

Investments and development

The ultimate goal of investments undertaken by the Company is to **drive up its market value**.

The investment program of KOGENERACJA S.A. focuses mainly on **internal and external investments in fixed-assets**.

Investments in fixed-assets are intended to boost growth, protect the national environment and ensure modernization and replacement of fixed assets.

Modernization and replacement investments, such investments in the Company's production assets, increase their efficiency and availability, reduce the failure rate of production systems and improve work safety.

Table. Investment costs

	for the period from 1 January 2020 to 31 December 2020	for the period from 1 January 2019 to 31 December 2019
KOGENERACJA S.A.	120 745	113 529
Internal investments	114 409	104 629
External investments	6 336	8 900
EC Zielona Góra S.A.	43 037	47 851
Total capital expenditures	163 782	161 380



Investments

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Internal investments

The projects in this field are aimed at the gradual restoration of decapitalized production assets, combined with their modernization. **The most important tasks carried out in 2020 include:**

- capitalized overhaul of TG2 turbine at EC Czechnica,
- modernization of G-2 generator at EC Wrocław,
- modernization of IMOS system – delivery and installation of perforated shelf aiming to reach the required emission in EC Wrocław,
- preparation of a construction project for heat and power plant Nowa EC Czechnica,
- capitalized overhaul of K-2 boiler in EC Wrocław,
- modernization of electrofilters aiming to reach the required level of emission in EC Wrocław,
- modernization of selected non-block facilities at EC Wrocław,

- modernization of selected construction infrastructure at EC Wrocław.

The investments executed in 2020 were financed mainly from the Company's own funds. **The most important tasks planned for 2021 include:**

- construction of the heat and power plant Nowa EC Czechnica,
- modernization of electrofilters (BREF) – continuation of the task from 2020,
- capitalized overhaul of G-3 generator at EC Wrocław,
- modernization of selected non-block facilities at EC Wrocław,
- modernization of selected construction infrastructure at EC Wrocław,
- modernization of IMOS (BREF) system.

The investments planned to be executed in 2021 will be financed from the Company's own funds.

External Investments

New connections

Both KOGENERACJA S.A. and EC Zielona Góra S.A. carry out external investments to facilitate new connections to the municipal heat distribution network in Wrocław, Siechnice, the municipality of Św. Katarzyna and Zielona Góra which aim to expand the heat market in conformance with the Company's strategic objectives. In 2020, consumers with a total contracted capacity of 19.9 MWt (vs. 26.4 MWt in 2019) were connected to the district heating network:

- **6,76 MW_t** - in Wrocław 14 nodes with a capacity of **4,72 MW_t**, through the construction of own nodes at customers' sites from the Company's own resources and nodes financed by customers; including **4,21 MW_t** on the primary market and **0,51 MW_t** on the secondary market. At the same time, **12** nodes with a total capacity of **2,18 MW_t** were built and connected to the own heat distribution network in Siechnice and Święta Katarzyna.
- **13,2 MW_t** in Zielona Góra - **46** objects and **32** modules preparing hot usable water.

The investment projects implemented in 2021 will be financed from the Company's own funds and from external sources e.g. subsidies from the National Fund for Environmental Protection and Water Management under the Integrated Territorial Investments.

Electromobility

EC Zielona Góra S.A. participates in the project called the Integrated system of low-emission public transport in Zielona Góra implemented in partnership with the City Hall of Zielona Góra and the Municipal Transport Company (MZK). The development of electromobility in Zielona Góra creates an opportunity for the Company to launch a new business line of sales and distribution of electricity supplied to the electric bus charging station and in the future also to charging points distributed across the entire city.

On 14 September 2020 the President of the Energy Regulatory Office (URE) approved the second tariff for the distribution of electricity for EC Zielona Góra S.A., which was further introduced for use in settlements with final recipients on 1 October 2020. Later, on 16 October 2020, President of URE appointed EC Zielona Góra S.A. as a buyer responsible for the period from 1 January 2021 to 31 December 2021 and power distribution system operator (DSO) within its own electricity distribution network.

Quality and environmental protection

Integrated Management System

KOGENERACJA S.A. and EC Zielona Góra S.A. have individual Integrated Management System certificates which cover the following three systems:

1. Quality Management System compliant with the requirements of PN-EN ISO 9001:2010,
2. Environmental Management System compliant with the requirements of PN-EN ISO 14001:2005,
3. Occupational Health and Safety Management System compliant with the requirement PN-N 18001:2004 and OHSAS 18001:2007 which will be replaced by the requirement PN-ISO 45001:2018 until 30 September 2021.

Abovementioned systems undergo annual audits carried out by an independent certifying unit.

Integrated permits and environmental decisions

Based on the decision of Marshal of Dolnośląskie Voivodeship dated 15 October 2020 No PZ 36.8/2020 an amendment to integrated permit for EC Czechnica was issued concerning the change of conditions for air emission and waste management. Until the end of 2022 coal-fired boilers at EC Czechnica may operate based on so-called heating derogation.

Integrated permit to operate fuel combustion installations with a nominal capacity of over 50 MW for EC Wrocław was changed based on the decision issued by the Marshal of Dolnośląskie Voivodeship on 18 December 2019.

Under the abovementioned decisions, the exploitation of installation is conducted in compliance with BAT conclusions (Best Available Techniques) with respect to large combustion plants.

Due to the need to replace in 2021 measuring equipment in combined cycle gas and steam unit and to adapt to the European Commission Executive Decision 2017/1442 of 31 July 2017, establishing conclusions on best available techniques (BAT) with respect to large combustion plants, the Heat and Power Plant Zielona Góra S.A. obtained on 16 December 2020 a decision from Marshal of Lubuskie Voivodeship, amending former decision from 6 February 2012 concerning issuing an integrated permit to operate fuel combustion installations with a nominal capacity of over 50 MW. The abovementioned decision changed the level of required frequency of dust and sulfur dioxide measurements on E3 emission source. Monitoring of the emission of SO₂ in combined

cycle gas and steam unit will be carried out periodically (twice a year) and the remaining pollutants will be monitored continuously.

CO₂ emission allowances trading system

The free allocation of CO₂ emission allowances is based on the National Allocation Plan in accordance with the Regulation of the Council of Ministers of 13 April 2015 on the list of power generating installations and with the Regulation of the Council of Ministers of 10 April 2015 on the list of installations other than power generating installations.

The allocation of free allowances is primarily dependent on the completion of investment projects set out in the National Investment Plan and the use of investment outlays for the settlement of allocated allowances. The number of allowances may be lower than the one included in the Regulations. Pursuant to the Regulations applicable to the period of 2013–2020, the granted limit for free CO₂ emission allowances is getting lower.

For 2020 the Company obtained a limit of **159 365 Mg**, including free allocations of CO₂ emission dedicated entirely and exclusively to **heat production** (374,649 Mg in 2019, 477,859 Mg in 2018, 585,956 Mg in 2017: of which free allowances for disposal granted to the Company amounted to 304,997 Mg; 665,993 Mg limit in 2016, 882,819 Mg limit in 2015, 1,091,947 Mg limit in 2014, 1,280,830 limit in 2013, 1,626,966 Mg limit in 2012, according to KPRU II):

actual CO ₂ emission in 2020	- 1 469 361 Mg*
annual allowance allocation	- 159 365 Mg
2020 balance following full settlement (shortage)	- 1 309 996 Mg
forwards (net) concluded and contracted for March 2021	- 1 313 187 Mg
surplus	- 3 191 Mg

For 2020 Elektrociepłownia Zielona Góra S.A. obtained a limit of 32,538 Mg, including free allocations of CO₂ emission dedicated entirely and exclusively to **heat production** (39,880 Mg in 2019, 47,491 Mg in 2018, 55,354 Mg in 2017, 63,477 Mg in 2016, 187,443 Mg in 2015, 343,161 Mg in 2014, 380,712 Mg limit in 2013 and 606,639 Mg CO₂ limit in 2012 according to KPRU II):

actual emission in 2020	- 552 524 Mg *
annual allowance allocation	- 32 538 Mg
2020 balance following full settlement (shortage)	- 519 986 Mg
forwards (net) concluded and contracted for March 2021	- 517 766 Mg
shortage	- 2 220 Mg

** Actual volume of emission for 2020 verified by an accredited unit between 22 and 23 January 2021 in EC Zielona Góra and between 9 and 10 February 2021 in KOGENERACJA S.A.*

According to the current accounting policy, the Group has created reserves for CO₂ allowances shortage in a total amount of PLN 201,194 thousand (in 2019: PLN 101,463

thousand), including the Parent Company in the amount of PLN 144,140 thousand (in 2019: PLN 70,473 thousand) and the subsidiary PLN 57,054 thousand (in 2019: PLN 30,990 thousand).



Quality, environmental and occupational health and safety policy of KOGENERACJA S.A.

KOGENERACJA S.A. is a subsidiary company of PGE Energia Ciepła S.A. specializing in the combined generation of heat and power, a technology that contributes to more efficient utilization of the chemical energy of fuel and thereby to reduced environmental pollution.

The Company pursues its core business in compliance with the principles of sustainable development, an approach that ensures satisfactory economic performance without compromising its social and environmental responsibilities.

Through its adherence to strict safety standards and the professional conduct of its personnel, KOGENERACJA S.A. aspires to be perceived as a reliable company that earns the trust of its customers and shareholders and is accepted by the local community.

Having full knowledge of the types and awareness of the scale of threats to the natural environment, the Company implements its environmental policy by:

- planning the Company's development on the basis of modern and environmentally friendly technologies, meeting the criterion of best available techniques,
- identification of all environmental aspects, their periodic review and continuous monitoring of significant aspects,
- minimizing the negative impact on the environment through appropriate management in all areas of the Company's operations,
- rational and economical use of fuels and electricity,
- taking preventive measures to counteract the occurrence of accidents,
- raising employees' qualifications, awareness and commitment to environmental protection,
- support and participation in the promotion of environmental protection in local social initiatives.

The management team is obliged to acquaint employees with this Environmental Policy and the Company's employees to apply it in practice.

The Management Board of the Company declares its commitment to the implementation of the Environmental Policy and to provide the necessary resources to achieve the objectives and tasks resulting from it.