

ZMIENIAMY SIĘ
DLA WAS



ZEPAK
Energia dla Ciebie

ZE PAK SA CAPITAL GROUP

MANAGEMENT BOARD'S REPORT FROM THE CAPITAL GROUP'S OPERATION IN 2021

*This is a translation of the document issued originally in Polish language.
The Polish original should be referred to in matters of interpretation.*



28 APRIL 2022

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1. SELECTED FINANCIAL DATA

<i>Selected consolidated financial data</i>	<i>Zloty thousand 12 months 2021 period from 01.01.2021 to 31.12.2021</i>	<i>Zloty thousand 12 months 2020 period from 01.01.2020 to 31.12.2020</i>	<i>Euro thousand 12 months 2021 period from 01.01.2021 to 31.12.2021</i>	<i>Euro thousand 12 months 2020 period from 01.01.2020 to 31.12.2020</i>
Sales revenue	2 451 209	2 206 974	535 491	493 267
Operating profit/loss	(512 622)	(291 114)	(111 987)	(65 065)
Profit/loss before tax	(518 523)	(303 055)	(113 276)	(67 734)
Net profit/loss for the period	(317 404)	(226 465)	(69 340)	(50 616)
Net profit/loss attributable to equity holders of the parent	(316 999)	(222 393)	(69 252)	(49 706)
Total comprehensive income	(314 473)	(227 006)	(68 700)	(50 737)
Net cash flow from operating activities	6 555	166 321	1 432	37 173
Net cash flow from investing activities	(391 229)	(57 619)	(85 468)	(12 878)
Net cash flow from financing activities	393 482	(25 475)	85 960	(5 694)
Net increase / (decrease) in cash and cash equivalents	8 808	83 227	1 924	18 602
Net profit /loss per share (in zloty/euro per share)	(6,24)	(4,38)	(1,36)	(0,98)
Weighted average number of shares	50 823 547	50 823 547	50 823 547	50 823 547
	<i>As of 31.12.2021</i>	<i>As of 31.12.2020</i>	<i>As of 31.12.2021</i>	<i>As of 31.12.2020</i>
Total assets	3 311 762	2 878 628	720 042	623 782
Fixed assets	1 273 696	1 857 355	276 927	402 478
Current assets	2 038 066	1 021 273	443 116	221 304
Total equity	524 232	949 463	113 978	205 743
Share capital	101 647	101 647	22 100	22 026
Share capital attributable to equity holders of the parent	524 627	951 214	114 064	206 122
Total liabilities	2 787 530	1 929 165	606 064	418 039
Long-term liabilities	794 587	861 085	172 759	186 592
Short-term liabilities	1 992 943	1 068 080	433 305	231 447
Book value per share (in zloty/euro per share)	10,31	18,68	2,24	4,05
Weighted average number of shares	50 823 547	50 823 547	50 823 547	50 823 547

Above financial data has been converted into EUR according to the following exchange rates:

- data on the statement of comprehensive income and the statement of cash flows according to the arithmetic average of the average NBP exchange rates from each last business day of the month of the financial period from January 1, 2021 to December 31, 2021, which is 4.5775 EUR/PLN and from January 1, 2020 to December 31, 2020, which is 4.4742 EUR/PLN.
- data on individual items of the statement of financial position according to the average exchange rate of the EUR/PLN specified by the NBP as at December 31, 2021, i.e. 4.5994 EUR/PLN and as at December 31, 2020, i.e. 4.6148 EUR/PLN.

2. DESCRIPTION OF THE COMPANY AND THE CAPITAL GROUP

2.1. Basic information on the Company and the Capital Group

Basic information on the Company

ZE PAK Spółka Akcyjna (former Zespół Elektrowni Pątnów – Adamów – Konin Spółka Akcyjna, hereinafter referred to as „ZE PAK SA” or „Company”) operates in the form of a joint-stock company, pursuant to the regulations of the Code of Commercial Companies as well as other regulations of the generally applicable Polish law. The Company was established as result of transformation of Zespół Elektrowni Pątnów – Adamów – Konin state-owned company with registered office in Konin into a company wholly owned by the State Treasury under the business name of Zespół Elektrowni „Pątnów – Adamów – Konin” Spółka Akcyjna. The deed of transformation was signed on 29 December 1994 in the presence of the notary public Elżbieta Brudnicka from the Notarial Office in Warsaw. On 31 December 1994, the Company was entered into the commercial register section “B” by the District Court in Konin under number RHB 847. Based on the decision of the District Court in Poznań, 22nd Commercial Department of KRS dated 21 June 2011, the Company was entered into the Register of Entrepreneurs. Currently the Company is entered into the Register of Entrepreneurs kept by the District Court Poznań Nowe Miasto i Wilda in Poznań, IX Commercial Department, under the KRS number 0000021374. The Company was established for an unlimited period of time.

Name:	ZE PAK Spółka Akcyjna
Legal status:	stock company
Abbreviated name:	ZE PAK SA
Registered office and address:	45 Kazimierska str., 62-510 Konin, Poland
Telephone number:	+48 63 247 30 00
Fax number:	+48 63 247 30 30
Website:	www.zepak.com.pl
Email address:	zepak@zepak.com.pl
KRS:	0000021374
REGON:	310186795
NIP:	665-000-16-45

According to the Company’s Articles of Association, the primary subject of the Company’s operations is the production and sales of electricity as well as the production and sales of heat. The Company produces energy from conventional sources as well as by biomass combustion. The company has decided to focus its future activities in the area of low-emission and carbon-neutral energy sources as well as the production and use of green hydrogen. The company may operate in the territory of the Republic of Poland and abroad. It should be taken into account that both the Company and the Group are currently in the process of significantly changing the nature of their future operations. A number of currently undertaken investment initiatives will be implemented in special purpose vehicles, often in cooperation with external partners. This way of functioning of the Group will transform the Company into a holding entity, concentrating shares in companies responsible for the implementation of separate projects.

The Company’s shares are listed on the regulated market operated by Giełda Papierów Wartościowych SA in Warsaw (Warsaw Stock Exchange). The Company’s shares are dematerialised and marked by Krajowy Depozyt Papierów Wartościowych SA (National Depository for Securities) with the following stocks code: ISIN PLZEPAK00012.

In 2021, the share capital of ZE PAK SA has been not changed. As of 31 December 2021 amounts to zloty 101 647 094.00 and is divided into 50 823 547 bearer shares class A with a face value of zloty 2.00 each, which represent 50 823 547 votes at the Company’s General Meeting, comprising 100% of the total votes at the Company’s General Meeting.

The Company has no branches (establishments).

Basic information on the Capital Group

As of December 31, 2021 ZE PAK SA Capital Group (hereinafter referred to as the „Group”, „Capital Group”, „ZE PAK SA Group”) is composed of a dominant entity ZE PAK SA and twenty six subsidiaries, i.e. PAK Kopalnia Węgla Brunatnego Konin SA (hereinafter referred to as „PAK KWB Konin SA”), PAK – Polska Czysta Energia sp. z o.o. (hereinafter referred to as „PAK – PCE sp. z o.o.”), PAK – PCE Fotowoltaika sp. z o.o., PAK – PCE Wiatr sp. z o.o., PAK – PCE Biopaliwa i Wodór sp. z o.o., PAK – PCE Polski Autobus Wodorowy sp. z o.o., PAK – PCE Biogaz sp. z o.o., PG Hydrogen sp. z o.o., Exion Hydrogen Polskie Elektrolizery sp. z o.o., PAK CCGT sp. z o.o., Farma Wiatrowa Kazimierz Biskupi sp. z o.o., PCE – OZE 1 sp. z o.o., PCE – OZE 2 sp. z o.o., PCE – OZE 3 sp. z o.o.,

PCE – OZE 4 sp. z o.o., PCE – OZE 5 sp. z o.o., PCE – OZE 6 sp. z o.o., MESE sp. z o.o., Park Wiatrowy Pałczyn 1 sp. z o.o., Park Wiatrowy Pałczyn 2 sp. z o.o., Przedsiębiorstwo Remontowe PAK Serwis sp. z o.o. (hereinafter referred to as „PAK Serwis” sp. z o.o.), PAK – Volt SA, PAK Górnictwo sp. z o.o., Exion Hydrogen Belgium BV, PAK Kopalnia Węgla Brunatnego Adamów SA in liquidation (hereinafter referred to as „PAK KWB Adamów SA in liquidation”) and Aquakon sp. z o.o. in liquidation. All the above-mentioned companies are subject to consolidation, with the exception of MESE sp. z o.o. due to insignificant amounts.

The companies of the biggest importance for the Group due to their scale of activity are: ZE PAK SA, dealing with production of electricity and heat and PAK KWB Konin SA, dealing with the lignite mining. The assets concentrated around PAK PCE sp. z o.o. which concentrates activities related to the generation of electricity from renewable sources, become more and more important. In addition to companies from the aforementioned main areas of activity, the Group also includes other companies that deal, among others, with the execution of construction and assembly works, maintenance works, service, production and trade activities aimed at satisfying the needs and comprehensive industry service.

The Group's generation assets include two lignite-fired power plants located in central Poland, in the Greater Poland Voivodship. Pałnów Power Plant produces energy using lignite in 4 power units with a total capacity of 1,118 MW. Konin Power Plant, a former coal-fired power plant, today mainly uses a block with a boiler dedicated to burning biomass with an installed capacity of 50 MW and produces electricity and heat from biomass. At the end of 2021, the modernization of the second unit in Konin power plant is being finalized, that is also adapted to biomass combustion. The Group also includes a photovoltaic farm with an installed capacity of 70 MWp, located in Brudzew commune.

The Group's mining assets are concentrated in PAK KWB Konin SA, which is exploiting Józwin, Tomisławice and Drzewce open pits.

Majority of the Group's sales revenue is derived from sale of electricity. This is supplemented by revenues from sale of heat, contracts for construction repair services and certificates of energy origin. An additional source of sales revenues, depending on the level of production costs, energy prices on the market and production volume, are revenues from the termination of long-term contracts (Power Purchase Agreements) for the sale of electricity. The Group, having lignite mines in its structure, provides Pałnów power plant with an access to uninterrupted lignite supplies for own production installations located in the immediate vicinity of the mines. The vertically integrated Group enables optimization of coal inventories and supplies by coordinating coal mining with the demand for this fuel. Coal supplies are supplemented with contracts with external suppliers. The demand for biomass is covered on the basis of contracts concluded with external suppliers.

For many years, the Group operated on the basis of a business profile focusing on the production of electricity from lignite mined in nearby open-pit mines. However, this business model has limited chances of development in the future, given the pressure on high-carbon energy producers. Increasingly higher costs of CO₂ emissions and the conditions related to the emission of other substances (NO_x, SO₂, dust, mercury, etc.) make the Group decide to focus its future activities in the area of low-emission and emission neutral energy sources as well as the production and use of green hydrogen.

Around PAK - PCE sp. z o.o. the structure of special purpose vehicles, which are to be responsible for activities in particular renewable energy technologies, is successively being built. Thanks to the planned sale transaction to Cyfrowy Polsat Group of the majority stake in the structure of PAK - PCE sp. z o.o., it is planned to acquire a strong capital partner that will be able to guarantee the implementation of a wide range of prospective investment projects in the area of renewable energy sources and the production and use of “green” Hydrogen.

Special purpose vehicle PAK CCGT sp. z o.o. is to be responsible for the preparation and implementation of the gas unit construction project at the former Adamów coal-fired power plant. The project won the auction and thus received support in the form of a 17-year power contract.

As part of its transformation activities, the Group is also active in the area of offshore wind farm construction projects. It is also planned to use the assets at Pałnów Power Plant for the implementation of the SMR (Small Modular Reactor) technology, which is currently in the pre-commercial phase. Both of the above projects are developed in cooperation with external partners.

Apart from the Capital Group, the Company owns shares in Zakłady Pomiarowo-Badawcze Energetyki Energopomiar sp. z o.o. with headquarters in Gliwice and providing measurement, research and consultancy services regarding, among others power engineering. The Company holds 1 share in the aforementioned company with the nominal value of PLN 159 500.07 which constitutes 2.96% of the total capital.

In addition, the Company also holds shares in Huta Łaziska SA in arrangement bankruptcy, based in Łaziska Górne, specializing in the production of ferroalloys. These are B series shares - 3,277,025 with a nominal value of PLN 10.00

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each and C series shares - 4,307,822 shares with a nominal value of PLN 10.00 each, which in total constitutes 11.19% of the share capital.

The main shareholder makes the Group affiliated with other entities, in which Zygmunt Solorz holds substantial direct or indirect share.

Picture 1: Structure of the Group as of December 31, 2021

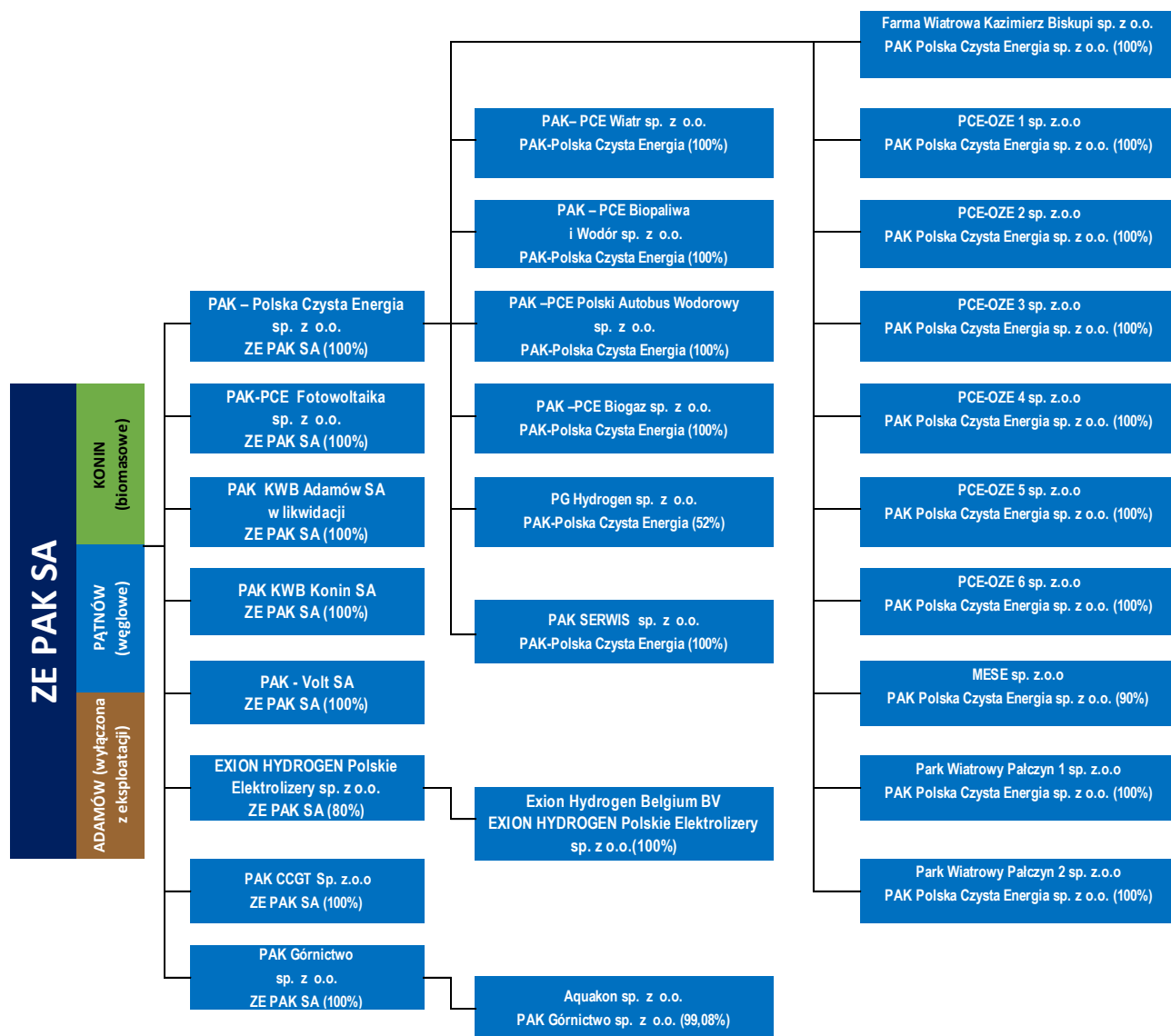


Table 1: Description of the Group's companies (excluding ZE PAK SA)

Entity	Registered office	Scope of operations	% Group's share in the capital	
			As at 31 December 2021	As at 31 December 2020
„PAK – Polska Czysta Energia” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Activities of central companies, excluding financial holding companies	100.00%	100.00%
„PAK Kopalnia Węgla Brunatnego Konin” SA	62-540 Kleczew ul. 600-lecia 9	Lignite mining	100.00%	97.68%*
„PAK Górnictwo” sp. z o.o.	62-510 Konin ul. Przemysłowa 158	Repair and maintenance of machines	100.00%	100.00%

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Przedsiębiorstwo Remontowe „PAK SERWIS” sp. z o.o.	62-510 Konin ul. Przemysłowa 158	Construction and repair service	100.00%*	100.00%*
„PAK – Volt” SA	04-028 Warszawa Al. Stanów Zjednoczonych 61	Trade of electricity	100.00%	100.00%
„PAK – PCE Polski Autobus Wodorowy” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Production of buses	100.00%*	100.00%*
„PAK – PCE Fotowoltaika” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Generation of electricity	100.00%	100.00%
„PAK – PCE Biogaz” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Generation of electricity	100.00%*	100.00%*
„PAK – PCE Biopaliwa i Wodór” sp. z o.o.	62-510 Konin ul. Przemysłowa 158	Generation of electricity	100.00%*	100.00%*
„PAK – PCE Wiatr” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Generation of electricity	100.00%*	100.00%*
„PG Hydrogen” sp. z o.o.	02-673 Warszawa ul. Konstruktorska 4	Manufacture of engines and turbines, except aircraft, car and motorcycle engines	52.00%*	52.00%*
„Exion Hydrogen Polskie Elektrolizery” sp. z o.o.	80-701 Gdańsk ul. Ku Ujściu 19	Design and production of electrolyzers	80.00%	-
„Exion Hydrogen Belgium” BV	Slachthuisstraat 120 Bus 12 2300 Turnhout	Design and production of electrolyzers	80.00%*	-
„Farma Wiatrowa Kazimierz Biskupi” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Design and production of wind farms	100.00%*	-
„PCE – OZE 1” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Generation of electricity	95.00%*	-
„PCE – OZE 2” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Generation of electricity	95.00%*	-
„PCE – OZE 3” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Generation of electricity	95.00%*	-
„PCE – OZE 4” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Generation of electricity	95.00%*	-
„PCE – OZE 5” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Generation of electricity	95.00%*	-
„PCE – OZE 6” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Generation of electricity	95.00%*	-
„PAK CCGT” sp. z o.o.	62-510 Konin ul. Kazimierska 45	Generation of electricity	100.00%	-
„MESE” sp. z o.o.	04-028 Warszawa Al. Stanów Zjednoczonych 61A		90.00%*	-
„Park Wiatrowy Palczyn 1” sp. z o.o.	70-419 Szczecin ul. Pl. Rodła 8	Generation of electricity	100.00%*	-
„Park Wiatrowy Palczyn 2” sp. z o.o.	70-419 Szczecin ul. Pl. Rodła 8	Generation of electricity	100.00%*	-
„PAK Kopalnia Węgla Brunatnego Adamów” SA in liquidation	62-700 Turek Warenka 23	Lignite mining	100.00%	99.35%*
„Aquakon” sp. z o.o. in liquidation	62-610 Sompolno Police	In liquidation	99.08%*	96.20%*

* Entities with partial or total indirect share via other companies from ZE PAK Group

On February 28, 2022, the Company acquired 100% of shares in PAK Pątnów sp. z o.o. This change has not yet been disclosed in the National Court Register.

On February 28, 2022, PAK - PCE sp. z o.o. acquired 100% of shares in the companies: Farma Wiatrowa Okonek sp. z o.o. and the Wind Farm Jastrowie sp. z o.o.

On March 3, 2022 PAK – PCE sp. z o.o. acquired 100 % of shares in Farma Wiatrowa Przyrów sp. z o.o.

On March 8, 2022 the Company acquired the shares in 5 companies - 50% of shares in each of them (these are the companies with the following names: Ørsted Polska OF SPV 1 sp. z o.o., Ørsted Polska OF SPV 2 sp. z o.o., Ørsted Polska OF SPV 3 sp. z o.o., Ørsted Polska OF SPV 4 sp. z o.o. and Ørsted Polska OF SPV 5 sp. z o.o.).

On April 13, 2022 the Company concluded the additional share purchase agreement with Ørsted Wind Power A/S (ORS) concerning the shares in further 5 project companies, as a result of which the Company will acquire 50% of shares from ORS in the share capital of the following companies: Orsted Polska OF SPV 6 sp. z o.o., Orsted Polska OF SPV 7 sp. z o.o., Orsted Polska OF SPV 8 sp. z o.o., Mawzorino Investments sp. z o.o. and Orsted Polska OF SPV 10 sp. z o.o.

As of 31 December 2021, the share in the general number of votes held by the Group in subsidiaries is equal to the Group's share in capitals of these subsidiaries.

2.2. Basic rules and changes to basic rules of ZE PAK SA Capital Group management

In order to provide appropriate solutions for key issues related to management of the Capital Group, in which ZE PAK SA is the parent company and, at the same time, the owner of capital, seeking a satisfactory return on the funds engaged, in the organizational structures of the Company there is a Management Board Office directly reporting to the President of the Management Board. Management Board Office in its competences has, among others matters related to ownership supervision. The basic task of the Management Board Office, in the area of corporate governance, is supervision over the operations of ZE PAK SA Capital Group and other companies in which ZE PAK SA holds shares or stocks. This unit coordinates the coherence of activities of all entities belonging to the Group and monitors the compliance of these activities with the applicable law, as well as the interest of the whole Capital Group.

In accordance with the policy implemented in the Group, in key subsidiaries, the functions of members of the management boards of these companies may be performed by members of the Management Board of ZE PAK SA, and in other companies of the Group they are members of the supervisory boards. In addition, in order to ensure the proper functioning of the corporate governance, the Management Board of ZE PAK SA recommends to the Supervisory Board of ZE PAK SA the candidates of the other members of the management and supervisory boards of the Group companies.

The organizational structure of the Company created organizational divisions gathering organizational units of the Company (departments, offices, departments, etc.). Individual organizational divisions are managed by members of the Management Board of ZE PAK SA in accordance with the internal division of powers made by the Company's Supervisory Board. Members of the Board of ZE PAK SA cooperate and agree and coordinate activities in matters of the Company and secure the proper cooperation of the divisions and organizational units they manage. The areas of the Company's operations managed by individual members of the Management Board are defined by the Company's organizational regulations defining the organization of the Company's enterprise.

Shared service centres operate in ZE PAK SA Capital Group in the following areas:

- legal area, services for the bodies of the Group companies,
- investments,
- accounting, finance and controlling,
- staff and wages,
- environmental Protection,
- logistics and shopping,
- administration.

Shared service centres provide services in the areas specified above on the basis of contracts concluded by ZE PAK SA with the companies from the Group. The concentration of competences in individual areas is aimed at improving the quality of services provided and optimizing the operating costs of the ZE PAK Capital Group.

From 2020, significant changes have occurred in the Group's structure. A number of companies have been registered to develop competences in the areas of energy production based on low-emission and carbon-neutral technologies. Due to the characteristics of new projects, a number of currently undertaken investment initiatives will be implemented in special purpose vehicles, often in cooperation with external partners. This way of functioning of the Group will transform the Company into a holding entity, concentrating shares in companies responsible for the implementation of separate projects.

2.3. Description of the structure of major capital deposits or main capital investments made within the Capital Group

Information on the structure of the ZE PAK SA Capital Group can be found above in point 2.1 of this report. In 2021, no capital investments and investments significant from the point of view of the Group's operations were made within the Capital Group.

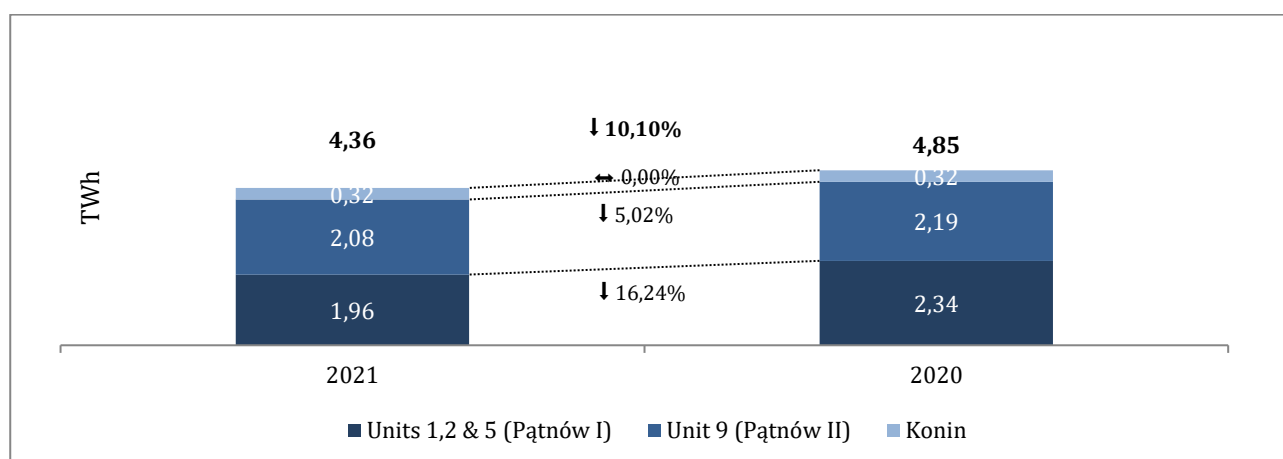
2.4. Basic products, goods, services, markets and sources of supply characteristics

The Company's operations are focused in several areas. The main area is doubtlessly generation of electricity from conventional and sources and renewable energy sources, lignite extraction, electricity wholesale trading, which is supplemented by sales of energy certificates, operations undertaken to ensure an adequate amount of CO₂ allowances as well as generation and sales of heat. In addition, the Group also includes other companies, which are engaged, among others, in: carrying out construction and assembly works, maintenance works, services, production and trade operations for the purpose of satisfying their own needs as well as providing comprehensive services to the industry. In 2021, the Group conducted its activities mainly on the Polish market. The exception is activities related to certain transactions on CO₂ emission allowances, which were concluded with foreign contractors. Also one of the companies from the renovation segment, i.e. PAK Serwis sp. z o.o. provides services to foreign entities, mainly German companies related to the energy sector.

The Group is a producer of electricity and has so far based its production mainly on lignite, however, being aware of the challenges that await the conventional generation industry in the near future, it decided to gradually reduce electricity generation from coal and develop projects in the area of energy generation from low-emission sources, and carbon neutral as well as the production and use of "green" hydrogen.

Total net electricity production in the Group's power plants in 2021 amounted to 4.36 TWh and it was 10.10% lower than in the previous year. Units 1, 2 and 5 (Pałnów I) produced 1.96 TWh, unit 9 (Pałnów II) - 2.08 TWh, and Konin power plant 0.32 TWh. At the end of 2021, the solar farm in Brudzew also started producing electricity from the sun.

Chart 1: Net electricity production

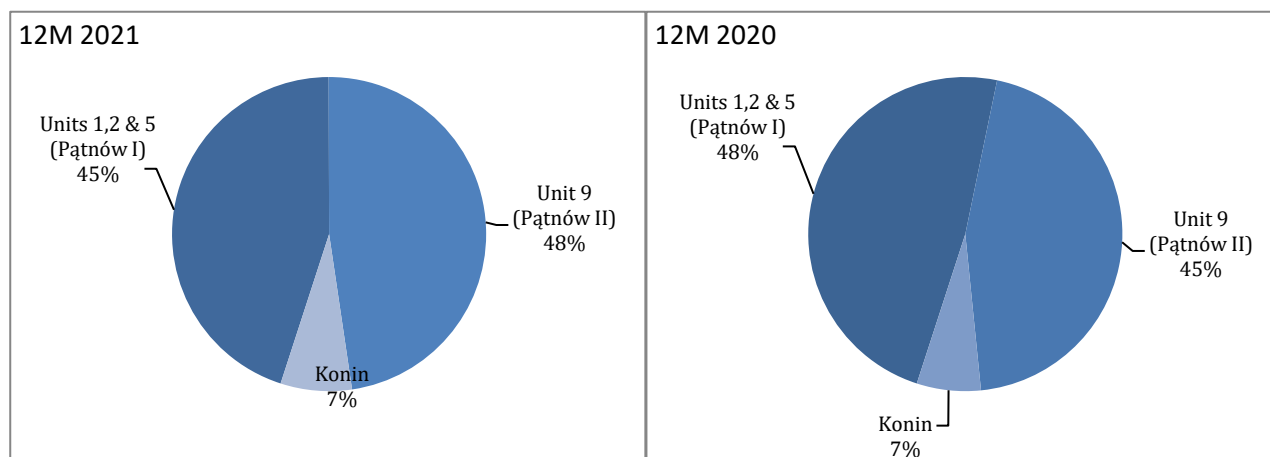


Source: Internal data

The decrease in production recorded last year concerned mainly the older, less effective units 1, 2 and 5 at the Pałnów power plant. The factors that determined the lower production in the first half of 2021 were mainly market-related and concerned such factors as the relation of energy sales prices to the purchase prices of CO₂ emission allowances, electricity imports and relatively good wind conditions (especially in the first half of the year) and dynamically increasing installed power in photovoltaics. In the second half of the year, the market situation was gradually improving, and also the production volumes did not differ significantly from those achieved a year earlier. However, it should be remembered that the availability of coal from mined open-pits begins to have an increasing impact on the production volume. By implementing the plan of gradual abandonment of energy generation from coal, the mine belonging to the Group does not undertake any significant investments in the mining segment and, consequently, is based on the currently operated

open-pit mines, the abundance of which is decreasing, which influenced the energy production capacity in the past year and it will also have an increasing impact on reducing coal-based energy production volumes in the coming years.

Chart 2: The structure of production divided into individual power plants

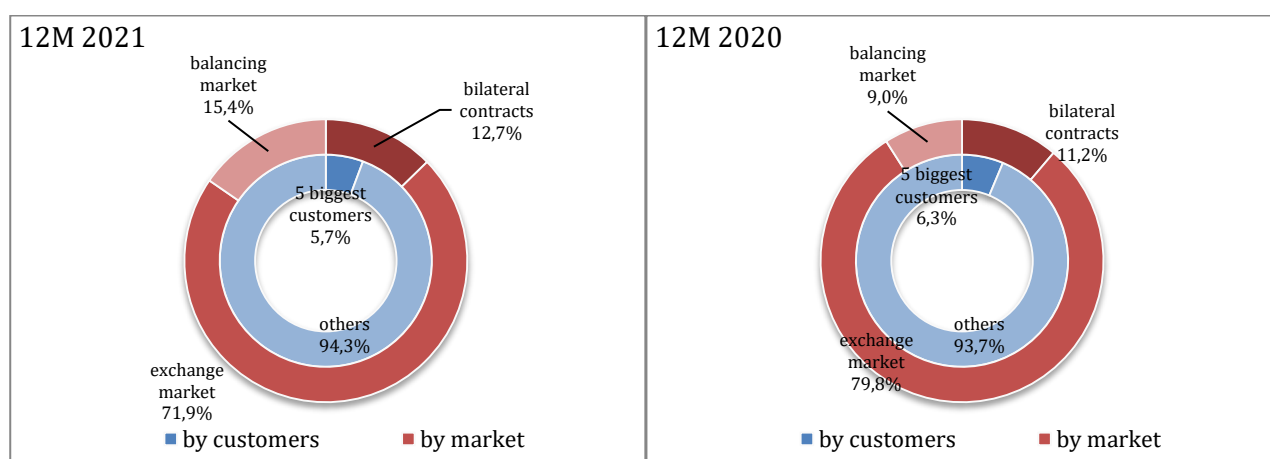


Source: Internal data

In addition to Energy production, the Group is also involved in wholesale energy trading. In 2021, the Group sold 5.75 TWh of electricity from its own production and purchased on the market, i.e. 14.43% less than in 2020. The decline in total sales was greater than the decline in own production.

The main direction of electricity sales in 2021 was sales on the stock market, which accounted for 71.9% of the total volume of electricity sold. Under bilateral contracts concluded mainly with electricity trading companies operating on the Polish market, the companies from the Group sold 12.7% of the annual sales volume of energy realized in 2021. Transactions with final customers accounted for 7.0% of the total electricity sales volume. The sales structure is supplemented by the electricity balancing market, where the Group companies sold 15.4% of the total electricity sales volume last year.

Chart 3: Electricity sale structure by customers (internal ring) and by market (external ring)



Source: Internal data

Revenues from the sale of electricity (in total - generated and traded, less excise tax) in 2021 accounted for 76.04% of the Group's total sales revenues, while revenues received from the termination of long-term contracts (LTCs) accounted for 6.96% of the Group's sales revenues.

The heat generated in the Group's power plants is sold to local customers. The main recipient is a municipal heat energy enterprise in Konin and local industrial producers. Last year, the Group sold 1,292 TJ of heat. Heat sales accounted for 2.23% of the Group's total sales revenues.

In 2021, revenues from the sale of rights of origin were higher compared to 2020. Growth was determined mainly by the higher market price of "green certificates". The share of revenues from the sale of property rights from energy certificates of origin in 2021 represented 3.66% of the total revenues of the Group.

From significant sources supplementing the revenue structure, it is worth mentioning the activities related to the execution of construction and assembly works. PAK Serwis sp. z o. o., one of the Group's companies, deals with the implementation of such tasks for the needs of the Group and external entities. The main external customers are entities from the industrial construction sector and the electricity generation and distribution sector. Revenues obtained from this service provided to external entities in 2021, accounted for 1.68% of the total revenue of the Group's sales. The remaining activity generated 1.85% of total revenues in the previous year.

The main raw material used by the Group for energy production is lignite. The extracted lignite coal is delivered directly from open pit mines to nearby power plants. For this reason, lignite mining in the ZE PAK SA Group is closely correlated with the amount of electricity generated by power plants located in the vicinity of the mines. The replenishment of deliveries from own opencasts constitute purchases from external suppliers.

In the Group, biomass is also used as a raw material for energy production – it is burned in a boiler dedicated to this purpose and located in Elektrownia Konin. Biomass supply contracts are concluded with external suppliers. All biomass used by ZE PAK SA in 2021 was domestic and certified biomass.

3. DESCRIPTION OF ACTIVITIES

3.1. Significant events in the accounting year as well as events after the balance sheet date affecting the current and future activities

Significant events in the accounting year

In the reported period there were the changes in the Management Board. Already after the reported period has been finished, there were the changes in the Supervisory Board as well. A description of these changes is provided in section 0.9. "Composition, changes and description of the management and supervisory bodies" of this report.

Loan agreement for financing an investment project at Konin Power Plant (adaptation to biomass combustion)

On January 29, 2021 the Company concluded a loan agreement with Bank Polska Kasa Opieki SA, on the basis of which the Company has been granted a loan in a total amount of up to PLN 160 million, intended for financing the investment project. The aim of the project was to adapt the existing coal-fired unit located on the premises of Konin power plant to biomass combustion. The modernized 50 MWe installation will produce electricity and act as a backup for the already operating biomass unit, supplying heat to the city of Konin. After the completion of the project, the power generation at Konin Power Plant will be approx. 100MWe (2x50MWe) using biomass as the primary fuel.

Pursuant to the agreement, the loan amount was up to PLN 160 million, and the Company undertook to contribute its own share from its own funds, in the amount of at least 20% of the project costs, but not less than PLN 52.8 million. The borrower is obliged to repay the loan with interest and other amounts due under the terms of the agreement, with the full repayment of the loan by December 31, 2030.

In order to secure the repayment of receivables, the Company has established collaterals, i.e. a mortgage on the indicated properties of Konin Power Plant; financial and registration pledge on bank accounts maintained by the Company at Bank Pekao SA and power of attorney to each of the above bank accounts; transfer as security under insurance policies of the property of Konin Power Plant and assignment of receivables from heat supply contracts for the city of Konin and the Company's declaration of submission to enforcement pursuant to Art. 777 § 1 point 5 of the Code of Civil Procedure.

Signing a letter of intent with PGW Wody Polskie

In 2020, ZE PAK SA, in cooperation with Państwowe Gospodarstwo Wodne Wody Polskie, began intensive activities aimed at improving water conditions in the area of operation of the mines belonging to the Group. On February 9, 2021, ZE PAK SA and PGW Wody Polskie signed a Letter of Intent regulating the already started activities aimed at increasing retention in Eastern Wielkopolska. ZE PAK SA, together with PGW Wody Polskie, prepared an integrated program for the reconstruction of water relations, covering both post-mining excavations, rivers and canals flowing through the areas in the vicinity of the open-pit mines, as well as wetlands from the nearby Gniezno and Kujawskie Lakelands. Retention

is to be increased by finding the most advantageous variants of further shaping the catchment areas of rivers and lakes occurring in the area of operation of mines owned by ZE PAK SA, using post-mining workings to conduct retention and flood management and establishing cooperation in the scope of the possibility of using the considered post-mining workings for the purposes of producing energy from renewable sources.

In total, there are over 30 investment tasks to be implemented under the program, for which investor cost estimates are currently being prepared. The cost of these works is estimated at over PLN 120 million and will be spread over the next 10 years. Some of these investment tasks will be financed as part of the reclamation obligations imposed on companies from the ZE PAK SA Capital Group. The agreement concluded with PGW Wody Polskie also provides for the implementation of a number of investments aimed at improving water relations in Eastern Wielkopolska, the source of financing of which may be the National Reconstruction Plan and the Just Transition Fund. The implementation of the envisaged tasks will significantly shorten the period of improvement of water relations in the region as compared to the current assumptions in this regard.

Conclusion of an electricity sales contract (PPA)

On March 12, 2021 PAK PCE Fotowoltaika Sp. z o.o. concluded an electricity sale contract with Polkomtel Sp. z o.o. The contract concerns the sale of electricity and guarantees of origin of energy produced by a solar farm with an installed capacity of 70 MWp, located in Brudzew commune, in Turek powiat, in Wielkopolskie voivodship.

The contract for the sale of electricity was signed for a period of 15 years with the possibility of extending it for another 5 years. The total planned volume of electricity sales under the contract applies to the entire volume produced by the farm in this period. The production volume of the farm throughout the entire period of operation will depend mainly on the insolation conditions and the degree of productivity of the installed devices. The estimated production volume of the farm in the first year of operation will amount to approximately 68 thousand MWh. The produced electricity will be sold at a fixed price, indexed from 2023 on the annual inflation rate. The total estimated sum of revenues from the sale of electricity over a period of 15 years will amount to approximately PLN 300 million.

Both parties to the contract have been adequately secured, including in the event of no electricity production by the farm, as well as no payment for the electricity supplied by the farm. The provisions of the contract also comprehensively regulate issues related to, inter alia, electricity production planning and responsibility for the commercial balancing.

Signing a long-term contract for the sale of electricity with a recipient with a stable financial position secures the revenue stream for the implemented project and makes it independent of the current fluctuations on the energy market. Such a solution, similar in its structure to auctions for renewable energy sources, is highly effective in the process of obtaining financing for large-scale renewable energy projects. The developed model of cooperation between the producer of renewable energy and its recipient, and the growing interest of commercial energy consumers in securing its supplies at predictable prices, constitute the potential to be used in the implementation of subsequent projects in the field of energy production from renewable sources.

Conclusion of a loan agreement for financing the project of construction of a photovoltaic farm with an installed capacity of 70MWp in Brudzew

On March 12, 2021, PAK PCE Fotowoltaika Sp. z o.o. concluded a loan agreement with a consortium of banks composed of: PKO BP SA (in the role of the Loan Agent and Security Agent), Bank Pekao SA and mBank SA, under which, a loan was made available in the total amount of up to PLN 175 million, of which the investment loan is PLN 138 million, and the loan for VAT financing is PLN 37 million, intended for financing the investment project. The aim of the project was to build a photovoltaic farm with an installed capacity of 70 MWp located in the commune of Brudzew, in Turek powiat, in Wielkopolskie voivodship. The farm construction project was carried out on areas previously used for mining activities. The contractors of the farm are the consortium of Esoleo Sp. z o.o. and PAK Serwis Sp. z o.o.

Pursuant to the agreement, the borrower undertook to contribute its own share from its own funds, in the amount of not less than PLN 51 million. The borrower is obliged to repay the loan with interest and other amounts due under the terms of the agreement, with the full repayment of the loan by December 31, 2035.

In order to secure the repayment of receivables, collaterals required by the loan agreement were established, i.e. mortgage on the indicated real estate, financial and registered pledge on shares in PAK-PCE Fotowoltaika Sp. z o.o., financial and registration pledge on bank accounts and power of attorney to each of the above-mentioned bank accounts, registered pledge on the company's assets, assignment of contracts constituting essential documentation of the project (general contracting contracts (EPC), service contracts (O&M), contracts for the sale of electricity (PPA)), assignment of insurance policies and the statements of PAK-PCE Fotowoltaika Sp. z o.o. and the Company to submit to enforcement pursuant to Art. 777 § 1 point 5 and 6 of the Code of Civil Procedure.

As part of the structure of the agreements accompanying the loan agreement, there has been signed the so-called support agreement under which ZE PAK SA acts as a guarantor in the event of, inter alia, exceeding the project costs during the construction period, subcontractors' claims, shortage of funds required to service the debt and complete the Project.

Conclusion of a loan agreement by PAK Polska Czysta Energia sp. z o.o.

On June 23, 2021 PAK Polska Czysta Energia sp. z o.o. signed a loan agreement with EFG Bank Ltd. Based in Zurich, under which the borrower will be granted a loan in the amount up to PLN 175 million. The obtained funds will be used to financially secure the potential for the implementation of projects in the field of renewable energy sources. Pursuant to the provisions of the Agreement, the Loan repayment date has been set by December 31, 2022. The financial terms and other terms of the Loan Agreement do not differ from the market terms.

Environmental decision for the hydrogen plant

On July 21, 2021 the Company received a decision on environmental conditions for the project consisting in the construction of a hydrogen production plant with accompanying infrastructure at Konin Power Plant.

The hydrogen production plant at Konin Power Plant is to be built on the basis of electrolyzers with an electrolyte-polymer membrane ("PEM" technology). The first electrolyser has already been ordered by the Company and the electricity used to operate the electrolyser will come 100% from a renewable energy source.

The plant will be constructed in modular (container) technology, which allows for its relatively simple expansion. The ordered electrolyser for the first stage of the task will have a capacity of 2.5 MW, which will allow for the maximum production of 1000 kg of hydrogen per day. In the event of a need for expansion, the granted environmental decision gives the possibility to increase the production of hydrogen to 20,000 kg per day. Water for the production of hydrogen will be supplied from the existing DEMI station in the power plant.

Co-financing from the European Union for the production of green hydrogen

In July 2021, the European Commission announced the results of the first call for proposals for grants awarded under the Innovation Fund. Among the 32 projects selected for co-financing, there was a project for the construction of a green hydrogen production facility submitted by ZE PAK SA. The project will receive a grant of approximately EUR 4.5 million in non-returnable funding.

The project implemented by the Company involves the construction of a system enabling the production and storage of green hydrogen intended for the needs of the transport sector. Hydrogen will be produced by two electrolyte and polymer membrane electrolyzers (PEM – Proton Exchange Membrane) with a total capacity of 5MW, in which innovative solutions will be implemented to increase their efficiency. The electrolyzers will be powered by energy from renewable energy sources, and the system will produce about 710 tons of green hydrogen per year.

It is expected that the project for producing hydrogen and its use in the transport sector will enable to avoid ca. 96 percent of greenhouse gas emissions compared to conventional technology.

Co-financing from the European Union will support ZE PAK SA in the implementation of investments in the production of green hydrogen. Their implementation is possible thanks to the decision on environmental conditions for the project consisting in the construction of a hydrogen production plant with accompanying infrastructure, previously issued for the Company by the President of Konin.

Acquisition of a wind project „Kazimierz Biskupi” by PAK – Polska Czysta Energia sp. z o.o.

On 18 August 2021 PAK PCE Sp. z o.o. has signed an agreement with KI Foundation, seated in Malta, for the purchase of 100% shares in the special purpose vehicle Farma Wiatrowa Kazimierz Biskupi Sp. z o.o. with its headquarters in Warsaw, which is implementing a project to build a wind farm.

The project provides for the construction of a wind farm consisting of 7 wind turbines with a total capacity of 17.5 MW, in Kazimierz Biskupi, in the immediate vicinity of Państwów power plant. Favourable wind conditions in this region allow for estimation of the annual production of the farm at nearly 60 GWh. The project has a complete set of administrative and legal permits allowing the commencement of construction works and connection of the Farm to the network. The expected date of launching the Farm is the third quarter of 2023. The total capital expenditure related to the acquisition and implementation of the Farm will amount to nearly PLN 150 million. In 2019, the Farm won an auction for sale of electricity to renewable energy producers.

The acquisition of the Farm is the first step in the implementation of the development strategy of ZE PAK SA Capital Group in the area of wind energy and it contributes to the acquisition of competences in the area of project management in this field.

BAT conclusions enter into force

Commission Implementing Decision (EU) 2017/1442 of July 31, 2017 establishing the conclusions on the best available technology (BAT Conclusions - Best Available Technology) for large combustion plants has been in force since 18 August 2021, in accordance with the Directive of the European Parliament and of the Council 2010/75 / UE. Integrated permits for all currently operated combustion installations of ZE PAK SA have been adapted to the requirements of the BAT Conclusions, taking into account individual deviations from the emission limit values. The company operates in accordance with the permissible emission limits resulting from the IED Directive as well as the BAT Conclusions. Continuous emission monitoring systems, developed in accordance with the requirements of BAT 4, constitute the basis for the verification of compliance with the requirements of the Commission Implementing Decision (EU) 2017/1442 in the field of air pollutant emissions at ZE PAK SA.

Change of the local spatial development plan - Project of Przykona photovoltaic farm

On August 23, 2021, the Resolution No. 0007.272.2021 of the Municipal Council of Przykona on the local spatial development plan comes into force. This Resolution is significant for the Company because it concerns post-mining areas, currently owned by the Company's subsidiary, on which ZE PAK Group intends to build a photovoltaic farm.

The adopted spatial development plan, with regard to the land belonging to ZE PAK Group, determines the allocation of the land for the construction of a photovoltaic power plant together with all the required infrastructure. The available area allows for the construction of a farm with a capacity of approximately 180-200 MWp. The intention of the Company is to implement the project in a separate special purpose vehicle.

Conclusion of a cooperation agreement with MS Innovation Impulse GMBH

On August 31, 2021 the Company signed a cooperation agreement with MS Innovation Impulse GMBH with its seat in Vienna, Austria, in the presence and participation of Argumenol Investment Company Limited with its seat in Cyprus and Synthos Green Energy Spółka Akcyjna with its seat in Warsaw (SGE).

On the basis of the Agreement, the Parties intend to undertake mutual cooperation by establishing a joint entrepreneur (SPV), operating in the field of nuclear energy, consisting particularly in the construction of generation sources based on the SMR (Small Modular Reactor) technology in Pałnów area, where the Company is currently operating its activity in the field of electricity generation from lignite.

The intention of the Parties is the disposal or the contribution of assets to the SPV in the form of an organized part of the enterprise (ZCP) related to the generation of electricity at Pałnów Power Plant, completion of the current activity consisting in the production of energy from lignite (maintaining obligations in this regard), and then developing the project of construction and operation of SMR based on SPV

As a rule, the Parties will finance the activities of the SPV in equal parts, corresponding to the share in the share capital, at every stage of the SPV's activity, i.e. at the stage of conducting and then liquidation of activities based on lignite combustion, at the stage of preparing the land for the investment process, as well as at the stage of the investment process consisting in the construction of SMR units. The parties will also jointly exploit the units.

SGE, as a party to the contract concluded with GE Hitachi Nuclear Energy Americas LLC, based in Wilmington in the USA (GEH) regarding, in particular, the exclusivity of SGE for the implementation of GEH technology in Poland, undertook to provide SPV with the possibility of using the GEH technology, if as part of the project, the Parties decide to use this technology.

Change of the Company's name

On September 30th, 2021 the District Court Poznań - Nowe Miasto and Wilda in Poznań, IX Commercial Division of the National Court Register registered the amendments the Articles of Association adopted by the Ordinary General Meeting of Shareholders of ZE PAK SA on June 28th, 2021, consisting in the amendment of the Company's name from Zespół Elektrowni Pałnów-Adamów-Konin Spółka Akcyjna to ZE PAK Spółka Akcyjna, giving § 1 item 1 of the Company's Articles of Association the following new wording: „The name of the Company is: ZE PAK Spółka Akcyjna”.

The above change concerned only the name of the Company, all other data have not changed.

Conclusion of a Letter of Intent with Ørsted Wind Power

On October 14, 2021 the Company signed a Letter of Intent with Ørsted Wind Power A/S with its seat in Fredericia, Denmark.

The intention of the Parties is the implementation and development of wind farm projects in the maritime areas of the Republic of Poland. The cooperation will be developed through joint ventures in which both parties will own 50% of shares. The parties plan to jointly prepare and submit applications for the issuance of permits for the construction and use of artificial islands, structures and devices in the maritime areas of the Republic of Poland for offshore wind farm projects in the upcoming deciding procedure, conducted in accordance with Art. 27d et seq. of the Act of March 21, 1991 on the maritime areas of the Republic of Poland and maritime administration.

Start-up of the Photovoltaic Farm in Brudzew

On October 27, 2021, a solar farm with a capacity of 70 MWp started operating in the Brudzew commune. The value of the investment was nearly PLN 164 million net.

The farm consists of 155 thousand photovoltaic modules with a capacity of 455 Wp each and covers about 100 ha of land. Until recently, it was an area used by Adamów Lignite Mine for opencast lignite mining. The contractor of the project was a consortium of Esoleo sp. z o.o. and PAK Serwis sp. z o.o. An investment loan agreement was signed to finance the construction of the farm with a consortium of banks composed of: Pekao SA, PKO BP SA and mBank SA. PAK - PCE Fotowoltaika sp. z o.o., the special purpose vehicle implementing the project has signed a 15-year contract with Polkomtel sp. z o.o. for the sale of the entire volume produced by the farm with the option of extending the contract for another 5 years.

November 10, 2021 PAK-PCE Fotowoltaika sp. z o.o. obtained a license to generate electricity. The license was granted by the President of the ERO for the period from November 10, 2021 to December 31, 2040.

Results of the capacity market auction

On December 16, 2021 as a result of a capacity market auction for the year 2026, PAK CCGT sp. z o.o. concluded a capacity contract for 17 years of supply, contracting 493 MW of the capacity obligation for a new generating capacity market unit.

Auction closing price amounted to 400.39 PLN/kW/year.

As a result of the above capacity market auction, PAK CCGT sp. z o.o. concluded a capacity contract for 17 years of supply, contracting 493 MW of the capacity obligation for a new generating capacity market unit.

The value of the contract for the first year of deliveries at constant prices for 2026, excluding inflation, amounts to PLN 197,392 thousand.

Conclusion of a preliminary share purchase agreement of PAK – Polska Czysta Energia sp. z o.o. shares

On December 20, 2021, as a result of conducted negotiations, the Company concluded a preliminary share purchase agreement regarding the sale of shares in PAK-Polska Czysta Energia sp. z o.o. with its registered office in Konin, representing 67% of the share capital of PAK – Polska Czysta Energia sp. z o.o. to Cyfrowy Polsat SA

The base sale price for PAK-PCE shares was set at PLN 193,104,000.00, while the total amount of inflows to be obtained by the Company as a result of the transactions described below is to amount to PLN 800,459,000.00.

The selling price of PAK-PCE shares was determined, inter alia, on the basis of the valuations prepared by Deloitte Advisory sp. z o.o. and may be reduced by the value of unauthorized outflows of funds made to the Company and its related entities in the period from September 30, 2021 until the transfer to Cyfrowy Polsat of the legal title to the PAK-PCE shares, and increased by interest accrued for the Locked Box Period according to the average interest rate on cash deposits in banks maintaining current bank accounts of ZE PAK SA for the time period closest to the Locked Box Period.

The sale price for PAK-PCE shares was established in relation to the assets that are already in the PAK-PCE structure and to the assets that the Company undertook to contribute to the PAK-PCE structure prior to the sale of the PAK-PCE shares.

The closing of the transaction contemplated in the agreement is contingent on the satisfaction of the following conditions precedent: (i) satisfactory for Cyfrowy Polsat results of examination of documentation, particularly the legal and tax one of PAK-PCE and its subsidiaries, (ii) obtaining the Supervisory Boards' approvals for completing the transactions by Cyfrowy Polsat and the Company. Additionally, the closing of the transaction will depend on the fulfilment of additional conditions precedent specified in the agreement, i.e. in particular: making a contribution in kind to PAK-PCE in connection with the increase of the share capital of PAK-PCE as part of the transaction of 960,000 shares in the share capital of PAK-PCE Fotowoltaika sp. z o.o.; 800 shares in the share capital of Exion Hydrogen Polskie Elektrolizery sp. z o.o.; 2,950,000 shares in the share capital of PAK-Volt SA, and receivables resulting from loans granted to companies: PCE-OZE 1 sp. z o.o., PCE-OZE 2 sp. z o.o., PCE-OZE 3 sp. z o.o., PCE-OZE 4 sp. z o.o., PCE-OZE 5 sp. z o.o., PCE-

OZE 6 sp. z o.o. (subsidiaries of PAK-PCE) by PAK Kopalnia Węgla Brunatnego Adamów SA in liquidation for the purchase of real estate by these entities from PAK Kopalnia Węgla Brunatnego Adamów SA in liquidation.

On March 30, 2022, the Company concluded an annex to the above preliminary share sale agreement and pursuant to this annex the parties decided to change the end date (*long stop date*) by which the parties assumed the fulfilment at all conditions precedent of the agreement and making a prepayment by Cyfrowy Polsat to the Company against the sale price for the PAK-PCE shares up to the maximum amount being the sum of: the base price specified in the agreement for the shares, i.e. PLN 193,104,000 and the amount constituting the selling price of additional shares in PAK-PCE, which, in accordance with the agreement, will be created as part of the performance of the additional obligation specified in the agreement, and then sold to the buyer, i.e. the amount of PLN 607,355,000 which may be adjusted in connection with the settlement of the working capital in accordance with the agreement.

The change of the end date in the agreement relates to the acknowledgement by the Company and Cyfrowy Polsat of the impossibility of one of the conditions precedent of the agreement in the originally assumed date, i.e. till March 31, 2022. Therefore, under the annex the end date was moved to September 30, 2022.

Acquisition of a wind project „Miłostów” by PAK – Polska Czysta Energia sp. z o.o.

On December 23, 2021, PAK – Polska Czysta Energia sp. z o.o. signed an agreement with VPL Projects sp. z o.o. with its seat in Szczecin, for the purchase of 100% shares in two design companies implementing a project to build a wind farm.

The project provides for the construction of a wind farm consisting of 4 wind turbines with a total capacity of 9.6MW, in Miłostów in Wielkopolska voivodship. The wind conditions in this region allow for estimation of the annual production of the farm at nearly 38 GWh. The project has a complete set of administrative and legal permits allowing the commencement of construction works and connection of the farm to the network. The expected date of launching the farm is the third quarter of 2023. The total capital expenditure related to the acquisition and implementation of the farm will amount to nearly PLN 100 million. In 2019, the Farm won an auction for sale of electricity to renewable energy producers.

At the same day, contracts for the supply of turbines and construction works at the farm were signed as well.

Significant Events after the balance sheet date

Decision made by PAK – Polska Czysta Energia sp. z o.o. on taking out a loan and granting loans to project companies in order to implement a wind project „Miłostów”

On February 25, 2022, PAK – Polska Czysta Energia sp. z o.o. decided to (i) conclude a loan agreement between PAK – PCE sp. z o.o. as the borrower and Cyfrowy Polsat SA as the lender, (ii) conclude a loan agreement between PAK – PCE sp. z o.o. as the lender and Park Wiatrowy Pałczyn 1 sp. z o.o. as the borrower, and (iii) conclude a loan agreement between PAK – PCE sp. z o.o. as the lender and Park Wiatrowy Pałczyn 2 sp. z o.o. as the borrower.

The above loans have been concluded in order to enable the financing of an investment project consisting in the implementation of RES installations in the form of four wind farms within the commune of Miłostów, Września country, Wielkopolskie voivodship.

The Loan Agreements provide that loans may be taken out in PLN or EUR by PAK – PCE sp. z o.o., Park Wiatrowy Pałczyn 1 sp. z o.o. and Park Wiatrowy Pałczyn 2 sp. z o.o. respectively, on the terms specified in accordance with the demand resulting from the schedule of the investment loan while at the same time the loan agreements provide borrowers with the possibility to obtain alternative forms of financing the investment project and potential early repayment of loans granted on the basis of the loan agreements. The interest rate on the loans is variable, based on the WIBOR rate.

PAK – Polska Czysta Energia sp. z o.o. acquires a wind project „Przyrów”

On March 4, 2022, PAK – Polska Czysta Energia sp. z o.o. acquired from KI Foundation, a foundation established and operating in accordance with the laws of the Republic of Malta, 200 (two hundred) shares with a nominal value of PLN 50.00 each, representing 100% of the total share capital of Farma Wiatrowa Przyrów sp. z o.o. with its seat in Warsaw.

PAK-PCE acquired the shares from the seller as part of an investment project consisting in the implementation of RES installations by PAK-PCE in the form of a set of 14 (fourteen) wind farms within the commune of Przyrów, Częstochowa county, śląskie voivodship.

The investment project provides for the construction of a wind farm consisting of 14 (fourteen) wind turbines with a total capacity of 42 MW in Przyrów. The wind conditions in this region make it possible to estimate the annual production of the farm at nearly 105.2 GWh. The project has a complete set of administrative and legal permits allowing for the commencement of construction works on wind turbines. The transaction documentation provides for obtaining a set of administrative and legal permits allowing for the completion of construction works and connection of the Farm to the network. The expected date for launching the farm is the third quarter of 2024 at the latest. The total estimated capital expenditure related to the acquisition and implementation of the farm will amount to nearly PLN 342 million.

Acquisition of project companies and conclusion of a partner agreement with Ørsted Wind Power A/S

On March 8, 2022, the Company concluded the share purchase agreement with Ørsted Wind Power A/S based in Fredericia, Denmark (ORS) for 5 project companies, under which the Company acquired from 50% of shares in the share capital of the following companies: Ørsted Polska OF SPV 1 sp. z o.o., Ørsted Polska OF SPV 2 sp. z o.o., Ørsted Polska OF SPV 3 sp. z o.o., Ørsted Polska OF SPV 4 sp. z o.o. and Ørsted Polska OF SPV 5 sp. z o.o. (Joint Venture Companies). The Parties obtained the consent of the President of the Office for Competition and Consumer Protection to implement the concentration, consisting in the creation by ORS and the Company of five joint entrepreneurs on 16 December, 2021.

Also on March 8, 2022 the parties concluded the partnership agreement specifying the principles of *corporate governance* in the Joint Venture Companies and the terms of further cooperation.

The parties plan to jointly submit applications for permit issuance for the construction and use of artificial islands, structures and devices in the maritime areas of the Republic of Poland for offshore wind farm projects in the upcoming deciding proceedings, conducted in accordance with Art. 27d et seq. of the Act of March 21, 1991 on the maritime areas of the Republic of Poland and maritime administration.

Changes in the Supervisory Board

On March 10, 2022, the Extraordinary General Meeting of Shareholders of the Company appointed three new members to the Supervisory Board of the Company: Mr. Jarosław Grzesiak, Mr. Tobiasz Solorz and Mr. Piotr Żak. The appointment resolutions entered into force upon their adoption.

On March 30, 2022, Mr. Leszek Wyslocki resigned from membership in the Supervisory Board of the Company.

On April 13, 2022, the Supervisory Board of the Company adopted a resolution on entrusting the function of Deputy Chairman to Mr. Piotr Żak. On April 22, 2022, the Extraordinary General Meeting of Shareholders of the Company established a new number of members of the Supervisory Board of the Company and dismissed Mr. Grzegorz Krystek from the function of a member of the Supervisory Board.

The consent to the target regulation of an organized part of the enterprise of ZE PAK SA related to the energy activities conducted as part of Elektrownia Pątnów for PAK Pątnów Sp. z o.o., i.e. leasing, and then making an in-kind contribution to PAK Pątnów Sp. z o.o.

On March 10, 2022 the Extraordinary General Meeting of ZE PAK SA adopted a resolution on the consent to the target ordinance of an organized part of the enterprise including a group of property and non-property components and a team of employees necessary to run a business within Pątnów Power Plant, which consists in independent and comprehensive generation of electricity and heat using Pątnów 1 Power Plant (installed capacity of 644 MW) and Pątnów 2 Power Plant (installed capacity of 474 MW), hereinafter referred to as "ZCP Pątnów", which will be sold in two stages - lease of ZCP Pątnów for PAK Pątnów Sp. z o.o. seated in Konin and in-kind contribution of ZCP Pątnów to PAK Pątnów Sp. z o.o. seated in Konin.

The Extraordinary General Meeting of ZE PAK SA authorized the Management Board of the Company to take all steps necessary to implement this Resolution.

The consent to the lease and sale of an organized part of the enterprise of ZE PAK S.A. related to the energy activities carried out as part of the Elektrownia Konin

On April 22, 2022 the Extraordinary General Meeting of ZE PAK SA adopted a resolution on the consent to lease an organized part of the Company's enterprise, which includes in particular: land real estate owned or in perpetual usufruct of the Company, where the production assets, electrical switchboards with transmission infrastructure, workshops, office

buildings and others, accompanying infrastructure, contracts and some employees are included, necessary to run a business by the Elektrownia Konin (“**ZCP Konin**”) for the benefit of PAK-PCE Biopaliwa i Wodór Sp. z o.o.

On April 22, 2022 as well the Extraordinary General Meeting of ZE PAK SA adopted a resolution on the consent to the sale of an organized part of the Company's enterprise, which includes in particular: land real estate owned or in perpetual usufruct of the Company, where the production assets, electrical switchboards with transmission infrastructure, workshops, office buildings and others, accompanying infrastructure, contracts and some employees are included, necessary to run a business by Elektrownia Konin (“**ZCP Konin**”) for the benefit of PAK-PCE Biopaliwa i Wodór Sp. z o.o.

3.2. Significant agreements concluded in the accounting year

Significant agreements for the Group's activity

Due to the characteristics of the business and the market in which ZE PAK SA Capital Group operates, the basic contracts concluded with major suppliers and customers in the ordinary course of business are standard. Contracts for the supply of the main raw material which is lignite are of a long-term nature and the main suppliers are subsidiaries of ZE PAK SA. Agreements supplementing coal supplies and contracts for the supply of biomass are concluded with external suppliers. In the area of energy sales, the company is obliged to sell the entire volume of energy produced through the stock market, the exclusion is production from renewable energy sources (in the case of ZE PAK SA it is the volume produced from biomass, i.e. about 7.5% of the total volume of energy production). Most of the biomass production volume is sold in bilateral contracts through the subsidiary PAK Volt SA. In the area of purchasing CO₂ emission permits, Group companies sign framework agreements with individual contractors defining the basic terms of cooperation. However, the purchase itself is made in separate transactions in relation to specific quantities using current market prices. Most of the CO₂ emission allowances are purchased in forward transactions. Certificates of energy origin (in the case of the Group the dominant role are played by green certificates) are sold on the exchange market.

Agreements regarding the obtained credits, loan and warranty lines

In 2021, ZE PAK SA Group's companies signed the following agreements regarding credits, loans and warranty lines:

1. On January 29, 2021, ZE PAK SA signed an investment loan agreement with one of the banks (being at the same time the financing organizer, agent and security agent) for the amount of PLN 160,000 thousand with the repayment period until December 31, 2030. On December 28, 2021, an Annex was signed amending the loan agreement. The loan interest rate is WIBOR 3M plus the bank's margin.
2. ZE PAK SA signed Annex no. 1, Annex no. 2 and Annex no. 3 to the agreement on opening a guarantee line with one of the banks. Under Annex 3, signed on March 23, 2022, the validity period of the guarantee line agreement was extended until March 31, 2023. The available limit for guarantees has remained unchanged and amounts to PLN 80,000 thousand. The validity period of the issued guarantees may not exceed March 31, 2024. As part of the line, ZE PAK SA may order the bank to provide an IRGIT guarantee, proper performance of the contract and payment of the price.
3. On July 6, 2021, ZE PAK SA signed an overdraft agreement with one of the banks for the amount of PLN 45,000 thousand, valid until June 30, 2022. The loan interest rate is WIBOR 1M plus the bank's margin.
4. On July 12, 2021, ZE PAK SA signed an agreement with one of the banks for a guarantee limit in the amount of PLN 50,000 thousand, valid until June 30, 2022. The validity period of the issued guarantees may not exceed 1 year. As part of the line, ZE PAK SA may order a bank to grant a payment guarantee.
5. ZE PAK SA signed Annex No. 5 to the multi-purpose credit limit agreement with one of the banks. Pursuant to Annex 5, the term of the contract was extended until December 30, 2022. The available multi-purpose credit limit is PLN 100,000 thousand until April 29, 2022; PLN 80,000 thousand from April 30, 2022 to June 29, 2022; PLN 65,000 thousand from June 30, 2022 to September 29, 2022 and PLN 50,000 thousand from September 30, 2022 to December 30, 2022. The interest rate on the loan on the current account according to the WIBOR 1M rate plus the bank's margin.
6. PAK - PCE Fotowoltaika sp. z o.o. signed on March 12, 2021 with a syndicate of banks a term loan agreement (PLN 138,000 thousand) and a VAT loan agreement (PLN 37,000 thousand) in the total amount of PLN 175,000 thousand with the repayment period for the term loan until December 31, 2035 and with the repayment of the VAT loan by June 30, 2022. The loan interest rate during the loan availability period is according to the WIBOR 1M rate plus the bank's margin. During the repayment period, the interest rate is WIBOR 3M plus the bank's margin.

7. PAK KWB Konin SA signed Annex No. 14 to the debt limit credit agreement with one of the banks, under which bank guarantees are issued up to the amount of PLN 4,000 thousand. Pursuant to Annex No. 14, the final repayment of the limit will take place on December 29, 2022.
8. PAK SERWIS sp. z o.o. signed with one of the banks Annex No. 14 to the multi-purpose credit limit agreement extending the term of the agreement until December 30, 2022. The available multi-purpose credit limit is PLN 20,000 thousand. The interest rate is WIBOR 1M plus the bank's margin.
9. PAK SERWIS sp. z o.o. signed with one of the banks Annex No. 4 to the framework agreement changing the amount of the surety granted by ZE PAK SA to the amount of PLN 3,300 thousand from the amount of PLN 10,000 thousand.
10. PAK SERWIS sp. z o.o. signed with one of the insurance companies Annex No. 2 to the framework agreement for granting contractual guarantees under the revolving limit, extending the term of the agreement until October 28, 2022. The available renewable limit was increased to PLN 5,000 thousand.
11. PAK SERWIS sp. z o.o. signed with one of the insurance companies Annex No. 1 to the contract of mandate for periodic granting of contractual insurance guarantees extending the term of the contract until 23 September 2022. The available renewable limit is PLN 3,000 thousand.
12. PAK - Polska Czysta Energia sp. z o.o. on June 23, 2021, signed a loan agreement with one of the banks for the amount of PLN 175,000 thousand, valid until December 31, 2022. The interest rate on the loan according to the WIBOR rate appropriate to the financing period plus the bank's margin.
13. PAK - Volt sp. z o.o. on November 4, 2021, signed an overdraft agreement with one of the banks for the amount of PLN 10,000 thousand, valid until June 30, 2022. The loan interest rate is WIBOR 1M plus the bank's margin.
14. PAK-Polska Czysta Energia sp. z o.o. signed on December 23, 2021 with Cyfrowy Polsat S. A. a loan agreement for the amount of PLN 60,000 thousand or its equivalent in EUR, with the repayment period until December 31, 2025. The interest rate on the loan is WIBOR 3M or EURIBOR 3M plus margin.

Agreements regarding the granted loans

1. On February 8, 2021, ZE PAK SA signed a loan agreement for a Group company, i.e. PAK - PCE Fotowoltaika sp. z o.o. The loan amount was PLN 12,000 thousand. The loan was repaid on March 22, 2021. The loan interest rate is WIBOR 3M plus margin.
2. On March 8, 2021, ZE PAK SA signed a loan agreement for a Group company, i.e. PAK - PCE Fotowoltaika sp. z o.o. The loan amount is PLN 3,000 thousand. The loan will be repaid by December 31, 2035. The loan interest rate is WIBOR 3M plus margin.
3. On March 9, 2021, ZE PAK SA signed a loan agreement for a Group company, i.e. PAK - PCE Fotowoltaika sp. z o.o. The loan amount is PLN 3,000 thousand. The loan will be repaid by December 31, 2035. The loan interest rate is WIBOR 3M plus margin.
4. On April 1, 2021, ZE PAK SA signed a loan agreement for a Group company, i.e. PG Hydrogen sp. z o.o. The loan amount is PLN 62.4 thousand. On March 4, 2022, Annex No. 2 was signed, extending the loan repayment date to September 6, 2022. The loan interest rate is WIBOR 6M plus margin.
5. PAK Serwis sp. z o.o. signed on April 27, 2021 a loan agreement for a Group company, i.e. ZE PAK SA, and on May 20, 2021, an annex to the loan agreement. The loan amount was PLN 15,000 thousand. The loan was repaid on August 6, 2021. The loan interest rate is WIBOR 1M plus margin.
6. On June 2, 2021, ZE PAK SA signed a loan agreement for a Group company, i.e. PAK - PCE Fotowoltaika sp. z o.o. The loan amount was PLN 4,200 thousand. The loan was repaid on June 29, 2021. The loan interest rate is WIBOR 3M plus margin.
7. On June 14, 2021, ZE PAK SA signed a loan agreement for a Group company, i.e. PAK - Polska Czysta Energia sp. z o.o. The loan amount was PLN 20,000. The loan was repaid on October 29, 2021. The loan interest rate is WIBOR 3M plus margin.
8. PAK - Polska Czysta Energia sp. z o.o. signed on July 28, 2021 a loan agreement for a Group company, i.e. PAK KWB Konin SA. On January 31, 2022, Annex No. 2 to the loan agreement was signed, extending the repayment date to June 30, 2022 and setting the loan amount at PLN 97,000 thousand. The loan interest rate is WIBOR 3M plus margin.

9. ZE PAK SA signed on September 6, 2021 with PG Hydrogen sp. z o.o. (Company from the Group) Annex No. 1 to the loan agreement for the amount of PLN 10,000 of September 7, 2020 extending the loan repayment date until March 6, 2022. The loan was repaid on March 4, 2022. The loan interest rate is WIBOR 12M plus margin.
10. PAK - Polska Czysta Energia sp. z o.o. signed on September 14, 2021 a loan agreement for a Group company, i.e. PCE - OZE 1 sp. z o.o. The loan amount is PLN 350 thousand. The loan will be repaid by June 30, 2022. The loan interest rate is WIBOR 6M plus margin.
11. PAK - Polska Czysta Energia sp. z o.o. signed on September 14, 2021 a loan agreement for a Group company, i.e. PCE - OZE 2 sp. z o.o. The loan amount is PLN 640 thousand. The loan will be repaid by June 30, 2022. The loan interest rate is WIBOR 6M plus margin.
12. PAK - Polska Czysta Energia sp. z o.o. signed on September 16, 2021 a loan agreement for a Group company, i.e. PAK - PCE Polski Autobus Wodorowy sp. z o.o. The loan amount is PLN 14,000 thousand. The loan will be repaid by June 30, 2022. The loan interest rate is WIBOR 6M plus margin.
13. PAK - Polska Czysta Energia sp. z o.o. signed on October 1, 2021 a loan agreement for a Group company, i.e. PCE - OZE 2 sp. z o.o. The loan amount is PLN 1,800 thousand. The loan will be repaid by June 30, 2022. The loan interest rate is WIBOR 6M plus margin.
14. PAK - Polska Czysta Energia sp. z o.o. signed on October 1, 2021 a loan agreement for a Group company, i.e. PCE - OZE 3 sp. z o.o. The loan amount is PLN 200,000. The loan will be repaid by June 30, 2022. The loan interest rate is WIBOR 6M plus margin.
15. PAK - Polska Czysta Energia sp. z o.o. signed on October 1, 2021 a loan agreement for a Group company, i.e. PCE - OZE 4 sp. z o.o. The loan amount is PLN 450,000. The loan will be repaid by June 30, 2022. The loan interest rate is WIBOR 6M plus margin.
16. PAK - Polska Czysta Energia sp. z o.o. signed on October 1, 2021 a loan agreement for a Group company, i.e. PCE - OZE 5 sp. z o.o. The loan amount is PLN 5,000 thousand. The loan will be repaid by June 30, 2022. The loan interest rate is WIBOR 6M plus margin.
17. PAK - Polska Czysta Energia sp. z o.o. signed on October 1, 2021 a loan agreement for a Group company, i.e. PCE - OZE 6 sp. z o.o. The loan amount is PLN 2,000 thousand. The loan will be repaid by June 30, 2022. The loan interest rate is WIBOR 6M plus margin.
18. Exion Hydrogen Polskie Elektrolizery sp. z o.o. signed on October 8, 2021 a loan agreement for a Group company, i.e. Exion Hydrogen Belgium BV. The loan amount is EUR 1,000 thousand. The loan will be repaid by November 30, 2026. The loan interest rate is EURIBOR 1Y plus a margin.
19. PAK KWB Adamów SA in liquidation signed on November 17, 2021 a loan agreement for a Group company, i.e. PCE - OZE 1 sp. z o.o. The loan amount is PLN 6,283.9 thousand. Pursuant to Annex No. 1 of March 29, 2022, the loan repayment date was set for December 31, 2022. The loan interest rate is WIBOR 6M plus margin.
20. On November 17, 2021, PAK KWB Adamów SA in liquidation signed a loan agreement for a Group company, i.e. PCE - OZE 2 sp. z o.o. The loan amount is PLN 14,250.9 thousand. Pursuant to Annex No. 1 of March 29, 2022, the loan repayment date was set for December 31, 2022. The loan interest rate is WIBOR 6M plus margin.
21. PAK KWB Adamów SA in liquidation signed on November 17, 2021 a loan agreement for a Group company, i.e. PCE - OZE 3 sp. z o.o. The loan amount is PLN 4,378.9 thousand. Pursuant to Annex No. 1 of March 29, 2022, the loan repayment date was set for December 31, 2022. The loan interest rate is WIBOR 6M plus margin.
22. On November 17, 2021, PAK KWB Adamów SA in liquidation signed a loan agreement for a Group company, i.e. PCE - OZE 4 sp. z o.o. The loan amount is PLN 3 330 thousand. Pursuant to Annex No. 1 of March 29, 2022, the loan repayment date was set for December 31, 2022. The loan interest rate is WIBOR 6M plus margin.
23. On November 17, 2021, PAK KWB Adamów SA in liquidation signed a loan agreement for a Group company, i.e. PCE - OZE 5 sp. z o.o. The loan amount is PLN 20,175.3 thousand. Pursuant to Annex No. 1 of March 29, 2022, the loan repayment date was set for December 31, 2022. The loan interest rate is WIBOR 6M plus margin.
24. On November 17, 2021, PAK KWB Adamów SA in liquidation signed a loan agreement for a Group company, i.e. PCE - OZE 6 sp. z o.o. The loan amount is PLN 11,181.9 thousand. Pursuant to Annex No. 1 of March 29, 2022, the loan repayment date was set for December 31, 2022. The loan interest rate is WIBOR 6M plus margin.
25. PAK KWB Adamów SA in liquidation signed on December 17, 2021 with PAK KWB Konin SA (a Group Company) Annex No. 2 to the loan agreement for the amount of PLN 32.5 million of December 20, 2019. In accordance with

Annex 2, the repayment date was extended to April 11, 2022. On February 9, 2022, Annex No. 3 to the loan agreement was concluded, extending the loan repayment date until June 30, 2022.

26. PAK - Polska Czysta Energia sp. z o.o. signed on November 26, 2021 a loan agreement for a Group company, i.e. Farma Wiatrowa Kazimierz Biskupi sp. z o.o. The loan amount is PLN 8,694 thousand, being a consolidation of previously granted loans for the total amount of PLN 8,694 thousand. The loan will be repaid by June 30, 2024. The loan interest rate is WIBOR 6M plus margin.
27. ZE PAK SA signed on December 14, 2021 with PAK - Volt SA (a Group company) Annex No. 1 to the loan agreement for the amount of PLN 13,000 thousand of December 15, 2020 extending the loan repayment date until December 16, 2022. The loan interest rate is WIBOR 3M plus margin.
28. ZE PAK SA signed on December 15, 2021 with PAK KWB Konin SA (a Group company) Annex No. 2 to the loan agreement for the amount of PLN 25,000 thousand of December 20, 2019, extending the loan repayment date until December 16, 2022. The loan interest rate is WIBOR 3M plus margin.
29. PAK - Polska Czysta Energia sp. z o.o. signed on December 23, 2021 a loan agreement for a Group company, i.e. Park Wiatrowy Palczyn 1 sp. z o.o. The loan amount is PLN 27,000 thousand or its equivalent in EURO. The loan will be repaid by December 31, 2025. The interest rate on the loan is WIBOR 3M or EURIBOR 3M plus margin.

Granted and obtained guaranties and sureties

Table 2: List of guaranties and sureties granted, as at December 31, 2021

	Zloty thousand	Euro thousand
	2021	
Granted guaranties	493 358	31 136
- for companies from the Group	-	-
Granted sureties	96 662	756
- for companies from the Group	62 400	-

Table 3: List of guaranties and sureties obtained, as at December 31, 2021

	Zloty thousand	Euro thousand
	2021	
Obtained guaranties	28 895	33 683
- from companies from the Group	-	-
Obtained sureties	77 378	-
- from companies from the Group	62 400	-

The agreements concluded between affiliated companies on terms different from market terms

In 2021, in the ZE PAK SA Capital Group, there were no agreements concluded between affiliated companies on terms different from market terms.

3.3. Implementation of investment projects

In 2021, ZE PAK SA Group continued the implementation of the following two large investment projects: (1) the adaptation of K-7 coal boiler at Konin power plant for the exclusive combustion of biomass along with the necessary technical infrastructure and (2) construction of a photovoltaic farm with a rated power of approx. 70MWp in Brudzew commune. In addition, investment activity focused on launching projects related to the production and distribution of hydrogen, as well as on preparatory work for the implementation of further renewable energy sources and the necessary tasks to ensure the maintenance of current efficiency and more effective use of the mining and generation assets held.

ZE PAK SA key investments in the implementation phase

Adaptation of the K-7 coal boiler to the exclusive biomass combustion (construction of biomass unit no. 2)

The task is to adapt the infrastructure previously used for the production of energy and heat from lignite to burn biomass. In this way, a second biomass unit will be created at Konin power plant, which, in addition to energy production for the National Power System, will also be an emergency source for heat production in the event of the withdrawal of the biomass unit currently operating in Elektrownia Konin.

On March 27, 2020, a leading contract was concluded for the implementation of the subject of the contract in the "turnkey" formula, i.e. the design and conversion of a coal-fired boiler into a fluidized bed boiler operating in the BFB technology. The contractor for the boiler adaptation for biomass combustion is Valmet Technologies Oy with its seat in Espoo Finland. In addition, further major contracts were concluded for the implementation of the so-called technological islands (TG5 turbine, G5 generator, biomass feeding installation and ash removal installation from the electrostatic precipitator, electrostatic precipitator, digital block control system).

On November 10, 2021, the boiler was fired up and the rated speed of the turbine was achieved. On December 29, 2021, the biomass block was synchronized with the National Energy System. The block tests required by PSE were successfully completed. The final stage of acceptance works for the modernized block was a trial run, which also ended with a positive result. During the trial run, measurements were also made to check the achievement of the guaranteed technical parameters by the contractors of the modernization. Currently, the unit is put into operation.

After the modernization, approximately 100 MWe (2x50 MWe) of power will be available at Konin Power Plant, using biomass as the primary fuel.

Construction of photovoltaic farm

The implementation of Brudzew farm construction is the element of ZE PAK SA strategy related to the development of electricity generation from renewable sources. The farms rated power is 70 MWp. The general contractor of the contract for the construction and commissioning of the photovoltaic power plant in the „turnkey” formula is a consortium of Esoleo sp. z o.o. and PAK Serwis sp. z o.o.

Deliveries of equipment as well as construction and assembly works were completed after June 30, 2021, the control and supervision system of the solar farm was launched. On September 15, permission was obtained to apply the voltage - the so-called EON. After the voltage was applied, the live electrical systems were checked and the start-ups of individual systems of the photovoltaic farm were completed. On October 26, 2021, a temporary operating permit for the farm (the so-called ION) was obtained and the first synchronization of the farm with the power grid was carried out. After the synchronization process, on October 27, 2021, the production of electricity from the Brudzew photovoltaic farm began. On December 10, 2021, the solar farm was commissioned.

ZE PAK SA key investments in the preparatory phase

In 2021 the Group carried out the works related to the following new investment projects:

- construction of a hydrogen production plant with associated infrastructure at Konin power plant,
- construction of a wind farm in the area of Kazimierz Biskupi commune,
- design work on a bus prototype powered by hydrogen fuel cells,
- autonomous supply of electricity and heat to a single-family house, based on its own renewable energy sources using hydrogen as a storage and energy carrier,
- construction of a photovoltaic farm in the area of Przykona commune.

Construction of a hydrogen production plant with associated infrastructure at Konin power plant

A program and spatial concept was developed and a decision was obtained establishing the environmental conditions for the implementation of the project.

Hydrogen will be produced in the water electrolysis process using energy from renewable sources. The basic source of primary energy will be biomass and solar energy, their conversion into electricity, in dedicated installations, will power the electrolytic plant system. The implementation of this task will enable to produce the so-called "Green hydrogen".

The first step towards building a hydrogen plant at the Konin Power Plant was the conclusion on April 9, 2020 of a contract with Hydrogenics Europe N.V. Belgium to purchase an electrolyser that will initially produce hydrogen in the amount of 1000 kg H₂ / day. At a later stage, thanks to the modular construction of the hydrogen plant and preparation of the infrastructure, it will be possible to increase production capacity, depending on the demand for hydrogen. The

original delivery date of the electrolyser indicated in the contract was in mid-2021, however due to reasons attributable to the supplier, resulting from force majeure, it was extended. Currently, the process of annexing the contract for the supply of an electrolyser with a capacity of 1 ton of H₂ per day and a capacity of 2.5 MW is underway.

In April 2021, an agreement was concluded with Energoprojekt-Katowice for the development of design documentation necessary to obtain a building permit and the construction of a hydrogen plant).

In order to enable the supply of hydrogen to the refuelling stations, in December 2020, an agreement was concluded with the company Wystrach for the supply of a mobile hydrogen storage facility. The delivery of the mobile hydrogen storage facility has been completed. In December 2021, an agreement was also concluded with this company for the supply of two hydrogen tanks.

Construction of a wind farm in the area of Kazimierz Biskupi commune

The shares in Farma Wiatrowa Kazimierz Biskupi were purchased together with the wind farm project consisting of 7 turbines with a total capacity of 17.5 MW. On September 16, 2021, an agreement was concluded with Siemens Gamesa Renewable Energy (SGRE) for the supply of seven wind turbines with a unit capacity of 2.5 MW.

A contractor for construction and assembly works was selected (outside the scope of SGRE) - PAK Serwis sp. z o.o. will be responsible for the scope of works related to the implementation of foundations for wind turbines, construction of target access and temporary roads, construction of the electrical system of connections between windmill switchboards and GPO (Main Acceptance Point), construction of GPO, connection of GPO with 110kV switchgear, enabling power evacuation to the power system and construction of a superior wind farm control system together with the facility technical protection system. On February 22, 2022 the construction site has been handed over to the contractor.

Design works on a bus prototype powered by hydrogen fuel cells

The project of the Polish Hydrogen Bus was launched in September 2020. The goal is to develop a new eco-friendly bus powered by hydrogen cells from scratch.

As part of the project, conceptual work and technical analysis of the selection of the main components of the bus (hydrogen cells, cylinders, batteries and drive) were carried out. Calculations were made to ensure the greatest overall energy efficiency in the designed bus. In order to achieve the maximum range, a modular construction of hydrogen cylinders with a pressure of 350 and 700 bar was developed.

As part of the construction work, a new bus design was designed, taking into account trends in ergonomics and modern appearance, dedicated to hydrogen-powered buses. On this basis, a prototype construction documentation of the bus was prepared.

At the end of April 2021, work began on the construction of a bus prototype. The first elements of the skeleton were made. Cooperation was established with suppliers who are leaders in the bus industry, orders were placed for key components.

In May 2021, a project fiche (New Energy Program) was submitted to the National Fund for Environmental Protection and Water Management in order to obtain funding for the project. The fiche was positively assessed by the National Fund for Environmental Protection and Water Management, the company moved to the next stage - submission of the application.

In October 2021, the construction of the prototype was completed and the bus tests began. Approval works are currently underway.

Autonomous supply of electricity and heat to a single-family house

The project involves the development of a concept and technical selection of devices for a self-sufficient autonomous power supply system for electricity, heat, domestic hot water for single-family houses with low energy consumption and passive houses.

In June 2020, an agreement was concluded with the AGH University of Science and Technology in Kraków named after Stanisław Staszic Energetics Centre, to perform the work entitled "Autonomous supply of electricity and heat for a single-family house, based on its own renewable energy sources, using hydrogen as a storage and energy carrier".

The equipment necessary to create an autonomous power and heat supply model for a single-family house was purchased - a complete electrolyser system, hydrogen storage tanks, fuel cells, and a home photovoltaic power plant. Currently, the initial operation phase of the assembled autonomous power supply system intended for a single-family house is in progress.

Construction of a photovoltaic farm in the area of Przykona commune

Design works related to the construction of another photovoltaic farm with a rated power of approximately 200 MWp in the area of the Adamów open pit, located in the area of the Przykona commune are underway. On August 23, 2021, the resolution of the Commune Council of Przykona, regarding the Local Spatial Development Plan, entered into force, the adopted plan determines the allocation of the land for the construction of a photovoltaic power plant with accompanying infrastructure. On January 5, 2022, an environmental decision was obtained, which became final on February 3, 2022. The next administrative permit that will be necessary to obtain are: conditions for connecting to the power grid and obtaining a building permit.

3.4. Risk management

While conducting its operations, the Group is exposed to a series of risks, occurring actually, potentially or theoretically, existing in the industry as well as on the markets where the Group's companies operate. These are factors having their source within the Group as well as and in its environment. Taking into account the formalization of the risk-related sphere in the Group's operations, a comprehensive document was created, entitled "Risk Management Principles for the ZE PAK SA Capital Group" ("Management Principles"). The principles of Management have been developed and implemented in order to define and determine the risks limits occurring or likely to occur in the ZE PAK SA Capital Group and to determine mechanisms for minimizing risk exposure in the course of conducting operations in the energy and mining sectors and minimizing the effects of risk, which due to the specific nature of the core business of the ZE PAK SA Capital Group, cannot be completely eliminated.

Business model and strategy of the Capital Group were determined within the principles mention earlier. The leading principle of the business model implemented by the Group in the area of business operations (mining, production and trade) is to maximize production and profit while respecting the principle of risk minimization. In order to achieve the business goals, the Group allows for incurring risk, but only to the extent and on the principles set out in the Management Rules. All kinds of the business risk and the situations resulting in the exposure to the risk are constantly minimized, unless the Management Rules or the Management decisions clearly allow for specific deviations. Relating to the structure of the Capital Group and organizational charts of particular subsidiaries, specific roles and scope of responsibility for decisions and activities connected with the realized strategy and market policy have been determined and extracted. A special role, strictly related to the observance and correct application of the Rules of Management, is performed by a task team, called the "Risk Management Committee", acting as an advisory and consultative body of the Management Board of ZE PAK SA. The team was appointed by the Ordinance of the President of the Management Board. The main tasks of the Risk Management Committee are identification and substantive assessment of all economic risks worth more than PLN 10 million related to the Group's business operations.

As part of risk management, the Group identified certain areas of risks related to the implementation of the assumed business objectives:

- raw material risks;
- production risks;
- market risks and associated financial risks;
- operational risks related to the operation of IT systems;
- risk in the area of information security.

For each area of risk identified above, specific types of risks have been identified for a strictly specific area. The risk type has been described comprehensively, including the theoretical examples of its occurrence in the operational activity of the Group. For each type of risk, specific forms of action were also developed in order to minimize or exclude it; an appropriate measure was also assigned and, where possible, so-called "Key performance indicator", i.e. the minimum level of performance was determined.

The managers and employees of organizational units assigned to particular risk area are the subject to control, in scope of compliance with the Management Principles, in accordance with their scope of activity. The management of organizational units is responsible for correct and compliant with the Management Rules performance of tasks by subordinate units and independent positions. The Management Rules also describe the detailed process of correct reporting on the identified risk as well as how to proceed in case of identifying a violation of the principles described in the document.

According the Management Principles, the compliance with the procedures and ways of proceeding described in the document can be abandoned only after obtaining the written approval of ZE PAK SA Management Board. In such a situation a special procedure, described also in in the Management Principles, is applied.

Information on financial instruments regarding the risk related to: changes in prices, credit, significant distortions of cash flows and loss of financial liquidity is included in Note 40 to the consolidated financial statements, it also contains information on the objectives and methods of financial risk management. Information on transactions for which hedge accounting is applied is included in note 38.3 to the consolidated financial statements.

3.5. Description of use of emission earnings

In 2021, the companies from the Group did not issue either debt or equity securities, and thus did not receive any proceeds from the issue.

4. MAIN BUSINESS RISKS

The process of forecasting future results of ZE PAK SA Capital Group must include a wide range of risk factors and threats, actually, potentially, or theoretically, existent in the branch and markets, in which the Group conducts its activities. These are factors which originate both from the inside of the Group as well as from its environment. In the opinion of the Board, they can be divided into factors, which occur constantly in all periods as well as those, which occur incidentally in the period, which is concerned by a given periodical report.

The most important factors with constant impact on the Group's results include the following:

- macro-economic trends in the Polish economy and the demand for electricity;
- regulatory environment;
- electricity prices;
- prices and supply of certificates of origin;
- extraction and supply costs of coal and other fuel;
- CO₂ emission allowances costs;
- compensation for the stranded costs related to the termination of PPA for unit 9 in Elektrowni Pątnów;
- seasonality and meteorological conditions;
- investment expenses;
- EUR/PLN exchange rate and the level of interest rates.

Moreover, important factor that may have a significant impact on the Group's financial results are the results of the value impairment tests of assets, if there are premises for their performance. The used valuation models of assets show sensitivity to a range of parameters, among others, the ones described in this section. Therefore, in the face of unstable operational perspectives, both the market ones and those having its origin in the legal conditions, the assumptions for the valuation models of assets can change, and consequently the value impairment tests results may cause the necessity of verifying the value of the amount of the write-downs against the asset components.

Macro-economic trends in the Polish economy and the demand of electricity

While conducting activities within the territory of Poland and obtaining most revenues from the sale of electricity, it is necessary to take into consideration the macro-economic trends in the Polish economy. A very significant factor is the change of the real GDP and industrial production in Poland, the development of the service sector as well as the increase in individual consumption. All the aforementioned factors significantly affect the demand for electricity and its consumption.

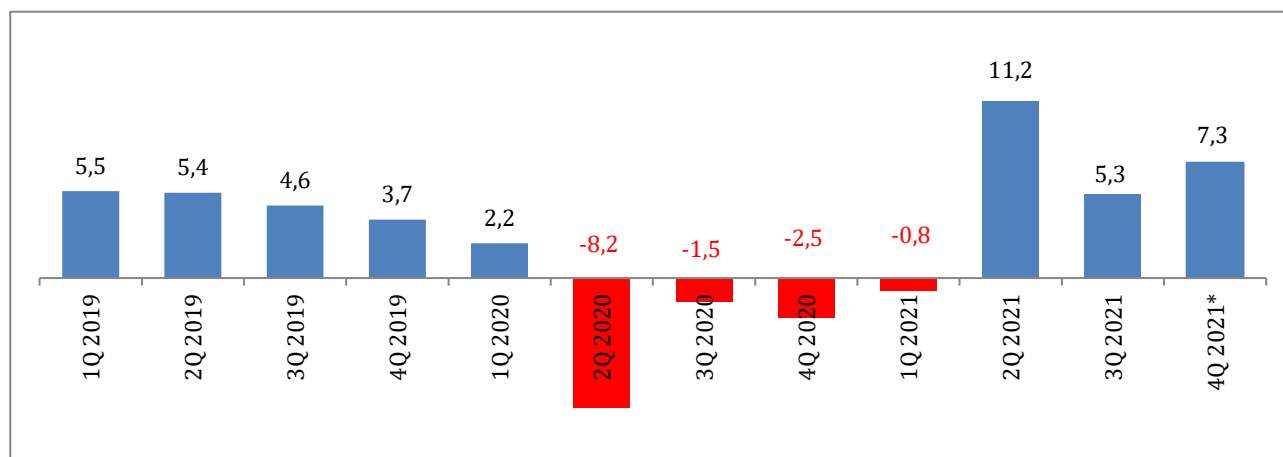
According to data from the Central Statistical Office of Poland, 2021 recorded the highest economic growth in more than a decade, which was due to the decisive rebound of the Polish economy from the pandemic low point. The preliminary estimates of the Central Statistical Office show that in 2021 the Gross Domestic Product (GDP) of Poland increased in real terms by 5.7% higher than the year before, compared to a decline by 2.5% in 2020. The last such rapid economic growth was recorded in 2007 (over 7%).

The dynamic rebound was mainly caused by an increase in consumption in the household sector, which amounted to 3.4% to the annual dynamics (in 2020 it subtracted 1.7%) and gross fixed capital formation - an added contribution of 1.3% (against a negative contribution of 1.6% in 2020).

In 2021, domestic demand increased in real terms by 8.2% compared to 2020, when a decrease of 3.4% was recorded. Total consumption in 2021 increased in real terms by 4.8%, including consumption in the household sector by 6.2% (in 2020 there was a decrease by 1.1% and 3.0% respectively). Gross fixed capital formation in 2021 increased by 8.0% compared to the previous year (compared to a drop by 9.0% in 2020). The investment rate in the national economy (ratio of gross fixed capital formation to gross domestic product at current prices) in 2021 was, as in 2020, 16.6%.

In the fourth quarter of 2021 solely, seasonally unadjusted GDP, calculated in constant average prices of the previous year, increased in real terms by 7.3% year on year, as compared to a decline by 2.5%.

Chart 4: GDP dynamics (%) in relations to analogous quarter of the previous year



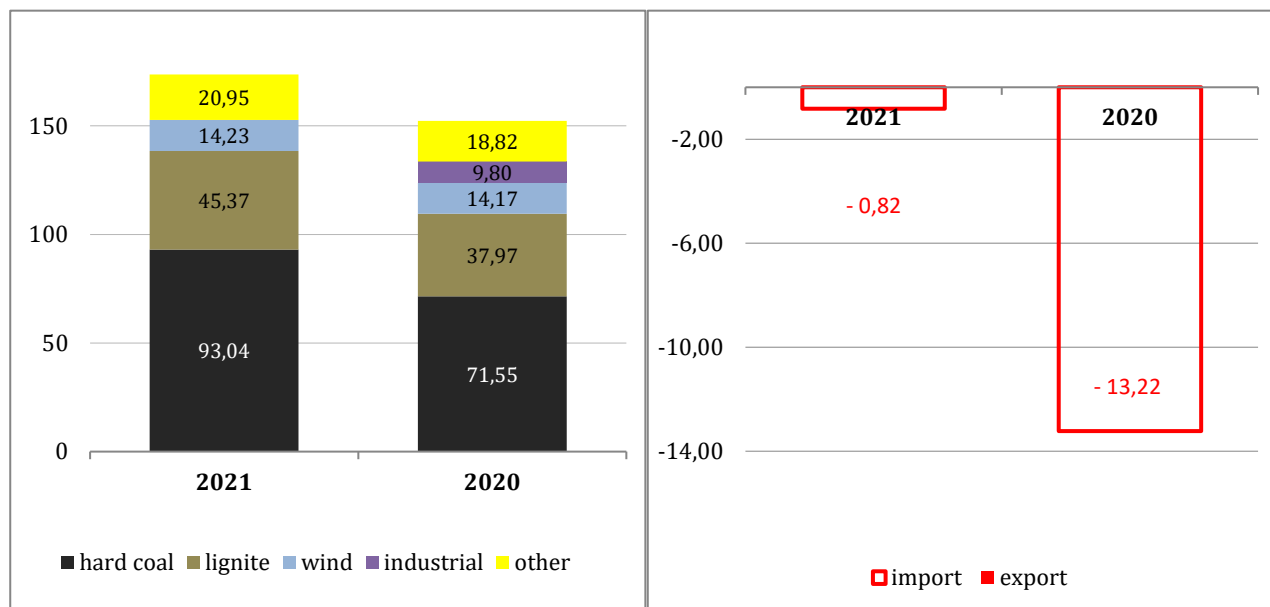
* The so-called preliminary estimate of gross domestic product in the fourth quarter of 2021, seasonally unadjusted, at constant average annual prices of the previous year.

Source: GUS data

Data on the operation of the National Power System and the Balancing Market, presented by Polskie Sieci Elektroenergetyczne SA, indicates that domestic electricity consumption¹ in 2021 amounted to 174.40 TWh and increased by 5.36% compared to the previous year. However, it should be borne in mind that a certain part of the consumption was covered by mass-produced photovoltaic sources producing energy that is directly consumed at the point of delivery (prosumers), which is not recorded by the existing metering systems. In 2021, electricity production increased by 13.97% compared to the previous year. Taking into account the entire balance of the year, there was an increase in energy production from hard coal by 30.03% and from lignite at the level of 19.49%. The increase in energy production from the main sources in terms of volume, i.e. hard coal and lignite, should be associated with the increase in energy demand in the National Power System, but also with increased exports in the second half of the year. When comparing production data y / y, it should be noted that from the beginning of 2021 the production of industrial power plants, previously shown separately, is included in individual categories of utility power plants, and therefore these data are also included in the quantities produced by coal-fired power plants. In addition, the factor increasing domestic production was the decline in energy supply on the European market and the high energy prices observed on these markets, which in turn made Poland an energy exporter from August to the end of 2021. Thus, the direction of foreign exchange has changed. The scale of changes that took place in 2021 in cross-border trade in electricity is very well shown by the comparison of PSE SA's annual data. The balance of foreign exchange in 2021 amounted to 0.82 TWh on the import side, which means that due to a change in the direction of foreign exchange, the annual import balance, compared to the year, decreased by as much as 93.80%. In 2021, the production of gas power plants decreased by 4.01% per annum. Wind farms produced practically the same amount of electricity as in 2020 (approximately 12.2 TWh). Electricity produced from hard coal accounted for 53.60% of the total electricity production, energy from lignite 26.14%, wind turbines generated 8.20%, and gas sources 7.7% of the total energy. It is worth adding that there was an increase of 116% in energy produced by renewable sources other than wind energy, mainly by photovoltaic sources.

¹ On the basis of Table 3: Structure of electricity production in domestic power plants, the volume of electricity exchange with foreign countries and national energy consumption - monthly values and from the beginning of the year - gross value available on PSE SA website.

Chart 5: Structure of electricity production and the balance of the electricity exchange with foreign countries (gross amounts) – TWh



Source: Own elaboration based on PSE data

Regulatory environment

Entities operating on the electricity market operate in a regulatory environment that is subject to constant change, mainly through the impact of EU law on national law. The most important legal regulations to which electricity producers are subject are the Energy Law Act, including provisions on the obligation to sell energy on stock exchange markets, the Act on renewable energy sources, defining the principles of support for specific energy generation technologies, the Act on Environmental Protection Law, which defines the principles sustainable use of the environment. The above laws transpose into the Polish legal order directives and regulations of the European Commission as well as international conventions regarding, among others rules for the single wholesale electricity market, environmental protection and climate change (including CO₂ emissions). Tax law, interpretations and recommendations issued in particular by the Energy Regulatory Office should also be taken into account. Any changes in the above-mentioned areas may be of great importance for the Group's operations. Regulatory risk is one of the most significant electricity generators in the industry.

Significant factors that may affect the financial results are issues related to the functioning of the capacity market. On December 16, 2021, the main auction for the delivery year 2026 took place, carried out according to the parameters specified in the Regulation of the Minister of Climate of August 6, 2022. ZE PAK SA Capital Group participated in the main auction for 2026, as a result of which PAK CCGT sp. z o.o. concluded a capacity contract for 17 years of supply, contracting 493 MW of the capacity obligation at the base price of PLN 400.39 / kW / year. The value of the concluded capacity contract for the first year of deliveries for 2026 is PLN 197,392,270.00.

The provisions of the regulation supplementing Regulation (EU) 2020/832 of the European Parliament and of the Council on the framework for recognizing economic activity as environmentally sustainable by including the transitional activity clause in the production of electricity from fossil gas fuels and nuclear will be extremely important for obtaining financing for this investment. Work on this document was carried out last year, and the draft for further consultations was approved by the European Commission on February 2, 2022. Poland sought recognition of both fuels, as they will play the role of stabilizing the system's operation while abandoning coal.

In addition, it should be mentioned that at the beginning of 2021, the secondary market of the capacity also began operationally, which allows ZE PAK SA to take over capacity obligations from other capacity providers in terms of free, non-contracted capacity. In the context of the capacity market, the legislative events that took place during the second quarter of this year are particularly important. In the previous reporting period, the parliament adopted the amendment to the Energy Law of April 10, 1997, which was processed from December 2020, as a result of which the Act of December 8, 2017 on the capacity market was also amended. Independently, in June this year, another draft amending the Polish capacity market was also being processed - the government draft act amending the act on the capacity market and certain other acts. Both amendments are the result of an analysis of the previous experience with the functioning of the capacity

market and introduce numerous improvements, clarifications and modifications, and above all, they adjust the capacity market to the provisions of the EU, the so-called market regulation. The most important change introduced by the amendments is the closing of the possibility of participation in capacity market auctions to generating units that do not meet the CO2 emission limit, the so-called EPS550, starting from 2026. Generation units that started commercial operations before July 4, 2019 and do not meet the emission limit will have the option to participate in the secondary market, allowing for multi-annual contracts to be booked until the end of 2019. Among other significant changes from the point of view of the future financial results of ZE PAK SA, there may also be statutory changes in the area of monitoring the implementation of investments for entities with long-term contracts on the capacity market, which may be important from the point of view of investments in the construction of a gas and steam unit at Adamów Power Plant for which PAK CCGT sp. z o.o. concluded a capacity contract for 17 years, starting from 2026. Modifications to the secondary market provisions may also be important - including the possibility to transfer the capacity obligation to another unit of the capacity supplier and the exclusion from the application of the provisions of the Public Procurement Law to contracts relating to the secondary capacity obligation.

On October 6, 2021, a positive judgment for Poland in the case T-161/19 Tempus Energy vs EC regarding the Polish capacity market was announced, which means that this mechanism will remain an element stabilizing the revenues of producers in accordance with the decision approving the EC C (2018) 601 final on February 7, 2018.

During 2021, the provisions of the Act on renewable energy sources were also amended. From the point of view of the Group's future financial results, changes such as the extension of system support from 2039 to 2047 and the change in the rules for settling the balance in three-year periods, and not after the end of the entire support period, i.e. maximum 15 years, as it was before, are of particular importance. The changes are significant due to new investment projects of ZE PAK SA Group related to renewable energy installations.

An important event for the financial results of the Company in the regulatory environment is the reform of the balancing market, which has been underway since 2019, when intensive work began to adapt the balancing market to the requirements of European law. In May 2020, the document Polish Plan for the Implementation of Reforms in the Balancing Market was adopted, which was a milestone in works on the reform of the balancing market. As a result of adopting the provisions of the plan, the balancing market reform will be carried out in two stages, and ultimately it is to introduce, among others, scarcity pricing mechanism, as well as major changes in system services and settlements on the balancing market. With the implementation of the first stage of the reform, on January 1, 2021, the so-called system regulation, which introduced a new methodology for determining forced electricity supply settlement price (CWD) and forced electricity supply settlement price (CWO), which regulates the variable cost for lignite-fired units in a different way than in previous years. As a consequence, the so-called forced reductions, producers who do not have their own fuel in the technological process are often forced to buy energy from the balancing market at prices higher than the contracts concluded on Towarowa Giełda Energii S.A. Another significant change, introduced by the reform, is the change in the rules for determining the settlement price of the deviation of sales and purchase of energy from the balancing market, depending on the contracting status of the National Power System, effective from January 1, 2022, which prevents price arbitrage on the balancing market and on the TGE SA day-ahead market.

Another important event in the broadly understood regulatory environment, which has a significant impact on energy prices on the day-ahead market at TGE SA, was the launch of the Interim Coupling project on June 17, 2021, which extends the Market Coupling (Poland, Sweden, Lithuania) implemented at TGE SA by new Countries. The Interim Coupling project aims to connect the borders of the participating countries - to connect the Czech, Slovak, Hungarian and Romanian markets with the pan-European Multi-Regional Coupling (MRC) area by introducing an implicit capacity allocation based on net transfer capacity (NTC) at six borders, i.e. Poland-Germany, Poland-Czech Republic, Poland-Slovakia, Czech Republic-Germany, Czech Republic-Austria and Hungary-Austria. The project is a step towards creating one common European market.

From the point of view of the Group's financial results, and above all from the point of view of the company's liquidity management in 2022, it is important to pass in January 2022 an act amending the so-called "anti-crisis shield", which changed the rules of the system securing the clearing of transactions concluded on the stock exchange, expanding the range of options for contributing non-cash collateral to the clearing guarantee system, which gives the company greater flexibility in financial management.

Electricity prices

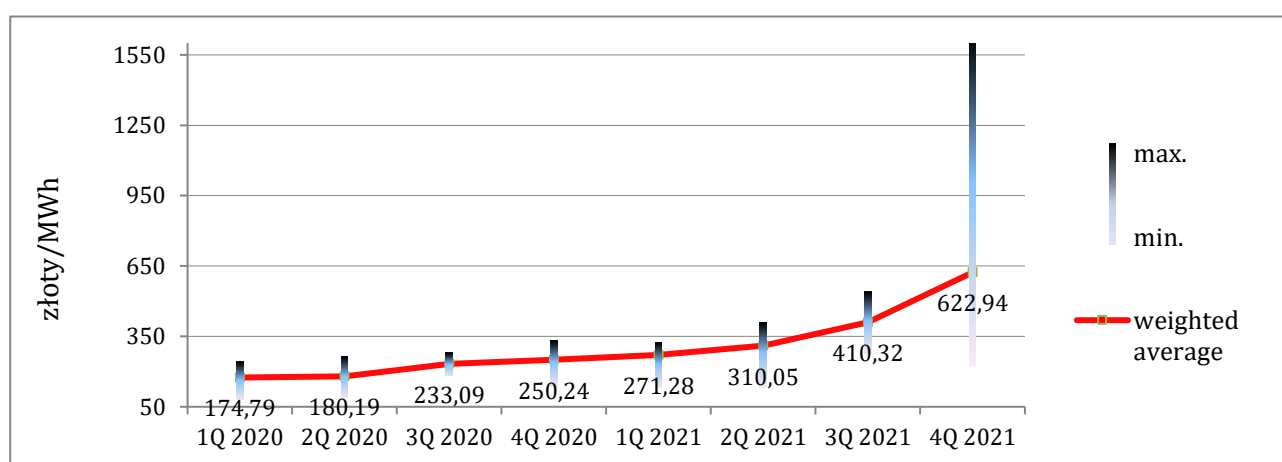
The company generates the vast majority of revenues from the production and sale of electricity, therefore the risk of changing the price at which it sells electricity is of key importance for the level of revenues generated by the Group.

On the Day-Ahead Market on TGE SA, invariably from the second quarter of 2020, the weighted average of the TGeBASE indices continues to grow, and so in the fourth quarter it was at the level of PLN 622.94 / MWh with a

maximum of PLN 1,641.90 / MWh of December 22, 2021. The price increases were dictated by the high demand for energy in Poland and Western Europe. The strong increases at the end of the fourth quarter of 2021, despite the recorded lower turnover compared to the third quarter, were influenced by many factors, including: lower than expected production from wind generation, unstable situation related to gas supplies in Europe and an increase in the prices of this fuel, an increase in coal prices, a dynamic upward price situation on the CO₂ emission allowances market, an ongoing renovation campaign, as well as unplanned shutdowns of power units, caused by both failures of generating units, but also deficiencies in the supply of both hard and lignite coal. An additional reason was the reversal of the exchange balance in cross-border electricity trade towards electricity exports from Poland.

The weighted average BASE price on the Day-Ahead Market on TGE SA for 2021 was at the level of PLN 401.17 / MWh, which means an increase compared to 2020, by PLN 191.06 / MWh, i.e. by approximately 91%. It is worth noting here that the base year 2020 was the year in which the outbreak of the COVID 19 pandemic had strong economic effects in the form of drops in price quotations on all energy markets.

Chart 6: Electricity prices (TGeBASE)²

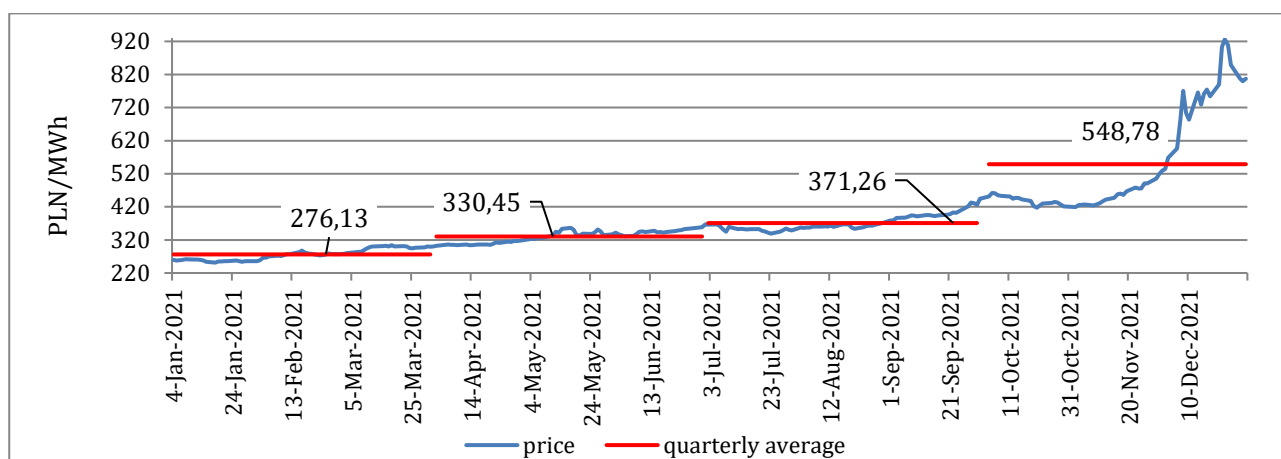


Source: Own elaboration based on TGE data

On the electricity futures market on TGE SA, price increases continued, which began in December 2020, which can be associated with large increases on the carbon market. The arithmetic average of daily clearing rates for the BASE_Y-21 contract in 2021 was PLN 276.13 / MWh in the first quarter, PLN 330.45 / MWh in the second quarter, PLN 371.26 / MWh in the third quarter, while in the fourth quarter it was at the level of PLN 548.78 / MWh. The fourth quarter of 2021 was significantly different from the price level shown in the first three quarters of 2021. In the fourth quarter of 2021, there was a significant increase in the price of the arithmetic mean of the daily clearing prices for the reference futures contract BASE_Y-22. The highest recorded price is PLN 926.40 / MWh, which was shaped by the market, as in the Day-Ahead Market on December 22, 2021. The sharp increases in the electricity futures market of TGE SA in the fourth quarter of 2021 on all forward instruments, not only on the reference BASE_Y-22 contract, were stimulated in particular by factors such as the unstable gas situation in Europe, and thus strong price increases on the gas market. Moreover, the surge in CO₂ emission allowances contributed to the surge in quotations on the futures market, as well as on the TGE SA Day-Ahead and Intra Market.

² In June 2019, TGE SA liquidated the IRDN index, currently the base reference index is the TGeBase index

Chart 7: The price of the futures contract for the supply of electricity (band) for 2022



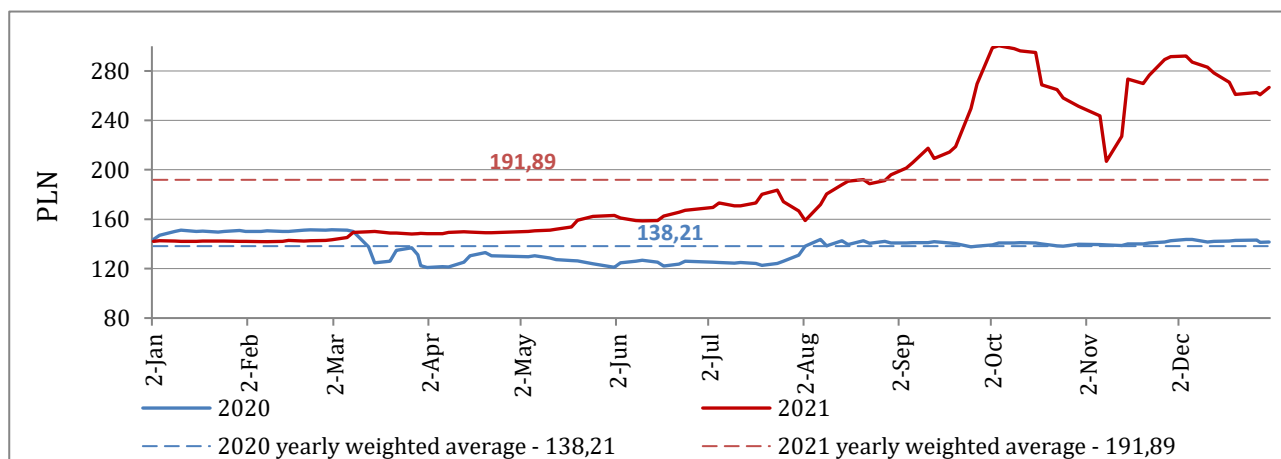
Source: Own elaboration based on TGE data

Certificates of origin

Due to the fact that one of the power units at ZE PAK SA is dedicated to combusting biomass and, a producer is entitled to green certificates. The number of obtained certificates of origin depends on the level of generation from a given sources and is higher than the number, which the Company is obliged to present for redemption, which allows to sell specific volumes to other market participants. However, biomass unit generation largely depends on the green certificates market price levels. During periods, when the total generated biomass energy and green certificate prices do not ensure reaching the assumed financial effect, the generation may be decreased or halted, which also automatically decreases the amount of generated green certificates. Due to the fact that the level of income generated from the sale of certificates of origin is lower than the level of revenues generated from the sale of electricity, the risk of price changes for certificates of origin also has a smaller impact on results than, for example, the risk of changes in energy prices.

2021 began with a slight increase in the prices of green certificates and the upward trend continued until the end of the year. The weighted average price at the sessions of the property rights market in 2021 for the PMOZE_A instrument was PLN 191.89 / MWh, i.e. by PLN 53.65 / MWh more compared to 2020, which means an increase of almost 39%. The economic situation related to the pandemic has stabilized somewhat, which has contributed to an increase in prices. The obligation to redeem green certificates is of key importance for the shaping of the demand for green certificates, which are one of the two sources of income - apart from electricity sales - affecting the profitability of investments in renewable energy implemented in the system of certificates of origin. In the second half of 2021, finally, after consulting the size of the obligation, the Ministry of Climate and Environment decided to reduce the RES obligation for 2022 to 18.5%. Another factor that may affect the increase in the prices of green certificates may be the inability to meet this obligation by the obliged entities through the so-called substitute fee (information from the President of ERO 5/2021 and 45/2021).

Chart 8: Average price of certificate of origin for RES produced energy



Source: own elaboration based on TGE data

Fuel costs and supplies, coal extraction costs

A fuel cost is the important part of the costs related to the electricity and heat generation in ZE PAK SA Group. The prices of fuel largely determine the competitiveness of particular electricity production processes. ZE PAK SA power plants produce most of their electricity from brown coal, but they also use forest and agricultural biomass. Furthermore, heavy and light heating oil is used in minimum quantities for heating purposes in the process of electricity production.

Currently, the main supplier of coal to ZE PAK SA is PAK KWB Konin SA. This is supplemented by deliveries from external entities from outside the Group. There is also an exposure to price fluctuations of other fuels used, mainly biomass, the price of which will become more and more important due to the ongoing technological commissioning of the new biomass unit at Konin Power Plant. The level of costs related to lignite mining is also important for the financial result, which largely depends on factors beyond the Group's direct control, such as e.g. the geological conditions of the deposits in the final stage of their exploitation.

The deposits exploited by the Group's mines have a certain abundance. The possibility of achieving the assumed level of electricity production depends on the extraction capacity and the quality of coal mined in the currently exploited deposits. Currently, no significant investments are made in the coal mining segment that would lead to an increase in production, and in the coming years a significant decline in coal volumes should be expected due to the end of operation of two out of three currently operated lignite open-pit mines. The company intends to gradually move away from coal-based power generation and focus more and more on low-carbon and carbon neutral electricity generation projects. The implementation of the project to build a gas and steam unit at Adamów Power Plant, which was the subject of the capacity market auction won in December 2021, will mean an increase in the importance of gaseous fuel in the balance of energy supplies for the Group in the future.

CO₂ emission allowances costs

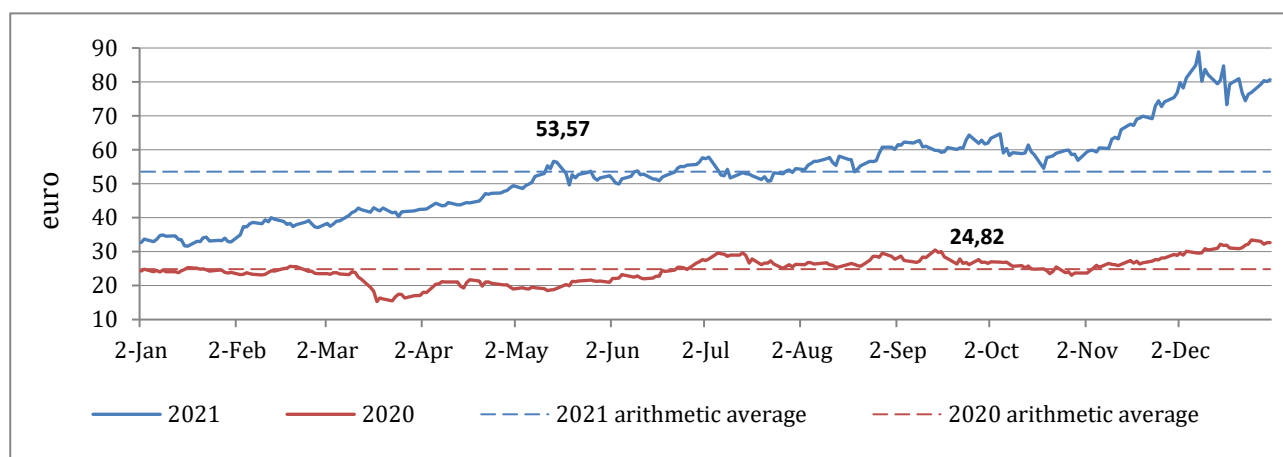
The activities in the scope of generating electricity and heat from conventional sources are associated with the need to incur the CO₂ emission costs. In view of the fact that these costs represent an important item in the structure of the costs incurred by the producers of energy from lignite, the impact of emitted quantities of CO₂ and the risk of price changes of CO₂ emission allowances (EUA) is of great importance to the activities' results.

In 2021, the Group received a small amount of free CO₂ emission allowances, i.e. 12,138 EUA, resulting from allocation to heat production. Therefore, practically the entire amount of emission allowances needed by ZE PAK SA Group must have been purchased on the secondary market.

In 2021, the prices of emission allowances increased almost threefold - from EUR 31 / EUA in January to EUR 85 / EUA in December. One of the main drivers of the spectacular price increase was the announcement by the European Commission of the "Fit for 55" package of proposals to adjust EU policies to cut net greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels, which is to be an intermediate goal to achieve climate neutrality by 2050. In addition, in 2021, the EU economy was catching up with its pandemic backlog, which turned into an increase in the demand for emission allowances in the industry sector. In May, EUA allowance prices broke the psychological level of EUR 50 and reached a record EUR 56.5. The price increases were "helped" by speculative purchases and statements that there is no need to intervene on the market, and the prices of allowances are still too low to meet the ambitious reduction targets of the EU. Ultimately, the energy crisis, pushing up the prices of fossil fuels, and in particular gas prices, led to a sharp increase in EUA quotations (strongly correlated with this raw material). December 2021 began with strong increases in the prices of EUA allowances, which by December 8 had increased by approx. 18%, to a value of nearly EUR 89 / EUA. Low storage levels in Europe and the uncertainty related to gas supplies from both Russia and LNG supplies from the USA have again made coal a more profitable and reliable raw material for energy production in the EU. The end of 2021 closed at EUR 80.00 / EUA. In the current year 2022, voices from the European Commission begin to appear about the need to reform the EU ETS in order to ensure greater stabilization of prices and to limit speculation on the prices of this instrument.

The arithmetic mean of the EUA quotations in 2021 was EUR 53.57, while the corresponding average in 2020 was EUR 24.82, which means an increase in the average price by 115.83%, i.e. by EUR 28.75.

Chart 9: Price of the futures contract for the supply of EUA



Source: Own elaboration based on ICE data

Compensation for the stranded costs related to the termination of the „long-term Contract” („PPA”) for unit 9 in Elektrownia Pątnów (former Elektrownia Pątnów II sp. z o.o.)

The long-term contract for the sale of power and electricity (PPA) was concluded between Elektrownia Pątnów II sp. z o.o. and Polskie Sieci Elektroenergetyczne SA. The contract was a long-term agreement in the scope of supply of electricity according to the established price formula.

Due to the early termination (on 1 April 2008) of PPA, pursuant to the Act of PPA, the Company is entitled to receive sufficient compensation. The amount of compensation is estimated according to an applicable formula specified in the Act. The Company is covered by the said act by the end of 2025. The mechanism determining the amount of revenues related to compensation for stranded costs largely functions on the basis of offsetting, therefore the risk related to the level of revenues from this source is to a certain extent dependent on other types of risk affecting the level of costs and revenues, e.g. energy prices or prices of allowances for emissions.

On December 30, 2020, Elektrownia Pątnów II sp. z o.o. was incorporated into ZE PAK SA by way of general succession. The merger of the companies does not affect the right of ZE PAK SA to apply for compensation for stranded costs.

Seasonality and meteorological conditions (including mainly wind conditions)

The demand for electricity and heat, especially among consumers, is subject to season fluctuation. So far, the practice showed that the consumption of electricity was higher in the winter (mainly due to low temperatures and shorter days) and lowered in the summer (due to the summer period, higher ambient temperatures, and a longer day). In the last couple of years, there is an increase in the demand for electricity in the summer, which is caused mostly by the rising number of used cooling devices and air conditioning.

Irrespective of the factors described above, meteorological conditions are becoming more and more important for ZE PAK production level. In the past, the operations of the Group were not subject to significant seasonality of demand, due to low costs, the work of blocks was carried out continuously (in the basis) for almost a whole year. Currently, taking into account the growing share of RES in the segment of energy producers, including primarily wind sources as well as increasing photovoltaic production, when estimating the Group's production volume, weather conditions are becoming more and more important, with particular emphasis on wind and solar conditions. It should be taken into account that in the periods when the weather conditions are favourable for RES production, the demand for the production from the Group's conventional power plants may periodically decrease, similarly in the periods of lower RES production, it may increase.

The risk related to seasonality and meteorological conditions in 2021 was not a key factor for the Company's financial results.

Investment expenses

Activities in the mining and electricity generating sectors require significant capital expenditure. The Group's generation assets require periodic repairs and ongoing modernization, both due to the tightening of environmental protection requirements and the need to increase the efficiency of electricity production. The expected increased level of capital

expenditure related to the Group's plans to implement projects in the area of energy production from low-emission and carbon-neutral sources as well as the production and use of "green" hydrogen should be taken into account. The level of capital expenditure will still have a significant impact and is expected to continue to have a significant effect on operating results, debt levels and cash flow. Delays in implementation, changes to the investment program and budget overruns can have a serious impact on future capital expenditures, as well as on results, financial standing and development prospects.

EUR/PLN exchange rate, the level of interest rates

Despite the fact that the Group conducts its activities in Poland, where it incurs costs and gains revenues in zloty, there is a couple of significant factors which make the financial results dependent on the exchange rate of EUR/PLN and the level of WIBOR interest rates. The most important factors include:

- transactions connected with EUA purchase are settled in EURO,
- one of the companies from the renovation segment - PAK Serwis sp. z o.o., carries out a part of its orders outside Poland, settling them in euro,
- the companies in the Group use debt financing based on a variable interest rate.

The Group has financial liabilities, mainly credits and loans with variable interest rates. The Group's exposure to the risk of changes in interest rates relates mainly to long-term financial liabilities related to the financing of investments in ZE PAK SA and PAK - PCE Fotowoltaika sp. z o.o. In order to minimize the interest rate risk, the Group has entered into interest rate swaps (interest rate swaps) under which it agrees to exchange, at specified intervals, the difference between the amount of fixed and floating interest rates on the agreed principal amount. These transactions are intended to secure contracted financial liabilities and concern 50% of the syndicated loan PAK - PCE Fotowoltaika sp. z o.o. for the construction of Brudzew photovoltaic farm and a 50% investment loan from ZE PAK SA for the modernization of the K7 boiler at Konin Power Plant, based on the variable WIBOR rate. IRS instruments were used to hedge.

The Group companies periodically use instruments to limit the risk arising from exchange rate fluctuations, e.g. for part of the flows related to the purchase of CO2 emission allowances. Forwards are used to hedge the exchange rate. Management Boards monitor the financial and market situation on an ongoing basis, and if necessary, they may decide on the need to use financial instruments to hedge against currency risk. In accordance with the principles applied in ZE PAK SA Group, any transactions will be collateral and will be matched to the hedged item in terms of volume and maturity. The decision to choose a hedging instrument will also take into account: price, market liquidity, product simplicity, ease of valuation and accounting, and flexibility.

5. DESCRIPTION OF THE FINANCIAL AND ECONOMIC SITUATION

5.1. Principles of development of the financial statement

The Group develops the financial statements on the basis of the International Financial Reporting Standards approved by the European Union. The above standards, known collectively as International Financial Reporting Standards (IFRS), also include the International Accounting Standards (IAS) and Interpretations issued by the Standing Interpretations Committee and the International Financial Reporting Interpretations Committee.

The significant principles of accounting used in the Group's Consolidated Financial Statement are discussed in note no. 12 of the Group's Consolidated Financial Statement for 2021.

5.2. Specification of the basic economic and financial values

Consolidated profit and loss account and the consolidated income statement

Sales revenues in 2021 amounted to PLN 2 451 209 thousand and, compared to 2020, increased by PLN 244 235 thousand, i.e. 11.07%.

In 2021, compared to the same period last year, the Group recorded a 14.43% decrease in the total volume of electricity sales from its own production and sales of purchased energy. In the case of the sale of electricity from own production, the decrease was 10.10% and the decrease in the sale of purchased energy was 25.67%. The decrease in production concerned coal-fired units, in particular the less efficient coal-fired units 1, 2 and 5 at Pątnów power plant, while in the case of the biomass unit, a higher production volume was achieved. The net production volumes of the Group's individual

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power plants are presented in Chart 1. At the same time, in 2021, the average obtained electricity sales price increased to PLN 324.09 / MWh, i.e. by 16.93% (calculated as the sum of revenues from the sale of electricity and revenues from system services divided by the volume of energy sold). Thanks to the higher price of electricity in 2021, it was possible not only to compensate for the decrease due to the lower sales volume, but also to obtain higher revenues from the sale of electricity in the amount of PLN 1,828 thousand, i.e. by 0.10%.

In 2021, a new category of revenues appeared in the form of revenues from the Capacity Market for readiness to supply energy to the grid, the amount of which in 2021 amounted to PLN 185 793 thousand.

Revenues from the sale of heat in 2021 amounted to PLN 54 733 thousand and were higher than in 2020 by PLN 5 936 thousand, i.e. 12.16%. The increase in the sales volume and the higher price for heat contributed to the increase in revenues.

Revenue from construction contracts in 2021 increased by PLN 15,836 thousand, i.e. 62.71%, compared to the revenue earned in the corresponding period of the previous year. The increase in revenues in the analysed period was related to the implementation of projects with a higher scope, both material and financial, carried out in Germany and contracts for the construction of a photovoltaic farm in Brudzew and the modernization of a biomass installation in Konin power plant, carried out by a company from the renovation segment PAK Serwis sp. z o.o. respectively in a consortium with an external entity and for an external entity.

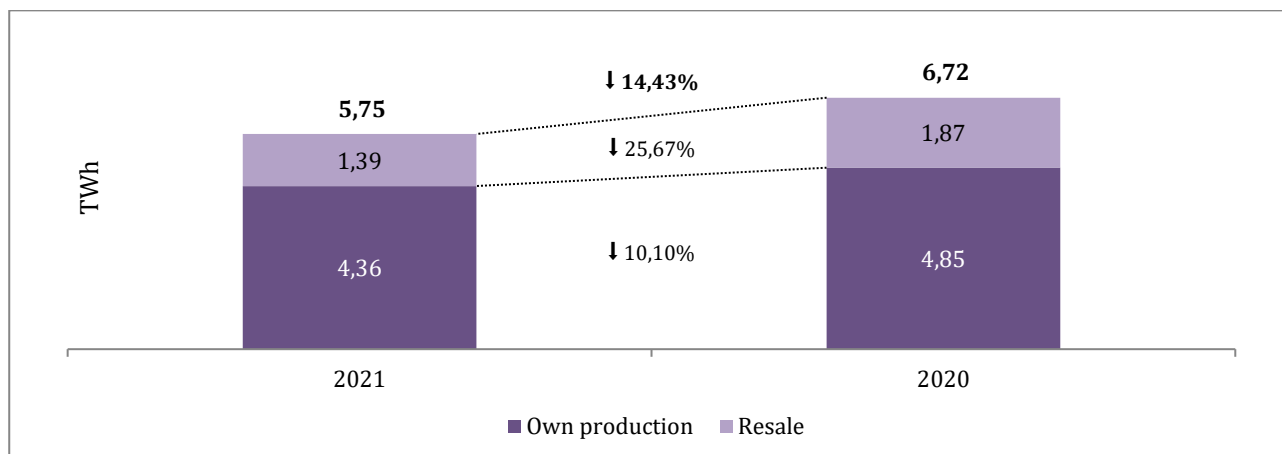
In 2021, compared to 2020, revenues from the sale of property rights from certificates of origin for energy increased by PLN 34 109 thousand, i.e. by 61.23%. The increase in revenues, as in the previous year, results from the realization of a higher price with a similar volume of production.

Revenues from the termination of LTCs (long-term contract for the sale of power and electricity) in 2021 amounted to PLN 170 574 thousand (including an advance of PLN 92 360 thousand), while in 2020 they amounted to PLN 180 073 thousand (including an advance of PLN 96 169 thousand). In both periods, advances and adjustments were at a comparable level.

Table 4: Specification of consolidated sales revenues

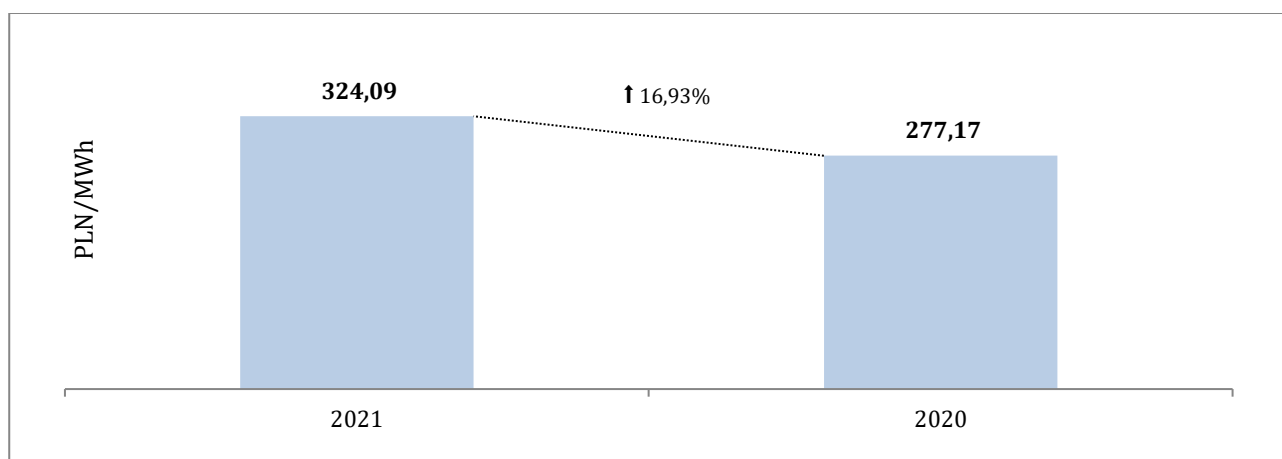
	<i>Zloty thousand</i> <i>12 months period</i> <i>ended</i> <i>31 December 2021</i>	<i>Zloty thousand</i> <i>12 months period</i> <i>ended</i> <i>31 December 2020</i>	<i>Zloty thousand</i> <i>change</i>	<i>%</i> <i>dynamics</i>
Revenues from the sale of goods, including:	2 192 461	1 972 488	219 973	11,15
– Revenues from the sale of electricity from own production	1 477 306	1 356 437	120 869	8,91
– Revenues from the sale of electricity from resale on the market	388 116	507 157	(119 041)	(23,47)
– Revenues from the Capacity Market	185 793	-	185 793	-
– Revenues from the sale of heat	54 733	48 797	5 936	12,16
– Other sale revenues	45 423	34 843	10 580	30,36
– Revenues from contracts for construction services	41 090	25 254	15 836	62,71
Other revenues, including:	260 392	235 782	24 610	10,44
– Property rights from Energy certificates of origin	89 818	55 709	34 109	61,23
– LTC compensations	170 574	180 073	(9 499)	(5,28)
Excise duty	(1 644)	(1 296)	(348)	(26,85)
Total revenues from the sale	2 451 209	2 206 974	244 235	11,07

Chart 10: Sale of electricity



Source: Internal data

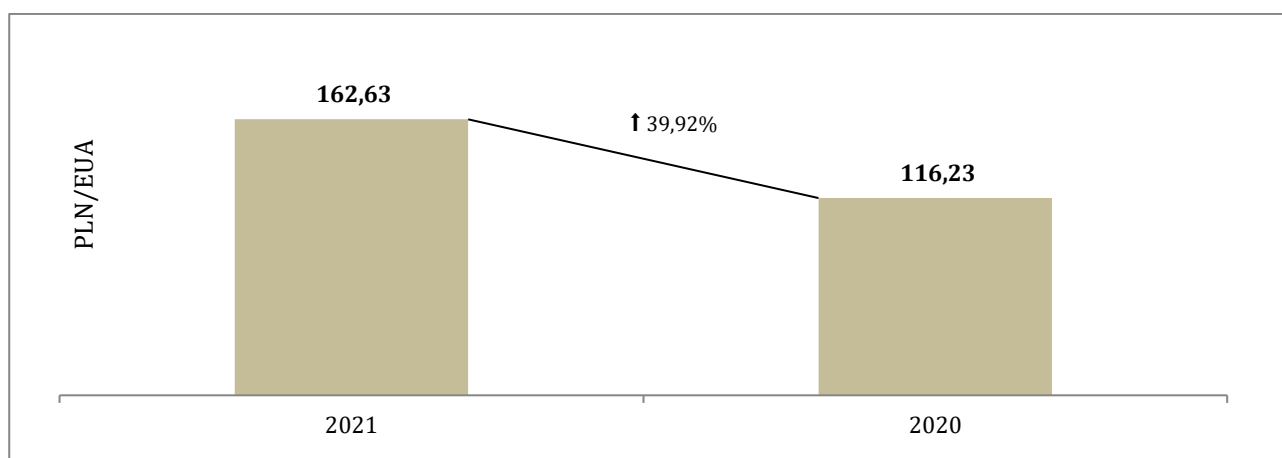
Chart 11: Average electricity prices*



* Average price, calculated as electricity sales revenues (own production with system service as from resale) divided by the sales volume.

Source: Internal data

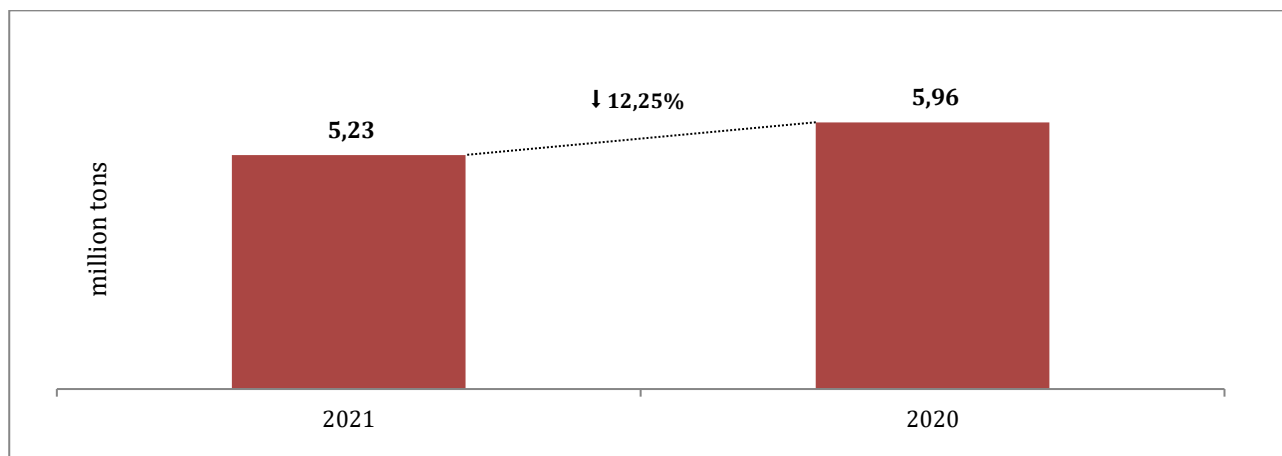
Chart 12: Average prices of CO₂ emission allowances purchase *(EUA)



* Average price calculated as the costs of purchasing emission allowances incurred to cover emissions for a given period divided by the volume of CO₂ emissions.

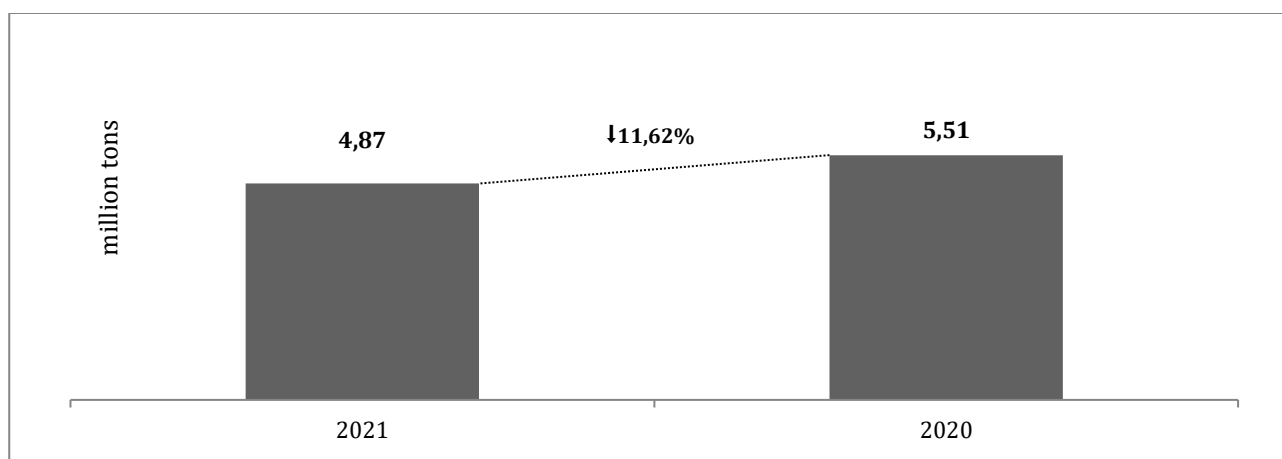
Source: Internal data

Chart 13: Lignite consumption



Source: Internal data

Chart 14: CO₂ emission



Source: Internal data

The prime cost of sales in 2021 amounted to PLN 2 892 942 thousand and increased by PLN 445 945 thousand, i.e. by 18.22%, compared to the price incurred in 2020.

The item that contributed most to the increase in cost was the impairment loss on property, plant and equipment made as a result of tests for impairment of assets in accordance with the requirements of IAS 36. The test result justified the write-off of property, plant and equipment worth PLN 620,170 thousand, i.e. by PLN 338 291 thousand more than the write-off realized in 2020, which was also the result of the conducted tests for impairment of the assets held. In addition, in connection with the planned shortening of the operating period of coal-fired power units and coal mining, at the end of 2021, a write-down of inventories (spare parts in storage) was also made in the amount of PLN 13 137 thousand. In addition to write-offs, the costs of CO₂ emissions increased significantly in 2021. It should be taken into account that the amount of emitted CO₂ decreased by 11.62% compared to 2020, as a result of a lower production volume. However, the unit price paid for the emission permit increased by 33.57%. As a result, the total costs of CO₂ emissions increased by PLN 121,303 thousand.

Other operating income in 2021 amounted to PLN 64 007 thousand and was lower by PLN 20 910 thousand than in the corresponding period of the previous year. The high level of revenues in the same period of last year related to revenues from aid programs related to the pandemic and demolition of Adamów power plant.

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Table 5: Selected items of the consolidated income statement

	Zloty thousand 12 months period ended 31 December 2021	Zloty thousand 12 months period ended 31 December 2020	Zloty thousand change	%
				dynamics
Sales revenues	2 451 209	2 206 974	244 235	11,07
Cost of goods sold	(2 892 942)	(2 446 997)	(445 945)	(18,22)
Gross profit (loss) on sales	(441 733)	(240 023)	(201 710)	(84,04)
Other operating revenues	64 007	84 917	(20 910)	(24,62)
Selling costs	(6 091)	(3 613)	(2 478)	(68,59)
Administrative expenses	(119 720)	(114 691)	(5 029)	(4,38)
Other operating costs	(9 085)	(17 704)	8 619	48,68
Profit (loss) on operating activities	(512 622)	(291 114)	(221 508)	(76,09)
Financial revenues	11 782	5 889	5 893	100,07
Financial costs	(17 683)	(17 830)	147	0,82
Gross profit (loss)	(518 523)	(303 055)	(215 468)	(71,10)
Income tax (tax load)	201 119	76 590	124 529	162,59
Net profit (loss)	(317 404)	(226 465)	(90 939)	(40,16)
Net other comprehensive income	2 931	(541)	3 472	-
Total income for the period	(314 473)	(227 006)	(87 467)	(38,53)
EBITDA*	243 079	147 665	95 414	64,62

* The Company defines and estimates EBITDA as the profit/(loss) on operating activities (estimates as the net profit/(loss) for the accounting year corrected by the (i) income tax (tax load), (ii) financial revenues as well as (iii) financial costs corrected by the depreciation (shown in the income statement) as well as impairment write-downs against tangible assets, intangible assets as well as mining assets.

Selling costs in 2021 amounted to PLN 6,091 thousand and were higher by PLN 2,478 thousand than in the previous year, mainly due to the introduction of the capacity fee obligation for end users, resulting from the act on the capacity market.

Table 6: Consolidated costs by type

	Zloty thousand 12 months period ended 31 December 2021	Zloty thousand 12 months period ended 31 December 2020	Zloty thousand change	%
				dynamics
Depreciation	135 531	156 900	(21 369)	(13,62)
Write-downs of fixed assets, intangible assets and mining assets	620 170	281 879	338 291	120,01
Impairment write-downs on inventory	13 137	28 025	(14 888)	(53,12)
Consumption of materials	322 888	271 628	51 260	18,87
Outsourcing	104 335	106 869	(2 534)	(2,37)
Taxes and fees excluding excise tax	160 588	163 668	(3 080)	(1,88)
Costs of CO ₂ emissions	792 344	671 041	121 303	18,08
Costs of employee benefits	369 764	383 751	(13 987)	(3,64)
Other costs by type	25 277	13 595	11 682	85,93
Value of sold goods and materials and sold traded electricity	493 874	521 696	(27 822)	(5,33)
Total costs by type	3 037 908	2 599 052	438 856	16,89

General and administrative expenses in 2021 amounted to PLN 119,720 thousand and were higher than last year's by PLN 5,029 thousand, i.e. by 4.38%.

Other operating expenses in 2021 amounted to PLN 9,085 thousand and decreased compared to the previous year by PLN 8,619 thousand. In 2020, higher costs were incurred due to the recognition of the costs of discontinued investments in the amount of PLN 8,857 thousand and the created provisions in the amount of PLN 3,778 thousand.

In 2021, the ZE PAK SA Group realized a loss on operating activities in the amount of PLN 512 622 thousand, which in relation to the result for the previous year was higher by PLN 221 508 thousand, i.e. 76.09%.

In 2021, the results achieved, as in the previous year, were negatively affected, in the amount of PLN 5,901 thousand, by a negative result on financial activities. The impact of financial activities in the corresponding period of the previous year decreased the result by PLN 11,941 thousand. The lower negative balance in 2021 was mainly due to the positive valuation of the exchange rate hedge in the amount of PLN 10 540 thousand.

In 2021, the Group recorded a gross loss of PLN 518,523 thousand. At the net level, the loss in 2021 was PLN 317,404 thousand.

Consolidated statement of financial position

The balance sheet total as at December 31, 2021 amounted to PLN 3 311 762 thousand and compared to the balance as at December 31, 2020 it increased by PLN 433 134 thousand, i.e. 15.05%.

Non-current assets as at December 31, 2021 amounted to PLN 1,273,696 thousand. Compared to December 31, 2020, they decreased by PLN 583 659 thousand, i.e. by 31.42%. The largest decrease was recorded in property, plant and equipment, which decreased by PLN 478,403 thousand, mainly as a result of impairment losses on property, plant and equipment and the depreciation write-off. The completed investment in the construction of a photovoltaic farm and the ongoing adaptation of the coal-fired boiler for biomass combustion at the Konin power plant had a positive effect in the item of tangible fixed assets.

Current assets as at December 31, 2021 amounted to PLN 2,038,066 thousand. Compared to the last day of 2020, they increased by PLN 1,021,273 thousand, i.e. 99.56%. At the end of 2021, the largest change occurred in receivables, which increased by PLN 1,009,728 thousand, mainly due to an increase in stock exchange deposits.

Table 7: Selected items from consolidated assets

	<i>Złoty thousand</i> 31 December 2021	<i>Złoty thousand</i> 31 December 2020	<i>Złoty thousand</i> change	%
				<i>dynamics</i>
<i>Fixed assets</i>				
Tangible fixed assets	1 182 258	1 660 661	(478 403)	(28,81)
Assets due to the right of use	45 856	49 210	(3 354)	(6,82)
Investment property	1 810	2 141	(331)	(15,46)
Intangible assets	2 383	2 754	(371)	(13,47)
Assets concerning stripping and other mining assets (long-term)	-	52 291	(52 291)	100,00
Other long-term financial assets	22 622	5 081	17 541	345,23
Other long-term non-financial assets	9 998	297	9 701	3 266,33
Deferred tax assets	8 769	84 920	(76 151)	(89,67)
Total fixed assets	1 273 696	1 857 355	(583 659)	(31,42)
<i>Current assets</i>				
Emission allowances	-	3 565	(3 565)	100,00
Inventories	74 241	67 859	6 382	9,40
Deliveries and services receivables and other receivables	1 394 784	385 056	1 009 728	262,23
Income tax receivables	81	19 416	(19 335)	(99,58)
Derivative short-term financial instruments (assets)	10 540	6 550	3 990	60,92
Other short-term financial assets	150	10	140	1 400,00
Other short-term non-financial assets	50 129	39 673	10 456	26,36
Amounts due from awarding entities under long-term contracts	1 472	1 283	189	14,73
Cash and cash equivalents	506 669	497 861	8 808	1,77
Total current assets	2 038 066	1 021 273	1 016 793	99,56
TOTAL ASSETS	3 311 762	2 878 628	433 134	15,05

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Equity as at 31 December 2021 amounted to PLN 524 232 thousand, compared to the end of 2020 decreased by PLN 425 231 thousand, i.e. by 44.79%, as a result of the net loss for 2021.

As at December 31, 2021, liabilities amounted to PLN 2,787,530 thousand, which means that they increased by PLN 858,365 thousand, i.e. by 44.49% during the year. The situation was similar in the case of short-term liabilities, which increased by PLN 924 863 thousand, i.e. by 86.59%, mainly due to an increase in the level of provisions for the redemption of CO2 emission allowances, an increase in loan liabilities and an increase in VAT liabilities. On the other hand, long-term liabilities decreased by PLN 66,498 thousand, mainly as a result of a decrease in deferred tax liability.

Table 8: Selected items from consolidated equity & liabilities

	<i>Zloty thousand</i> <i>31 December 2021</i>	<i>Zloty thousand</i> <i>31 December 2020</i>	<i>Zloty thousand</i> <i>change</i>	<i>%</i> <i>dynamics</i>
<i>Equity</i>				
Issued capital	101 647	101 647	-	-
Supplementary capital	1 131 326	1 124 376	6 950	0,62
Other reserve capital	3 472	3 472	-	-
Uncovered losses	(711 828)	(278 324)	(433 504)	(155,76)
Exchange differences from converting a foreign unit	10	43	(33)	(76,74)
Equity attributable to majority shareholders	524 627	951 214	(426 587)	(44,85)
Non-controlling interest	(395)	(1 751)	1 356	77,44
Total equity	524 232	949 463	(425 231)	(44,79)
<i>Long-term liabilities</i>				
Interest credits and loans	249 226	-	249 226	-
Employee benefits	27 155	40 886	(13 731)	(33,58)
Long-term delivery and service liabilities and other financial liabilities	467	5 248	(4 781)	(91,10)
Leasing liabilities	41 515	51 495	(9 980)	(19,38)
Long-term subsidies	4 317	36 027	(31 710)	(88,02)
Other long-term provision as well as prepayments and accruals	439 105	414 527	24 578	5,93
Deferred income tax provision	32 802	312 902	(280 100)	(89,52)
Total long-term liabilities	794 587	861 085	(66 498)	(7,72)
<i>Short-term liabilities</i>				
Short-term delivery and service liabilities and other financial liabilities	251 887	188 261	63 626	33,80
Current part of interest credits and loans	202 545	55 003	147 542	268,24
Short-term derivative financial instruments (liabilities)	3 606	-	3 606	-
Other non-financial liabilities	200 723	78 152	122 571	156,84
Income tax liabilities	663	1 279	(616)	(48,16)
Short-term employee benefits	4 371	6 521	(2 150)	(32,97)
Short-term subsidies	46	3 646	(3 600)	(98,74)
Long-term contract receivables due to ordering parties	3 680	6 680	(3 000)	(44,91)
Other short-term provisions as well as prepayments and accruals	1 319 106	728 538	590 568	81,06
Total short-term liabilities	1 992 943	1 068 080	924 863	86,59
Total liabilities	2 787 530	1 929 165	858 365	44,49
TOTAL equity & liabilities	3 311 762	2 878 628	433 134	15,05

Consolidated cash flow statement

In 2021, the Group generated a positive balance of cash flows from operating activities in the amount of PLN 6,555 thousand, which was lower by PLN 159,766 thousand compared to the previous year. The decrease in the level of net cash from operating activities was mainly due to the significant increase in the amount of the maintained deposits securing open positions related to the sale of electricity on IRGIT.

In 2021, as part of investing activities, expenses for the acquisition of non-current assets were made in the amount of PLN 409 720 thousand, which included the expenses related to investments described in more detail in point 3.3 of this report. Assets for the amount of PLN 31 815 thousand were also sold.

The balance of cash operations related to financing activities in 2021 was positive and amounted to PLN 393,482 thousand. The balance mainly comprised of loans received for investments in the construction of a photovoltaic farm and adaptation of a coal-fired boiler to biomass combustion, as well as instalments of a term loan at PAK KWB Konin SA. In the previous year, the balance was mainly due to the repayment of the term loan at PAK KWB Konin SA.

Cash increased by PLN 8,808 thousand in 2021 and amounted to PLN 506,669 thousand at the end of the year.

Table 9: Selected items from the consolidated cash flow statement

	<i>Zloty thousand</i> <i>12 months period</i> <i>ended</i> <i>31 December 2021</i>	<i>Zloty thousand</i> <i>12 months period</i> <i>ended</i> <i>31 December 2020</i>	<i>Zloty thousand</i> <i>change</i>	<i>%</i> <i>dynamics</i>
Cash flows on operating activities				
Gross profit (loss)	(518 523)	(303 055)	(215 468)	(71,10)
Adjustment for positions:	525 078	469 376	55 702	11,87
Depreciation	119 134	153 253	(34 119)	(22,26)
Interest and shares in profits	(1 428)	2 329	(3 757)	-
(Profit)/loss on exchange difference rates	124	(264)	388	-
(Profit)/loss on investing activities	(23 816)	(812)	(23 004)	(2 833,00)
(Increase)/decrease in receivables	(1 021 512)	(134 838)	(886 674)	(657,58)
(Increase)/decrease in inventory	(6 382)	36 482	(42 864)	-
Increase / (decrease) in liabilities excluding loans and advances	225 541	215	225 326	104 802,79
Change in provisions, accruals and employee benefits	1 246 268	653 421	592 847	90,73
Income paid tax	15 194	21 368	(6 174)	(28,89)
Expenses for the purchase of CO ₂ emission allowances	(639 159)	(528 438)	(110 721)	(20,95)
Impairment allowance for property, plant and equipment and mining assets	620 170	281 879	338 291	120,01
Others	(9 056)	(15 219)	6 163	40,50
Net cash on operating activities	6 555	166 321	(159 766)	(96,06)
<i>Cash flows on investment activities</i>				
Sale of tangible and intangible assets	31 815	6 520	25 295	387,96
Acquisition of tangible and intangible assets	(409 720)	(63 482)	(346 238)	(545,41)
Expenses and income related to other financial assets	(13 321)	(711)	(12 610)	(1 773,56)
Received dividends	46	71	(25)	(35,21)
Other	(49)	(17)	(32)	(188,24)
Net cash on investment activities	(391 229)	(57 619)	(333 610)	(578,99)
<i>Cash flows on financial activities</i>				
Repayment of financial leasing liabilities	(290)	(1 310)	1 020	77,86
Credits, loans and debt stocks income	492 639	9 376	483 263	5 154,26
Repayment of credits, loan and debt stocks	(95 126)	(30 914)	(64 212)	(207,71)
Paid interest	(3 741)	(2 627)	(1 114)	(42,41)

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Net cash on financial activities	393 482	(25 475)	418 957	-
Increase / (decrease) in net cash and its equivalents	8 808	83 227	(74 419)	(89,42)
Cash opening balance	497 861	414 634	83 227	20,07
Closing cash balance	506 669	497 861	8 808	1,77

Financial indexes

The net loss recorded in 2021 caused all profitability ratios to have negative values.

The total debt ratio at the end of 2021 increased, which means that the level of reserves and liabilities increased compared to the balance sheet total.

The value of the current liquidity ratio informs about the degree of coverage of short-term liabilities and provisions, including provisions related to carbon dioxide emission allowances by current assets and the value of acquired carbon dioxide emission allowances. The value of the 1.02 ratio remained slightly higher than in the previous year, which means that at the end of 2021 the liquidity situation is similar to the situation at the end of 2020.

Table 10: Indexes

		2021	2020	change	% dynamics
ROE	%	(60,55)	(23,85)	(36,70)	153,88
ROA	%	(9,58)	(7,87)	(1,71)	21,73
Net sales profitability	%	(12,95)	(10,26)	(2,69)	26,22
General debt index	x times	0,84	0,67	0,17	25,37
Current liquidity index	x times	1,02	0,96	0,06	6,25

5.3. Significant off-balance sheet items

The description of significant off-balance sheet items is presented in Note 33 and 34 of the consolidated financial statements of the Group for 2021.

5.4. Expected financial situation

The consolidated financial statements have been prepared on the assumption that the Group will continue as a going concern in the foreseeable future. Taking into account, in particular, the increased reporting standards of public interest entities and the protection of stakeholders, the Management Board of ZE PAK SA (the "Management Board") notes that:

- In 2021, the Group incurred a net loss of PLN 317,404 thousand. On the amount of loss, the impact of PLN 633,307 thousand, had impairment losses on non-current assets, mining assets and inventories. The write-offs were non-cash. On the other hand, the result at the EBITDA level in 2021 amounted to PLN 243,079 thousand. The amount of one-off events in the form of impairment losses on assets and inventories was influenced by the change in the base scenario in terms of shortening the expected life of mining assets and the activity of coal-based generation assets. The current scenario assumed the operation of coal-fired units 1, 2 and 5 at Elektrownia Pątnów until 2024, while the 474 MW unit (former Elektrownia Pątnów II) was to be operated no longer than until 2030. Currently, the base scenario is the operation of all the Group's coal units until the end of 2024, i.e. until these assets are supported in the form of the capacity market mechanism. The Company perceives the current market situation in terms of the relationship between energy prices and CO₂ emission allowances as highly volatile and risky, and the dynamics of these changes has become even stronger in the last year. Coal mining and production after 2024 will have to involve a number of investments, including enabling further exploitation of Tomisławice open pit and adjusting the 474 MW unit to environmental requirements. The Company sees the possibility of incurring such investments and extending the operation of coal assets after 2024, but it definitely makes such measures conditional on the introduction of a support mechanism after 2024, which would reduce the risk of operations of the Group's generation assets to be discontinued. Due to the fact that currently no such mechanism exists, after 2024, following the principle of reasonable expectations, the Company shortened the expected life of its coal mining and production assets. At the same time, the Company does not rule out a change in the expected lifetime of coal assets in the event of establishing a support mechanism after 2024 in a satisfactory shape.

2. As at December 31, 2021, the Group's current assets exceed the value of short-term liabilities, including bank loans, by PLN 45 123 thousand. The company draws attention to this fact, because in subsequent periodic reports in 2021, the value of short-term liabilities was higher than the value of current assets. During the year, the liquidity situation gradually improved and at the end of the year, there was a surplus of current assets over short-term liabilities.

The Management Board has analysed the cash flow forecasts in detail and confirms that the cash flow analysis indicates the possibility of generating sufficient positive cash flows for at least the next 12 months from the date of these financial statements.

5.5. Specification of factors affecting the current and future financial results

The Group's financial results, as an entity focused on the generation and sale of electricity produced on the open wholesale market, are fully dependent on the behaviour of other market participants who, to a greater or lesser extent, depending on their market share, affect the level of shaped prices. Market behaviours of participants in the wholesale energy market are in turn stimulated by legislative actions in the area of broadly understood energy policy, conducted both at the national and EU level as well as at the level of the global economy.

The energy sector is currently experiencing a number of changes, in the near future there are plenty of announcements that could have a significant impact on the shape and functioning of the broadly understood energy market. In this context, mention should be made of the regulatory package adopted in 2019 under the name 'Clean energy for all Europeans' (Winter Package), which fundamentally affect national legislation in the energy sector. The entry into force of these regulations, in particular Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market in electricity (the so-called "Market Regulation") is very important from the point of view of the Polish capacity market. The provisions of the above-mentioned Market Regulation exclude from support installations emitting above 550g CO₂ / kWh while producing electricity from fossil fuels, which started production before the entry into force of the Market Regulation. From 1 July 2025, such installations will not be able to receive support under capacity mechanisms. As part of the adjustment of Polish law to EU guidelines, generating units that do not meet the emission limit starting from the main capacity market auction for the 2026 supply period have been excluded from participation in capacity market auctions. However, generating units that started commercial operations before July 4, 2019 and do not meet the emission limit will have the opportunity to participate in the secondary market, allowing for reservations for multi-year contracts concluded by the end of 2019. When assessing the market and regulatory environment of the producer and seller of electricity, one should take into account several phenomena particularly significant in the last year, the effects of which may also affect the Group's results in the future:

- increases in energy commodity prices as a long-term effect of the COVID19 pandemic,
- announcement of the "Fit for 55" guideline package and confirmation of the new EU reduction target for 2030, set in 2020, amounting to a 55% reduction in emissions compared to 1990,
- increase in power in the NPS in the RES segment, in particular an intensive increase in photovoltaic installations,
- auction on the capacity market for the year 2026 with the possibility of concluding long-term contracts,
- approval by the Council of Ministers of Poland's energy policy until 2040 (PEP2040), which defines the new shape of the target energy mix for Poland, which will require further adjustment works,
- work on the draft act amending the Act of May 20, 2016 on investments in wind farms (the so-called Distance Act),
- Poland's participation in interconnection projects aimed at building a common European electricity market,
- Polish Plan for the Implementation of Reforms on the Balancing Market, which are to be introduced, inter alia, by the "scarcity pricing" mechanism as well as major changes in system services and settlements on the balancing market, including the implementation works on the 2nd stage of the balancing market reform, ongoing in 2021 and continued in 2022, which are likely to become effective in 2023.
- work of the European Commission on delegated acts to the taxonomy, including the recognition of natural gas as a sustainable fuel.

ZE PAK SA generates most of its revenues from the production and sale of electricity, therefore the price for which it sells electricity is very important for the results of its operations. When analysing the current market trends in the context of the level of electricity prices on wholesale energy markets, one should first of all look at the prices quoted on the Polish Power Exchange (TGE). The factors significantly affecting the level of stock exchange quotations on the SPOT market (DAM, IAM of TGE) have remained the same for years, among them the most important are: the size of wind generation, the state of the reserve in the PPS system, the amount of transmission capacity made available for cross-border exchange. In the last two years, another factor is becoming more important, namely solar conditions, which, due to the significant and dynamic increase in the installed capacity in photovoltaic technology, affect energy prices, especially in the spring and summer period.

The electricity trading volume on TGE in 2021 was 225,174,640 MWh, which is a 7.4% decrease compared to 2020. The weighted average price of the "BASE" contract (the so-called "band", i.e. delivery of a fixed amount of energy in a specific time unit) on the TGE's Day-Ahead Market was in 2021 at the level of PLN 401.17 / MWh, which means an increase by 191.06 PLN / MWh, i.e. by almost 91% compared to the corresponding price from 2020. On the other hand, on the "CFIM" futures market, the weighted average price of an annual contract with band delivery in 2022 (BASE_Y-22) amounted to PLN 384.16 / MWh throughout 2021, which means an increase by PLN 152.29 / MWh, i.e. by 65 % in relation to the price quoted in the BASE_Y-21 contract in 2020. The significant increase in the average annual price of the BASE_Y-22 annual contract may be related to the unstable situation on the gas market in Europe, and thus the strong increases in gas prices. Moreover, jumps in prices of CO₂ emission allowances contributed to jumps in increases in electricity prices quoted on the futures market and on the spot market (DAM & IAM) of TGE SA.

The price of CO₂ emission allowances ("EUA"), which the issuer is obliged to redeem in the amount corresponding to the amount of CO₂ emissions to the atmosphere, is one of the factors that most determines the competitiveness of an energy company dealing in the production of electricity based on brown coal, next to the costs of coal and auxiliary fuels. At present, the Company receives a very small amount of free CO₂ emission allowances resulting from the allocation for heat production, therefore, virtually all of the allowances needed by the Group must be purchased on the market. The level of prices at which the Group acquires CO₂ emission allowances had in previous years and will continue to be of significant importance for the future financial results of the Group, as long as the Group will be producing the electricity from lignite. It should be rationally assumed that in view of the plans to phase out coal production, this impact should decrease in the long term. The CO₂ emission allowances market is the market that is currently most exposed to price changes caused by political decisions resulting from the directions of the debate on the shape of the reform of the European Emissions Trading System (EU ETS), which has been going on for several years, as well as the ongoing transformation of the economy. A factor stimulating a further increase in prices on the carbon market may be the new EU reduction target for 2030 announced in 2020, amounting to a 55% reduction in emissions compared to 1990, as well as the long-term concept of an EU zero-emission economy by 2050. These assumptions were included in the "Fit for 55" package of proposals announced by the European Commission in order to adjust EU policies. The reporting year 2021 was the year in which the EU economy was catching up with a pandemic, which turned into an increase in the demand for emission allowances in the industry sector. In May, EUA allowance prices broke the psychological level of EUR 50 and reached a record EUR 56.5. In December, they reached the level of around EUR 85, ending the year with a slight decrease of around EUR 80. Any changes in the regulatory environment, which are assumed to increase the cost of CO₂ emissions, will increase the cost of energy production by coal generating units owned by ZE PAK SA. Due to the high level of variable costs of the operation of coal units, mainly caused by the costs of CO₂ emissions, the revenues generated by the coal blocks do not always cover the costs, which in turn means that there are periods in which production ceases to be economically justified. In the context of the carbon market, the information from the beginning of this year 2022 about the votes from the European Commission about the need to reform the EU ETS system in order to ensure greater stabilization of prices and to limit speculation on the prices of this instrument is important.

Another factor that will undoubtedly have an impact on the Group's future financial results is the share of the Group's generation units in the capacity market. In 2018 and 2019, the generation units belonging to the Group participated in the main auctions on the Capacity Market conducted by Polskie Sieci Elektroenergetyczne SA, in accordance with the rules set out in the Act of December 8, 2017 on the capacity market, concluding power contracts for the supply years 2021-2024. As a result of the auction, the Group concluded one-year capacity agreements for the years 2021-2024 for existing coal-fired units participating in the auction. Moreover, as a result of the auction conducted in 2019, ZE PAK SA concluded a capacity contract for 17 years of supply, contracting 40 MW of the capacity obligation at a price of PLN 259.87 / kW / year for a new unit of the generation capacity market, i.e. a modernized biomass combustion installation in Konin power plant, which was previously used to produce energy with the use of lignite. In auctions held in previous years, ZE PAK SA contracted the capacity obligation in one-year contracts at the level of 587 MW for 2021 - at a price of PLN 240.32 / kW / year, 587 MW for 2022 - at a price of PLN 198.00 / kW / year, 587 MW for 2023 - at a price of PLN 202.99 / kW / year, 588 MW for 2024 at a price of PLN 259.87 / kW / year. In 2021, another auction was held with the participation of the ZE PAK SA Group, conducted on the basis of the amended provisions of the Capacity Market Act, adjusting it to EU requirements. As a result of the auction procedure, a subsidiary of ZE PAK SA - PAK CCGT sp. z o.o. concluded a capacity contract for 17 years of supply, contracting 493 MW of the capacity obligation at the base price of PLN 400.39 / kW / year, starting from 2026. In addition to the planned revenues from the capacity contracted on the primary auction market, the Company has the possibility to generate additional revenues from transactions concluded on the secondary capacity market. At the beginning of 2021, when the capacity market entered the operational phase, the secondary market was launched in practice, which enables the Company to take over capacity obligations from other entities in terms of free, uncontracted capacity. With regard to issues related to the capacity market, it should also be noted that the capacity market is not only additional payments for entities participating in it, but also specific obligations and financial penalties for those who fail to perform or improperly perform the contracted capacity obligation in the contract.

The announced future shape of Poland's energy mix is of great importance to the framework of the Group's operations. On February 2, 2021, the "Poland's Energy Policy until 2040" (PEP2040) was approved, on which it has been worked since 2018. The document provides, inter alia, gradual reduction of electricity production from coal sources. It should be mentioned that during the works on PEP2040, work was carried out on the National Energy and Climate Plan (NECP) until 2030, which Poland submitted to the European Commission on December 30, 2019. This document provides for an increase in the target for the share of renewable energy sources and a reduction in the share of coal in the production of electricity. Bearing in mind the current "green" directions of European policy, and in particular the decision of the EU Member States to increase the emission reduction target by 2030 from 40% to 55%, the announcement of the "Fit for 55" package of applications in order to adapt EU policies to the reduction targets and taking into account the background of the events in 2020 and 2021, including the COVID19 pandemic and the assumptions of the Reconstruction Fund after the pandemic, it should be expected that the provisions of the NECP will be revised. Referring the Group's generation activities to the opportunities and threats to financial results in the context of the provisions of PEP2040 and NECP until 2030, which documents assume an increase in the share of renewable energy sources and a reduction in the share of coal in electricity production, it should be mentioned that the Group, in accordance with its strategy, intends to focus on development of low-emission and neutral-emission generation sources as well as the production and use of "green" hydrogen, which corresponds to the directions set at the national and EU level. Last year, this direction was consistently implemented through investments in projects in the renewable energy sector.

From the point of view of new investments in renewable energy sources, the amendments to the provisions of the Act on renewable energy sources introduced in 2021, such as the extension of system support from 2039 to 2047 and the change in the rules for settling the balance in three-year periods, and not after the end of the overall support period, i.e. a maximum of 15 years.

An important impulse for the Company's investment decisions in other renewable energy sources may also be the amendment to the provisions of the so-called "Distance Act", the adoption of which in recent years has largely limited the development of new wind farm projects. The announcements of changes suggest that decisions regarding the location of wind farms will depend to a greater extent on the decisions of the authorities and local communities.

In the context of the investment plans of ZE PAK Group, including the planned investment in the construction of the CCGT unit at Adamów Power Plant and obtaining financing for this project, the amendments to the taxonomy delegated act adopted by the European Commission at the beginning of 2022, on which intensified works were carried out in 2021, are of great importance. The adopted regulations recognize both gas projects and nuclear energy as sustainable, provided that detailed guidelines contained in the draft regulation are taken into account, which have yet to be approved by the Member States. The Group is taking steps related to the plans for both the gas project at Adamów Power Plant and the potential nuclear project at Pątnów Power Plant after the end of the life of the coal assets.

Among the factors that may have an impact on the future financial results of ZE PAK SA, there are also opportunities that have arisen for the participants of the wholesale energy market in connection with the development of the single electricity market. The launch on November 19, 2019 by TGE SA of quotations on the Intra-Day Market in the XBID model gave participants of the wholesale electricity market new commercial opportunities for the sale of the generated volumes of electricity. It is worth emphasizing that the turnover on the intraday market in the XBID model (SIDC - Single Intraday Coupling) is much higher than it was when the quotations on this market were conducted only in the domestic formula. Thanks to this mechanism, the Company is able to purchase or sell energy two hours before delivery, which allows it to manage its electricity and production contracts more flexibly.

Since 2019, intensive work has been underway on the reform of the balancing market, adjusting the market to the requirements of European law. In May 2020, the document Polish Plan for the Implementation of Reforms on the Balancing Market was adopted, which was a milestone in the work on the reform of the balancing market, which, as a result of adopting the provisions of the plan, will be carried out in two stages, and ultimately is to introduce, inter alia, scarcity pricing mechanism as well as major changes in system services and settlements on the balancing market. The changes introduced on the balancing market as part of the first stage include enabling active participation in the balancing market for DSR and units other than JWCD, including wind farms and PV, as well as the share of storage facilities / pumped storage power plants (ESP) in the balancing market. The reform also enabled market participants to update their intraday balancing offers from January 1, 2021, which allows the company to participate more actively in the technical market. At the present moment, it is difficult to determine the degree of impact of the changes introduced in the market reform balancing the future financial results of the Company. However, the impact of the implementation of the reforms announced under Stage II, i.e. the introduction of the scarcity pricing mechanism, changes in system services and significant changes in settlements in the balancing market, may turn out to be particularly important for the Company's financial results, which should help alleviate the problem of "missing money" for coal blocks of ZE PAK SA. However, due to a number of external factors, the implementation schedule of the 2nd stage of the reform, which was initially to be implemented for operational application on January 1, 2022, will be postponed by a year and the estimated implementation

of all solutions of the 2nd stage may not take place until January 2023. From the second stage of the reform, as of January 1, 2022, a solution was implemented that changed the rules for determining the settlement price for the sale and purchase of energy from the balancing market, depending on the contracting status of the National Power System. However, also at this point it is difficult to determine the degree of impact of this change on the Company's future financial results.

An important topic for the Company accompanying the implementation of the first stage of changes to the balancing market was the entry into force of the so-called systemic regulation, which introduced a new methodology for determining the CWD and CWO prices, regulating the variable cost issue for lignite-fired units in a different way than before, which in consequence of the so-called forced reductions can often lead to the purchase of energy from the Balancing Market at prices higher than the contracts concluded on the POLPX, which is caused by the difference in prices of CO2 emission allowances between the time of concluding the transaction on the POLPX and the time of performing the contract. Such a settlement, in the event of a significant number of contract reductions by TSO, may adversely affect the financial results of energy producers.

5.6. Unusual factors and events affecting the financial results

The verification of strategic assumptions and the decision to shorten the operation of coal-fired units and the extraction of coal contributed to the identification of one-off events in the Group.

The current scenario assumed the operation of coal-fired units 1, 2 and 5 at Pałnów power plant until 2024, while the 474 MW unit (former Pałnów II Power Plant) was to be operated no longer than until 2030. Currently, the base scenario is the operation of all the Group's coal units until the end of 2024, i.e. until these assets are supported in the form of the capacity market mechanism. The company perceives the current market situation in terms of the relationship between energy prices and CO2 emission allowances as highly volatile and risky, and the dynamics of these changes has increased even more in the last year. Coal mining and production after 2024 will have to involve a number of investments, including enabling further exploitation of the Tomisławice open pit and adjusting the 474 MW unit to environmental requirements. The company sees the possibility of making such investments and extending the operation of coal assets after 2024, but it definitely makes such measures conditional on the introduction of a support mechanism after 2024, which would reduce the risk of operations of the Group's generation assets to be discontinued. Due to the fact that currently no such mechanism exists, after 2024 the Group, guided by the principle of reasonable expectations, shortened the expected life of its coal mining and generation assets. At the same time, the Group does not rule out a change in the expected lifetime of coal assets in the event that a satisfactory form of the support mechanism is established after 2024.

The change in the baseline scenario of the exploitation period of coal mining and production assets had the greatest impact on the results of tests for impairment of property, plant and equipment. With regard to the consolidated financial statements of ZE PAK SA Capital Group for 2021, the tests for the impairment of assets showed the legitimacy of creating an impairment loss for property, plant and equipment of CGU Elektrownia Pałnów. During the preparation of the financial statements, other one-off events were also identified that were related to the change in the base scenario for the exploitation of coal assets. The most important ones include: other impairment write-downs on fixed assets and fixed assets under construction, impairment write-downs on mining assets, impairment write-downs on materials, changes in the amount of provisions for reclamation and adjustments in the scope of deferred income tax.

The above-mentioned events resulted in a decrease in the Group's EBITDA by approximately PLN 26 million, and in the scope of the consolidated net result by approximately PLN 550 million.

6. MANAGEMENT OF FINANCIAL ASSETS

6.1. Evaluation of financial assets management

The Group manages its current financial resources in a flexible manner by using cash liquidity analysis models and planning future cash flows on the basis of short-term and long-term financial forecasts developed periodically. By using the aforementioned tools, the Group's Companies execute current monitoring and analyses of the maturity dates of receivables and liabilities as well as adjust the deadlines and bank account balances to the amounts of cash flows. The excess cash is managed by investing in safe instruments of the financial market, which mainly include bank deposits. The period of increased demand for cash is usually the turn of the first and second quarters. This is due to the fact that the Company secures the volume of CO2 emission allowances on the forward market and, with the approaching redemption date (end of April each year), requires cash to purchase them. In order to ensure flexibility in periods of increased demand for cash, overdraft facilities are used.

6.2. Evaluation of investment plan execution

The Group has its own functioning strategy and an investment plan adjusted to it. The investment plans take into consideration the current conditions in legislation and law, as well as economy and technology. The adopted manner of execution of the planned investments is mainly based on the use of resources obtained from current operations as well as external financing. During financing planning, the Group's Companies take into consideration a series of existing or future factors which can significantly affect the executed program. The projected financing structure of particular investment plans also takes into consideration the levels of a series of financial indexes, such as the debt or liquidity index, in a way which allows obtaining their optimal levels. In the opinion of the ZE PAK SA Capital Group, the currently implemented and planned investment projects focused around the structure of PAK - PCE sp. z o.o. with their scale and scope, exceed the possibilities of financing them by ZE PAK SA Group. Therefore, the Company analysed possible scenarios for the further financing of an extensive investment plan related to the development of projects in the field of renewable energy sources and the production and use of "green" hydrogen, and decided to select the scenario involving the involvement of a partner with a stronger capital position than the Group in the projects. On December 20, 2021, an agreement was signed for the sale of a majority stake in PAK - PCE sp. z o.o. between the Company and Cyfrowy Polsat SA. Also in the case of other projects developed by the Group, cooperation with external partners is expected, an example is the construction of offshore wind farms developed jointly with Ørsted or cooperation in the field of the SMR reactor project developed jointly with Synthos. The assumptions made in the field of investments are feasible with the use of possessed and potential resources. However, it should be emphasized that the factors having the most significant impact on the investment program are monitored all the time, and in the event of significant changes to one or more factors, the Group companies make specific adjustments or significant changes to the implemented strategy.

7. SIGNIFICANT FACTORS AND DEVELOPMENT PROSPECTS

Directional activities designated by the Group's strategy

Directions of the strategy of ZE PAK SA Capital Group are determined based on a systematic analysis of a wide range of economic and technological factors, such as: price trends of conventional fuels, prices of CO2 emission allowances, mechanisms supporting various technologies of electricity and heat generation.

ZE PAK SA Group directs its attention to the regulatory environment and technological progress, for broadly defined areas related to the Group's activity. The aim of such a view is to optimize investment plans, directional - in terms of the diversification of the fuel base and production source technologies, as well as detailed - referring to improvements in existing generating units and adjustment of production equipment work schedules. The Group strives to develop a long-term model of functioning in conditions of visible unfavourable trends for high-emission energy in adopted policies at the EU level, which is also reflected in the forecasts of changes in the energy mix of Poland.

The broadly understood legislative framework determined by EU and Polish law directly affects the Group's production potential. The technically exploited production facilities, for which the analyses do not demonstrate the expediency of modernization, in accordance with the decisions taken, will be gradually withdrawn. The way of exploitation during the transitional period must be strictly adjusted to their capabilities, through the selection of a derogation dedicated in environmental law. In addition, the optimal use of the available fuel base will be taken into account.

The company is aware of changes, especially those from the legislative and legal area that take place in the environment. Legal regulations aiming at reduction of CO2, other gases (SO2, NOX) and dust emissions as well as regulations concerning the renewable energy sector are important challenges for the Group companies. New environmental regulations resulting from the introduction of BAT conclusions (Best Available Technology) that entered into force in 2021 expand the catalogue of limited pollutants. It is noteworthy that through investment activities and proper renovation management on existing generating units and associated reduction equipment, the emission of produced electricity is successively being reduced.

The development directions adopted by the Group mean that the Group, on the one hand, gradually reduces the generation of energy in the process of lignite combustion until its final completion, on the other hand, it develops projects related to the production of energy from low-emission and neutral-emission sources, and intensifies activities aimed at generating and using "green" hydrogen.

Around PAK - PCE sp. z o.o., a structure of special purpose vehicles is being built successively, which is to be responsible for the activity in particular technologies of renewable energy sources. Thanks to the planned sale transaction to Cyfrowy Polsat Group of the majority stake in the structure of PAK - PCE sp. z o.o., it is planned to acquire a strong capital partner

that will be able to guarantee the implementation of a wide range of prospective investment projects in the area of renewable energy sources and the production and use of "green" hydrogen.

Special purpose vehicle PAK CCGT sp. z o.o. is to be responsible for the preparation and implementation of the gas and steam block construction project at the former Adamów coal-fired power plant. The project won the auction and thus received support in the form of a 17-year power contract.

As part of its transformation activities, the Group is also active in the area of offshore wind farm construction projects. It is also planned to use the assets at Pątnów Power Plant for the implementation of the SMR (Small Modular Reactor) technology, which is currently in the pre-commercial phase. Both projects are developed in cooperation with external partners.

Plans for the use of conventional power

The basic model of the coal segment operation assumes the use of currently exploited open pits and the lack of new investments in this area. This means that two deposits from the 3 currently exploited fields will soon be exhausted and closed, and only Tomisławice open pit will be exploited.

Currently, Pątnów Power Plant operates two modernized units 1 and 2 with a capacity of 222 MW each, a partially modernized unit 5 with a capacity of 200 MW and a modern unit 9 with supercritical parameters with a capacity of 474 MW (former Pątnów II power plant). Currently, the baseline scenario for the operation of coal-fired units at Pątnów power plant assumes their operation until the current support system in the form of the capacity market, i.e. until the end of 2024. However, the company does not exclude the possibility that it will be able to incur appropriate capital expenditures and extend the operation of the most effective unit with a capacity of 474 MW if the support system is implemented after 2024, which would ensure the economic efficiency of such activity. The remaining blocks of Pątnów power plant were decommissioned - unit 4 with a capacity of 200 MW was shut down at the end of 2019, while units 3 and 6 with a capacity of 200 MW each were shut down at the end of June 2020.

Adamów Power Plant was shut down at the beginning of January 2018. Currently, demolition works are underway on its premises and the area is being prepared for the new investment that the gas-steam unit is going to be. Documents required by law were prepared for regulatory authorities and the possibility of the functioning of auxiliary economies to the necessary extent was secured. As a result of the capacity auction organized in 2021, PAK CCGT sp. z o.o. concluded a capacity agreement for 17 years of supply, contracting 493 MW of capacity obligation for this unit of the generation capacity market, starting from 2026.

After the end of operation of the coal units at the Pątnów Power Plant, it will be possible to use the existing infrastructure and prepare this area for a potential future project related to the technology of small modular nuclear reactors (SMR). For this purpose, the Company established cooperation with an external partner, Synthos.

Plans related to the development of renewable Energy sources

Konin Power Plant currently produces electricity and heat using a 50 MW biomass-fired unit. An investment project has been implemented at Konin Power Plant, the purpose of which was to adapt coal-fired installations for biomass combustion. As a result, a new biomass source has been created with the expected power of 50 MW, i.e. a coal-fired boiler has been converted into a such that is dedicated to biomass combustion, in order to ultimately be a source producing electricity and securing heat production in emergency situations. The biomass block will also supply the electrolytic plant system, which in turn will enable the production of the so-called "green hydrogen".

As a result of the capacity auction organized in 2020, the Company contracted a capacity obligation for this generating asset for 17 years, starting from 2024. Thanks to the implementation of the described modernization, the available capacity increased to 100 MW and Konin Power Plant became the first power plant in the country whose power source has been changed from coal to biomass.

Areas of reclaimed opencasts PAK KWB Adamów and PAK KWB Konin - in line with the objectives of energy and climate policy and having the appropriate potential, the Company made a directional decision to use the areas previously used in mining activities to prepare them for investments in photovoltaic and wind technology. In Adamów region, in the reclaimed areas where lignite was once mined, the first 70 MWp solar farm was built, implemented by a special purpose vehicle. The farm was launched on October 27, 2021. On November 10, 2021 PAK - PCE Fotowoltaika sp. z o.o. obtained a license to generate electricity. The license was granted by the President of the ERO for the period from November 10, 2021 to December 31, 2040. Another large photovoltaic project, after obtaining all formal, legal and environmental approvals, will be a photovoltaic farm in the village of Przykona. The Group is also developing wind projects thanks to more flexible regulations regarding the location of wind turbines. In 2021, work began on the construction of a wind farm in Kazimierz Biskupi and in the town of Miłosław in the Greater Poland Voivodship. Projects in the field of renewable

sources as well as the production and use of "green" hydrogen will be developed in cooperation with Cyfrowy Polsat. On December 20, 2021, both companies signed a preliminary agreement providing for the sale of a majority stake in the structure created around PAK - PCE sp. z o.o.

The company has also taken steps to implement and develop wind farm projects in the maritime areas of the Republic of Poland. This project is also being developed in cooperation with an external partner, Ørsted, a world leader in offshore wind farms.

Using various support mechanisms for this type of investment available in the broadly understood regulatory environment, the Company is trying to obtain preferential financing in order to increase the economic efficiency of the planned investments.

The use of renewable Energy sources in the production of hydrogen as a new field in the Company's activity

Hydrogen will be produced in the electrolysis process, using electricity produced from renewable energy sources. In the first stage, the primary source of primary energy will be biomass, the transformation of which into electricity, in a dedicated installation, will supply the electrolysis plant. The implementation of this task will allow the production of the so-called "Green hydrogen". The first step towards building a hydrogen plant was the conclusion of a contract for the purchase of an electrolyser in the PEM technology, which, along with the necessary infrastructure, will be located on the premises of Konin power plant, and thanks to the modular construction of the plant and preparation of infrastructure, it will be possible to increase production capacity, depending on the demand for hydrogen. In the opinion of the Company, the importance of hydrogen in the low-emission economy model will increase. An area with significant potential is, for example, public transport, and the Company is currently working with partners interested in using hydrogen in this area. A mobile hydrogen storage facility has been ordered to enable the supply of hydrogen to the refuelling stations. At the end of 2021, work on the construction of a prototype of a hydrogen bus was also completed and bus tests began.

The scope and pace of implementation of the plans described above will largely depend on the pace of changes in the economic model towards emission neutrality. In the case of faster reduction of the economy's dependence on fossil fuels, opportunities for market exploitation of the potential of planned projects should appear faster. In the case of a slower decarbonisation path, the pace of investment intentions may depend on the availability of support mechanisms and preferential financing.

8. SPECIFICATION OF THE SHAREHOLDING STRUCTURE

8.1. Shareholding structure

As of December 31, 2021, the Company's share capital amounted PLN 101,647,094.00 and consisted of 50,823,547 shares with a nominal value of PLN 2.00 each.

The below table includes the specification of shareholders holding either directly or indirectly through subsidiaries, at least 5% of the total number of votes at the General Meeting of the Company according to information held by the Company based on the notifications of purchase / sale of the Company's shares as at the day of preparation of this report and as at 31 December 2021 and 31 December 2020.

*Table 11: Description of shareholders holding, either directly or indirectly through subsidiaries, at least 5% of the total number of votes at the Company's General Meeting as of the day of this statement**

Shareholder	Pcs			%		
	Number of shares and corresponding number of votes at the General Meeting			Shares in the total number of shares/votes		
	28.04.2022	31.12.2021	31.12.2020	28.04.2022	31.12.2021	31.12.2020
Zygmunt Solorz (indirectly) through:	33 523 911	33 523 911	33 523 911	65,96	65,96	65,96
– Argumenol Investment Company Limited	33 523 911	33 523 911	33 523 911	65,96	65,96	65,96
Nationale-Nederlanden OFE	4 503 242	4 503 242	4 503 242	8,86	8,86	8,86
OFE PZU „Złota Jesień”	4 635 719	4 635 719	4 635 719	9,12	9,12	9,12

* According to information possessed by the Company based on the delivered notices of purchase / sale of shares

The structure of shareholders holding directly or indirectly through subsidiaries at least 5% of the total number of votes as at the date of submitting this annual report for 2021 does not differ from the corresponding list of the periodic report for 2020.

The Company has no knowledge of any agreements that may result in future changes in the proportions of shares held by the current shareholders.

8.2. Acquisition of own shares

The Company did not acquire own shares in 2021.

8.3. Shares of entities from ZE PAK SA Capital Group in the possession of supervising and managing persons

The below table presents the Company's shareholdings (direct and indirect), as well as shareholdings of the management personnel of its affiliates as of 31 December 2021 and as at the date of this report.

Table 12: The ownership of the Company's shares / stocks in entities related to the Company by the management as at December 31, 2021 and as at the date of the report.

Name and surname	ZE PAK SA shares		ZE PAK SA affiliate shares	
	quantity	nominal value	quantity	nominal value
Piotr Woźny	0	0	0	0
Zygmunt Artwik	0	0	0	0
Maciej Nietopiel	0	0	0	0
Andrzej Janiszowski	0	0	0	0
Katarzyna Sobierajska	0	0	0	0

The below table presents the Company's shareholdings (direct and indirect), as well as shareholdings of the supervising personnel of its affiliates as of 31 December 2021 and as at the date of this report.

Table 13: The ownership of the Company's shares / stocks in entities related to the Company by the supervising personnel as at December 31, 2021 and as at the date of the report.

Name and surname	ZE PAK SA shares		ZE PAK SA affiliate shares	
	quantity	nominal value	quantity	nominal value
Zygmunt Solorz	0	0	0	0
Wiesław Walendziak	0	0	0	0
Tomasz Szelaż	0	0	0	0
Henryk Sobierajski	0	0	0	0
Leszek Wysocki	0	0	0	0
Sławomir Zakrzewski	0	0	0	0
Grzegorz Krystek	0	0	0	0
Maciej Stec	0	0	0	0
Alojzy Z. Nowak	0	0	0	0
Jarosław Grzesiak	0	0	0	0
Tobiasz Solorz	0	0	0	0
Piotr Żak	0	0	0	0

8.4. Control of employee share option plan

The Company does not have an employee share program, therefore there is no control system of the employee share program in the Company.

9. DECLARATION OF COMPLIANCE WITH THE CORPORATE GOVERNANCE RULES

Declaration of compliance with the corporate governance rules is presented in accordance with § 70 item 6 point 5) of the Resolution of the Minister of Finances of March, 29, 2018 on the current and periodical information provided by

issuers of stocks as well as conditions for recognizing as equivalent information required by the laws of a non-member state.

9.1. Set of corporate governance rules applied

From January 1, 2016 to June 30, 2021, ZE PAK SA was subject to the rules and recommendations contained in the document Best Practices of WSE Listed Companies 2016 ("DPSN 2016"), adopted by the Resolution of the WSE Supervisory Board of October 13, 2015. The rules described in the Best Practices entered into force on January 1, 2016.

From 1 July 2021, ZE PAK SA is subject to a new set of corporate governance rules for companies listed on the WSE Main Market - Best Practices of WSE Listed Companies 2021 ("DPSN 2021"), adopted by Resolution No. 13/1834/2021 of the Stock Exchange Council of March 29, 2021.

The Management Board of the Company, within the scope of competences conferred upon it by the Statute and generally binding legal regulations, exercises due diligence in order to ensure the Company's compliance with the widest possible range of Best Practices. The number and scope of principles that the Company has not complied with in 2021 are described in detail in the item below. The Management Board of the Company makes special efforts to ensure that the Company's information policy towards individual as well as institutional investors, being the implementation of the guidelines contained in the Good Practices, was in line with their expectations. Furthermore, for reasons beyond the Company's control, not all rules contained in Good Practices are applied.

The collection of Best Practices for both 2016 and 2021 is published on the website of the Warsaw Stock Exchange at the following addresses:

DPSN 2016 - https://www.gpw.pl/pub/GPW/files/PDF/GPW_1015_17_DOBRE_PRAKTYKI_v2.pdf

DPSN 2021 - https://www.gpw.pl/pub/GPW/files/PDF/dobre_praktyki/DPSN21_BROSZURA.pdf

Due to the fact that changes in the Best Practice document occurred in the reporting period and in accordance with the principles contained therein, the Company published information both on the state of application by the Company of the principles and recommendations contained in DPSN 2016 and on the state of application by the Company of the principles contained in DPSN 2021. Below are links to this information:

- Information on the state of application by the Company of the principles and recommendations contained in DPSN 2016 - (https://ri.zepak.com.pl/upload/files/PL_GPW_dobre_praktyki_ZE_PAK.pdf).
- Information on the state of application by the Company of the principles contained in DPSN - https://ri.zepak.com.pl/upload/files/2021_EN_GPW_dobre_praktyki_ZEPAK.pdf

9.2. Set of rules (DPSN 2016) which Company has not complied with

The corporate governance rules that the Company did not meet in the course of its activities in 2021 in the period from January 1, 2021 to June 30, 2021 are listed below, along with an explanation of the Company's position in each specified exception.

Recommendation IV.R.2. DPSN 2016

If justified by the structure of shareholders or expectations of shareholders notified to the company, and if the company is in a position to provide the technical infrastructure necessary for a general meeting to proceed efficiently using electronic communication means, the company should enable its shareholders to participate in a general meeting using such means, in particular through:

- 1) real-life broadcast of the general meeting;
- 2) real-time bilateral communication where shareholders may take the floor during a general meeting from a location other than the general meeting;
- 3) exercise of the right to vote during a general meeting either in person or through a plenipotentiary.

Reasons for non-compliance with the recommendation IV.R.2. Best Practice:

The company provides real-time broadcast of the general meeting, however according to the Company's assessment, current shareholders structure does not justify real-time bilateral communication where shareholders may take the floor during a general meeting from a location other than the general meeting. Exercise of the right to vote during a general meeting either in person or through a plenipotentiary is a usual practice on general meeting of the Company. According to the Company's assessment, not in full use of above mentioned recommendation does not adversely affect the achievement of the objective described in the section IV of the code of best practices.

9.3. Set of rules (DPSN 2021) which Company has not applied with

The corporate governance rules that the Company failed to comply with in its operations in 2021 in the period from July 1, 2021 to December 31, 2021 are listed below, along with an explanation of the Company's position in each of the exceptions specified.

Principle 1.4.2. DPSN 2021

ESG information concerning the strategy should among others present the equal pay index for employees, defined as the percentage difference between the average monthly pay (including bonuses, awards and other benefits) of women and men in the last year, and present information about actions taken to eliminate any pay gaps, including a presentation of related risks and the time horizon of the equality target.

Reasons for non-compliance with the principle 1.4.2.

Due to the specific nature of the activity of the Company operating in the heavy industry segment, men (in the production area) have a decisive advantage in employment, therefore the Company does not keep such statistics. However, the remuneration in the Company is adjusted to the level of education and competences as well as the position held, and in no way depends on the gender or age of the employee.

Principle 2.1. DPSN 2021

The Company should have in place a diversity policy applicable to the management board and the supervisory board, approved by the supervisory board and the general meeting, respectively. The diversity policy defines diversity goals and criteria, among others including gender, education, expertise, age, professional experience, and specifies the target dates and the monitoring systems for such goals. With regard to gender diversity of corporate bodies, the participation of the minority group in each body should be at least 30%.

Reasons for non-compliance with the principle 2.1.

The company has not developed a diversity policy with regard to the management board and supervisory board. In line with the standards prevailing in the Company, when selecting the management and supervisory staff, objective criteria such as knowledge, experience, competences and skills necessary to perform the entrusted functions are of decisive importance. In the opinion of the Company, the above-mentioned criteria may ensure effective and efficient functioning of the Company and implementation of the adopted strategy.

Principle 2.2. DPSN 2021

Decisions to elect members of the management board or the supervisory board of companies should ensure that the composition of those bodies is diverse by appointing persons ensuring diversity, among others in order to achieve the target minimum participation of the minority group of at least 30% according to the goals of the established diversity policy referred to in principle 2.1.

Reasons for non-compliance with the principle 2.2.

Persons making decisions on the selection of members of the management board and supervisory board ensure the versatility of these bodies, guided by the current needs of the Company, which are expressed by taking into account the relevant professional experience, competences and education of the candidates, which are necessary to perform the functions entrusted to them. The rule is not applied in the scope of maintaining the predefined indicator of 30% of the minimum minority share. In the opinion of the Company, adopting a fixed indicator of minority participation in the Company's bodies may lead to a situation where this criterion of belonging to a minority will have a decisive impact on the selection of a candidate at the expense of the most important criteria in the Company's opinion, such as appropriate professional experience, competences and education.

Principle 2.11.6. DPSN 2021

Annual report includes at least the information regarding the degree of implementation of the diversity policy applicable to the management board and the supervisory board, including the achievement of goals referred to in principle 2.1.

Reasons for non-compliance with the principle 2.11.6.

Due to the lack of a developed diversity policy and the explanation of non-application of rule 2.1., the report on the activities of the supervisory board will not contain information on the degree of implementation of the Company's diversity policy.

Principle 4.1. DPSN 2021

The Company should enable its shareholders to participate in a general meeting by means of electronic communication (e-meeting) if justified by the expectations of shareholders notified to the company, provided that the company is in a position to provide the technical infrastructure necessary for such general meeting to proceed.

Reasons for non-compliance with the principle 4.1.

The Company provides real-time broadcast of the general meeting, however, in the opinion of the Company, the current shareholding structure does not justify real-time bilateral communication, which would allow shareholders to express their views at the general meeting while staying in a place other than the place of the meeting. The possibility to exercise voting rights in person or by proxy is a regular practice during the general meeting of the Company's shareholders.

Principle 6.2. DPSN 2021

Incentive schemes should be constructed in a way necessary among others to tie the level of remuneration of members of the company's management board and key managers to the actual long-term standing of the company measured by its financial and non-financial results as well as long-term shareholder value creation, sustainable development and the company's stability.

Reasons for non-compliance with the principle 6.2.

Currently, there are no incentive schemes in place in the Company, but the Company initially assumes that if such a scheme is adopted, it will be in line with the principles of Best Practice.

Principle 6.3. DPSN 2021

If the Company's incentive schemes include a stock option programme for managers, the implementation of the stock option programme should depend on the beneficiaries' achievement, over a period of at least three years, of predefined, realistic financial and non-financial targets and sustainable development goals adequate to the company, and the share price or option exercise price for the beneficiaries cannot differ from the value of the shares at the time when such programme was approved.

Reasons for non-compliance with the principle 6.3.

Currently, the Company does not have any incentive schemes based on options or other instruments related to the Company's shares, however, the Company initially assumes that if such a scheme is adopted, it will be in line with the principles of Best Practices.

9.4. Description of the main characteristics of internal control and risk management systems in relation to the process of financial statement and consolidated financial statement development

The process of development of the Company's financial statements as well as the Capital Group's consolidated financial statements takes place with the use of internal control and risk management mechanisms, such as: Company's internal procedures, management mechanisms of IT systems used for registration of economic activities and development of financial statements, as well as protection mechanisms of data and systems, principles of supervision over preparation of financial statements, principles of verification and assessment of statements, the internal audit and other control elements.

The development of the Company's financial statements as well as the Group's consolidated financial statements is executed in an orderly manner, pursuant to the organizational structure of the Company and Group. The management accounting tools and IT systems implemented in the Company and Group for the purpose of registration of economic events in books of account provide the basis for the evaluation that the Company's financial statements and the Group's consolidated financial statements reliably and clearly present the Company's and Group's financial and economic situation.

The basic regulations in the scope of development of financial statements include: the Company's accounting policy in accordance with the Accounting Act of 29 September 1994, International Financial Reporting Standards ("IFRS"), approved by the European Union, the procedure of closing the books of account of companies including the Capital Group, as well as the financial statement and consolidated financial statement development requirements imposed by the Warsaw Stock Exchange.

As of the date of development of this statement, the Company did not make a decision on keeping the books of account in the Group according to the International Financial Reporting Standards (“IFRS”). Therefore, the process of development of financial statements in the Group takes place in two stages. Firstly, all the companies of the Group develop their own individual statements pursuant to the Polish accounting standards. These statements are studied if they meet the conditions specified in the Accounting Act. Then, the companies transform the individual statements on the basis of the accounting policy, determined for the Group, in accordance with the International Financial Reporting Standards (“IFRS”) using the so-called sheets of transition into financial statements in the IFRS standards. Such prepared individual statements are the basis for development of the Group’s consolidated financial statement. Only in case of ZE PAK SA, there is an automatic process of importing data from SAP ERP system to SAP BPC consolidation system.

The Group’s consolidated statement is developed with the use of SAP BPC IT system. The separated central unit in the parent company (i.e. ZE PAK SA) merged with accounting departments in individual subsidiaries functions within the framework of the system. The consolidation process is started with the central unit opening access for companies to enter data into the system, the subsidiaries have the possibility of access to its back data at any time, but without the possibility of their adjustment. The central unit constantly monitors the entry of data by the companies, and then, after entering individual data, it starts the consolidation process. This process is based on defined business rules, which determine the content of consolidation adjustments. Furthermore, the consolidation process allows for entering manual adjustments by the central unit. The result of the consolidation process completion includes a complete package of the financial statement together with explanatory notes in Excel files, which is then exported to Word file after verification.

The Management Board is responsible for the Company’s internal control system and for its effectiveness in the process of development of financial statements and periodical reports developed and published in accordance with the Regulation of the Minister of Finance dated 29 March 2018 on current and periodic information provided by issuers of securities and conditions for recognizing as equivalent to the information required by the law of a non-member state.

The substantive supervision over the process of development of the Company’s and Group’s financial statements and periodical reports is executed by a member of the Management Board responsible for financial issues. The organisation of works related to the development of financial statements is the responsibility of the Director of Finance who, together with the Principal Accountant, develops the work schedule including in the development of statements.

The Company’s effective internal control and risk management systems related to the process of financial reporting is ensured thanks to the following aspects:

- development of procedures specifying the principles and division of responsibility in the development process of financial statements,
- specification of the scope of reporting pursuant to the mandatory provisions of the Accounting Act and International Financial Reporting Standards,
- implementation and execution of supervision over the use by the Capital Group’s companies of coherent accounting principles as well as
- semi-annual inspections and annual audits of the financial statements of ZE PAK SA and Capital Group by an independent statutory auditor.

The annual and semi-annual financial statements are subject to the independent auditing and inspection by the independent statutory auditor, who gives an opinion on the reliability and clarity of such a statement as well as correctness of books of account comprising the basis for the statement development.

The choice of a statutory auditor is made by the Supervisory Board, from a group of reputable auditing companies, which guarantee high service standards and the required independence.

The audits of financial statements are carried out:

- in accordance with the provisions of Chapter 7 of the Accounting Act of 29 September 1994,
- in accordance with the National Standards of Auditing within the meaning of the International Standards on Auditing, adopted by the resolution of the National Chamber of Statutory Auditors of 10 February 2015 as amended and the resolution of the KRBR of 7 July 2017.

In particular, the audits include verification of correctness of the accounting rules used by the Company and Group, verification of significant estimates, checking – in a random manner – of accounting evidence and records, which the amounts and information included in the financial statement result from, as well as comprehensive assessment of the financial statement.

The Company's and Group's financial results are regularly monitored during the financial year and are subject to periodical evaluation made by the Supervisory Board. During regular sessions of the Supervisory Board, the Company's Management Board provides information regarding the current financial situation of the Company and ZE PAK SA Group.

The Company's and Group's task is to develop a financial statement, including numerical data and wordy clarifications, which:

- reliably and clearly presents all information which are significant for the evaluation of the financial and economic situation for a given day, as well as the financial result for a given period,
- was properly developed in all the significant aspects, that is, in accordance with the accounting rules resulting from the International Financial Reporting Standards, as well as the related interpretations published in the form of the European Commission regulations, and according to the requirements of the Accounting Act and executive regulations issued on its basis, as well as on the basis of correctly kept books of account,
- is compliant with the regulations and provisions of the Company's Articles of Association, which affect the financial statement content.

The Company has the documentation, which describes its adopted accounting principles, specified in Article 10 of the Accounting Act. The applied principles of cost accounting, quotation of assets and liabilities as well as determination of the financial result are pursuant to the Accounting Act and the International Financial Reporting Standards.

The Management Board is responsible for the correct keeping of the Company's and Group's accounting. The Company keeps the books of account within the integrated SAP ERP IT system. This system, like the above SAP BPC consolidation system of statements, provides the division of competence, coherence of activity entries in the books, as well as control between the main book of account and the auxiliary books. The conducted registration allows determining the financial result, VAT tax, and other budget liabilities. The account registration ensures correctness and completeness of entries. The chronology of economic events is kept. Entries in the books of account reflect the actual state, and data are entered in a complete and correct manner, on the basis of accounting records qualified for entry. The continuity of entries and correctness of the applied procedures are ensured. The accounting records meet the requirements of the Accounting Act. The books of account are kept in the Company's registered office. There is a possibility to modify the system operation in order to ensure the adequacy of technical solutions to the changing accounting principles and legal standards. The system includes the documentation both in the part related to end users as well as in the technical part. The system's documentation is subject to periodical verification and updating. The Company implemented organisational and system solutions in the scope of ensuring proper use and protection of data access protection systems as well as hardware. The access to the financial registration system resources is limited with proper entitlements, which are provided for authorized employees only in the scope of their responsibilities and activities.

The internal audit, the aim of which is to carry out independent and objective assessment of the risk management and internal control systems, functions in the Company. The internal audit is conducted on the basis of the auditing regulations. The audit executes planned and temporary auditing tasks both in the parent company as well as in the Group's companies. The audit plans are developed on the basis of the risk analyses. The audit results are reported to the Company's Management Board. Information on the internal audit activity also constitutes the subject of analyses of the Audit Committee.

As part of the control activity, the periodical management reporting is subject to evaluation in terms of presented information, especially, in the context of the analysis of deviations from the assumptions adopted in the financial plans.

9.5. Shareholders with significant blocks of shares

The below table presents the shareholders with significant blocks of shares, in accordance with the Company's knowledge, based on the notifications submitted to the Company.

*Table 14: Shareholders owning directly or indirectly significant blocks of shares (over 5 %) in accordance with the information available to the Company based on the notifications of purchase / sale of the Company's shares, as at the date of this report**

<i>Shareholder</i>	<i>Number of shares</i>	<i>Percentage share in the share capital</i>	<i>Number of votes</i>	<i>Percentage share in the share capital</i>
Zygmunt Solorz (indirectly) through: Argumenol Investment Company Limited.	33 523 911	65.96%	33 523 911	65.96%
Nationale-Nederlanden Otworthy Fundusz Emerytalny	4 503 242	8.86%	4 503 242	8.86%
OFE PZU „Złota Jesień”	4 635 719	9.12%	4 635 719	9.12%

* according to the Company's knowledge on the basis of notifications submitted by the shareholders.

9.6. Holders of stock giving special control rights

As of 31 December 2021 and as of the date of development of this statement, the Company has not issued stocks giving special control rights.

9.7. Limitations in the execution of the right of ballot

According to the Company's Articles of Association and other internal documents of the Company as of 31 December 2021 and as of the date of development of this report, there are no limitations regarding the execution of the right of ballot.

9.8. Limitations regarding the transfer of right of ownership of stock

As of 31 December 2021 and as of the date of development of this statement, the Company does not include any limitations regarding the transfer of right of ownership to Company's stocks.

9.9. Principles for the appointment and dismissal of management and supervisory board

Management Board

The Management Board is comprised of 3 to 6 members appointed for joint term. The composition of the Management Board includes: President of the Board, Vice-Presidents, as well as other members of the Board. The number of Board members and their functions are specified by the Supervisory Council. The Management Board's term is five years. The Board's President, Vice-Presidents, as well as other members are appointed and dismissed by the Supervisory Council during a secret ballot. The Board's President, Vice-Presidents, as well as other members can also be dismissed or suspended in duties during the General Meeting.

The Board administers the Company's cases and represents the Company. The Board acts pursuant to the Board's Regulations which specifically determine the Board's action mode. The Regulations are established by the Board and approved by the Supervisory Council by way of a resolution.

The Board's resolutions are required for cases exceeding common management, which especially include:

- 1) resolution and changes in the organisational regulations which specify the organisation of the Company's entrepreneurship,
- 2) contracting credits and loans,
- 3) proxy establishment,
- 4) granting credit guarantees and sureties,
- 5) acquisition and disposal of property, right of perpetual usufruct or share in property or perpetual usufruct.
- 6) decisions in cases, the value of which exceeds zloty 500 000.00. The value of transactions expressed in foreign currencies is subject to conversion according to the average exchange rate of the National Bank of Poland (NBP) of the date of resolution passing.

The Board's resolutions are also required for cases in which the Board addresses the General Meeting and the Supervisory Board.

Supervisory Board

The Supervisory Board is comprised of 5 to 14 members appointed for joint term. The Board's term is five years. The members of the Supervisory Board are appointed and dismissed during the General Meeting. The General Meeting, prior to the appointment of the Board's members for a new term, specifies the number of members of the Board. The Board appoints the President, Secretary, Vice-President or, if deemed reasonable, two Vice-Presidents, among its members in a secret ballot.

The composition of the Board should include two members who fulfil the independence criteria projected for an independent Board member within the meaning of the Commission's Recommendation of 15 February 2005 regarding the role of non-executive directors or directors acting as members of supervisory Boards in stock exchange listed companies and the (supervisory) Board's committee (2005/162/EC) with consideration of Good Practices of the Warsaw Stock Exchange Listed Companies ("Independent Supervisory Board Members"). A candidate for the Independent Supervisory Board Members provides the Company, prior to his/her appointment as a Board member, with a written declaration on the fulfilment of the independence criteria.

In accordance with the Act of 11 May 2017 on statutory auditors, audit firms and public supervision (i.e. Journal of Laws, of 2020 item 1415, of 2021 item 1598.2106), the Company has the status of a public interest entity within the meaning of this Act, and therefore it should have an Audit Committee. The audit committee consists of at least 3 members. At least one member of the audit committee has the knowledge and skills in the field of accounting or auditing of financial statements. According to the said Act, the majority of the audit committee members, including its chairman, must meet the criteria of independence from a given public interest entity.

The Board supervises the Company's activities in all areas of its operation.

The Board's rights especially include:

- 1) approval of the Board's Regulations and giving opinion on the organisational regulations, which specify the organisation of the Company's entrepreneurship,
- 2) conclusion, termination, and amending agreements with the Board members, as well as establishment of the Board's remuneration principles and the remuneration amounts for the Company's Board members,
- 3) appointment and dismissal of the Board's President, Vice-Presidents, as well as other Board members in a secret ballot,
- 4) suspension in duties due to significant reasons, in a secret ballot, of the Board's President, Vice-Presidents, as well as other Board members, or the entire Management Board,
- 5) delegation of a Board member or members for temporary execution of Board member activities in case of suspension of Board members or the entire Management Board,
- 6) selection of the entity authorised to audit the Company's financial statements,
- 7) evaluation of the Board's report from the Company's activities or financial statement for the previous accounting year,
- 8) evaluation of the Board's conclusion regarding the division of profit or loss coverage,
- 9) submission to the General Meeting of the written annual report on the results of evaluations specified in paragraph 7 and 8,
- 10) submission to the General Meeting of the annual brief evaluation of the Company's situation, as well as the annual report on the Board's work,
- 11) giving opinion on cases submitted by the Board and comprising the subject of the General Meeting's resolutions,
- 12) approval of the Company's and ZE PAK Capital Group's perennial activity programs, including the Company's and ZE PAK Capital Group's activity strategies, developed by the Board, and
- 13) approval of the Company's annual activity programs, as well as the Capital Group's annual activity programs, especially including production plans and revenues, type cost plans, unit cost plans, remuneration plans, investment plans, as well as renovation and maintenance service plans.

The Board's competencies also include giving the Board an approval:

- 1) to participate in other companies and disposal of shares in other companies,
- 2) to establish foreign branches,
- 3) to make advanced payments for dividends,
- 4) for the Company to execute activities which result in incurring liabilities, except for:
 - a. activities provided in the Company's annual activity program approved by the Board,
 - b. activities resulting in incurring liabilities with a value of up to zloty 1 000 000, including granting sureties or guarantees as well as suretyship,
- 5) acquisition and disposal of property, right of perpetual usufruct or share in property or perpetual usufruct with a value exceeding zloty 1 000 000,

- 6) conclusion by the Company and an affiliate of a major agreement within the meaning of the regulations regarding the current and periodical information provided by issuers of stocks accepted for trade in a regulated market, excluding typical agreements concluded by the Company pursuant to market conditions, within the conducted operational activities,
- 7) designation by the Board of personnel acting in the bodies of companies or other entities in which the Company has a direct or indirect share, as well as
- 8) establishment by the Board of the manner of ballot execution during the General Meeting or the Meeting of Partners in companies, in relation to which the Company is a parent company or an affiliate within the meaning of the Code of Commercial Companies, in the following cases:
 - a. disposition and lease of the company's entrepreneurship or its organised part, establishment of a limited property right for them, as well as execution of other activities related to the acquisition or administration of the company's asset components which comprise the subject of the General Meeting's or Meeting of Partners' deliberations,
 - b. company's termination or liquidation,
 - c. amendment of the company's articles of association or deed
 - d. company's merger, division or transformation, as well as
 - e. increase or decrease in the company's share capital.

Pursuant to the Board's application, the Supervisory Board grants Board members the approval to take positions in the bodies of companies, in which the Company holds shares, as well as for the collection of remuneration for acting in these positions.

9.10. Composition, its changes as well as description of the management and supervisory bodies

Management Board

The financial year 2021 began in the following composition:

- 1) Piotr Woźny – President of the Management Board,
- 2) Zygmunt Artwik – Vice President of the Management Board,
- 3) Maciej Nietopiel – Vice President of the Management Board,
- 4) Andrzej Janiszowski – Vice President of the Management Board,

On March 2, 2021, the Supervisory Board of the Company appointed Ms. Katarzyna Sobierajska to the Management Board entrusting her with the function of the Vice President of the Management Board.

As at the day of signing this report, the composition of the Management Board of the Company is as follows:

- 1) Piotr Woźny – President of the Management Board,
- 2) Zygmunt Artwik – Vice President of the Management Board,
- 3) Maciej Nietopiel – Vice President of the Management Board,
- 4) Andrzej Janiszowski – Vice President of the Management Board,
- 5) Katarzyna Sobierajska – Vice President of the Management Board.

Supervisory Board

There were no changes recorded in the composition of the Supervisory Board within the reported period. As at December 31, 2021, the Supervisory Board of ZE PAK SA was composed of the following:

- 1) Zygmunt Solorz – Chairman of the Supervisory Board,
- 2) Wiesław Walendziak – Deputy of the Chairman of the Supervisory Board,
- 3) Tomasz Szelaż – Secretary,
- 4) Henryk Sobierajski,
- 5) Leszek Wysocki,
- 6) Sławomir Zakrzewski,
- 7) Grzegorz Krystek,
- 8) Maciej Stec,
- 9) Alojzy Z. Nowak.

On March 10, 2022, at the meeting of the Extraordinary General Meeting of Shareholders of the Company, the number of members of the Supervisory Board of the Company was established and three new members were appointed to the

Supervisory Board of the Company. On March 30, 2022, Mr. Leszek Wysłocki resigned from his membership in the Supervisory Board of the Company.

On April 13, 2022, the Supervisory Board of the Company adopted a resolution on entrusting the function of Deputy Chairman to Mr. Piotr Żak. On April 22, 2022, the Extraordinary General Meeting of Shareholders of the Company established a new number of members of the Supervisory Board of the Company and dismissed Mr. Grzegorz Krystek from the function of a member of the Supervisory Board.

Considering the above changes, as at the date of signing this report, the composition of the Supervisory Board is as follows:

- 1) Zygmunt Solorz – Chairman of the Supervisory Board,
- 2) Wiesław Walendziak – Deputy of the Chairman of the Supervisory Board,
- 3) Piotr Żak – Deputy of the Chairman of the Supervisory Board,
- 4) Tomasz Szelaąg – Secretary,
- 5) Henryk Sobierajski,
- 6) Sławomir Zakrzewski,
- 7) Maciej Stec,
- 8) Alojzy Z. Nowak.
- 9) Jarosław Grzesiak
- 10) Tobias Solorz

The members of the Supervisory Board meeting the criteria of the independence are: Sławomir Zakrzewski and Alojzy Z. Nowak.

Performing its code and statutory duties, the Supervisory Board held 8 meetings in 2021 adopting a total of 135 resolutions.

In the reporting period, the Supervisory Board collectively supervised the Company's activity in all areas of its operation. The Supervisory Board focused on the following issues:

- 1) assessment of reports prepared for the business year 2021,
- 2) changes in the composition of the Management Board of ZE PAK SA,
- 3) internal division of competences between members of the Management Board of the Company,
- 4) expressing consent for the Company to perform actions resulting in incurring liabilities with a value of over PLN 1 million,
- 5) issuing opinions on applications submitted by the Management Board in matters pertaining to the current operations of the Company,
- 6) approving activities related to the restructuring process in the ZE PAK SA Capital Group
- 7) discussing the current activities undertaken by the Company in the area related to the investment consisting in the creation of a second biomass generating unit at Konin power plant based on the existing coal boiler and existing turbine sets,
- 8) discussing the current activities undertaken by the Company in the area related to the investment consisting in the construction of a solar farm with an estimated capacity of about 70 MWp.
- 9) implementation by the Management Board of the Company of the energy transformation strategy of ZE PAK SA Capital Group by expanding the portfolio of renewable energy projects.

Audit Committee

In 2021 the Audit Committee was meeting in the following composition:

- 1) Sławomir Zakrzewski – Chairman of the Audit Committee,
- 2) Tomasz Szelaąg,
- 3) Alojzy Z. Nowak.

A member of the Audit Committee with knowledge and skills in the industry in which ZE PAK SA operates is Mr. Sławomir Zakrzewski, who acquired them through his extensive professional experience, in the construction and energy industries, acquired both at home and abroad. The member of the Audit Committee with knowledge and skills in the field of accounting is Mr. Tomasz Szelaąg, who acquired them thanks to his education and he perfected taking up numerous managerial positions requiring this knowledge and competence. The members of the Audit Committee who meet the independence criterion are Mr. Sławomir Zakrzewski and Mr. Alojzy Z. Nowak.

The company developed a policy of selecting an audit firm to conduct the audit and a policy for the audit company conducting the audit, by entities related to this auditing company and by a member of the auditing company's network of permitted non-audit services.

The main assumptions of the policy of choosing an audit firm to conduct the study:

1. Pursuant to the Company's Articles of Association, the body selecting the auditing company for the statutory audit is the Supervisory Board of the Company.
2. The remuneration for statutory audit received by the audit firm or its subcontractors may not be conditional on any conditions, including the result of the statutory audit or be shaped or dependent on the provision of additional services that are not statutory audits of the Company or its related companies.
3. The Audit Committee of the Company's Supervisory Board approves the procedure for selecting an audit firm.
4. The Company prepares tender documentation for invited audit firms according to specific criteria.
5. The Company assesses the offers established by the audit firms in accordance with the selection criteria specified in the tender documentation and prepares a report containing the conclusions of the selection procedure and submits them to the Audit Committee.
6. The Audit Committee presents the Supervisory Board with a recommendation to select an audit firm.
7. If the decision of the Company's Supervisory Board regarding the selection of an audit firm deviates from the recommendation of the Audit Committee, the Company's Supervisory Board justifies the reasons for non-compliance with the Audit Committee's recommendation and provides such justification to the General Meeting of Shareholders of the Company.

The main assumptions of the policy of providing the Company with the auditing company conducting the audit by entities related to this auditing company and by a member of the auditing company's network of permitted non-audit services:

1. The Company, realizing the provisions of the Act of 11 May 2017 on statutory auditors, audit firms and public supervision ("UoBR"), does not conclude with the auditing company conducting the audit, with entities related to this auditing company and with the members of the audit company's service contracts prohibited services within the meaning of Article 136 of UROBR;
2. To the extent not related to the Company's tax policy, the Company may commission an audit company or an entity related to that auditing company or a member of the auditing company network, works that are permitted non-audit services;
3. The Audit Committee supervises the compliance with the law of performing the works referred to in point 2. Prior to the commissioning by the Company of the services referred to in point 2, the Audit Committee shall conduct an assessment of the threats and safeguards of independence referred to in art. 69-73 of UoBR;
4. The policy also lists the main types of permitted and prohibited services.

The recommendation regarding the selection of an audit firm to conduct the audit was made following a selection procedure organized by the Company that meets the applicable criteria and this recommendation meets the auditor's product conditions in force at the Company.

In 2020, the Audit Committee of the Supervisory Board of ZE PAK SA adopted a Resolution on the recommendation of the Audit Committee for the Supervisory Board of the Company regarding the selection of an audit company to conduct statutory audits and reviews of the consolidated and separate financial statements of ZE PAK SA and separate financial statements of companies belonging to ZE PAK SA Capital Group, prepared for the years 2020-2022.

In May 2021 the Audit Committee of ZE PAK SA Supervisory Board adopted a Resolution on the approval of a statutory auditor for assessing the reports on remunerations of the Management Board and Supervisory Board of ZE PAK SA, prepared for the years 2019-2020, 2021 and 2022.

The Audit Committee of the Supervisory Board of ZE PAK SA met with representatives of the Company twice in 2021.

9.11. Procedure and basic powers of the General Meeting as well as description of shareholders' rights and their exercise

General Meeting

The General Meeting is held in cases specified in the Code of Commercial Companies and in the Company's Articles of Association. The General Meeting is held in principle by the Company's Board and deliberates, and an ordinary or extraordinary meeting. In case of summoning the General Meeting by an entity or body other than the Company's Board, the Board is obligated to cooperate with the entity or body in order to execute any activities specified by the law as

necessary to summon, organise, and execute the General Meeting. Since the first day of listing of the Company's shares in the regulated market of the Warsaw Stock Exchange Joint-stock Company, the General Meetings can take place with the use of electronic communication resources. The decision on arranging the General Meeting using electronic communication devices is made by the Company's Supervisory Council.

The General Meeting takes place in Warsaw or in the Company's registered office. Broadcast of the General Meeting is carried out in real time, after the session is finished, a link to the video transmission of the General Meeting is available on the Company's website.

The ZE PAK SA's General Meeting is convened by notification placed on the Company's website and in a manner specified for provision of current information in accordance with the regulations on public bidding and conditions for introducing financial instruments to the organised trade system and on public companies.

The materials made available to shareholders in relation to the General Meeting, including drafts of resolutions proposed for passing, as well as other important materials are made available by the Company on the <http://ri.zepak.com.pl/> website.

The basic competencies of the General Meeting include:

- 1) examination and approval of the Board's report on the Company's activities, as well as the financial statement for the previous accounting year, as well as acknowledgement of the fulfilment of duties by the Company's body members,
- 2) division of profit and loss coverage,
- 3) change in the subject of the Company's activities,
- 4) amendments to the Company's Articles of Association,
- 5) increase or decrease in the share capital,
- 6) authorisation of the Board to acquire own shares for the purpose of redemption,
- 7) appointment and dismissal of Council members,
- 8) establishment of the remuneration of Council members,
- 9) Company merging, division and transformation,
- 10) Company termination and liquidation,
- 11) emission of convertible bonds or bonds with right of priority and subscription warrants,
- 12) sale or lease of the company or its organised part as well as establishment of a limited property right for them,
- 13) establishment and cancellation of the Company's capitals and funds,
- 14) conclusion by the Company of a credit, loan, surety agreement, or a similar agreement with a member of the Company's Board, Supervisory Council, proxy or liquidator, or for any of this personnel,
- 15) conclusion by an affiliate of a credit, loan, surety agreement or a similar agreement with a member of the Company's Board, Supervisory Council, proxy or liquidator, or for any of this personnel,
- 16) any provisions regarding claims the remedy of damage done during the Company's establishment or executing management or supervision, and
- 17) use of the share capital.

The active right to participate in the General Meeting is available to persons being the shareholders, 16 days prior to the General Meeting. The condition of admitting a shareholder to participate in the General Meeting is the submission of a registered certificate regarding the right to participate in the General Meeting, which is issued by the entity that keeps the stocks account.

The shareholder participates in the General Meeting's deliberations and executes the right of ballot in person or via an authorised representative.

The shareholder who represents at least 1/20 of the Company's share capital is entitled to request specific cases to be included in the Company's General Meeting agenda. The request should be reported to the Company's Board no later than 21 days prior to the Company's General Meeting.

The shareholder, who requests to include specific cases in the General Meeting's agenda, should demonstrate the possession of the proper number of shares at the date of request submission, including a deposit certificate to the request, issued by the entity keeping the stocks account.

The shareholder representing at least 1/20 of the Company's share capital can submit resolution drafts regarding the cases introduced into the General Meeting's agenda, or cases, which are to be introduced into the agenda in a written or electronic form prior to the date of the General Meeting.

Each of the shareholders authorised to participate in a general meeting can provide the resolution drafts regarding the cases introduced into the agenda during the Company's General Meeting.

The General Meeting's resolutions are passed with a majority of 75% votes, provided that the Code of Commercial Companies does not specify otherwise. Each Company's share entitles to a single vote at the General Meeting.

9.12. Description of principles of changes in the Company's Statute

Changes to the Company's statute, in accordance with the Code of Commercial Companies and provisions of the Company's Statute, require the General Meeting to pass a suitable resolution and an entry into the register of entrepreneurs. The General Meeting can authorise the Company's Supervisory Council to develop a uniform text of the amended statute, or to introduce editorial changes specified in the General Meeting's resolution. Amendments to the Statute are binding since the moment of entry into the register of entrepreneurs. In 2021, one amendment was made to the Articles of Association of the Company regarding the change of the Company name from Zespół Elektrowni Pątnów-Adamów-Konin Spółka Akcyjna to ZE PAK Spółka Akcyjna, therefore the consolidated text of the Articles of Association was adopted, which was made available on the Company's website.

On March 10, 2022, the General Meeting of Shareholders adopted a new, amended unified text of the Articles of Association, which was submitted to the National Court Register and will be effective from the moment the change is registered by the National Court Register in the register of entrepreneurs.

9.13. Information on the remuneration system and the amount of management and supervisory staff's remuneration

In ZE PAK SA the remuneration system is based on the Corporate Collective Labour Agreement for employees of ZE PAK SA of September 24, 1993 (CCLA). Only members of the Management Board, chief accountant and key managers who have concluded managerial contracts. On September 25, 2018, the Company terminated CCLA and in accordance with the notice procedure, the terms of employment contracts were effective until December 31, 2019. In July 2019, the Company submitted a draft of a new collective labour agreement to the social side. On October 19, 2021, the Company signed a new collective agreement with company trade unions. The new corporate collective labour agreement entered into force on January 1, 2022, which results from the agreement registration procedure at the District Labour Inspector in Poznań.

The basic components of remuneration for the employees contained in the CCLA include an individual monthly basic salary, a monthly statutory bonus, extra payment for seniority, an annual bonus, a post-employment benefit and allowances. The employees are also entitled to receive awards from the president's fund and social benefits.

The Management Board determines the principles of remuneration of key managers in individual agreements. The basic component of remuneration is the basic salary. The key managers can receive a discretionary award granted by the Management Board's decision. The key managers are also entitled to some components of the CCLA.

The members of the ZE PAK SA Management Board are paid on the basis of the provisions of individual management agreements, the content of which is formed by the Supervisory Board of the Company. In 2020, the Ordinary General Meeting of the Company adopted the "Policy of remuneration of members of the Management Board and Supervisory Board of ZE PAK SA". The policy aims to ensure a sustained increase in the value of the Company, the implementation of which by the Management Board and the Supervisory Board requires, inter alia, shaping the structure of remuneration of the members of the Management Board and Supervisory Board for the entirety of their duties. This is achieved by limiting the remuneration of these people to a fixed part, allowing them to perform their duties regarding the entirety of the Company's operations without limiting themselves to achieving only selected goals. The volatility of the market, social and economic situation, as well as the need to flexibly respond to emerging risks and business opportunities, do not justify the rigid setting of such goals. The need to flexibly respond to changes in this situation and the emerging challenges is ensured - in the case of members of the Management Board - by the possibility of awarding them bonuses. This ensures flexibility in ensuring the stable existence of the Company and its long-term interests. Members of the

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Management Board are entitled to monthly remuneration. They may also be awarded a discretionary award. In the event of dismissal from the Management Board, severance pay is not provided. There are no provisions for compensation in the event of dismissal following a merger or acquisition.

The Company does not have a motivational or bonus program based on the Company's capital.

Table 15: Information on the amount of remuneration paid in 2021 by the Company and its subsidiaries to all Management Board members performing their functions in 2021

<i>The Board's member name and surname</i>	<i>Zloty thousand Value of (gross) remuneration paid by the Company</i>	<i>Zloty thousand including variable elements of remuneration *</i>	<i>Zloty thousand Value of (gross) remuneration paid by the Company's subsidiaries</i>	<i>Zloty thousand Total:</i>
Piotr Woźny	1 463,78	650,00	0,50	1 464,28
Zygmunt Artwik	1 036,00	400,00	0,30	1 036,30
Maciej Nietopiel	870,00	450,00	0,60	870,60
Andrzej Janiszowski	643,78	250,00	0,10	643,88
Katarzyna Sobierajska	716,40	241,43	0,10	716,50
Total	4 729,96	1 991,43	1,60	4 731,56

* *The variable remuneration components include: awards and bonuses, severance pay for dismissals from the Management Board, holiday equivalents and retirement benefits.*

Table 16: Information on the amount of non-cash benefits in 2021 granted by the Company and its subsidiaries to all Management Board members performing functions in 2021

<i>The Board's member name and surname</i>	<i>zloty thousand Total estimated value of non-cash benefits granted by the Company</i>	<i>zloty thousand Total estimated value of non-cash benefits granted by the Company's subsidiaries</i>	<i>zloty thousand In total</i>
Piotr Woźny	0,0	-	0,0
Zygmunt Artwik	0,0	-	0,0
Maciej Nietopiel	9,3	-	9,3
Andrzej Janiszowski	0,0	-	0,0
Katarzyna Sobierajska	0,0	-	0,0
Total	9,3	-	9,3

The total amount of remuneration, understood as the value of remuneration, bonuses and benefits received in cash, in kind or in any other form, paid by the Company and subsidiaries of the Company to the Management Board members in 2021 amounted to PLN 4 740.86 thousand. The given amount should be treated as the gross value of remuneration paid or due in the period from 1 January to 31 December 2021.

The Members of the Supervisory Board of ZE PAK SA are remunerated pursuant to Resolution No. 12 of the Extraordinary General Meeting of April 15, 2019, which set the monthly remuneration for the chairman of the Supervisory Board in the amount of PLN 15 thousand, the deputy chairman of the Supervisory Board in the amount of PLN 12 thousand and for other members in the amount of PLN 10 thousand.

Table 17: Information on the amount of remuneration paid and the value of non-cash benefits in 2021 by the Company and its subsidiaries, as a member of the Supervisory Board, all members of the Supervisory Board performing their functions in 2021

<i>Name and surname of Supervisory Board member</i>	<i>zloty thousand Value of (gross) remuneration paid by the Company and the Company's subsidiaries</i>	<i>zloty thousand Total estimated value of non-cash benefits granted by the Company and the Company's subsidiaries</i>	<i>zloty thousand In total</i>
Zygmunt Solorz	180,00	0,0	144,80
Tomasz Szelaż	120,00	0,0	121,20
Wiesław Walendziak	144,00	0,0	144,00

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Leszek Wysocki	120,00	0,0	120,00
Sławomir Zakrzewski	120,00	0,0	120,00
Alojzy Z. Nowak	120,00	0,0	120,00
Maciej Stec	120,00	0,0	120,00
Grzegorz Krystek	120,00	1,8	121,80
Henryk Sobierajski	370,00	0,0	370,00*
Total	1 414,00	1,8	1 415,80

* The amount of 370.0 includes 120.0 for serving as a Supervisory Board Member and 250.0 for serving as President of the Management Board in 2020, paid on January 4, 2021

The total amount of remuneration, understood as the value of remuneration, bonuses and benefits received in cash, in kind or in any other form, paid out by the Company and subsidiaries of the Company to the members of the Supervisory Board in 2021 amounted to PLN 1 415.80 thousand. The given amount should be treated as the gross value of remuneration paid or due in the period from 1 January to 31 December 2021.

The company has no obligations arising from pensions and similar benefits in relation to former management, supervisory or former members of administrative bodies and liabilities incurred in connection with such pensions.

10. STATEMENT ON THE DIVERSITY POLICY

With reference to §70 paragraph 6 point 5 lit. m of the Regulation of the Minister of Finance of 29 March 2018 on current and periodic information the Company declares that in ZE PAK SA Group and in ZE PAK SA no separate document describing the diversity policy has been adopted, in relation to the Management Board and the Supervisory Board. In line with the standards prevailing in the Company, objective criteria such as knowledge, experience, competences and skills necessary to perform the entrusted functions are of decisive importance when selecting the management and supervisory staff. In the opinion of the Company, the above-mentioned criteria may ensure effective and efficient functioning of the Company and implementation of the adopted strategy. At the same time, other management solutions related to the issue of diversity management were adopted.

The restructuring process, lasting for years, meant that most vacancies were filled on the basis of internal recruitment (as part of transfers between departments and companies). A side effect of actions aimed at reducing redundancies and concentrating in the recruitment process on persons already employed in the Group's companies was the lack of a significant inflow of young employees, and as a result, the average age of employees increased. At some point, this may result in significant retirements and staff shortages. Therefore, ZE PAK SA Group actively monitors changes in the age structure of employees in order not to allow the adverse consequences of losing a large part of experienced employees without proper preparation of their successors.

Simultaneously, the Code of Ethics adopted in the Company includes diversity policy, guaranteeing equal treatment regardless of gender, age, worldview, religion, political views, etc. The document is a tool for reporting potential incidents related to discrimination on any background. It defines the desired and undesirable behaviour in the organization, and at the same time constitutes its ethical policy. Due to its nature, it also includes elements of anti-discrimination and anti-corruption policies as well as procedures for reporting violations and irregularities, non-compliance with legal obligations, threats to health and safety at work and health, environmental safety, unfair competition practices and attempts to conceal any of the above. It applies to all employees, regardless of their position or length of service. In 2020, the Code of Ethics was also implemented in other companies belonging to the Capital Group.

The Company also adopted the procedure for anonymous reporting of violations of the provisions of the Act on public offering and conditions for introducing financial instruments to organized trading, and on public companies, Regulation 2017/1129 and ethical procedures and standards, which enables employees to easily and safely report inappropriate, unsafe or unethical behaviour by their employers, and provides full protection to reporting persons. In 2021, the Company also adopted the Breach Reporting Regulations, which define the internal procedure for reporting violations of law, the procedure for taking follow-up actions and the procedure for protecting the whistle-blower.

Both the Code of Ethics and the Anonymous Reporting Procedure are available on the Company's intranet.

As of today, in the Company's opinion such solutions are sufficient.

Numerical data referring to diversity can be found in this report, in the Statement on Non-Financial Information for 2021 in the subsection - "Employee Issues".

11. STATEMENT OF THE MANAGEMENT BOARD OF THE COMPANY ON ZE PAK SA CAPITAL GROUP NON-FINANCIAL INFORMATION

This non-financial statement has been prepared “with reference” to the GRI Standards, an internationally recognized 2021 non-financial reporting standard. Using a reporting approach, primarily the benchmarks of this standard, will greatly facilitate the Group's stakeholders to find key information and compare it with the results of other companies from the mining and energy industry. For this purpose, the text includes the indexes of individual standard indicators.

[2-2, 2-3, 2-5] The statement covers all companies of the ZE PAK SA Capital Group, included in the consolidated management report. It refers to the period from January 1, 2021 to December 31, 2021, with an indication of significant events that took place after December 31, 2021 and before the statement was signed. The non-financial statement has not been certified by an independent auditor.

In addition to the aforementioned GRI Standards 2021, when defining the scope of the content described in the statement, ZE PAK SA Capital Group took into account the following:

- PN-ISO 26000 standard,
- the requirements of Regulation (EU) 2019/2088 of the European Parliament and of the Council of November 27, 2019 on disclosure of information related to sustainable development in the financial services sector, and more precisely information relevant to financial market institutions indicated in the document *Final Report on draft Regulatory Technical Standards*
- GRI G4 sectoral supplements in the scope related to mining and power engineering,
- „Best Practice for GPW listed companies 2021” („Best Practice 2021”),

The original process of non-financial reporting was preceded by and alluded to the development of the Social Responsibility Strategy of the ZE PAK SA Group. Nevertheless, the key areas defined at that time, although still valid, were supplemented with new aspects of social responsibility related to the transformation of the Group and **the transformation of its business model into a sustainable model, which is manifested by significant investments (CapEx) in the activities described in the so-called "Taxonomy"**³ and the growing share of revenues from activities considered to be environmentally sustainable. The sustainable development strategy itself will also be revised soon.

11.1. Description of business model

[2-6] The ZE PAK SA Capital Group is one of the important energy producers on the Polish market and at the same time an important element of the country's energy system, co-guaranteeing its stable operation:

- it is the second, in terms of installed capacity, the national producer of electricity from lignite,
- it is the 5th electricity producer in Poland.
- it remains the largest private (uncontrolled by the State Treasury) power engineering group in Poland.

From the point of view of the current scale of operations, the companies currently of the greatest importance for ZE PAK SA Group are still ZE PAK SA, which deals with conventional generation of electricity and heat, and PAK KWB Konin SA, which deals with the extraction of lignite. In addition to companies from the above-mentioned main areas of activity, the Group also includes other companies that deal, among others, with the implementation of construction and assembly works, maintenance works, service, production and commercial activities aimed at meeting the needs and comprehensive service of the industry.

³Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 establishing a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088.

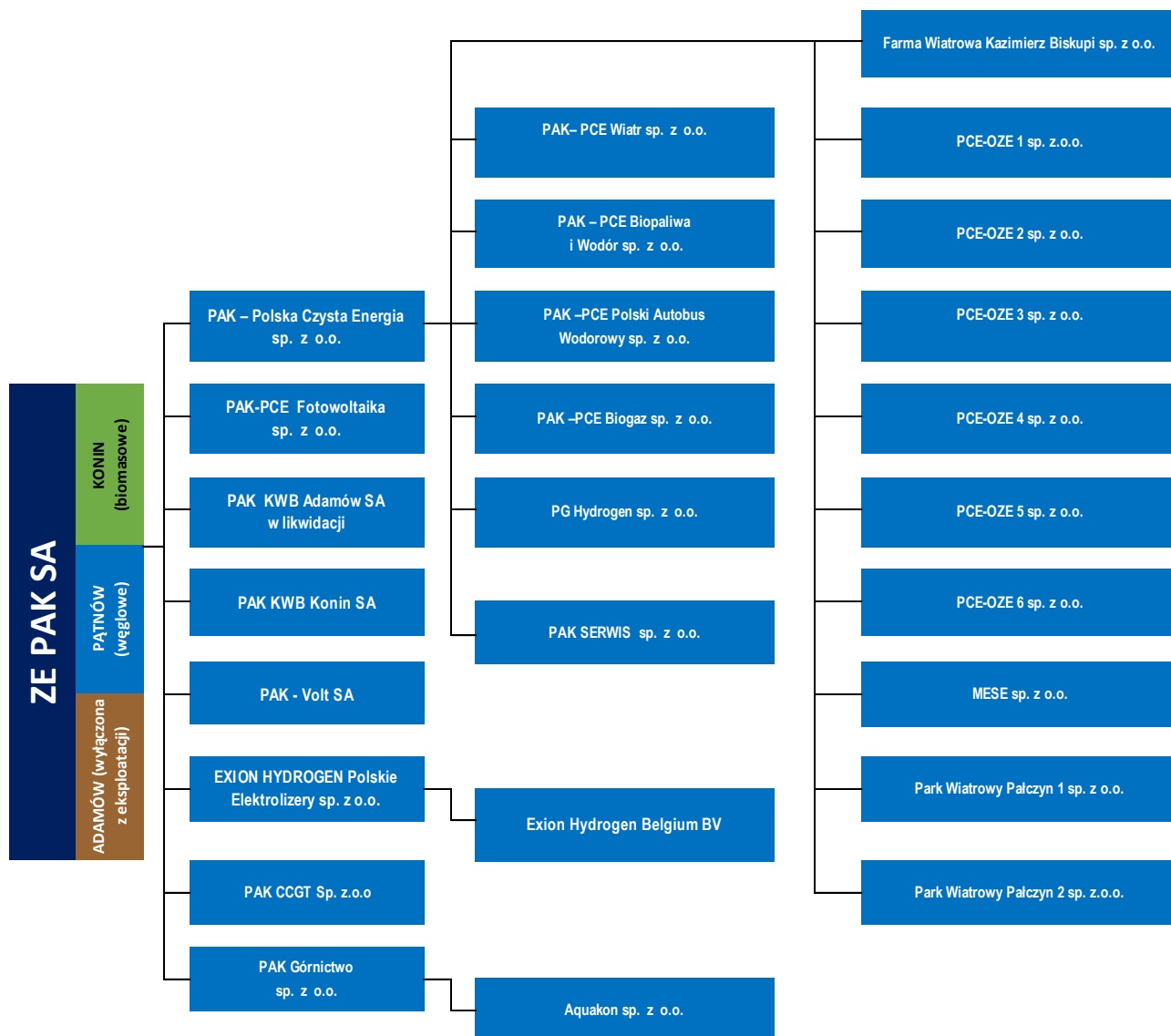
The impact of climate change risk on the business model

The group is aware of the climate change taking place, and the related direct and indirect risk, both in its regulatory and operational dimensions. That is why, in advance, it undertakes activities related to the deep transformation of the business model towards a sustainable economy.

The international community, including the European Union member states, undertook to ratify the Paris Agreement and undertook actions aimed at slowing down the global temperature rise resulting from excessive anthropological greenhouse gas emissions. Adopted in 2015, it is the first-ever universal legally binding climate agreement. As a consequence, the EU countries undertook to jointly undertake actions that will make the EU economy the first economy in the world to achieve climate neutrality by 2050. This commitment determines the economic policy in the field of sustainable development, and thus the EU regulations. As a result, companies that emit significant amounts of greenhouse gases will be under increasing pressure - among other things, it will be more and more difficult for them to obtain financing for their activities, and the costs of emissions will increase.

The traditional generation assets of the Group, based on the generation of energy generated in the process of lignite combustion, are high-emission. Therefore, becoming less and less profitable, they need to be replaced with more environmentally friendly sources. At the same time, the effects of climate change observed today make it more difficult to function in the traditional model. On the one hand, droughts and stepping in the areas of Wielkopolska, and on the other hand, the recorded extreme weather phenomena will make conventional energy generation more and more difficult. The need to obtain water for cooling purposes, as well as the drainage of open-cast mines, disrupting the balance of water resources, will become more and more controversial. Especially that ZE PAK Group plants operate in areas with limited water resources. Moreover, the violent weather events will only increase the costs of potential further work of the open mines.

As a result, ZE PAK Group initiated the first projects that were ultimately included in the directions of the development strategy until 2030, and which were aimed at adapting to the occurring climate change and making a significant contribution to mitigating climate change a few years ago. This wide-ranging transformation of the business model is in line with the directions outlined in the EU systematics (the so-called taxonomy).



The Group's generation assets include two lignite-fired power plants located in central Poland, in the Greater Poland Voivodship. **Elektrownia Pańków** produces electricity using lignite in 4 power units with a total capacity of 1 118 MW. **Elektrownia Konin**, former lignite power plant, today mainly uses a block with a boiler dedicated to burning biomass with an installed capacity of 50 MW and produces electricity and heat from biomass. In Konin power plant, the modernization of the second unit, which was also adapted to biomass combustion, was completed. In December 2021, synchronization took place with the National Energy System. Currently, the unit is put into operation. From October 2021, the generation assets of the ZE PAK SA Group increased by a **70 MWp solar farm** located in Brudzew commune.

Adamów Power Plant, originally part of ZE PAK SA, was closed at the beginning of January 2018. The shutdown of the power plant's units was dictated by a decision of the European Commission, acting on the basis of the derogation described in the directive of November 24, 2010, on the necessity to terminate the production assets of Adamów Power Plant at the beginning of January 2018. Currently, decommissioning works are underway at the power plant (including demolition works) for a new investment, which is to be a gas and steam unit.

The Group's mining assets are concentrated in PAK KWB Konin SA, which exploits Józwin, Tomisławice and Drzewce open pits, while Józwin and Drzewce open pits will soon end coal mining. In recent years, mining at PAK KWB Adamów SA in liquidation has been discontinued. Thus, PAK KWB Konin mine will exploit only one open pit - Tomisławice.

The companies associated with PAK-Polska Czysta Energia sp. z o.o., responsible for the implementation of projects in the field of energy production from renewable sources, production of "green" hydrogen and its use, are becoming more and more important with time. **ZE PAK SA Group is today a leader when it comes to green transformation in the**

energy sector. So far, being a producer of conventional energy from high-emission sources, in 2020 the Group **initiated the most ambitious strategy of transition from coal to green energy in Poland - announced, inter alia, a complete going-away from coal by 2030 at the latest, however, the baseline scenario now is the end of coal mining and combustion as early as 2024.**

ZE PAK SA Group, consisting of vertically integrated entities operating in the field of lignite mining and conventional electricity production from lignite and biomass combustion as well as energy trading, invests heavily in the production of energy from renewable energy sources (RES). The best example of the feasibility of investing in sustainable generation sources may be the commissioning of the largest photovoltaic farm in Poland in 2021. **The vast majority of revenues are generated by the Group from the sale of electricity produced, but the origin of this energy, i.e. the method of its production, will change.** The base model for the operation of the coal segment assumes the use of currently exploited open pits and the lack of new investments in this area. The generation of energy in coal-fired units at Pątnów I power plant will be shortened until the support system in the form of a capacity market or another, which will ensure the economic effectiveness of such activity, is in operation. ZE PAK SA Group assumes that **the end of electricity production from coal sources of ZE PAK SA Group is planned not later than at the end of the current decade.** Simultaneously with the phasing out of coal activities, new areas will be developed in which ZE PAK SA Group intends to exist. The new directions of the Group's development focus on low-emission and carbon-neutral methods of generating electricity as well as on the production and use of "green" hydrogen.

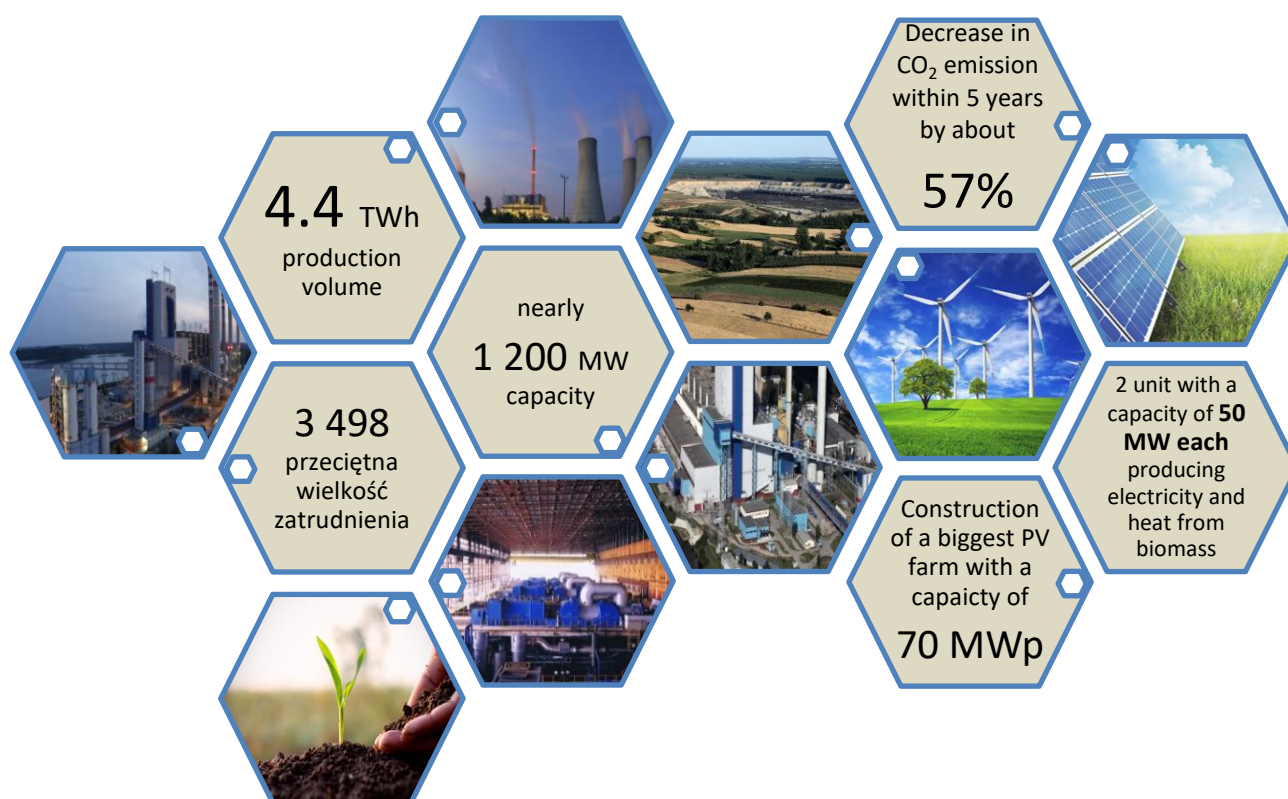
The first step in implementing the outlined direction was the establishment of the company PAK - Polska Czysta Energia sp. z o.o. within the structure of the Group, which is to separate activities in the area of renewable energy sources from activities related to the production of energy from coal. Special-purpose subsidiaries responsible for individual areas of activity were also established.

Main directions of development of ZE PAK SA until 2030:

- **decommissioning of coal production** - the fastest and in the shortest time in Poland, i.e. 20 years earlier than the assumed climate neutrality of the European Union
- **wind Energy production** – acquisition of wind projects ready for implementation and construction of wind farms on reclaimed areas owned by ZE PAK Group
- **solar Energy production** – acquisition of solar projects ready for implementation and construction of photovoltaic farms on reclaimed areas owned by ZE PAK Group
- **production of Energy from biomass and production of green hydrogen** – incl. adaptation of coal boilers for biomass combustion at Konin Power Plant. An important area of Konin Power Plant's activity is to be the production of green hydrogen in the electrolysis process
- **production of Energy from offshore wind farms** – establishing cooperation with the world leader in the field of offshore wind farms, the company Ørsted and joint efforts to build offshore wind farms
- **perspective projects related with the nuclear engineering** – establishing cooperation with Synthos in order to potentially use the infrastructure and assets of Pątnów Power Plant in order to develop a project using modular nuclear reactors (SMR)
- **other initiatives such as the production of zero-emission buses** - developing a concept and implementing a project for the production of an innovative city hydrogen bus or production of zero-emission hydrogen drives for motor boats - creating a hydrogen drive project in cooperation with a partner specialized in the construction of motor boats.

The aim of the implementation of the outlined directions is to build a modern, integrated enterprise with a diversified base of production assets, adapted to activities within the implementation of the idea of the Green Deal and climate-neutral economy.

A few numbers for ZE PAK SA Capital Group:



Sustainable transformation investments

[203-1] 2021 is not only the year of commissioning and commencement of commercial operation of the largest solar power plant in Poland in Brudzew (70 MWp). It is also the implementation of other investments that will soon increase the sustainable generation assets of ZE PAK SA Group. It is worth mentioning here about the plans to build another large-scale photovoltaic power plant with a capacity of approximately 180 MWp, which is to be built in the municipality of Przykona. Similarly to the power plant in Brudzew, it will be built on post-mining land (area originally used by PAK KWB Adamów). In 2021, the first wind farm construction projects were also acquired.

In the years 2020-2021, about 900 ha (KWB Adamów post-mined area) have been developed for future production of sustainable energy in the post-mining areas, and in 2022 work is underway to designate another approximately 1 400 ha (KWB Konin post-mined area). All these investments are part of the activities included in the so-called EU “taxonomy”.

The largest solar plant in Poland

[203-1] In October 2021, the largest solar power plant in Poland started operation. The farm was established on the initiative of Zygmunt Solorz and is one of the stages of the transition of ZE PAK SA to the production of clean energy and the shift away from lignite. The farm was built by the ESOLEO and PAK Serwis consortium for ZE PAK SA group in Brudzew commune and has a capacity of 70 MWp. In November 2021, PAK - PCE Fotowoltaika sp. z o.o. obtained a license to generate electricity. The license was granted by the President of the ERO for the period from November 10, 2021 to December 31, 2040. PAK - PCE Fotowoltaika sp. z o.o., the special purpose vehicle implementing the project has signed with Polkomtel sp. z o.o. 15-year contract for the sale of the entire volume produced by the farm with the possibility of extending the contract for another 5 years.

The farm consists of 155 554 photovoltaic modules with a capacity of 455 Wp each and covers about 100 ha of land. Until recently, it was an area used by Adamów Lignite Mine for opencast lignite mining. Thus, its creation was not related to, for example, limiting the acreage of agricultural or forestry production.

While constructing the farm, ESOLEO company engaged, among others former miners who have been retrained and now are implementing new projects related to renewable energy.

Annually, the power plant is to produce approx. 68,188 MWh, which will turn into a reduction in CO₂ emissions at the level of 56.7 thousand tonnes of CO₂ per year.



[203-1] In 2021, ZE PAK SA Group implemented two large investment projects, which are the adaptation of K-7 coal boiler at Konin power plant for the exclusive combustion of biomass along with the necessary technical infrastructure and the construction of a 70 MWp photovoltaic farm in Brudzew commune. Both of these investments were completed, the synchronization of the first one with the National Energy System took place in December 2021, and the second one is in the final stage of implementation and will be put into operation in the first half of 2022.

At the same time, investment activity focused on launching projects related to the production and distribution of hydrogen. As part of the first stage of construction of the hydrogen plant at Konin Power Plant, a production plant with a capacity of 1 ton of H₂ / day, based on an electrolyser produced by Hydrogenics, is to be launched. As part of the investment, in April 2020, an agreement was signed with Hydrogenics Europe Belgium for the supply of hydrogen technology (electrolyser, power supply system, compressor station and loading system for mobile warehouses). In August 2021, the final environmental decision was obtained for the plant. At the same time, a refuelling station is being built in Warsaw. In October 2020, an agreement was concluded with NEL Hydrogen Denmark for the supply of technological equipment for two hydrogen refuelling stations. Hydrogen storage tanks were provided. The environmental procedure was completed, the construction design was prepared and an application for a building permit was submitted. In January 2021, a contract was concluded for the supply of a mobile hydrogen storage facility, and the storage itself was delivered. In December 2021, a contract was signed for the supply of hydrogen tanks with a 6-month delivery period.

Status of design work on a bus prototype powered by hydrogen fuel cells

[203-1] The project of the Polish Hydrogen Bus was launched in September 2020. The goal is to develop a new eco-friendly bus powered by hydrogen cells from scratch.

As part of the project, conceptual work and technical analysis of the selection of the main components of the bus (hydrogen cells, cylinders, batteries and drive) were carried out. Calculations were made to ensure the greatest overall energy efficiency in the designed bus. In order to achieve the maximum range, a modular construction of hydrogen cylinders with a pressure of 350 and 700 bar was developed.

As part of the construction work, a new bus design was designed, taking into account trends in ergonomics and modern appearance, dedicated to hydrogen-powered buses. On this basis, a prototype construction documentation of the bus was prepared.

At the end of April 2021, work began on the construction of a bus prototype. The first elements of the skeleton were made. Cooperation was established with suppliers who are leaders in the bus industry, orders were placed for key components. The construction of the prototype was completed in October 2021. In the period from November 2021 to March 2022, approval and tests are planned (road tests, braking system tests, noise and tilt tests, optimization of the energy balance, obtaining VIN and approval).

In May 2021, preliminary design documents (the so-called fiche) (New Energy Program) were submitted to the National Fund for Environmental Protection and Water Management in order to obtain funding for the construction of a factory and the start of production of a bus with hydrogen cells. They were positively assessed by the National Fund for Environmental Protection and Water Management, and the company moved to the next stage, which is submitting the application. In turn, in August 2021, the Company received a positive decision of Agencja Rozwoju Przemysłu SA on support within the EURO-PARK MIELEC Special Economic Zone for the implementation of a new investment.



[203-1] In 2021, works related to the implementation of other investments in assets enabling the production of energy from renewable energy sources were also carried out, and these investments are:

- Kazimierz Biskupi Wind Farm (17.5 MW),
- Miłosław Wind Farm (9.6 MW).

In the case of the first of them, the main contractor was selected in 2021, field work was started in the field of roads and service yards, and work was carried out on detailed designs and arrangements for the project. In the case of the second one, in December 2021, the acquisition of the project was completed, and contracts for the purchase of assets as well as contracts for the construction, management of a wind farm and the purchase of wind turbines were signed. Both farms should be commissioned in the third quarter of 2023.

The Group has also established cooperation with external partners in the construction of offshore wind farms and the implementation of small modular reactor (SMR) technology.

All the above-mentioned investments are part of activities for sustainable development, including activities described in the EU "taxonomy".

Management of social responsibility

So far, the basis for the management approach has been the Social Responsibility Strategy of ZE PAK SA Capital Group for 2017-2020. It has set out key directions of activities and objectives (KPIs) aimed, on the one hand, at optimizing efficiency and continuous improvement of environmental and social performance, as well as ensuring compliance in the areas of significant environmental impact.

Although the period described by the strategy has ended, in 2021, in the described area of lignite mining and conventional energy generation, the directions and focus on optimizing efficiency and improving social and environmental performance, as well as ensuring compliance, were still in force in 2021. At the same time, a very ambitious development strategy for ZE PAK SA Group was announced, aimed at a quick transformation towards clean energy generation technologies and a radical reduction of the carbon footprint. Its announcement initiated an internal discussion on the optimal shape of the capital group organization. After the final crystallization of individual entities in the organization, work will begin on a new functional strategy in the field of ESG, which will integrate new, ambitious development goals, in line with the transformation towards a sustainable economy with minimizing the environmental impact of extinguished assets and the social and environmental effects of their liquidation.

11.2. Social issues

The policy and management approach of the ZE PAK SA Group to social issues were set out in the Strategy for Corporate Social Responsibility of the ZE PAK SA Capital Group for 2017-2020. Simultaneously, the approach presented in the Strategy is reflected in other internal regulations. The management approach is also determined in administrative decisions that allow conducting the mining and generating operations in the units that belong to ZE PAK SA Group and

dependent on the specifics of the particular object. Each time, the Group is trying to work out the optimal solutions in this respect, based on social consultations as well as in accordance with the applicable law.

The Group's management approach to social issues is conditioned by the nature of its companies' influence on the environment. Particularly in the areas where the influence is or might be negative and can be associated with specific burdens for people, the management approach aims at eliminating, limiting or compensating for these burdens, and consequently limiting the exposure of the Group to the risk (also understood as reputational or image risk).

The Group's influence on the environment is multidimensional:

- **Social impact.** From the point of view of general public, ZE PAK SA Group is an important supplier of energy for the Polish economy and Polish society. Nevertheless, the final customers are not the main clients of the Group. The Group sells the vast majority of energy produced on the wholesale market. For this reason, the ZE PAK SA Group aims at ensuring stable electricity supply at a competitive price to other technologies.
- **Local communities neighbouring with ZE PAK SA.** The ZE PAK SA Group has a much wider range of impact on the environment from the point of view of the local community, i.e. understood as a community living in the immediate neighbourhood of the Group's plants, where the production of electricity and heat and lignite coal mining is conducted. The exploitation of lignite deposit and production of energy have the great impact on the natural environment (see: Environmental issues), and consequently social environment too.

The impact of the transformation of ZE PAK SA Group on the social environment and future risks

[413-2] The transformation of the ZE PAK SA Group towards a sustainable economy will involve a change in the nature of the social impact. First of all, it will contribute to the reduction and gradual elimination of individual risk categories referred to above. Resignation from the exploitation of lignite deposits from new open-pit mines, and for concessions, the extraction of which was undertaken by the Group, means no transformation of new areas and no impact, inter alia, on surface waters in their area. In December 2020, the management board of ZE PAK SA confirmed the resignation from investments aimed at the implementation of projects consisting in the extraction of lignite and accompanying minerals from the deposits: Piaski, Dęby Szlacheckie and Ościsłowo. At the same time, along with the phasing out of energy production from lignite, the extraction from the currently exploited deposits will be phased out, as will their gradual liquidation and rehabilitation of the areas they occupy. This means the target elimination of nuisance for the population related to, for example, noise or dust from mines and coal transports. The natural water conditions will also be gradually restored, which will not be disturbed by artificial drainage of the mining area. Importantly, where land reclamation involves reclamation in the water direction, water reservoirs will be created, which will be part of the nationwide water retention activities. However, it is worth being aware that in the transitional period, the restoration of natural water conditions may be associated with their periodic disruption, which will result from the filling of the depression craters with water and the associated reduction in the amount of water in some watercourses on the surface, which will not be additionally supplied with water drained from mining areas..

New types of activity should not be a source of such serious nuisance to the social environment as today are, inter alia, lignite mines. The photovoltaic farm, although it covers an area of about 100 ha, was located on reclaimed post-mining areas, thanks to which its creation did not involve excluding the areas from agricultural production, buying land, or relocating residents. There are no larger groups of people in its immediate vicinity. Besides, the impact of the solar farm itself, apart from the transformation of space, is limited.

As of today, the ZE PAK SA Group has plans for the construction of wind farms, and their construction must take into account the social impact on the environment in the form of disturbing the landscape, or the so-called strobe effect. Nevertheless, on the one hand, it seems that the restrictive regulations in this area obligatory in Poland allow to limit possible nuisance, but on the other hand, in the case of their construction in post-industrial (post-mining) areas, it will mean their removal from clusters of people. A possible source of controversy and social concerns may be the already announced plans related to investments in nuclear energy, especially on the part of the local community or certain groups of environmentalists. Nevertheless, it should be noted that the research carried out at the request of the Ministry of Climate and Environment shows that the acceptance of Poles for the construction of a nuclear power plant in the country, including in the vicinity of their place of residence, is high. According to the announcement of the Ministry of Climate and Environment: "The survey of November 2021 shows that 74 percent of those polled express their support for nuclear power plants in our country, and 20 percent are of the opposite opinion. Compared to 2020, there was an increase in supporters of this type of investment by 11 percent. It is particularly important that the majority of respondents (58%) support locating a nuclear power plant in the immediate vicinity of their place of residence. 39 percent objects to this solution. The number of supporters of building a nuclear power plant in the neighbourhood increased by 12%, compared to the previous year ". It is worth noting that after the announcement of the intention to build small modular reactors

(SMR), ZE PAK SA Group has not met with public criticism, neither at the national or local level. ZE PAK SA Group also does not expect other planned activities (hydrogen production and hydrogen-based automotive) to become a source of social concern or generate significant nuisance for the social environment.

The nature of the nuisance related to the operation of ZE PAK SA Group will change as the transformation proceeds, but in general the nuisance will be less and less, and thus the level of social risk will be lower.



Current social risks and management approach

[413-2] Dealing with the negative influence on the natural as well as social environment, it is necessary to mention, first of all, about **the danger and burdens, being the source of social risk** and associated with:

- **an influence on the land surface** (opencast mining of minerals results from the transformation of the land surface; in the place of the originally used land, spatial field forms (excavation, heap) and accompanying infrastructure are created (conveyors, transport routes, facilities),
- **an influence on the surface water** (inter alia reducing the flow in watercourses under the influence of the mine and increasing the flow in the watercourses due to discharging water from underground drainage and surface pits),
- **an influence on the groundwater** (formation of the so-called depression funnel due to the drainage of opencast mines),
- **noise emission** (basic machines related to the operation of the overburden and its dumping, basic machines mining coal, coal and overburden conveyors, road transport),
- **an impact of mine objects on atmospheric air** (dust emission: technological (mechanical), i.e. associated with mechanical mining and transport of the raw material with conveyor belts; climatological, i.e. related to wind erosion of vegetation-free areas; organized emissions of pollutants into the air from the boiler room providing heat for social facilities mine),
- **an influence on valuable natural area** (in case when the valuable natural area is located in the zone of influence),
- **hazards associated with electromagnetic fields.**

Business risk that may have negative influence on the Group's results and development, and being associated with the area of social influence, results directly from the character of its influence (e.g. disturbing the hydrology balance or noise mentioned earlier). They constitute inconvenience and may also be a source of material damage of the third parties. This can lead to disputes with the society and thus loss of its positive attitude for present and further projects, including so-called social licence to operate. It can cause the increase of complaints directed by the society to administration bodies, initiating the proceedings against the plants and legal and financial sanctions, in case of confirming the allegations. Ineffective dialogue, for example on damages or land purchase, may also mean civil proceedings for damages. A particular threat is the loss of public trust and a negative opinion about the plant as an unreliable investor, which can definitely hinder the acquisition of further permits and concessions (e.g. in the case of using existing infrastructure to implement investments in the field of renewable energy sources). This, in turn, may cause a greater risk associated with the new investment and less favour of investors and lenders, and thus difficulties in raising capital.

It is worth mentioning here that **the employees of the plants are recruiting from local communities**. As a consequence, these groups are not separate and any possible animosities with the local community related to, for example, inconvenience, will indirectly affect the culture of the organization and the work atmosphere, and vice versa: all important incidents on the employer-employee line may result and are resulting in specific consequences in relations with local community. The same person may appear in several roles, i.e. an employee, a resident of a local community adjacent to a plant, which is exposed to nuisance related to noise for example, as well as being the owner of a real estate that is seeking compensation or redemption.

Operational management and social impact

[413-2] The management approach of the ZE PAK SA Group at the level of operational management focuses primarily on ensuring ongoing security for the natural environment, and consequently also for the society, while ensuring continuity and stability of production. This approach was originally defined in the Corporate Social Responsibility Strategy for 2017-2020 and, as mentioned, is still in force today. It assumes the provision of effective mechanisms limiting to a minimum the risk of anomalies and deviations, resulting in an excessive impact on the environment in the mining or manufacturing process. It is an approach typical of quality management systems, assuming continuous improvement of processes and optimization of applied solutions. At the same time, it is an approach characteristic of typical risk management, i.e. striving to eliminate threats, and in the next steps, if elimination is impossible, to limit them and finally compensate.

ZE PAK SA Group assumes that the implementation of the assumed approach eliminating to a minimum the negative impact on the environment also changes into a stable operation of the plants, which is not disturbed by interruptions in production or extraction that would be caused by social factors. These aspects also relate to policies accompanying management systems and internal regulations that ensure compliance with laws and administrative permits related to specific manufacturing facilities and installations.

The management approach and, consequently, the implemented activities directly or indirectly address the risks associated with the loss of favour of the local community, and thus contribute to the prevention of events that could disrupt the stable operation of mining and manufacturing plants. When it comes to aspects of influence on the natural environment, which at the same time are the source of potential burdens for the local society, they were widely described in the further part of the report (see: Social issues). They constitute the element of environmental management, having parallel consequences for local society. The approach to them was also described in other internal regulations as well as in the administrative decisions regulating the environmental issues. This description is limited to the characteristic of the Group's approach to these aspects that directly affect people. Though, all of them focus on the activities which aim at monitoring and reducing the negative influence.

Real estate buyouts

[413-2] Lignite deposits in the area of the Group's operations have specific characteristics and abundance. The company does not exploit a single deposit, but over the years it was forced to start up more open-pit mines. Therefore, at the same time the process of reclamation of previously exploited open pits and exploitation of the present open pits are taking place.

For instance, in the areas that are to be under extraction, as well as directly adjacent with the area designed for extraction, real estate buyouts are made. Most often they are agricultural lands but also the buildings or constructions. Assessments of the influence, i.e. whether the real estate adjacent to the opencast mine is going to be the subject to buyout, are set individually. The individual approach is justified by the fact that in such aspect the significant roles are played by emotional factors, for instance, associated with getting used to this place. The intention of the Group is to carry out the described processes in a way that reduces negative emotions, as it may affect further projects of this type. These are always difficult situations, especially since real estate often has not only financial but also sentimental value for its owners. Often these are farms inherited by successive generations. Nevertheless, limiting, and ultimately refraining from, energy production based on lignite, will result in a slowdown and, ultimately, a suspension of further land purchases. Currently, real estate buyouts are carried out to a limited extent and concern land within the Konin Mine. It is related to the depletion of the exploited deposits (Józwin Open-pit, Drzewce Open-pit). The land purchases concern in particular the Tomisławice Open-pit mine.

Mining damage

[413-2] Mining damage can be divided into direct and indirect. **Direct** damage is usually associated with mining plant operations and the progress of exploitation fronts. They include reconstruction and construction of new roads, power lines, water supply networks and other technical infrastructure as well as road repairs, on which the mine transport moves and in particular cases the transfer of sacral culture objects, e.g. chapels, churches, cemeteries. Due to direct damage, the companies from the Group's mining segment in 2021 paid PLN 2 263 thousand, in 2020 – PLN 4 639 thousand, in 2019 – PLN 18 001 thousand. It is worth noting that in each case the payment of compensation for indirect damage occurred by way of a settlement or agreement. Apart from direct damage, there is also **indirect** damage associated with the dehydration of the deposit, which has an impact on the lowering of groundwater level in the areas adjacent to the mines. The effect of lowering groundwater levels may be a partial degradation of soil productivity, tree drying, periodic drying of farm wells and ponds, damage to buildings, impact on the performance of deep-water intake wells and others. On the other hand, drainage of waters from drainage of outcrops with surface watercourses can cause periodic flooding of adjacent areas. In order to minimize this damage, systematic conservation of these watercourses is carried out as part of their own or financial participation in the cost of living. Due to indirect damage, the companies from the Group's mining

segment paid out PLN 1 858 thousand in 2021 (in 2020 it was PLN 1 515 thousand and in 2019 – PLN 1 641 thousand. Due to the nature of indirect damage, financial compensation is usually of one-off nature. The Group tries to compensate adverse impact by paying reasonable compensation in justified cases. Owners of compensated land receive written notifications with a proposal for the amount of compensation due to the mine's impact. In the case of acceptance, an out-of-court settlement is signed with the owner, with a waiver of claims after payment of compensation - compensations are paid on the basis of previously agreed settlements or agreements. Only a few cases of mining damage are subject to resolution by common courts. In 2021, PLN 216.4 thousand were paid out on the basis of court verdicts (over 5% of the total compensation paid for indirect and direct damage), while in 2020 it was PLN 18.5 thousand (ca. 1% of the total compensation paid). The low share of damages paid on the basis of court judgments shows the conciliatory attitude of the Company, which prefers to agree possible amounts of compensation in the negotiation process, seeking agreement with the other party.

Other nuisances, including periodic nuisances

[413-2] Coal mining, its transport and related works may be a source of nuisance in the form of dust or noise. Due to the location of mining plants, i.e. operating at a considerable distance from human clusters as a result of an earlier purchase of real estate, these nuisances are limited. In addition, the method of work, including moistening the slopes during drought, reduces the risk of dusting.

In case of other periodical burdens, for example intensified noise associated with the renovation or modernization works on the generating objects (such works give rise to the necessity of blowing the boiler's installation under very high pressure, in order to remove even the filings from the installation, which could damage it, and that is quite loud), the Group informs local society, through mass media, about such burdens by giving the information to local media or local offices. The same happens with any other burdens (e.g. in road traffic connected with the transport of oversized equipment, the intensification of dusting or dew from chimneys. Consequently, they do not arouse controversy, and the plant can count on the forbearance of the inhabitants of the immediate area. As part of educational activities addressed to the external environment, the corporate communication department operating within the structure of ZE PAK SA also prepares press articles explaining the principles of exploitation of lignite open pits and rehabilitation of post-mining areas. As mentioned, the inhabitants of the closest vicinity of the plants are often employees of ZE PAK SA Group companies. Hence, although we are talking about communication outside the organization, an important role can also be played by proper internal communication, where the employees themselves play the role of ambassadors of ZE PAK SA Group. Also in the case of communication activities, in the situations mentioned above, internal communication can play an equally important role. In 2021, ZE PAK SA finished publishing the monthly magazine of the Capital Group "Kontakt". Internal communication with employees is conducted mainly using the Intranet, mailing and articles published on social media (Facebook, Twitter).

Social commitment

[413-1] ZE PAK SA Group also declares its support for local initiatives, although due to the savings program and the COVID-19 pandemic and related restrictions in the economic and social life, it has recently been lower than in previous years. The goal of the ZE PAK SA Group is to support the local community through social involvement, so as to compensate it as much as possible for these inconveniences related to the operation of plants, in the part where it is impossible to eliminate or reduce them. Understanding the importance of the natural environment for each of us, the Company also supports projects aimed at promoting renewable energy sources.

The Group's goal is not to engage in spectacular projects to gain publicity, but to reach the nearest municipalities and independent organizations from the region.

ZE PAK SA also carried out pro-social activities last year. Unfortunately, the COVID-19 pandemic has significantly limited the possibility of organizing socio-cultural events, which significantly influenced the number of donations made in this area. Moreover, there were no annual celebrations of the Power Engineer's Day and the related sponsored and subsidized events.

In the vicinity of the Company's area of operations, in Kazimierz Biskupi commune, one of the two Camaldolese hermitage and the only strictly contemplative male hermit order in Poland, i.e. the Congregation of Camaldolese hermits of Góra Koronna - the Erem of Five Martyrs in Bieniszew, conducts its activity. For many years, the Order could count on the support from ZE PAK SA. Therefore, also in 2021, the Company made a donation to the friars.

Financial support for the renovation of the church in 2021 was also received by the Roman Catholic Parish of St. Jadwiga Śląska in Janiszew.

For years ZE PAK SA has been supporting the activities of the "Inter-Enterprise Club of Honorary Blood Donors PCK Pątnów - Konin Capital Group ZE PAK". Traditionally, ZE PAK SA is also involved in supporting the activities of Polsat

Foundation, one of the largest non-governmental organizations operating in Poland, which has been directing its help to sick children and their parents for over twenty years.

ZE PAK SA, understanding the growing awareness of the impact of physical condition on health, joins various types of sports events. This year, the organizers of the races (4th run GRUNt in Bieniszew Primeval Forest, Runner Club "Active Konin" Run for the Mining Lamp) and sailing regattas (Sailing Regatta for the President's Cup of ZE PAK SA) could count on financial support.

One of the most important events in which ZE PAK SA takes part - as a strategic partner - is the festival "For the Earth, for us" in Uniejów, organized by Polsat Group. The idea of the festival is to draw attention to the environmental problems that our planet Earth has to deal with every day. Huge changes taking place there, including the climatic ones, have a huge impact on the lives of each of us. Therefore - as the organizers of the festival write on their website - "with all our experience and passion, we want to join an ever wider stream of people's involvement around the world to reverse the process of this degradation."

The message that accompanied the two-day meeting oscillated around the idea of For Earth For Us. This idea, resulting from the observation of the progressive degradation of the quality of life on Earth by the Wielkopolska power industry, accompanies the entire ZE PAK SA Group, and the idea of Program Czysta Polska association, announced by Zygmunt Solorz, co-owner of Polsat Group and ZE PAK SA Group, clearly shows that even the smallest actions to stop these negative changes - they make sense. Hence the Earth Festival, an event promoting ecology, a concert of the great stars of the Polish stage and several hundred thousand people already supporting Program Czysta Polska association, which is constantly developing and gaining new supporters.

Last year, PAK KWB Konin SA made a number of donations, both in-kind and financial, the beneficiaries of which were local communes, parishes and social organizations. The boulders were handed over to the Municipal Office in Konin and Ślesin commune along with transport and loading. In addition, Ślesin and Kleczew communes received sand with loading, and Wierzbiniek commune and Hunting Association no. 27 "Rosochacz" in Kleczew, land with loading. The addressee of the donation in the form of gravel along with the loading was one of the inhabitants of Kramsk commune. In turn, the company donated an old-use tape to the Secondary School in Koło. Help was also given to the Society for Civic Initiatives in Konin - the charges of the Sociotherapy Centre. Society for Civic Initiatives received Christmas and New Year packages. The company has been supporting the organization of harvest festivals in municipalities for many years, last year a subsidy for the preparation of the Harvest Festival was received by the Municipal Cultural Centre in Kramsk. The mine also helped the Association for the Development of the Lubstówek Village by making a donation for the purchase of equipment for a village day room.

On the occasion of Barbórka, PAK KWB Konin SA, as in previous years, sponsored a nationwide sports event. The Sailing Club operating at Konin Mine received a financial donation for the purchase of material prizes for the winners of the XXVII Winter Barbórka Regatta and the service of launching yachts with a self-propelled crane.

As part of last year's celebration of the Miner's Day, donations were made to local parishes. Eight Roman Catholic parishes received donations for the purposes of religious worship.

PAK KWB Adamów SA in liquidation in 2021 granted financial aid to the Roman Catholic Parish under the name of St. Barbara in Turek. 14 Christmas packages were donated to the House for Children and Youth in Kaczki Średnie. Members of the liquidated Mining Orchestra PAK KWB Adamów received a donation in the form of 42 musical instruments and musical equipment.

Tax fees and transformation of ZE PAK SA Group

ZE PAK SA Group, due to the nature and large scale of its operations, has a significant direct and indirect economic impact on the region, especially on the development of the municipalities in which it conducts business. Money transfers in the form of various taxes and para-tax fees (license fees, concession fees, etc.), significantly contribute to the budgets of local governments. For years, many of the richest communes in Poland are mining communes. Although in the case of ZE PAK SA Group, mining and production are spread over several municipalities, the source of fees are not only mines, but also power plants and a photovoltaic farm. For example in **2021**, ZE PAK SA Group companies paid **PLN 187 million** (in 2020 over PLN 207 million and in 2019: PLN 291 million), **of which PLN 135 million** (in 2020 – PLN 157 million and in 2019 it was over PLN 139 million) were the fees for local government. These funds allow, for example municipalities to carry out investment tasks, finance health care, education, etc. At the same time, thanks to the remuneration of employees, who are mostly recruited from local communities, multiplier effects and the local economy is stimulated, including sectors directly unrelated to lignite mining and energy. In 2021, companies from ZE PAK SA Group spent PLN 370 million on employee benefits (in 2020 and 2019 it was PLN 385 and 406 million, respectively). However, you should be aware that the transformation of ZE PAK SA Group, including the gradual phasing out of mines

and production assets, is associated with a visible reduction in the stream of taxes and fees, which is felt primarily by the budgets of local governments. Limiting extraction means lower operating fees, and reclamation of post-mining routes and liquidation of production assets means a reduction in property taxes. Thus, the income of local governments in the areas where operating activities are carried out will shrink. Therefore, ZE PAK SA Group tries to communicate its plans in advance and make people aware of the consequences of the green transformation of ZE PAK SA Group for local governments. It is also trying to compensate for the loss in income with taxes on new real estate by implementing investments such as a 100 hectare photovoltaic farm in Brudzew. Nevertheless, it should be borne in mind that these fees will only partially compensate for the lost revenues of municipalities.

Remaining indirect influence on the local economic and social environment

Heat preservation for Konin

[203-1] Apart from a significant contribution to ensuring stable electricity supplies and co-stabilizing the national energy system, another important dimension of impact on the social environment (in its local approach) is related to the economic use of waste heat that accompanies the production of electricity. For years, some heat has been used for heating purposes, e.g. by Miejskie Przedsiębiorstwo Energetyki Ciepłej in Konin. This approach is extremely rational from both a social and an environmental point of view. For many years, heat was produced with the use of a lignite-based source in Konin power plant. However, for environmental reasons, such production could not be continued. At the same time, however, a simple decision to stop the production of electricity in the Konin plant, which would also result in the suspension of heat production, would be socially unacceptable. It would mean depriving the inhabitants of heat, i.e. hot water and heating. ZE PAK SA Group, wishing to continue to be a heat supplier for the local community, launched a new heat source based on a biomass block for this purpose. The current solution, using a renewable energy source, eliminates the risk of non-compliance with the more stringent environmental standards. The second biomass unit, in addition to the production of energy for the National Power System, will also be an emergency source for heat production in the event of shutting down the biomass heating unit currently operating at Konin Power Plant.

It is also important that all biomass used by ZE PAK SA in 2021 was domestic and certified biomass. Forest biomass and energy wood in the form of chips from orchards and energy willow (agricultural biomass) were purchased. From January 1, 2022, having the appropriate certification formally became obligatory for biomass suppliers.



Local fishery farms and heat production

[203-2] Konin energy basin has a unique, cooling system, based on water cycle. A common name of "jeziora ślesieńskie" includes the following lakes: Gosławskie, Pątnowskie, Wąsowsko-Mikorzyńskie, Licheńskie and Ślesieńskie, which are included in the cooling circulation of Pątnów, Pątnów II and Konin power plants. All the lakes are connected by a channel system of total length of about 26 km and they are forming a closed circulation where the water flow is regulated by culverts and pumping stations. The discharge of waste heat to nearby lakes obviously influenced their ecosystems, but also made these reservoirs especially valuable for fishing and fish farming. Higher temperature of water and its large flow in the channels and lakes caused that in the area of cooling system the breeding fish ponds were located there. Fishing farms operating here are not only the largest producers of sturgeon fish in Poland (Siberian sturgeon, Russian sturgeon, sterlet), but also other species of fish such as European catfish, rainbow trout, amur, silver carp, catfish, carp or ornamental fish. By the use of waters with increased thermic for reproduction, breeding and breeding of thermophilic fish, they are an important producer of fry in the domestic market. The cooperation with ZE PAK SA Group makes the warm water to flow directly through the ponds providing optimal conditions for development of fry and adult fish. One of the farms is taking the water for breeding from Elektrownia Konin precooling water tank and the production is strictly dependent on the conditions made by the power plant, water temperature and its cleanliness, etc. For this reason there is a constant communication and information flow between the fish farms and the power plants. In addition to some of the largest fishing farms in Poland, these areas are known among anglers. Supporting such economic activities, as well as all other forms of social involvement allows compensating partially to social environment the burdens related to the activities of ZE PAK SA Group. It is worth noting that the heat of key importance for fishery farms comes from the plant in Konin,

i.e. a plant where only biomass is burned. Thus, the abandonment of lignite and the extinction of blocks fired with it will not have negative consequences for the fishing farms in the region.

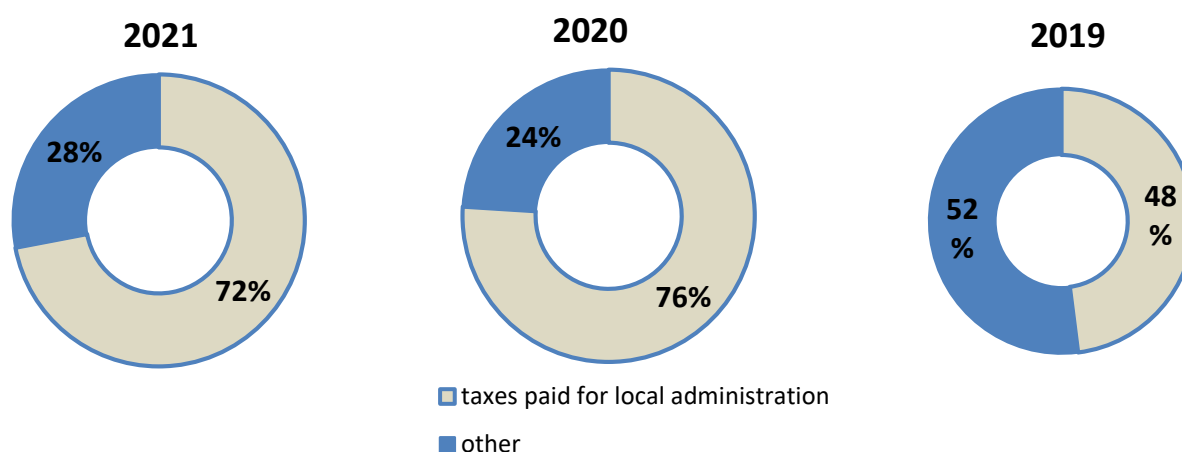


Key indicators

Table 18: Key indicators in the area of social impact

	2021	2020	2019
Number of environmental failures resulting in serious contamination	0	0	0
The amount of damages paid as a result of court verdict in relation to the amount of damages paid out by the Group as a result of a settlement or agreement	5.0%	1.0%	1.0%
Total amount of taxes and para-taxes paid - altogether	PLN 187 m	PLN 207 m	PLN 291 m
Total amount of taxes and para-taxes paid – for local administration	PLN 135 m	PLN 157 m	PLN 139 m

Chart 15: Percentage share of taxes and para-taxes paid to the local administration in relation to the total amount of paid taxes and para-taxes



11.3. Employee issues

Current employee risks and management approach

In the area of human resources management, the ZE PAK SA Group has formal solutions defining the relationships between the employer and employees, resulting from the Polish law, inter alia work regulation resulting from the Labour Code, corporate collective labour agreement resulting from the Labour Code, Company Social Benefits Fund resulting from the act of Social Benefits Funds, in the companies not covered by the provisions of CSBF the remuneration regulations are obligatory. The companies meeting the statutory criteria have their own Staff Councils. The Unions are

also operating in ZE PAK SA Group. In the matters specified by the law the management of ZE PAK SA and other companies inform and consult the decisions with the employee representatives.

Simultaneously, apart from formalized solutions resulting from specific legal provisions or adopted voluntarily (e.g. recruitment procedure), current operational activity is based on a series of solutions and customary forms of behaviour that do not require rigid formalization in the managers' opinion, and at the same time they guarantee the management that is effective and consistent with legal norms and standards of social coexistence. The Group's companies comply with the labour law and they require proper behaviour in relations between the employees as well as between the employees and their superiors.

Corporate collective labour agreements, obligatory in ZE PAK SA Groups in the reporting period, contain the principles of employment and remuneration of the employees. On the other hand, the regulations of the Company Social Benefits Fund define the rules of using and financing of social activity and housing for the benefits of the employees and their family members. Both documents are recorded by the managers, although at the same time collective disputes take place in the Group, which are subject to resolution based on applicable law. In the reporting period, we have 5 collective disputes, i.e. three collective disputes with ZE PAK SA and one each with PAK Kopalnia Węgla Brunatnego Konin S.A. and PAK Górnictwo sp. z o.o. Collective disputes at ZE PAK SA concern an increase in wages and the restoration of provisions from the terminated collective agreement. The collective dispute in ZE PAK SA is in the mediation phase with the participation of an external mediator. In PAK Kopalnia Węgla Brunatnego Konin SA, the dispute concerns an increase in wages and the cessation of restructuring of the company and layoffs. The dispute is in the mediation phase with the participation of an external mediator. At PAK Górnictwo, the collective dispute concerns an increase in wages and the willingness of the unions to conclude a collective agreement. The collective dispute is already after the mediation phase and the trade unions held a referendum among the workers whether they intend to go on strike. Trade unions were mandated to strike, but they did not start a strike. In the reporting period, negotiations with trade unions were initiated on the conclusion of a new collective labour agreement at ZE PAK SA. The final result of the negotiations was the signing of a new collective labour agreement for employees of ZE PAK SA on October 19, 2021. The agreement entered into force on January 1, 2022.

Meanwhile, in companies such as PAK –Volt SA (trading in electricity, office work) significant from the point of view of the generated revenues, but with very little employment and work specificity without any significant health and safety risk, formalization of labour relations and related procedures are minimal and limited to legal requirements.

Basic aspects associated with the human resources management have been determined in the Strategy for Corporate Social Responsibility of the ZE PAK SA Capital Group for 2017-2020, the directions of which were maintained until the completion of work on the optimal shape of the organization and the development of a new functional strategy in the ESG area.

Provision of human resources and their restructuring

The companies of ZE PAK SA Group, against the background of the local and rather small labour market, are perceived as a stable and trustworthy employer.

At the same time, however, the restructuring process that had been going on for many years meant that most of the vacancies had been filled for years based on internal recruitment (in other words, the employment of people working in ZE PAK SA Group was protected by shifting between individual departments, plants and companies). For a long time, focusing in recruitment processes on people already employed in the companies of ZE PAK SA Group means that there is no significant inflow of young employees and makes the average age of employees increase. The aging of the workforce, turns into an increase in the number of people retiring. While earlier such a phenomenon was perceived as a certain drawback, in the era of transformation of the ZE PAK SA Group, it gives a chance for a less painful implementation. The phasing out of lignite mining and conventional energy based on the combustion of this fuel will mean the gradual liquidation of jobs both in the mining industry and in the power plants themselves. The shutdown of production in some plants is already underway. It is enough to mention the closed Adamów Power Plant and the accompanying mine. As far as possible, employees were, are and will be transferred, for example, to other open-pit mines, but it will not be possible for all employees. To some extent, it will be possible to alleviate the social costs of extinguishing production by reaching the retirement age by employees and retirement, especially in mining, and potentially to the so-called mining leave due to persons approaching retirement age. The job destruction process will be spread over time, which will also alleviate social costs, but it will not be possible

Dialogue with the social side

A potential source of risk in the employee area may be protracted collective disputes. Therefore, the dialogue with the representatives of the crew allows for the identification of potential sources of problems, and on the other hand, it gives a chance for a reliable and comprehensive presentation of the limitations within which the companies of ZE PAK SA Group operate. In the era of energy transformation, trade unions are extremely constructive and active, supporting initiatives close to ZE PAK SA Group itself, and part of the so-called just transformation. This term is understood as a way of declining from fossil fuels that would not place an excessive burden on communities associated with, for example, mining regions. Eastern Wielkopolska is such a region. At the same time, ZE PAK SA Group actively joined the work of the so-called "Coal platform", i.e. a structure at the EU level, which is to prepare a framework for financial and organizational support programs for regions related to coal mining in Europe. Thanks to common goals, it is easier to cooperate. While there are still areas where managers and representatives of the community side have different opinions, it is worth noting the aforementioned constructive cooperation.

Health and safety

[403-1, 403-2] Another dimension of the risk associated with employees is occupational risk in terms of occupational health and safety. It is strongly dependent on the risks associated with the arduousness of working at a specific workplace, and all activities in the area of occupational health and safety management focus precisely on the elimination or reduction of hazards and on minimizing the consequences of accidents, if such occur, based on an occupational risk assessment.

Similarly to earlier areas, the most significant ways of activities associated with the health and safety risk management have been described in the Strategy for Corporate Social Responsibility of ZE PAK SA Capital Group for 2017-2020 and maintained in force until a new functional strategy in the ESG area is developed.

Simultaneously, it is important to remember about the obligatory certified management systems covering the issues of security management, including:

- the process of electricity and heat production with all the auxiliaries, identified environmental aspects, performed occupational risk assessment on the basis of identified hazards related to the arduousness of work as well as legal and other requirements (ZE PAK SA - in line with the health and safety dimension PN-ISO 45001:2018),
- works in scope of renovations and service of power engineering equipment, industry construction services, management of investments in power engineering and industry, as well as modernization and maintenance of automation and electrical systems in power engineering (Przedsiębiorstwo Remontowe PAK Serwis sp. z o.o. – in line with health and safety dimension PN-ISO 45001:2018).

Their goal and the objective of the Corporate Social Responsibility Strategy of ZE PAK SA Capital Group for the years 2017-2020 is to minimize the level of accidents, with particular emphasis on the elimination of events with severe and fatal consequences and undertaking organizational and technical measures aimed at eliminating or reducing the exposure of workers to harmful factors occurring in the work environment like noise and pollution to a level compliant with the standard. Simultaneously, selected management aspects, falling within a broader scope of health and safety management, are regulated by internal principles, instructions, business orders and ordinances.

COVID-19 Pandemic

In 2020 and 2021 the actions taken by the Health and Service services in the Group were very much determined by the SARS-CoV-2 coronavirus pandemic spreading among people at an unpredictable pace. In order to ensure the safety of employees and to minimize health risks, preventive measures have been taken. In the entire ZE PAK SA capital group, working teams have been set up to analyse the situation related to the coronavirus threat on an ongoing basis, developing internal legal acts, instructions and procedures. Instructions were developed in the event of a special quarantine for employee, and the places for their quarantine as well as procedures in the event of a sudden illness of an employee were secured, and isolation rooms were designated for them. Meetings and deliberations were forbidden, and the circulation of paper documents was limited. In all buildings and facilities as well as in the internal IT network INTRANET, a propaganda and information campaign was carried out, consisting in publishing information and presentations made available on the official websites of the Republic of Poland Service, the Ministry of Health and the World Health Organization. All wash basins in the plant are equipped with antibacterial soap dispensers, dispensers with disposable paper towels and hand washing instructions.

Containers with hand sanitizing liquid have been placed at the entrance doors to buildings and facilities on the premises of the plant, as well as at the entrance gate to the plant premises. Containers with disinfectant liquid for disinfecting surfaces, devices, computer keyboards, telephones, etc. are located on all basic machines, where employees operate

work desks, as well as in offices. Before entering the premises of the plant, all persons are subjected to body temperature measurements with the use of non-contact infrared thermometers. Protective masks, disposable gloves, goggles and protective coveralls were purchased to protect the employees. Additionally, air purifiers with UV lamps that destroy viruses, including the SARS-CoV-2 coronavirus, were purchased for office rooms, control rooms and conference rooms. A service of an external company was purchased, which disinfects workstations and social rooms on machines and facilities as well as in offices and locker-rooms. The objects and surfaces that employees have contact with (door handles, handrails, worktops, etc.) are decontaminated on an ongoing basis every day.

Mining

[403-1, 403-2] The mining part is the only one from three main areas where certified management system according with PN-ISO 45001:2018 was not implemented. The management of health and safety risk works on the basis of Ordinances of the President and Ordinances of Manager of mining plant. The regulations apply to all areas that involve the possibility of threats to proper and safe fulfilment of their duties by employees. Examples of issues covered by the ordinances include: occupational risk related to work performed, list of works requiring special psychophysical predispositions, safety of exploitation of used equipment, medical assistance, periodic and control tests, medical examinations and many others.

Typical threats accompanying opencast lignite coal mining should be divided into natural and traumatic hazards. The last ones, potentially connected with the machines work, particularly their rotating elements, dangerous in consequences but they happen very rarely, mostly due to the activities of health and safety service and the employees' awareness. In recent years, in practice, if there were accidents, these were light accidents: dislocations, sprains and occasional fractures. As for the natural hazards, they can be divided into landslide (scarp escaping), methane (emergence of gas in drainage wells), fire and water (associated with: atmospheric precipitation, neighbourhood of natural reservoirs and watercourses or watercourses in the excavation).

In 2021, PAK KWB Konin SA carried out activities aimed at improving the health and safety conditions in the mining area, in accordance with the adopted annual health and safety improvement plan. The cabins of operators of basic machines, such as excavators and stackers, were renovated, which allowed to reduce noise emissions in the cabins and to improve the technical equipment of the machines. Air conditioning units have been repaired and installed in the operator's cabins of basic machines in order to improve the working conditions in the summer period. Likewise, replacing the seats for primary machine operators has reduced the level of workers' exposure to vibration.

Flashlights were replaced, and new equipment and power tools were purchased along with accessories (hammers, drills, grinders, impact wrenches, etc.) in order to eliminate heavy and dangerous manual labour. In addition, a new entrance to the swing portal was made on the SRs-1200/3 excavator and the loading boom winch clutch cover was installed on the RS-560/3 excavator to improve the technical production equipment. Employees were purchased and equipped with HYT radios. In order to eliminate the risks associated with electric shock, cordless power tools were purchased. The markings of the installation of emergency stop buttons on the conveyors (the so-called "lines") have been renewed. Information and warning boards in switchgear containers on excavators, conveyors and cable gates were replaced.

As for the activities carried out in 2020 to improve the health and safety conditions in the mining area at PAK KWB Adamów SA in liquidation, on the basis of the expertise specifying the geotechnical conditions of the slopes of post-mining reservoirs at the stage of further filling in terms of stability of dump and native soil, carried out by the State Geological Institute, monitoring and securing of landslides in Koźmin opencast mine was carried out. The groundwater and surface waters of the regions within the impact range of the open-pit mines were also monitored.

In order to improve safety and eliminate the risk of accidents, lighting was carried out on communication routes in Warenka technical facility development site by installing additional lighting points. The monitoring system of the coal loading yard in Adamów open pit was also expanded by installing additional cameras. In order to eliminate the risks resulting from the poor technical condition of the 6kV switching station, a new type of substation was installed, supplying the technical facilities of Bogdałów.

In connection with the epidemic situation throughout the country, to ensure the safety of employees and to minimize health hazards in PAK Kopalnia Węgla Brunatnego Adamów SA in liquidation and PAK Kopalnia Węgla Brunatnego Konin SA, preventive and preventive measures were taken by disinfecting places of frequent direct contact, in particular door handles, handrails, providing containers with hand sanitizing liquid, measuring body temperature before entering the premises.

To protect employees, protective masks, disposable gloves, goggles and protective coveralls were purchased.

A procedure for dealing with suspected SARS-CoV-2 infection at the workplace has been developed, off-road vehicles with a separate passenger cabin have been designated and secured for the possible transport of an employee suspected of

being infected with coronavirus. A safe isolation room was designated, where an employee suspected of being infected with the coronavirus could wait for PSSE decisions or possible transport to a designated hospital with an infectious disease ward.

Conventional generation

[403-1, 403-2] In the area of production at ZE PAK SA, as already mentioned, occupational health and safety management is carried out on the basis of the Integrated Management System procedures in accordance with the PN-ISO 45001: 2018 standard. At the same time, activities in the area of health and safety are regulated by the orders of the President of the Management Board and the Vice President managing the production division, relating to broader aspects, but also covering health and safety issues.

The key documents defining the procedures for the safe operation of energy equipment include, in particular, the Instructions for the Operation of Electricity Equipment, the Instructions for the organization of safe work with energy equipment at ZE PAK SA and the official instructions of the Vice President managing the production division and the Director of Pątnów-Adamów-Konin Power Plant as well as Integrated Management System procedures in accordance with the PN-ISO 45001 standard, which include, in particular, the documentation of occupational risk assessment.

Based on the identification of hazards at workplaces, the employer assesses and documents the occupational risk related to the work performed and applies the necessary preventive measures to reduce this risk. Documented occupational risk assessment is a tool that allows the people managing employees to optimally and effectively use technical and organizational measures aimed at eliminating or minimizing the level of risk related to hazards that may be a source of an accident at work or an occupational disease. If the applied technical and organizational protection measures are insufficient, the assessment shall specify the individual protection measures necessary for the application. The procedure for carrying out the risk assessment and the templates of the documents used are specified in the procedures of the Integrated Quality, Safety and Environmental Management System. Informing employees about occupational risks and the principles of protection against threats takes place each time after updating, and in addition, as part of the implementation of training programs in the field of occupational health and safety, the knowledge of the risks associated with the work and methods of protection against these threats is updated and supplemented.

Annual analysis show that repairs and renovations carried out over the years, and most of all decommissioning of old and construction of new devices and installation, including generation units (boiler 7 in Konin power plant), in addition to improvement of production efficiency and reduction of negative influence on natural environment, undoubtedly contribute improvement of employees working conditions and technical safety at work through elimination or reduction of danger to health and life of the employees.

The only factor harmful to health that occurs in the work environment at ZE PAK SA above the permissible hygienic standards is noise. Exceedances result from such elements as boilers, turbines, pumps, fans, conveyors, transmission gears, engines, clutches, etc. The number of people exposed to this harmful factor is systematically limited by taking action organizational and technical. Thanks to the effectiveness of the implemented corrective actions and through the proper organization of work, the exceedances of the highest allowable concentrations of harmful agents in the work environment, which are dust and hydrazine, have been eliminated. Another group of hazards are dangerous factors, whose impact on the employee can lead to injury or death. These include, in particular, particularly hazardous works and works that create the possibility of a particular threat to human health or life. The most important factors in this group are: high temperature, high pressure, electric current, explosive atmosphere and moving machine parts.

The factors associated with the arduousness of work include insufficient lighting and employment at night. The number of those exposed to these nuisance factors is systematically reduced by undertaking organizational and technical measures (switching off worn out production equipment, repairs and maintenance of lighting installations).

At ZE PAK SA, there are also factors and work processes that pose a particular threat to health or life. These include: chemical, carcinogenic and biological factors. With regard to chemical agents, the hazard identification and occupational risk assessment performed showed the use of chemical agents belonging to the group of corrosive agents, as well as irritating and sensitizing agents. Managers of organizational units have lists of used hazardous chemical substances and data sheets of these substances. Employees confirm in writing that they have read the safety data sheets and the occupational risk assessment. The health and safety service prepares registers and data required by law, which are transferred to the competent state provincial sanitary inspector and the competent district labour inspector, as well as to the basic unit of the occupational medicine service for the purposes of health prevention. In contact with biological agents, employees are employed, whose duties include the operation of biomass transport equipment (contact with fungi) and the operation of sewage treatment plants and chemical analyses of domestic sewage (contact with pathogens occurring in domestic sewage and sewage sludge). On the basis of the occupational risk assessment, the presence of biological agents belonging to group 2 of the hazard was identified, that is: factors that can cause diseases in humans, may be dangerous to

workers, but their spread in the human population is unlikely. There are usually effective methods of prevention or treatment for them". Workers professionally exposed to biological agents were offered available vaccinations against these threats. Vaccinations, for which the majority of employees have agreed, are performed as part of preventive healthcare.

In 2021, several investment tasks were implemented to increase the level of occupational health and safety, such as: commissioning of the largest photovoltaic farm in Poland in Brudzew with a capacity of 70 MW and completion of the modernization of the K7 boiler at Konin power plant, fired with biomass, and the produced electricity from biomass is to be used for the production of "green" hydrogen.

Due to the epidemiological situation caused by the spread of the SARS-CoV-2 coronavirus, ZE PAK SA appointed a team by order of the President of the Management Board to assess the risk of coronavirus infection and introduced procedures to minimize health hazards and minimize the risk of coronavirus infection. The OHS service in the sanitary regime carried out inspections of workstations and compliance with health and safety regulations and rules. Due to the pandemic, the review of working conditions was carried out using remote communication techniques (email, telephone). After consultations carried out by the OHS Committee with the use of remote communication techniques, inspection reports were sent to the Director of Pątnów-Adamów-Konin Power Plant, who issued official orders regarding the deadlines for implementing the conclusions of the inspection and the persons responsible for their implementation.

Service

[403-1, 403-2] In the renovation segment (PAK Serwis Sp. z o.o.) the risk assessment includes all the workplaces, stationary as well as extramural ones. The risk assessment is carried out once for three years and each time, in case of any changes, reported at workplaces or after an accident. Health and safety department keeps a register of all the workplaces being the subject to occupational risk assessment.

The so-called last minute risk analysis is carried out as well - before the work starts the employees identify the potential threats at their workplaces using the LMRA card for this purpose. In this way the works and areas of operation associated with the significant threats are being identified. For each and every significant threat the way of procedure and supervising is determined, providing compatibility with legal and other regulations of health and safety.

Due to the current health and safety management the following procedures are of the special importance:

- „Training in scope of health and safety and environment protection”,
- „Identification of threats and occupational risk assessment”,
- „Health and safety and environment monitoring”,
- „Serious failures”,
- „Organization of works of significant threats”,
- „Accidents and occupational disease investigation”.

Annual analyses show that most of the accidents in service work result from the improper behaviour of the employees, i.e. by failure to exercise due caution and concentration on the performed activity. The most common cause of potentially accidental events, on the other hand, is the failure to carry out the risk assessment before the task starts. The basic factors posing a threat to the health and life of employees related to the work environment are noise, work at height, optical radiation (UV and IR) and dust containing crystalline silica, and the factor related to the nuisance of work is a forced body position. Within post-accidental prophylaxis the employees are acknowledged with the circumstances and reasons of the accidents, additional instructions are given, and the information on accidents are provided to the services of ZE PAK SA (in these cases where the cause related to energy devices was found). Sometimes, it is also possible to impose administrative fines on the person supervised, in relation to whom non-compliance with health and safety regulations was proven, in connection with the accident. The employees of the Health and safety Office carry out inspections in the scope of compliance with health and safety rules and regulations, as a result of which, in the most common cases, the so-called non-compliance card and applications for imposing a penalty are given out. In the prepared business notes or protocols after the inspections carried out, the most common recommendations regarding disorder at the workplace and improper technical condition of the work means are registered. Also the duty to perform inspections of workplaces is carried out by supervisory employees (senior masters and managers), which is documented by checklists. In the past period, the Health and Safety Service put great emphasis on the correct selection of workwear and personal protective equipment for line workers. A checklist was developed in this respect and an inspection was performed on its basis in each month of the previous year.

The employer's obligation to provide employees with safe and hygienic working conditions at PAK SERWIS was implemented in 2021 as follows:

- a) with technical means, the following were purchased:
- MELEX cart - 1 pc

- VOLVO wheel loader - 1 pc
- welding helmets with ventilation - 4 sets
- Kawasaki BX100L industrial robot - 1 set
- Wiwa Professional painting unit - 1 set
- palletizing station - 1 set
- b) with organizational measures:
 - workshop rooms for three groups of workers were painted;
 - a group of employees were trained in the use of handling equipment, first aid and individual SCC certificates.

Ancillary activity – maintenance and service

[403-1, 403-2] PAK Górnictwo sp. z o.o. carries out work related to maintenance and repair services of PAK KWB Konin SA. Works at PAK KWB Adamów SA in liquidation are carried out in the field of reclamation of post open-pit mines land. PAK Górnictwo sp. z o.o. until December 31, 2021 also dealt with industrial cleaning on the premises of ZE PAK SA. An additional activity is the production of water, which will be completed at the end of April 2022. As part of the capital group, the company conducts waste collection, which it then transfers to authorized entities. The company employs approximately 1,235 employees, most of them work in the Mining Plant Movement. The Health and Safety Service conducts post-accident proceedings in respect of any work-related accident that occurs in the areas of the company's operations. For each accident at work, an accident order is made on the basis of which the employees are familiarized with the circumstances of accidents and indicates the reasons that affect the occurrence of an accident. Information about accidents is also provided to the services of ZE PAK SA and PAK KWB Konin SA. Analyses of the causes of the accident show that the most common cause of accidents is inappropriate behaviour of employees, i.e. failure to exercise due care and concentration on the work performed. An occupational risk assessment has been prepared for all positions in accordance with the Polish Standard PN-N-18002 on a five-point scale. Measurements of harmful factors in the work environment are carried out on a regular basis based on the instruction of supervision over measurements of factors in the work environment. The basic harmful factors in the work environment are noise, vibration, dust and, to a lesser extent, chemical factors, and the night-time factor is a factor related to the nuisance. The measurement results and registers are in the OHS office. On the basis of factor studies in the work environment, organizational and technical programs are prepared to reduce exposure to their negative impact. Employees of the OHS Office conduct checks on the compliance with health and safety regulations and rules on an ongoing basis. A protocol is drawn up for each inspection. Post-inspection recommendations are implemented by management personnel. On the basis of official orders, reviews of working conditions are also carried out. Recommendations from such a review are sent to the company's Management Board. Recommendations that do not require financial outlays are implemented immediately, while the decision to implement the conclusions of the review that require financial outlays is made by the Management Board of the Company. Due to the epidemic situation in the country, a team consisting of the company's employees was appointed in ZE PAK SA. The task of the team is to monitor the situation related to the development of the COVID-19 threat. Based on the findings of the above team, a coordinator was appointed in the company. The main tasks of the coordinator include the analysis of the situation related to the threat of coronavirus, as well as the implementation of internal legal acts, instructions and procedures. PAK Górnictwo has taken a number of measures to minimize the risk of COVID-19 infection. On the basis of orders and instructions, employees were informed about the introduced restrictions related to the pandemic. In order to minimize the risk of infection, disinfection of places of frequent direct contact, rotational and remote work, training courses were suspended, business trips and meetings were reduced to a minimum, workplaces were equipped with disinfectants, and employees were equipped with protective measures such as disposable gloves and reusable masks. A procedure for dealing with suspected SARS-CoV-2 infection at the workplace has also been developed, off-road vehicles with a separate passenger cabin have been designated and secured for the possible transport of an employee suspected of being infected with coronavirus. Internal legal acts are also prepared on an ongoing basis, such as ordinances, orders regarding organizational arrangements that directly or indirectly relate to health and safety issues and work ergonomics, i.e. affecting the provision of safe and hygienic working conditions in the company. Instructions are prepared and updated regarding the performance of works and the operation of machines, devices and tools, methods of handling chemical substances and their mixtures or hazardous materials, along with the hazards that may arise in the work process and the methods of avoiding them or limiting these effects.

New business areas

[403-2] New areas of activity related to the production of energy from renewable energy sources (RES), nuclear energy and hydrogen production will be associated with threats other than the present ones in the work environment. In the case of investments in photovoltaics that have already been initiated on a larger scale, one can of course talk about the risk of electric shock, but the level of threats is incomparably lower than in the case of some positions in lignite mining or conventional energy. On the other hand, the planned investments in nuclear power will be associated with exposure of certain workplaces to radiation and the need to ensure adequate radiological protection in order to eliminate them.

Although the assessment of specific positions in terms of threats in the work environment will be possible only at a more advanced stage of individual investments, it can be assumed that the exposure of people to the risks associated with hazards in the work environment will be lower than at present. Thus, the risks associated with arduous work in these OHS positions will be rather lower than today.

Key indicators

Table 19: Employment structure at the end of the year by type of contract (in persons at the end of subsequent periods) [2-7, 2-8]

	2021			2020			2019		
	women	men	total	women	men	total	women	men	total
<i>By type of contract</i>									
Work contract for an indefinite period	333	3 092	3 425	364	3 498	3 862	407	3 955	4 362
Work contract for a definite period	7	59	66	4	99	103	7	181	188
Work contract for a trial period	0	5	5	1	6	7	0	17	17

Table 19a: The structure of persons cooperating based on the civil-law agreements (at the end of subsequent periods) [2-7, 2-8]

	2021			2020			2019		
	women	men	total	women	men	total	women	men	total
Civil-law agreement	13	79	92	16	78	94	12	87	99

Chart 16: Percentage share of individual forms of employment by type of contracts

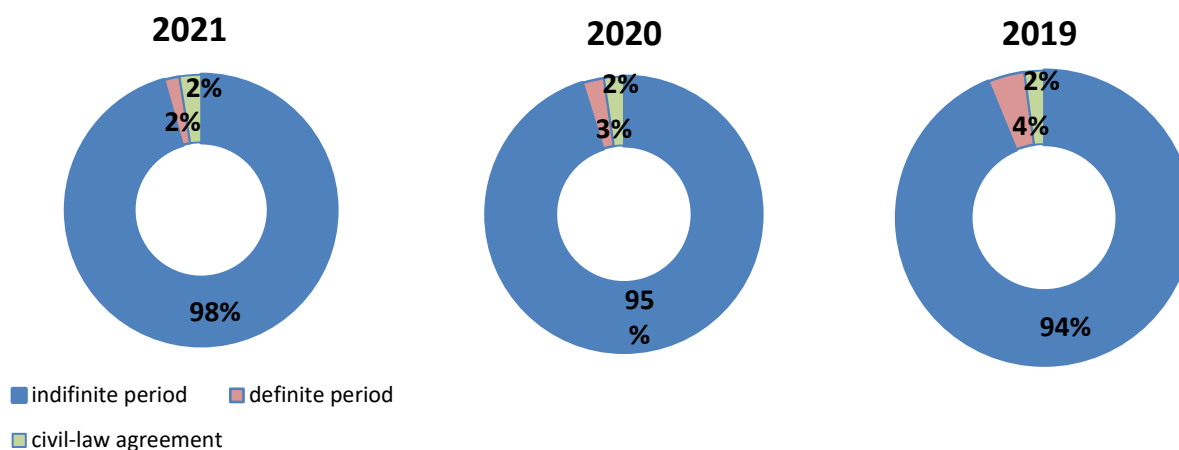


Table 20: Employment structure at the end of the year by type of position, education and age (in persons at the end of subsequent periods). The structure does not include the civil-law agreements [2-7, 2-8]

	2021			2020			2019		
	women	men	total	women	men	total	women	men	total
<i>By type of position</i>									
Managerial position	45	259	304	35	183	218	37	181	218
Non-managerial position	295	2 899	3 194	333	3 421	3 754	376	3 973	4 349

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	2021			2020			2019		
	women	men	total	women	men	total	women	men	total
<i>By type of position</i>									
<i>By education</i>									
Higher (bachelor, master, postgraduate, doctorate, professor)	206	764	970	210	801	1 011	223	883	1 106
Medium (high school, technical college, college, post-secondary)	123	1 206	1 329	137	1 384	1 521	164	1 591	1 755
Professional (basic, learning a profession)	11	1 028	1 039	16	1 216	1 232	19	1 423	1 442
Basic (elementary, junior high)	5	155	160	6	202	208	8	256	264
<i>By age</i>									
Up to 30 years old	4	157	161	13	197	210	15	289	304
31 to 40 years old	56	538	594	56	608	664	61	715	776
41 to 50 years old	100	1 128	1 228	103	1 397	1 500	116	1 714	1 830
Over 50 years old	185	1 330	1 515	197	1 401	1 598	222	1 435	1 657
Total	345	3 153	3 498	369	3 603	3 972	414	4 153	4 567

Chart 17: Percentage share of particular age groups in the employment structure

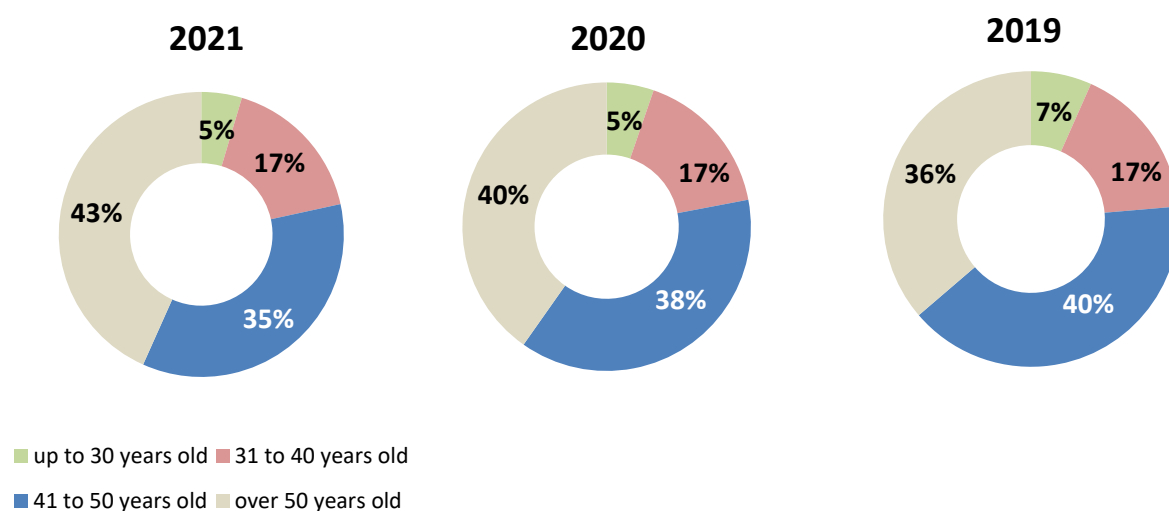


Table 21: Newly employed during the year (in persons in the given period) [401-1]

	2021			2020			2019		
	women	men	total	women	men	total	women	men	total
Up to 30 years old	0	27	27	1	14	15	4	23	27
31 to 40 years old	1	21	22	4	12	16	18	28	46
41 to 50 years old	6	24	30	8	20	28	37	55	92
Over 50 years old	2	28	30	10	28	38	83	74	157
Total	9	100	109	23	74	97	142	180	322

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<i>% new employees in the Group</i>	2.61%	3.17%	3.12%	6.23%	2.05%	2.44%	34.30%	4.33%	7.05%
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Table 22: Leaving the work during the year (in persons in a given period) [401-1]

	2021			2020			2019		
	<i>women</i>	<i>men</i>	<i>total</i>	<i>women</i>	<i>men</i>	<i>total</i>	<i>women</i>	<i>men</i>	<i>total</i>
Up to 30 years old	3	26	29	1	57	58	8	87	95
31 to 40 years old	3	83	86	4	115	119	22	85	107
41 to 50 years old	8	193	201	9	185	194	44	197	241
Over 50 years old	26	272	298	48	262	310	124	283	407
Total	40	574	614	62	619	681	198	652	850
<i>% rotation</i>	11.59%	18.20%	17.55%	16.80%	17.18%	17.15%	47.83%	15.70%	18.61%

ZE PAK SA CAPITAL GROUP
MANAGEMENT BOARD'S REPORT FROM THE CAPITAL GROUP'S OPERATION IN 2021

Table 23: Diversity in the boards of the Company (in persons at the end of subsequent periods) [405-1b]

	2021			2020			2019		
	women	men	total	women	men	total	women	men	total
<i>Management Boards of Group's companies</i>									
Up to 30 years old									
31 to 40 years old		1							
41 to 50 years old	2	8	10	1	9	10	2	4	6
Over 50 years old		14	14	0	11	11	1	8	9
Total	2	23	25	1	20	21	3	12	15
<i>Supervisory Boards of Group's companies</i>									
Up to 30 years old									
31 to 40 years old									
41 to 50 years old	1	8	9	1	8	9	1	5	6
Over 50 years old		7	7		7	7	1	7	8
Total	1	15	16	1	15	16	2	12	14

Table 24: Accidents at work [403-9]

	2021	2020	2019
Total number of accidents (injured), including:	37	23	42
– Light	35	22	42
– Serious	0	1	0
– fatal	2	0	0
Number of lost days	1842	1 909	2 079
Frequency ratio of injured in total accidents (per 1000 insured)	7,9	7,9	9,7
Frequency ratio of injured in serious and fatal accidents (per 1000 insured)	0,254	0,355	0,293

Table 25: Occupational diseases [403-10a]

	2021	2020	2019
Number of confirmed occupational diseases	0	0	1

Table 26: Number of employees exposed to health harmful factors and those connected with the work burdens (in persons at the end of subsequent periods) [403-10b]

	2021	2020	2019
Noise	129	153	197
Dust	0	0	0
Insufficient lighting	141	130	146
Energy expenditure	420	555	740
Nuisance at work – night shift work	1383	1 628	1 816

11.4. Environmental issues

Impact of ZE PAK SA Group's transformation on the environment and future risks

The transformation of the ZE PAK SA Group towards a sustainable economy will bring benefits that are difficult to overestimate, mainly related to a huge decrease in greenhouse gas emissions from the combustion of non-renewable minerals. The emission from biomass combustion, although it does exist, of course, does not affect the CO₂ balance in nature. The same biomass, if it had not been burned and subjected to decay processes, would have released significant amounts of carbon dioxide into the atmosphere from the oxidation of the carbon in it during its decay. Therefore, combustion of biomass is considered to be neutral for the climate and, most importantly, it is a renewable fuel. Along with reducing combustion, emissions of other pollutants into the air (SO₂, NO_x, dust and resulting from kBAT) as well as the amount of generated waste (by-products) and sewage will be limited. The abandonment of lignite mining will allow to avoid interference with the surface of the site associated with the construction of an open-cast mine, impact on surface and underground waters, as well as noise and dust associated with obtaining the raw material.

As mentioned earlier, the gradual decommissioning of the pits also means a gradual restoration of natural water conditions, not disturbed by the artificial drainage of the mining area. Where land reclamation involves water reclamation, water reservoirs will be created, which will be part of the nationwide water retention activities and counteracting the effects of drought. However, during the transitional period, the restoration of natural water conditions may be associated with their periodic disruption, which will result from the filling of the depression craters with water and the associated reduction in the amount of water in some watercourses on the surface, which will no longer be supplied with water pumped out from the areas mining.

At the same time, however, new investments will be associated with other types of environmental impact, which will be the source of specific risk categories. Nevertheless, it is worth noting that the scale of these threats, and thus the exposure of ZE PAK SA Group to environmental risk in the case of already implemented investments, will be much smaller. For example, in the case of photovoltaic farms, at the stage of their operation, we can only talk about a disturbance of the landscape. ZE PAK SA Group is also observing with interest projects that allow the use of farm land, e.g. for sheep grazing. In turn, in the case of wind energy, apart from significant disturbance to the landscape, it is worth pointing to the threat that turbines can pose to birds.

New types of activity should not be a source of such serious nuisance to the social environment as today are, inter alia, lignite mines. Although the built photovoltaic farm covers an area of about 100 ha, it was located on reclaimed post-mining areas, thanks to which its creation did not involve the exclusion of land from agricultural production, land purchases or relocation of residents. There are no larger groups of people in its immediate vicinity. Besides, the impact of the solar farm itself, apart from the transformation of space, is limited.

The current technologies and the level of securities used in modern nuclear reactors minimize the risk of radiological contamination. In practice, these solutions eliminate scenarios of events analogous to the Chernobyl or Fukushima reactor disasters.



Zero-emission hydrogen buses and the avoided emission

Experts of the company Polski Autobus Wodorowy, part of the ZE PAK SA Group, estimated that replacing one diesel bus with a hydrogen bus enables the avoidance of CO₂ emissions at the level of 94.69 tons per year (per bus), i.e. 7.89 tons per month.

For the period of 10 years, projected as the average depreciation period of a hydrogen bus, this gives savings of almost 1,000 tonnes of CO₂ throughout the entire period of operation (in the case of long-distance buses, the benefits per bus may reach over 3,000 tonnes of CO₂ for the same period of operation).

The estimated environmental effect of the Project is based on the methodology used by the European Commission under support programs (including the Innovation Fund) for projects related to the use of emission-free hydrogen for transport.

Buses with hydrogen drive combine the advantages of conventional buses and electric buses. They do not emit CO₂ during use, as is the case with buses running on conventional fuels. Additionally, thanks to the modularity of the designed bus, it is possible to offer the performance currently available only in conventional units, and currently not available in the case of existing hydrogen buses and electric buses. At the same time, the refuelling time of hydrogen buses is comparable to the refuelling time of a diesel bus and significantly better than the time of charging an electric bus.



Current environmental risks and management approach

As in the case of other areas, the principles of the policy and management approach of ZE PAK SA Group to environmental issues are defined in the Corporate Social Responsibility Strategy of ZE PAK SA Capital Group for 2017-2020 and at the level of operational management, the directions indicated in this document remain valid until the optimal shape of the new organization, and then developing and adopting a new functional strategy in the ESG area. Simultaneously, it is important to remember about the obligatory certified management systems covering the environmental issues, including:

- the process of electricity and heat production with all the auxiliaries, identified environmental aspects, threats, legal and other requirements (ZE PAK SA),
- works in scope of installations, renovations and service of power engineering and industry equipment, industry construction services, management of investments in power engineering and industry, as well as modernization and maintenance of automation and electrical systems in power engineering (Przedsiębiorstwo Remontowe PAK Serwis sp. z o.o.).

They contain the environmental policies of selected companies with particular procedures periodically reviewed and optimized. Their goal as well as the objective of the current Corporate Social Responsibility Strategy of ZE PAK SA Capital Group for the years 2017-2020 is to provide stable and safe lignite mining, energy production and service and modernization work for the environment.

Simultaneously, selected management aspects, falling within a broader scope of environmental management, are regulated by internal principles and ordinances. They often reflect not only the legal regulations in force in the country, but also specific administrative decisions, permits or environmental impact reports relating to a specific project, facility or installation. The latter, i.e. environmental impact reports, and their detailed description of the foreseen activities of the planned project on the environment, constitute in itself an obligatory reference point for the managers of particular

facilities and installations. This approach is extremely important. It should be realized that not universal management systems, but environmental impact reports, on the one hand refer to the specificity of the conditions of a given investment, and on the other, unlike many other procedural solutions, they are created through dialogue and open consultations with the environment. Therefore, solutions minimizing the impact on the natural environment are developed with the participation of stakeholders (local government, administration, local community, environmental organizations). They also recognize the unique specificity of each place, which is important, for example, in the case of opencast mines because even if they are located close to each other, the prevailing conditions (e.g. geological, hydrological, location of human settlements) will be at most similar but not identical. Therefore, the approach to environmental management and limiting the negative impact on the natural environment may also be similar, but not identical.

The starting point for policy and procedures based on it is the nature of the impact of business operations on the natural environment. It is associated with identified risks, to which specific and constantly improved procedures and technological solutions correspond. Defining briefly the nature of the impact on the environment, they should be divided into the impact associated with mining (lignite mining) and energy production.

In case of **open pit mines**, basic aspects of influence on natural environment are the following:

- **impact on the surface area** - opencast mining of minerals consists in the transformation of the land surface, instead of the land that was originally used, spatial terrain forms (excavation, heap) and accompanying infrastructure (conveyors, transport routes, facilities),
- **impact on surface waters** (including reduction of flow in watercourses under the influence of the mine's operation and increase of flow in watercourses due to discharge of water coming from underground drainage and surface opencast),
- **impact on groundwater** (formation of the so-called depression funnel due to the drainage of open-cast mines),
- **noise emission** (basic machines related to the operation of the overburden and its dumping, basic machines mining coal, coal and overburden conveyors, road transport),
- **influence of mining objects on the atmospheric air:**
 - dust emission: technological (mechanical), i.e. associated with mechanical mining and transport of the raw material with conveyor belts; climatological, i.e. related to wind erosion of vegetation-free areas;
 - organized emissions of pollutants into the air from the boiler room providing heat for social facilities mine,
- **an influence on valuable natural area** (in case when the valuable natural area is located in the zone of influence),
- **hazards associated with electromagnetic fields.**

In case of **producing energy in conventional lignite and biomass power plants** the following aspects of influence on the environment are to be distinguished:

- **emissions of compounds accompanying coal combustion, e.g. CO₂, SO₂, NO_x**
- **dust emissions,**
- **noise generation** (e.g. due to the operation of power unit turbines),
- **waste generation** (in the process of lignite combustion and flue gas cleaning),
- **possible oil leaks, mazout and acids spills, resulting in local contamination of the ground and water environment,**
- **heating of surface waters, lakes** (due to the use of lake surface waters in the cooling process),
- **leakage of ash pulp or supernatant water to the soil and water environment,**
- **emission of industrial wastewater,**
- **emission of electromagnetic fields,**
- **terrorist threat that may result in environmental contamination.**

The individual aspects of the impact on the natural environment, referred to above, pose specific risks both for business and the natural environment. Anyway, it was the excessively high environmental costs of producing energy from lignite combustion, especially in the climate context, that influenced the shape of the economic policy of the EU and Poland, and

further the decision to discontinue this activity in ZE PAK SA Group and the transformation towards more environmentally sustainable technologies.

In addition, each of the above-mentioned aspects may, in certain situations (e.g. breakdown resulting in contamination or excessive emissions), cause image losses, social conflicts and loss of social consent to act, legal or financial sanctions or other decisions that result in a loss of profits. As a consequence, this may mean, for example, an imbalance in the stability of production (the need to temporarily shut down some part of the production installation), a decrease in revenues (reduced production) or an increase in costs (e.g. the need to remove the consequences of a failure, but also the need to incur additional fees and penalties).

Therefore, the policies and procedures adopted by ZE PAK SA Group in relation to the mining area and conventional energy, as originally adopted in the Corporate Social Responsibility Strategy of ZE PAK SA Capital Group for 2017-2020, focus on: ensuring mechanisms and procedures limiting the risk of anomalies and deviations to a minimum, resulting in an over-standard impact on the natural environment in the mining or production process and minimizing emissions to the atmosphere by optimally shaping the use of the production capacities existing in ZE PAK SA Group and ensuring that the risk of excess emissions of gaseous pollutants into the atmosphere is minimized.

In the area of generation, activities in 2021 traditionally focused on aspects related to air protection (emissions, nuisance), water and wastewater management (lake monitoring, wastewater management, underground water management), waste management, noise emissions to the environment.

The impact of the activity on the immediate natural environment

[303-1, 304-2] In the mining area, the majority of the key activities, aiming at preventing, limiting or compensating nature of negative environmental impact, are initially planned at the stage of environmental analyses and creating a report of influence on the environment. In addition to technical and engineering solutions (appropriate formation of the dump, planning solutions to minimize the effects of disruption of water relations due to the drainage of opencasts, etc.), impact norms are defined in specific environmental aspects and environmental monitoring is carried out throughout the entire life cycle of the opencast mine and the monitoring of the level of water in wells, watercourses and water reservoirs, the quantity and quality of water discharged to receivers (water and ground), the extent of the depression funnel, dust emissions, noise level etc., is carried out as well.

Last year in PAK KWB Adamów SA in liquidation and PAK KWB Konin SA the following were carried out:

- quantity and quality monitoring of groundwater and surface water,
- nature monitoring, particularly valuable areas,
- technical and biological reclamation,

[304-1 304-3] There are several important natural areas within the range of the significant impact of power plants as well as of open-pit mines of ZE PAK SA Group. Among others, the eastern part of "Adamów-Koźmin" mining area is included in Natura 2000 – the special bird protection area - Dolina Środkowej Warty (area code: PLB300002). The same area is located within the influence of Drzewce opencast drainage. Part of field A of Drzewce outcrop is within Natura 2000 area, and the rest of it and field B affect this area. On the other hand, 7-12 km to the west from Tomisławice opencast mine there is the Landscape Park and the reserve named "Nadgoplański Park Tysiąclecia" (NPT). In the field of Tomisławice opencast mine there is also a protected landscape area: "Goplańsko - Kujawski" and a protected landscape area: "Głuszyńskie Lake". In turn, near Pątnów Power Plant, 2.5 km to the west, there is a Special Protection Area for Habitats - "Puszcza Bieniszewska" PLH300011. The boundary of the Special Protection Area for Birds - "Dolina Środkowej Warty" - PLB300002 and the Special Area of Protection of Habitats - "Ostoja Nadwarciańska" - PLH300009 are within the range of Pątnów power plant, approx. 6-8 km to the south of the plant.

In PAK KWB Adamów SA under liquidation, groundwater monitoring was performed (in the network of piezometers, farm and drainage wells), surface water monitoring (including studies of flows in the riverbeds in the area of impact). In addition, monitoring of vegetation in the inter-embankment of Warta River was carried out (determining the impact of Koźmin opencast mine on the variability of water conditions and vegetation in "Natura 2000" area) and ornithological monitoring of Koźmin - Central Field deposit. Final reports summarizing the many years of research were prepared: a report on the 11-year monitoring of vegetation and a report summarizing the 7-year ornithological monitoring cycle, covering the years 2012-2016 and 2020-2021.

In PAK KWB Konin SA monitoring of the aquatic environment was performed for the outlets of Tomisławice, Józwin, Drzewce and open pit areas where the exploitation, i.e. Kazimierz and Lubstów. The monitoring of breeding birds in the area of the Ostoja Nadgoplańska, monitoring of natural habitats and plant species was carried out on Tomisławice outcrop. As part of corrective measures, meadows were mowed in Ostoja Nadgoplańska area to restore, preserve or improve the condition of habitats with species of protected plants and create favourable conditions for living birds and insects. Bird monitoring was carried out on Drzewce open-pit, monitoring of the impact of Drzewce open-pit on water-mud birds being

the subject of protection of the Central Warta Valley protection area. As part of natural compensations aimed at restoring natural habitats, 15 artificial floating platforms for black tern were installed on the oxbow lake in the Central Warta Valley.

Special Area of Habitats Protection PLH300011 „Puszcza Bieniszewska” [304-4]

The compact forest complex is located on the western edge of the Konin urban and industrial agglomeration. Almost the entire area is covered with well-preserved oak-hornbeam forests and riparian forests, while small areas are covered with acidophilic and luminous oak forests. Among them, there are three eutrophic water reservoirs, on the shores of which vast stretches of eutrophic rushes and moss beds develop. Forest communities are well preserved and highly diversified. It includes very well-preserved fertile deciduous forests of various types, especially valuable as a reservoir of genes in a landscape subject to very intense, large-scale anthropogenic impact (nearby there are extensive external and internal lignite mines, which are currently being reclaimed).

In total, there are 8 types of habitats listed in Annex I of the Habitats Directive. A valuable floristic refuge. It is worth emphasizing that there is a stable population of Loesela (*Liparis loeseli*) - a species from Annex II of the Habitats Directive (1 animal species from this Annex was also observed here). Moreover, there are at least 12 other rare species in the country or region. Rich populations are also created by numerous species protected under Polish law.

The threats include: air pollution - the immediate vicinity of open-cast mines, power plant ash settling tanks and heated waters of Gosławickie Lake; groundwater level change; change of use. The area is mostly located within 4 nature reserves: Bieniszew (144.1 ha; 1996), Sokółki (240 ha; 1996), Pustelnik (100.25 ha; 1997) and Mielno (93.65 ha; 1957). Entirely within Powidzko-Bieniszewski Protected Landscape Area (20,480 ha).

Special Area of Birds Protection PLB300002 „Dolina Środkowej Warty” [304-4]

The area covers Warta valley between the village of Babin (near Uniejów) and Dębno on Warta River (near Nowe Miasto on Warta river). The valley is 500 m to about 5 km wide, it is filled with marshes and sands, and only in the outflow depressions there are small areas of shallow peat. The area of the valley is transformed and used to a different extent.

In the area of Kolska Valley, the river is embanked on both sides - floodplains (meadows and pastures, local riparian forests and riverside wicker) are located in the inter-embankment zone and in the estuaries of Prosna and Kielbaska rivers. Within Konińsko-Pyzdrska Valley, the valley has retained a more natural character.

Its western part has not been embanked and is subject to periodic floods. The area is occupied by a mosaic of extensively used meadows and pastures, riparian trees and oxbow lakes overgrown with rushes. The western part of the area (west of Prosna estuary) is occupied by a large complex of floodplains, close to the natural, old ash and elm forests and low hornbeam forests. Considerable fragments have been preserved as a result of reserve protection. As a result of the construction of Jeziorsko dam reservoir on Warta river, the natural hydrological rhythm of Warta was changed, which resulted in various habitat changes. The area includes a bird sanctuary of European rank E 36 (Dolina Środkowej Warty).

There are at least 42 species of birds from Annex I of the Birds Directive, 18 species from the Polish Red Book (PCK). The area is a very important refuge for wetland birds, especially during the breeding season. During the breeding season, the area is inhabited by over 10% of the national population of the white tern (PRC), over 2% of the national population of the following bird species: garganey, greylag goose, redshank, northern shoveler, little tern (PCK), white-winged tern (PCK), black tern, black-tailed godwit and at least 1% of national population of the following bird species: ruff (PCK), great bittern (PCK), montagu's harrier, marsh harrier, middle spotted woodpecker, spotted crane, bluethroat (PCK), common sandpiper, Eurasian teal, lapwing, grey heron, hoopoe, rosefinch, dadwall, curlew (PCK), common ringed plover (PCK) and black-necked grebe; the following are relatively numerous: hen harrier (PCK), Eurasian teal, corncrake, common snipe, Ortolan bunting, black-crowned night heron (PCK), river kingfisher and tawny pipit; there probably nests a very rare pintail (PCK); additionally in the amount over 1% of national population there are: hoopoe, rosefinch, kestrel and penduline tit, in the abundance ca. 1% of national population - quail. In the autumn migration period, there is a white heron (to 23 individuals) warbler to 1500 individuals, crane (to 250 individuals) and mixed stocks of geese up to more than 5000 individuals. During the spring migration, tooting battalions can be found in the number of up to 1,200 individuals. There are the following forms of protection: Landscape parks: Nadwarciański (13,428.0 ha), Żerkowsko - Czeszewski (15,640.0 ha), Protected Landscape Area : , Pyzdrowski (until 1995 30,000 (16,572.0 ha), Uniejowski (18,000.0 ha)), Goplańsko-Kujawski, Nadwarciański, Powidzko-Bieniszewski, Żerkowska Switzerland, Złotogórski

The threat is the limitation of snowmelt floods and unpredictable floods after heavy summer rains in the period from June to August. The change in the hydrological regime leads to the limitation of meadow and pasture management, and consequently to the expansion of shrub and woody vegetation to open areas. The change of water relations also has a negative impact on the health of the riparian forests in the western part of the area.

Special Area of Habitats Protection PLH300009 „Ostoja Nadwarciańska” [304-4]

The refuge is located in the eastern part of Wielkopolska and covers a fragment of the Middle Warta valley. Warta flows here latitudinally in the Warsaw-Berlin ice-marginal valley formed during the last glaciation.

Warta floodplain area is in some places over 4 km wide and is characterized by a large variety of flora, thus creating favourable habitats for many species of animals, especially birds. The contemporary bottom of the valley was created mainly as a result of the accumulative and erosive activity of river waters (mainly Warta River, and to a lesser extent Proсна and Czarna Struga). The relief is rich in various fluvial forms: embankments, a floodplain terrace with various types of oxbow lakes, a dune terrace and dune hills. The waters of Warta are characterized by a melt and rain regime, with a specific rhythm of floods and low flows which determine the environmental conditions of the entire valley. The lagoon zone still covers most of the refuge's area, creating periodic backwaters up to several thousand hectares. These backwaters arise mainly in spring, during the thaw period, and also occur irregularly in summer. Originally, such lagoons shaped the natural conditions in the entire valley.

Currently, they are modified by a rather narrow embankment of the greater part of the valley, as well as the functioning of a large dam reservoir "Jezioro" since the 1980s. The vegetation is very varied; it retained mainly semi-natural and natural, dynamic character. Fragments of the Salicetum or fragilis willow forests which are dying out in Europe are sporadic, while the successively related phytocoenoses of Salicetum triandro-viminalis riverside wicker phytocoenoses are frequent. In small areas, mainly on the outskirts of the valley, the Ribo nigri-Alnetum alder and the accompanying Fraxino-Alnetum ash and alder riparian forests, as well as the riverside form of the Ficario-Ulmetum campestris typicum ash and elm forest (now spontaneously expanding its local range) have survived. For several hundred years, the largest areas have been occupied by wet meadows and pastures (Molinietalia) and rushes of the Phragmitetea class, especially Glycerietum maximae and Caricetum gracilis. In oxbow lakes, communities of aquatic plants of the Lemnetaea and Potametea classes are well developed. The sand dunes are covered with grasslands of the Koelerio-Corynephoretea class and pine stands. There are also interesting transitional bogs in the drainage depressions within the dune terrace.

The vast majority of the area is dominated by extensive meadow and pasture management (including the traditional grazing of geese herds in these areas) with the participation of forestry. The farmland is concentrated in the elevated areas and on the edge of the valley where moderate agricultural settlement has developed. Some fragments of the area, especially in Warta near-river belt, are basically only subject to fluvial processes shaping the natural vegetation. The area of the refuge is rich in amphibian fauna (13 out of 18 species occurring in Poland have been found here). The remaining groups of organisms are less well known, but there are interesting species of fungi, bryophytes, molluscs, mayflies, leeches, bats and fish.

The high value of this area is determined by the relatively low level of anthropogenic transformation, as it is dominated by natural and semi-natural ecosystems. The international environmental values of the refuge have been confirmed by including it in the CORINE biotopes and ECONET - Poland programs. The Middle Warta Valley also meets the criteria of areas important from the point of view of the protection of wetland biotopes under the Ramsar Convention. The area is also of great importance for the protection of birds.

Landscape Park and the Reserve „Nadgoplański Park Tysiąclecia” (NPT) [304-4]

The park is located 7-12 km to the west of Tomisławice open pit. Within its borders, a large area is covered by waters - 2,130 ha, including Gopło Lake - 2,050 ha. The protected plants include the yellow water lily and the white water lily. The natural arrangement of meadows around the lake has been preserved - from wetlands to fresh meadows and pastures. Birds are the most numerous and interesting in the NPT area. Gopło is the most inhabited lake in Poland for a greylag goose, a breeding place for bittern, marsh harrier, lapwing, black-tailed godwit, and a wintering place for black stork, red-necked dive, silver gull, seeder and, recently, white-tailed eagle. The new species are: the purple heron, the greyhound, the little ringed plover, the ruff, the little grebe, and the lilac. In the southern part of the reserve and landscape park "Nadgoplański Park Tysiąclecia" along Warta-Gopło canal, in the area of Sompolno, Wierzbinek and Zaryń, "Goplańsko - Kujawski" Protected Landscape Area was created. Within the boundaries of this area, parts of forests with valuable tree stands, wetlands and peat bogs with marsh and meadow vegetation, often in meadows of

organic origin, are protected. In "Goplańsko - Kujawski" Area of Protected Landscape there is a forest reserve "Kawęczyńskie Brzęki". In the reserve, there is an oak-hornbeam forest with *Sorbus torminalis* (common name – checker tree). "Goplańsko – Kujawski" Protected Landscape Area joins in the eastern part with the Protected Landscape Area "Głuszyńskie Lake". Forests (the Orle Forests) and meadow and marsh complexes are valuable.

At the same time, ZE PAK SA Group carried out reclamation works aimed at the overturning of areas which, due to the extraction of lignite, were excluded from forest or agricultural production.

In the areas where the exploitation of the deposits has already ended, technical reclamation and biological reclamation are carried out in the following directions: water, forest, agriculture, recreation and others. For example, in 2021, technical reclamation was carried out on 167 ha (in 2020 - 186 ha), and biological reclamation - on 2,252 ha (in 2020 - on 1,867 ha). As part of biological reclamation, approximately 202,000 trees and shrubs were planted in 2021 (276,000 in 2020).

PAK KWB Adamów SA in liquidation conducted biological reclamation of internal dumps on an area of 168 ha and technical reclamation of an area of 79 ha. Reclamation of final workings was also carried out, including, inter alia, work on sloping the intermediate reservoir in Adamów open pit and Adamów final reservoir. In Koźmin open-pit mine and Władysławów open-pit mine, the post-mining workings with a total area of approx. 530 ha were filled with water, and the maintenance of the slopes of these reservoirs was carried out. As part of the water reclamation, a drain was made from the Głowy reservoir on Koźmin opencast mine.

A decision was obtained to recognize reclamation as completed in the agricultural direction on the inner dump of Władysławów open pit on an area of 4.49 ha, on the inner dump of Koźmin open pit on an area of 8.95 ha and on the inner dump of Adamów open pit on an area of 9.45 ha. A decision was obtained on partial completion of reclamation in the water direction: for Władysławów reservoir - on an area of 114.66 ha and for Koźmin reservoir - on an area of 102.60 ha. A decision was obtained to complete reclamation in the forest direction on the slopes of Władysławów reservoir for 9.41 ha. In total, a decision on completion of reclamation was obtained for 249.56 ha of land.

On the premises of PAK KWB Adamów SA in liquidation in 2021, 22,650 trees and shrubs were planted.

At PAK KWB Konin SA, works were carried out as part of technical reclamation on the internal dump of Józwin open pit and the external dump of Tomisławice open pit. Technical reclamation was carried out on an area of 88 ha. The biological support of the reclaimed land in the water, agriculture, forest and recreation directions was carried out on an area of approx. 1554 ha. A decision was obtained to complete land reclamation in Józwin II A open pit with an area of 13.19 ha, in the area of the reservoir after Lubstów open pit in the forest direction with an area of 49.54 ha and in the water direction with an area of 35.80 ha and in Drzewce outcrop towards the forest with an area of 39.89 ha. In total, a decision on completion of reclamation was obtained for 138.50 ha. The reclamation process in the forest direction was continued on Drzewce open pit - Pole Bilczew and Pole A on an area of approx. 80 ha, as well as the process of acceptance and obtaining a decision to end reclamation in the water direction of the flooded part of Kleczew water reservoir in Kazimierz Północ open pit excavation with an area of approx. 242 ha. In 2021, the process of obtaining a decision on the completion of reclamation in the agricultural direction was launched on the internal dump of Józwin II B opencast mine for the area of approx. 140 ha. In 2021, 179,350 trees and shrubs were planted on the premises of PAK KWB Konin SA.

Table 27: Summary of the size of areas where technical and biological reclamation have been carried out and sowing is still being carried out, as well as areas for which a decision on properly completed reclamation has been obtained (ha)

	2021	2020	2019
Technical reclamation	167	186	170
Biological reclamation (in progress)	2,252	1,867	1,781
Biological reclamation (completed)	388.0	3.6	32.2

Table 28: Share of land for which decisions on completion of reclamation were obtained to land excluded from agricultural and forestry production in mines (%)

	Totally from 2006	2021	2020	2019
Land excluded from agricultural and forestry production subject to reclamation (ha)	3,208.55	37.86	88.16	79.64

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Land for which decisions on completion of reclamation were obtained (ha)	2,827.16	388.05	3.64	32.25
Share of land for which decisions on completion of reclamation were obtained to land excluded from agricultural and forestry production in mines (%)	88%	1,025%	4%	40%

Table 29: Reclamation efficiency index in a given year: % share of land that has obtained a decision on completion of reclamation to the total land excluded from agricultural and forestry production.

	2021	2020
Estimated total area of land excluded from agricultural and forestry production subject to reclamation (ha)	4,740	5,085
Land that obtained a decision on completion of reclamation (ha)	388.05	3.64
Reclamation efficiency index (%)	8.2%	0.1%

Table 30: Plantings

	2021	2020	2019
Number of planted trees (pcs)	202,000	276,000	338,800



Air protection: emissions and nuisance

The production installations, which have been operating for many years, were modernized and equipped with technological solutions related mainly to their adaptation to the tightening environmental standards. Thanks to the modernization of two units at Pałnów I power plant and the earlier construction of a unit at the former Pałnów II power plant, on the one hand, **the efficiency of production in these power plants increased** (and thus the efficiency of fuel use), and on the other hand, **the emission intensity decreased, e.g. CO₂ mass per unit of electricity produced**. This approach also allowed to **radically reduce the emission of harmful nitrogen and sulphur oxides and dust to the atmosphere**. However, it should be borne in mind that the further tightening of the standards that eliminate emissions or the increase in fees associated with it turns into the economic efficiency of the process of generating energy in a conventional manner, using fossil fuels.

The new, extremely ambitious green transformation strategy of the ZE PAK SA Group, assuming a shift towards low-emission and carbon-neutral electricity sources as well as the production and use of "green" hydrogen, is becoming a reality. Investments in new, environmentally friendly generation assets are accompanied by the phasing out of energy production based on lignite. It started even before the formal adoption of the strategy document. The following power plants have been shut down in recent years:

- Adamów Power Plant (600 MW: 5 lignite units with a capacity of 120 MW each) – the shut-down of the last unit took place on January 1, 2018.
- Pałnów I Power Plant (200 MW: 1 lignite unit with a capacity of 200 MW – unit no. „4”) – the shut-down at the end of 2019.

- Pałnów I Power Plant (200 MW: 1 lignite unit with a capacity of 200 MW – unit no. „3”) – the shut-down in the middle of 2020.
- Pałnów I Power Plant (200 MW: 1 lignite unit with a capacity of 200 MW – unit no. „6”) the shut-down at the end of 2020.
- Konin Power Plant (93 MW: 2 turbine sets working in a collector system with coal boilers) – the shut-down in the middle of 2020.

As a result, devices with a capacity of 1293 MW were shut down in ZE PAK SA Capital Group in recent years. In Pałnów, the largest power plant in the Group, only 4 coal-fired units are left, out of the originally available 7 units.

The Group plans to decommission the remaining coal-fired units. In the case of **Konin Power Plant** (2 boilers in a collector system with a total thermal capacity of 222 MW) - the final shutdown is planned at the end of 2022. Their operation is related to the maintenance of a reserve heat supply to the city of Konin until the second biomass unit is put into normal operation. It will be, in addition to the production of energy for the National Power System, a backup source for heat production in the event of shutting down the biomass unit currently operating at Konin Power Plant. In December 2021, it was synchronized with the National Energy System. Currently, the unit is in the commissioning phase.

As with the mining area, key environmental impact parameters for electricity generation are monitored, often on a continuous basis. Reports of potential irregularities are checked in a similar way. It is worth mentioning, however, that environmental conditions imposed on conventional manufacturers are increasingly stringent and one should expect this trend to continue. In this context, it is necessary to mention BAT conclusions (Best Available Technology), which for conventional energy sector have been effective since August 18, 2021. The BAT regulations tighten the limits for emissions of nitrogen oxides, sulphur oxides and dust, which until now were regulated by the Industrial Emissions Directive (IED). The catalogue of these standards also includes limits for chlorine, fluorine and heavy metal compounds, including for mercury. Before generators from the conventional energy sector, this poses major organizational and capital challenges related to adapting to the new regulations. However, it is also necessary to take into account certain exceptions and derogations that will be available to the manufacturer under certain conditions (e.g. in relation to the remaining relatively short exploitation period not justifying the incurring of disproportionate expenditure)

During the year the quantities of pollution emissions in particular power plants were monitored in terms of meeting obligatory emission standards and BAT conclusions requirements. Continuous emission monitoring systems have been expanded to meet the objectives of monitoring emissions to air in the light of kBAT. The correct operation of continuous measurement systems were supervised, functioning of procedures was coordinated (QAL3 – quality assurance procedures during the exploitation of exhaust emission monitoring system in ZE PAK SA in accordance with PN-EN 14181). From August 18, 2021, a number of additional obligations were performed to monitor emissions, including metals and metalloids, and the extended scope of fuel quality. The correct operations of protective devices reducing emission of pollutants into the air were supervised. The production process in aspect of meeting air pollution emissions' standards and limits was coordinated (optimization of combustion process in Pałnów II Power Plant). The tasks were realized under PRTR (National Register of Pollution Release and Transfer) by pollution measurements and reporting as well as by paying the fees. Financial commitments were made for the emission of pollutants into the air as part of its operations, i.e. environmental and penalty fees as well as in the scope of reporting pollutant emissions to the air.

Due to the emission of pollution influence on the immediate surroundings, the purity of the atmospheric air in the area of operations of the Groups power plants is also monitored (nuisance of air pollution). In 2021 no significant differences between the levels of substances tested and their counterparts measured by the stations of Voivode Inspectorate of Environment Protection were found.

In the context of the emission of all pollutants, including dust, the past year was correct for the Group. A comparison of the respective indicators can be found at the end of this chapter. Integrated permits for combustion installations of ZE PAK Spółka Akcyjna, i.e. Pałnów I Power Plant - units no. K1, K2 and K5, Pałnów II PP - power unit no. K9, Konin PP- units K12 as well as K-85 and K-86 have been adapted to the requirements of BAT conclusions, taking into account individual deviations from the emission limit values. The company operates in accordance with the permissible emission limits resulting from the IED Directive as well as the BAT Conclusions. Continuous emission monitoring systems, developed in accordance with the requirements of BAT 4, constitute the basis for the verification of compliance with the requirements of the Commission Implementing Decision (EU) 2017/1442 in the field of air pollutant emissions at ZE PAK SA.

Regardless of the abovementioned reduction of the emission factors per production unit, it is also important that the installations used in Pałnów and Konin power plants did not exceed the permissible emission levels even once in the last year.

Water and sewage management and lake monitoring

[303-1] Anthropogenic activities contributed to the creation of an aquatic ecosystem characteristic only for heated lakes in the area of Konin (Gosławskie, Pątnowskie, Ślesińskie, Licheńskie, Wąsowsko - Mikozyńskie). However, Konin power plants do not treat lakes only as an available source of water intake for cooling and a receiver of heated water, but they take measures to improve their purity and therefore carry out continuous monitoring.

Cooling system of Pątnów I, Pątnów II and Konin power plants works in the conditions changing during the year. The following parameters are changeable:

- the amount of circulating water,
- the temperature of drop water,
- the levels of water in the lakes,
- use the lakes for cooling (only „close” or “distant” circulation).

All the above mentioned parameters are covered by a constant monitoring. Systematic control of thermic conditions in the lakes and in the channels of cooling circuit of Pątnów and Konin power plants is run by ZE PAK SA on the principles determined in the integrated permit. This control includes:

- temperature measurements of Surface water in 24 points important for protection of lakes and operation of cooling circuit; the measurements are taken at least once a month (in the cold period) and more often (even every day) in the summer period (depending on the temperature of the air),
- continuous, automatic temperature measurement on the lakes' shots – Pątnowskie and Gosławskie,
- continuous, automatic temperature measurement of water on power plant discharges.

All the objects of cooling system are equipped with the network of control and measurement benchmarks. Measurements of water levels and flows are carried out in order to control the proper functioning of the entire cooling circuit. They are, among others, water level gauges, mounted on water intake and discharge ditches and on lakes. Fluctuations in water levels in lakes depend on a number of factors, mainly of natural character. However, the possibility of using water to cool the working blocks depends on its quantity and temperature. In all the lakes and channels included in the cooling circuit, physicochemical monitoring of water is also performed once a month.

[303-1] Wastewater generated in power plants is treated in factory sewage treatment plants and after obtaining parameters compliant with applicable regulations, it is discharged to the receivers. However, for many years, preventing lake water pollution, the power plants have been taking actions aiming at using the sewage in internal systems. Thus, wastewater from exhaust gas treatment installations, oily sewage from cleaning industrial floor and filter wastewater from a drinking water treatment plant are used for the production of ash and slag pulp, and therefore there is no need to use lake water as a transport medium for this purpose. Additionally, the lakes are not polluted with chemical substances. Moreover, wastewater from a modern water demineralization station is used in the flue gas desulphurization plant to produce lime milk. Thanks to the comprehensive modernization of the sewage disposal system at El. Pątnów, all sewage (including domestic and industrial sewage) was managed in the internal layout of the plant, which contributed to the complete cessation of pollutant emissions to surface waters.

According to *AqueductTM Water Risk Atlas*⁴ published by the World Resources Institute (WRI) the entire area of Konin lakes, where the mining and production activities of the ZE PAK SA Group are carried out, is a region where the so-called 'Water stress'⁵ has been defined as 'high' and the overall risk of water⁶ as 'medium high'. Conversely, the risk of physical availability of water, which is comprised of the overall risk of water and includes, inter alia, the issue of water stress was assessed for this area as "extremely high". This means the necessity of very serious, economical and rational use of limited resources and special care for their non-contamination. At the same time, however, it is worth noting that in the coming years, the transformation of ZE PAK SA Group will mean a change in the conducted business activity into one that will not significantly affect water resources.

⁴ <https://www.wri.org/applications/aqueduct/water-risk-atlas>

⁵ Water stress measures the ratio of total water abstraction to available renewable sources of surface and groundwater.

⁶ Overall Water Risk measures all water related risks by aggregating all selected indicators from the physical quantity, quality, regulatory and reputational risk categories. Higher values indicate a greater risk with water.

Use of post-mining excavations to increase retention in Eastern Wielkopolska

On February 9, 2021, ZE PAK SA signed a Letter of Intent with Państwowe Gospodarstwo Wodne Wody Polskie, on the use of post-mining excavations to increase retention in Eastern Wielkopolska. The signing ceremony was attended by Deputy Minister Marek Gróbarczyk from the Ministry of Infrastructure.

The purpose of signing the Letter of Intent is to increase the retention in eastern Wielkopolska by finding the most advantageous options for further shaping the catchment area of rivers and lakes occurring in the area of operation of mines belonging to ZE PAK SA, using post-mining excavations to conduct retention and flood management and establishing cooperation in the scope of possible use of the considered mine workings for the production of energy from renewable sources.

An integrated program for the reconstruction of water conditions has been prepared for this purpose, covering both post-mining excavations, rivers and canals flowing through this area as well as lakes and wetlands from the nearby Gniezno and Kujawskie Lakelands. In particular, the signed letter of intent includes activities for:

- restoration of water resources in the catchments of the rivers: Teleszyna and Kielbaska after the end of the activities of PAK KWB Adamów SA in liquidation and Adamów Power Plant, along with the adaptation of reservoirs after Koźmin and Adamów open-pit mines to perform a retention and flood protection function;
- restoration of water resources in Topiec river basin in the area of Władysławów open pit operation along with the construction of a system enabling faster filling of the final excavation in order to provide it with a retention and flood protection function;
- faster filling of the end excavations of Józwin IIB and Kazimierz Północ open-pit mines in order to accelerate the reconstruction of aquifers, which have been lowered as a result of the depression crater functioning in this region for years, which will turn into an increase in the water table levels of the lakes belonging to Powidzki Landscape Park;
- reconstruction of water resources and improvement of the hydrological condition of Warcica river catchment area by supplying it with water that can be used from Warta river along with the restoration of wetlands adjacent to the river being rebuilt and occurring in the area of Drzewce opencast mining operation;
- faster filling of the final excavation of Lubstów open pit, which will contribute to an increase in the amount of water in Noteć River flowing in the vicinity of the reservoir;
- directing the available surface waters to the final excavation after Tomisławice open pit in order to accelerate the reconstruction of aquifers, which have been lowered as a result of the depression crater that has operated in this region for years.

Table 31: Water intake⁷ [303-3]

		IU	2021	2020	2019
Surface water					
	sweet (≤ 1000 TDS)	m ³	2 701 643	2 890 477	3 326 231
	other (> 1000 TDS)	m ³	0	0	0
Groundwater					
	sweet (≤ 1000 TDS)	m ³	455 999	430 265	563 278
	other (> 1000 TDS)	m ³	0	0	0
Sea water					
	sweet (≤ 1000 TDS)	m ³	0	0	0
	other (> 1000 TDS)	m ³	0	0	0
Produced water					

⁷ Only entities with the highest water demand were taken into account, i.e. ZE PAK SA, KWB Adamów and KWB Konin.

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	sweet (≤ 1000 TDS)	m ³	0	0	0
	other (> 1000 TDS)	m ³	0	0	0
Purchased water		m ³	184 773	285 064	168 844
Total water intake		m³	3 342 415	3 605 806	4 058 353

Comment: in the case of ZE PAK SA: in the case of surface waters, the sum of water withdrawn for individual power plants, i.e. Patnów, Konin (former Adamów power plant does not consume such water) was taken into account. It is non-refundable collection. The summary does not include the amount of water taken for cooling purposes, which is entirely returned to the environment in an unchanged amount and composition. Underground water for ZE PAK SA is the sum of water collected in power plants: Patnów, Adamów, Konin. In the case of mines, the intake of groundwater applies to water taken from the intakes of the plant for social and living purposes and fire protection.

Table 32: Drainage of used water (mine drainage)⁸ [303-4]

	IU	2021	2020	2019
<i>Water drained according to destination</i>				
Surface water	m ³	0	0	0
Groundwater		160 581 455	169 844 423	176 753 772
Sea water	m ³	0	0	0
Produced water	m ³	0	0	0
Purchased water	m ³	0	0	0
Total	m³	160 581 455	169 844 423	176 753 772

Comment: water from opencast drainage was discharged into the environment - the given amount does not include the discharged domestic wastewater

Table 33: Water consumption⁹ [303-5]

	IU	2021	2020	2019
Total water consumption	m ³	212 419	313 303	193 188

Waste

[306-2] In KWB Adamów and KWB Konin, the main stream of generated waste is: iron and steel scrap, as well as slag and bottom ash from the company's boiler houses. Additionally, in KWB Adamów waste of concrete and rubble from demolition of buildings is generated in significant amounts.

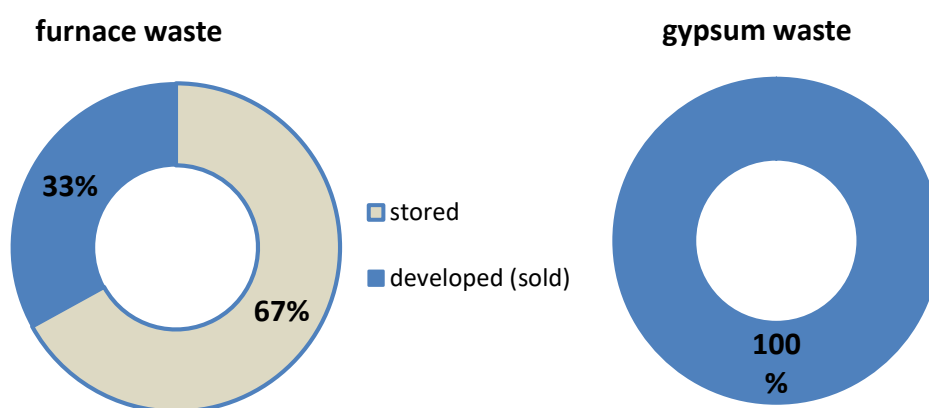
In total, 3,691.9 Mg of waste was generated in 2021, including 18.1 Mg of hazardous waste, where: in PAK KWB Adamów - 1,033.1 Mg of total waste and 4.5 Mg of hazardous waste, and in PAK KWB Konin SA - 2,658, 8 Mg of total waste and 13.6 Mg of hazardous waste. In 2020, 3,474.6 Mg of waste was generated, including 15.7 Mg of hazardous waste. The generated waste was transferred to companies with appropriate permits: for waste collection, processing, i.e. recovery or neutralization (except for ash and slag waste from the company's boiler rooms, which were used to harden the surface of areas, build foundations for internal roads and yards).

⁸ Only entities with the highest water demand were taken into account, i.e. ZE PAK SA, KWB Adamów and KWB Konin.

⁹ Only entities with the highest water demand were taken into account, i.e. ZE PAK SA, KWB Adamów and KWB Konin

[306-2] In ZE PAK SA, the main stream of generated waste is furnace waste (ashes) and solid waste from calcium methods of flue gas desulphurization (gypsum). Waste generated in the first place is managed by external companies as part of waste recovery. On the basis of the volatile ash produced, mixtures for road foundations and road binders are mainly made. On the other hand, waste from flue gas desulfurization is directed mainly to the production of gypsum products, drywall and cement plants. In 2021, around 793 thousand tons of furnace waste were generated (of which over 260 thousand tons were sold) and approx. 156 thousand tons of waste from calcium flue gas desulphurisation method (156 thousand tons were sold). The remaining quantities of waste generated are directed to landfills belonging to the Company. The furnace waste and waste from flue gas desulphurisation produced in ZE PAK SA meet the requirements of environmental protection and do not threaten human life and health, which was confirmed by research in the field of physicochemical, toxicological and Eco toxicological properties performed for the registration of substances in accordance with REACH requirements.

Chart 18: Percentage shares of waste management generated in the Company in 2021



At landfills managed by ZE PAK SA in 2021, monitoring of the quality of groundwater and surface water as well as supernatant water was carried out, with the frequency specified in the integrated permits and instructions for running landfills, i.e. once a quarter. Currently, ZE PAK SA has 4 landfills and all of them were exploited in 2021 on the following:

- solid waste landfill, Pałnów opencast (landfill for inert waste),
- landfill site for Zachodnia opencast with a vaporizer - so-called Wschodnia outcrop and landfill site (landfill for non-hazardous and inert waste),
- northern landfill site for Pałnów open pit (landfill for non-hazardous and inert waste),
- landfill of furnace waste in Gosławice open pit along with Linowiec vaporizer (landfill for non-hazardous and inert waste).

Monitoring was carried out in the primary and supplementary monitoring networks. Monitoring of groundwater quality is performed in a network of piezo metric wells located in the vicinity of landfills. The quality of the groundwater tested in piezometers and deep wells in 2021 fluctuated in classes from I to V. Supernatant waters occurring in landfills (used for hydro transport of furnace wastes) were characterized by high mineralization, high electrolytic conductivity, high pH and total hardness. In addition, as a part of the monitoring of landfills, an annual assessment of slope stability and subsidence is also carried out. Most of the monitored slopes surveyed in 2021 proved to be stable.

ZE PAK SA also conducts reclamation of unused parts of landfills on an ongoing basis.

Table 34: Waste management – generated waste [306-3]

Waste stream (waste code)	IU	2021	2020
ash-slag mixture (10 01 80)	tons	212 219.95	295 512.02

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Coal Fly ash (10 01 02)	tons	416 621.92	454 688.39
Calcium-based reaction wastes from flue-gas desulphurisation in sludge form (10 01 07)	tons	148 191.30	123 368.35
Bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04) (10 01 01)	tons	2 824.44	2 245.30
Fly ash from peat and untreated wood (10 01 03)	tons	14 242.94	14 395.40
Sludge from on-site effluent treatment other than those mentioned in 10 01 20 (10 01 21)	tons	398.45	760.10
Calcium-based reaction wastes from flue-gas desulphurisation in solid form (10 01 05)	tons	155 717.80	124 136.30
other non-hazardous waste	tons	5 913.60	25 780.77
Hazardous waste	tons	88.67	119.24
Total	tons	956 219.06	1 041 005.87

Noise

As part of the obligation to monitor noise emitted to the environment imposed by integrated permits for the fuel combustion installations of ZE PAK SA, in 2021 noise measurements were taken in the area of Konin and Pątnów power plants. The results from the conducted tests did not show any exceedances of limit values set in the permits. The noise measurements were not carried out from Adamów and the results from 2020 are still valid.

Inspections

In 2021, the Provincial Inspectorate for Environmental Protection in Poznań, the Branch Office in Konin, carried out four inspections of the power plants of ZE PAK SA Group. The scope of all inspections included the verification of compliance with administrative regulations and decisions in the field of environmental protection.

The mines were inspected by the District Mining Office in Poznań (inspection of reclamation and the use of the Mine Decommissioning Fund in PAK KWB Konin SA and PAK KWB Adamów SA in liquidation). The inspection bodies found no shortcomings, and therefore no post-inspection orders were issued and no fines were imposed.

Programs for the prevention of major industrial accidents

In connection with the expansion of Konin power plant with a hydrogen production installation (among others), the Program for the prevention of serious industrial failures in the fuel combustion installation and hydrogen production at Konin Power Plant has been updated. For the remaining programs, no need for changes was identified.

Other

In PAK Górnictwo sp. z o.o. due to the implemented activity, administrative decisions regarding, among others, water collection and waste collection and production are of crucial meaning. The issue of water abstraction is connected with the takeover of the activity previously carried out by Aquakon Sp. z o.o. and the collection of groundwater from chalk deposits from two deep wells (production of mineral water). Another important aspect of the environmental impact is the collection and production of waste. It is mainly about waste generated in service and repair workshops and maintenance workshops, a conveyor belt regeneration hall, a repairs hall, and a bottling plant.

On the other hand, PAK - Volt SA (electricity trading, office work) a company significant in terms of generated revenues, should be considered irrelevant as regards the impact of the entire Group on the natural environment.

Key indicators

Taking into account the changing legal and environmental conditions, the increasing prices of CO₂ emission allowances, and the tightening of emission standards for other substances, the Company is already significantly reducing its carbon footprint. In recent years, a significant decrease in CO₂ compared to the previous years can be noticed.

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Table 35: Consumption of key fuels [302-1]

Energy source	IU	2021	2020	2019
<i>a. Non-renewable sources / total consumption of key non-renewable fuels</i>				
lignite	Mg	5 229 634	5 964 444	7 028 657
heating oil	Mg	6 628	3 745	3 289
mazout	Mg	2 547	3 609	4 074
gas	Mg	2 780	4 587	5 742
diesel	Mg	43	34	34
<i>b. Renewable sources (RES)/consumption of renewable fuels</i>				
biomass	Mg	485 378	441 352	444 737

Table 36: Electricity production [302-1]

Energy source	IU	2021	2020	2019
<i>a. Non-renewable sources</i>				
lignite/heating oil/mazout	MWh	4 534 739	5 069 745	5 947 676
	GJ	16 325 062	18 251 083	21 411 633
<i>b. Renewable sources (RES) / consumption of renewable fuels</i>				
biomass	MWh	374 659	368 695	381 415
	GJ	1 348 773	1 327 304	1 373 093
solar energy	MWh	3 609	-	-
	GJ	12 993	-	-
Total electricity production	MWh	4 913 008	5 438 441	6 329 091
	GJ	17 686 828	19 578 387	22 784 726
% of RES energy	%	8.3%	7.3%	6.4%

Table 37: Production of heat [302-1]

Energy source	IU	2021	2020	2019
<i>a. Non-renewable sources</i>				
lignite/heating oil/mazout	GJ	247 912	277 427	264 724
<i>b. Renewable sources (RES)</i>				
biomass	GJ	1 089 931	978 830	971 602
Total production of heat	GJ	1 337 843	1 256 257	1 236 326
% of RES energy	%	81.5%	77.9%	78.6%

Table 38: Total energy production (electricity, heat)

Energy source	IU	2021	2020	2019
<i>a. Non-renewable sources</i>				
lignite/heating oil/mazout	GJ	16 572 974	18 528 510	21 676 357
<i>b. Renewable sources (RES)</i>				

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Biomass and solar	GJ	2 451 697	2 306 134	2 344 695
Total heating energy	GJ	19 024 671	20 834 644	24 021 052
% of RES energy	%	12,9%	11,1%	9,8%

Table 39: Sale of electricity

Energy source	IU	2021	2020	2019
<i>a. Sale of own electricity</i>				
Sale of black electricity	MWh	4 039 419	4 540 237	5 352 418
	GJ	14 541 909	16 344 853	19 268 704
Sale of green electricity	MWh	320 015	310 666	309 416
	GJ	1 152 055	1 118 398	1 113 898
Total sale of own electricity	MWh	4 359 434	4 850 903	5 661 834
	GJ	15 693 964	17 463 251	20 382 602
<i>b. Sale of trading electricity</i>				
Sale of trading electricity	MWh	1 391 282	1 868 192	3 695 944
	GJ	5 008 614	6 725 490	13 305 398
Total sale of electricity	MWh	5 750 716	6 719 095	9 357 778
	GJ	20 702 578	24 188 741	33 688 001

Table 40: Sale of heat

Energy source	IU	2021	2020	2019
<i>a. Sale of own heat</i>				
Total sale of own heat	GJ	1 292 335	1 213 485	1 193 343
<i>b. Sale of trading heat</i>				
Total sale of trading heat	GJ	-	-	-
Total sale of heat	GJ	1 292 335	1 213 485	1 193 343

Table 41: CO₂ emission in ZE PAK SA Group (Scope 1, 2 and 3)* [305-1, 305-2, 305-3]

Energy sources	IU	2021	2020	2019
<i>a. emission from fuel combustion – electricity production (Scope 1) (1)</i>				
lignite (1.1)	Gg (1,000 t)	4 799,4	5 453,2	6 536,3
heating oil (1.2)	Gg	22,7	12,5	10,5
mazout (1.3)	Gg	8,0	11,4	13,0
meal (flue gas desulphurization installation (IOS)) (1.4)	Gg	41,2	33,4	49,9
Emission of No _x (flue gas denitrification system) (1.5)	Gg	0,7	0,4	0,0
Total of non-renewable fields (1.1+1.2.+1.3+1.4+1.5)	Gg	4 872,0	5 510,9	6 609,8
biomass (biogenic emission) (1.6)**	Gg	549,0	525,8	538,5
Total (Scope 1)(1.1+1.2.+1.3+1.4+1.5+1.6)	Gg	5 421,0	6 036,7	7 148,3
<i>b. emission from fuel combustion – other than electricity production (Scope 1) (2)</i>				
diesel (2.1)	Gg	8,9	14,6	18,3
gas (2.2)	Gg	0,1	0,1	0,1

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Total (Scope 1)^(2,1+2,2)	Gg	9,0	14,7	18,4
Total direct emission (Scope 1)⁽¹⁺²⁾	Gg	5 430,0	6 051,4	7 166,7
<i>c. emissions related to the production of purchased energy (Scope 2) ⁽³⁾</i>				
electricity purchased outside the Company ^(3,1)	Gg	971,1	1 304,0	2 657,4
Total (Scope 2) ^(3,1)	Gg	971,1	1 304,0	2 657,4
<i>d. emission related to lignite transport by external suppliers (Scope 3) ⁽⁴⁾</i>				
railway transport ^(4,1)	Gg	2,0	0,8	1,0
Car transport ^(4,2)	Gg	1,8	3,1	3,1
Total (Scope 3) ^(4,1+4,2)	Gg	3,8	3,9	4,2
Total (Scope 1+2+3) ⁽¹⁺²⁺³⁺⁴⁾	Gg	6 395,9	7 344,6	9 809,8
<i>Including biogenic emission ^{(1,6)**}</i>	Gg	549,0	525,8	538,5

* *The methodology of estimating the carbon footprint: in the case of **solid fuels used for energy production** (i.e. lignite, biomass), the amount of CO₂ emissions is determined by the calculation method, i.e. it is the sum of daily emissions calculated as the product of the daily fuel consumption, its current calorific value, coefficient emissions determined as a result of chemical analysis of the fuel and the oxidation coefficient. The advantage of this method is its greater accuracy due to taking into account the actual parameters of fuel from the deposits used by ZE PAK SA in the calculations. An alternative, but simplified, calculation method using the calorific value (CV) and the CO₂ emission factor (EF) published by KOBiZE for reporting in the Emission Trading Scheme would give more favourable results, i.e. respectively: in 2021: 4 608 944 Mg CO₂, in 2020: 5 256 542 Mg CO₂, in 2019: 6 194 447 Mg CO₂.*

*In the case of **liquid fuels used for energy production** (mazout, heating oil), the emission factor is not determined based on the results of chemical analysis, but the indicators according to KOBiZE guidelines are used. Additionally, emissions related to the use of flue gas desulphurization and denitrification installations (also calculated as the amount of meal and urea solution consumption and the adopted emission factors for them) are added to the emissions. Emission from fuels that are not used directly for the production of electricity and heat, i.e. for **automotive fuels** (gasoline, diesel oil), is calculated as the product of consumption and the calorific value and emission factors according to the KOBiZE guidelines..*

*As for indirect emissions, in the case of **purchased electricity**, the emission indicators published by KOBiZE were used. In turn, the **emission related to the transport of lignite by third parties (subcontractors)** was estimated based on the so-called **transport performance** (i.e. weight multiplied by distance travelled, expressed in tonne kilometres) and the applicable emission factor. In the case of rail transport, the emission factor was calculated on the basis of data from the annual report of PKP Cargo, and in the case of road transport, the indicator from the "UK Government GHG Conversion Factors for Company Reporting, 2021 (ver.2)" (average truck, 100% load).*

****Comment:** *Undoubtedly, the combustion of biomass produces CO₂ as a product of its combustion. Such emission, unlike the emissions from fossil fuel combustion, does not increase the balance of CO₂ that circulates in nature and which, in most cases, would be gradually released into the atmosphere in the process of biomass putrefaction. Therefore, there are two approaches in the practice of carbon footprint estimation. According to the methodology of calculating and reporting the carbon footprint for the purposes of KOBiZE and the ETS, which is the basis for the formal reporting of the carbon footprint of ZE PAK SA Group, biomass combustion is treated as zero-emission. In turn, according to the GHG Protocol methodology, CO₂ emissions from biomass combustion should be included in the carbon footprint. In order to present a reliable and comprehensive picture of the impact on the environment, the ZE PAK SA Group publishes the carbon footprint taking into account both methods (methodological approaches).*

Chart 19: CO₂ emission related to electricity production in Group in 2015-2020

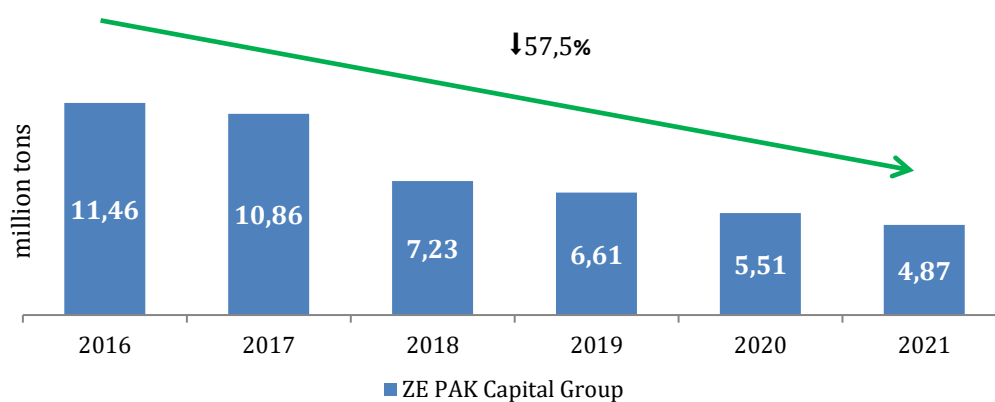


Table 42: CO₂ emission related to electricity production

	2021	2020	2019
CO ₂ emission ZE PAK SA Group (m tons)	4,87	5,51	6,61
CO ₂ emission in ZE PAK SA Group per production unit (m tons/TWh)	0,99	1,01	1,04

Chart 20: Total CO₂ emission related to electricity production in ZE PAK SA Group (m tons)

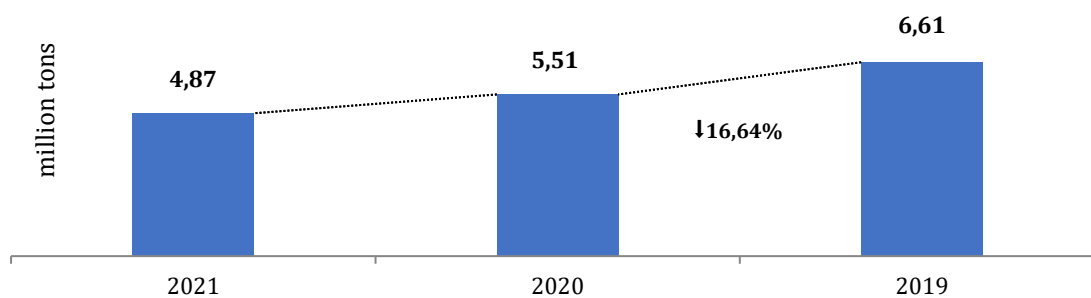


Chart 21: CO₂ emission related to electricity production in ZE PAK SA Group per production unit (m tons/TWh) [305-4]

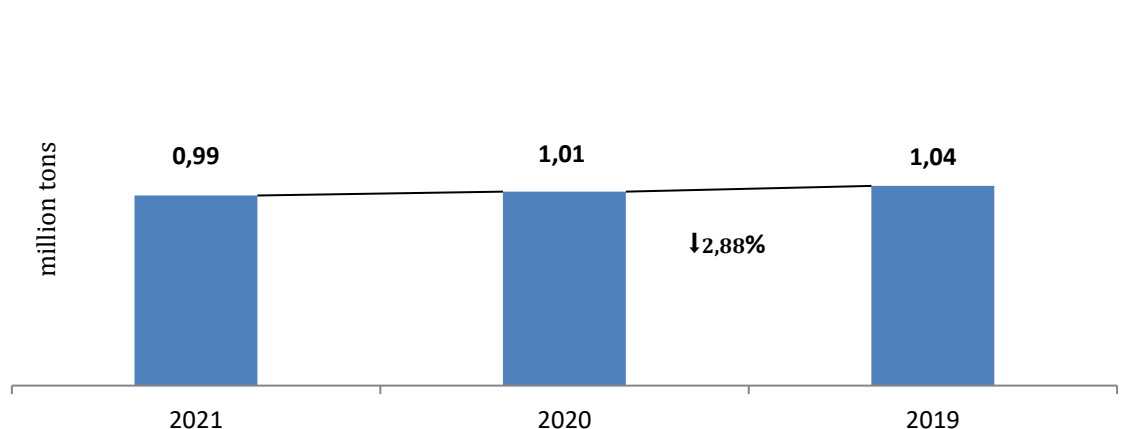


Table 43: SO₂, NO_x and dust emission to the atmosphere [305-7]

	2021	2020	2019
SO ₂ emission in ZE PAK SA Group (thousand tons)	1,53	2,66	4,05
SO ₂ emission in ZE PAK SA Group per production unit (thousand tons/TWh)	0,31	0,49	0,64
NO _x emission in ZE PAK SA Group (thousand tons)	3,56	4,85	7,07
NO _x emission in ZE PAK SA Group per production unit (thousand tons/TWh)	0,73	0,89	1,12
Dust emission in ZE PAK SA Group (thousand tons)	0,37	0,63	0,67
Dust emission in ZE PAK SA Group per production unit (thousand tons/TWh)	0,08	0,12	0,11

Chart 22: Total SO₂, NO_x and dust emission to the atmosphere (thousand tons)

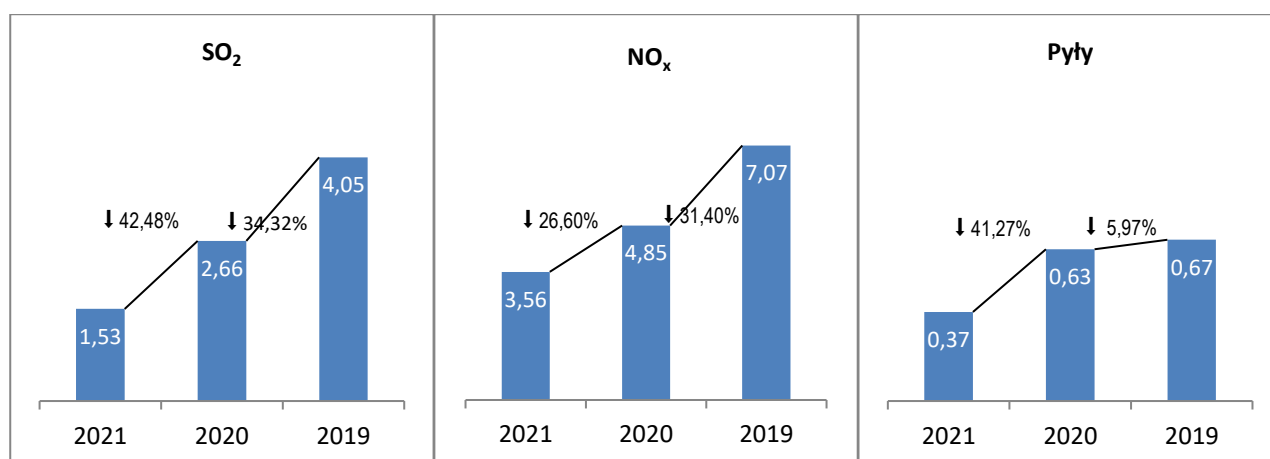


Chart 23: SO₂, NO_x and dust emission to the atmosphere per production unit (thousand tons/TWh)

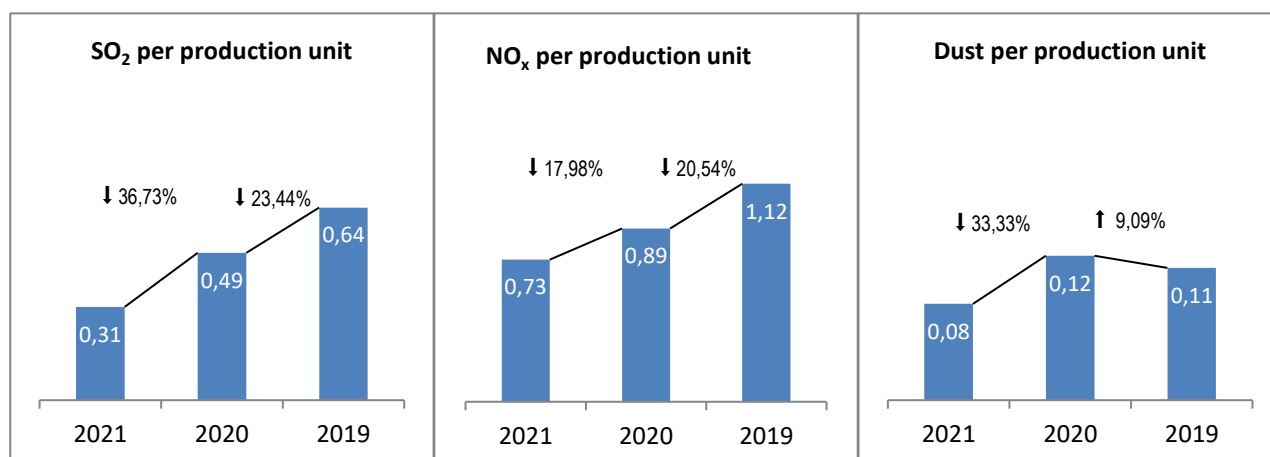


Table 44: Violation of environmental standards (%)

Emitted amount resulting from exceeding the standards in relation to the total amount of emissions

	2021	2020	2019
SO ₂	0,00	0,00	0,00
NO _x	0,00	0,00	0,00
Dust	0,00	0,00	0,00

11.5. Issues of respect for human rights

Management approach

When analysing issues related to respect for human rights, several should be distinguished, the respect of which may be of particular importance in the case of large industrial enterprises such as ZE PAK SA Group, i.e.:

- **recognition of the inalienable rights and dignity of the individual regardless of any differences between people** (*Art. 1 and Art. 2 of the Universal Declaration of Human Rights of December 10, 1948*) in the context of interpersonal relations and the prohibition of any form of discrimination
- **the right to life, freedom and security of one's person** (*Art. 3*) in the context of, inter alia, ensuring a high level of occupational health and safety (see "Health and Safety")
- **prohibition of humiliation** (*Art. 4*) in the context of the mobbing risk
- **the right to property** (*Art. 17*) in the context of the purchase of land from third parties (see: "Purchase of real estate")
- **the right to social insurances** (*Art. 22*)
- **the right to equal pay for equal work and the right to form a trade union** (*Art. 23*)
- **the right to leave and rest** (*Art. 24*)

In the aspect referring to an individual and ensuring its respect (*Art. 1*), which means the respect for variety and simultaneous lack of any form of discrimination (*Art. 2*) or mobbing (*Art. 4*), beside the respect and enforcement of legal regulations that guarantee such a respect (e.g. Labour Code), ZE PAK adopted The Code of Ethics that is available for all employees on the internal website of the Company. Not only does it guarantee the aforementioned rights of an individual, but it is also a tool in itself that allows for the resolution of potential conflicts of interest. It contains a mechanism for both resolving doubts as well as reporting suspicions about potential behaviour that violates the provisions of the Code. It is worth mentioning that the Code of Ethics also condemns other behaviours that violate human rights, such as child labour, forced labour or slave labour.

At the same time, internal regulations in the ZE PAK SA Group guarantee respect for the right to social insurance (*Art. 22*) or the right to leave and rest (*Art. 24*). The Group scrupulously complies with the obligations related to the payment

of social security contributions (ZUS), and records due leave days (*Art. 24*). It also actively supports the rest and activity of employees (e.g. by co-financing holidays and offering tickets for sports activities). These issues have been formally regulated in the regulations of the Company Social Benefits Fund (CSBF).

ZE PAK SA Group also provides procedural solutions in the field of fair remuneration, i.e. analogous remuneration for similar work, regardless of the non-substantive features that differentiate employees (*Art. 23*). Monitoring of the level of wages and possible gender differences in the level of wages was also initiated. Nevertheless, one should be aware of the strong dominance of mining professions and also positions in the energy sector by men. As a result, among the employees of ZE PAK SA Group there is a relatively small percentage of women and, what is more, they dominate in specific areas (finance, human resources).

As mentioned earlier, in the companies of ZE PAK SA Group that meet the statutory criteria, there are Employee Councils, selected on the basis of the applicable regulations. There are also a number of trade union organizations operating pursuant to the Act on Trade Unions. The management boards of the Group companies inform and consult decisions with the employees' representatives (Employee Council, trade unions) on matters specified in legal regulations. In the opinion of the managers, the freedom of association in trade unions and related rights are ensured (*Art. 23*).

It should be emphasized that suspected violations of any of the human rights, including rights not listed here, can and should be reported through the mechanisms provided for in the Code of Ethics.

The disrespect for human rights, including aforementioned right to associate and strike, would mean not only the breach of national law (and sanctions in consequence), but also could lead to unnecessary escalation of conflicts on the employer-employees line. Despite the existing differences of opinion, manifesting, for example, with a collective dispute, the managers of ZE PAK SA Group appreciate the role of trade unions. Theoretical tightening of disputes, while not having a dialogue, can lead to strike actions and threaten the stability of production. Trade unions and the management, despite disputes and different assessment of the situation (e.g. in terms of short and long-term approach), are constructively oriented and aware of the economic consequences of a possible imbalance in the stability of energy supplies. Such consequences could concern not only the Group but also the national energy system.

Regarding the risk of disrespect for individual rights, such cases can not only expose ZE PAK SA Group to litigations and necessity to pay compensations, but they are primarily a real threat for organisation culture, work atmosphere and the same its effectiveness. They are also associated with the risk of losing valuable employees or, through discrimination, the impossibility of making full use of their potential (e.g. promotion of people with lower competences, while inhibiting the promotion of discriminated people).

All the cases of disrespect for human rights in ZE PAK SA Group also mean a measurable reputational risk, and then, with the escalation of this type of phenomena it can affect the loss of social consent for acting.

Key indicators

Table 45: Key indicators in the area of human rights' respect [406-1]

	2021	2020	2019
The number of cases of reporting suspicion of unethical behaviour under the mechanisms provided for by the Code of Ethics for violation of individual rights	0	0	0
Unionization ratio	45,80	46,93%	47,05%
Number of collective disputes	5	5	6
Number of work days lost due to strike actions	0	0	0

11.6. Issues related to counteracting corruption

Management approach

One of the goals of the Social Responsibility Strategy of ZE PAK SA Capital Group for 2017-2020 was to provide a management system that would take into account solutions related to counteracting corruption and other unacceptable unethical phenomena. Exposure to these types of threats depends, among others, on the scale of implemented investments and orders as well as the effectiveness of the control system and the lack of social acceptance for undesirable behaviour in the culture of the organization. The risk of corrupt behaviour accompanies every enterprise, and cases of decision-

making by corrupt employees lead, among others, to suboptimal choices in purchasing processes, both in the sense of overstating the price, as well as, for example, improper quality of products or services, untimely delivery or performance of services, or the consent of a corrupt employee to other, improper behaviour of the contractor (e.g. breaking regulations, failure to carry out warranty repairs, etc.). Of course, corruption and bribery may take a number of other forms and may also be related to the granting of benefits by employees of the organization to officials for issuing a favourable decision, etc. As a consequence, for the organization it may mean threats related to unjustified increase of costs, as well as e.g. huge image losses.

Considering the scale of planned and often already realized investments, which are to implement the transformation of ZE PAK SA Group into a clean energy supplier, the exposure to potential corruption threats will be greater in the coming years. At the same time, it is worth noting that at the operational level, the current business model is burdened with a relatively low risk of corrupt behaviour in relation to the scale of business activity. Contrary to many other electricity producers, ZE PAK SA Group has based its activities on a highly integrated business model, i.e. energy production is based primarily on its own raw materials. Thus, raw materials are supplied inside the organization (understood as a capital group) and not from external entities. At the moment, the exception is biomass, purchased from external suppliers. Also, service works are in many cases performed by entities from ZE PAK SA Group. As a consequence, external purchases of products and services are reduced to a minimum, which in turn reduces the risk, although it does not eliminate it, of course. The risk of corruption will increase as indicated above with the implementation of the investment.

In recent years, a number of steps have been taken to ensure, on the one hand, effective control mechanisms, and, on the other, to sensitize employees to the symptoms of corruption and to reinforce their lack of acceptance for passivity towards such behaviour. In 2017, the Code of Ethics was adopted at ZE PAK SA, and in 2020 by other companies of the Group.

In turn, the internal system of inspection „Rules of Internal Audit of ZE PAK SA” determines the rules of organizing and functioning of internal audit that provides the systematic and methodological approach to evaluation and improvement of the effectiveness of supervision as well as management of risk and organization processes. They include the research and evaluation of activities of organizational units and the Group's subsidiaries in terms of thriftiness, legality, advisability, reliability and transparency of documentation (processes). The inspection activities aim at disclosure of unused business provisions, detection of irregularities and abuse in the operations of organizational units, determination of causes and effects of irregularities found and persons responsible for them, as well as elaboration of conclusions and post-audit recommendations. Among the irregularities and abuse there are also all activities that may be characterized by bribery and corruption.

The internal inspection system includes: self-control of the correctness of work performance, functional and institutional control (implemented by the internal audit unit). As part of the institutional control, the internal audit unit checks the activity of the organization as a whole, responding to the needs reported by the Management Board and the Supervisory Board in accordance with the audit regulations (among others, evaluates the coordination of activities between workstations and organizational units, evaluation of the creation system and documentation flow and information, etc.) with a frequency depending on the identified risk areas and the level of risk significance, as well as the role of control in its reduction. In this context, the activities of the internal control unit supplement the basic control and ongoing supervision and are aimed at revealing weaknesses or gaps in the organization and functioning of the internal control system. Controls are planned (in accordance with the annual plan approved by the Management Board), ad hoc (at the request of the Management Board or the Supervisory Board) and the one of checking nature.

The purchasing procedures described in the management systems applicable in the companies of the ZE PAK SA Group also regulate the issues of supplier selection. In the case of generation area, ZE PAK SA has implemented the Integrated Management System, under which in Sector 5.3 "Product / service support" applies, among others two procedures 5.3 - 01 "Supplier assessment" and 5.3 - 02 "Identification and traceability". The basic condition in the selection of suppliers is that they should be specialist suppliers, meeting agreed technical and commercial conditions and guaranteeing 100% reliability of deliveries. In addition, suppliers whose products decide directly on the quality of electricity and heat are subject to qualifications based on ongoing cooperation with suppliers, delivery control and periodic evaluation, among others, through their auditing as well as updates of the list of qualified suppliers. The management system also introduces "Supplier assessment sheets". In addition to the obvious factors such as the quality of deliveries, the level and stability of prices and payment conditions, for example, timeliness, or the fact that suppliers have certified management systems are taken into account.

ZE PAK SA is responsible for making purchases in the area of electricity generation and in the mining area for PAK KWB Konin and PAK KWB Adamów. The purchase process itself has been defined in ZE PAK SA by the "Rules of Supplier Selection". The process is supported by the electronic purchase platform which eliminates some of the threats, for instance, it prevents from getting acquainted with offers submitted before the deadline. Thus, it eliminates the risk that dishonest employee could provide the information of competitive bids to the supplier who is still working on the offer. It is worth mentioning here, that the purchase process is based on the electronic auction option, which is carried out in real

time, and this limits the possibility of unethical contact with a potential supplier. Moreover, until the auction closes, employees are not able to observe its progress, i.e. offers submitted by individual tenderers. They can read them only after the auction process is closed. ZE PAK SA makes purchases in the area of generating electricity.

PAK Górnictwo sp. z o.o. and PAK Serwis make purchases for the service area based on their own regulations, similar to each other in terms of the shape of the process itself. They use the same tools, including the same electronic purchase platform. Approximately, the purchase procedure is initiated by a substantive unit that reports a specific purchase need. After obtaining relevant approvals justifying the future purchase, a commission which defines the purchase criteria is appointed. The commission makes an assessment of the collected offers and points out the recommended supplier. In the next step, negotiations are conducted, and finally the accepted offer is directed to implementation. From the perspective of transparency, the important thing is that the information on planned purchases (i.e. request for quotations and tender inquiries) is published on the electronic purchase platform as well as on the website, and the purchases themselves are usually open tenders.

Simultaneously, all areas, including the aforementioned purchasing area, are subject to be controlled by internal audit staff, also in terms of the potential occurrence of corruption-related phenomena. Controls may be planned as well as ad hoc inspections. The employees of the internal audit unit have an access to all information and reports necessary to perform the control activities in a reliable and objective way. Auditors are therefore obliged to inform the auditing manager on an ongoing basis about the course of the audit and the difficulties encountered in the implementation of the audit tasks. Auditing manager presents an assessment of the implementation of the audit's objective to the Management or the Supervisory Board. The auditors are authorized to: enter all the objects and rooms of the audited unit; inspect all recording devices, plans, reports, protocols and business memos or correspondence as well as other documents and materials associated with the controlled unit operation; periodical assisting at all activities of controlled unit; request for clarification and any information (oral or written) related to the subject of the control, from the manager and other employees of the controlled unit; requesting the head of the audited entity to perform partial or complete inventory of certain assets at the indicated date and to commission calculations, draw up lists, analytical statements, copies, extracts, etc.; receiving declarations from employees and other persons in matters related to the activity of the controlled entity; determine the real states by means of measurements, situational sketches as well as photo and recordings etc.; take necessary actions to secure evidence and property in case of irregularities; request the management of the audit with an application for the appointment of experts, in case of a justified need to make an expert report; ask the head of the controlled entity to provide all means necessary for a smooth inspection and for the effective implementation of conclusions resulting from the audit findings; performing control activities at the time selected by the inspector and extending the subject of controls in justified cases without obtaining additional consent of the manager of the control. The manager of the controlled unit is obliged to provide the auditor with the appropriate working conditions and technical assistance necessary for the efficient control.

If there are any circumstances threatening for human health or life, or any other resulting in the loss of goods due to the mismanagement, negligence, prodigality or an offense found during the inspection, the auditor makes a written request to a manager of the controlled unit, obliging him to take immediate action in order to eliminate such incidents. The auditor informs immediately audit management unit and secures the evidence documents and items of mismanagement or an offense. Then, after receiving the legal advice, a person managing the audit takes a decision to inform law enforcement authorities.

Simultaneously, each employee of ZE PAK SA Group, in the case of suspicion of any unethical behaviour, including those of bearing the marks of corruption, has not only the possibility but obligation as well to report information using the mechanisms provided by the Code of Ethics and the procedure for reporting violations implemented in ZE PAK. For this purpose, the employee can contact the superior or the person indicated by the Management and acting as Ethics Spokesman, or may make an anonymous report to the e-mail addresses dedicated to such reports, indicated in the above-mentioned Code of Ethics and Procedure. Such a notification is analysed, and an employee who has reported the information cannot be in danger of any consequences and will be protected from any retaliation, even if the information was not confirmed but was reported in good faith.

In connection with DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (EU) 2019/1937 of 23 October 2019 on the protection of persons reporting breaches of EU law, in ZE PAK SA and companies from the capital group employing over 250 people (PAK KWB "Konin", PAK Górnictwo sp. Z o.o. and PAK Serwis sp. Z o.o.) the "Regulations for reporting violations of law" have been adopted. The adopted regulations determine:

- internal procedure for reporting violations of law,
- a follow-up procedure,
- the procedure for protecting the whistle-blower.

The Internal Audit Department of ZE PAK SA is responsible for the correct implementation and performance of the above procedures in ZE PAK SA and other companies of the capital group.

The Regulations are generally available on ZE PAK SA intranet website.

Key indicators

Table 46: Key indicators in the area related to counteracting corruption [205-3]

	2021	2020	2019
Number of suspicions of corrupt behaviour reported to law enforcement authorities	0	0	0
Number of people convicted by a valid sentence for a corruption offense	0	0	0

11.7. GRI content index

Statement on the use of GRI Standards	<i>ZE PAK SA Group and ZE PAK SA published the information cited in this index on the GRI content for the period 01.01.2021 - 31.12.2021 with reference to the GRI Standards.</i>
Used standard GRI 1:	<i>GRI 1: Foundation 2021</i>
Obligatory GRI sector standards:	<i>No sector standards for the industry.</i>

GRI Standard	Disclosure (index)
GRI 2: General Disclosures 2021	2-2 Entities included in the organization's sustainability reporting
GRI 2: General Disclosures 2021	2-3 Reporting period, frequency and contact point
GRI 2: General Disclosures 2021	2-5 External assurance
GRI 2: General Disclosures 2021	2-6 Activities, value chain and other business relationships
GRI 2: General Disclosures 2021	2-7 Employees
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported

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GRI 203: Indirect Economic Impacts 2016	203-2 Significant indirect economic impacts
GRI 205: Anti-corruption 2016	205-3 Confirmed incidents of corruption and actions taken
GRI 302: Energy 2016	302-1 Energy consumption within the organization
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource
GRI 303: Water and Effluents 2018	303-3 Water withdrawal
GRI 303: Water and Effluents 2018	303-4 Water discharge
GRI 303: Water and Effluents 2018	303-5 Water consumption
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas
GRI 304: Biodiversity 2016	304-2 Significant impacts of activities, products and services on biodiversity
GRI 304: Biodiversity 2016	304-3 Habitats protected or restored
GRI 304: Biodiversity 2016	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations
GRI 305: Emissions 2016	Disclosure 305-1 Direct (Scope 1) GHG emissions
GRI 305: Emissions 2016	305-2 Energy indirect (Scope 2) GHG emissions
GRI 305: Emissions 2016	305-4 GHG emissions intensity
GRI 305: Emissions 2016	305-7 Nitrogen oxides (NO _x), sulphur oxides (SO _x), and other significant air emissions
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts
GRI 306: Waste 2020	306-2 Management of significant waste related impacts

GRI 306: Waste 2020	306-3 Waste generated
GRI 401: Employment 2016	401-1 New employee hires and employee turnover
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system
GRI 403: Occupational Health and Safety 2018	403-2 Hazard identification, risk assessment, and incident investigation
GRI 403: Occupational Health and Safety 2018	403-9 Work-related injuries
GRI 403: Occupational Health and Safety 2018	403-10 Work-related ill health
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs
GRI 413: Local Communities 2016	413-2 Operations with significant actual and potential negative impacts on local communities

11.8. Taxonomy

Pursuant to Art. 8 of the Regulation of the European Parliament and of the EU Council 2020/852 of 18 June 2020 establishing a framework to facilitate sustainable investments and complementary Commission Delegated Regulations 2021/2139 of 4 June 2021 and 2021/2178 of 6 July 2021, ZE PAK SA Group for the first time discloses information on the so-called EU Taxonomy, which is a classification system that defines a list of environmentally sustainable economic activities. The intention of the Taxonomy is to support investors in a rational investment process and making investment decisions, which is to increase the scope of environmental protection by allocating investors' capital in ecological activities, and additionally to eliminate the problem of false "green" marketing.

The taxonomy aims to define an activity classification system that will provide clarity as to which activity qualifies as sustainable. Establishing criteria for environmentally sustainable economic activity is essential for the European Union's goal of achieving sustainable development and the transition to a safe, climate-neutral, climate-resilient and more resource-efficient circular economy.

This transition requires, in addition to harnessing climate-neutral energy and increasing investment in already low-carbon economic activities and sectors of the economy, a significant reduction in greenhouse gas emissions from other economic activities and sectors for which there are no low-carbon alternatives that do not exist would be technologically and economically feasible. These transitional economic activities should qualify as a significant contributor to climate change mitigation where their greenhouse gas emissions are well below the sector or industry average, do not hamper the

development and deployment of alternative low carbon solutions, as well as they do not lead to a dependency on assets incompatible with the climate neutrality objective, taking into account the economic life cycle of those assets.

According to the Taxonomy, selected enterprises, including the ZE PAK SA Group, should report key indicators for 2021 regarding the activities implementing two of the six environmental goals according to the interpretation formulated by the Taxonomy. Taking the above into account, this report covers the key indicators for climate change mitigation and adaptation to climate change, while keeping in mind not to harm other environmental goals.

In the first year of application, in accordance with the content of Commission Delegated Regulation (EU) 2021/2178, ZE PAK SA Group discloses the percentage of turnover, capital expenditure and operating expenses qualifying for taxonomy, without the need to verify the Technical Eligibility Criteria, i.e. without determining what percentage of these three values is related to environmentally sustainable activities.

Bearing this in mind, ZE PAK SA Group has reviewed its activities, identifying economic activities in accordance with the taxonomy within the meaning of Art. 1 of the Commission Delegated Regulation (EU) 2021/2178 of 6 July 2021. After analysing all types of activities described in the Taxonomy (also under the NACE codes), it was determined that the revenues, capital expenditures and operating costs currently included in the Taxonomy come from the following types of operating activities (in accordance with the taxonomy) conducted by ZE PAK SA Group:

- Hydrogen production [3.10.]
- Electricity production using photovoltaic technology [4.1.]
- Wind electricity production [4.3.]
- Production of electricity from biomass [4.8.]
- Hydrogen storage [4.12.]
- Cogeneration of heat / cooling and electricity from biomass [4.20.]
- Electricity production from renewable non-fossil gaseous and liquid fuels [4.7.]

No exclusions were used at this stage (no materiality level).

The basis for calculating the individual shares was the consolidated financial statements of ZE PAK SA Group for 2021.

For the revenue ratio, the basis for the calculation was consolidated net sales revenue. The numerator shows significant consolidated revenues from activities eligible for the taxonomy.

Table 47: Percentage of revenues of ZE PAK SA Capital Group eligible for taxonomy

	2021
Consolidated revenues from the sale of services, products, goods and materials (PLN)	2 451 209 000.00
Identified revenues from eligible activities	213 334 096.00
Share of revenues related to eligible activities	8.7%
Share of revenues related to non-eligible activities	91.3%

For the CAPEX ratio, the denominator covers the increase in property, plant and equipment and intangible assets during a given financial year before depreciation, amortization and revaluation, including those resulting from revaluation and impairment, for a given financial year, excluding changes in fair value. The numerator includes capital expenditure on activities eligible for taxonomy. A very high ratio of investments in line with the taxonomy proves that in the coming years the Group will also increase the value of environmentally sustainable revenues in areas 4.1., 4.3. and 4.20.

Table 48: Percentage of capital expenditure (CAPEX) of ZE PAK SA Capital Group eligible for taxonomy

	2021
Total capital expenditure (PLN)	354 748 669.00
Identified capital expenditure related to eligible activities	334 012 434.00
Share of capital expenditure related to eligible activities	96.6%
Share of capital expenditure related to non-eligible activities	3.4%

For the OPEX ratio, the basis for the calculation were the costs related to the maintenance of the company's assets, including the costs related to the ongoing servicing and repairs of tangible fixed assets necessary to ensure the continuity and efficiency of their operation, as well as the costs of remuneration, security of facilities, and technical supervision. The numerator shows the part of OPEX which relates to activities eligible for taxonomies. The low share of environmentally sustainable expenditure proves that most of the activities are still in the investment phase, therefore, a significant increase in this ratio should be expected in the coming years.

Table 49: Percentage of operating expenses (OPEX) of ZE PAK SA Capital Group eligible for taxonomy

	2021
Total of operating expenses (PLN)	361 634 402.00
Identified operating expenses related to eligible activities	27 690 305.00
Share of operating expenses related to eligible activities	7.7%
Share of operating expenses related to non- eligible activities	92.3%

12. OTHER INFORMATION

12.1. Significant court proceedings

ZE PAK SA and the companies consolidated within the Group were not a party in proceedings pending before court, competent arbitration authority or public administration authority in the third quarter of 2021, whose single or total value would exceed 10% of ZE PAK SA's equity with the exception of those described below.

Proceedings on an environmental decision issued to PAK KWB Konin SA concerning lignite deposit in Tomisławice

PAK KWB Konin SA is a party in the administrative proceedings related to the environmental decision regarding the lignite deposit in Tomisławice. On 7 August 2007, the Head of Wierzbinek Commune issued an environmental decision regarding the lignite open cast. On 5 December 2008, this decision was contested by nine physical persons supported by the Greenpeace organization due to alleged major infringement of the regulations of the law. On 25 March 2009, the Self-government Appeal Court dismissed the application to reverse the environmental decision. The plaintiffs applied for the judicial review. On 4 May 2009, after the judicial review, the Self-government Appeal Court sustained its previous decision. The plaintiffs again appealed against the environmental decision. On 5 May 2010, the Provincial Administrative Court in Poznań ruled that the environmental decision, pursuant to which the license for the extraction of lignite at Tomisławice deposit was granted, infringes the regulations of the law in a major manner. PAK KWBK SA and the Self-government Appeal Court submitted an appeal against this judgment. On 21 March 2012, the Supreme Administrative Court overturned the contested decision of the Provincial Administrative Court in Poznań and referred the matter for reconsideration. On 6 November 2012, the Provincial Administrative Court in Poznań announced the decision repealing the decision of the Self-government Appeal Court of 25 March 2009 refusing to declare the invalidity of the environmental decision issued on 7 August 2007 by the Head of Wierzbinek Commune, related to the extraction of lignite from Tomisławice open pit by PAK KWBK SA. On 7 January 2013, PAK KWBK Konin SA submitted a cassation appeal from the described decision.

After the review on the hearing on 7 October 2014, the Supreme Administrative Court dismissed the cassation appeal of PAK Kopalnia Węgla Brunatnego Konin SA from the judgment of the Provincial Administrative Court in Poznań of 6 November 2012 repealing the decision of the Self-government Appeal Court in Konin of 25 March 2009 refusing the annulment of the environmental decision issued on 7 August 2007 by the Head of Wierzbinek Commune related to the extraction of lignite from Tomisławice open pit.

Dismissal of the cassation appeal of PAK Kopalnia Węgla Brunatnego Konin SA means that the judgment of the Provincial Administrative Court in Poznań of 6 November 2012 became legally binding and the case regarding the statement of invalidity of the environmental decision will be examined again by the Self-government Appeal Court.

On 18th January 2019 the Local Government Appeal Court in Konin issued a decision refusing to annul the environmental decision issued on August 7, 2007 by the Head of Wierzbinek Commune related to the exploitation of Tomisławice lignite open pit. Subsequently, the Government Appeal Court upheld its decision, from which a complaint was filed with Poznań Administrative Court.

On June 19, 2020 the Company received information on the issuance, in closed session by the Provincial Administrative Court in Poznań, of a judgment dismissing the complaint against the decision of the Local Government Appeals Board in Konin regarding refusal to annul the environmental decision issued on August 7, 2007 by the Head of Wierzbinek Commune associated with the exploitation of the lignite mine Tomisławice.

The judgment of the Provincial Administrative Court in Poznań, dated June 18, 2020, means that the environmental decision issued on August 7, 2007 by the Head of Wierzbinek Commune, is still in legal circulation.

The Greenpeace Polska Foundation with its seat in Warsaw and Józef Imbierski submitted a cassation complaint to the Supreme Administrative Court against the judgment of June 18, 2020. On October 26, 2020, PAK KWB Konin responded to the cassation appeal, petitioning for its dismissal.

Other court cases are described in the consolidated financial statements of the Group in point 34.1.

12.2. Significant achievements in the field of research and development

In September 2020, the ZE PAK SA Capital Group started work on an innovative project of the prototype of the Polish Hydrogen Bus, the aim of which was to develop from scratch the construction of a new eco-friendly bus powered by hydrogen cells. After the conceptual work, technical analysis of the selection of the main components of the bus (hydrogen cells, cylinders, batteries and drive) and the calculations ensuring the highest overall energy efficiency in the designed bus, a new design was designed, taking into account trends in ergonomics and modern appearance, dedicated to buses powered by hydrogen and work began on the construction of the bus prototype, which lasted from April to October 2021. After the construction was completed, the bus tests began and the approval works are currently underway.

ZE PAK SA Group is also working on an autonomous power supply for a single-family house. This project involves the development of a concept and technical selection of devices for a self-sufficient autonomous power supply system for electricity, heat, hot water for single-family houses with low energy consumption and passive houses, based on own renewable energy sources using hydrogen as a storage and energy carrier. Currently, the initial operation phase of the assembled autonomous power supply system intended for a single-family house is in progress.

12.3. Information on the selection of the audit firm conducting the audit of the annual consolidated financial statements

According to the statement of the Supervisory Board, the selection of the auditing company conducting the audit of the annual consolidated financial statements was made in accordance with the regulations, including the selection and procedure of selecting an audit firm. The auditing company and the members of the audit team meet the conditions for the preparation of an impartial and independent audit report on the annual consolidated financial statements in accordance with applicable regulations, professional standards and professional ethics. The applicable regulations related to the rotation of the auditing company and the key statutory auditor as well as mandatory grace periods are complied with. The company has a policy regarding the selection of an audit firm and a policy for providing the issuer by an auditing company, an entity related to an auditing company or a member of its network of additional non-audit services, including conditionally exempt services from an audit firm.

12.4. Information on the auditing of the financial statement

The auditing company auditing the financial statements and the consolidated financial statements is PricewaterhouseCoopers Polska Spółka z ograniczoną odpowiedzialnością. Audyt sp.k. The agreement regarding the audit of the Company's financial statements and the consolidated financial statements of the Group together with the service of verifying the marking of the consolidated report with XBRL tags in accordance with the ESEF requirements was concluded on August 10, 2020 for a period of 3 years. In addition to the above-mentioned service work, in 2021 PricewaterhouseCoopers Polska Spółka z ograniczoną odpowiedzialnością Audyt sp.k. provided assurance services to the Company in connection with the remuneration report.

Information on the remuneration of the audit firm is presented in point 38 of the consolidated financial statements of the Group for 2021.

12.5. Financial forecasts

The Capital Group did not publish financial forecasts for 2021 and it will not present the forecast for 2022.

All other information required to be disclosed by law and not disclosed in this management report on operations does not apply to the Group.

Konin, April 28, 2022

SIGNATURES:

Piotr Woźny
President of the Management Board

Zygmunt Artwik
Vice President of the Management Board

Andrzej Janiszowski
Vice President of the Management Board

Maciej Nietopiel
Vice President of the Management Board

Katarzyna Sobierajska
Vice President of the Management Board