2021 the Vice-President of the Court of Justice of the European Union issued an order on an interim measure as follows: "Poland must immediately cease lignite extraction activities in the Turów mine until a judgment of the Court brings case C-121/21 to an end. An interim measure does not rule on the merits of the case.  The request to repeal the decision of the Vice-President of the Court of Justice of May 21, 2021 was dismissed. Pursuant to a decision issued on September 20, 2021, by the Vice-President of the Court of Justice, the Republic of Poland was obligated to pay to the European Commission a periodic penalty payment in the amount of EUR 500 000 per day, starting from the date of service of this order to the Republic of Poland until the time when the Member State complies with the order (C - 121/21 R).	If the complaint is not withdrawn, the following will be examined in the next stage: procedural motions submitted by the parties to the proceeding, and then the complaints and arguments of the parties to the proceeding before the Court of Justice.	Depending on the outcome of the application for interim measures and the demands specified in the complaint, the case may have an impact on the further operation of the energy complex in Turów.					



# 4. Activities of PGE Capital Group

# 4.1. Main business segments

	Conventional Generation	District Heating	Renewables	Distribution	Supply
Key assets of the segment	5 conventional power plants 2 CHP plants 2 lignite mines	14 CHP plants	17 wind farms 5 photovoltaic power plants 29 run-of-river hydro power plants 4 pumped-storage power plants, including 2 with natural flow	296 278 kms of distribution lines	-
Installed capacity electricity/heat	13 522 MWe/1 329 MWt	2 344 MWe/6 496 MWt	2 326 MWe	-	-
Electricity volumes	Net electricity generation 26.82 TWh	Net electricity generation 4.77 TWh	Net electricity generation 1.35 TWh	Electricity distribution volume 18.64 TWh	Sales to final off-takers 18.65 TWh*
Heat volumes	Heat production 3.60 PJ	Heat production 29.39 PJ	-	-	-
Market position	PGE Group is the leader of lignite mining in Poland (92%)	-	PGE Group is the largest electricity producer from RES with market share of approx. 9% (excluding production	Second domestic electricity distributor with regard to number of customers	Leader in wholesale and retail trading in Poland
	PGE Group is also a na in electricity and district l		from biomass and bio-gas)		
* Data for PGE Obrót S.A.					

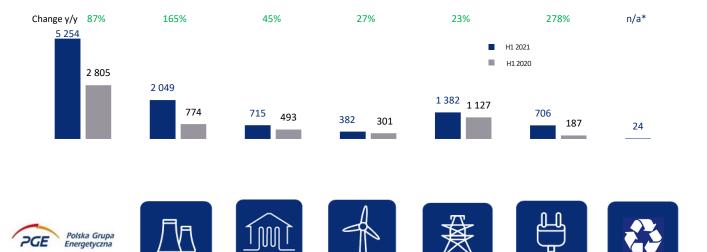


# 4.2. PGE Group's key financial results

The best way to measure the profitability of energy companies is EBITDA. This is a result before depreciation, amortization, income tax and financial activities, including interest from drawn debt. It approximately reflects cash flows from operating activities and makes it possible to compare the results of companies regardless of the value of their assets, level of debt and existing income tax rates.

PGE Group's consolidated results are composed of the financial results of each of its operating segments. The the Conventional Generation segment and Distribution segment made the largest contribution to the Group's result for the half quarter of 2021, participating respectively in 39% and 26% of the Group's EBITDA. The District Heating segment contributed 14%, Supply segment 13% and Renewables segment contributed 7% the Group's EBITDA.

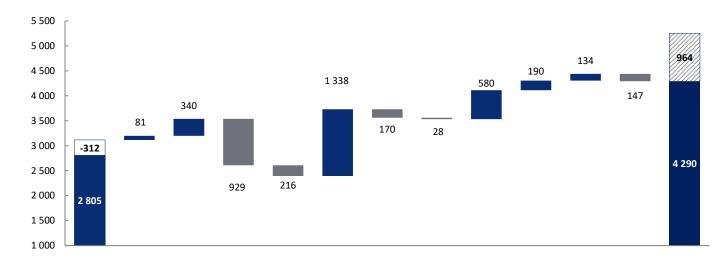
# **EBITDA** of the Capital Group by segments (PLN million)



<sup>\*</sup>The chart does not show data for the first half of 2020, because in that period companies from the Circular Economy segment were presented in Conventional Generation, District Heating and Other Operations.



Chart: Key factors affecting EBITDA in PGE Capital Group (in PLN million).



	EBITDA H1 2020	Result on the sale of electricity at producers <sup>1</sup>	Revenues from heat sales	('() <sub>2</sub>	Fuel costs	Capacity Market <sup>3</sup>	Revenues from ancillary services <sup>4</sup>	Revenues from certificates	Result on the sale of electricity to final customers <sup>5</sup>	Margin on distribution services <sup>6</sup>	Personnel costs <sup>7</sup>	Other <sup>8</sup>	EBITDA H1 2021
Change		81	340	-929	-216	1 338	-170	-28	580	190	134	-147	
Reported EBITDA H1 2020	2 805												
One-offs H1 2020	-312												
Recurring EBITDA H1 2020	3 117	8 163	1 156	2 836	2 090	0	349	154	-54	2 057	2 795	985	
Recurring EBITDA H1 2020		8 244	1 496	3 765	2 306	1 338	179	126	526	2 247	2 661	1 132	4 290
One-offs H1 2021													964
Reported EBITDA H1 2021													5 254

Reversal of impact of total one-offs reducing the reported result.

Reversal of impact of total one-offs increasing the reported result.

<sup>&</sup>lt;sup>1</sup>Revenue from the sale of electricity reduced by the purchase cost of electricity.

<sup>&</sup>lt;sup>2</sup>Adjusted for result on resale of CO<sub>2</sub> emission rights and reversal of impact of provision for CO<sub>2</sub> reversal at Dolna Odra power plant (one-off in 2020).

<sup>&</sup>lt;sup>3</sup>Managerial perspective.

<sup>&</sup>lt;sup>4</sup>RUS –Ancillary services, agreements with the TSO.

 $<sup>{}^5</sup>$ Including margin adjustment on certificates at PGE Group.

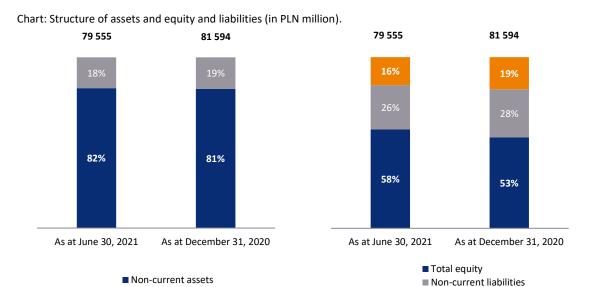
<sup>&</sup>lt;sup>6</sup>Including revenues from distribution services, transmission services (TSO), balance of transferred fees and costs of electricity purchased to cover balancing difference.

<sup>&</sup>lt;sup>7</sup>Personnel costs without including the impact of change in actuarial provision and VLP provision reversal (one-offs).

 $<sup>^8</sup>$ Other without including the impact of change in reclamation provision and LTC compensations (one-offs).



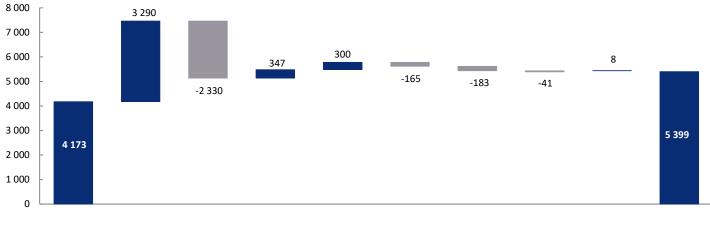
#### CONSOLIDATED STATEMENT OF FINANCIAL POSITION



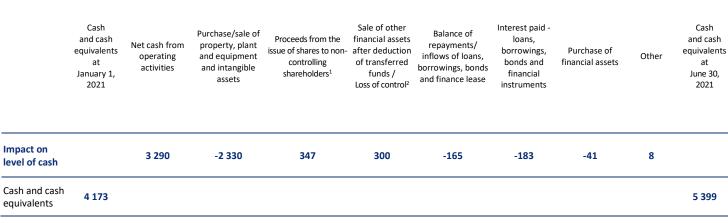
#### CONSOLIDATED STATEMENT OF CASH FLOWS

■ Current assets

Chart: Net change in cash (in PLN million).



Current liabilities

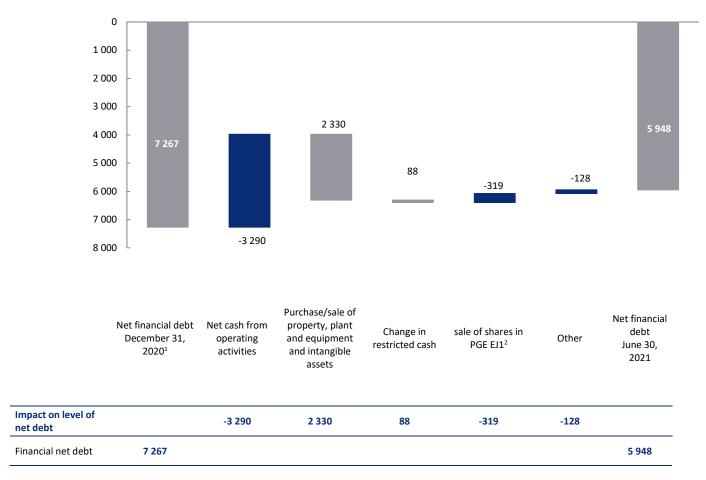


<sup>&</sup>lt;sup>1</sup>Half of funds, which Elektrownia Wiatrowa Baltica–2 sp. z o.o. ("EWB 2") and Elektrownia Wiatrowa Baltica–3 sp. z o.o. ("EWB 3") received from Ørsted for the capital increase.

<sup>&</sup>lt;sup>2</sup>Mainly sale of shares in PGE EJ 1 (value reduced by cash and cash equivalents of the sold company), bonds of PGE EJ 1 and consequence of loss of control and deconsolidation.



Chart: Net debt (in PLN million).

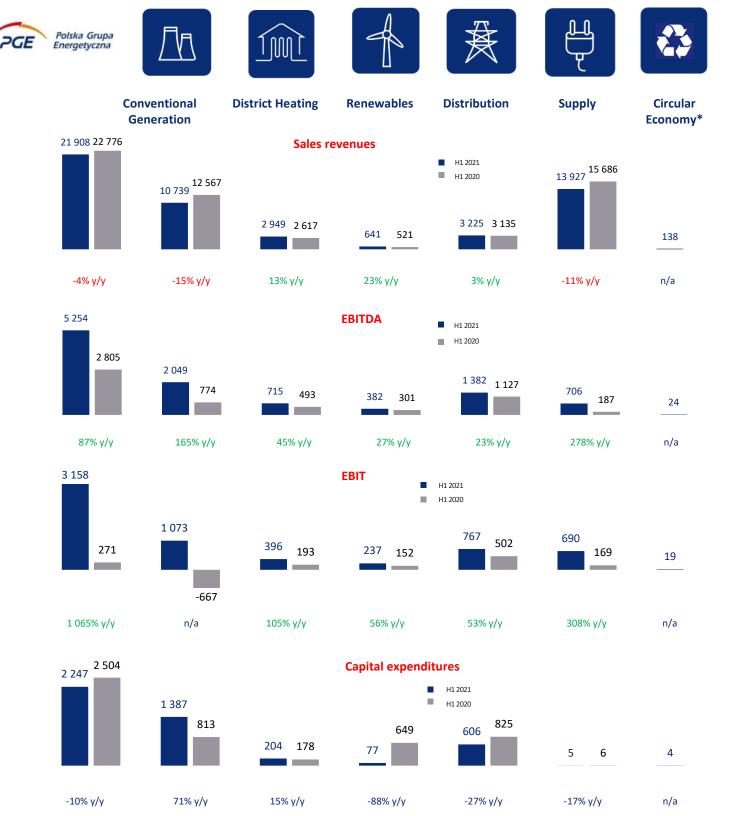


<sup>&</sup>lt;sup>1</sup> In order to standardise the reporting of net debt (adjustment to the method of calculating covenants in loan agreements), starting from the results for the first half of 2021, there has been a change in the presentation, which also results in a change in the comparable periods (as at December 31, 2020), i.e. restricted cash items include only the funds in PGE Dom Maklerski S.A. clients' accounts as collateral for settlements with IRGiT (the Warsaw Commodity Clearing House).

<sup>&</sup>lt;sup>2</sup>Funds from sale of PGE EJ1 (PLN 372 million) reduced by cash and cash equivalents of the sold company (PLN 53 million).



# KEY RESULTS IN BUSINESS SEGMENTS (IN PLN MILLION)



<sup>\*</sup>The charts do not show data for the first half of 2020, because in that period companies from the Circular Economy segment were presented in Conventional Generation, District Heating and Other Operations.



#### BALANCE OF ENERGY OF PGE CAPITAL GROUP

#### **Balance of electricity**

Table: Sales, purchase, production and consumption of electricity in the PGE Capital Group (TWh).

Volume	H1 2021	H1 2020	% change
A. Sales of electricity outside the PGE Capital Group:	52.38	57.51	-9%
Sales to end-users*	18.75	20.12	-7%
Sales on the wholesale and balancing market	33.63	37.39	-10%
B. Purchases of electricity from outside of PGE Group (wholesale and balancing market)	21.35	31.19	-32%
C. Net production of electricity in units of PGE Capital Group	32.94	28.58	15%
D. Own consumption DSO, lignite mines, pumped-storage power plants (D=C+B-A)	1.91	2.26	-15%

<sup>\*</sup> Sale mainly by PGE Obrót S.A. and PGE Energia Ciepła S.A.

The total volume of purchased and generated electricity is higher than the volume of electricity sold. The difference presented in point D results from the necessity to cover grid losses in the distribution business (Distribution System Operator), consumption of energy at lignite mines and consumption of energy at pumped-storage power plants.

The lower purchases and sales in wholesale market results from a lower level of contracted purchases and sales in derivative transactions. The Capital Group to a lesser degree pursued market purchase for the needs of decreased sale on the bilateral market.

Decrease in volume of sales to end-users in the first half of 2021 is a consequence of lower demand for electricity in the corporate customers segment.

#### Production of electricity

Table: Electricity production (TWh).

Electricity production volume	H1 2021	H1 2020	% change
ELECTRICITY PRODUCTION IN TWh, including:	32.94	28.58	15%
Lignite-fired power plants	17.58	14.68	20%
Coal-fired power plants	8.81	7.42	19%
including co-combustion of biomass	0.01	0.01	0%
Coal-fired CHP plants	2.57	2.46	4%
Gas-fired CHP plants	2.46	2.39	3%
Biomass-fired CHP plants	0.15	0.21	-29%
Communal waste-fired CHP plants	0.02	0.02	0%
Pumped-storage power plants	0.36	0.37	-3%
Hydroelectric plants	0.28	0.25	12%
Wind power plants	0.71	0.78	-9%
including RES generation	1.17	1.27	-8%

Higher generation volume in the first half of 2021 mainly results from increased NPS demand due to low outside temperatures, lower net imports and decreased wind generation.

Higher generation at lignite-fired power plants (increase by 2.9 TWh) results from higher average load factors at the Turów power plant by 75 MW, i.e. by 59% and at the Bełchatów power plant by 9 MW, i.e. by 3%. In addition, the unit no. 3 at Turów power plant (+0.6 TWh) was in modernisation in the first half of 2020. And in 2021 the production from a new unit no. 7 at Turów power plant (+0.5 TWh) has commenced.

Higher production in hard coal-fired power plants (up by 1.4 TWh) results from increased generation at Rybnik power plant and Opole power plant, what is a consequence of shorter reserve downtime of the units: by 7 949 h of units 3-8 at Rybnik power plant and by 2 001 h at Opole power plant.

Production at coal-fired CHP plants, gas-fired CHP plants, pumped-storage power plants and waste-to-energy plants remained at similar level as in the base period.



Lower generation from biomass CHP plants is a consequence of technical conditions in Szczecin CHP Plant, where higher heat generation (due to lower outside temperatures) led to lower electricity generation.

Higher generation at hydro power plants was caused by better hydrological conditions.

Lower generation at wind farms results from worse wind conditions in the first half of 2021. Load factor at wind farms in the first half of 2021 was lower by 5 p.p. on average.

Table: Production of heat (PJ).

Heat production volume	H1 2021	H1 2020	% change
Heat production in PJ, including:	32.99	28.53	16%
Lignite-fired power plants	1.59	1.50	6%
Coal-fired power plants	0.38	0.29	31%
Coal-fired CHP plants	23.59	20.76	14%
Gas-fired CHP plants	6.19	5.47	13%
Biomass-fired CHP plants	1.09	0.37	195%
CHP plants fuelled by municipal waste	0.06	0.07	-14%
Other CHP plants	0.09	0.07	29%

External temperatures contributed more than any other factor to higher generation of heat in the first half of 2021 (y/y). As compared to 2020, the average temperatures for the first half of 2021 were by 2.6°C lower, which translated into increased production of heat.

## Sales of heat

In the first half of 2021 the heat sales volume in PGE Capital Group totalled 32.12 PJ and was higher by 4.36 PJ y/y. The above results were caused mainly by higher demand for heat due to the lower average outside temperatures in the first half of 2021.



### 4.3. Operational segments

#### **CONVENTIONAL GENERATION**

#### Segment description and its business model

Przedmiotem działalności segmentu jest wydobycie węgla brunatnego i wytwarzanie energii elektrycznej w źródłach konwencjonalnych.

#### **Conventional Generation** Main revenue items PLN m Main cost items PLN m Sale of electricity\* 6 802 Electricity Fees for CO2 emissions\* 3 2 3 4 26.82 TWh generation Capacity Market 1 0 3 9 Personnel expenses 1391 Sale of heat Cost of production fuels used 1 277 including sale of contracted capacity and heat distribution 116 Depreciation and amortisation, Heat 977 **3.60** PJ liquidation, write-offs generation including capitalised amortisation External services 689 Main result PLN m items **EBIT** 1073 **EBITDA** 2 049 reported

The main source of revenue in the Conventional Generation segment is revenue from the sale of electricity on the wholesale market, based on electricity prices that are shaped by supply and demand mechanisms, taking into account the variable costs of generation. At the same time, the segment's key cost items, given their size and volatility, and thus their impact on operating results, are the cost of production fuels, mainly hard coal and natural gas, as well as fees for CO<sub>2</sub> emissions. Lignite-based production, which is of key significance for the Group, is based on own mines, therefore its cost is relatively stable and reflected mainly in fixed-cost items, i.e. personnel costs, third-party services and depreciation.

Revenue from the Capacity Market, a mechanism introduced to prevent electricity shortages in the NPS, constitutes a significant item in the segment's revenue in 2021. PGE GIEK S.A.'s power plants receive fees for performing the capacity obligation (a Capacity Market entity being on standby to supply electricity to the system and the obligation to supply specified capacity to the system when the system is under threat). Capacity Market revenue compensated for **revenue from ancillary services**. The cold intervention reserve and operational capacity reserve services were discontinued, while revenue from capacity reallocation remained.

In addition, this segment generates **revenues from sales of heat** produced both at industrial plants and at the Szczecin CHP plant and Pomorzany CHP plant <sup>12</sup>, which form part of ZEDO.

<sup>\*</sup> managerial perspective

<sup>&</sup>lt;sup>12</sup> From July 1, 2021, Szczecin CHP, Pomorzany CHP and the district heating network in Gryfino were included in the structures of the District Heating segment. 48 of 96

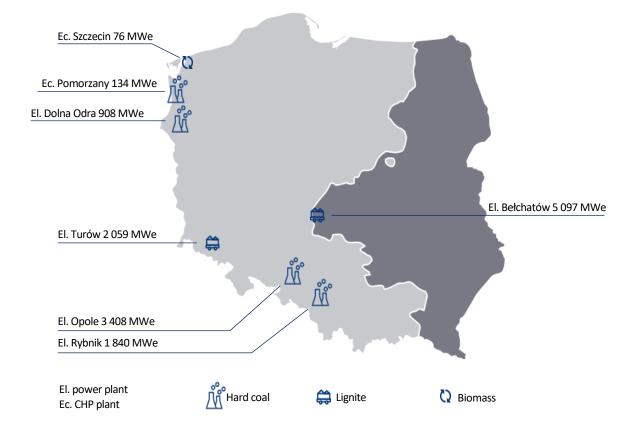


### **ASSETS**

Conventional Generation segment consists of: 2 lignite mines, 5 conventional power plants and 2 CHP plants.

Conventional Generation is the leader of lignite mining (its share in the extraction market of this raw material accounting for 92%<sup>13</sup> of domestic extraction), it is also the largest generator of electricity as it generates approx. 32%<sup>14</sup> of domestic gross electricity production. The generation is based on lignite extracted from mines owned by the company as well as hard coal and biomass.

Diagram: Main assets of the Conventional Generation segment with their installed capacity.



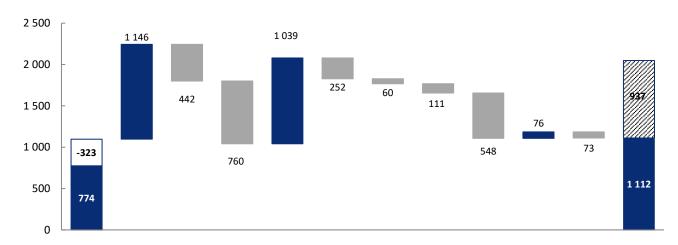
 $<sup>^{\</sup>rm 13}$  Own calculations based on data from Central Statistical Office of Poland.

<sup>&</sup>lt;sup>14</sup> Own calculations based on data from PSE S.A.



#### KEY FACTORS FOR THE RESULTS OF THE SEGMENT

Chart: Key changes of EBITDA in Conventional Generation (in PLN million) - managerial perspective.



	EBITDA H1 2020	Electricity production difference in volume	Electricity production difference in price	Result on the optimization of the electricity trade	Capacity Market <sup>1</sup>	Result on sale of CO <sub>2</sub>	Revenues from agreement with TSO	Costs of fuel	Costs of CO <sub>2</sub> <sup>2</sup>	Personnel expenses <sup>3</sup>	Other <sup>4</sup>	EBITDA H1 2021
Change		1 146	-442	-760	1 039	-252	-60	-111	-548	76	-73	
Reported EBITDA H1 2020	774											
One-offs H1 2020	-323											
Recurring EBITDA H1 2020	1 097	5	953	905	0	255	221	1 166	2 686	1 474	911	
Recurring EBITDA H1 2020		6	657	145	1 039	3	161	1 277	3 234	1 398	984	1 112
One-offs H1 2021												937
Reported EBITDA H1 2021												2 049

Reversal of impact of total one-offs reducing the reported result

Reversal of impact of total one-offs increasing the reported result

Key factors affecting the EBITDA result of Conventional Generation segment on y/y basis included:

- **Higher electricity production volume** in PGE GiEK by 4.2 TWh due to increased degree of use of units by PSE S.A. resulting from low outside temperatures, lower net import and lower wind generation (see p. 3.2 of this report).
- Decrease in electricity sales prices due to lower prices of forward contracts with delivery in 2021 as compared to contracts with 2020 delivery.
- Lower result on optimisation of electricity portfolio due to decreased volume of electricity trading by 10.8 TWh, with lower margin realized on electricity trading.
- Capacity Market, a mechanism, which was not present in the base period.
- Result on sale of CO<sub>2</sub>, which occured in 2020 (free allowances granted for Opole power plant and Rybnik power plant and resale of surplus of allowances, purchased for delivery year 2019).

<sup>&</sup>lt;sup>1</sup>Managerial perspective.

<sup>&</sup>lt;sup>2</sup>Adjusted for result on resale of CO₂ emission rights, assigned to a given period and reversal of impact of provision for CO₂ reversal at Dolna Odra power plant (one-off in 2020).

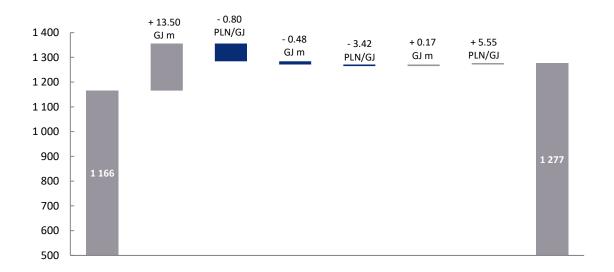
<sup>&</sup>lt;sup>3</sup>Personnel costs without including the impact of change in actuarial provision (one-off).

<sup>&</sup>lt;sup>4</sup>Other without including the impact of change in reclamation provision (one-off).



- Lower revenues from ancillary control services, mainly as a result of lack of revenues cold reserve and from the Operational Capacity Reserve.
- **Higher fuel consumption costs** mainly hard coal, due to increased generation based on this fuel (see p. 3.2 of this report). Main changes on different types of fuel are presented in the chart below.
- **Higher CO<sub>2</sub> costs** as a result of higher CO<sub>2</sub> emissions volume by 4.2 million tons due to generation higher by 4.2 TWh. Main changes are shown in the chart below.
- Lower personnel expenses due to ongoing optimisation process.

Chart: Costs of production fuels consumption in Conventional Generation (in PLN million).



	Cost of fuels H1 2020	Hard coal volume	Hard coal price	Biomass volume	Biomass price	Light and heavy oil volume	Light and heavy oil price	Cost of fuels H1 2021
Change		190	-72	-13	-6	6	6	
Cost of fuels H1 2020	1 166	1	073		61	3	32	
Cost of fuels H1 2021		1	191		42	4	14	1 277

Table: Data on use of production fuels consumption in Conventional Generation.

	H1 2	021	H1 2020		
Fuel type	Volume	Cost	Ilość	Volume	
	(tons ths)	(PLN million)	(tys. ton)	(tons ths)	
Hard coal	3 942	1 191	3 345	1 073	
Biomass	216	42	247	61	
Fuel oil – light and heavy	26	44	22	32	
TOTAL		1 277		1 166	



Chart: CO<sub>2</sub> costs in Conventional Generation segment (in PLN million).

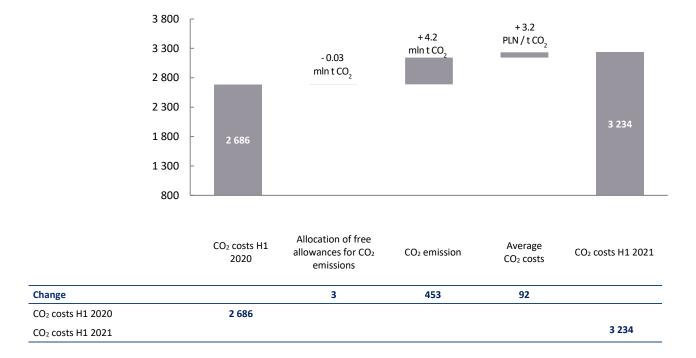


Table: Data on CO<sub>2</sub> costs in Conventional Generation.

Data regarding CO₂	H1 2021	H1 2020	% change
Allocation of free allowances for CO <sub>2</sub> emissions (tons)	51 645	79 343	-35%
CO <sub>2</sub> emission* (tons)	29 098 524	24 912 275	17%
Average CO <sub>2</sub> costs (PLN/t CO <sub>2</sub> )	111.34	108.16	3%

<sup>\*</sup> Estimates, emissions not verified - the emissions will be settled and certified by the authorised verifier of CO<sub>2</sub> emission on the ground of yearly reports of volume of CO<sub>2</sub> emissions.

### **CAPITAL EXPENDITURES**

Table: Capital expenditures incurred in Conventional Generation segment in the first half of 2021 and 2020.

PLN million	H1 2021	H1 2020	% change
Investments in generating capacities, including:	1 359	691	97%
<ul> <li>Development</li> </ul>	921	183	403%
<ul> <li>Modernisation and replacement</li> </ul>	438	508	-14%
Other	28	35	-20%
TOTAL	1 387	726	91%
Capitalised costs of overburden removal in mines	0	87	-
TOTAL with capitalized costs of overburden removal	1 387	813	71%

#### KEY EVENTS IN THE CONVENTIONAL GENERATION SEGMENT

Key development investments:

- Annex no. 1 to the contract to build a capacity offtake system for units 9 and 10 as part of the investment "Construction of two gasand-steam units at PGE GiEK S.A.'s Dolna Odra branch" was signed on January 5, 2021.
- An agreement was signed with Energoprojekt Katowice S.A. on February 2, 2021 to draft an environmental impact report and obtain a decision on environmental conditions for the project "Construction of new low-emission unit at Rybnik power plant," and work began on an application to PSE S.A. for issue of conditions for connecting to the National Power System.



- On February 25, 2021 syndicate of Mitsubishi Hitachi Power Europe GmbH, Tecnicas Reunidas S.A., Budimex S.A. signed an Annex no. 10 with PGE GiEK S.A. to the contract for construction of unit no. 7 in the Turów power plant. The annex included prolongation of the contract realization by 6 months until April 30, 2021 and change in the Contractor's remuneration. On March 31, 2021 PGE GiEK S.A. and the consortium signed a regulatory run completion protocol for unit 7 at Turów power plant. A 720-hour test run for unit 7 began. On April 30, 2021 information was taken on another delay in commissionings of the unit. The unit was officially, by protocol, put into operation on May 14, 2021.
- Installing piles for machinery building at unit 10 and for a boiler room chimney for units 9 and 10 was completed on March 29, 2021 as part of the investment "Construction of two gas-and-steam units at PGE GiEK S.A.'s Dolna Odra branch".
- Final handover and commissioning on a carburising system at the new unit of the Turów power plant was carried out on May 31, 2021.
- On June 17, 2021 PSE S.A. obtained a final decision on a building permit for PSE S.A. investments enabling the connection of units 9
  and 10 at the Dolna Odra power plant that are currently under construction, along with a backup transformer to the transmission
  network.
- On June 23, 2021, the Management Board of PGE GiEK adopted a resolution to transfer to Rybnik 2050 sp. z o.o. rights to the
  construction project for a new low-emission unit at the Rybnik power plant and accepted the content of the proposed agreement
  for the sale of rights to the project and the obligation to sell the right of perpetual usufruct of land properties intended for the Project.

Key modernisation investments aimed at reducing emissions to the environment:

- Final handover and commissioning of modernised electrostatic precipitator no. 5 at Turów power plant took place on January 26, 2021
- Final handover of modernised electrostatic precipitator at unit 2 of Opole power plant took place on February 5, 2021.
- A modernised flue-gas desulphurisation system for units 9 and 10 at Bełchatów power plant was put into operation on February 10, 2021.
- Construction of the 3rd catalytic layer in the SCR reactor (selective catalytic reduction system for converting nitrogen oxide particles into water and nitrogen) for unit 8 at Rybnik power plant began on February 19, 2021.
- An agreement was signed with Eltur-Serwis Sp. z o.o. on March 3, 2021 for the modernisation of the electrostatic precipitator at Turów's unit 6.
- A test run for an SCR system at Dolna Odra's unit 5 was launched on March 9, 2021.
- The electrostatic precipitator of units 7 and 6 at Rybnik plant was put into operation on March 25, 2021.
- The final handover of the SNCR system (reducing NOx via selective non-catalytic reduction) for unit 2 at Opole plant took place on March 30, 2021.
- On April 15, 2021, as part of a contract for the modernisation of the spraying levels of FGD absorbers for units 2-4 at the Opole power plant, an acceptance protocol for the stage involving the completion of works on the absorber of unit 3 was signed.
- The SCR installation of unit 5 at the Dolna Odra power plant was commissioned on April 28, 2021.
- The FGD systems at units 5 and 6 of the Belchatów power plant were put into operation on May 31, 2021.
- The SCR installation of unit 8 at the Dolna Odra power plant was commissioned on June 11, 2021.
- The handover and commissioning of an OPII ash settling tank at the Turów power plant was carried out on June 24, 2021.
- An electrostatic precipitator at unit 8 of the Rybnik power plant was handed over for regulatory operation on June 21, 2021.
- Works on the assembly of a facility installation to reduce Hg emissions for units 7–12 at the Belchatów power plant were completed on June 30, 2021.
- An SCR system for unit 8 at the Rybnik power plant was commissioned for initial operation after the installation of the third catalyst layer on June 30, 2021.
- On July 29, 2021, modernisation works were completed and a dust emission reduction installation on unit 6 at the Turów power plant was synchronised.



### **KEY PROJECTS IN H1 2021**

Aim of the project	Budget (net, without costs of financing)	Capital expenditures incurred so far (net, without costs of financing)	Capital expenditures in H1 2021 (net, without costs of financing)	Fuel/ Net efficiency	Contractor	Expected date of completion	Aim of the project	
Construction of new unit in Turów power plant								
Construction of power unit no. 7 with a capacity of 490 MW in Turów power plant	PLN 4.4 billion	PLN 4.3 billion	PLN 546 million	Lignite/ 43%	Syndicate of companies: MHPSE, Budimex and Tecnicas Reunidas	Q2 2021	The unit no. 7 was officially, by protocol, commissioned on May 14, 2021. On June 19, 2021, the planned standstill of the unit began. The contractor performed a technical inspection of the equipment after the first month of operation of the unit. The commissioning of the block after the shutdown was completed on July 24, 2021.	
				Construction	of new units in Dolna Odra powe	r plant		
Construction of two CCGT units no. 9 and 10 in Dolna Odra power plant	PLN 4.3 billion	PLN 380.3 million	PLN 319 million*	Natural gas/ 63%	Syndicate of companies: General Electric (consortium leader) and Polimex Mostostal	December 2023	At the end of June 2021, the progress of work under the project was estimated at approx. 37%. Construction works related to the laying of foundations for the main buildings of new units are underway at the construction site.	

<sup>\*</sup> Expenditures incurred do not include expenses in the form of advances paid to the General Contractor for the Project and to the other contractor in amount of PLN 564 million.



#### DISTRICT HEATING

# Segment description and its business model

Core business of the District Heating segment includes production of heat and electricity from conventional sources as well as distribution of heat.

#### **District Heating** Main cost items PLN m Heat **29.39** pJ Cost of production fuels used 1032 generation Main revenue items PLN m 535 Sale of heat Depreciation and amortisation, 1373 Including contracted capacity and heat distribution 319 liquidation, write-offs Electricity **4.77** TWh Sale of electricity\* 1 178 generation Personnel expenses 221 Capacity Market 138 External services 213 Main result PLN m items

As in the case of Conventional Generation, this segment's significant revenues are **revenues from electricity sales**, however, they are usually directly related to generation of heat which in turn depends on demand that is highly seasonal and depends on external temperatures. This is why, in contrast to industrial power plants in Conventional Generation, as a rule, CHP plants do not have any considerable impact on the development of prices for electricity on the wholesale market.

396

715

**EBIT** 

**FBITDA** 

reported

Revenues from the sale and distribution of heat are regulated revenues. Energy companies independently set tariffs and present them to the President of the Energy Regulatory Office (the "ERO President") for approval. Heat production at PGE Group takes place in cogeneration units, which tariffs for heat are calculated using a simplified approach (compared to tariffs based on a full cost structure), based on reference prices, conditioned on average sales prices for heat generated in units with specific fuel other than cogeneration units. They are published each year by the ERO President. Tariffs for heat production for cogeneration units in a given tariff year thus reflect changes in the costs of heat-generation units (not co-generation units) in the previous calendar year. The cost approach is applied in the case of tariffs for heat distribution, which allows to cover justified costs (mainly the costs of heat losses and property tax) and a return on invested capital, in line with guidelines from the ERO President. Distribution tariffs for heat are in place at branches in Gorzów and Zgierz, as well as by Kogeneracja S.A., PGE Toruń and Zielona Góra CHP.

Generation of heat and electricity is directly related to key variable costs of the segment, i.e. the cost of production fuel used (in particular, hard coal and gas) and the cost of fees for CO<sub>2</sub> emissions.

Electricity production in high-efficiency cogeneration is additionally remunerated. Until 2018, CHPs generated revenue from the sale of energy origin certificates, i.e. cogeneration certificates (yellow and red). From 2019, due to a change in support model, they receive support at a level covering increased operating costs related to production. For large units, this are set on an individual basis. The support mechanism in the form of certificates is in place also for biomass-fired generating assets. This type of production is additionally remunerated by awarding origin certificates, i.e. green certificates, the sale of which generates additional revenue. Tithin the segment such revenues is obtained at biomass unit in Kielce CHP.

Revenue from the Capacity Market, a mechanism introduced to prevent electricity shortages in the National Power System, constitutes a significant item in the segment's revenue, starting from 2021. CHP plants receive fees for performing the capacity obligation (a Capacity Market entity being on standby to supply electricity to the system and the obligation to supply specified capacity to the system when the system is under threat).

<sup>\*</sup> managerial perspective

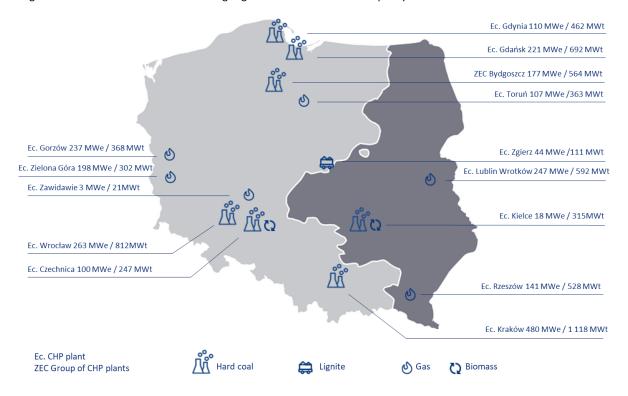


#### **ASSETS**

District Heating within PGE Capital Group combines CHP plants separated from the EDF Polska assets acquired on November 14, 2017 and CHP plants separated from PGE GiEK. Since January 2, 2019 the following companies has been included in the segment. 15

District Heating is the largest heat producer in Poland. Generation is based mainly on hard coal and gas.

Diagram: Main assets of the District Heating segment and their installed capacity.



<sup>&</sup>lt;sup>15</sup> In addition, from July 1, 2021, Szczecin CHP, Pomorzany CHP and the district heating network in Gryfino, recognised until June 30, 2021 as part of the Conventional Generation segment, were included in the structures of the District Heating segment.

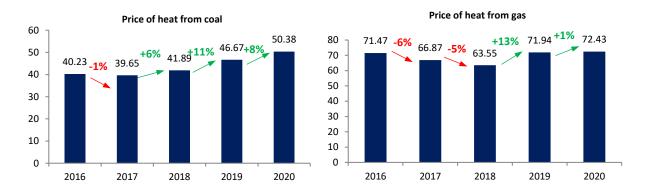


#### TARIFFS IN DISTRICT HEATING

#### Description of tariffs in the segment

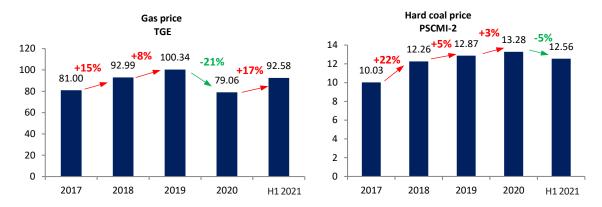
Due to the fact that the income on heat sales for CHP plant are tariffed as part of the so-called simplified method, they are characterised by a relative delay in the transfer of costs (annual or two-year). They are based on the year-to-year dynamics of average costs (including fuels used) incurred by entities that are not co-generation entities for the year preceding the time of tariff setting.

Charts: Changes in the reference price of heat for hard coal and natural gas (PLN/GJ).



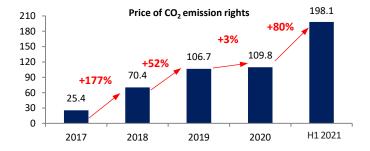
Source: ERO.

Charts: Changes in costs of fuels - hard coal (PLN/GJ) - PSCMI 216 and gas (PLN/MWh) -TGE.



Source: ARP, TGE.

Chart: Changes in price of CO<sub>2</sub> emission rights<sup>17</sup> (PLN/t).



Source: ICE.

<sup>&</sup>lt;sup>16</sup>PSCMI-2 Polish Steam Coal Market Index 2 - The average prices for pulverised coals sold to industrial and municipal heat plants, other industrial customers and other domestic customers in Poland.

 $<sup>^{17}</sup>$ Arithmetic average of the daily and monthly records in a given period (spot price).



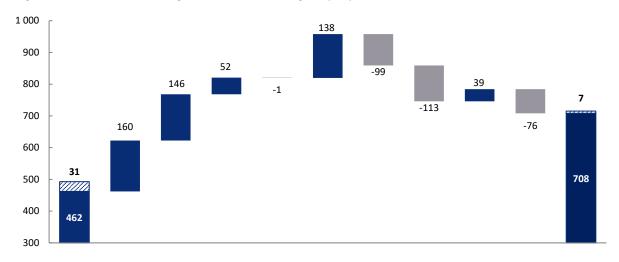
Reflecting previous cost increases, the reference price of heat produced from hard coal increased by 8% in 2020. It is a base to the increase in heat prices for co-generation entities establishing the tariff during 2021. In the first haf of 2021 the average market price of coal decreased by 5%, while the average price of CO<sub>2</sub> emission rights increased by 80%.

Tariffs for the production of heat from gas in 2021 are set based on an increase in the reference price (+1%), whereas in the first half of 2021 gas prices are already higher than in previous periods. Prices stand at PLN 93/MWh and are largely due to forward contracts.

Weather conditions also substantially affect the segment's results. Temperatures directly shape the level of heat demand. Simultaneously, the level of heat production determines the level of electricity production in co-generation, which is an additional source of revenues that decisively affects the CHP plant's profitability.

#### KEY FACTORS FOR THE RESULTS OF THE SEGMENT

Chart: Key changes of EBITDA in District Heating (in PLN million) – managerial perspective.



	EBITDA H1 2020	Heat production - volume	Heat production - price <sup>1</sup>	Electricity production - volume	Electricity production – price <sup>1</sup>	Capacity Market revenues	Costs of fuel	Costs of CO <sub>2</sub> <sup>2</sup>	Personnel expenses <sup>3</sup>	Other <sup>4</sup>	EBITDA H1 2021
Change		160	146	52	-1	138	-99	-113	39	-76	
Reported EBITDA H1 2020 One-offs H1 2020	493 31										
Recurring EBITDA H1 2020	462	10	65	1 1	.27	0	933	422	261	115	
Recurring EBITDA H1 2020		13	71	1 1	.78	138	1 032	535	222	191	708
One-offs H1 2021 Reported EBITDA H1 2021											7 715



Reversal of impact of total one-offs increasing the reported result.

<sup>&</sup>lt;sup>1</sup> Includes costs of certificates redemption.

 $<sup>^2</sup>$ Adjusted for result on resale of CO $_2$  emission rights, assigned to a given period.

<sup>&</sup>lt;sup>3</sup>Personnel costs without including the impact of change in actuarial provision (one-off).

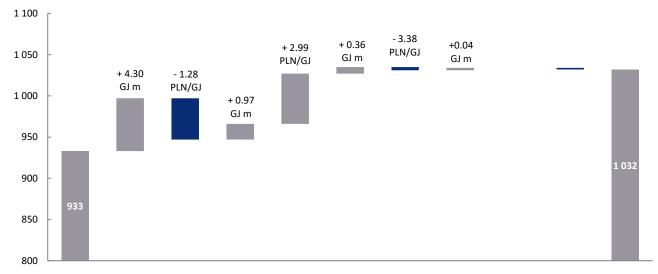
<sup>&</sup>lt;sup>4</sup>Other without including the impact of change in reclamation provision and LTC compensations (one-off).



Key factors affecting the EBITDA result of District Heating segment on y/y basis included:

- **Higher volume of heat production** in the first half of 2021 y/y is a result of lower outside temperatures as compared to analogical period of 2020 the average temperatures were by 2.6° C lower, what translated into increased heat production (by 3.8 PJ).
- Increase of heat sale price is a result of increased tariffs for heat for the CHP plants following the publication by the ERO of new reference prices for heat production in units not being co-generation units.
- Higher electricity production volume in the segment by 0.5 TWh as a result of increased electricity production in co-generation, due to higher demand for heat.
- Decrease of electricity sale prices due to lower forward contracts with 2021 delivery as compared to the contracts with 2020 delivery.
- Capacity Market, a mechanism, which was not present in the base period.
- **Higher fuel consumption costs** are caused by increased volume of hard coal consumption and higher gas prices. The details are shown in the chart below.
- **Higher CO<sub>2</sub> costs** are mainly a result of higher price of allowances and lower allocation of allowances granted free of charge. The details are shown in the chart below.
- Lower personnel expenses result mainly from decreased employment y/y.

Chart: Consumption costs of production fuels in District Heating (in PLN million).



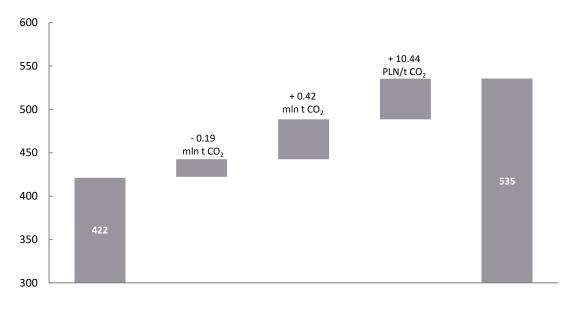
	Costs of fuel H1 2020	Hard coal volume	Hard coal price	Gas volume	Gas price	Biomass volume	Biomass price	Light and heavy oil volume	Light and heavy oil price	Other raw materials	Costs of fuel H1 2021
Change		64	-50	19	61	8	-4	3	0	-2	
Costs of fuel H1 2020	933	5:	14	38	38	1	6		7	8	
Costs of fuel H1 2021		52	28	46	58	2	0	3	10	6	1 032

Table: Data on use of production fuels consumption in District Heating.

	H1:	2021	H1 2020		
Fuel type	Volume	Cost	Volume	Cost	
	(tons ths)	(PLN million)	(tons ths)	(PLN million)	
Hard coal	1 719	528	1 547	514	
Gas (cubic metres ths)	668 182	468	632 977	388	
Biomass	117	20	74	16	
Fuel oil and other raw materials	-	16	-	15	
TOTAL		1 032		933	



Chart: CO<sub>2</sub> costs in District Heating (PLN million).



	CO <sub>2</sub> costs H1 2020	Allocation of free allowances for CO <sub>2</sub> emissions	CO <sub>2</sub> emission	Average CO <sub>2</sub> costs	CO₂ costs H1 2021
Change		20	46	47	

CO<sub>2</sub> costs H1 2020 422

CO<sub>2</sub> costs H1 2021 535

Table: Data on CO<sub>2</sub> costs in District Heating.

Data regarding CO₂	H1 2021	H1 2020	% change	
Allocation of free allowances for CO <sub>2</sub> emissions (tons)	317 309	504 011	-37%	
CO <sub>2</sub> emission* (tons)	4 815 114	4 392 867	10%	
Average CO <sub>2</sub> costs (PLN/t CO <sub>2</sub> )	119.04	108.60	10%	

<sup>\*</sup> Estimates, emissions not verified - the emissions will be settled and certified by the authorised verifier of CO<sub>2</sub> emission on the ground of yearly reports of volume of CO<sub>2</sub> emissions

### **CAPITAL EXPENDITURES**

Table: Capital expenditures incurred in District Heating segment in the first half of 2021 and 2020.

PLN million	H1 2021	H1 2020	% change
Investments in generating capacities, including:	190	160	19%
<ul> <li>Development</li> </ul>	119	55	116%
<ul> <li>Modernisation and replacement</li> </ul>	71	105	-32%
Other	14	18	-22%
TOTAL	204	178	15%



#### KEY EVENTS IN THE DISTRICT HEATING

On June 23, 2021 an agreement (the "Agreement") was concluded with syndicate of companies Polimex Mostostal S.A. (Consortium leader) and Polimex Energetyka sp. z o.o. (Consortium partner) for construction of gas and steam CHP plant in Siechnice for KOGENERACJA S.A. (New Czechnica CHP plant). Subject matter of the agreement is realisation by the Contractor of turn-key construction of CCGT unit with a total gross capacity of 179.4 MWe and 162.9 MWt, heat accumulator and four water boilers with total capacity of 152 MWt. New units will replace currently existing hard coal-fired CHP plant. The value of the agreement for construction of CHP (EPC agreement) amounts to PLN 1 425.8 thousand gross. In connection with the EPC agreement, a LTSA (Long-Term Service Agreement) was also signed with regard to service for 103 months starting from the commissioning date of the units. The value of the LTSA amounts to PLN 1 572.4 thousand gross (according to the average EUR/PLN exchange rate on June 21, 2021).

The project schedule provides for the commissioning of the CCGT unit in the second quarter of 2024.



#### **RENEWABLES**

#### Segment description and its business model

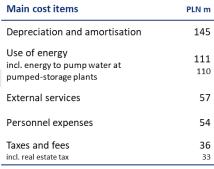
This segment is involved in the generation of electricity from renewable sources and in pumped storage power plants.

# **Renewables**



Main revenue items	PLN m	
Sale of electricity	390	
Capacity Market	145	
Sale of certificates	82	ı
Ancillary services	18	





Main result items	PLN m
EBIT	237
EBITDA	382

The Renewables segment is based mainly on revenues from the sale of electricity, however contrary to production at industrial plants within the Conventional Generation segment, this revenue is subject to a larger degree to changes in weather conditions and prices on the spot market due to the renewables sales model in place. Electricity output volume translates into property rights (green certificates) and revenue from the sale of energy origin certificates obtained by the segment's assets, excluding hydropower plants over 5 MWe.

Revenue from the Capacity Market, a mechanism introduced to prevent electricity shortages in the National Power System, constitutes a significant item in the segment's revenue, starting from 2021. Selected power plants in the Renewables segment receive fees for performing the capacity obligation (a Capacity Market Entity being on standby to supply electricity to the system and the obligation to supply specified capacity to the system when the system is under threat). Capacity Market revenue compensated for revenue from ancillary services. The readiness intervention reserve service was discontinued.

On the cost side, the most important items include: depreciation of segment assets, use of energy to pump water at pumpedstorage plants and third-party services, mainly the repair services. Property tax and employee wages also constitute a significant cost item in this segment.



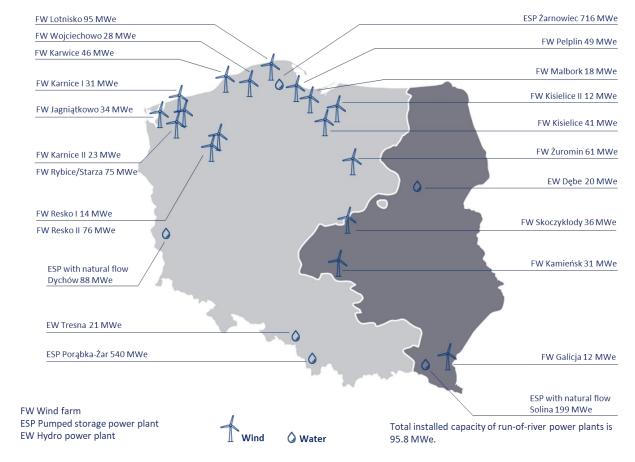
#### <u>Assets</u>

The PGE Capital Group's operations in renewable energy are managed by the PGE Energia Odnawialna S.A. Due to the profile of operations, the segment includes PGE Baltica sp. z o.o. This company is responsible for all activities related to off-shore wind farms.

Assets in the segment include:

- 17 wind farms,
- 5 photovoltaic power plants,
- 29 run-of-river hydro power plants,
- 4 pumped-storage power plants, including 2 with natural flow.

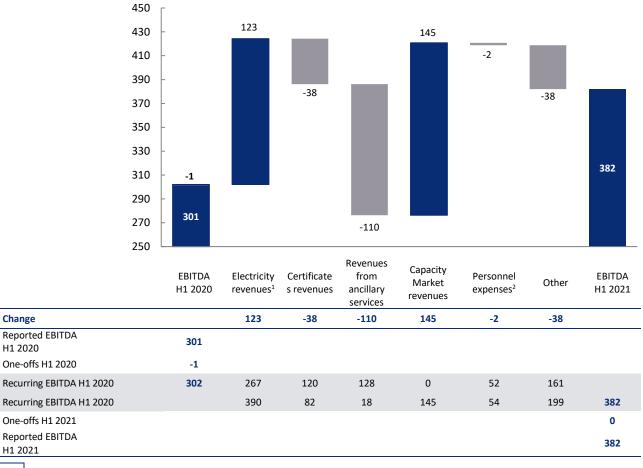
Diagram: Main assets of the Renewables segment and their installed capacity.





#### KEY FACTORS FOR THE RESULTS OF THE SEGMENT

Chart: Key changes of EBITDA in Renewables (in PLN million) – managerial perspective.



Reversal of impact of total one-offs reducing the reported result.

Key factors affecting the y/y results of Renewables included:

- Increase in revenues from electricity sales results from: higher electricity sale price by PLN 107/MWh y/y, what translated into
  increase of revenues by approx. PLN 147 million; offset by lower sales volume by 137 GWh, what caused revenues decrease of
  approx. PLN 24 million.
- Lower revenues from sales of certificates result from: decreased generation volume by 192 GWh, what translated into decrease of revenues by approx. PLN 28 million; lower average sale price of certificates by PLN 16/MWh y/y, what translated into decrease of revenues by approx. PLN 10 million.
- Lower sales revenues from ancillary services result mainly from change in agreement for provision of services and withdrawal of Readiness Interventional Reserve among others.
- Capacity Market, a mechanism, which was not present in the base period.
- Decrease in other results mainly from higher operating costs in connection with new assets commissioned from the second quarter to the end of 2020: 3 wind farms and 4 PV plants. Additionally, from the beginning of 2021 pumped-storage units are obligated to pay grid fees in full in order to pump water that is used to generate electricity. The change in model was caused by the discontinuation of certain ancillary services.

<sup>&</sup>lt;sup>1</sup> The sum of electricity revenues includes revenues from main generation technologies (wind, water, PV, pumped storage).

<sup>&</sup>lt;sup>2</sup> Personnel costs without including the impact of change in actuarial provision (one-off).



#### **CAPITAL EXPENDITURES**

Table: Capital expenditures (excluding acquisitions) incurred in Renewables segment in the first half of 2021 and 2020.

PLN million	H1 2021	H1 2020	% change
Investments in generating capacities, including:	70	643	-89%
<ul><li>Development</li></ul>	19	630	-97%
<ul> <li>Modernisation and replacement</li> </ul>	51	13	292%
Other	7	6	17%
TOTAL	77	649	-88%

#### KEY EVENTS IN THE RENEWABLES

As part of the ordinary auctions for the sale of energy from renewable sources announced by the President of the Energy Regulatory Office, held from May 26 to June 11, 2021, PGE Group's 19 photovoltaic projects won auctions for the sale of electricity in renewable energy installations up to 1 MW.

As part of the project, accompanying infrastructure related to power off-take will be built next to solar power plants. All installations will be built using modern PV modules, the technical parameters of which allow for high productivity in weather conditions typical for climatic zones in Poland. Photovoltaic installations will be built not only under the auction system, but also on the basis of long-term contracts for the sale of electricity ("PPA").

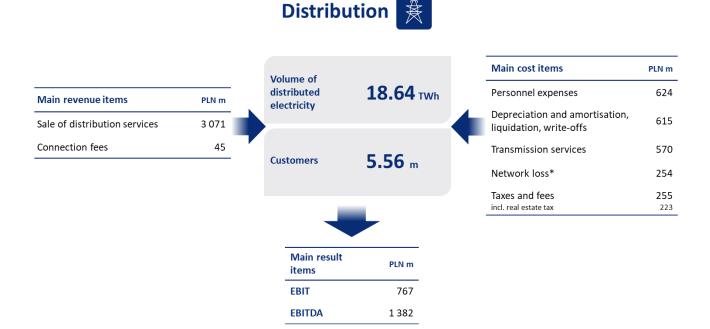
In accordance with the PV Program, PGE Group intends to launch within the next decade up to 3 GW capacities of solar installations and solidify its leading position on the renewable energy market in Poland. The Company has so far secured more than 2500 ha of land for PV farms with a total capacity of approx. 2 GW.



#### DISTRIBUTION

#### Segment description and its business model

Core business of the segment includes supply of electricity to final off-takers through the grid and HV, MV and LV infrastructure.



<sup>\*</sup> managerial perspective.

Segment revenue is based on a tariff for electricity distribution services, which is approved by the ERO President every year at company request and is regulated. The tariff allow costs related to the distribution system operator's on-going activities to be transferred. These are both justified operating costs, depreciation, as well as costs related to the necessity to cover grid losses on electricity distribution or the purchase of transmission services from the TSO. At the same time, the tariff reflects the costs transferred in fees such as the RES fee, the transition fee, the co-generation fee and – from 2021 – the capacity fee.

The key element shaping the Distribution segment's result is **return on company's invested capital**. This is based on the Regulatory Asset Base ("RAB"), which is established on the basis of completed investments and taking into account asset depreciation. The Regulatory Asset Base serves as the basis for calculating return on capital, using weighted average cost of capital, which is published by the ERO President in accordance with a set formula and using as the risk free rate the average yield on 10-year State Treasury bonds with the longest maturity during the 36-month period preceding the tariff application submission, quoted on the Treasury BondSpot market. In addition, return on capital depends on the achievement of individual quality targets set by the ERO President for performance indicators including: interruption time, interruption frequency, connection time and (not yet included) time to provide metering and settlement data.



# VOLUME, CUSTOMERS AND OPERATING DATA

PGE Dystrybucja S.A. operates in the area of 129 829 sq. km and delivers electricity to approximately 5.56 million customers.

Diagram: Area of PGE distribution grid.



Table: Volume of distributed energy and number of customers in the first half of 2021 and 2020.

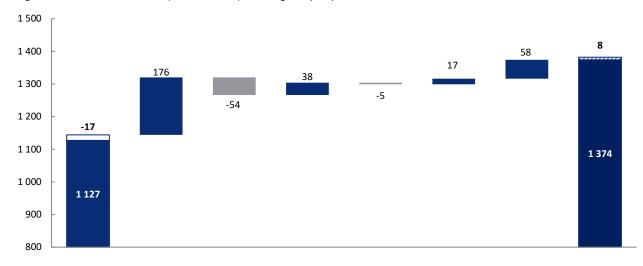
Tariff	Volume	(TWh)*	Number of customers according to power take-off points			
	H1 2021	H1 2020	H1 2021	H1 2020		
A tariff group	2.64	2.54	115	109		
B tariff group	7.25	6.65	12 703	12 287		
C+R tariff groups	3.37	3.16	488 971	486 087		
G tariff group	5.38	4.94	5 056 964	4 999 745		
TOTAL	18.64	17.29	5 558 753	5 498 228		

<sup>\*</sup> with additional estimation of sales.



#### KEY FACTORS FOR THE RESULTS OF THE SEGMENT

Chart: Key changes of EBITDA in Distribution (in PLN million) – managerial perspective.



	EBITDA H1 2020	Electricity distribution volume	Change of distribution tariff <sup>1</sup>	Network losses <sup>2</sup>	Property tax	Personnel expenses <sup>3</sup>	Other	EBITDA H1 2021
Change		176	-54	38	-5	17	58	
Reported EBITDA H1 2020	1 127							
One-offs H1 2020	-17							
Recurring EBITDA H1 2020	1 144	2 :	241	292	218	649	62	
Recurring EBITDA H1 2020		2	363	254	223	632	120	1 374
One-offs H1 2021								8
Reported EBITDA H1 2021								1 382

Reversal of impact of total one-offs increasing the reported result

Key factors affecting results of Distribution segment y/y included:

- Increased volume of distributed energy by 1.4 TWh resulting mainly from higher demand by households.
- **Decrease in rates in tariff for 2021** by PLN 2.9/MWh compared to the tariff for the corresponding period of the previous year, that translated into an decrease in revenues from the sale of distribution services.
- Lower costs of energy purchases to cover network losses mainly as a result of a decrease in the electricity purchase price to cover the losses.
- Increase of costs of tax on real estate in connection with an increase of: grid assets value as a result of investments; tax rates on land and buildings.
- Decrease in personnel expenses due to ongoing process to optimise costs.
- Change in other resulting mainly from higher revenues from sale of other distribution services, mainly in the field of collecting subsidies and release of provisions related to claims concerning non-contractual use of properties as a result of a significant increase in the number of court cases being ruled in favour of the company.

Reversal of impact of total one-offs reducing the reported result

<sup>&</sup>lt;sup>1</sup> Excluding cost of transmission services from PSE S.A.

<sup>&</sup>lt;sup>2</sup> Adjusted for revenues from the Balancing market.

<sup>&</sup>lt;sup>3</sup> Personnel costs without including the impact of change in actuarial provision (one-off).



### **CAPITAL EXPENDITURES**

Table: Capital expenditures incurred in Distribution segment in the first half of 2021 and 2020.

PLN million	H1 2021	H1 2020	% change
Development investments	302	385	-22%
Modernisation and replacement	304	439	-31%
Other	0	1	-
TOTAL	606	825	-27%

### KEY CAPITAL EXPENDITURES IN THE DISTRIBUTION SEGMENT

In the first half of 2021 the largest expenditures in amount of PLN 279 million were incurred for connection of new off-takers.



#### **SUPPLY**

### Segment description and its business model

Supply segment activities include Group's wholesale and retail trading of electricity. Wholesale trading includes mainly electricity trading on behalf of and for Conventional Generation segment, District Heating segment and Renewables segment.



Main revenue items*	PLN m	Volume of		
Sale of CO <sub>2</sub> emission rights	6 640	electricity sales to final	18.65	
Sale of electricity	6 411	off-takers*	TWh	
Sales management	396			
Sale of fuels	215	Customers*	5.43	
Sale of gas	177	Customers	million	
		4		
		Main result items	PLN m	
		EBIT	690	

Main cost items	PLN m
Purchase of CO <sub>2</sub> emission rights	6 643
Purchase of electricity	5 352
Redemption of energy origin certificates	481
Segment operating expenses	346
Purchase of fuels including transport	203 6
Purchase of gas	172

As part of retail-market activities, the key source of **segment's revenue is sale of electricity** to final customers. This is sale to business and institutional clients, which constitutes more than 70% of the sales volume, and to retail clients. The segment's revenue also includes the **sale of fuels**, mainly: pulverised coal and coarse coal, which is sold by PGE Paliwa sp. z o.o., and **sale of gas.** 

706

Electricity sales are matched by the **costs to purchase electricity on the wholesale market** and **costs to redeem certificates** as part of the support system for renewable sources and energy efficiency.

The Supply segment also incurs costs related to the Group's corporate centre.

### VOLUME, CUSTOMERS AND OPERATING DATA

Table: Volume of electricity sales to final off-takers and number of customers in the first half of 2021 and 2020.

**EBITDA** 

Tariff	Volume (	TWh)*	cording to power take-off nts*	
	H1 2021	H1 2020	H1 2021	H1 2020
A tariff group	3.63	4.60	136	145
B tariff group	6.69	7.08	11 830	12 533
C+R tariff groups	3.13	3.31	423 869	447 684
G tariff group	5.20	4.88	4 989 505	4 913 860
TOTAL	18.65	19.87	5 425 340	5 374 222

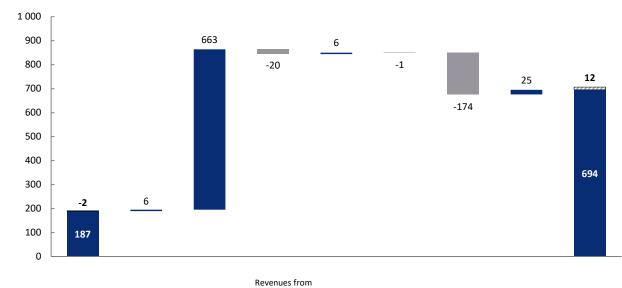
<sup>\*</sup> Data for PGE Obrót S.A.

<sup>\*</sup> Data for PGE Obrót S.A.



#### KEY FACTORS FOR THE RESULTS OF THE SEGMENT

Chart: Key changes of EBITDA in Supply (in PLN million) – managerial perspective.



	EBITDA H1 2020	Result on electricity - volume	Result on electricity - margin	services provided to other segments of the PGE Group	Result on sale of fuels	Personnel expenses <sup>1</sup>	Balance of provisions for onerous contracts	Other	EBITDA H1 2021
Change		6	663	-20	6	-1	-174	25	
Reported EBITDA H1 2020	187								
One-offs H1 2020	-2								
Recurring EBITDA H1 2020	189	-1	23	446	6	188	174	126	
Recurring EBITDA H1 2020		54	46	426	12	189	0	101	694
One-offs H1 2021									12
Reported EBITDA H1 2021									706



Reversal of impact of total one-offs reducing the reported result.

Key factors affecting EBITDA of Supply segment y/y included:

- Higher result on electricity, due to lowered base in the sale of tariffed products in previous year the ERO President set the prices for households at a level which did not cover actual costs of electricity purchase. The last year's low base was also an effect of lower demand due to COVID-19, what resulted in re-selling certain volumes on the spot market below purchase prices in forward transactions.
- Decrease of revenues from services performed within the Group resulting mainly from lower revenues from the Agreement for Commercial Management of Generation Capacities as a consequence of lower trading value of electricity under management.
- Higher result on fuel sales, mainly due to a higher result on the sale of coarse coal.
- Negative impact of balance of provisions for onerous contracts in PGE Obrót resulting from high base level in the analogical period of the previous year. At the end of the first half of 2020, the result was due to reversal of provision for onerous contracts, that mainly related to lack of coverage of part of justified operating costs in the tariff for households approved by the ERO President.

<sup>&</sup>lt;sup>1</sup>Personnel costs without including the impact of change in actuarial provision (one-off).

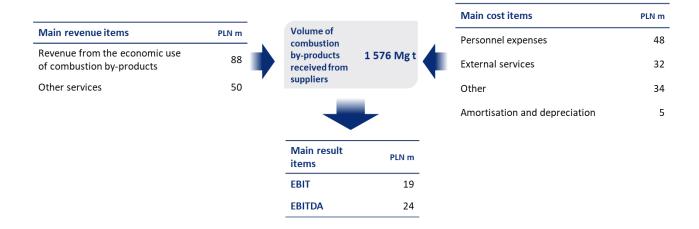


#### CIRCULAR ECONOMY

#### Segment description and its business model

The core business of Circular Economy segment is the management of combustion by-products in the PGE Group.





From the beginning of 2021, PGE Group reports a new operating segment – Circular Economy, which includes the following companies: PGE Ekoserwis S.A., EPORE S.A., ZOWER sp. z o.o. The management of combustion by-products at PGE Group turns waste into high-value substances that are used in other branches of economy (cement industry, construction, road-building, mining) and thus reduces the volume of ultimate waste generated.

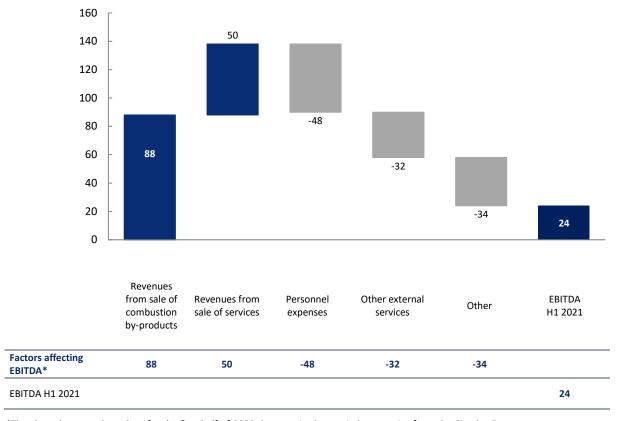
The main revenue source in the Circular Economy segment is **revenue from the economic use of combustion by-products**, which includes revenue from the sale of products manufactured on the basis of combustion by-products in internal production processes and the sale of services related to the management of combustion by-products. The level of revenue depends on multiple factors, including commercial potential for selling combustion by-products, in processed and unprocessed form, seasonality of industries purchasing combustion by-products, seasonality of suppliers of combustion by-products (power plants, combined heat-and-power plants), volumes collected, efficiency of production infrastructure, capabilities for storing combustion by-products as materials inventories intended for production, as well as market conditions.

**Revenue from other services** includes revenue from the sale of continuous and ad hoc services provided to electricity and heat producers, including the operation of ash handling systems and equipment, operation of technological lines, operation of mill facilities and operation of fuel and combustion by-product storage sites.



#### KEY FACTORS FOR THE RESULTS OF THE SEGMENT

Chart: Key factors affecting EBITDA in Circular Economy segment (in PLN million) - managerial perspective.



<sup>\*</sup>The chart does not show data for the first half of 2020, because in that period companies from the Circular Economy segment were presented in Conventional Generation, District Heating and Other Operations.

Key factors affecting EBITDA of Circular Economy segment included:

- Revenue from sale of combustion by-products: ash, slag, gypsum obtained in the process of hard coal and lignite combustion.
- Revenue from sale of services, concerning services in the field of coal storage site operations and heavy equipment rentals, mainly to PGE Group companies.
- Personnel costs necessary for the proper functioning of the segment.
- Third-party service costs, mainly concerning services in the field of transporting waste from production units.



#### 4.4. Significant events of the reporting period and subsequent events

#### IMPACT OF THE COVID-19 PANDEMIC ON PGE GROUP'S OPERATIONS

PGE Group identifies, on an ongoing basis, the risk factors that affect the Group's performance in connection with the COVID-19 pandemic. In the first half of 2021, the impact of the pandemic on financial performance remained limited. The nature and scale of possible further effects are difficult to estimate. What will be important is the duration of the epidemic, its potential severity and extent and its impact on economic growth in Poland. At the same time, the accuracy of estimates remains difficult in view of a number of other factors affecting the power market, including the level of demand for electricity.

The outbreak of the pandemic led to the economic slowdown in the global economy and in Poland. After the "freezing" of the economy in Poland, the economic situation is improving. These are reflected, among others, in the rapid growth of GDP and industrial production in the second quarter of 2021 on a year-on-year basis.

Nevertheless, another implementation of restrictions may result in the reduced level of economic activity, which may create risk that the lower level of domestic electricity consumption will continue periodically, what may have impact on the decrease in revenues and margins from energy generation, distribution and sales in the Conventional Generation, Distribution, Supply, as well as in District Heating segment. Most of the production for 2021 was contracted in previous years, which is why the potential negative impact of lower volumes on the Conventional Generation segment was largely limited.

If the pandemic situation were to deteriorate, the Supply segment would face the risk of a decline in demand for electricity, which could result in lower sales to end users and a higher cost to balance electricity. Also in the Distribution segment, a lower volume of deliveries made to final off-takes would directly translate into lower revenues earned on this account.

As at June 30, 2021, the impact of the expected increase in payment congestion, especially regarding receivables from small and medium-sized enterprises, was not significant. As it is described in note 2.4 to the consolidated financial statements, the Group created additional write-offs on receivables in the amount of PLN 13 million. On the other hand, depending on the further epidemiological and economic situation, the risk of deteriorated liquidity of PGE Group and increased impairment losses on overdue receivables still exists and is monitored on an ongoing basis. Currently, the Group does not expect the occurrence to be more material and does not identify any liquidity risk.

PGE Group's plants are of strategic importance for maintaining undisturbed production and supply of electricity and heat in Poland. The COVID-19 pandemic has affected the change of work organisation, especially with respect to PGE Group's generation units. In many cases, this involves additional costs resulting from, for example, the purchase of protective materials for employees. Since the beginning of the pandemic, the Group has introduced work rules that aim to reduce, as much as possible, the health risk for employees. As one of the largest employers in Poland, with approx. 40 thousand employees, PGE Group takes a number of measures related to the organisation of the companies and work to ensure business continuity, protect the health and life of its employees, including the implementation of teleworking and rotational work, raising awareness of, in particular, the basic principles of protection against coronavirus, prevention and quarantine.

PGE Group constantly conducts communication activities aimed at employees, to build awareness of the positive effects of vaccinations - both individual and social. In addition, internal communication is carried out related to the course of the pandemic and encouraging to minimise the risk of infection - that is, keeping a distance, washing hands frequently or using office spaces in a safe way. PGE has established a Crisis Team to collect information from all Group companies, monitor the situation in individual companies on an ongoing basis and take appropriate steps. The production branches also have plans for operation with increased absenteeism that are developed and verified on an ongoing basis, and as plants of strategic importance from the point of view of maintaining undisturbed production and supply of electricity and heat, they are in constant contact with local authorities responsible for monitoring the situation in the country in all locations of PGE Group entities.

In the area of retail customer service, PGE Group focused primarily on expanding remote service channels.

Due to the introduction of appropriate countermeasures at the early stage of the pandemic, PGE Group has been continuously producing electricity and heat and ensuring their uninterrupted supply.

PGE Group has been monitoring the further impact of the COVID-19 pandemic on the financial condition of the PGE Group and is preparing for various scenarios. The pandemic has accelerated the introduction of measures to prepare the entire organisation to changes in order to tackle the decarbonisation challenges faced by energy companies. This will require considerable financial expenditure. All potential savings scenarios for both capital expenditures and operating costs were analysed in order to focus on the most important development projects related to the core business of PGE Group.



#### CHANGES IN THE MANAGEMENT BOARD AND SUPERVISORY BOARD

#### **Management Board members**

From January 1, 2021 till March 31, 2021 the Management Board had worked in following composition:

Name and surname of the Management Board		Position
Wojciech Dąbrowski	President of the Management Board	from February 20, 2020
Wanda Buk	Vice-President for Regulatory Affairs	from September 1, 2020
Paweł Cioch	Vice-President for Corporate Affairs	from February 24, 2020
Paweł Strączyński	Vice-President for Finance	from February 24, 2020
Paweł Śliwa	Vice-President for Innovations	from February 20, 2020
Ryszard Wasiłek	Vice-President for Operations	from February 20, 2020

On March 31, 2021 Mr Paweł Strączyński - Vice-President for Finance – submitted his decision to resign from the position. The resignation took effect on April 1, 2021.

After a competitive procedure, on June 8, 2021 the Supervisory Board adopted resolution no. 396/XI/2021 on appointing Mr Lechosław Rojewski to the Management Board of PGE Polska Grupa Energetyczna S.A. entrusting him the position of the Vice-President for Finance as from June 9, 2021.

As at June 30, 2021 and at the publication date of this report, the Management Board has worked in following composition:

Name and surname of the Management Board		Position
Wojciech Dąbrowski	President of the Management Board	from February 20, 2020
Wanda Buk	Vice-President for Regulatory Affairs	from September 1, 2020
Paweł Cioch	Vice-President for Corporate Affairs	from February 24, 2020
Lechosław Rojewski	Vice-President for Finance	From June 9, 2021
Paweł Śliwa	Vice-President for Innovations	from February 20, 2020
Ryszard Wasiłek	Vice-President for Operations	from February 20, 2020

### Supervisory Board members

As at June 30, 2021 and at the publication date of this report, the Supervisory Board has worked in following composition:

Name and surname	Position	
Anna Kowalik	Chairman of the Supervisory Board	
Artur Składanek	Vice-Chairman of the Supervisory Board – independent	
Grzegorz Kuczyński	Secretary of the Supervisory Board - independent	
Janina Goss	Supervisory Board Member - independent	
Tomasz Hapunowicz	Supervisory Board Member - independent	
Marcin Kowalczyk	Supervisory Board Member	
Mieczysław Sawaryn	Supervisory Board Member - independent	
Jerzy Sawicki	Supervisory Board Member - independent	
Radosław Winiarski	Supervisory Board Member	



As at June 30, 2021 and at the publication date of this report, the committees have worked in following compositions:

Name and surname of the member of the Supervisory Board	Audit Committee	Corporate Governance Committee	Strategy and Development Committee	Appointment and Remuneration Committee
Janina Goss	Member			Member
Tomasz Hapunowicz		Chairman	Member	
Marcin Kowalczyk			Member	
Anna Kowalik	Member		Member	Member
Grzegorz Kuczyński	Chairman	Member		
Mieczysław Sawaryn			Member	Chairman
Jerzy Sawicki		Member	Member	Member
Artur Składanek	Member		Chairman	
Radosław Winiarski	Member		Member	

#### IMPAIRMENT TESTS ON PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND GOODWILL

Property, plant and equipment is PGE Group's most significant group of assets. Due to variable macroeconomic conditions, PGE Group regularly verifies indications of impairment for its assets. When assessing the market situation PGE Group uses both its own analytical tools and independent think tanks' support. In previous reporting periods, PGE Group recognised substantial impairment allowances of property, plant and equipment of Conventional Generation segment, District Heating segment and the Renewables segment. An impairment loss recognised in the Renewables segment was also partially reversed in previous reporting periods.

In the current reporting period, the Group analysed impairment indications and identified factors that could result in changes to the asset values in the Conventional Generation and Renewables segments. The tests showed no need to recognise an impairment loss for the Conventional Generation segment and the necessity to reverse the impairment loss for the Renewables segment. An analysis of the indications for conducting impairment tests in the District Heating segment did not show the need to conduct these tests.

The results of the test are described in Note 3 (with regard to property, plant and equipment) and 7.5 (with regard to partial reversal of loss of value of shares in the associate - Polska Grupa Górnicza S.A., recognised in the consolidation under the equity method) to the consolidated financial statement.

The impairment test results were disclosed in the current report of PGE S.A.:

Information on the result of impairment tests

### **ACTIVITIES RELATED TO NUCLEAR ENERGY**

### Business partnership and sale of 100% shares in PGE EJ 1 to the State Treasury

Until the end of the first quarter of 2021, company PGE EJ 1 (set up in 2010) was part of the PGE Capital Group. In 2014, a shareholder agreement was signed, pursuant to which Enea S.A., KGHM Polska Miedź S.A. and TAURON Polska Energia S.A. each purchased from PGE a 10% stake in PGE EJ1 (30% in total).

In the first quarter of 2021, talks regarding the acquisition by the State Treasury of 100% shares in PGE EJ1 from PGE and other partners continued. The intention to conclude such transaction was expressed in the Letter of Intent signed on October 1, 2020 between PGE, KGHM Polska Miedź S.A., TAURON Polska Energia S.A., Enea S.A. and the State Treasury.

The business model for Polish nuclear power plants envisaged in the Nuclear Power Programme updated in October 2020, provides for the State Treasury's acquisition of 100% of shares in the special purpose company responsible for investments in nuclear power in Poland, i.e. PGE EJ1 Sp. z o.o.

On March 26, 2021 PGE, KGHM Polska Miedź S.A., TAURON Polska Energia S.A., Enea S.A. and the State Treasury concluded an agreement to sell 100% shares in PGE EJ 1 to the State Treasury. In accordance with the provisions of the agreement, PGE sold to



the State Treasury 3 727 661 shares of PGE EJ1, constituting 70% of the share capital of PGE EJ1 and representing 70% of votes at the Assembly of Partners. The sale price for all shares amounted to PLN 531 362.0 thousand, out of which PGE received PLN 371 953.4 thousand.

In accordance with the provisions of the agreement, the transfer of ownership of shares took place on the payment date by the State Treasury what was made on March 31, 2021. On that day, PGE ceased to be the parent company of PGE EJ 1 sp z o.o. within the meaning of the Commercial Companies Code.

Following the transaction, PGE EJ1 is no longer a company of the PGE Capital Group.

Sale of shares in PGE EJ1 constitutes the implementation of one of the activities provided in the PGE Group's Strategy until 2030 announced on October 19, 2020.

The sale of shares in PGE EJ 1 was described in the current report of PGE S.A.:

#### Signing of the agreement for the sale of PGE EJ 1 shares

#### Compensations from WorleyParsons

On March 26, 2021 roku PGE, KGHM Polska Miedź S.A., TAURON Polska Energia S.A. and Enea S.A. signed with PGE EJ1 an annex to the agreement dated April 15, 2015 regarding WorleyParsons, according to which PGE, KGHM Polska Miedź S.A., TAURON Polska Energia S.A. and Enea S.A. are proportionally responsible for liabilities or are proportionally entitled to claims that may potentially arise as a result of resolution of a dispute with WorleyParsons, up to the level of claims together with accrued interest as at March 26, 2021.

Detailed information are described in note 24.1 to the consolidated financial statements.

#### **LEGAL ASPECTS**

#### The issue of compensation regarding the conversion of shares

Information on the issue of compensation regarding the conversion of shares are described in note 24.4 to the consolidated financial statements.

# INFORMATION CONCERNING PROCEEDINGS IN FRONT OF COURT, BODY APPROPRIATE FOR ARBITRATION PROCEEDINGS OR IN FRONT OF PUBLIC ADMINISTRATION AUTHORITIES

Significant proceedings pending in front of courts, competent arbitration authority or public administration authority are described in note 24.4 to the consolidated financial statements.

#### Termination by Enea S.A. of agreements for sale of certificates

Information on termination by Enea S.A. of agreements for sale of certificates are described in note 24.4 to the consolidated financial statements.

# INFORMATION CONCERNING THE GUARANTEES FOR LOANS GRANTED BY THE COMPANY OR A SUBSIDIARY

Within the Group, as at June 30, 2021 PGE S.A. and subsidiaries did not grant guarantees to other entities or to a subsidiary, where a value of guarantees constitutes at least 10% of the Company's equity.

#### INFORMATION ON ISSUE, REDEMPTION AND REPAYMENT OF DEBT SECURITIES AND OTHER SECURITIES

Information on issue, redemption and repayment of debt securities and other securities is described in p. 5.1 of the foregoing report and in note 1.3 to the consolidated financial statements.

#### TRANSACTIONS WITH RELATED ENTITIES

Information about transactions with related entities is presented in note 26 to the consolidated financial statements.



# SUBMITTING OF AN INITIAL NON-BINDING OFFER FOR ACQUISITION OF SHARES IN FORTUM GROUP'S ASSETS BY A CONSORTIUM WITH PARTICIPATION OF PGE

On October 27, 2020, an investment consortium, a part of which was PGE, has submitted an initial, non—binding offer to purchase district heating and cooling businesses in Estonia, Lithuania, Latvia and Poland from Fortum Holding B.V. The participants of the consortium are: PGE, Polskie Górnictwo Naftowe i Gazownictwo S.A., PFR Inwestycje FIZ (Closed-end investment fund) which is managed by Polski Fundusz Rozwoju S.A. (Polish Development Fund) and IFM Investors Pty Ltd.

On November 16, 2020 PGE and Polskie Górnictwo Naftowe i Gazownictwo S.A. (the "Partners"), submitted a revised, initial non-binding offer to acquire assets owned by Fortum Holding B. V.

Under the revised Offer, the Partners are bidding for the district heating business operated by Fortum Holding B.V. exclusively in Poland. PGE further announces that the Partners abandoned their original intention to purchase the Fortum Group's assets operating in Estonia, Lithuania and Latvia, and decided they would not participate in the investment consortium with PFR Inwestycje FIZ and IFM Investors Pty Ltd.

Currently, joint works towards the submission of a binding offer are being continued. The core business of Fortum Holding B.V.'s Polish subsidiary is generation, distribution and sale of heat and the generation of electricity.

The acquisition of the shares in the Fortum Group's assets is in line with PGE Group's Strategy until 2030 announced on October 19, 2020.

Current reports of PGE S.A.:

Submitting of an initial non-binding offer for acquisition of shares in Fortum Group's assets

Submitting of an initial non-binding offer for acquisition of shares in Fortum Group's assets - 2

#### APPROVAL OF THE ENERGY POLICY OF POLAND UNTIL 2040 ("PEP2040")

On February 2, 2021, the Council of Ministers approved the Energy Policy of Poland until 2040. PEP2040 is a vision for Poland's energy transition strategy, presenting inter alia, a proposed structure of electricity generating units. According to PEP2040, the share of zero-emission units will grow and the share of coal units will decrease. The full text of PEP2040 was published on March 10, 2021.

The pace of energy transition and trends assumed in PEP2040 have recently accelerated and strengthened significantly. In July 2021, the European Commission published the Fit for 55 legislative package, aimed at, inter alia, achieving the reduction of greenhouse gas emissions in the EU by 55% (previously 40%) by 2030 compared to 1990. As expected by market participants, the reform of the EU ETS included in the package should result in a significant increase in the price of CO<sub>2</sub> emission allowances, which in practice took place in the first half of the year. As a result, the current level of prices of CO<sub>2</sub> emission allowances significantly differs from the assumptions of PEP2040. Another important element that differs significantly from the assumptions of the Policy is the dynamic increase in photovoltaic capacity as a result of the operation of numerous co-financing programs, a discount system for prosumers and RES auctions. As a result, the level of installed capacity assumed for 2030 has already been achieved.

In view of the above, to assess the recoverable amount of its generation assets, PGE Group adopted assumptions that take into account the current market and regulatory situation. Possible future differences compared to the adopted assumptions may lead to changes in the financial situation and financial results of the PGE Group and will be included in future financial statements.

#### SIGNING OF AN INVESTMENT AGREEMENT WITH ØRSTED REGARDING OFFSHORE WIND PROJECTS

On February 10, 2021, entities from PGE and Ørsted group concluded an agreement, according to which the parties determined their share at 50% in two offshore projects developed until now by PGE: Baltica-2 (through SPV named EWB 2 with potential capacity of approximately 1.5 GW) and Baltica 3 (through SPV named EWB 2 with potential capacity of approximately 1 GW).

The Investment Agreement constitutes a legal framework for the establishment of a joint venture dedicated to the development, construction and operation of the Baltica-2 and Baltica-3 offshore wind power farms.

On May 6, 2021, following the fulfilment of the conditions precedent the transaction was finalised. As part of the transaction the  $\emptyset$ rsted group subscribed for the shares representing 50% of the share capital of Elektrownia Wiatrowa Baltica – 2 sp. z o.o. and Elektrownia Wiatrowa Baltica – 3 sp. z o.o. – the companies developing two offshore windfarms: Baltica-2 and Baltica-3. Upon the registration of the share capital increase,  $\emptyset$ rsted and PGE will become 50/50 partners in the joint ventures.



The total subscription price for 50% of the shares in Baltica-2 and Baltica-3 amounted to the equivalent of approx. PLN 686 million. Upon the fulfilment of certain assumptions, the relevant investors from Ørsted group will be required to provide EWB 2 and EWB 3 with additional cash contributions which may amount in total up to PLN 1 024 million.

At the closing of the transaction the entities from both Ørsted and PGE groups entered into a number of documents separately for each EWB 2 and EWB 3, including notably:

- the shareholders' agreements regulating, inter alia, the corporate governance of the joint ventures, functioning of integrated project teams, obligations of the parties related to the funding of and providing for other support to the joint ventures, restrictions regarding the transfer of interest on the joint ventures as well as the consequences of any events of default and change of control;
- the development services agreements regulating the provision of development services to the joint ventures by the respective affiliates of both parties;
- the resource provisions agreements based on which both parties will delegate personnel to the joint venture;
- the shareholder loan agreements under which the shareholders will provide debt financing (in addition to equity financing) to the joint ventures;
- the corporate guarantees issued by both PGE and Ørsted Wind Power A/S under which both parties guarantee the commitments of their respective subsidiaries in the development stage of the projects.

Current reports of PGE S.A.:

Signing of an investment agreement with Ørsted regarding offshore wind projects

Closing of the transaction regarding offshore wind projects

#### COMMISSIONING OF UNIT NO. 7 IN TURÓW POWER PLANT

On February 25, 2021 PGE GiEK, after detailed analysis of the Consortium's proposal for change in the schedule and price of the contract with regard to methodic accuracy of assumptions taken, reasons for delay and planned methods of further management of the project execution, concluded a settlement agreement in front of the mediator that concerns designing and turn-key construction of power unit in Turów power plant, being realized by consortium including companies: Mitsubishi Hitachi Power System GmbH (Consortium leader), Tecnicas Reunidas S.A. and Budimex S.A. The value of the Agreement was increased by approx. PLN 108 million net, i.e. to PLN 3 755 million net. The commissioning date of the unit was postponed by 6 months i.e. until April 30, 2021.

On April 30, 2021 the Management Board of PGE had taken about the another postponement of the completion of the investment, resulting in changing the commissioning date of the unit no. 7 to May 14, 2021.

A scheduled standstill of unit 7 at the Turów plant, resulting from contractual provisions, began on June 19, 2021. During that time, the Consortium made a technical inspection of the equipment after the first month of the unit's operation. Optimisation and maintenance work was carried out. All activities carried out by the Consortium on the new generating unit are standard and are aimed at ensuring its stable operation in the future. On July 24, 2021, unit 7 was re-integrated into the national power system.

Current reports and press releases of PGE S.A.:

Signing of the settlement agreement regarding the unit in Turów

Delay of the commissioning of the unit no. 7 in Turów power plant

Unit No. 7 at Turów Power Plant at full disposal for PSE

# CZECHIA'S COMPLAINT AGAINST POLAND REGARDING PROLONGATION OF MINING CONCESSION FOR KWB TURÓW MINE

On September 30, 2020 the Czech Republic lodged a letter with the European Commission pursuant to art. 259 of the Treaty on the Functioning of the European Union initiating a proceeding against Poland for alleged violations of EU law in connection with the extension of the term of the concession for lignite mining for 6 years for KWB Turów (Turów lignite mine).

On December 17, 2020 the European Commission issued a reasoned opinion in which it agreed with some of the infringements alleged by Czechia, at the same time indicating that the prolongation of KWB Turów's functioning did not infringe on the provisions of the water framework directive. The European Commission also emphasised that some of the other infringements alleged by Czechia were unfounded.



On February 26, 2021 the Czech government lodged a complaint against Poland with the Court of Justice of the European Union. A summary of the complaint and key arguments were published in the EU Official Journal on April 19, 2021. The Member States are parties to the proceedings, which excludes the possibility of participation of natural and legal persons, even if the case is directly connected with their activities.

On May 21, 2021 the Vice-President of the Court of Justice of the European Union issued an order on an interim measure as follows: "Poland must immediately cease lignite extraction activities in the Turów mine until a judgment of the Court brings case C-121/21 to an end." An interim measure does not rule on the merits of the case.

On June 9, 2021, the European Commission joined the main proceedings as an intervener supporting some of the claims of the Czech side. In the interim measure procedure, the Czech Republic additionally demanded a fine for each day of non-compliance with the decision to immediately cease lignite mining. At the same time, the Republic of Poland applied for annulment of the decision on interim measures due to a change in circumstances within the meaning of art. 163 of the Rules of the Court of Justice. In accordance with the decision of September 20, 2021, the Vice-President of the Court of Justice dismissed the request to revoke the interim measure and ordered Poland to pay the European Commission a fine in the amount of EUR 500 000 per day, starting from the date of delivery to Poland of the decision until that Member State complies with the decision of May 21, 2021. In the opinion of the Company, it is not possible to transfer the above-mentioned penalties onto PGE Group companies.

PGE Group does not plan to stop coal mining activities at KWB Turów and electricity generation activities at the Turów plant. The operation of the Turów lignite mine is conducted in compliance with the provisions of national law and European environmental standards, on the ground of legally obtained licence. The government of the Republic of Poland takes the same position in this respect, additionally pointing out that the suspension of works in the mine would endanger the stability of the Polish power system and would have negative consequences for energy security. Government representatives also point to the lack of legal grounds to order the suspension of work at KWB Turów.

At the same time, the main proceedings concerning allegations of breach of EU law are pending.

In the opinion of the PGE Capital Group, the dispute does not affect the financial statements as at the date of their preparation. At the same time, the PGE Capital Group will monitor the course of the case on an ongoing basis and any possible events that will occur will be appropriately reflected in future financial statements.



#### CONSTRUCTION OF GAS AND STEAM CHP PLANT IN SIECHNICE (NEW CZECHNICA CHP PLANT)

On March 1, 2021 the Management Board of KOGENERACJA S.A. decided on:

- conditional approval of selection of the offer by consortium consisting of Polimex Mostostal S.A. (Consortium Leader) and Polimex Energetyka sp. z o.o. (Consortium Partner) submitted in the procurement procedure titled "Turn-key construction of CCGT combined heat and power plant for Zespół Elektrociepłowni Wrocławskich KOGENERACJA S.A. in Siechnice",
- giving consent for conditional signing of the agreement with the above mentioned consortium.

On March 5, 2021 the Supervisory Board of the company adopted resolution on giving consent to pursue the above investment, in connection with which new fixed assets will be created with a value exceeding PLN 10 million, provided that the Energy Regulatory Office (ERO) President grants a co-generation individual premium to the Company for unit New Czechnica CHP plant, on the ground of the Act of December 14, 2018 on promotion of electricity from highly-efficient co-generation.

On March 12, 2021 the company received a co-generation individual premium for unit New Czechnica CHP plant, by the decision by the ERO President.

On April 1, 2021, the Extraordinary General Meeting of the company adopted resolution on giving consent to acquisition of non-current assets, within the meaning of the Accounting Act of September 29, 1994, exceeding PLN 10 million through giving consent to pursue agreement for construction of CCGT combined heat and power plant in Siechnice, on the ground of agreements with a syndicate of: Polimex Mostostal S.A. and Polimex Energetyka sp. z o.o. with a value of approx. PLN 1.2 billion net and the corresponding LTSA with a value of approx. PLN 118 million net.

Thus, on April 1, 2021 the last condition was fulfilled with regard to the acceptance of the selection of the consortium.

On June 23, 2021 an agreement (the "Agreement") was concluded with syndicate of companies Polimex Mostostal S.A. and Polimex Energetyka sp. z o.o. for construction of gas and steam CHP plant in Siechnice for KOGENERACJA S.A.

Subject matter of the Agreement is realisation by the Contractor of turn-key construction of CCGT unit with a total gross capacity of 179.4 MWe and 162.9 MWt, heat accumulator and four water boilers with total capacity of 152 MWt. New units will replace currently existing hard coal-fired CHP plant. The value of the Agreement for construction of CHP (EPC agreement) amounts to PLN 1 159 180.0 thousand net.

In connection with the EPC agreement, a LTSA (Long-Term Service Agreement) was also signed with regard to service for 103 months starting from the commissioning date of the units. The value of the LTSA amounts to PLN 25 027.8 thousand net and EUR 20 717.8 thousand net. The total value of all concluded contracts amounts to approx. PLN 1 278 353.8 thousand netto (according to the average EUR/PLN exchange rate on June 21, 2021).

The project schedule provides for the commissioning of the CCGT unit in the second quarter of 2024.

Current reports of PGE S.A.:

Conditional approval of offer for construction of New Czechnica CHP plant

Fulfilment of conditions necessary to sign a contract for construction of gas New Czechnica CHP plant

Signing of a contract for construction of gas and steam CHP plant Czechnica.

#### GRANTING OF CONTRACTS FOR DIFFERENCE FOR PGE'S OFFSHORE WIND FARMS

On April 7, 2021, the ERO President awarded right to cover negative balance of electricity (the "Contract for Difference", "CfD") to the Baltica-2 and Baltica-3 offshore wind farms with a total capacity of up to 2.5 GW. The right to the CfD guarantees a price at a maximum of PLN 319.60/MWh in accordance with the Decree of the Minister of Climate and Environment of Poland and the Act of December 17, 2020 on promoting electricity generation in offshore wind farms. The CfD award, including the final price, is subject to final approval from the European Commission.

Current report of PGE S.A.:

<u>Granting of contracts for difference for PGE's offshore wind farms.</u>



#### RECOMMENDATION NOT TO PAY DIVIDEND FOR 2020

On April 27, 2021, the Management Board of PGE decided on the recommendation not to pay dividend for 2020 to the PGE's shareholders. Decision was taken in accordance with the dividend policy, particularly following the analysis of the Company's indebtedness in the context of the implementation of the investment program, in line with the assumptions of the PGE Group's Strategy until 2030.

During a General Meeting on June 29, 2021, the shareholders of PGE S.A. decided to allocate all of the 2020 profit to supplementary capital.

Current report of PGE S.A.:

Recommendation not to pay dividend for 2020.

#### PROLONGATION OF COAL MINING CONCESSION FOR KWB TURÓW TO 2044

On April 28, 2021 the Minister of Climate and Environment prolonged the existing concession for the mining of lignite and associated minerals at the "Turów" deposit to 2044.

According to the Minister of Climate and Environment, the continued mining of lignite and accompanying minerals at the "Turów" deposit is compliant with the rational deposit management concept therefore the issue of the decision making it possible for the mining facility to continue operating was justified.

#### SHUT-DOWN OF 10 UNITS AT BEŁCHATÓW POWER PLANT

On May 17, 2021, 10 units of Bełchatów power plant with a total capacity of approx. 3 900 MW were shut down as a result of reasons at the side of PSE S.A. All units were put back to operation on May 18, 2021. The shutdown did not result in interruptions in electricity supplies and was not felt by consumers. The reason for the shutdown was a disturbance at the Rogowiec power station, to which 11 units of the Bełchatów Power Plant are connected.

#### PLANNED TRANSFER OF COAL ASSETS TO THE NATIONAL ENERGY SECURITY AGENCY

On May 21, 2021, the following project was published in the list of legislative and program works of the Council of Ministers: "Transformation of the electricity sector in Poland. Separation of generation coal assets from companies with State Treasury shareholding ". According to the draft project, the asset spin-off process will be pursued through acquisition by the State Treasury from PGE S.A., ENEA S.A., TAURON Polska Energia S.A. and ENERGA S.A. (which was not included in the published draft, but joined the transformation process in June 2021) all assets related to the generation of electricity in hard coal-fired and lignite-fired power plants, including service companies providing services to them. Due to the inseparability of lignite-fired energy complexes, lignite mines will also be among the acquired assets. Assets related to hard coal mining will not be transferred to the entity dealing with generation of electricity in coal units. CHP plants will not be subject to his transaction, as they are planned to be modernized towards low and zero-emission sources. Then, the State Treasury will integrate the acquired assets within one entity. The integrator is to be PGE GIEK S.A. The integration will take place through the merger of the companies acquired by the State Treasury or their contribution for a capital increase to PGE GiEK S.A. PGE GiEK will be operating under the name of the National Energy Security Agency (Polish "NABE"). NABE will be a self-sufficient entity that, as part of its operations, will carry out maintenance and modernisation investments necessary to maintain the efficiency of the coal-fired units in operation. Transaction is to take place following appropriate business and economic analyses, including due diligence and valuations of selected assets. The method of settlement of the transaction, based on the valuation made, due to the indebtedness of the generation companies towards parent entities in their capital groups, will be subject to detailed arrangements between the State Treasury and the current owners.

According to the assumptions of the project, after the separation of coal generation assets, energy companies will focus on the implementation of low and zero-emission investments, and NABE, operating in the form of a company with 100% State Treasury shareholding, will be the owner of coal-based generation assets. The role of NABE will be to ensure the necessary power balance in the energy system, limiting itself to the necessary replacement investments and gradual decommissioning of coal-fired units along with the progressive capacity increase from low and zero-emission sources, ensuring the country's energy security.

Public consultations on the published draft were conducted. An updated version of the document "Transition of Poland's energy sector. Carve out of coal-based generation assets from companies with a State Treasury shareholding." has not yet been published. On July 23, 2021, PGE S.A., ENEA S.A., TAURON Polska Energia S.A. and ENERGA S.A. executed an agreement with the State Treasury regarding cooperation on the carve out of coal-based energy generation assets and their integration into NABE.



A precise date for the disposal of the coal assets, their valuation and means of settling debt and other liabilities related to these assets has not yet been set. In connection with this, it is currently not possible to determine the impact of this division on the future financial statements of PGE and PGE Group.

The Company expects the process to sell these assets to NABE to take place in 2022.

Current report of PGE S.A.:

Agreement regarding co-operation in spin-off of coal assets to National Energy Security Agency.

## AFFIRMATION OF PGE'S RATING AT BAA1 WITH STABLE OUTLOOK

On June 30, 2021 Moody's Investors Service affirmed rating for PGE S.A. at Baa1 and its stable outlook.

According to the opinion issued by this institution, the rating affirmation reflects PGE's currently strong financial risk profile, which provides the Company with some flexibility to absorb a large investment program and withstand potential changes in Poland's electricity market.

According to Moody's, the Polish government's plan to transform the domestic utility sector will be supportive of PGE's credit risk profile. A spin-off of the coal assets would strengthen the company's business risk profile since PGE would be able to implement its corporate strategy, focused on increasing already high share of regulated earnings from distribution grid operations and district heating and growth of generation from renewable energy sources.

## AGREEMENT BETWEEN PGE S.A. AND POLSKA GRUPA GÓRNICZA ("PGG") REGARDING COAL SUPPLIES

On August 27, 2021 PGE S.A. and PGG S.A. signed an agreement concerning hard coal supply contracts. This agreement regulates rules for further cooperation until 2023 under existing multiannual contracts. Most importantly, issues related to coal supplies that could not have been collected by PGE S.A. as a result of decreased demand for electricity in connection with the COVID-19 pandemic were addressed.

The agreement guarantees the continuity of cooperation and allows PGG to function without interruptions, while for PGE S.A. it provides market-based conditions for receiving the contracted hard coal.

PGE's press release:

Coal supply agreement.



## 5. Other elements of the report

## 5.1. Significant changes in organisation of the Capital Group

Changes which occurred in the PGE Capital Group's structure in the period from January 1, 2021 until the publication date of this report, are presented in note 1.3 to consolidated financial statements and described below.

#### **ESTABLISHMENT OF COMPANIES**

Segment	Entity	Date of establishment/ registration in the National Court Register (NCR)	Comment
Renewables	Elektrownia Wiatrowa Baltica-6 sp. z o.o.	February 25, 2021	On December 17, 2020 PGE S.A. set up an one-person limited liability company with headquarters in Warsaw. Current name of the company is: Elektrownia Wiatrowa Baltica-6 sp. z o.o. The share capital the company is PLN 1 250 000.
Other Operations	Rybnik 2050 sp. z o.o. in organisation	May 31, 2021	On February 1, 2021 PGE S.A. set up an one-person limited liability company with headquarters in Rybnik. Current name of the company is: Rybnik 2050 sp. z o.o. The share capital the company is PLN 50 000.

#### ACQUSITION OR DISPOSAL OF SHARES BY THE COMPANIES

Segment	Shares of the company	Date of transaction/ registration in the NCR	Comment
Other Operations	PGE EJ 1 sp. z o.o. ("PGE EJ 1") —sale by PGE S.A. of all shares of PGE EJ 1 (the share sale agreement)	March 31, 2021	On March 26, 2021 PGE S.A., Enea S.A., TAURON Polska Energia S.A. and KGHM Polska Miedź S.A. (as the sellers) and the State Treasury (as the buyer) signed an agreement for sale of all possessed shares in PGE EJ 1, i.e. 5 325 230 shares of this company, with a total nominal value of PLN 750 857 430, representing 100% of the share capital. Transfer of ownership of shares to the State Treasury took place on March 31, 2021. PGE S.A. held 3 727 661 shares representing 70% of the share capital of PGE EJ 1. As a result of the share purchase agreement, PGE ceased to be the parent company of PGE EJ 1 sp z o.o. within the meaning of the Commercial Companies Code, thus PGE EJ 1 is no longer part of PGE Group.
District Heating	Przedsiębiorstwo Energetyki Cieplnej S.A. with seat in Bogatynia ("PEC Bogatynia") – sale by PGE GiEK S.A. of all shares of PEC Bogatynia (the share sale agreement)	April 15, 2021/ May 5, 2021 (entry in the register of shareholders)	On April 15, 2021 PGE GIEK as a seller and PGE Energia Ciepła S.A. as a buyer concluded an agreement for the sale of all held by PGE GIEK S.A. inscribed shares in PEC Bogatynia, i.e. 101 036 shares, with a total nominal value of PLN 10 103 600, representing 34.93% of the share capital. Transfer of ownership of shares to PGE Energia Ciepła S.A. took place on May 5, 2021 (upon entry in the register of PEC Bogatynia shareholders indicating PGE Energia Ciepła S.A. as the buyer of these shares, under the above-mentioned share sale agreement).
District Heating	"Przedsiębiorstwo Energetyki Cieplnej" sp. z o.o. with seat in Bełchatów ("PEC Bełchatów") – sale by PGE GiEK S.A. of all shares of PEC Bełchatów (the share sale agreement)	April 15, 2021	On April 15, 2021 PGE GIEK as a seller and PGE Energia Ciepła S.A. as a buyer concluded an agreement for the sale of all held by PGE GIEK S.A. inscribed shares in PEC Bełchatów, i.e. 14 411 shares, with a total nominal value of PLN 7 205 500, representing 17.05% of the share capital. Transfer of ownership of shares to PGE Energia Ciepła S.A. took place on April 15, 2021.



Segment	Shares of the company	Date of transaction/ registration in the NCR	Comment
Other Operations	PGE Ekoserwis S.A. with seat in Wrocław ("PGE Ekoserwis") – acquisition by PGE S.A. all shares held by minority shareholders (compulsory buyout)	April 30, 2021 August 19, 2021 – entry in the register of shareholders of PGE Ekoserwis.	On April 30, 2021 the Extraordinary General Meeting of PGE Ekoserwis adopted resolution on compulsory buyout of shares held by minority shareholders, referred to in Art. 418 of the Polish Commercial Companies Code. The compulsory buy-out covered 11 525 shares representing 4.92% of the share capital of the company, i.e. all shares owned by other shareholders of PGE Ekoserwis. On July 12, 2021 PGE S.A. paid the full buyout price of the minority shareholders' shares referred to above, and on July 13, 2021, the company's Management Board decided to buy back the shares of minority shareholders of the company and transfer the acquired shares to the shareholder PGE S.A. and make appropriate changes to the register of the company's shareholders. As a result of the compulsory buyout of shares, PGE S.A. became the sole shareholder of PGE Ekoserwis.
Other Operations	ZOWER sp. z o.o. with seat in Rybnik ("ZOWER")	July 7, 2021	On July 7, 2021 PGE Energia Ciepła S.A. as a seller and PGE Ekoserwis as a buyer concluded an agreement for the sale of all held by PGE Energia Ciepła S.A. shares in ZOWER, i.e. 8 000 shares, with a total nominal value of PLN 4 000 000, representing 100% of the share capital. Transfer of ownership of shares to PGE Ekoserwis took place on July 7, 2021.
Other Operations	ElectroMobility Poland S.A. with seat in Warsaw ("ElectroMobility Poland") – increasing the share capital of ElectroMobility Poland and taking up all new shares by a new shareholder, i.e. by the State Treasury	Not yet registered	On August 19, 2021 the Extraordinary General Meeting of ElectroMobility Poland adopted resolution on decrease of the share capital of the company from PLN 70 000 000 to PLN 52 300 500, i.e. by PLN 17 699 500, by reducing the nominal value of all the company's shares from the PLN 7 000 to a new nominal value of PLN 5 230.05 each. The purpose of reducing the share capital is to transfer funds from the share capital to the supplementary capital, therefore the amounts obtained from the reduction of the share capital will increase the company's supplementary capital.  In addition, On August 19, 2021 the Extraordinary General Meeting of ElectroMobility Poland adopted resolution on increase of the share capital of the company from PLN 52 300 500 to PLN 302 296 890, i.e. by PLN 249 996 390, by issuing through private subscription 47 800 series B shares numbered from B-00001 to B-47800, with a nominal value of PLN 5 230.05 each. The Extraordinary General Meeting of the company decided to deprive the existing shareholders of the right to acquire new shares in full and offer all new shares to be taken up by the State Treasury in exchange for a cash contribution. Current shareholders of ElectroMobility Poland, holding 25% share in the share capital are PGE S.A., ENEA S.A., ENERGA S.A. and TAURON Polska Energia S.A. As a result of the State Treasury joining ElectroMobility Poland by acquiring all new shares in the increased share capital of ElectroMobility Poland, the share of PGE S.A. in the share capital of this company will decrease from 25% to 4.33%.

## **INCREASE OF SHARE CAPITAL OF SUBSIDIARIES**

Segment	Entity	Date of registration in the NCR	Comment
Renewables	Elektrownia Wiatrowa Baltica-1 sp. z o.o.	January 25, 2021	On October 28, 2020 the Extraordinary Assembly of Partners of the company adopted resolution on a share capital increase from PLN 20 700 000 to PLN 22 545 000, i.e. by PLN 1 845 000. The share capital increase was taken up and paid by PGE S.A. in cash. PGE S.A. holds 100% in the share capital.
Renewables	PGE Baltica 5 sp. z o.o.	March 22, 2021	On February 11, 2021 the Extraordinary Assembly of Partners of the company adopted resolution on a share capital increase from PLN 2 778 000 to PLN 46 768 000, i.e. by PLN 43 990 000. The share capital increase was taken up and paid by PGE S.A. in cash. PGE S.A. holds 100% in the share capital.
Renewables	Elektrownia Wiatrowa Baltica-3 sp. z o.o.	March 15, 2021	On February 11, 2021 the Extraordinary Assembly of Partners of the company adopted resolution on a share capital increase from PLN 83 900 000 to PLN 127 422 000, i.e. by PLN 43 522 000. The share capital increase was taken up and paid by PGE Baltica 5 sp. z o.o. in cash. PGE Baltica 5 sp. z o.o. holds 100% in the share capital.



Segment	Entity	Date of registration in the NCR	Comment
Renewables	Elektrownia Wiatrowa Baltica-1 sp. z o.o.	March 11, 2021	On February 18, 2021 the Extraordinary Assembly of Partners of the company adopted resolution on a share capital increase from PLN 22 545 000 to PLN 32 545 000, i.e. by PLN 10 000 000. The share capital increase was taken up and paid by PGE S.A. in cash. PGE S.A. holds 100% in the share capital.
Renewables	PGE Baltica 6 sp. z o.o.	March 15, 2021	On February 18, 2021 the Extraordinary Assembly of Partners of the company adopted resolution on a share capital increase from PLN 1 344 000 to PLN 36 516 000, i.e. by PLN 35 172 000. The share capital increase was taken up and paid by PGE S.A. in cash. PGE S.A. holds 100% in the share capital.
Renewables	Elektrownia Wiatrowa Baltica-2 sp. z o.o.	April 28, 2021	On February 18, 2021 the Extraordinary Assembly of Partners of the company adopted resolution on a share capital increase from PLN 65 200 000 to PLN 99 947 500, i.e. by PLN 34 747 500. The share capital increase was taken up and paid by PGE Baltica 6 sp. z o.o. in cash. After this transaction, PGE Baltica 6 sp. z o.o. holds 100% in the share capital.
Renewables	Elektrownia Wiatrowa Baltica-3 sp. z o.o.	July 19, 2021	On May 6, 2021 the Extraordinary Assembly of Partners of Elektrownia Wiatrowa Baltica-3 sp. z o.o. adopted resolution on a share capital increase from PLN 127 422 000 to PLN 254 844 000, i.e. by PLN 127 422 000, through issue of new 254 844 shares of the company with a nominal value of PLN 500 each. In addition, the Extraordinary Assembly of Partners of the company decided to exclude the pre-emptive right of the former sole partner of the company, i.e. PGE Baltica 5 sp. z o.o., to acquire all newly created shares in the increased share capital and decided that all newly created shares of the company would be acquired by the new partner, i.e. Ørsted Baltica 3 Holding sp. z o.o. with seat in Warsaw. In connection with the above resolution, the increase in the company's share capital was covered by a cash contribution by the new partner of the company: EUR 19 727 173, DKK 158 934 766 and PLN 200 721 000, with part of the contribution in amount of PLN 127 422 allocated to cover the nominal value of the new shares, and the remaining part of the cash contribution constituting the surplus over the nominal value of the new shares in the amount of PLN 73 299 000, EUR 19 727 173 and DKK 158 934 766 was allocated to the company's reserve capital. As a result of increasing the company's share capital and taking up its new shares, PGE Baltica 5 sp. z o.o. and Ørsted Baltica 3 Holding sp. z o.o. have the same number of shares in the company, each representing 50% of its share capital, and the company became a jointly controlled entity.
Renewables	Elektrownia Wiatrowa Baltica-2 sp. z o.o.	April 18, 2021	On May 6, 2021 the Extraordinary Assembly of Partners of Elektrownia Wiatrowa Baltica-2 sp. z o.o. adopted resolution on a share capital increase from PLN 99 947 500 to PLN 199 895 000, i.e. by PLN 99 947 500, through issue of new 199 895 shares of the company with a nominal value of PLN 500 each. In addition, the Extraordinary Assembly of Partners of the company decided to exclude the pre-emptive right of the former sole partner of the company, i.e. PGE Baltica 6 sp. z o.o., to acquire all newly created shares in the increased share capital and decided that all newly created shares of the company would be acquired by the new partner, i.e. Ørsted Baltica 2 Holding sp. z o.o. with seat in Warsaw. In connection with the above resolution, the increase in the company's share capital was covered by a cash contribution by the new partner of the company: EUR 15 499 922, DKK 124 877 316 and PLN 156 913 750, with part of the contribution in amount of PLN 99 947 500 allocated to cover the nominal value of the new shares, and the remaining part of the cash contribution constituting the surplus over the nominal value of the new shares in the amount of PLN 56 966 250, EUR 15 499 922 and DKK 124 877 316 was allocated to the company's reserve capital. As a result of increasing the company's share capital and taking up its new shares, PGE Baltica 6 sp. z o.o. and Ørsted Baltica 2 Holding sp. z o.o. have the same number of shares in the company, each representing 50% of its share capital, and the company will become a jointly controlled entity.
Renewables	PGE Baltica 2 sp. z o.o.	September 9, 2021	On July 1, 2021 the Extraordinary Assembly of Partners of PGE Baltica 2 sp. z o.o. adopted resolution on a share capital increase from PLN 20 000 to PLN 606 216 000, i.e. by PLN 606 196 000, through issue of new 606 196 shares of the company with a nominal value of PLN 1 000 each. The share capital increase was taken up by the sole partner, i.e. by PGE S.A., in return for an in-kind contribution (in-kind contribution) in for of 36 516 shares in the share capital of PGE Baltica 6 sp. z o.o. (former name: PGE Inwest 19 sp. z o.o.) constituting 100% in it share capital, what means that PGE Baltica 2 sp. z o.o. became the sole partner



Segment	Entity	Date of registration in the NCR	Comment
			of PGE Baltica 6 sp. z o.o. On July 13, 2021 transfer of ownership of shares to PGE Baltica 2 sp. z o.o. took place, on the ground of the in-kind agreement concluded on that day between PGE S.A. and PGE Baltica 2 sp. z o.o.
Renewables	PGE Baltica 3 sp. z o.o.	August 26, 2021	On July 1, 2021 the Extraordinary Assembly of Partners of PGE Baltica 2 sp. z o.o. adopted resolution on a share capital increase from PLN 20 000 to PLN 774 491 000, i.e. by PLN 774 471 000, through issue of new 774 471 shares of the company with a nominal value of PLN 1 000 each. The share capital increase was taken up by the sole partner, i.e. by PGE S.A., in return for an in-kind contribution (in-kind contribution) in for of 46 768 shares in the share capital of PGE Baltica 5 sp. z o.o. (former name: PGE Inwest 16 sp. z o.o.), constituting 100% in it share capital, what means that PGE Baltica 3 sp. z o.o. became the sole partner of PGE Baltica 5 sp. z o.o. On July 13, 2021 transfer of ownership of shares to PGE Baltica 3 sp. z o.o. took place, on the ground of the in-kind agreement concluded on that day between PGE S.A. and PGE Baltica 3 sp. z o.o.
Conventional Generation	Rybnik 2050 sp. z o.o.	September 15, 2021	On August 17, 2021 the Extraordinary Assembly of Partners of Rybnik 2050 sp. z o.o. adopted resolution on a share capital increase from PLN 50 000 to PLN 22 564 000, i.e. by PLN 22 514 000, through issue of new 22 514 471 shares of the company with a nominal value of PLN 1 000 each. The share capital increase was taken up and paid by PGE S.A. in cash. PGE S.A. holds 100% in the share capital.
Renewables	PGE Baltica 4 sp. z o.o.	Not yet registered	On August 25, 2021 the Extraordinary Assembly of Partners of PGE Baltica 4 sp. z o.o. adopted resolution on a share capital increase from PLN 20 000 to PLN 1 170 000, i.e. by PLN 1 150 000, through issue of new 1 150 shares of the company with a nominal value of PLN 1 000 each. The share capital increase was taken up and paid by PGE S.A. in cash. PGE S.A. holds 100% in the share capital.

## ADDITIONAL PAYMENTS FOR COMPANIES SHARES

Segment	Entity	Transaction date	Comment
Other Operations	PGE Inwest 8 sp. z o.o.	January 13 – 15, 2021	On January 13, 2021, the Extraordinary Assembly of Partners of the company adopted a resolution to obligate the sole shareholder of the company, i.e. PGE S.A., to make an additional payment to its shares, within the meaning of Article 177 of the Commercial Companies Code, in the total amount of PLN 50 000, i.e. in the amount of PLN 1 000 to each share held by PGE S.A., by January 18, 2021. In accordance with the above resolution of the Extraordinary Assembly of Partners, the additional payment was made by PGE S.A. on January 15, 2021.
Renewables	PGE SOLEO 1 sp. z o.o. PGE SOLEO 2 sp. z o.o. PGE SOLEO 3 sp. z o.o. PGE SOLEO 4 sp. z o.o. PGE SOLEO 5 sp. z o.o. PGE SOLEO 6 sp. z o.o. PGE SOLEO 7 sp. z o.o. ("Companies PGE Soleo")	February 4, 2021	On February 4, 2021 the Extraordinary Assemblies of Partners of the Companies PGE Soleo adopted resolutions to obligate the sole shareholder of the Companies PGE Soleo, i.e. PGE Energia Odnawialna S.A., to make additional paymenta to its shares, within the meaning of Article 177 of the Commercial Companies Code. Amount of the additional payment in case of PGE SOLEO 1 sp. z o.o. and PGE SOLEO 5 sp. z o.o. is the amount of PLN 200 000 for each one, and in case of PGE SOLEO 2 sp. z o.o., PGE SOLEO 3 sp. z o.o., PGE SOLEO 6 sp. z o.o. and PGE SOLEO 7 sp. z o.o is the amount of PLN 50 000 for each one.
Other Operations	PGE Inwest 8 sp. z o.o.	March 2 – 5, 2021	On March 2 2021 the Extraordinary Assembly of Partners of the company adopted a resolution to obligate the sole shareholder of the company, i.e. PGE S.A., to make an additional payment to its shares, within the meaning of Article 177 of the Commercial Companies Code, in the total amount of PLN 820 000, i.e. in the amount of PLN 16 400 to each share held by PGE S.A., by March 5, 2021. In accordance with the above resolution of the Extraordinary Assembly of Partners, the additional payment was made by PGE S.A. on March 5, 2021.



Other Operations	PGE Inwest 14 sp. z o.o.	April 22-27, 2021	On April 22, 2021 the Extraordinary Assembly of Partners of the company adopted a resolution to obligate the sole shareholder
			of the company, i.e. PGE S.A., to make an additional payment to its shares, within the meaning of Article 177 of the Commercial Companies Code, in the total amount of PLN 2 381 058, i.e. in the amount of PLN 537 to each share held by PGE S.A., by April
			28, 2021. In accordance with the above resolution of the Extraordinary Assembly of Partners, the additional payment was made by PGE S.A. on April 27, 2021.
			by 1 GE 3.A. 011 April 27, 2021.

## **MERGERS**

Segment	Acquiring company/acquired company	Date of transaction/ registration in the National Court Register	Comment
Renewables	PGE Energia Odnawialna S.A./ ECO – POWER sp. z o.o.	March 31, 2021/ April 30, 2021	On March 31, 2021 the Extraordinary General Meeting of PGE Energia Odnawialna S.A. (Acquiring company) and the Extraordinary Assembly of Partners ECO - POWER sp. z o.o. (acquired company) adopted resolutions on the merger of the companies in mode of art. 492 § 1 p. 1 of the Polish Commercial Companies Code (merger through acquisition), through transferring of all assets of the acquired company to the acquiring company without issue of new shares in exchange for the shares in the share capital of the acquired company pursuant to art. 516 of the Polish Commercial Companies Code and dissolution of the acquired company without its liquidation. PGE Energia Odnawialna S.A. was the sole shareholder of ECO – POWER sp. z o.o.
Supply	PGE Obrót S.A./ PGE Centrum sp. z o.o.	September 20, 2021/ Not yet registered	On September 20, 2021 the Extraordinary General Meeting of PGE Obrót S.A. (Acquiring company) and the Extraordinary Assembly of Partners of PGE Centrum sp. z o.o. (acquired company) adopted resolutions on the merger of the companies in mode of art. 492 § 1 p. 1 of the Polish Commercial Companies Code (merger through acquisition), through transferring of all assets of the acquired company to the acquiring company, in exchange for the shares of the acquiring company, which the acquiring company will grant to PGE S.A. as the sole partner of the acquired company. As a result of the merger, the Extraordinary General Meeting of PGE Obrót S.A. adopted resolution on increase of the share capital of the acquiring company by PLN 37 283 500 to PLN 529 923 900 in way of issue of 372 835 inscribed shares of I series with a nominal value of PLN 100 each. In addition, the Extraordinary General Meeting of PGE Obrót S.A. decided to assign the company PGE S.A. all new shares of PGE Obrót S.A. referred to above.



#### **DE-MERGERS**

Segment	Spun off company /acquiring company	Date of transaction/ registration in the NCR	Comment
District Heating	PGE GIEK S.A./ PGE Energia Ciepła S.A.	April 15, 2021 May 24, 2021 decrease of the share capital of PGE GIEK S.A. was registered in NCR. July 1, 2021 increase of the share capital of PGE Energia Ciepła S.A. was registered in NCR.	On April 15, 2021 the Extraordinary General Meetings of PGE GiEK S.A. and PGE Energia Ciepła S.A. adopted resolutions to divide PGE GiEK S.A. (divided company) through partial division pursuant to art. 529 § 1 point 4 of the Polish Commercial Companies Code by transferring to PGE Energia Ciepła S.A. (acquiring company) certain assets of the divided company in the form of a part of a branch of this company, i.e. branch ZEDO, in the scope covering the Szczecin CHP plant, Pomorzany CHP plant and the district heating system in Gryfino, constituting an organised part of enterprise, functionally related to the generation of electricity as well as electricity and heat in cogeneration and the distribution of heat. The transfer of the organised part of enterprise to the acquiring company was performed through a reduction in the divided company's supplementary capital and an increase in the acquiring company's share capital by PLN 120 347 940 to PLN 2 501 281 240 as a result of the issue of 12 034 794 registered shares of the acquiring company, with a nominal value of PLN 10 each. As the sole shareholder of the divided company, PGE acquired all of the newly-issued shares in the increased share capital of the acquiring company.
Conventional Generation	PGE GIEK S.A./PGE Inwest 8 sp. z o.o.	July 15, 2021 The decrease of the share capital of PGE GiEK S.A. wa registered on September 9, 2021. The increase of the share capital of PGE Inwest 8 sp. z o.o. has not been registered	On July 15, 2021 the Extraordinary General Meeting of PGE GiEK S.A. and the Extraordinary Assembly of Partners of PGE Inwest 8 sp. z o.o. adopted resolutions to divide PGE GiEK S.A. (divided company) through partial division pursuant to art. 529 § 1 point 4 of the Polish Commercial Companies Code by transferring to PGE Inwest 8 sp. z o.o. (acquiring company) certain assets of the divided company in the form of a part of a branch of this company, i.e. PGE GiEK S.A. — Branch Zespół Elektrowni Dolna Odra, in the scope covering the construction of gas-fired units constituting an organized part of the enterprise ("OPE"), functionally related to the construction of new units and the generation of electricity in the future. Transfer of OPE to the acquiring company will take place by reducing the share capital of the divided company by the amount of PLN 27 543 770 to PLN 6 450 307 050 and an increase in the share capital of the acquiring company by the amount of PLN 32 314 000 to PLN 32 364 000 as a result of the issue of 32 314 shares of the acquiring company, with a nominal value of PLN 1 000 PLN each. As the sole shareholder of the divided company, PGE acquired all of the newly-issued shares in the increased share capital of the acquiring company.

## TRANSFORMATION OF COMPANIES

Segment	Company in transformation/transformed company	Date of transaction/ registration in the NCR	Comment
Other Operations	PGE Ekoserwis sp. z o.o. after transformation: PGE Ekoserwis S.A.	December 2, 2020/ February, 5 2021	On December 2, 2020 the Extraordinary Assembly of Partners of PGE Ekoserwis sp. z o.o. adopted resolution on transformation of the company into a joint stock company under name PGE Ekoserwis S.A. PGE Ekoserwis S.A. was established on February 5, 2021 as a result of an entry into the register of entrepreneurs of the National Court Register. At the reporting date PGE S.A. held 222 850 shares, constituting 95.08% in the share capital of PGE Ekoserwis S.A.
Other Operations	EPORE sp. z o.o. after transformation: EPORE S.A.	December 21, 2020/ January 13, 2021	On December 21, 2020 the Extraordinary Assembly of Partners of EPORE sp. z o.o. adopted resolution on transformation of the company into a joint stock company under name EPORE S.A. EPORE S.A. was established on January 13, 2021 as a result of an entry into the register of entrepreneurs of the National Court Register. PGE GIEK S.A. is the sole shareholder of the company, holding 100% in the share capital of EPORE S.A.



## LIQUIDATION OF COMPANIES

Segment	Company in liquidation	Date of transaction/ registration in the National Court Register	Comment	
Supply	PGE Trading GmbH with seat in Berlin ("PGE Trading")	March 1, 2021/ PGE Trading has not been removed from the commercial register kept by the District Court in Berlin- Charlottenburg	On March 1, 2021 the Extraordinary Assembly of Partners of PGE Trading, in which PGE holds 100% of the share capital, adopte resolution on dissolution of PGE Trading and appointment of a liquidator to carry out liquidation activities of PGE Trading.	



#### 5.2. Publication of financial forecasts

PGE S.A. did not publish financial forecasts.

#### 5.3. Information about shares and other securities

#### SHAREHOLDERS WITH A SIGNIFICANT STAKE

According to the best knowledge, on the ground of the letter from the Ministry of the State Treasury of April 27, 2016, the State Treasury holds 1 072 984 098 ordinary shares of the Company, representing 57.39% of the Company's share capital and entitling to 1 072 984 098 votes on the General Meeting of the Company, constituting 57.39% of total votes.

Table: Shareholders holding directly or indirectly by subsidiaries at least 5% of the total votes at the General Meeting of PGE S.A.

Shareholder	Number of shares	Number of votes	% in total votes on General Meeting
State Treasury	1 072 984 098	1 072 984 098	57.39%
Others	796 776 731	796 776 731	42.61%
Total	1 869 760 829	1 869 760 829	100.00%

Shares of the parent company owned by the members of management and supervisory authorities

As at June 30, 2021, none of the persons managing the Company owns or manages directly the shares of PGE S.A.

### 6. Statement on the reliable preparation of the financial statements

#### STATEMENT ON THE RELIABLE PREPARATION OF THE FINANCIAL STATEMENTS

To the best knowledge of the Management Board of PGE S.A., the half-yearly financial report, containing interim condensed consolidated financial statements of PGE Capital Group, interim condensed standalone financial statements for PGE S.A. and comparative data were prepared in accordance with the governing accounting principles, present a fair, true and reliable view of the material and financial situation of PGE Capital Group and its financial result.

The report of the Management Board on the activities of PGE Capital Group presents a true view of the development, achievements and situation of the Capital Group.

#### STATEMENT ON THE ENTITY AUTHORISED TO AUDIT THE FINANCIAL STATEMENTS

The Management Board of PGE S.A. declares that the entity authorised to audit the financial statements, which reviews the interim consolidated financial statements and interim condensed standalone financial statements for PGE S.A., has been appointed in accordance with provisions of the law. The entity and the statutory auditors, who performed the review, fulfilled all the requirements for issuing an unbiased and independent report on the review, in accordance with the governing provisions and professional standards.



## 7. Approval of the Management Board's Report

The foregoing Management Board's Report on activities of PGE Capital Group was approved for publication by the Management Board of the parent company on September 28, 2021.

Warsaw, September 28, 2021

Signatures of members of the Management Board of PGE Polska Grupa Energetyczna S.A.

President of the Management Board	Wojciech Dąbrowski	
Vice- President of the Management Board	Wanda Buk	
Vice- President of the Management Board	Paweł Cioch	
Vice- President of the Management Board	Lechosław Rojewski	
Vice- President of the Management Board	Paweł Śliwa	
Vice- President of the Management Board	Ryszard Wasiłek	



## Glossary

JIUSSAI Y					
AKPiA	Control, measurement and automation apparatus area				
Ancillary	services provided to the transmission system operator, which are indispensable for the proper				
control	functioning of the National Power System and ensure the keeping of required reliability and quality				
services (ACS)	standards.				
Achievable	the maximum sustained capacity of a generating unit or generator, maintained continuously by a				
capacity	thermal generator for at least 15 hours or by a hydroelectric generator for at least five hours, at				
capacity	standardized operating conditions, as confirmed by tests.				
ARA	USD hard coal price index in EU. Loco in harbours Amsterdam-Rotterdam-Antwerp				
AIVA					
Balancing	a technical platform for balancing electricity supply and demand on the market. The differences between				
market	the planned (announced supply schedules) and the actually delivered/off-taken volumes of electricity are				
	settled here. The purpose of the balancing market is to balance transactions concluded between				
	individual market participants and actual electricity demand. The participants of the balancing market				
	can be the generators, customers for electricity understood as entities connected to a network located in				
	the balancing market area (including off-takers and network customers), trading companies, electricity				
	exchanges and the TSO as the balancing company.				
Base,	standard product on the electricity market: a constant hourly power supply per day in a given period, for				
baseload	example week, month, quarter or year.				
BAT	Best Available Technology				
Best Practices	Document "Best Practice for GPW Listed Companies 2016" adopted by the resolution of the GPW				
	Supervisory Board of October 13, 2015 and effective from January 1, 2016.				
Biomass					
Diomass	solid or liquid substances of plant or animal origin, subject to biodegradation, obtained from agricultural				
	or forestry products, waste and remains or industries processing their products as well as certain other				
	biodegradable waste in particular agricultural raw materials.				
Black energy	popular name for energy generated as a result of combustion of black coal or lignite.				
CCGT	Combined Cycle Gas Turbine				
Circular	system that minimises the consumption of resources and the level of waste as well as emissions and				
economy	energy losses by creating a closed loop of processes in which waste from one process is used as				
,	resources in other processes so as to maximally reduce the quantity of production waste				
Co-	the generation of electricity or heat based on a process of combined, simultaneous combustion in one				
combustion	device of biomass or biogas together with other fuels; part of the energy thus generated can be deemed				
combastion	to be energy generated with the use of renewable sources.				
Co-generation	the simultaneous generation of heat and electricity or mechanical energy in the course of one and the				
co generation	same technological process.				
Constrained	the generation of electricity to ensure the quality and reliability of the national power system; this				
generation	applies to generating units in which generation must continue due to the technical limitations of the				
generation	operation of the power system and the necessity of ensuring its adequate reliability.				
CVC fund	Corporate Venture Capital; in the CVC model, portfolio companies, aside from financial support, receive				
CVCTuna					
Distribution	the opportunity to verify their ideas in a corporate setting				
Distribution	transport of energy through distribution grid of high (110 kV), medium (15kV) and low (400V) voltage in				
Distribution	order to supply the customers.				
Distribution	a power company engaging in the distribution of gaseous fuels or electricity, responsible for traffic in the				
System	gas or electricity distribution systems, current and long-term security of operation of the system, the				
Operator	operation, maintenance, repairs and indispensable expansion of the distribution network, including				
(DSO)	connections to other gas or power systems.				
Energy cluster	civil-law arrangement that may include natural persons, legal entities, scientific units, research institutes				
	or local government units, concerning the generation, distribution or trade in energy and energy demand				
	balancing, with this energy being from renewable sources or other sources or fuels, within a distribution				
	grid with nominal voltage below 110 kV, within the operational area of the given cluster, not exceeding				
	the area of one district (powiat) in the meaning of the act on district authorities) or 5 municipalities				
	(gmina) in the meaning of the act on municipal authorities; an energy cluster is represented by a				
	coordinator, which is a cooperative, association, foundation appointed for this purpose or any member				
	of the energy cluster indicated in the civil-law arrangement				
ERO	Energy Regulatory Office (pol. URE).				
EUA	European Union Allowances: transferable CO <sub>2</sub> emission allowances; one EUA allows an operator to				
	release one tonne of CO <sub>2</sub> .				



EU ETS	European Union Greenhouse Gas Emission Trading Scheme) EU emission trading scheme. Its operating rules are set out in the ETS Directive, amended by the Directive 2009/29/EC of the European Parliament and of the Council of April 23, 2009 (OJ EU L. of 2009, No. 140, p. 63—87).			
EV	Electric vehicle			
FIT/FIP	Feed-in-Tariff (FIT) and Feed-in-Premium (FIP): system of subsidies to the market price of electricity performed by Zarządca Rozliczeń S.A.			
Generating unit	a technically and commercially defined set of equipment belonging to a power company and used to generate electricity or heat and to transmit power.			
GJ	Gigajoule, a unit of work/heat in the SI system, 1 GJ = 1000/3.6 kWh = approximately 278 kWh.			
GPZ	main power supply point, a type of transformer station used for the processing or distribution of electricity or solely for the distribution of electricity.			
Green certificate	popular name for energy generated from renewable energy sources.			
GW	gigawatt, a unit of capacity in the SI system, 1 GW = $10^9$ W.			
GWe	one gigawatt of electric capacity.			
GWt	one gigawatt of heat capacity.			
HCl	hydrogen chloride.			
Hg	mercury.			
HICP	Harmonised Index of Consumer Prices			
High Voltage Network (HV)	a network with a nominal voltage of 110 kV.			
IED	Industrial Emissions Directive			
IGCC	Integrated Gasification Combined Cycle.			
Installed	the formal value of active power recorded in the design documentation of a generating system as being			
capacity	the maximum achievable capacity of that system, confirmed by the acceptance protocols of that system			
	(a historical value, it does not change over time.			
IRiESP	the Transmission Network Operation and Maintenance Manual required to be prepared by a transmission system operator pursuant to the Energy Law; instructions prepared for power networks that specify in detail the terms and conditions of using these networks by system users as well as terms and conditions for traffic handling, operation and planning the development of these networks; sections on transmission system balancing and system limitation management, including information on comments received from system users and their consideration, are submitted to the ERO President for approval by way of a decision.			
IRZ	Cold Intervention Reserve Service – service consisting of maintaining power units ready for energy production. Energy is produced on request of PSE S.A.			
KRI	Key Risk Indicator			
KSE	the National Power System, a set of equipment for the distribution, transmission and generation of electricity, forming a system to allow the supply of electricity in the territory of Poland.			
KSP	the National Transmission System, a set of equipment for the transmission of electricity in the territory of Poland.			
kV	kilo volt, an SI unit of electric potential difference, current and electromotive force; 1kV= 103 V.			
kWh	kilowatt-hour, a unit of electric energy in the SI system defined as the volume of electricity used by the 1 kW equipment over one hour. 1 kWh = 3,600,000 J = 3.6 MJ.			
kWp	a power unit dedicated to determining the power of photovoltaic panels, means the amount of electricity in the peak of production.			
Low Voltage Network (LV)	a network with a nominal voltage not exceeding 1 kV.			
LTC	long-term contracts on the purchase of capacity and electricity entered into between Polskie Sieci Elektroenergetyczne S.A. and electricity generators in the years 1994-2001.			
Medium- voltage network (MV)	an energy network with a nominal voltage higher than 1 kV but lower than 110 kV.			
MEV	Minimum Energy Volumes.			
MSR	Market Stability Reserve (relating to CO <sub>2</sub> )			
MW	a unit of capacity in the SI system, 1 MW = 10 <sup>6</sup> W.			
MWe	one megawatt of electric power.			



MWt	one megawatt of heat power.			
NAP	National emissions Allocation Plan, prepared separately for the national emission trading system and for the EU emission trading system by the National Administrator of the Emission Trading System.			
NAP II	National $CO_2$ emissions Allocation Plan for the years 2008-2012 prepared for the EU emission trading system adopted by the Ordinance of the Council of Ministers of July 1, 2008 (Dz. U. of 2008, No. 202, item 1248).			
NH <sub>3</sub>	ammonia			
Nm³	normal cubic meter; a unit of volume from outside the SI system signifying the quantity of dry gas in 1 m3 of space at a pressure of 101.325 Pa and a temperature of 0°C.			
NO <sub>x</sub>	nitrogen oxides.			
N:W ratio	Ration of volume of overburden removed in m <sup>3</sup> to the mass of extracted coal in tons			
OTF	Organised Trading Facilities			
Operational Capacity Reserve (ORM)	ORM constitutes of generation capacities of active Production Schedular Units (JGWa) in operation or layover, representing excess capacity over electricity demand available to the TSO under the Energy Sale Agreements and on the Balancing Market in unforced generation			
Peak, peakload	a standard product on the electricity market; a constant power supply from Monday to Friday, each hour between 7:00 a.m. and 10:00 p.m. (15-hour standard for the Polish market) or between 8:00 a.m. and 8:00 p.m. (12-hour standard for the German market) in a given period, for example week, month, quarter or year.			
Peak power pumped storage plants	special type of hydro-power plant allowing for electricity storage. It uses the upper reservoir, to which water is pumped from the lower reservoir using electricity (usually excessive in system). The pumped storage facilities provide ancillary control services for the national power system. In periods of increased demand for electricity, water from the upper reservoir is released through the turbine. This way, electricity is produced.			
PJ	Petajoule, a unit of work/heat in the SI system, 1 PJ = approx. 278 GWh			
Property rights	negotiable exchange-traded rights under green and co-generation certificates			
Prosumer PSCMI1	end customer who purchases electricity under a comprehensive agreement and generates electricity only from renewable sources at a micro-installations for own purposes, unrelated to economic activities			
FSCIVIII	Polish Steam Coal Market Index 1 - average level of prices of coal dust sold to industrial-scale power plants in Poland			
RAB	Regulatory Asset Base.			
Red certificate	a certificate confirming generation of electricity in co-generation with heat.			
Red energy	popular name for electricity co-generated with heat.			
Regulator	the President of ERO, fulfilling the tasks assigned to him in the energy law. The regulator is responsible for, among others, giving out licenses for energy companies, approval of tariffs for energy companies, appointing Transmission System Operators and Distribution System Operators.			
Renewable Energy Source (RES)	a source of generation using wind power, solar radiation, geothermal energy, waves, sea currents and tides, flow of rivers and energy obtained from biomass, landfill biogas as well as biogas generated in sewage collection or treatment processes or the disintegration of stored plant or animal remains.			
RIG	Readiness Interventional Reserve - the power plant's readiness to provide the active power generation service or its consumption at the request of PSE.			
SAIDI	System Average Interruption Duration Index - index of average system interruption time (long, very long and disastrous), expressed in minutes per customer per year, which is the sum of the interruption duration multiplied by the number of consumers exposed to the effects of this interruption during the year, divided by the total number of off-takers. SAIDI does not include interruptions lasting less than three minutes and is determined separately for planned and unplanned interruptions. It applies to breakdowns in the low (LV), medium (MV) and high voltage (HV), wherein SAIDI in quality tariff does not include interruptions on low voltage.			
SAIFI	System Average Interruption Frequency Index - index of average system amount of interruptions ( long, very long and disastrous ), determined as number of off-takers exposed to the effects of all such interruptions during the year divided by the total number of off-takers. SAIFI does not include interruptions lasting less than three minutes and is determined separately for planned and unplanned interruptions. It applies to breakdowns in the low (LV), medium (MV) and high voltage (HV), wherein SAIFI in quality tariff does not include interruptions on low voltage.			
SCR	Selective catalytic reduction			
SNCR	Selective non-catalytic reduction			



Start-up	early-stage company established in order to build new products or services and characterised by a high level of uncertainty. The most common features of start-ups are: short operational history (up to 10 years), innovativeness, scalability, higher risk than in the case of traditional businesses but also potential
	higher returns on investment
Tariff	the list of prices and rates and terms of application of the same, devised by an energy enterprise and introduced as binding on the customers specified therein in the manner defined by an act of parliament.
Tariff group	a group of customers off-taking electricity or heat or using services related to electricity or heat supply to whom a single set of prices or charges and terms are applied.
TGE	Towarowa Giełda Energii S.A. (Polish Power Exchange), a commodity exchange on which trading can take place in electricity, liquid or gas fuels, extraction gas, emission allowances and property rights whose price depends directly or indirectly on electric energy, liquid or gas fuels and emission allowances, admitted to commodity exchange trading.
TPA, TPA rule	Third Party Access, the owner or operator of the network infrastructure to third parties in order to supply goods/services to third party customers.
Transmission of electricity	transport of electricity through high voltage (220 and 400 kV) transmission network from generators to distributors.
Transmission	a power company engaging in the transmission of gaseous fuels or electric energy, responsible for traffic
System	in a gas or power transmission system, current and long-term security of operation of that system, the
Operator (TSO)	operation, maintenance, repair and indispensable expansion of the transmission system, including
	connections with other gas or power systems. In Poland, for the period from July 2, 2014 till December 31, 2030 Polskie Sieci Elektroenergetyczne S.A. was chosen as a TSO in the field of electricity transmission.
TWh	terawatt hour, a multiple unit for measuring of electricity unit in the system SI. 1 TWh is 10 <sup>9</sup> kWh.
Ultra-high- voltage network (UHV)	an energy network with a voltage equal to 220 kV or higher.
V (volt)	electrical potential unit, electric voltage and electromotive force in the International System of Units (SI),
	$1 V = 1J/1C = (1 kg x m^2) / (A x s^3).$
W (watt)	a unit of power in the International Systems of Units (SI), $1 \text{ W} = 1 \text{J}/1 \text{s} = 1 \text{ kg x m}^2 \text{ x s}^{-3}$ .
Yellow certificate	a certificate confirming generation of energy in gas-fired power plants and CCGT power plants.
Yellow energy	popular name for energy generated in gas-fired power plants and CCGT power plants.