



***Management Board's report on activities
of the Capital Group
of PGE Polska Grupa Energetyczna S.A.
for the 6-month period***

ended June 30, 2017

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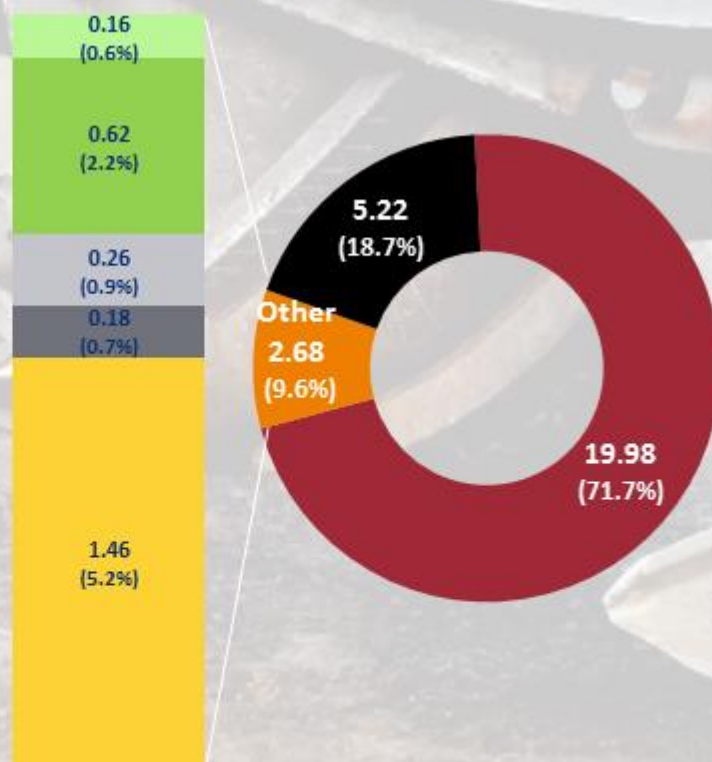
EBITDA
[PLN BN] I HALF



NET ELECTRICITY PRODUCTION
[TWh] I HALF



ELECTRICITY GENERATION STRUCTURE
[TWh]



* net profit adjusted by impairment of property, plant and equipment

	CONVENTIONAL GENERATION	RENEWABLE ENERGY	SUPPLY	DISTRIBUTION
Operations	Extraction of lignite and generation of electricity and heat from conventional sources and distribution of heat and supporting operations in this respect	Electricity generation from renewable sources and in pumped-storage power plants	Wholesale trading of electricity on domestic and international market and trading of related products, fuels and CO ₂ emission allowances	Supply of electricity to final off-takers through the grid and HV, MV and LV power infrastructure
Key assets of the segment	4 conventional power plants 8 CHPs 2 lignite mines	14 wind power plants 1 photovoltaic plant 29 run-of-river hydro power plants 4 pumped-storage power plants, including 2 with natural flow	-	286 482 kms. of distribution lines
Energy volumes	Generation 26.83 TWh	Generation 1.05 TWh	Sales to end-users 19.77 TWh	Electricity distributed 17.50 TWh
Market position	PGE is a leader in lignite mining in Poland (79%) and domestic leader in electricity generation	PGE is the leading producer of energy from renewable sources with market share of approx. 10% (incl. biomass)	One of the leaders in wholesale trading and retail supply in Poland	Second energy distributor with regard to number of customers with approx. 26% share in Polish electricity distribution market
Revenues [PLNm]	5 650	369	7 630	3 175
EBITDA [PLNm]	1 612	169	422	1 222
Share of Group EBITDA	47%	5%	12%	35%
CAPEX [PLNm]	1 906	28	5	629
Assets [PLNm]	36 653	3 547	6 430	17 349

1. Description of activity of the Capital Group

1.1. Description of organisation

The Capital Group of Polska Grupa Energetyczna S.A. ("PGE Capital Group", the "Group", "PGE Group", "PGE CG") is Poland's largest vertically integrated power utility by revenue, installed capacity and electricity production volume.

With a mix of own fuel sources, generation assets and distribution network, PGE provides a safe and reliable supply of electricity to more than five million households, businesses and institutions.

PGE is the largest electricity producer in Poland, one of the leaders in wholesale and retail trading and second largest electricity distributor in Poland with regard to the number of customers.

The parent company of PGE Capital Group is PGE Polska Grupa Energetyczna S.A. ("PGE S.A.", "PGE", the "Company", the "Issuer", the "Parent company").

PGE Group currently organizes its activities in the four main business segments:

- Conventional Generation

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

- Renewables

Core business of the segment includes electricity generation from renewable sources and in pumped-storage power plants.

- Supply

Core business of the segment includes trading of electricity across the country, wholesale trading of electricity on domestic and international market, provision of services to companies from the PGE Group related to commercial management of generation capacities of the Group and electricity produced, as well as trading of CO₂ allowances and energy certificates and gas.

- Distribution

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

Since December 16, 2016 due to the lowering of the so called "power exchange obligation" (obligation to publicly sell electricity) most of the trading is executed bilaterally within the Capital Group. That change significantly attributed to the decrease of the electricity sale and purchase volumes (see p. 3.2.1 of this report) and consequently consolidated revenues (see p. 3.1.3 of this report) and costs. It had limited impact on the actual profitability of PGE Group.

1.2. Composition of organisation

Full composition of the PGE Capital group is presented in note 1.3 to the consolidated financial statements.

1.2.1. The most significant changes in organisation of the Capital Group

Changes which occurred in the PGE Capital Group's structure in the period from January 1, 2017 until the publication date of this report, are presented in note 1.3 to consolidated financial statements and described below.

Setting up of new companies

Entity/entities	Date of registration in National Court Register	Share capital	Comment
PGE Towarzystwo Funduszy Inwestycyjnych S.A.	January 27, 2017	PLN 750,000	On December 29, 2016, PGE S.A. formed a single-member company based in Warsaw in the form of a public limited company.
PGE Inwest 19 sp. z o.o.	February 24, 2017	PLN 10,000	On February 1, 2017, PGE S.A. formed a single-member company based in Warsaw in the form of a limited company.

Increase of the share capital of companies

Entity	Date of registration National Court Register	(1) Share capital (2) Increase (3) Share capital after increase	Comment
PGE Inwest 13 sp. z o.o. (currently a joint stock company, under name PGE Inwest 13 S.A.)	January 27, 2017	(1) PLN 20,000 (2) PLN 730 000 (3) PLN 750 000	On December 7, 2016, the Extraordinary Assembly of Partners of the company adopted a resolution on an increase of the company's share capital. The increased capital was acquired by PGE S.A. in exchange for a cash contribution. PGE S.A. holds 100% of share capital.
PGE Nowa Energia sp. z o.o. (previously: PGE Inwest 15 sp. z o.o.)	March 22, 2017	(1) PLN 20 000 (2) PLN 50 000 (3) PLN 70 000	On December 20, 2016, the Extraordinary Assembly of Partners of the company adopted a resolution on an increase of the company's share capital. The increased capital was acquired by PGE S.A. in exchange for a cash contribution. PGE S.A. holds 100% of share capital.
PGE EJ 1 sp. z o.o.	February 15, 2017	(1) PLN 275 859 450 (2) PLN 34 999 020 (3) PLN 310 858 470	The Extraordinary Assembly of Partners of the company of December 21, 2016 adopted resolution on the increase of the share capital of company. The increase of the share capital was acquired by all partners, i.e. PGE S.A., KGHM Polska Miedź S.A., TAURON Polska Energia S.A. and ENEA S.A. in exchange for a cash contribution, proportionally to their stakes. PGE S.A. holds 70% in the share capital.
PGE Nowa Energia sp. z o.o. (previously: PGE Inwest 15 sp. z o.o.)	April 18, 2017	(1) PLN 70 000 (2) PLN 5 150 000 (3) PLN 5 220 000	On March 28, 2017, the Extraordinary Assembly of Partners of the company adopted a resolution on an increase of the company's share capital. The increased capital was acquired by PGE S.A., in exchange for a cash contribution. PGE S.A. holds 100% of share capital.
PGE Centrum sp. z o.o. (previously: PGE Inwest 6 sp. z o.o.)	May 22, 2017	(1) PLN 20 000 (2) PLN 1 500 000 (3) PLN 1 520 000	On April 7, 2017, the Extraordinary Assembly of Partners of the company adopted a resolution on an increase of the company's share capital. The increased capital was acquired by PGE S.A., in exchange for a cash contribution. PGE S.A. holds 100% of share capital.
PGE Inwest 16 sp. z o.o.	April 27, 2017	(1) PLN 200 000 (2) PLN 900 000 (3) PLN 1 100 000	On April 7, 2017, the Extraordinary Assembly of Partners of the company adopted a resolution on an increase of the company's share capital. The increased capital was acquired by PGE S.A., in exchange for a cash contribution. PGE S.A. holds 100% of share capital.

PGE Inwestycyjnych S.A.	Towarzystwo Funduszy	June 2, 2017	(1) (2) (3)	PLN 750 000 PLN 5 500 000 PLN 6 250 000	On May 12, 2017 the Extraordinary General Meeting of the company adopted a resolution on an increase of the company's share capital. The increased capital was acquired by PGE S.A., in exchange for a cash contribution. PGE S.A. holds 100% of share capital.
PGE Ventures sp. z o.o. (previously: PGE Inwest 7 sp. z o.o.)		No registration at the time of publication	(1) (2) (3)	PLN 20 000 PLN 420 000 PLN 440 000	On May 29, 2017 the Extraordinary Assembly of Partners of the company adopted a resolution on an increase of the company's share capital. The increased capital was acquired by PGE S.A., in exchange for a cash contribution. PGE S.A. holds 100% of share capital.
PGE Nowa Energia sp. z o.o. (previously: PGE Inwest 15 sp. z o.o.)		No registration at the time of publication	(1) (2) (3)	PLN 5 220 000 PLN 2 000 000 PLN 7 220 000	On May 30, 2017 the Extraordinary Assembly of Partners of the company adopted a resolution on an increase of the company's share capital. The increased capital was acquired by PGE S.A., in exchange for a cash contribution. PGE S.A. holds 100% of share capital.

Acquisition or disposal of shares by the companies

Shares of the entity	Date of transaction/ registration in the National Court Register	Number of acquired shares	Comment
Polska Grupa Górnicza sp. z o.o. ("PGG") – acquisition by PGE Górnictwo i Energetyka Konwencjonalna S.A. ("PGE GiEK S.A.", "PGE GiEK"). of shares in the increased share capital of PGG	November 3, 2016/ January 27, 2017 PGG's share capital increase registered	833 333 shares	The Extraordinary Assembly of Partners of PGG adopted resolution in the increase of the share capital by PLN 366 667 000 to PLN 2 672 274 200 through issue of new shares. PGE GiEK S.A. took up 833 333 shares with a nominal value of PLN 83 333 300, representing 3.1% in the increased share capital of PGG.
PGG – acquisition by PGE GiEK S.A. of shares in the increased share capital	February 1, 2017/ March 10, 2017 PGG's share capital increase registered	555 556 shares	The Extraordinary Assembly of Partners of PGG adopted resolution in the increase of the share capital by PLN 244 444 000 to PLN 2 916 718 200 through issue of new shares. PGE GiEK S.A. took up 555 556 shares with a nominal value of PLN 55 555 600, representing 1.9% in the increased share capital of PGG.
PGG – acquisition by PGE GiEK S.A. of shares in the increased share capital	April 3, 2017/ June 7, 2017 PGG's share capital increase registered	500 000 shares	On March 31, 2017 the investment agreement was signed between PGE GiEK, Enea S.A., ENERGA Kogeneracja sp. z o.o., PGNiG TERMIKA S.A., Węglokoks S.A., Towarzystwo Finansowe Silesia sp. z o.o., Fundusz Inwestycji Polskich Przedsiębiorstw Fundusz Inwestycyjny Zamknięty Aktywów Niepublicznych and PGG sp. z o.o. The investment agreement determines the conditions of the financial investment in PGG. assumes recapitalisation of PGG in three stages by PGE GiEK, Enea S.A., ENERGA Kogeneracja sp. z o.o., PGNiG TERMIKA S.A. and Towarzystwo Finansowe Silesia sp. z o.o. with total amount of PLN 1 billion. Within the recapitalisation of PGG, PGE GiEK committed itself to acquire new shares of PGG with a total nominal value of PLN 100 million in exchange for the cash contribution in amount of PLN 100 million. On the base of that agreement, the Extraordinary Assembly of Partners of PGG adopted resolution on the increase of the share capital by PLN 500 000 000 to PLN 3 416 718 200, through issue of new shares. PGE GiEK S.A. took up 500 000 shares with a nominal value of PLN 50 000 000, representing 1.5% in the increased share capital of PGG.
PGG – acquisition by PGE GiEK S.A. of shares in the increased share capital	June 14, 2017/ July 7, 2017 PGG's share capital increase registered	200 000 shares	The Extraordinary Assembly of Partners of PGG adopted resolution in the increase of the share capital by PLN 200 000 000 to PLN 3 616 718 200 through issue of new shares. PGE GiEK S.A. took up 200 000 shares with a nominal value of PLN 20 000 000, representing 0.6% in the increased share capital of PGG. Currently PGE GiEK S.A. holds a total of 5 700 000 shares with a nominal value of PLN 570 000 000 representing 15.76% in the share capital of PGG.

Polimex-Mostostal S.A. („Polimex”) – acquisition by PGE S.A. of shares in the increased share capital	January 20, 2017/ February 21, 2017 Polimex's share capital increase registered	37 500 000 ordinary bearer shares	On January 18, 2017 PGE S.A., ENEA S.A., ENERGA S.A, PGNiG Technologie S.A. (the „Investors”) signed Investment Agreement with Polimex, on the ground of which, subject to the conditions precedent specified in the agreement, the Investors have committed to make investment in Polimex. The investment involves acquisition by the Investors jointly of 150 000 000 ordinary bearer shares with a nominal value of PLN 2 each and the issue price amounting to PLN 2 PLN for one share (“New Issue Shares”), issued by Polimex for the increase of the share capital of Polimex by the amount of up to PLN 300 000 000 (the “Investment Agreement”). In accordance with the resolution of the Extraordinary General Meeting of December 28, 2016 on the increase of the share capital, the New Issue Shares will be introduced to the trading on the regulated market of the Warsaw Stock Exchange and will be dematerialised. On the ground of the Investment Agreement, in connection with the fulfilment of the conditions precedent, on January 20, 2017 PGE S.A. accepted the offer for acquisition in private placement of 37 500 000 New Issue Shares for the total price of PLN 75 000 000.
Polimex – acquisition of shares by PGE S.A. (agreement for sale of shares)	January 20, 2017	1 500 001 shares	On January 18, 2017 the Investors signed a agreement with SPV Operator, obliging the parties, provided the conditions precedent are fulfilled, to conclude transaction in which SPV Operator sells to the Investors total of 6 000 001 shares of Polimex. On January 20, 2017, in connection with the fulfilment of the conditions precedent, PGE S.A. acquired 1 500 001 shares of Polimex from SPV Operator.
Polimex – acquisition of shares by PGE S.A. (tender offer)	April 28, 2017	24 shares	Pursuant to the Polish regulations regarding capital market, as a consequence of the subscription tender for sale of shares. in number sufficient to reach by the Investors 66% threshold of voting rights on the general meeting of Polimex, on April 28, 2017 the Investors acquired total of 96 shares of Polimex, including PGE which purchased 24 shares of that company. As a result of the share capital increase of Polimex, acquisition of shares from SPV Operator and subscription offer, the Investors hold jointly 156 000 097 shares currently representing 65.93% of the share capital of Polimex, including PGE S.A. which holds 39 000 025 shares representing 16.48% of the share capital.
EXATEL S.A. – sale of shares by PGE S.A.	March 29, 2017	8 360 211 shares	PGE S.A. and the State Treasury of the Republic of Poland („State Treasury”) executed an agreement for the sale of 100% of shares in EXATEL S.A. to the State Treasury. As a result of the sale transaction, EXATEL S.A. and its subsidiary ENERGO-TEL S.A. are no longer part of PGE Group.
PGE GiEK S.A. – mandatory buyback of shares by PGE S.A.	April 10, 2017	67 052 shares	CDM Pekao S.A., which maintains PGE GiEK S.A.'s share register, made entries in the share register regarding transfer to PGE S.A. of the ownership of 67 052 shares of PGE GiEK S.A. covered by a mandatory squeeze-out procedure but not yet transferred to PGE S.A. In connection with the above, PGE S.A. currently holds a 100% stake in the share capital of PGE GiEK S.A.
EDF Polska S.A. and EDF Investment III B.V. – acquisition of shares by PGE S.A. (conditional share sale agreement)	May 19, 2017 Currently conditions precedent from the share sale agreement are not fulfilled – shares of the companies have not been transferred to PGE S.A.		On May 19, 2017 PGE signed the Conditional Share Sale Agreement (the “CSSA”) regarding sale of EDF assets in Poland with EDF International SAS and EDF Investment II B.V. (jointly “EDF”). The CSSA includes in particular (the “Transaction”) acquisition of 99.51% of shares of EDF Polska S.A., acquisition of 100% of shares of EDF Investment III B.V., indirect acquisition of 50% of shares + 1 share of ZEW Kogeneracja S.A. (shares held by EDF Polska S.A. and EDF Investment III B.V.), and acquisition of shares in supporting subsidiaries of EDF Polska S.A. Due to the fact that the conditions precedent have not been fulfilled, the shares of EDF Polska S.A. and EDF Investment III B.V. have not been transferred to PGE S.A. The closing of the Transaction is planned not later than January 2, 2018. After the closing of the Transaction, pursuant to the Polish regulations regarding capital market, as a consequence of acquisition of shares of ZEW Kogeneracja S.A. PGE Group will be obliged to announce a subscription tender for shares of ZEW Kogeneracja S.A. in number sufficient to reach 66% threshold of voting rights in ZEW Kogeneracja S.A.

Transformation of companies

Transformed company	Date of transaction/ registration in the National Court Register		Comment
PGE Inwest 13 sp. z o.o. after transformation: PGE Inwest 13 S.A.	April 25, 2017	750 shares	On April 25, 2017, the Extraordinary Assembly of Partners of the company adopted a resolution on the change of this company's legal form into a single-member public limited company under the name PGE Inwest 13 S.A. PGE S.A. held 100% shares in the share capital of PGE Inwest 13 sp. z o.o.
	April 26, 2017		On April 26, 2017, PGE S.A. signed the Articles of Association of PGE Inwest 13 S.A. and appointed its governing bodies.
	May 16, 2017 the company was registered in the National Court Register		

2. PGE Group's strategy and its implementation

2.1. Updated strategy of the Capital Group

On September 6, 2016 the Supervisory Board approved PGE Group's strategy update presented by the Management Board of PGE. The update is aimed at adapting the Group's activities to the changing environment. In the updated document, the Group also addresses threats and opportunities connected with, among others, volatility of fuel prices, climate policy directions, market model evolution and new technology development.

Mission, vision and overall objectives

In accordance with the updated strategy, PGE's mission is to ensure security and growth based on reliability of supply, technical excellence, modern services and partnership relationships. The overall objective of PGE Group's operations is to increase its shareholder value and the key role in ensuring Poland's energy security.

Diagram: Redefining PGE Group's mission.



PGE Group's new mission

We provide security and growth based on reliability of supply, technical excellence, modern services and partnership relationships

Updated vision determines the target position of the PGE Group in four areas:

Leader in generation, actively taking advantage of growth opportunities

Reliable and active utility and service supplier

Poland's most efficient and flexible energy group

Leader in developing new business models and lines of business

2.2. Implementation of key projects within the strategic objectives

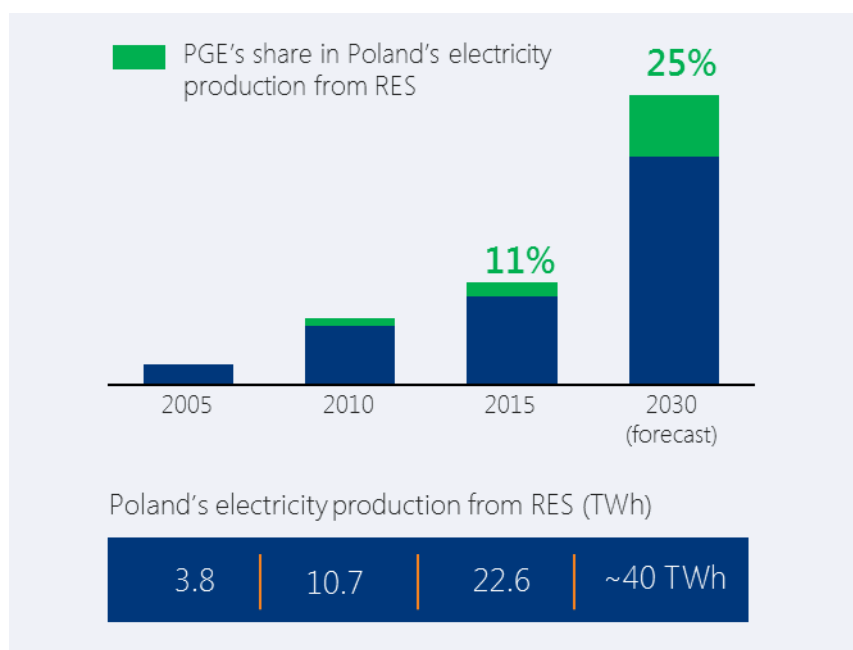
2.2.1. Leader in electricity generation, actively seeking development opportunities

To retain its leading position in the area of electricity generation, PGE Group must secure at least a 40% share of the electricity generation market in Poland by 2020. PGE Group is continuing its flagship investments in Opole and Turów and may invite partners to participate in these projects. At the same time, further investments in conventional energy based on a new market model will be analysed, e.g. construction of new capacities at Dolna Odra power plant. The company will carry out modernisations of conventional plants and combined heat-and-power plants in an optimal scope so that they are adapted to new industrial emission standards BAT (Best Available Technology). In May of the current year, the PGE Group successfully completed negotiations concerning the purchase of EDF assets in Poland. As a result of the execution of the conditional agreement, the installed electrical capacity of the PGE Group will increase by 25% and will reach the level of 15.95 GWe.

At the same time, within the generation area, PGE Group will seek innovative solutions that will cement its competitive advantage and allow it to reduce environmental impact, including through adapting production assets to a new energy market model, maintaining a competitive lignite extraction operation, reducing SO₂, NO_x, particulates and mercury emissions as well as increasing the efficiency of coal combustion by-product use.

PGE Group intends to retain its leadership in the renewables segment and account for approx. 25% of domestic renewables generation by 2030. To reach this ambitious target, PGE Group plans to complete those onshore wind farm projects that are at the most advanced stages, build an approx. 1 000 MW offshore wind farm and increase its presence in the distributed generation segment. These investments will depend on successes in the auction support system, development of an innovative financing model and implementation of new business models for the micro-installations segment.

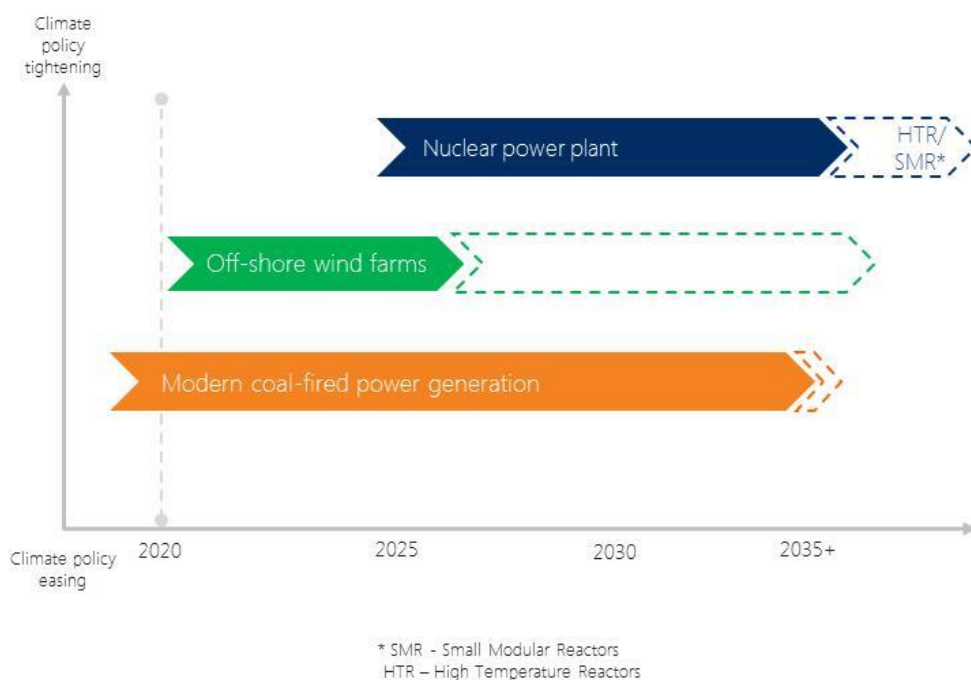
Diagram: PGE Group's aspirational share in Poland's electricity production from RES.



In order to maintain a leading position in generation, in the long term PGE Group has three strategic options, thereby can make the optimal choice in the context of future climate policy:

- Construction of Poland's first nuclear power plant, following the development of a model guaranteeing economic viability of the investment,
- Construction of approx. 1 000 MW capacity in off-shore wind farms, based on an auction support system,
- Modern coal-fired power generation, including utilization of new lignite deposits in case there is a significant easing of the climate policy.

Diagram: Strategic options.



2.2.2. Reliable and active utility and service supplier

Currently on-going investments in the distribution segment are intended to increase the reliability of supply and reduce SAIDI and SAIFI by 56% compared to 2015 and the average connection time by 40%. The achievement of these quality targets is being supported by, among others, the development of electricity quality monitoring systems, intelligent grid metering and automation as well as the construction of a digital transmission system.

In the retail area, PGE Group is planning to focus on strengthening relations with clients through gaining more knowledge about their needs. In response to identified expectations, PGE Group will expand its offering by, for example, adding new product and services that are complementary to electricity as well as through the development of new sales and communication channels, what will have a positive impact on monitoring client satisfaction indicators. Attaining the status of a reliable, credible and modern supplier will allow PGE Group to maintain low client migration rates in the mass segment.

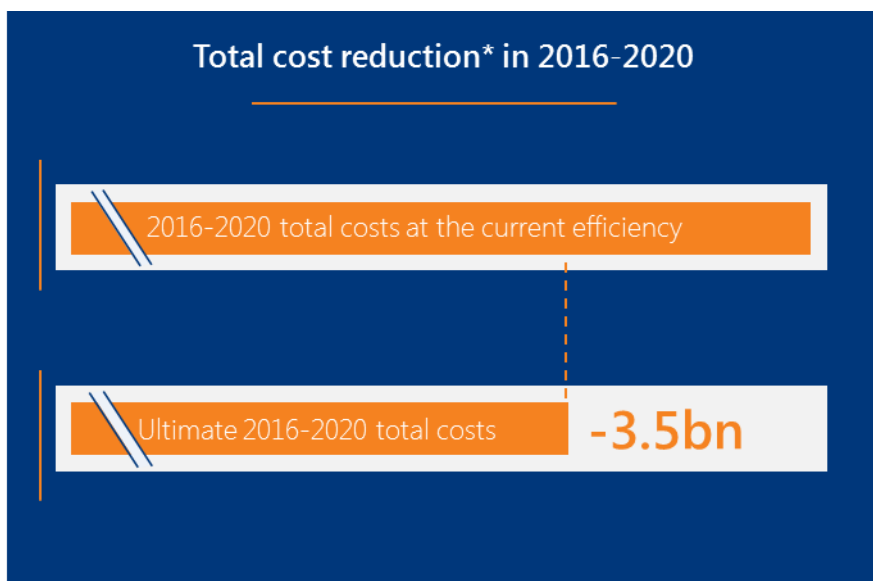
2.2.3. Poland's most efficient and flexible energy group

PGE Group's cost and operational efficiency is one of key preconditions for accomplishing the other strategic goals. On the other hand, flexibility is key to achieving the ability to respond quickly to opportunities arising in PGE Group's environment

Due to efficiency improvement, in 2020 PGE Group plans to achieve reduction of the forecasted controllable costs in the amount of PLN 500 million versus year 2016. This will allow for the total cost reduction in 2016-2020 by approx. PLN 3.5 billion versus the current efficiency scenario.

The goal of the cost reduction is to strengthen PGE Group's competitiveness and maintain potential of financing of the Group's development. Objectives and initiatives in scope of improving the operational and cost efficiency are assigned to each business line of the Group.

Diagram: Total reduction of controllable costs in 2016-2020.



*Controllable costs

Reduction of controllable costs will concern both the modification of organisational structure and as well as optimisation of processes. Changes in the organisational structure are intended to prepare PGE Group for development in the most promising business areas as well as to eliminate redundant functions and simplify organisational structures. These changes will be introduced through, among others, standardisation and optimisation of support functions throughout PGE Group, effective formation of new business lines and spin-off of a new business line – “Co-generation”. Process optimisation will focus on improving operational efficiency measured by ratios relating to cost, time and quality of particular processes, both basic and supporting. Within the framework of the human resources management strategy, it is planned to implement the rules of corporate employment, mobility and remuneration, as well as other initiatives connected with optimisation of labour costs. Moreover, within next four years, planned expenditures on modernization and replacements will be reduced by approximately PLN 500 million in relation to forecasts. It will be possible thanks to introduction of integrated asset management system, among others. Unified approach to planning of expenditures, that takes into account inter alia the class of the assets will allow for reducing asset maintenance costs and modernisation and replacement expenditures, while maintaining the proper availability and security of power supply.

Higher flexibility at PGE Group will be achieved mainly through mechanisms for monitoring the surrounding and rapidly responding to changes, increased mobility of employees, cooperating with external partners, scientific and academic institutions, as well as streamlining decision-making, analytical and reporting processes.

2.2.4. Leader in development of new business models and operating segments

The updated strategy places particular emphasis on the development of new business models and operating segments in order to diversify revenues structure and to increase EBITDA from new operations. This will be possible through PGE Group's involvement in cooperating in the area of development and commercialisation of new technologies with credible partners having competences allowing to obtain synergies and competitive advantages. PGE Group's involvement may come in the form of financing, technical or organisational support, depending on the type of venture and form of its implementation. New technological solutions that are of interest to PGE Group include energy warehouses, electromobility, power-to-gas technologies, LNG, diffuse energy sources, integrated intelligent solutions and the development of coal gasification installations.

Involvement in the development and commercialisation of new technologies will allow PGE Group to introduce to the market a modern and comprehensive offering for clients, covering, among other things, photovoltaics, electromobility, intelligent home solutions, natural gas and demand management.

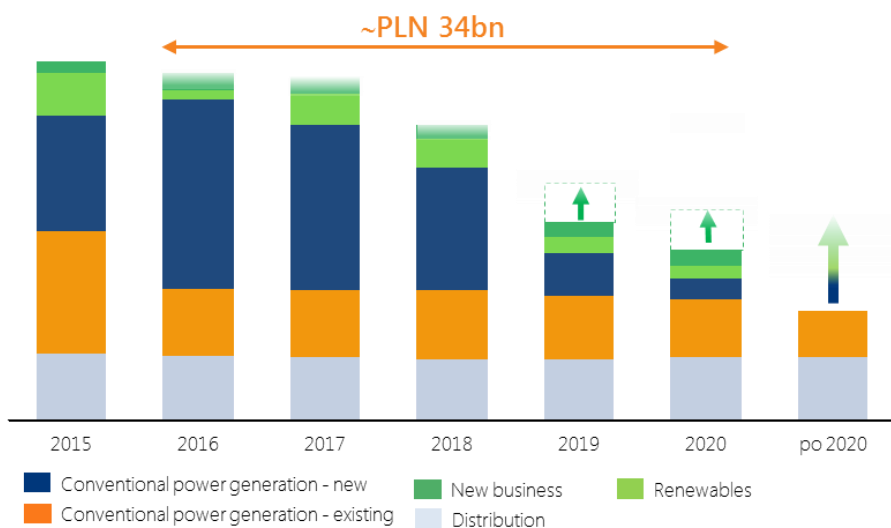
PGE Group intends to build up its brand of a leader on the energy efficiency market. New ESCO (Energy Saving Company) activities will provide clients with benefits such as reduced energy consumption costs, supply continuity and improved image. This will enable PGE Group to develop long-term beneficial client relationships with industry, local government and retail customers, among others. A wide scope of initiatives to improve the effectiveness of energy infrastructure and buildings belonging to the Group will also be implemented.

The PGE Group will allocate at least PLN 25 million per year to capital investments in innovative start-ups and incubation, and acceleration of projects at the earliest stage of development. Activities within those areas will be implemented by PGE Ventures sp. z o.o. ("PGE Ventures"), a specialized CVC (corporate venture capital) fund, and by the PGE Nowa Energia sp. z o.o. company ("PGE Nowa Energia").

Investments

The Group assumes capital expenditures of approximately PLN 34 billion in 2016-2020, including more than PLN 10 billion for ongoing projects in Opole and Turów. In connection with modernisation programs that are to be completed soon, the expenditures for the existing capacities in Conventional Energy will be gradually decreasing. After construction of two flagship projects, PGE Group will be ready to invest significantly in new business areas, also abroad. Beyond 2020 PGE will be implementing a new investment program, dependent on selected strategic options, the power system's needs and new market model.

Diagram: Planned capital expenditures of PGE Group.



Values of PGE Group

PGE Group's strategy will be implemented in accordance with values Partnership, Growth, Responsibility and principles in everyday work included in the Code of Ethics of PGE Group. PGE Group is a responsible organization, aware of its impact on the environment, thus in its operations focuses on reducing impact on natural environment, operating based on ethical principles and involvement in activities for the benefit of local communities.

Key projects in the first half of 2017

Development investments

Construction of new units in Opole power plant

- construction of two power units of 900 MW each
- budget: approx. PLN 11 billion (net, without costs of financing)
- capital expenditures incurred so far: approx. PLN 7.6 billion
- **fuel:** hard coal
- **net efficiency:** 45.5%
- **contractor:** syndicate of companies: Rafako, Polimex-Mostostal and Mostostal Warszawa with co-operation of GE as Project manager on behalf of the syndicate
- commissioning: unit 5 – H2 2018; unit 6 – H1 2019
- January 31, 2014 – issue of Notice to Proceed
- status: assembly at unit 5 is at an advanced stage, first start-up work has commenced on individual installations; at unit 6 leak tests on the boiler's pressure systems are being prepared, assembly of the turboset has continued; the Project's overall progress at the end of June 2017 was slightly above 80%

Construction of new unit in Turów power plant

- **aim of the project:** construction of power unit with a capacity of 490 MW
- budget: approx. PLN 4 billion (net, without costs of financing)

- capital expenditures incurred so far: approx. PLN 0.7 billion
- **fuel:** lignite
- **net efficiency:** 43.1%
- **contractor:** syndicate of companies: MHPSE, Budimex and Tecnicas Reunidas
- commissioning: H1 2020
- December 1, 2014 - issue of Notice to Proceed
- status: assembly of the boiler's steel construction completed and consolidation of the pressure elements of the boiler has commenced; the first elements of the turboset have been delivered to the building site; erection of the cooling tower shell has commenced

Construction of a Thermal Processing Installation with Energy Recovery at Rzeszów CHP

- **aim of the project:** construction of a thermal processing installation with energy recovery at Rzeszów CHP with capacity of approx. 8 MWe in condensation (approx. 4.6 MWe + 16.5 MWe in co-generation)
- budget: approx. PLN 293 million (net, without costs of financing)
- capital expenditures incurred so far: approx. PLN 26 million
- **fuel:** municipal waste
- **boiler's efficiency:** 86%
- **contractor:** syndicate of TM.E. S.p.A. Termomeccanica Ecologia and Astaldi S.p.A
- commissioning: H1 2018
- Agreement with the Contractor signed on December 22, 2015, Notice to Proceed issued on April 8, 2016
- status: works related to the construction of the main structures are at the final stage, assembly has been completed of the steel structure of the boiler and consolidation of boiler's pressure elements has commenced; construction work has been completed in the turbine set room

Modernisation and replacement projects

Comprehensive reconstruction and modernisation of units no. 1-3 at Turów power plant

- **aim of the project:** Adaptation to future BAT conclusions requirements regarding permissible emissions of sulphur, NO_x and particulate, increase of availability and efficiency, as well as expansion of each turboset's nominal capacity by approx. 15 MWe
- status: unit 2 was shut down for modernisation and the area was handed over to contractors. Main dismantling works have been completed on specific objects, installations and equipment covered by modernisation works. Modernization and renovation is under way of the burner system, including the pressure part of the unit's boiler, and assembly of the parts of the compression turbine, production has ended of the generator's impeller, assembly continues of the ash disposal installation, the wet deck surface made of asbestos-concrete boards, installed on the cooling tower, was disassembled, modernization work has been continued on electrical switching stations and power evacuation stations with regard to modernization of the control and supervision systems. The contractors for the boiler, turbine, generator, electrical filter have submitted the documentation of the basic project regarding modernization of unit no. 1
- budget: PLN 0.8 billion (net, without costs of financing)
- **fuel:** lignite
- completion: 2020

Change in technology of furnace waste storage for units 1-12 – Bełchatów power plant and construction of installation to transport ash; production and transport of sludge from unit 14 in Bełchatów power plant

- **aim of the project:** to provide the capability for storage of furnace waste produced during the operation of units 1-12 of Bełchatów power plant until exhaustion of lignite resources. In the course of the project, the requirement to fit out unit 14 with new technology for the transport and storage of combustion waste was identified
- status: works related to filling in and securing the storage site continue, as do works related to installations for unit 14 – construction of a suspension production and pumping system, assembly of pipelines for the Lubień storage site, construction and modernisation of electrical switching stations
- budget for units 1-12: ca. PLN 450 million (net, without costs of financing)
- budget for unit 14: ca. PLN 85 million (net, without costs of financing)
- completion: 2018

Modernisation of the Pomorzany power plant

- **aim of the project:** Reduction of NO_x and SO_x emissions from Benson OP-206 boilers to a level allowing to meet the requirements of future BAT conclusions as well as to ensure that the plant remains in operation until about 2040
- **status:** agreements signed with main contractors (on construction of flue-gas desulphurisation FGD and deNO_x installations and selected non-contractual tasks). Permits to build FGD and SCR (selective catalytic reduction of NO_x) secured. General Contractors delivered documentation of main projects. As regards implementation of SCR, foundation work has been under way regarding installations for boilers A and B. As far as FGD is concerned, currently the disassembly of the switching station building is in progress, and preparatory work, and excavations for foundations are being continued
- **budget:** ca. PLN 213 million (net, without costs of financing)
- **fuel:** hard coal
- **completion:** SCR – 2017/2018 (boiler A and B), FGD - 2019.

Construction of flue gas denitrification installation and flue-gas desulphurisation for OP-230 boilers no. 3 and 4 in Bydgoszcz CHPs

- **aim of the project:** Reduction of NO_x and SO_x emissions from boilers no. 3 and 4 to a level allowing for further use after 2017
- **status:** on July 5, 2017, an agreement was concluded for Extension of FGD with the Contractor, GE Power sp. z o.o. Tender proceedings are pending for selection of the general contractor for construction of the fumes denitrogenation installation (deNO_x).
- **budget:** PLN 52 million (net, without costs of financing) for denitrification installation, PLN 44 million (net, without costs of financing) – value of agreement with contractor of desulphurisation installation,.
- **fuel:** hard coal
- **completion:** 2018

Project of network losses reduction

- **aim of the project:** reduction of electricity procurement costs for balancing differences
- **activities undertaken (multi-year project):**
 - replacement of HV/MV, MV/LV transformers with low-loss units, adaptation of transformers' output to power consumption
 - grid conversion and modernisation: construction of HV/MV and MV/LV stations, increase of cable cross-sections for HV, MV and LV lines, reduction of MV and LV lines,
 - maintenance of optimal grid workload, elimination of adverse energy transit in HV lines, optimisation of MV line partitions,
 - reduction of load asymmetries in LV lines.
- **the results of the project:** lowering of the balancing difference in 2016 to 5.77% (in 2015 it amounted to 5.91%); volume of balancing difference in 2016 amounted to 2.41 TWh with the simultaneous increase of volumes of energy delivered to off-takers by 2.8% in comparison to 2015.
- **activities initiated in first half of 2017:** project assumptions for 2017-2021 were updated in March 2017; activities aimed at reducing balancing differences at PGE Dystrybucja S.A. are to be continued.

Trading strategy update

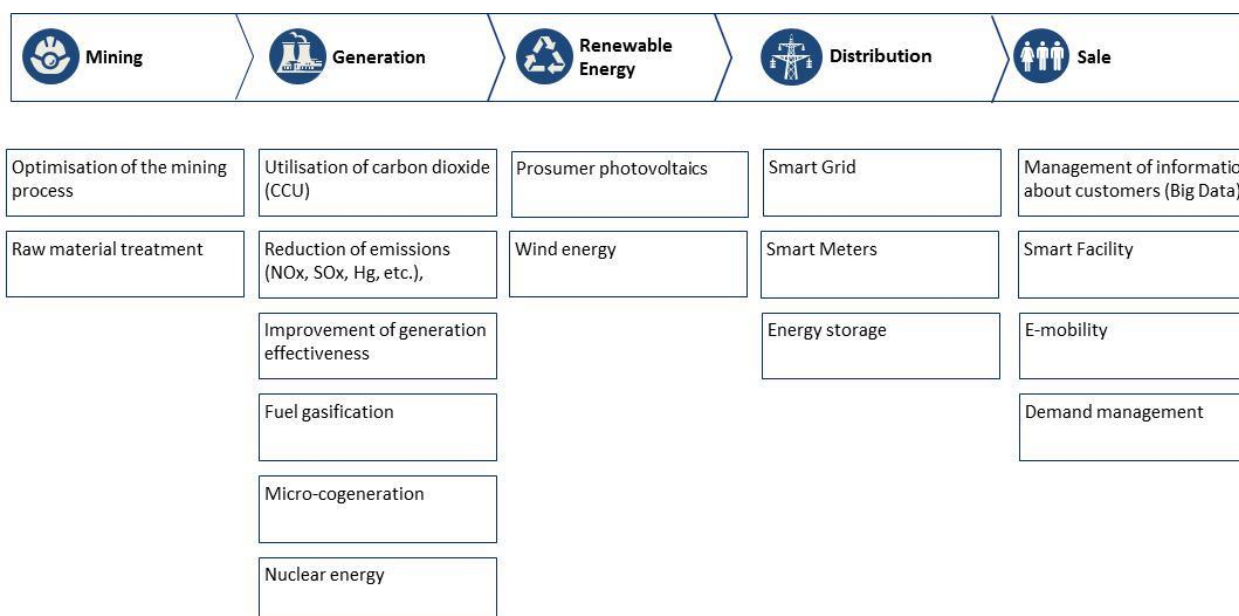
- **aim of the project:** achieving maximum margin on sale of electricity simultaneously minimising risk associated with trading activities
- **activities initiated in first half of 2017:**

Sale of electricity was realised pursuant to conditions resulting from optimisation of use of particular generating units in connection with the level of variable costs, level of market prices, market liquidity, regulations and laws, with the simultaneous assessment of risk associated with so called "open position". Electricity trading methods were adapted to a reduced "power exchange obligation" (to 15% from December 16, 2016). Sales were conducted bilaterally within the Group, on forward market and spot market, where balancing of contractual position was made. Available capacities that were not sold, were offered on the balancing market. Sales channel directed to transmission and distribution grid operators was also in use. Implementation of the plan of contracting was taking into account trading directions, hedging methods, risk and open trading positions limits as well as product optimisation. Moreover, activities were undertaken to improve wholesale trade operations and adapt wholesale trade to regulatory changes, including the MIFID II directive. Works included the identification of wholesale trade areas with operations requiring verification and possible modification. Currently, works are underway to develop and implement target solutions in these areas.

Human Capital Management Strategy ("HCM Strategy")

- **aim of the project:** supporting the business strategy goals through securing strategic and effective human resources management and optimization and standardisation of HR processes.
- **activities initiated in H1 2017:** works were underway to clarify the definitions of specialisations in Workplace Architecture. Furthermore, during meetings with PGE Group management, specialist competences were selected to be included in the Competence Model next to firm-wide and management competences. The Competence Model will eventually be used in the process of evaluating PGE Group's employees. The 3rd Conference of PGE Group Employers took place at the end of March 2017, during which the management team discussed on changes in the work style of managers with regard to issues surrounding human capital management and adaptation of the organisation in order to meet PGE Group's ambitious goals. Work has been commenced by a team which will be responsible for implementation of Employee Assessment at PGE Capital Group. During the first stage, Competence Assessment will be implemented based on the developed Competence Model. The team has specified the details of the procedure's rules and commenced planning of its implementation in individual LBs. Moreover, during the first six months of 2017, work was being performed on the update of the Human Resources Management Strategy. A review was conducted of the status of implementation of strategic initiatives in view of an update of the PGE Group's Strategy. The update of the HRM Strategy indicates the main initiatives which, in consecutive years, will be implemented by all PGE Group companies.

Strategic Research and Development and New Business Areas ("SOBiR+NB"), within which the Group intends to carry out R&D and innovation projects concerning, among others, the supply of new products or services. The SOBiR+NB areas are aligned with the Group's most important challenges and are identified for each element of the value chain (see the graph below).



In connection with an Update of the Group's Strategy until 2020 being introduced in the third quarter of 2016, works have progressed on updating the Development and Innovation Strategy. The updated Development and Innovation Strategy will place emphasis on challenges that most affect the Group, where R&D and innovation are essential to the achievement of business objectives. In connection with this, particular attention will be paid to both dynamically developing segments such as electromobility or energy warehousing as well as ways of acquiring and developing initiatives such as new models of management and implementation of innovations like acceleration and investing in an equity fund model in small businesses that develop technologies and products. A strategic option for PGE will be the design and development of specific technologies – which constitutes a large quality change in contrast to the previous model – an operator of technologies from other businesses, providers. An SPV named PGE Nowa Energia was formed to work with small businesses (start-ups) in the acceleration and project commercialisation (implementation of innovation solutions) formula. By working with start-up market stakeholders (small businesses, accelerators, other investors, government agencies, etc.), the company is intended to be a competence centre, allowing PGE to effectively identify and develop technologies and products being part of and related to the power value chain. In order to facilitate the continued development of companies and obtainment of new solutions from the market (at the maturity stage later than acceleration), the PGE Ventures company was established, which

serves the role of the investment fund of GK PGE. The purpose of the company is to invest PGE's own funds and funds obtained via support tools – the public budget available through the Polish Development Fund (PFR) and the National Research and Development Centre (NCBiR).

Innovation

PGE focuses on initiating and executing R&D projects that fall within the SOBiR+NB areas. In the first half of 2017, several dozen projects were continued within these areas.

Key projects in the first half of 2017

Involvement in equity structures that support the development of new technologies and solutions as well as small businesses

- **aim of the project:** Introduction of a new model for developing and implementing new solutions, allowing to manage higher-risk undertakings whilst reducing time-to-market for new solutions (for own purposes or to sell to other entities)
- **main activities:**
 - PGE Ventures company was established, dedicated as a venture capital fund (VC) to conduct an investment activity on the basis of its own funds and funds obtained from the public budget (PFR Ventures). The process of recruitment and conclusion of the first investment agreements is planned for the second half of 2017;
 - the main assumptions of the acceleration activities conducted by the PGE Nowa Energia company have been developed and rules of co-operation between the companies (PGE Nowa Energia and PGE Ventures) have been determined, providing for optimization and maintenance of continuity at the next stages of development of small companies.

Electromobility

- **aim of the project:** promoting and developing electric transport in Poland and gaining by PGE Capital Group of experience and the competence necessary to serve the role of the operator of electrical cars charging infrastructure and of the supplier of electrical cars charging services
- **main activities** concern individual transport – cars used for private and business purposes.
 - PGE has been continuing a project launched in December 2016 in which a pilot run is being implemented that consists of the construction of infrastructure for an electromobility system in Łódź. At the turn of the third and fourth quarter of 2017, it is planned to launch the first public, fast-charging station in Łódź, and the next stations will be opened in the following months. Moreover, PGE extended its pilot “e-Mobility” project to the next locations. On 13 April 2017, a letter of intent was signed between PGE S.A. and the Head of the Mazovia Province, and on 26 May 2017, a letter of intent between PGE S.A., the Marshal of the Podkarpacie Province and the Office of the City of Rzeszów. Both agreements concern co-operation in the development of the charging infrastructure and development of a system encouraging public and private entities to use electric cars.

Recycling

- **Aim of the project:** PGE Group is preparing to execute a project allowing to develop and implement a new technology for the recycling of lithium batteries, particularly those used in energy warehouse systems and to charge electric cars. This technology is intended to obtain strategic materials from used lithium batteries – cobalt, nickel and copper. The project directly supports the assumptions of the Ministry of Development concerning the transformation of the economy in the direction of closed-circuit economy, as well as the requirements of the Polish legislation specifying the needs of collection and utilization of used batteries. The project has a business potential due to the anticipated growth in the world's market of lithium batteries and the increase in the quantity of battery wastes connected with that, as well as increased demand of markets for products recycled from used batteries.
 - **main activities:** PGE S.A. has set up a consortium with RDLS sp. z o.o., a company of the Warsaw University operating in the area of environmental research and biotechnology. The goal of the consortium is to produce a pilot recycling installation for lithium batteries and implement this technology in Poland. The consortium jointly prepared and submitted an application for funding from the NCBR (National Centre for Research and Development). The project was recommended by NCBiR for co-financing from public funds of the Research Programme of the Power Sector (PBSE).
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3. Key financial results of the PGE Capital Group

Key financial data	Unit	H1 2017	H1 2016	% change
Sales revenues	PLN million	10 620	13 666	-22%
EBIT	PLN million	1 932	952	103%
EBITDA	PLN million	3 445	3 143	10%
Adjusted net profit attributable to equity holders of the parent company*	PLN million	1 531	1 267	21%
LTC compensations	PLN million	83	401	-79%
<i>LTC revenues</i>	<i>PLN million</i>	0	253	-
<i>Adjustment of the LTC settlements (other operations)</i>	<i>PLN million</i>	83	148	-44%
Capital expenditures	PLN million	2 595	3 690	-30%
Net cash from operating activities	PLN million	3 282	2 857	15%
Net cash from investing activities	PLN million	-591	-4 601	87%
Net cash from financial activities	PLN million	-242	354	-
Adjusted net earnings per share*	PLN	0.82	0.68	21%
EBITDA margin	%	32%	23%	

Key financial data		As at June 30, 2017	As at December 31, 2016	% change
Working capital	PLN million	5 336	5 702	-6%
Net debt/LTM EBITDA **	x	0.61	0.70	

* Net profit adjusted by impairment loss

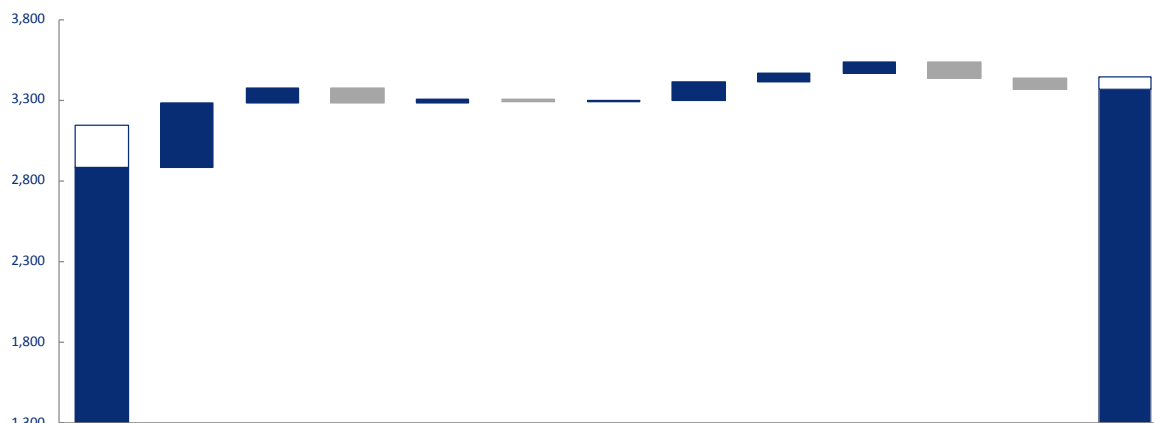
** LTM EBITDA - Last Twelve Months EBITDA

Impact of one-offs on EBITDA [in PLN million].

One-offs	H1 2017	H1 2016	% change
LTC compensations	83	401	-79%
Voluntary Leave Program	-4	-21	-81%
Revaluation of balance sheet value of certificates	0	-118	-
Total	79	262	-70%

3.1. Consolidated statement of comprehensive income

Chart: Key changes of recurring EBITDA in PGE Capital Group (in PLN million).



	EBITDA H1 2016	Result on electricity	Fuels	CO ₂ costs	Revenues from agreement with TSO	Revenues from certificates	Sales of heat	Certificates redemption	Cost of materials and repair services	Return on distribution	Capitalised costs	Other	EBITDA H1 2017
Change		397	94	-89	22	-19	12	116	53	65	-98	-68	
EBITDA reported H1 2016	3,143												
One-offs H1 2016	262												
Recurring EBITDA H1 2016	2,881	4,791	1,063	499	250	264	402	509	358	2,089	534		
Recurring EBITDA H1 2017		5,188	969	588	272	245	414	393	305	2,154	436		3,366
One-offs H1 2017													79
EBITDA reported H1 2017													3,445

□ one-offs

*adjusted for revaluation of certificates in Szczecin CHP

Chart: Key changes of recurring EBITDA by segments (in PLN million).



	EBITDA H1 2016	Conventional Generation	Renewable Energy	Supply	Distribution	Other Operations + consolidation adjustments	EBITDA H1 2017
Change		227	-36	214	105	-25	
EBITDA reported H1 2016	3,143	1,568	205	208	1,117	45	
One-offs H1 2016	262	262	0	0	0	0	
Recurring EBITDA H1 2016	2,881	1,306	205	208	1,117	45	
Recurring EBITDA H1 2017		1,533	169	422	1,222	20	3,366
One-offs H1 2017		79	0	0	0	0	79
EBITDA reported H1 2017		1,612	169	422	1,222	20	3,445

□ one-offs

3.1.1. Consolidated statement of financial position

Chart: Key changes in Assets (in PLN million).

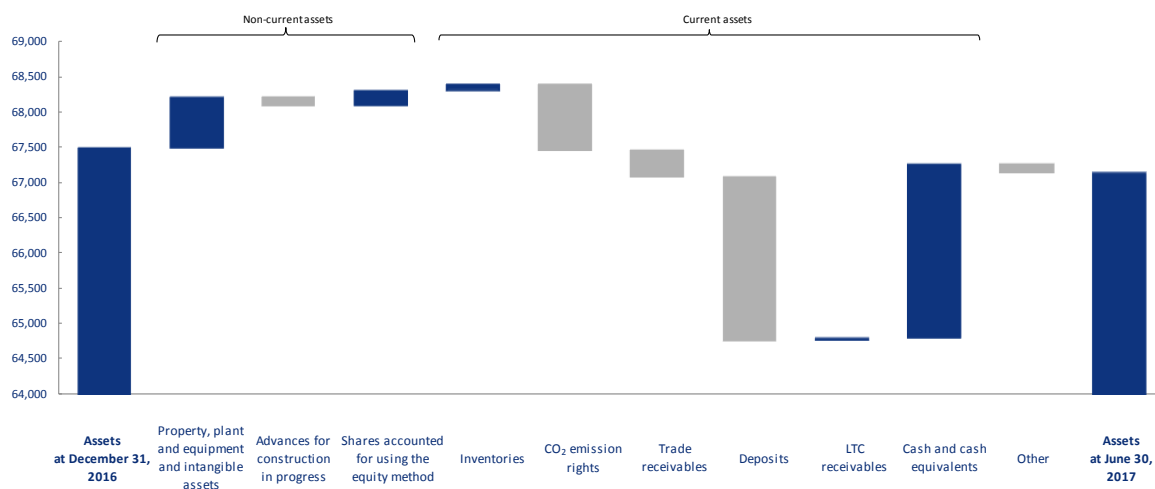
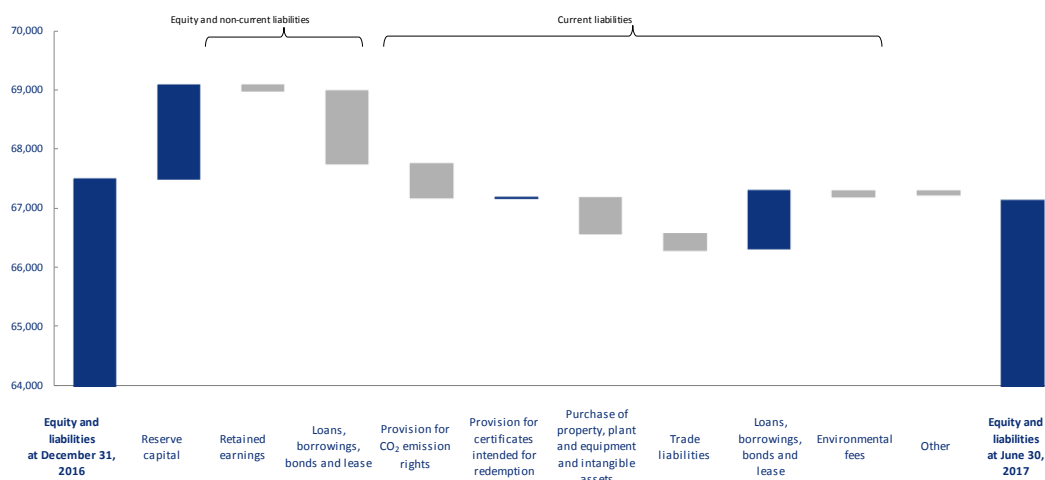
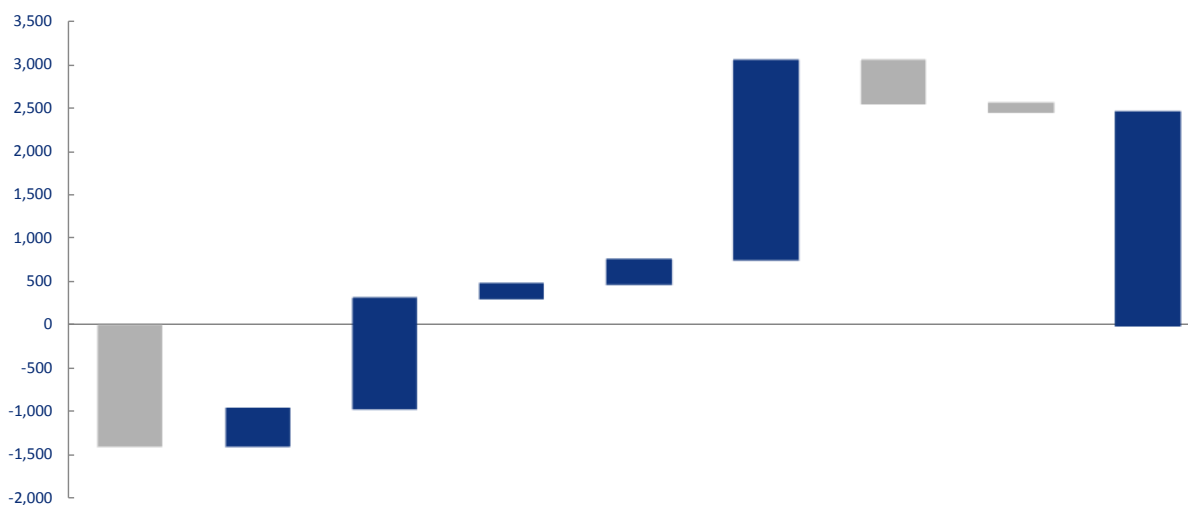


Chart: Key changes in Equity and Liabilities (in PLN million).



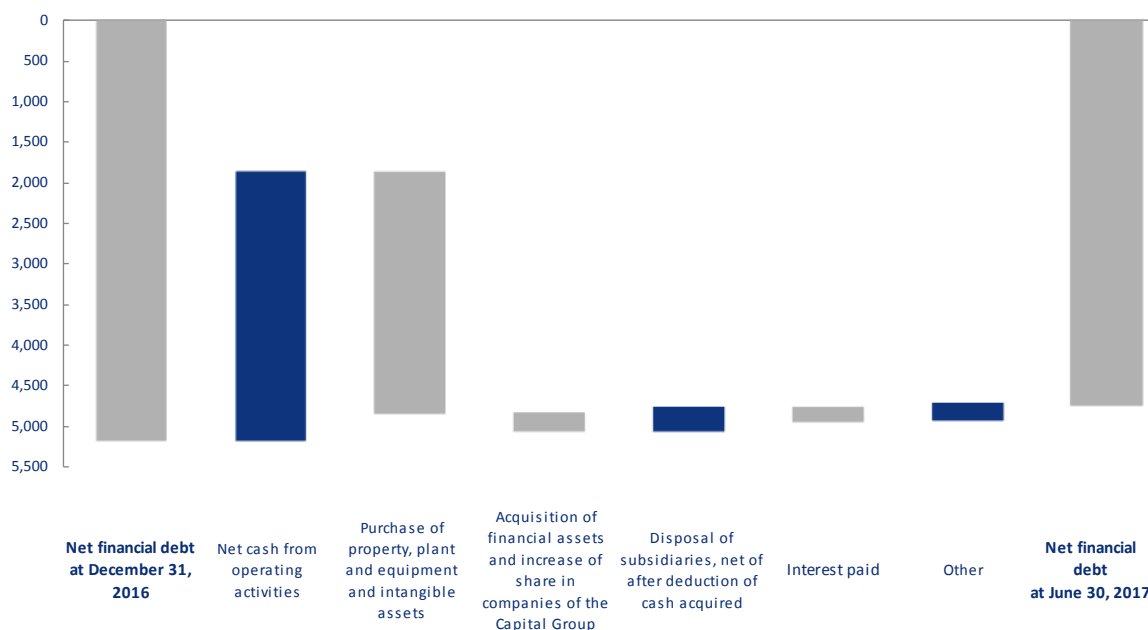
3.1.2. Consolidated statement of cash flows

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



Change	Net cash from operating activities	Purchase of property, plant and equipment and intangible assets	Acquisition of financial assets and increase of share in companies of the Capital Group	Disposal of subsidiaries, net of after deduction of cash acquired	Deposits made/terminated	Repayment of loans, borrowings, bonds and finance lease	Other	Net change in cash H1 2017
Change	425	1,280	164	272	2,294	-495	-101	
Net change in cash H1 2016	-1,390	-4,228	-382	0	-11	412	-38	
Net change in cash H1 2017	3,282	-2,948	-218	272	2,283	-83	-139	2,449

Chart: Net financial debt in the first half of 2017 (in PLN million).



Change in HY 2017	Net cash from operating activities	Purchase of property, plant and equipment and intangible assets	Acquisition of financial assets and increase of share in companies of the Capital Group	Disposal of subsidiaries, net of after deduction of cash acquired	Interest paid	Other	Net financial debt at June 30, 2017
Change in HY 2017	-3,282	2,948	218	-272	156	-202	
Net financial debt	5,152						4,718

3.1.3. Key financial results in the business segments

Table: Breakdown of the Group's revenues by business segments for the first half of 2017 and 2016.

in PLN million	H1 2017	H1 2016	% change
Conventional Generation	5 650	5 652	0%
Renewables	369	370	0%
Supply	7 630	8 047	-5%
Distribution	3 175	2 922	9%
Other operations	251	333	-25%
TOTAL	17 075	17 324	-1%
Consolidation adjustments	-6 455	-3 658	-76%
TOTAL AFTER ADJUSTMENTS	10 620	13 666	-22%

Table: Key financial figures for each business segment for the first half of 2017 (after intrasegmental eliminations).

in PLN million	EBITDA	EBIT	Capital expenditures	Assets of the segment*
	H1 2017			
Conventional Generation	1 612	855	1 906	36 653
Renewables	169	37	28	3 547
Supply	422	409	5	6 430
Distribution	1 222	642	629	17 349
Other operations	20	-31	53	609
TOTAL	3 445	1 912	2 621	64 588
Consolidation adjustments	0	20	-26	-5 325
TOTAL AFTER ADJUSTMENTS	3 445	1 932	2 595	59 263

* see note 4.1 to the consolidated financial statements

Table: Key financial figures for each business segment for the first half of 2016 (after intrasegmental eliminations).

in PLN million	EBITDA	EBIT	Capital expenditures	Assets of the segment*
	H1 2016			
Conventional Generation	1 568	915	2 855	33 603
Renewables	205	-720	95	3 849
Supply	208	195	7	4 651
Distribution	1 117	557	713	16 814
Other operations	33	-29	68	1 042
TOTAL	3 131	918	3 738	59 959
Consolidation adjustments	12	34	-48	-3 032
TOTAL AFTER ADJUSTMENTS	3 143	952	3 690	56 927

* see note 4.1 to the consolidated financial statements

3.2. Key operational figures of PGE Capital Group

Table: Key operational figures.

Key figures	Unit	H1 2017	H1 2016	% change	2016
Lignite extraction	Tons m	25.02	21.68	15%	47.68
Net electricity production	TWh	27.88	25.42	10%	53.67
Heat sales	GJ m	10.61	10.18	4%	18.06
Sales to final customers*	TWh	19.77	21.43	-8%	42.91
Distribution of electricity**	TWh	17.50	16.91	4%	34.32

* sales by PGE Obrót S.A. with additional estimation and with taking into account the sales within PGE Group

** with additional estimation

3.2.1. Balance of energy of PGE Capital Group

Sales of electricity

Table: Sales of electricity outside the PGE Capital Group (in TWh).

Sales volume	H1 2017	H1 2016	% change	2016
SALES IN TWh, including:	32.03	50.63	-37%	104.35
Sales to end-users*	19.80	21.46	-8%	42.96
Sales on the wholesale market, including:	10.80	28.12	-62%	59.13
<i>Sales on the domestic wholesale market - power exchange</i>	<i>6.84</i>	<i>25.22</i>	<i>-73%</i>	<i>53.15</i>
<i>Other sales on the domestic wholesale market</i>	<i>3.78</i>	<i>2.85</i>	<i>33%</i>	<i>5.83</i>
<i>Sales to foreign customers</i>	<i>0.18</i>	<i>0.05</i>	<i>260%</i>	<i>0.15</i>
Sales on the Balancing Market	1.43	1.05	36%	2.26

* after elimination of internal sales within PGE Group

The decline in sales volume to end customers compared to the same period of 2016 mainly results from lower contracted volume in the corporate client segment in tariff group A (Large companies), B and C2x (Small and Medium Enterprises). The lower sales volume on the power exchange results from a reduction of the so called "power exchange obligation". The increase in sales volume on the other wholesale market results from optimising the sales of produced electricity through executing larger bilateral contracts. The growth in sales to foreign clients results from intensified activity in neighbouring markets, as a result of favourable price relation between foreign and Polish market. The growth in sales volume on the balancing market is related largely to the start-up run of a new unit at Gorzów CHP.

Purchases of electricity

Table: Purchases of electricity from outside of the PGE Capital Group (in TWh).

Purchases volume	H1 2017	H1 2016	% change	2016
PURCHASES IN TWh, including:	6.37	27.69	-77%	55.43
Purchases on the domestic wholesale market – power exchange	1.05	21.21	-95%	42.84
Purchases on the domestic wholesale market, other	2.26	2.39	-5%	5.23
Purchases from abroad	0.04	0.04	0%	0.06
Purchases from Balancing Market	3.02	4.05	-25%	7.30

In connection with the reduction of the “power exchange obligation” a large part of PGE Group’s sales in the first half of 2017 was directly hedged by the Group’s own production assets, which translated into a decrease in buying volumes both on the domestic market – exchange, as well as in the other markets. The buying volume decline on the balancing market is the result of a lower number of reductions at the generation units that are part of the Conventional Generation segment.

Production of electricity

Table: Production of electricity (in TWh).

Generation volume	H1 2017	H1 2016	% change	2016
ENERGY GENERATION IN TWh, including:	27.88	25.42	10%	53.67
Lignite-fired power plants	19.93	16.85	18%	37.26
<i>including co-combustion of biomass</i>	0.00	0.00	-	0.00
Coal-fired power plants	4.81	5.47	-12%	10.71
<i>including co-combustion of biomass</i>	0.06	0.18	-67%	0.30
Coal-fired CHP plants	0.52	0.53	-2%	0.98
Gas-fired CHP plants	1.46	1.31	11%	2.33
Biomass-fired CHP plants	0.10	0.24	-58%	0.43
Pumped-storage power plants	0.18	0.26	-31%	0.45
Hydroelectric plants	0.26	0.24	8%	0.43
Wind power plants	0.62	0.52	19%	1.08

The main impact on the level of electricity production in the first half of 2017, as compared to the first half of 2016, was higher production in lignite-based power plants as a result of shorter – by 8 381 h – downtime of units in Bełchatów power plant for repairs and modernisations. During the first half of 2016, units no. 3 and 6 in Bełchatów power plant are in medium overhaul and unit no. 10 was being modernised. Furthermore, the average load for Elektrownia Bełchatów units in the first half of 2017 was higher by 15.4 MW.

The growth in production at gas-fired combined heat-and-power plants results from higher generation at Gorzów CHP, what is the result of a new gas-and-steam unit being commissioned from January 31, 2017.

The decline in production at hard coal-based plants results from longer by 3 803 h downtime of units in repairs. Lower production at Opole power plant is a result of downtime at unit no. 3, undergoing medium overhaul from March 3, 2017 until May 4, 2017. Lower production at Dolna Odra power plant is a result of downtime at unit no. 5, undergoing medium overhaul from May 31, 2017 until June 17, 2017 and downtime at unit no. 7, undergoing medium overhaul since April 3, 2017. Additionally, lower production at Dolna Odra power plant was caused by a lower average load at this plant’s units by 18.0 MW.

A drop of production in biomass CHP plants results from limitation of production in the Szczecin CHP, which is a consequence of termination by ENEA S.A. of an agreement for purchase of certificates. In addition, lower volume of biomass co-combustion in power plants fuelled by hard coal results from discontinuation of production with co-combustion at the Opole Power Plant, as a result of decrease in profitability of production in this technology.

Production at coal-fired combined heat-and-power plants remained at a level comparable to the first half of 2016.

Higher production at wind power plants results mainly from better meteorological conditions in comparison to the first half of 2016.

Production at hydro power plants is slightly higher than in the first half of 2016, resulting mainly from better hydrological conditions.

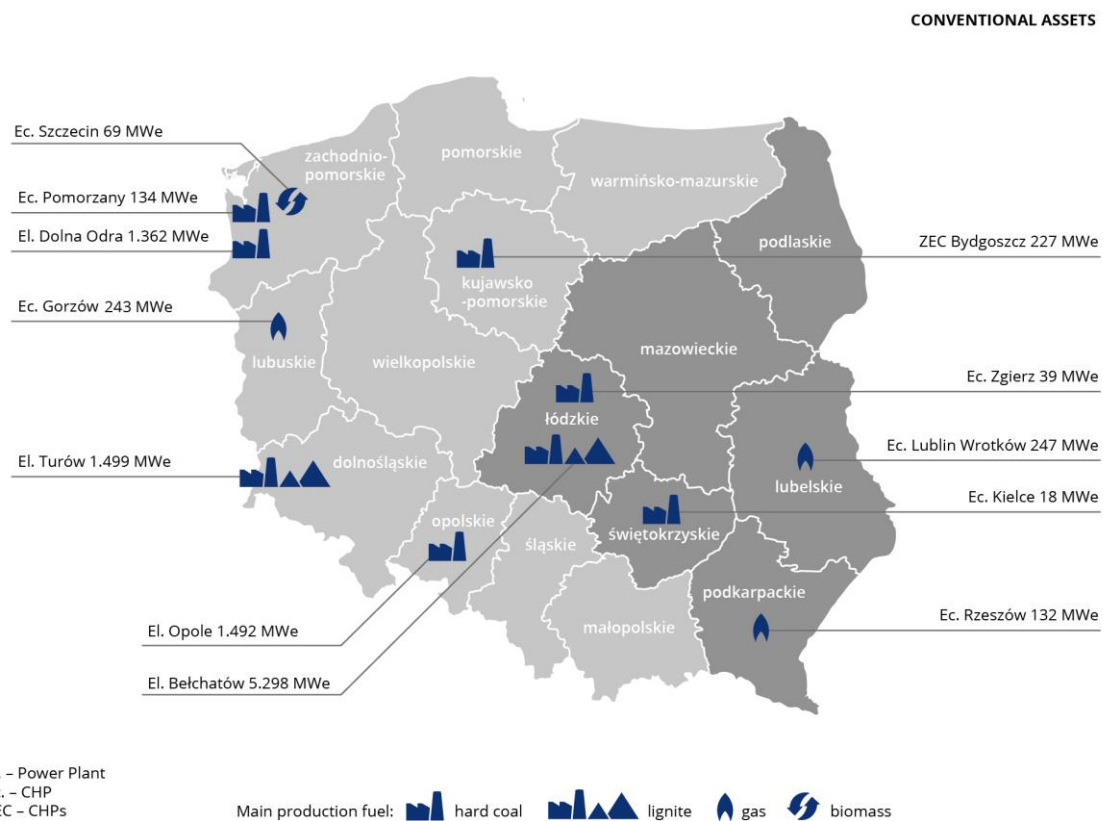
Lower production in pumped storage power plants results from the nature of these generation units, which in the first half of 2017, were used to a lower extent by PSE S.A.

3.2.2. Sales of heat

In the first half of 2017 the heat sales in PGE Capital Group totaled 10.61 GJ million and were higher by 0.43 GJ million than in the first half of 2016. Higher heat sales resulted from increased demand for heat caused by the lower outside temperatures.

3.3. Conventional Generation segment

Diagram: Main assets of the Conventional Generation segment.

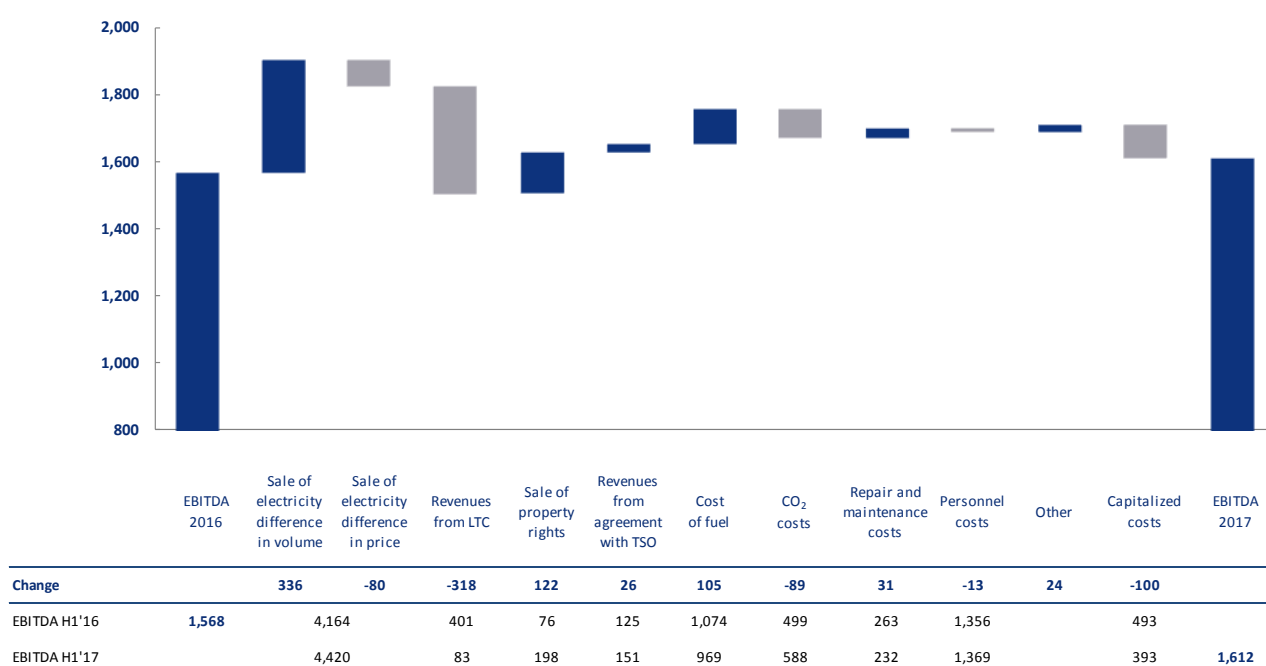


3.3.1. Key financial figures

Table: Key figures for Conventional Generation.

in PLN million	H1 2017	H1 2016	% change
Sales revenues	5 650	5 652	0%
EBIT	855	915	-7%
EBITDA	1 612	1 568	3%
Capital expenditures	1 906	2 855	-33%

Chart: Key changes of EBITDA in Conventional Generation [in PLN million).

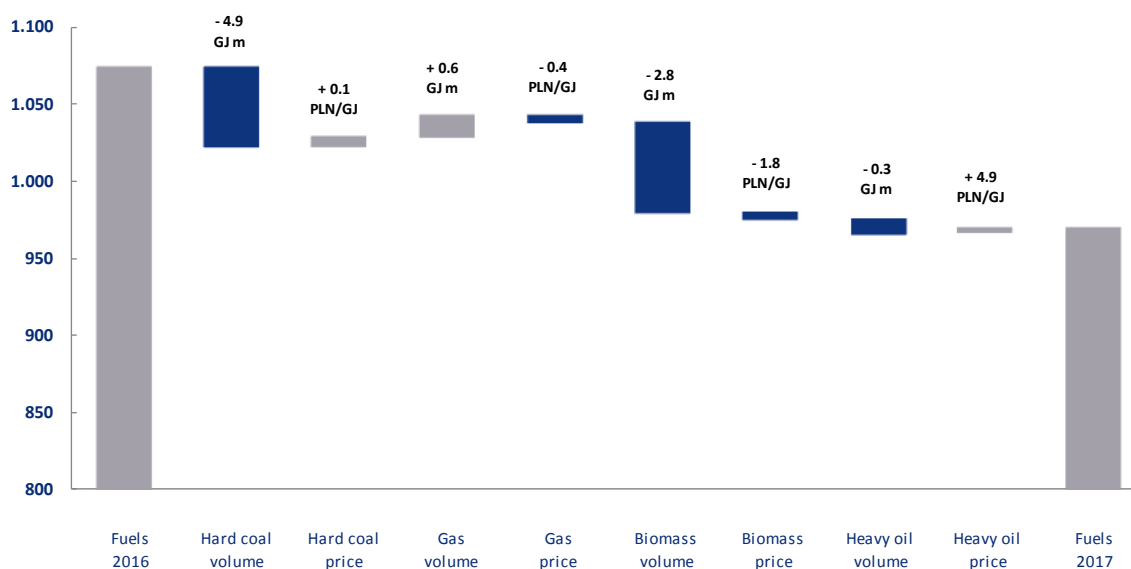


Key factors affecting the results of Conventional Generation segment in the first half of 2017 compared to the results of the first half of 2016 included:

- **Higher electricity sales volume**, mainly due to stronger production at Elektrownia Bełchatów due to shorter downtime of units for repairs and modernisations as well as higher production at Gorzów CHP owing to the handover of a new gas-and-steam unit from January 31, 2017.
- **Decline in electricity sales prices**, which caused a decrease in revenue from sales. The average realised sales price for electricity at the Conventional Generation segment excluding the sales to final off-takers in the first half of 2017 was PLN 163/MWh, compared to PLN 166/MWh in the first half of 2016. In addition, margin on the re-sale of electricity was lower by almost PLN 6/MWh.
- **Decline in electricity sales prices**, which caused a decrease in revenue from sales. The average realised sales price for electricity at the Conventional Generation segment excluding the sales to final off-takers in the first quarter of 2017 was PLN 163.5/MWh, compared to PLN 164.8/MWh in the first quarter of 2016. In addition, margin on the re-sale of electricity was lower by PLN 15.4/MWh.
- **Lower proceeds from long-term contracts (LTCs)**. PLN 83 million was recognised in other operating revenues in the first half of 2017, as a result of rulings by the Court of Appeal regarding the amount of annual adjustment for 2009 for Lublin Wrotków CHP and Gorzów CHP. During the comparative period, proceeds from LTC compensation presented in operating activities amounted to PLN 253 million. Furthermore, other operating activities included recognition of LTC adjustment in amount of PLN 148 million in connection with the verdicts in court disputes: (i) favourable verdict of the Court of Appeal relating to adjustment of stranded costs for 2010 due to Opole power plant (PLN +173 million); (ii) unfavourable verdict of the Supreme Court in scope of gas adjustment for 2009 for Lublin Wrotków CHP and rejection of cassation appeal in case of gas adjustment for 2010 for Lublin Wrotków CHP and Rzeszów CHP (PLN -25 million).

- **Higher revenues from certificates**, what mainly results from lower revenues from certificates in the first half of 2016 due to revaluation of certificates inventories in Szczecin CHP (PLN -118 million).
- **Higher revenue from Regulatory System Services**, mainly higher revenue from the Operational Capacity Reserve resulting from higher rates and higher volume due to lower sales activity at Opole power plant, Dolna Odra power plant and unit no. 1 in Bełchatów power plant.
- **Lower fuel consumption costs**, mainly hard coal and biomass. This is mainly the effect of lower power production at power plants and biomass-based combined heat-and-power plants and in co-combustion (see p. 3.2.1 of this report). Main changes on different types of fuel are presented on the chart below.
- **Higher CO₂ costs** as a result of higher production volume and lower amount of allowances granted free of charge.
- **Lower costs of renovations and exploitation**, mainly due to a smaller substantive scope of the conducted work in comparison with the corresponding period.
- **Higher personnel costs** resulting from an increase in the value of provisions for employee benefits at PGE GiEK S.A. and as a result of implementation of payment agreements in the support companies of PGE GiEK S.A.
- **Lower capitalised costs**, among other, as a result of lower volume of overburden removal in mines and recognition of lower removal costs as asset.

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



Change	-52	6	14	-4	-59	-4	-9	3
Fuels H1'16	1,074	682	256	110	23			
Fuels H1'17	636	265	47	16	969			

3.3.2. Capital expenditures

Table: Capital expenditures incurred in Conventional Generation segment in the first half of 2017 and 2016.

in PLN million	H1 2017	H1 2016	% change
Investments in generating capacities, including:	1 660	2 541	-35%
▪ Development	1 221	1 798	-32%
▪ Modernisation and replacement	439	743	-41%
Purchase of finished capital goods	30	29	3%
Vehicles	1	4	-75%
Other	11	12	-8%
TOTAL	1 702	2 586	-34%
Capitalized costs of overburden removal in mines	204	269	-24%
TOTAL with capitalized costs of overburden removal	1 906	2 855	-33%

Highest capital expenditures in the first half of 2017 were incurred for the following projects:

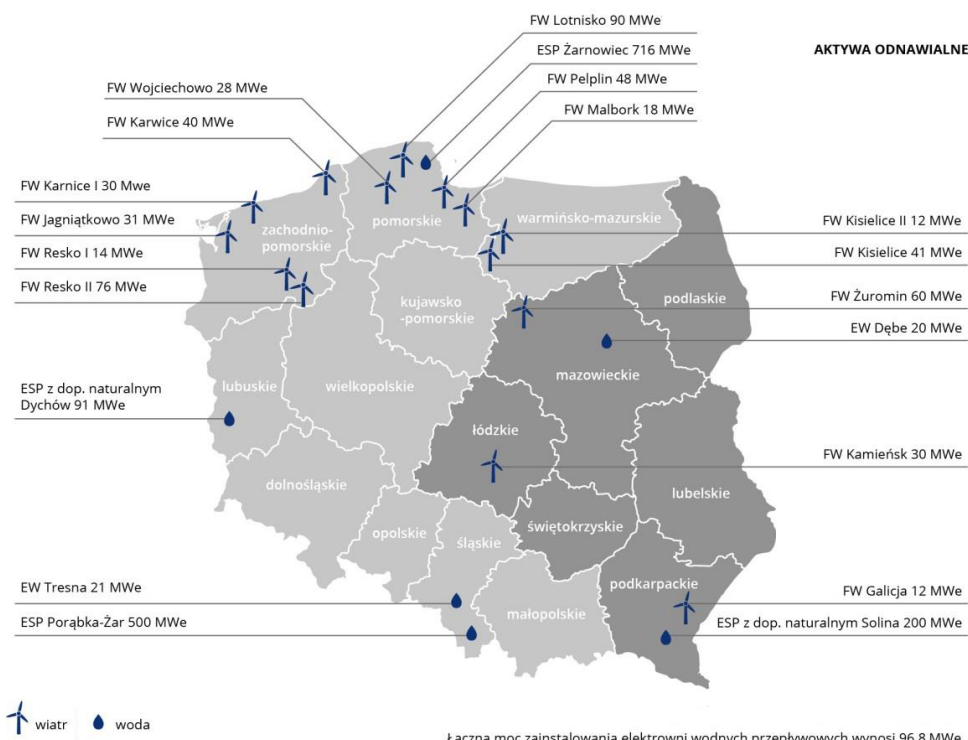
■ construction of units 5 and 6 in Opole power plant	PLN 1 018 million;
■ construction of unit no. 11 in Turów power plant	PLN 129 million;
■ construction of CCGT unit in Gorzów CHP	PLN 58 million;
■ modernisation of units 1-3 in Turów power plant	PLN 55 million;
■ change in technology of furnace waste storage in Bełchatów power plant	PLN 35 million;
■ comprehensive modernization of units 7-12 - Bełchatów power plant	PLN 33 million;
■ construction of installation to transport ash and suspension from unit 14 in Bełchatów power plant	PLN 17 million;
■ construction of a Thermal Processing Installation with Energy Recovery at Rzeszów CHP	PLN 12 million;
■ adaptation of unit no. 3 in Opole power plant to BAT conclusions – modernization of SNCR installation	PLN 8 million.

Key decisions for the Conventional Generation segment in the first half of 2017:

- On January 24, 2017, the Minister of the Environment issued a decision upholding a decision by the Marshall of the Opole Voivodeship dated October 10, 2016 on the grant of an integrated permit for units 1-6 at Opole power plant. This decision is final in the administrative course of instances.
- A gas-and-steam unit at Gorzów CHP was commissioned on January 31, 2017.
- On March 13, 2017, the President of Szczecin issued a decision regarding a permit for the construction of a flue gas deNo_x system for two Benson OP-206 boilers, together with the modernisation of water heater, flue gas ventilators and rotating air warmers at Pomorzany power plant. The decision became final on March 29, 2017.
- On June 1, 2017, an agreement was concluded for construction of the SNCR installation on unit no. 2 at the Bełchatów Power Plant in order to adapt it to the requirements of the BAT Conclusions.
- On June 9, 2017, the Provincial Administrative Court in Warsaw revoked the decision of the Minister of the Environment regarding the Integrated Permit for the Opole Power Plant, covering exploitation of units 5 and 6 at Opole Power Plant, and referred the matter for another consideration by that authority. A cassation appeal is being prepared, to be submitted to the Supreme Administrative Court.
- On June 22, 2017, an agreement was concluded for the construction of a ground tank which will be used as a gypsum warehouse, located on an external heap at KWB Bełchatów (Bełchatów lignite mine).
- On June 30, 2017, an application was submitted to the Podkarpacie Marshal Office for an issue of an integrated permit for the Thermal Processing with Power Recovery Installation (ITPOE) at the Rzeszów CHP plant.

3.4. Renewables segment

Diagram: Main assets of the Renewables segment.

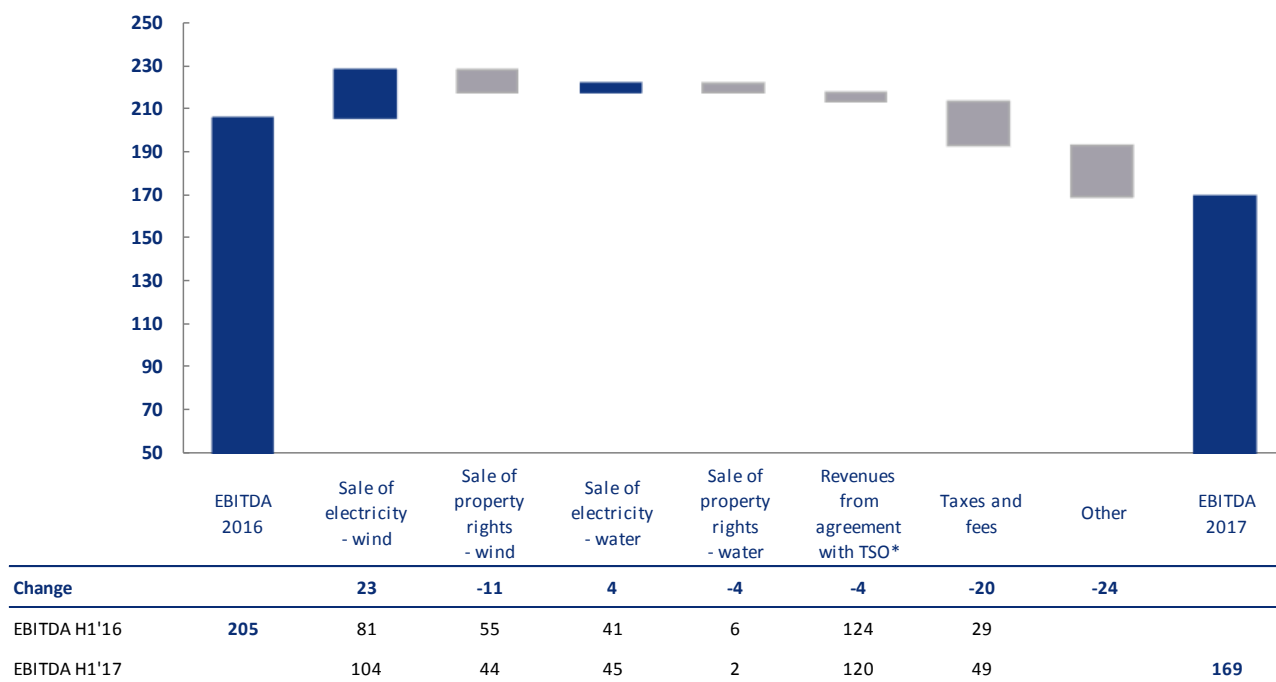


3.4.1. Key financial figures

Table: Key figures for Renewables.

in PLN million	H1 2017	H1 2016	% change
Sales revenues	369	370	0%
EBIT	37	-720	-
EBITDA	169	205	-18%
Capital expenditures	28	95	-71%

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



* excluding revenues and costs relating to balancing market not affecting EBITDA result

Key factors affecting the results of Renewables segment in the first half of 2017 compared to the results of the first half of 2016 included:

- **Growth in revenues from electricity sales from wind farms** results mainly from a higher electricity sales volume by 142 GWh compared to the first half of 2016.
- **Increase in revenues from sale of electricity from hydro power plants**, caused mainly by electricity sales volume increasing by 17 GWh and a price by PLN 3/MWh higher compared to the previous year.
- **Decline in revenues from the sale of certificates**, resulting from: (i) valuation of certificates at a price lower by approx. PLN 62/MWh in the first half of 2017, compared to the first half of 2016, which resulted in a decline in revenue by about PLN (-)25 million from the previous year; (ii) correction of valuation of sold certificates and update of inventory valuation, which resulted in a PLN (+)10 million increase in revenues.
- **Lower revenues from sale of regulatory system services** (contract with PSE S.A.) resulting mainly from the adjustment of revenues for 2016 and a lower settlement rate.
- **Increase in taxes and fees** is mainly connected with the change in the regulations in scope of tax base for wind farms. Unfavourable contribution on EBITDA due to the above amounted to approximately PLN 17 million.
- **Unfavourable deviation in the "Other" item** results mainly from lower revenues from the other operating activity primarily due to one-off settlement of the subsidy (PLN 21 million) caused by write-offs establishing the present value of tangible assets as of the end of the first six months of 2016.

3.4.2. Capital expenditures

Capital expenditures incurred in Renewables segment in the first half of 2017 and 2016.

in PLN million	H1 2017	H1 2016	% change
Investments in generating capacities, including:	25	94	-73%
▪ Development	10	73	-86%
▪ Modernisation and replacement	15	21	-29%
Other	3	1	200%
TOTAL	28	95	-71%

3.5. Distribution segment

Diagram: Area of PGE distribution grid.

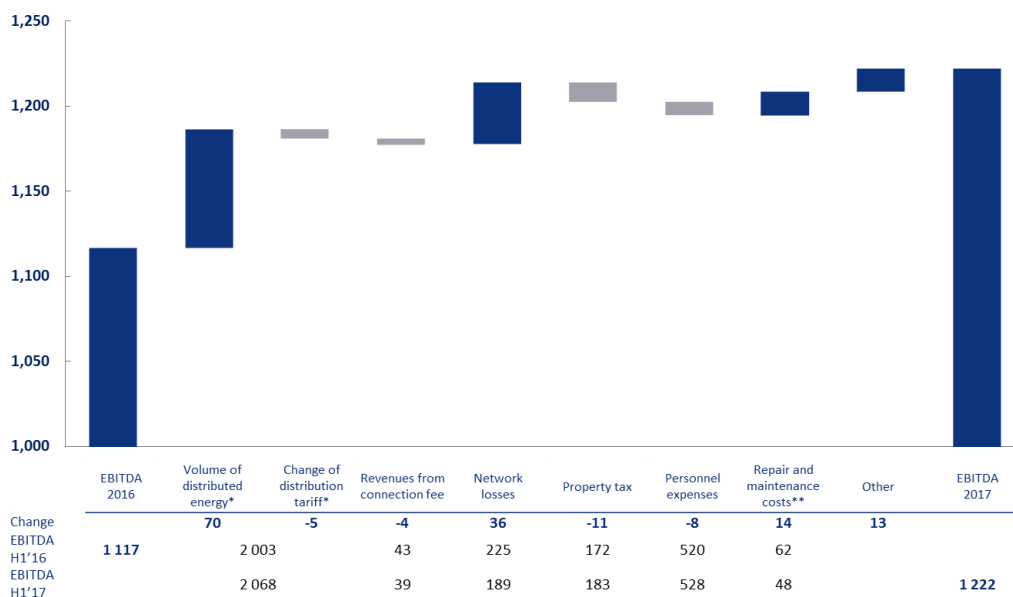


3.5.1. Key financial figures

Table: Key figures for Distribution.

in PLN million	H1 2017	H1 2016	% change
Sales revenues	3 175	2 922	9%
EBIT	642	557	15%
EBITDA	1 222	1 117	9%
Capital expenditures	629	713	-12%

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



* Except costs of transmission by PSE S.A.

** Cost of materials and services for repair and maintenance

Key factors affecting the results of Distribution segment in the first half of 2017 compared to the results of the first half of 2016 included:

- **Increased volume of distributed energy** by 590 GWh, resulting from – inter alia – higher number of customers measured by power take-off points (by approx. 42.4 thousand) in comparison to the first half of 2016 and growth of the economic activity of customers from groups A and B in the area of operation of PGE Dystrybucja S.A.
- **A slight drop of the average rate** by approximately PLN 0.3/MWh, without taking into account the transition fee and RES fee.
- **Decrease of revenues from connection fees** results from lower investment activity of potential clients, mainly on medium voltage.
- **Lower costs of energy to cover balancing difference** as a result of a decline in the volume of balancing difference by 90 GWh and recognition of additional estimation to cover balancing difference.
- **Increase of costs of tax on real estate** in connection with an increase of grid assets in comparison with the first six months of 2016.
- **Increase in personnel costs**, resulting largely from an on-going process to optimise salaries.
- **Lower costs of renovation and exploitation** in connection with more effective use of the company's own resources and shift of some of the work to the following months.
- **Positive deviation in the 'other' item**, resulting mainly from decreased IT costs by PLN 4 million and positive result on other operating activities (growth by PLN 9 million).

3.5.2. Capital expenditures

Table: Capital expenditures incurred in Distribution segment in the first half of 2017 and 2016.

in PLN million	H1 2017	H1 2016	% change
MV and LV power networks	193	227	-15%
110/ MV and MV/MV	68	61	11%
110 kV power lines	13	18	-28%
Connection of new off-takers	226	268	-16%
Purchase of transformers and energy counters	71	61	16%
IT, telemechanics and communication	38	57	-33%
Other	20	21	-5%
TOTAL	629	713	-12%

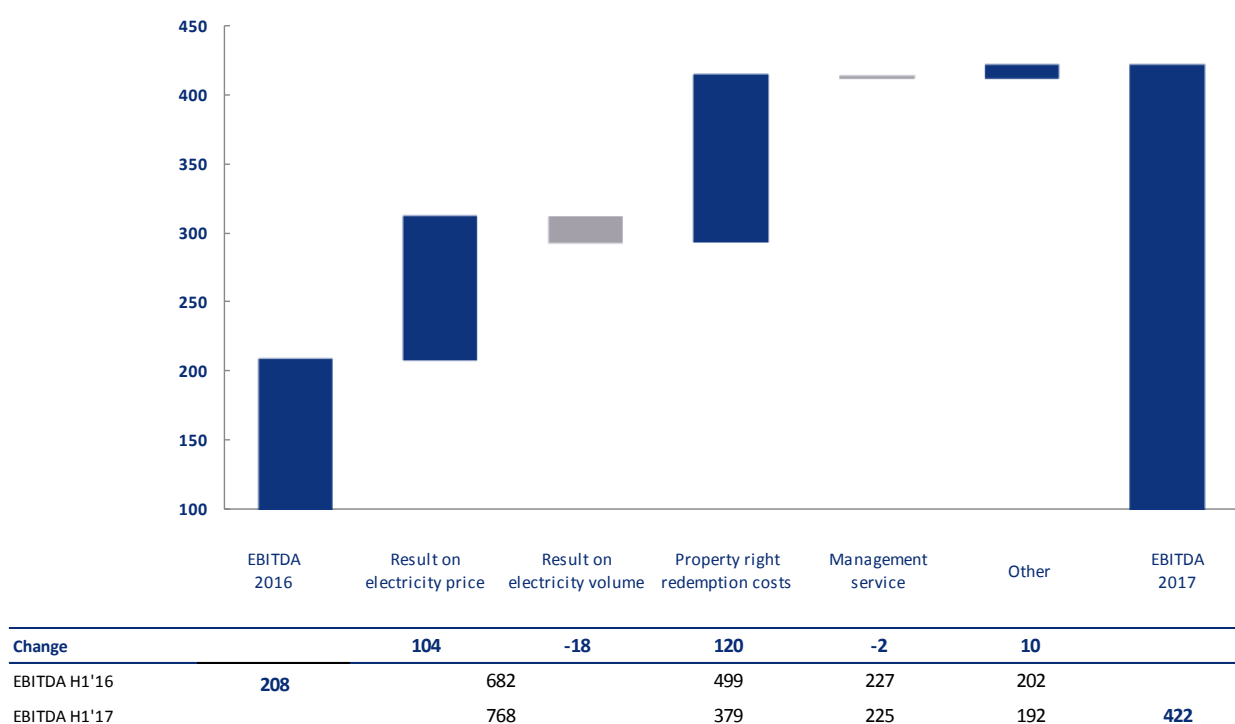
3.6. Supply segment

3.6.1. Key financial figures

Table: Key figures for Supply.

in PLN million	H1 2017	H1 2016	% change
Sales revenues	7 630	8 047	-5%
EBIT	409	195	110%
EBITDA	422	208	103%
Capital revenues	5	7	-29%

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



Key factors affecting the results of Supply segment in the first half of 2017 compared to the results of the first half of 2016 included:

- **Increase of result from electricity** results from the change of sales policy aimed at maximization of the margin.
- **Decrease in costs to redeem certificates**, mainly as a result of lower market prices for green certificates, partially offset by the introduction of an obligation to redeem certificates for electricity produced in biogas plants, which followed the amendment of the RES Act.
- **Decrease of revenues from the Agreement for Commercial Management of Generation Capacities ("ZHZW")** due to lower trading volume by 0.6 TWh. Revenues of PGE S.A. from PGE GiEK S.A. decreased by PLN 3 million, while revenues from PGE EO increased by PLN 1 million.
- **Change in other** results from lower operating expenses by PLN 8 million and higher result on other operations by PLN 1 million.

3.7. Other operations

3.7.1. Key financial figures

Table: Key figures for Other operations.

in PLN million	H1 2017	H1 2016	% change
Sales revenues	251	333	-25%
EBIT	-31	-29	-7%
EBITDA	20	33	-39%
Capital expenditures	53	68	-22%

Decrease in the EBITDA result of the Other operations segment by PLN 13 million was mainly connected with the share sale agreement concluded on March 29, 2017, concerning the transfer of 100% shares of EXATEL S.A. to the State Treasury. In addition, EXATEL S.A., during the first quarter of 2017, achieved a lower EBITDA result, which was caused by a lower margin of connection lease services in comparison with the first quarter of 2016.

3.7.2. Capital expenditures

Capital expenditures in Other Operations in the first half of 2017 amounted to PLN 53 million compared to PLN 68 million in the first half of 2016.

Within the above amount, the highest capital expenditures in the first half of 2017 were incurred by the following companies:

- PGE EJ 1 sp. z o.o. – for nuclear project development PLN 19 million;
- PGE Systemy S.A. – for IT infrastructure and software development PLN 18 million;
- EXATEL S.A. – for telecommunication infrastructure development PLN 15 million.

4. Risks and opportunities

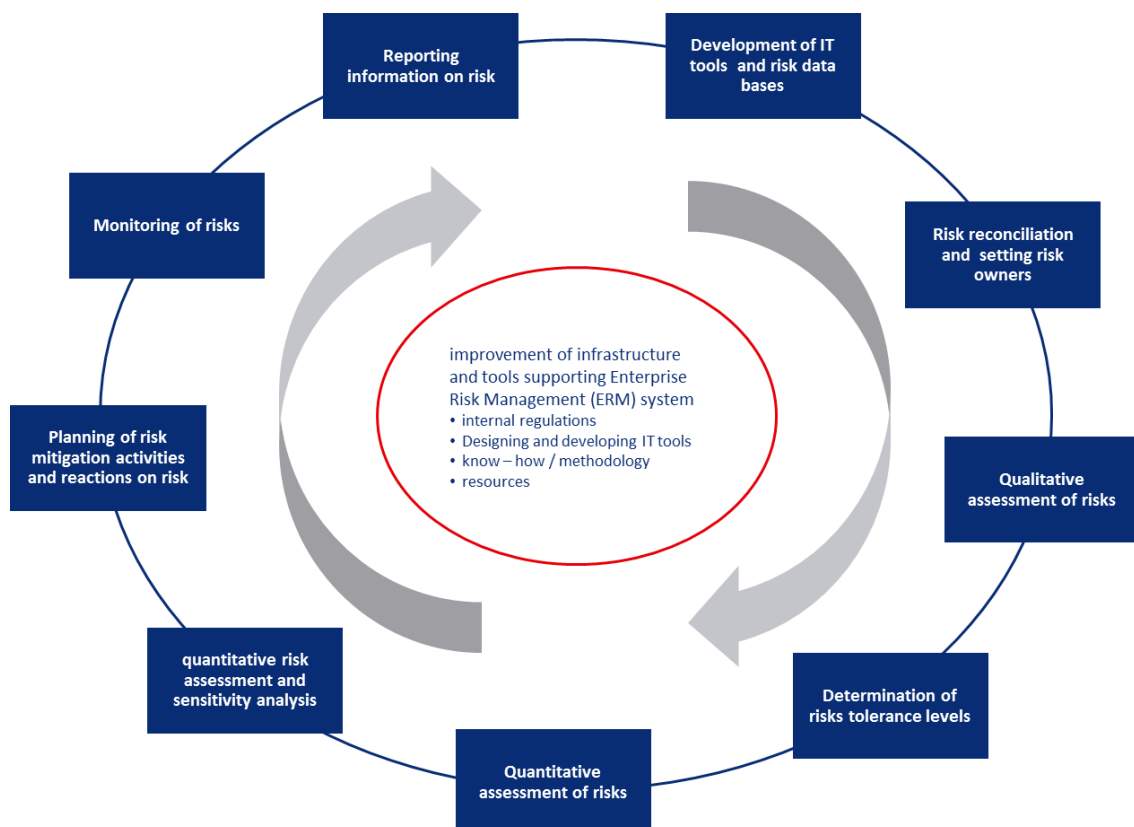
4.1. Risk management

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

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

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















The PGE Capital Group has consequently developed a comprehensive risk management system. During the first six months of 2017, a process of assessment and analysis of long-term risks was launched in the key companies of the Group. Mechanism allowing identification of areas exposed to risk and risk level measurement methods are constantly verified and developed. Thanks to that, the significant risks concerning various areas of operations are identified and kept within the assumed limits by reducing negative effects of such risks and by taking preventive or corrective measures, in accordance with the applied cycle.



4.1.1. Risk factors and mitigating actions

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

Risk level	Risk outlook					
	low	medium	high	decrease	growth	stable
low level	Risk does not pose a threat and may be tolerated,					
medium level	Risk which needs preparation of the proper reaction based on analysis of costs and benefits,					
high level	Intolerable risk, which needs immediate and active reaction, leading simultaneously to limitation of possible consequences and of probability of occurrence thereof.					
Market and product risks	Prices of electricity and related products – resulting from a lack of certainty with regard to the future levels and volatility of commodity prices relative to open contract positions - this particularly concerns electricity and associated products (property rights, CO2 emission allowances).					
Related to prices and volumes of offered products and services	Electricity sales volumes – this risk derives from a lack of certainty with regard to the conditions determining the demand and supply of electricity, directly affecting the volume of market sales by PGE Group.					
	Tariffs (regulated prices) – resulting from the requirement to approve rates for distribution services and electricity and heat prices for particular groups of entities.					
Property risks	Failures – connected with the operation and degradation over time of energy equipment and facilities (maintenance and repair work, diagnostics)					
Related to development and maintenance of the assets	Damage to property – connected with the physical protection of energy equipment and facilities against destructive external factors (including fire, weather phenomena and intentional damage).					
	Investment and development – connected with strategic plans for expanding the generation, distribution and sales potential as well as on-going investments.					
Operational risks	Electricity and heat production – connected with production planning and impact of the factors that determine production capacities.					
Related to pursuing of ongoing economic processes	Fuel management – connected with uncertainty regarding the costs, quality, timeliness and volumes of fuel supply (mainly coal) and the effectiveness of inventory management processes.					
	Human Resources – pertaining to provision of employees with the relevant experience and competences, who are capable of performing specific tasks.					
	Social dialogue – connected with a failure in achieving agreement between the Group's management and employees, what could lead to strikes/collective labour disputes.					
Regulatory and legal risks	Legal changes in support systems – connected with uncertainty as to the future shape of the support system for production of certified energy.					
Related to compliance with external and internal legal provisions	Purchase of certificates and CO₂ allowances - resulting from the possible changes to the statutory requirement for electricity sellers to purchase a specified quantity of property rights and to uncertainty with regard to volume of CO ₂ emission rights granted free of charge in future.					
	Compensation for the termination of long-term contracts (LTCs) – there is a possibility that the level of adjustments to advances collected for stranded costs, as calculated by the Group, will be questioned by the President of the Energy Regulatory Office (URE), as a result of which the Group will be obligated to return advances received for terminating LTCs.					
	Environmental protection – resulting from industry regulations specifying which "environmental" requirements energy installations should meet and what the principles for using the natural environment are. The future environmental regulations and uncertainty concerning their final shape (in particular with regard to the revision of BAT / BREF) may translate into a change in the level of capital expenditures of the PGE Group.					

	Unresolved legal status – connected with difficulties in respect of land acquisition or access to land in the course of new investments (particularly in the Distribution segment).		
	Concessions – resulting from the statutory requirement to hold concessions with regard to conducted operations.		
	Discriminatory activities – connected with application by the Group of practices that limit or eliminate competition and infringe on legal regulations or consumer interests.		
Financial risks			
Related to finance management	Credit risk – connected with the counterparty default, partial and/or late payment of receivables or a different type of breach of contractual conditions (for example failure to deliver/collect goods or failure to pay for any associated damages or contractual penalties).		
	Liquidity risk – connected with the possibility of losing the ability to meet current liabilities and obtaining financing sources for business operations.		
	Interest rate risk – resulting in particular from the negative impact of changes in market interest rates on PGE Group's cash flows generated by floating-rate financial assets and liabilities.		
	Foreign exchange risk – understood in particular as risk that PGE Group's cash flows denominated in currencies other than the functional currency are exposed to due to negative exchange rate movements.		

The main risk mitigation actions for the PGE Group are presented below along with the description of the main tools used for the management of the given risk.

Market and product risks

Impact: revenues and product and service offerings	<p>Measures: PGE Group has rules for managing market risk (price- and volume-related), which include a global risk appetite measure, VaR-based position limits and management of consolidated exposure to commodity pricing risk through mechanisms for protection against risk exceeding acceptable levels. Those rules provide consistent guidance in respect of process organisation in the context of commercial strategy and mid-term planning. PGE Group follows rules pertaining to a strategy for hedging key exposures in the area of electricity and related product trading that correspond to the adopted risk appetite in the mid-term. Position hedging levels are established with consideration given to the results of analysing pricing risk in respect of electricity and related products. Target hedging levels are specified taking into consideration the Group's financial standing, including in particular its strategic objectives.</p> <p>PGE Group researches, monitors and analyses the electricity and related products markets in order to optimally use its generation and selling capacities.</p> <p>New products are introduced on the retail market and actively promoted through nationwide marketing campaigns. Maintaining a diverse product portfolio and focusing efforts on tailoring its offering to the market, the Group diversifies channels used to reach the end-customers and diversifies target groups with account take to client's volume potential. Efforts aimed at current clients retention are based on a model consisting of a diversified portfolio of customer loyalty schemes and client-acquisition activities. Portfolio includes also special offers dedicated to former clients who moved over to the competitors, as well as industry offerings dedicated to specific types of economic activity. PGE Group also introduces bundled offers. Particular attention is paid to ensuring a high level of customer service by developing employees' competences and building relations with business and retail clients. Having implemented tools to support these processes, the Group effectively manages information flows, which directly translates into comfortable client relations as well as better sales planning and organisation.</p>
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Operational risks

Impact: costs

Measures: PGE Group's results are to a large extent dependent on the costs incurred in the course of operations. The Group optimises costs inter alia through monitoring of fuel prices and reserves and securing supply through long-term contracts with suppliers and through price fixing formulas. Inspections, repairs and modernisation of the existing assets optimise equipment lifecycles and required availability of key components of those assets. Level of costs is affected by securing CO₂ emission allowances partly free of charge and purchase of lacking allowance with the assumption of securing the margin on sales.

An intensive and effective dialogue is also carried out in order to avoid escalation of potential disputes with the social partners and to work out the most favourable solutions with regard to employment and employment costs within PGE Capital Group connected therewith.

Property risks

Impact: assets

Measures: PGE Group effectively pursues a strategy for building up and modernization of its production capacities. The Group diversifies current structure of the production sources due to energy generation technology. Currently PGE Group is running two key investments (Opole, Turów) alongside a number of grid investments, as well as modernisation and replacement projects. We are continuously carrying out maintenance and repair work. Our main generation assets were insured against failure and damage to property. The reliability of the power supply to the end users has been systematically improved.

Regulatory and legal risks

Impact: compliance area

Measures: PGE Group's operations are subject to a host of national and international laws and regulations. Monitoring of the changes being introduced or proposed provides that our operations in key business segments are carried in compliance with the law and that PGE Capital Group has solutions which take into account potential changes in the legal environment. PGE S.A. is one of the members of the Polish Electricity Committee that opened its office in Brussels. Through the Committee's operations, PGE S.A. actively influences proceeding and shaping of EU law and engages a dialogue with the EU institutions.

The Group adapts its internal regulations and practices to make sure that the activities are in compliance with the power sector regulations and binding law.

The extraction of fossil fuels as well as the production and distribution of electricity and heat have impact on the environment therefore the Group continuously improves its activities aimed at protecting and improving the state of the environment by implementing technological and organisational solutions ensuring efficient and effective management in this area.

Financial risks

Impact: Finance management

Measures: PGE Group manages credit risk stemming from commercial transactions. Prior to executing a transaction, a counterparty assessment is carried out and forms a base for applying credit limits, that are regularly updated and monitored. Exposures that exceed established limits are hedged in accordance with the Group's credit risk management policy.

PGE Group applies a central financing model, which is generally used by PGE S.A. when raising external capital. PGE Group subsidiaries use a variety of intra-group financing sources and liquidity risk is monitored using periodic planning for operating, investing and financing activities. As regards currency risk and interest rate risk, PGE Group has implemented internal management procedures. PGE Group companies execute derivative transactions involving interest rate- and/or currency-based instruments (IRS, CCIRS) only in order to hedge identified risk exposures.

5. Significant events of the reporting period and subsequent events

5.1. Investment Agreement on the financial investment in Polska Grupa Górnicza sp. z o.o.

Investment Agreement on the financial investment in Polska Grupa Górnicza sp. z o.o. is described in note 22.2 to the consolidated financial statements.

5.2. Capital investment in Polimex-Mostostal S.A.

Capital investment in Polimex-Mostostal S.A. is described in note 22.4 to the consolidated financial statements.

5.3. Termination of agreements for purchase of certificates by Enea S.A.

Termination of agreements for purchase of certificates by Enea S.A. is described in note 19.4 to the consolidated financial statements.

5.4. Submission of offer for acquisition of EDF assets in Poland

Submission of offer for acquisition of EDF assets in Poland is described in note 22.3 to the consolidated financial statements.

5.5. Description of material agreements

In the first quarter of 2017 there were no agreements meeting the criteria of material agreement.

5.6. Changes in the Management Board and Supervisory Board

Changes in the Management Board in the first half of 2017

On February 13, 2017 the Supervisory Board adopted resolutions on dismissal of following persons from the Management Board effective February 13, 2017:

- Mr. Henryk Baranowski, President of the Management Board;
- Ms. Marta Gajęcka, Vice-President for Market Development and International Relations;
- Mr. Bolesław Jankowski, Vice-President for Trading;
- Mr. Marek Pastuszko, Vice-President for Corporate Affairs;
- Mr. Paweł Śliwa; Vice-President for Innovations;
- Mr. Ryszard Wasilek, Vice-President for Development;
- Mr. Emil Wojtowicz, Vice-President for Finance.

At the same time the Supervisory Board adopted resolutions on appointment of following persons to the Management Board of the tenth term of office as from February 14, 2017:

- Mr. Henryk Baranowski and entrusting him the position of the President of the Management Board;
- Mr. Bolesław Jankowski and entrusting him the position of the Vice-President for International Affairs;
- Mr. Wojciech Kowalczyk and entrusting him the position of the Vice-President for Capital Investments;
- Mr. Marek Pastuszko and entrusting him the position of the Vice-President for Corporate Affairs;
- Mr. Paweł Śliwa and entrusting him the position of the Vice-President for Innovations;
- Mr. Ryszard Wasilek and entrusting him the position of the Vice-President for Operations;
- Mr. Emil Wojtowicz and entrusting him the position of the Vice-President for Finance.

As at June 30, 2017, the Management Board of the Company consisted of:

Name and surname of the Management Board member	Position
Henryk Baranowski	President of the Management Board
Bolesław Jankowski	Vice-President for International Affairs
Wojciech Kowalczyk	Vice-President for Capital Investments
Marek Pastuszko	Vice-President for Corporate Affairs
Paweł Śliwa	Vice-President for Innovations
Ryszard Wasilek	Vice-President for Operations
Emil Wojtowicz	Vice-President for Finance

On June 20, 2017 Mr. Bolesław Jankowski submitted his resignation from the position of Vice-President for International Affairs, effective as of July 1, 2017.

As at the publication date of this report, the Management Board of the Company consists of:

Name and surname of the Management Board member	Position
Henryk Baranowski	President of the Management Board
Wojciech Kowalczyk	Vice-President for Capital Investments
Marek Pastuszko	Vice-President for Corporate Affairs
Paweł Śliwa	Vice-President for Innovations
Ryszard Wasilek	Vice-President for Operations
Emil Wojtowicz	Vice-President for Finance

Changes in the Supervisory Board

On April 6, 2017 the Company received a resignation from Mr. Mateusz Gramza from the Company's Supervisory Board with immediate effect.

On June 26, 2017, the State Treasury, represented by the Minister of Energy, by way of a written statement submitted to the Management Board of the Company, dismissed Mr Radosław Osiński from the Supervisory Board. On June 27, 2017, Mr Radosław Osiński was appointed by the Ordinary General Meeting to serve the function of a Member of the Supervisory Board.

As at June 30, 2017 and as at the publication date of this report, the Supervisory Board of the Company consisted of:

Name and surname of the Supervisory Board member	Position
Anna Kowalik	Chairman of the Supervisory Board
Witold Kozłowski	Supervisory Board Member - independent
Grzegorz Kuczyński	Secretary of the Supervisory Board - independent
Jarosław Głowacki	Supervisory Board Member - independent
Janina Goss	Supervisory Board Member - independent
Radosław Osiński	Supervisory Board Member - dependent
Mieczysław Sawaryn	Supervisory Board Member - independent
Artur Składanek	Supervisory Board Member - independent

As at June 30, 2017 the standing committees of the Supervisory Board consisted of:

Name and surname of the member of the Supervisory Board	Audit Committee	Corporate Governance Committee	Strategy and Development Committee	Appointment and Remuneration Committee
Janina Goss	Member from March 2, 2016			Member from March 2, 2016
Jarosław Głowacki		Member from March 2, 2016	Member from March 2, 2016	
Anna Kowalik	Member			Member
Grzegorz Kuczyński	Member from March 2, 2016 Chairman from March 18, 2016	Member from March 2, 2016		
Witold Kozłowski		Member from Sept. 13, 2016 Chairman from October 25, 2016		Member from September 13, 2016
Radosław Osieński			Member from Sept. 13, 2016 till June 26, 2017 Chairman from October 25, 2016 till June 26, 2017	Member from September 13, 2016 till June 26, 2017
Mieczysław Sawaryn			Member from March 2, 2016	Member from March 2, 2016 Chairman from August 8, 2016
Artur Składanek		Member from March 7, 2016	Member from March 2, 2016	

5.7. Decisions of the President of the Energy Regulatory Office related to realisation of LTC Act

Decisions of the President of the Energy Regulatory Office related to realisation of LTC Act are described in note 22.1 to the consolidated financial statements.

5.8. Legal aspects

5.8.1. Claims for annulment of the resolutions of the General Meetings of PGE S.A.

Information on claims for annulment of the resolutions of the General Meetings of PGE S.A. are described in note 19.4 to the consolidated financial statements.

5.8.2. The issue of compensation regarding the conversion of shares

Information on the issue of compensation regarding the conversion of shares are described in note 19.4 to the consolidated financial statements.

5.9. Information concerning proceedings in front of court, body appropriate for arbitration proceedings or in front of public administration authorities

As at June 30, 2017 PGE S.A. and its subsidiaries were not a party of any proceedings concerning payables or debts whose total value would constitute at least 10% of the Company's equity.

Significant proceedings pending in front of courts, competent arbitration authority or public administration authority are described in note 19.4 to the consolidated financial statements.

5.10. Information concerning the guarantees for loans granted by the Company or a subsidiary

Within the Group, in the first half of 2017 PGE S.A. and subsidiaries did not grant guarantees to other entities or to a subsidiary, where a value of guarantees constitute at least 10% of the Company's equity.

5.11. Information on issue, redemption and repayment of debt securities and other securities

Information on issue, redemption and repayment of debt securities and other securities is described in p. 1.2.1 of the foregoing report in note 18.1 to the consolidated financial statements.

5.12. Activities related to nuclear energy

Business partnership

As a result of the sale of shares on April 15, 2015 to the Business Partners (TAURON Polska Energia S.A., ENEA S.A. and KGHM Polska Miedź S.A.) by PGE S.A., PGE S.A. holds 70% in the share capital of PGE EJ 1 sp. z o.o. ("PGE EJ1"), and each of the Business Partners holds 10% in the share capital of PGE EJ1.

According to the Partners' Agreement, concluded on September 3, 2014, the Parties jointly undertook to finance operations under the initial phase of the Program (the "Development Stage"), proportionally to their shareholdings. The funds for the Program are paid to PGE EJ1 in form of the increase of the share capital. PGE's financial commitment in the Development Stage will not exceed amount of approx. PLN 700 million.

Proceeding for selection of technology

Further action with regard to delivery of technology is dependent on the final arrangements with the Ministry of Energy related to formula of technology selection, working out economic, organisational and legal solutions, including the risk distribution and estimated costs of implementation of those solutions.

Site characterisation, environmental and other surveys

Site characterisation and environmental surveys connected with preparations for the construction of Poland's first nuclear plant began in March 2017. Works are being conducted at two sites: Lubiatowo-Kopalino and Żarnowiec, within Choczewo, Krokowa and Gniewino municipalities in the Pomeranian Voivodeship.

The surveys are focusing on activities necessary to prepare an environmental impact assessment and a site characterisation report. The works are expected to finish by the end of 2020.

The aim of the environmental surveys is to specify the project's impact on the environment, broken down into the preparation, construction, operation and disassembly of the nuclear plant.

The aim of the site characterisation work is to obtain data to conduct an assessment of areas in terms of their usefulness as a nuclear plant site, including the verification of factors preventing the classification of area as one that meets nuclear safety requirements (major fault). The results of these works are necessary to develop solutions that ensure the plant's safe operation and reduction of its impact on the lives of nearby residents and the natural environment to a minimum.

The surveys are being carried out by PGE EJ1, with the main role played by the survey programme contractor, ELBIS Sp. z o.o., which is part of PGE Group.

The following initiatives are planned as part of works that will be conducted in the third quarter of 2017 within environmental and site characterisation surveys:

- obtaining archive seismic and well data (including for the purposes of surveying deep soil) and to obtain the necessary technical data from technology providers in order to prepare the environmental impact assessment and site characterisation report,
- start of analysis concerning, among other things, cooling water and external threats at the locations,
- start of work related to preparing a specification for a study on the power take-off corridor and work related to power connections point to the National Power System.

Social acceptance

The main aim of activities in this area is to achieve and maintain a high level of community support at the planned nuclear plant sites (eventually, at the selected site), allowing the programme to construct Poland's first nuclear plant to be conducted and to deliver knowledge about nuclear power and about the Programme to selected stakeholder groups at national and local level.

In the first half of 2017, works in the area of community acceptance focused on continuing activities within the Site Municipality Development Support Programme - the Programme's budget for 2017 was adopted in the first quarter of 2017.

The third quarter of 2017 assumes the signing and execution of the further agreements under the Site Municipality Development Support Programme intended to reinforce partner relations of PGE and the local communities and authorities of the three municipalities by providing support to initiatives that are of significance to the residents and development of the region.

Legal regulations concerning nuclear energy

In the first half of 2017, PGE S.A. participated in public consultations on a draft act on amendment of the Nuclear Law, on a draft of the Urban and Construction Code Law and on draft Water Law act.

Compensations from WorleyParsons

In 2013, PGE EJ1 signed an agreement for environmental studies, site characterisation and services related to obtaining permits and permissions necessary in the investment process associated with the construction of a nuclear power plant with a consortium of WorleyParsons Nuclear Services JSC, WorleyParsons International Inc. and WorleyParsons Group Inc. ("WorleyParsons"), in the amount of approximately PLN 253 million net (including basic scope of approximately PLN 167 million). Due to delays in the implementation of the agreement, in 2013 PGE EJ1 accrued to WorleyParsons a contractual penalty in the amount of approximately PLN 7 million. In addition, in connection with a further improper execution of services in 2014, PGE EJ1 accrued contractual penalties in the total amount of approximately PLN 43 million. On December 23, 2014, PGE EJ 1 terminated the contract for reasons attributable to WorleyParsons.

Contractual penalties of 2013 were deducted from the remuneration payable to WorleyParsons in 2014. Penalties for 2014 were partly deducted from the remuneration payable to WorleyParsons and partly obtained from the bank guarantee. After all deductions and amounts received by the company from the bank guarantee, PGE EJ1 is entitled to claim towards WorleyParsons for payment of approximately PLN 14 million as a penalty by way of delay.

On August 7, 2015 PGE EJ 1 filed with the District Court in Warsaw a claim against WorleyParsons for the payment of approximately PLN 15 million plus statutory interest for late payment of the amount due.

On November 13, 2015, PGE EJ1 received a payment demand from WorleyParsons for about PLN 59 million due for WorleyParsons remuneration, which - according to the claimant - was deducted unduly, for the works that in opinion of WorleyParsons were unjustifiably not accepted and for the project management, as well as funds collected from the bank guarantee. The court obligated PGE EJ 1 sp. z o.o. to submit a statement of defence within three months from receipt. Moreover, value of claims by WorleyParsons amounting to approximately PLN 54 million was included in the WorleyParsons' payment demand for PLN 92 million of March 13, 2015 with regard to termination of the agreement. On March 24, 2017, PGE EJ1 received a procedural document expanding the action being brought by WorleyParsons from approximately PLN 59 million to approximately PLN 104 million (i.e. by around PLN 45 million). It is possible that WorleyParsons will file another claim amounting to approximately PLN 32 million representing the difference in amount of claims from the demand for payment of March 13, 2015 and the expanded claim received on March 24, 2017.

On March 29, 2017, mediation between the Parties took place – the meeting did not result in a settlement. By means of a decision of May 15, 2017, the District Court in Warsaw set the date of the hearing for September 13, 2017, while a date for replying to WorleyParsons' letter expanding their claim has not been set yet.

PGE EJ1 does not accept the claim and regards its possible admission by the court as less likely than its dismissal.

Furthermore, on May 20, 2016, PGE EJ1 filed a motion with the District Court for the Capital City of Warsaw in Warsaw to commit WorleyParsons to attempt reaching a settlement concerning PGE EJ1's claims of PLN 41 million together with statutory interest for compensation for undue contractual performance. A conciliation meeting at the court is scheduled for June 8, 2017. During the hearing on June 8, 2017, the Court stated that a certified copy of the application was not delivered to the American WorleyParsons companies, and therefore it adjourned the hearing without setting a date. On July 3, 2017, a representative of the company received information that a certified copy of the application was delivered to the American companies, and therefore we can expect that a new date of the hearing will be set.

5.13. Sale of 100% stake in Exatel S.A. to the State Treasury

On March 29, 2017, the Management Board of PGE S.A. signed an agreement to sell 100% of the shares of Exatel S.A. to the State Treasury for PLN 368.5 million. Exatel S.A. is a telecommunications operator that provides solutions for business and public administration.

5.14. Distribution of profit for 2016

Information on distribution of profit for 2016 is presented in note 16.3 to the consolidated financial statements.

6. Transactions with related entities

Information about transactions with related entities is presented in note 21 to the consolidated financial statements.

7. Publication of financial forecasts

PGE S.A. did not publish financial forecasts.

8. Information about shares and other securities

8.1. Shareholders with a significant stake

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

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

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

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

According to the best knowledge of the Management Board of the Company, members of management and supervisory authorities of the Company as of the date of submission of this report and as of the date of publishing of the consolidated report for the first quarter of 2017 held following number of shares:

Table: PGE S.A. shares held and managed directly by the members of management and supervisory authorities of the Company.

Shareholder	Number of shares as of date of publishing of the consolidated report for Q1 2017 (i.e. May 11, 2017)	Change in number of owned shares	Number of shares as of submission date of the quarterly report (i.e. August 8, 2017)	Nominal value of shares as of submission date of the half-year report (PLN)
Management Board	-	-	-	-
Supervisory Board	7	-	7	71.75
Jarosław Głowacki	7	-	7	71.75

Other member of the Management Board and Supervisory Board did not hold shares of the Company.

Table: shares of entities related to PGE S.A. held and managed directly by the members of management and supervisory authorities of the Company.

Shareholder	Number of shares as of date of publishing of the consolidated report for Q1 2017 (i.e. May 11, 2017)	Change in number of owned shares	Number of shares as of submission date of the quarterly report (i.e. August 8, 2017)	Nominal value of shares as of submission date of the half-year report (PLN)
Management Board	-	-	-	-
Supervisory Board	200	-199	1	2.00
Jarosław Głowacki*	200	- 199	1	2.00

* shares of Polimex – Mostostal S.A.

Other members of the Management Board and Supervisory Board did not hold shares in the entities related to PGE S.A.

9. Electricity market and regulatory and business environment

9.1. Macroeconomic environment

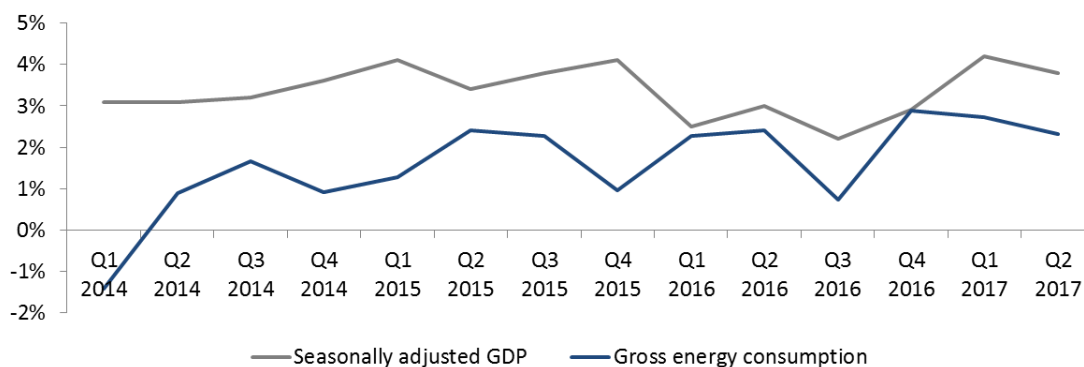
PGE Group's main operating area is Poland, and the domestic macroeconomic backdrop has a substantial impact on Group's results. At the same time, the condition of Poland's economy remains largely tied to the situation across the European Union and in global markets. The Group's financial results are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

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

In the first half of 2017, gross electricity consumption went up 2.3% compared to the analogical period of the previous year. The increase was higher than in the previous year, when consumption went up 2.2% compared to the analogical period of 2015.

Economic trends in the first half of 2017 remained positive in general. Median from the financial institutions forecasts for the GDP in the first half of 2017 indicates growth by 3.8% compared to the same period of the previous year.

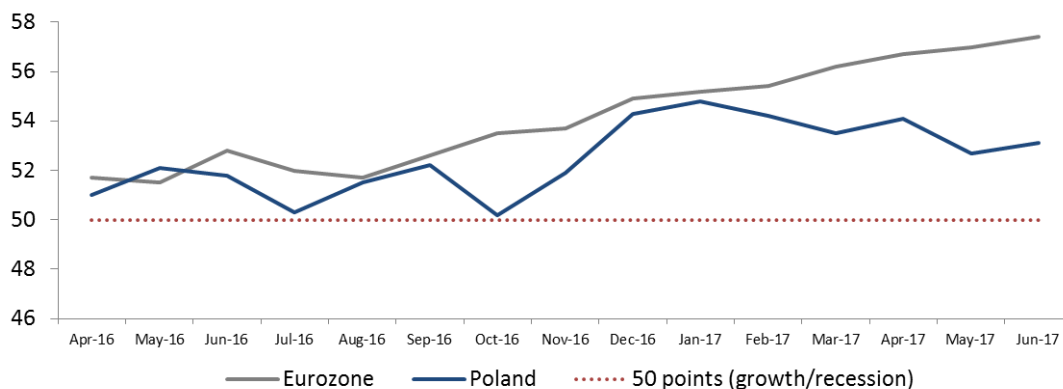
Diagram: Seasonally adjusted GDP change vs. change in domestic gross electricity consumption.



Source: GDP forecasts of financial institutions according to the survey by the Central Statistical Office of Poland, PSE

Economic growth and rising electricity consumption were accompanied by optimistic condition of Polish industry, which is responsible for approx. 45% of domestic electricity consumption. The Purchasing Managers' Index (PMI) for industry reached 52.1 points in the first half of 2016, and 53.7 points on average in the first half of 2017. This is above the 50-point threshold, which means the respondents expect the sector's situation to improve. The positive result stems mainly from growing production, employment and consumption. The results of the Polish industrial sector should be further strengthened by the Eurozone, whose PMI for the first half of 2016 reached an average level of 51.9 points, and 56.3 points in the analogical period of 2017.

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



Source: Markit Economics

Positive development in the Polish economy is confirmed by dynamics in overall industrial production. In the first half of 2017, it went up sharply by 4.2% y/y, compared to 5.7% in the comparable period of the previous year. The change resulted from lower increase in industrial production dynamics (6.2% y/o/y in the first half of 2017 versus 7.3% in the first half of 2016). Simultaneously, production in the whole energy sector increased (3.8% y/y in the first half of 2017 vs -3.8% in the first quarter of 2016). The value of industrial manufacturing depends on volumes of goods produced and prices. PPI in the first half of 2017 amounted to 3.6% in relation to comparable period of the preceding year. CPI reading amounted to 1.5% y/y at the end of June.

Table: Key economic indicators for Poland.

Key economic indicators (% change y-o-y)	H1 2017	H1 2016
GDP ¹	3.8	3.0
CPI ²	1.5	-0.8
PPI ³	3.6	-1.1
Sold industrial production ³	4.2	5.7
Sold production – manufacturing ³	6.2	7.3
Sold production – energy ³	3.8	-3.8
Dynamics of domestic electricity consumption ⁴	2.3	2.2
Gross domestic electricity consumption (TWh) ⁴	83.5	81.6
EUR/PLN ⁵	4.27	4.37

Source: ¹ For H1 2017 GDP - survey among financial institutions, for H1 2016 - data by the Central Statistical Office of Poland, ² National Bank of Poland, ³ Central Statistical Office of Poland, ⁴ PSE S.A., ⁵ National Bank of Poland

9.2. Regulatory environment

Regulatory environment

Domestic

- work on the National Action Plan concerning the power effectiveness for Poland 2017, works on new Energy Policy of Poland until 2050
- publication of Strategy Of Responsible Development setting out the challenges and strategic projects for the energy area
- changes in scope of services like:
 - modification of current Operational Reserve mechanism
 - implementation of further packages for demand reduction services
- implementation of capacity market
- further amendments to the Law on Renewable Energy Sources, defining support scheme for energy generation in renewables
- obligation to redeem RES certificates in next years
- parameters and auction schedule for RES installations and level of reference prices
- act on investments with regard to wind power plants – inability to build new power plants at a distance less than 10 times the height of the turbine, divergent court rulings regarding property tax base (whether just the mast or the entire installation with turbine)
- introduction of support scheme for highly-efficient co-generation
- change of the rules of obtaining energy efficiency certificates
- results of explanatory proceedings before the ERO President and court disputes in cases of issue of certificates of origin of energy produced from biomass for some of the branches of PGE GiEK S.A.
- matter of implementation of quality tariff in distribution, that will make regulated income dependant on SAIDI and SAIFI ratios and connection time, among others
- possible different decision in law disputes, from which most relevant were presented in note 19.4 to the consolidated financial statements
- works on new draft Water Law Act introducing fees for water services, including the use of water for energy purposes
- work on a legislative package that is intended to transform linear economy towards a circular economy and might contribute to a change in the classification of coal combustion by-products
- work on the act on electrical mobility whose purpose is to facilitate the construction of infrastructure for charging electrical cars

International

- regulations of climate and energy package determining reduction targets for years 2021-2030; legal implementation of energy union concept, including inter alia:
 - legislative proposal regarding revision of Directive 2003/87/EC (the EU ETS Directive), including provisions specifying the following: level of linear reduction factor (LRF), division of emission allowances into emissions sold at auctions and allocated free of charge, removal of a specific volume of emissions, operation of the Market Stabilisation Reserve mechanism, level of funds and ways of fund distribution for the Modernisation Fund, ways of distributing free of charge emission allowances. Currently, final arrangements are under way concerning the position of the European Commission, the European Parliament and European Council within the so-called “trilogues”;
 - legislative proposal with regard to revision of the Renewable Energy (RED II) Directive, including setting out the means by which Poland is to contribute to the 27% share of renewable energy in the energy mix at EU level by 2030. The draft includes, inter alia, a proposal for legislation that restricts the use and further support of biomass;
 - legislative proposal related to internal electricity market regulation (“EMR”) and a legislative proposal related to common rules for internal electricity market (“EMD”), the aim of which is the creation of a new structure for a single energy market, including through the introduction of numerous pro-consumer solutions and increasing market flexibility and intervention into the capacity mechanism structures

- (specifically, the proposal to introduce European assessment of capacities sufficiency and a CO₂ emission standard for capacity market units at a level of 550 g/kWh);
- legislative proposal regarding regulation on energy union governance, which is to create a system for managing the implementation of energy union objectives that is based on cooperation with other member states and on arrangements made by the European Commission. As regards achieving the renewable energy objective, the draft includes the creation of a financial platform funded by contributions from member states;
 - legislative proposal with regard to revision of the Energy Efficiency Directive (EED), including setting out the means by which Poland is to contribute to the 30% improvement in energy efficiency at EU level by 2030.
- regulations connected with the reduction of emissions of pollutants implemented within the framework of environmental policy, including:
- process of revising the Best Available Techniques ("BAT") – BAT Conclusions await the acceptance of the College of Commissioners and translation to the EU official languages, whereupon they will be officially published. BAT conclusions will likely be published in the second half of 2017 therefore the deadline for adapting to new emission requirements will probably be in the second half of 2021, at the latest.
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9.2.1. Electricity prices

Domestic market - Prices

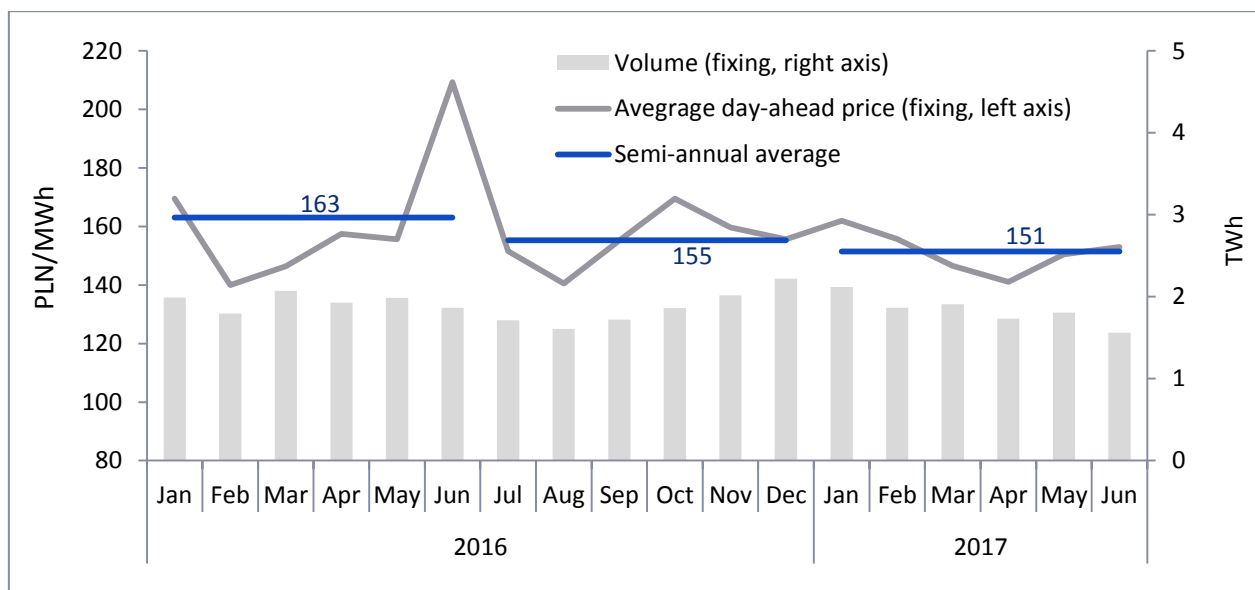
Day-ahead market

In the first half of 2017, the average price on the day ahead market ("RDN")¹ was PLN 151/MWh, down by 7% from the average price in the previous year's first half (PLN 163/MWh). Results of the first half of 2017 were determined mainly by the situation in the second quarter, when average RDN price amounted to PLN 148/MWh and was by 15% lower y/y (in the first quarter prices were similar y/y).

- The drop of RDN electricity prices in the second quarter of 2017 was also caused by an increase in wind power generation – the supply of power in this technology grew in the second quarter of 2017 by 1.0 TWh, i.e. 47% y/y.
- Drop of prices at the RDN in the second quarter of 2017 resulted also from the so-called high base of the previous year effect. This phenomenon was particularly visible in June 2016 – when the high prices were connected with changes in the structure of demand and lower availability of units fuelled by lignite. It resulted in growth of production of plants characterized by a higher variable cost, and therefore, the settling of the market price at a higher level. In the second quarter of 2017, repair-related shutdowns in units fuelled by lignite were by 1/3 lower y/y, contributing to a drop in electricity prices.
- Another factor which contributed to a drop in spot prices (y/y) was the price of CO₂ emission rights, which was lower by 18% and which, in the second quarter of 2017, amounted on average to EUR 4.79 per tonne, in comparison with EUR 5.81 one year before, additionally supported by the appreciation of PLN (the EUR exchange rate in the second quarter of 2017 amounted to PLN 4.22 in comparison with PLN 4.37 from the previous year)
- A slight counter-balance for the aforementioned factors was the listings of coal prices – the average level of the Polish Steam Coal Market Index (PSCMI1), in the second quarter of 2017 increased by 2.6%, to PLN 9.1/GJ in comparison with the level of PLN 8.9/GJ during the corresponding period of the previous year.

¹ Statistics calculated for the data from fixing

Chart: Monthly prices and price volatility at the day ahead market in 2016–2017 (TGE)*



* average monthly price of RDN calculated on the base of hourly quotations (fixing), weighted by the trading volume

Forward market

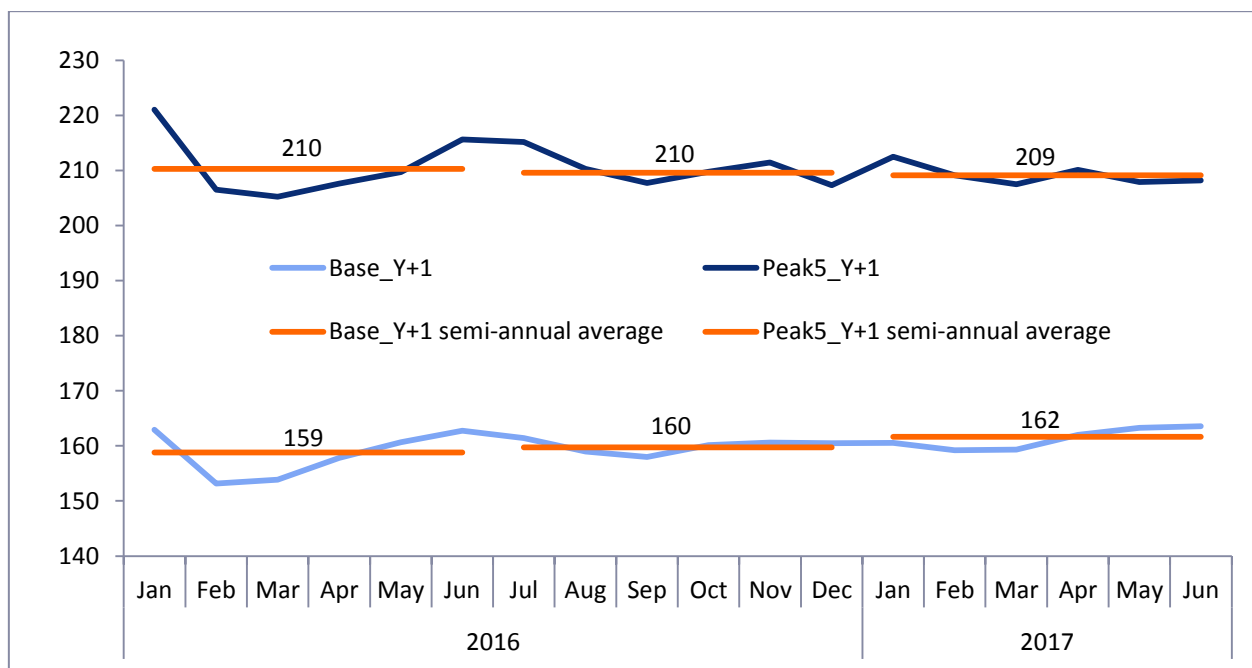
The average price for BASE_Y-18 contracts in the second quarter of 2017 reached PLN 163/MWh, while in the same period of last year BASE_Y-17 cost PLN 161/MWh on average (+2% y/y). Trading volume for BASE_Y-18 in the second quarter of 2017 was 10.0 TWh – this is 10% lower than the BASE_Y-17 trading volume in the second quarter of 2016.

The average price for PEAK_Y-18 contracts in the first quarter of 2017 reached PLN 209/MWh, while in the same period of last year PEAK_Y-17 costed PLN 211/MWh on average (-1% y/y). PEAK5_Y-18 trading volume in the second quarter of 2017 amounted to 1.0 TWh – this is 9% lower than the PEAK5_Y-17 in the second quarter of 2016.

In the full first half of 2017 the average price for BASE_Y-18 contracts amounted to PLN 162/MWh and was by 2% higher than BASE_Y-17 in the second half of 2016 (PLN 159/MWh). The increase of prices on forward market was negatively correlated with the trend on spot market (described in the previous paragraph). That can be explained by the specifics of the spot market, which is more prone to the events of ad hoc nature (weather, failures) and is more volatile (as an example: atypical June 2016 and its impact on RDN statistics). Whereas, on the forward market a set of fundamental factors is priced, that are relatively stable for a year ahead (volatility characteristic for spot market in longer period is evenly distributed for all days covered by the given forward instrument).

BASE_Y-18 trading volume in the first half of 2017 reached 17.0 TWh – this is 22% lower than the BASE_Y-17 trading volume in the first quarter of 2016. Average price of PEAK5_Y-18 in the first half of 2017 amounted to PLN 209/MWh, what means 1% decrease in relation to the first quarter of 2016, when the average price of the analogical contract PEAK5_Y-17 amounted to PLN 210/MWh. PEAK5_Y-18 trading volume in the first half of 2017 reached 1.7 TWh – this is 26% lower than volume of PEAK5_Y-17 recorded in the first half of 2016.

Chart: Monthly prices and price volatility on the forward market in 2016–2017 (TGE)*.



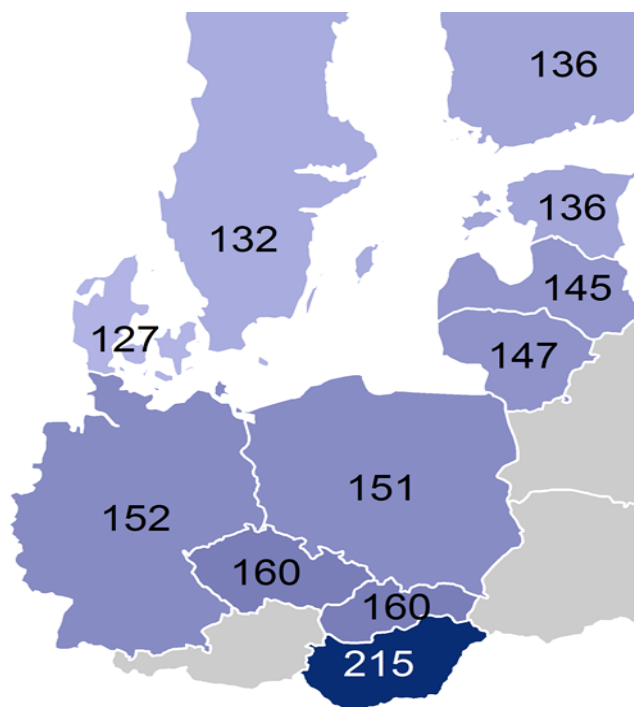
* monthly average index level for forward contracts for the next year (Y+1), baseload and peak, calculation based on hourly quotations, weighted by the trading volume.

International market

Wholesale market (comparison of day-ahead markets)

During the first six months of 2017, differences in energy prices between Poland and neighbouring countries were lower than in the previous year. Parallel to the aforementioned drops in energy prices in Poland (RDN), the average prices in the key neighbouring markets increased: in Sweden by 18% y/y, in Germany by 39% y/y, in the Czech Republic by 37% y/y. During the first six months of the previous year, the energy prices in those three countries were lower by about PLN 50/MWh than in Poland, and during the first six months of 2017, the price difference between Polish and Swedish market decreased to PLN 19/MWh, prices in the German and Polish markets were very similar, and prices in the Czech market were higher than in Poland by about PLN 9/MWh. In the following map of the region, we can observe a general rule of price distribution (cheaper in the north, more expensive in the south), which is reflected by the direction of transborder exchange.

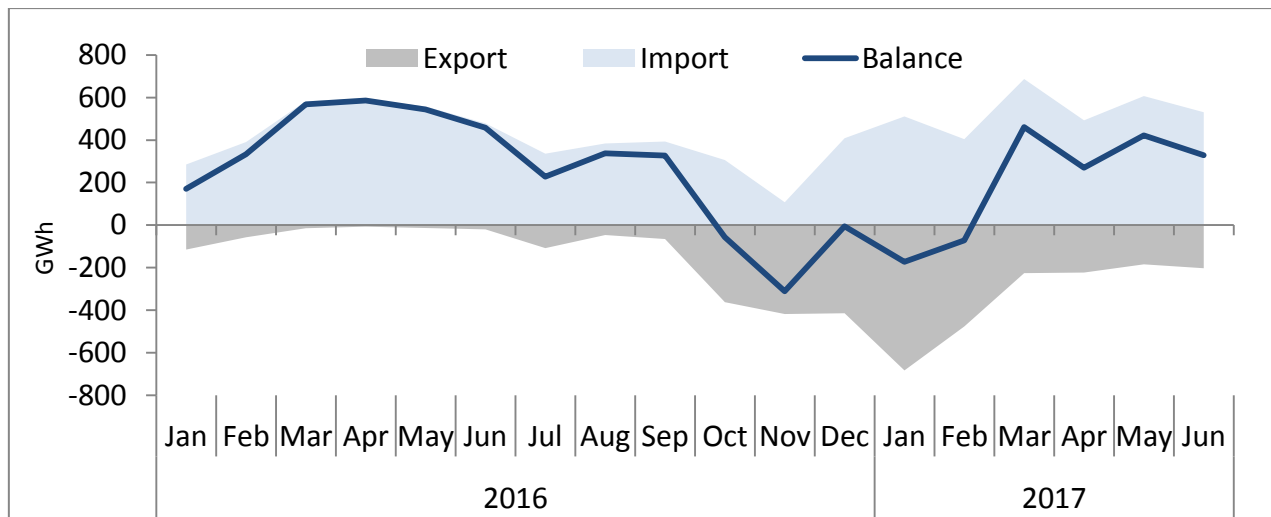
Chart: Comparison of average prices on Polish market and on selected European markets in the first half of 2017 (prices in PLN/MWh, average exchange rate EUR/PLN 4.27).



Source: TGE, EEX, EPEX, Nordpool, OTE a.s., PXE

International trading

Chart: Monthly imports, exports and cross-border exchange balance in 2016-2017 (in GWh).



Source: own work based on PSE data.

The direction of the commercial exchange is closely connected with the current price relation (which fluctuates every hour, i.e. when prices in Poland are higher than the prices abroad, this results in import of energy). During the first six months of 2017, Poland was a net importer. The balance of commercial exchange amounted to 1.23 TWh, and it consisted of 3.23 TWh of import and 2.00 TWh of export.

If in the first quarter of 2017, import and export were comparable (1.60 TWh vs. 1.39 TWh), in the second quarter import prevailed (1.63 TWh vs. 0.61 TWh). The growth of net import in the second quarter compared to the first quarter is related to the weather factor. The Polish power sector, mainly based on conventional power generation, is characterized by less seasonality in comparison with hydro power plants in the neighbouring countries. Ice thawing in the Alps released large production volumes in hydro power plants (frozen during winter). In the second quarter of 2017, Polish market lost the price

advantage over the neighbours from the south observed in the first quarter (average prices in Germany and in Czech Republic decreased by 30% q/q, while in the same period prices in Poland dropped by 5% q/q).

Diagram: Geographical structure of commercial exchange in the first half of 2017 (GWh).



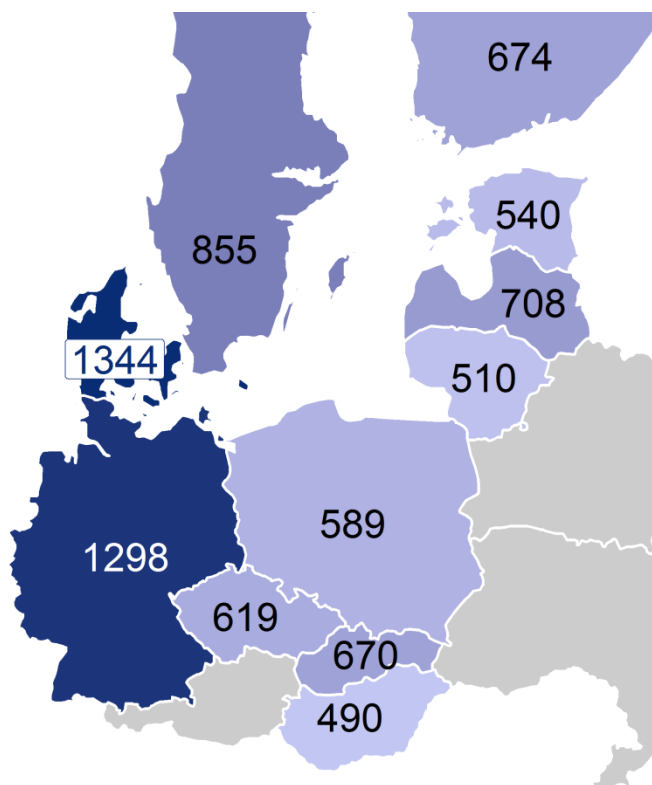
Source: own work based on PSE data.

Retail market

The diversity of electricity prices for retail customers in the European Union depends not only on the level of the wholesale prices of electricity. The fiscal system, regulation mechanisms and support schemes in particular countries all have significant impact on the final price of electricity. In Poland in the second half of 2016², an additional burden for individual customers accounted for 22% of the electricity price, compared to the EU average of 29%. In Denmark and Germany the proportion of additional charges in the price of electricity exceeded 50%.

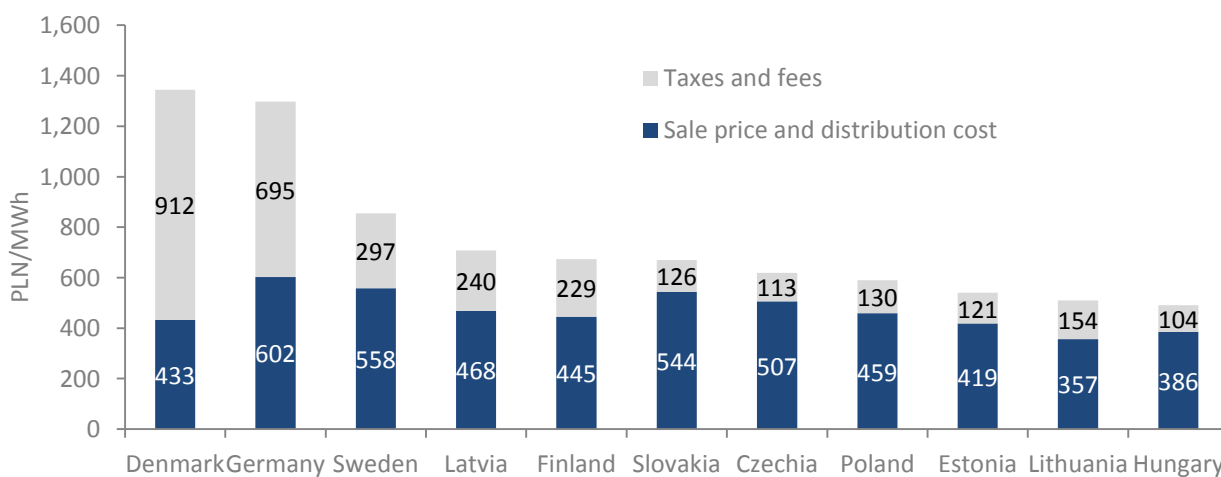
² Eurostat data are published every six months.

Chart: Comparison of average prices for individual customers in selected EU countries in the second half of 2016 (prices in PLN/MWh).



Source: own work based on Energy prices in the EU. Eurostat, the statistical office of the European Union. EUR/PLN 4.36

Diagram: The share of additional charges in electricity prices for the individual customers in selected EU countries in the second half of 2016 (prices in PLN/MWh, calculated with average exchange rate EUR/PLN 4.36).



Source: own work based on PSE data.

9.2.2. Prices of certificates

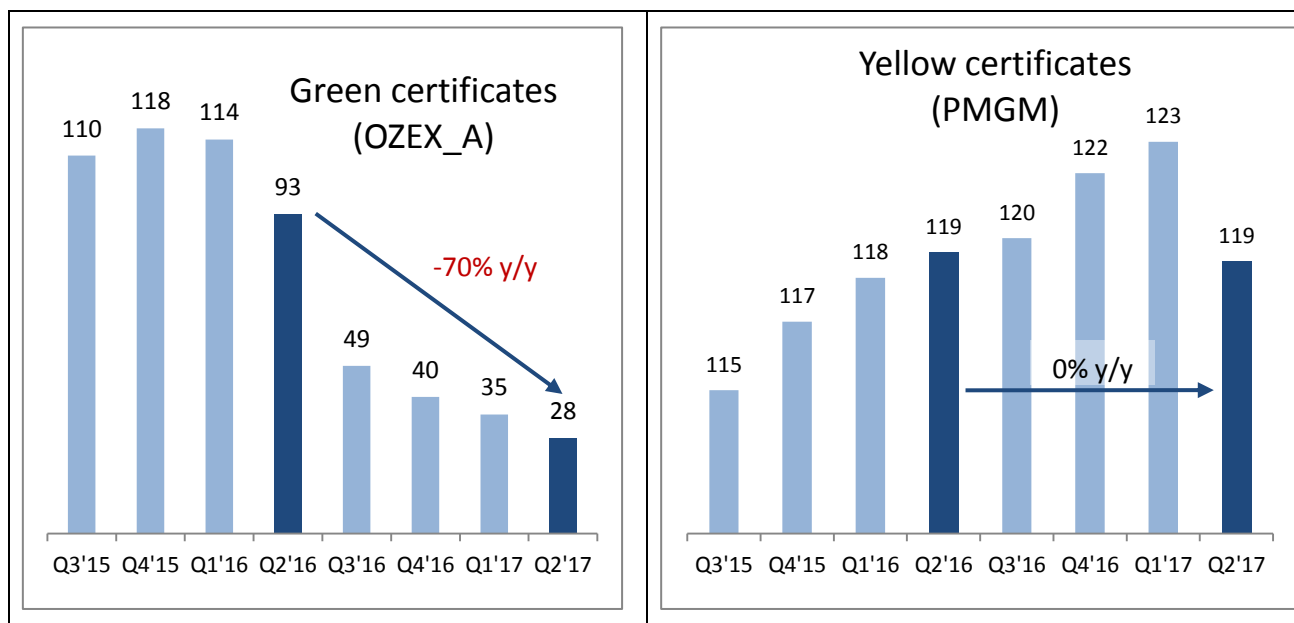
In the second quarter of 2017, the average price of green certificates (PMOZE) reached PLN 28/MWh and was 70% lower y/y (OZEX_A index). The main reason of price pressure is oversupply of green certificates produced in previous years combined with the growing energy production from renewable sources. In 2017, the obligation to redeem PMOZE certificates was set at 15.40%, while the obligation to redeem biogas certificates (PMOZE-BIO) at 0.60%. A single substitute fee applies to PMOZE and PMOZE-BIO certificates, which in 2017 remains at last year's level: PLN 300.03/MWh.

The average price for the PMOZE-BIO certificate in the second quarter of 2017 was PLN 389/MWh (the price exceeded the substitute fee). In light of the existing regulations arising under the RES Act and an interpretation issued by the President of the Energy Regulatory Office, it was not possible to meet the redemption obligation for PMOZE-BIO for the second half of 2016 by paying the substitute fee – settlement using the substitute fee is conditional upon the relative value of the substitute fee to the weighted average yearly price of the certificate.

The draft amendment to the RES Law contains provisions levelling the pressure in the market of biogas certificates – but the influence of legislative processes was reflected in PMOZE-BIO prices only after the end of the second quarter of 2017.

The average price of yellow certificates in the second quarter of 2017 reached PLN 119/MWh, at the same level as the average price in the second quarter of the preceding year (the graph shows the break of the trend – in previous quarters the prices consequently grew). The redemption obligation³ for yellow certificates in 2017 was raised from 6% to 7% as compared with year 2016 (causing additional demand), while on the other hand there was increased supply of energy produced in gas-fired co-generation sources. The substitute fee was reduced from PLN 125/MWh to PLN 120/MWh).

Chart: Average quarterly prices of certificates.



Source: Own work based on TGE quotations. The yellow certificates prices presented on the chart are weighted average blended price – for products PMGM-14, PMGM-15, PMGM-16, PMGM-17.

³Redemption obligation concerns the sale of electricity to the final customer. The seller is obliged to redeem a number of “coloured” certificates (in relation to the volume of electricity sold) specified by the regulator.

9.2.3. Prices of CO₂ emission rights

Two types of emission rights are available on the market – European Union Allowances (EUA) and Certified Emission Reductions (CER). CER-type rights may be redeemed by business operators only to a limited extent, in settlement period 2013-2020 up to 11% of the allocations granted under the National Allocation Plan for years 2008-2012.

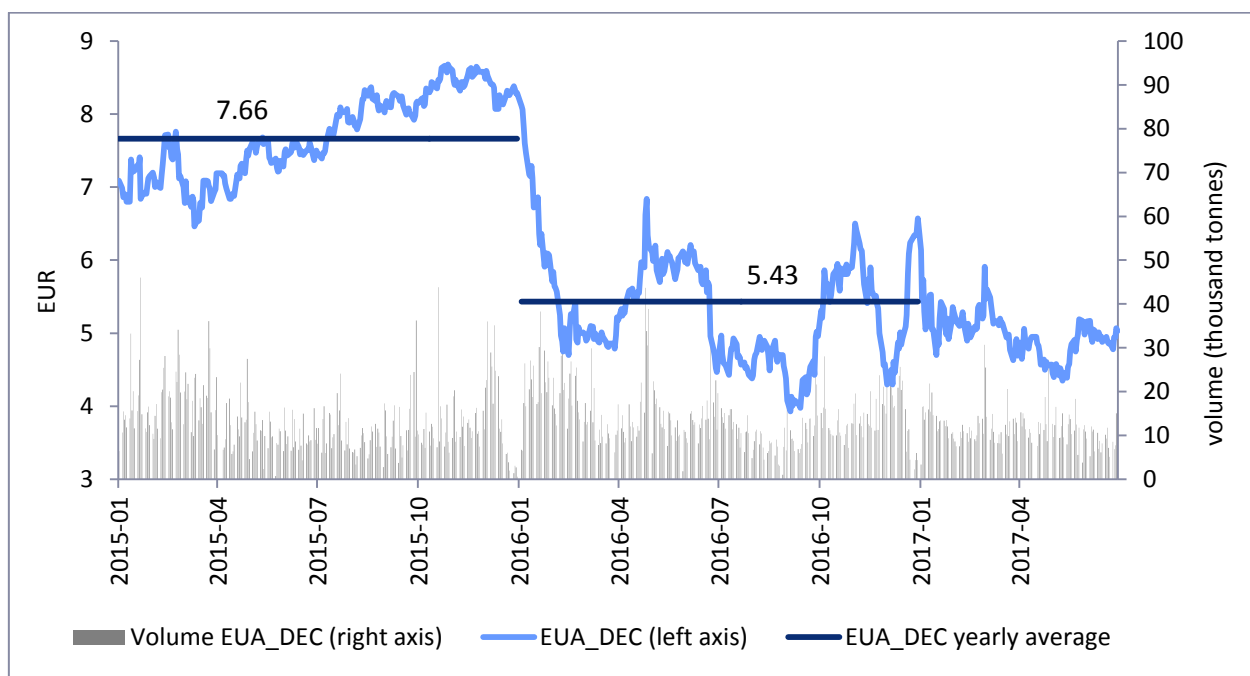
In the first half of 2017, the average prices⁴ of EUA allowances reached EUR 5.00/t and were 13% lower than in the same period last year (EUR 5.76/t).

One of the reasons of the decline from 2016 may be the end of a 3-year backloading period and therefore an increase in the supply of EUAs on the primary market. The average quantity of allowances offered in auctions during this period was 4.4 million tonnes. In the same period of 2016, this amount was 3.4 million tonnes.

The highest price – EUR 6.14/t – occurred in the first listing of 2017. The second price growth – EUR 5.91/t - occurred on March 1, 2017 and was caused by the adoption of ambitious amendments to the draft directive of EU ETS by the Environment Council.

After a single increase, prices started to drop slowly and they achieved the lowest value of EUR 4.35/t on May 11, 2017.

Chart: Prices of CO₂ emission rights.



Source: Bloomberg, own work

In the first half of 2017, future EUA for December 2017 were priced in range EUR 4.35-6.14/tonne. In the same period, CERs in future contracts with delivery in December 2017 were priced in range EUR 0.20-0.29/tonne

Further work on revision of the EU Emissions Trading System (EU ETS) directive is on-going. The new legal regulations concern the next settlement period, i.e. after 2020. The final version of the directive will be published after voting at the European Council and Parliament.

9.2.4. Emission rights granted free of charge for years 2013-2020

The Regulation of the Council of Ministers, that sets the allocation of allowances for particular units of electricity producers in period 2013-2020, was adopted on April 8, 2014. Analogically, allocations of allowances for heat producers were set by the Regulation of the Council of Ministers of March 31, 2014.

⁴ Average prices weighted by volume

PGE's installations accounts were credited with free allowances for heat for 2017 and energy for 2016, while free allowances for electricity for 2017 will be received by the Group by the end of April 2018, after verification of reports from investments submitted to the National Investment Plan.

At the same time, redemption of emission rights resulting from CO₂ emissions in 2016 was completed in April 2017.

Table: Emission of CO₂ from major Group installations in the first quarter of 2017 in comparison to allocation of CO₂ emission rights for 2017 (in Mg).

Operator	CO ₂ emissions in H1 2017*	Allocation of CO ₂ emission rights for 2017**
Bełchatów Power Plant	19 148 970	7 788 822
Turów Power Plant	3 590 780	3 135 350
Opole Power Plant	2 821 507	1 802 162
ZEDO	2 150 740	1 484 923
Bydgoszcz CHPs	425 700	347 386
Lublin Wrotków CHP	295 537	202 222
Gorzów CHP	230 978	158 071
Rzeszów CHP	182 854	94 345
Kielce CHP	114 914	64 141
Zgierz CHP	104 094	26 016
TOTAL	29 066 074	15 103 438

* estimates, emissions not verified - the data will be settled and certified by the authorised verifier of CO₂ emission on the ground of yearly reports of volume of CO₂ emissions

** amount of granted CO₂ emission rights will be confirmed in the Regulation of the Council of Ministers in the first quarter of 2018

9.2.5. Termination of long-term contracts (LTC)

Due to the termination of LTCs in accordance with the LTC Act, the producers being earlier the parties to such contracts obtained a right to receive compensations for the coverage of so called stranded costs. Stranded costs were capital expenditures resulting from investments in generating assets made by the generator before May 1, 2004 that a generator is not able to recoup from revenues obtained from sales of generated electricity, spare capacity and ancillary services in a competitive environment after early termination of LTC. The LTC Act limits the total amount of funds that may be paid to all generators to cover stranded costs, discounted as at January 1, 2007, to PLN 11.6 billion, including PLN 6.3 billion for PGE.

Table: Key data relating to PGE Group generators subject to the LTC Act.

Generator	LTC maturity	Maximum amount of stranded and additional costs (in PLN million)
Turów Power Plant	2016	2 571
Opole Power Plant	2012	1 966
ZEDO	2010	633
Lublin Wrotków CHP	2010	617
Rzeszów CHP	2012	422
Gorzów CHP	2009	108
TOTAL		6 317

In the period provided for by the LTC Act, i.e. till December 31, 2007, PGE S.A. signed LTC termination agreements with generators being parties to the then applicable LTCs. Therefore generators obtained a right to receive funds to cover their stranded costs.

An adjustment period for PGE GiEK S.A. producers covered by the compensation system ended in December 2016.

On April 5, 2017, PGE GiEK S.A. received information about the initiation of a proceeding regarding the amount of annual adjustment of stranded costs for 2016. On July 31, 2017 the ERO President issued decision regarding the amount of annual adjustment of stranded costs for 2016. According to the decision of the ERO President, the amount of annual adjustment of stranded costs in the generating units of PGE GiEK S.A. for 2016 amounts to approximately PLN (+)276 million.

On April 10, 2017, PGE GiEK S.A. received information about the initiation of a proceeding regarding the amount of final adjustment of stranded costs.

According to the provisions of the LTC Act, the process of establishing the final adjustment of stranded costs should be completed by August 31, 2017. If no disagreements arise in this process, decision issued by the President of the Energy Regulatory Office will conclude the participation of PGE GiEK S.A. producers in the compensation system.

The impact of LTC compensations on results achieved by the PGE Group is described in note 22.1 to the consolidated financial statements.

9.3. Supply markets

9.3.1. Fuel purchase costs

Table: Volume and cost of purchase of fuels from third party suppliers in the first half of 2017 and 2016

Type of fuel	H1 2017		H1 2016	
	Volume (tons ths)	Cost (PLN m)	Volume (tons ths)	Cost (PLN m)
Hard coal	2 446	546	2 338	504
Gas (cubic metres ths)	368 686	266	353 887	256
Biomass	253	46	501	111
Fuel oil	13	18	20	18
TOTAL		876		889

In the first half of 2017 the costs of purchasing primary fuels from providers outside the Group amounted to PLN 876 million and were lower by PLN 13 million than in the first half of 2016. Costs of purchase of the fuels in PGE Capital Group were mainly affected by biomass and hard coal.

Biomasa

- Lower purchase volume by 50% (PLN -55 million)
- Lower average price by 18% (PLN -10 million)

The lower volume of biomass purchases resulted from lower electricity production based on combustion and co-combustion of biomass given the non-profitability of biomass combustion (see p. 3.2.1 of this report).

Hard coal

- Higher purchase volume by 5% (PLN +23 million)

The higher volume of hard coal purchases in the first half of 2017 results from the need to maintain required level of stocks.

- Higher average price by 4% (PLN +19 million)

The higher price of hard coal in the first half of 2017 mainly results from the growing prices on the domestic and international mining market, which translates directly into higher contractual prices.

Gas

- Higher purchase volume by 4% (PLN +10 million)

Higher volume of gas used is related to increases production at gas-fired CHPs (see p. 3.2.1 of this report).

Fuel oil

- Lower purchase volume by 35% (PLN -6 million)

The lower volume of heating oil purchases in the first half 2017, comparing to the same period of 2016, was caused by a lower number of energy unit start-ups connected with failures, planned repairs and demand from the TSO.

- Higher average price by 54% (PLN +6million)

The significant increase in the average price for heating oil was driven by growth in oil and refinery product prices across the world.

In the first half of 2017 approximately 72% of the electricity was produced from internally sourced lignite, whose extraction price is fully controlled by PGE Capital Group. In the analogical period of 2016 the share of lignite-based electricity generation amounted to 66%.

9.3.2. Tariffs

PGE Group companies earn part of their income based on tariffs approved by the President of the Energy Regulatory Office:

- tariffs for the sale of electricity to households (G tariff group);
- tariffs of the distribution companies;
- tariffs for heat.

Distribution of electricity

Methodology of and assumptions for tariffs determination were published in the document "Tariffs for the DSO for the year 2017", which was prepared and published by the President of the Energy Regulatory Office.

On December 15, 2016 the ERO President approved the Tariff of PGE Dystrybucja S.A. for electricity distribution services for the period from January 1, 2017 until December 31, 2017.

Tariff came into force on January 1, 2017.

Distribution tariffs for 2017 approved by the President of the Energy Regulatory Office, contributed to changes in average tariff in particular tariff groups (calculated for revenues and volume in a given tariff year) in comparison to year 2016:

- A tariff group – decrease by 0.15%;
- B tariff group – increase by 5.89%;
- C+R tariff group – increase by 3.77%;
- G tariff group – increase by 6.23%.

The change in distribution service rates takes into consideration a significant increase in the transition fee (from approx. 80% for tariff B groups to 106% for customers with highest consumption in tariff G groups) related to the costs of liquidating long-term contracts and RES fee (by approx. 47%) related to support mechanisms for the production of energy from renewable sources. These fees have an impact on growth of regulated revenue and distribution service fees, but they are fully transferred to entities in charge of support instruments, thus they do not impact profit of the distribution companies.

Changes in average tariff in particular tariff groups (not including RES fee and transition fee) are as follows:

- A tariff group – no change;
- B tariff group – decrease by 0.55%;
- C+R tariff group – decrease by 0.22%;
- G tariff group – increase by 0.64%.

The quality regulation elements introduced in 2016 are being continued in 2017. It has been settled that the ratios directly impacting the regulated revenue will be following key performance indicators:

- SAIDI – System Average Interruption Duration Index;
- SAIFI – System Average Interruption Frequency Index;
- Connection time;
- Transfer time of metering and billing data („CPD”), which will be included in the quality regulations as of 2018.

Not meeting the levels of ratios indicated by the ERO President will result in penalty of decreasing the regulated revenue through reduction of amount of return on capital in year t+2. In the initial period no rewards are anticipated for achieving better indicators than the required ones.

Impact of quality parameters realized in 2017 will be included in tariff for 2019. In accordance with the assumptions adopted by the ERO, a penalty cannot exceed 2% of regulated revenue and value of 15% of return on capital in a given year.

Tariff for heat

Pursuant to the Energy Law, energy companies holding concessions set tariffs for heat and propose their duration. Conduction of proceedings concerning heat tariffs approval lies within the competence of regional branches of the Energy Regulatory Office. Average sale price of heat in PGE decreased by approximately 1% in comparison to the prices in the first half of 2016.

10. Statements of the Management Board

10.1. Statement on the reliable preparation of the financial statements

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

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

10.2. Statement on the entity authorised to audit the financial statements

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

11. Approval of the Management Board's Report

The foregoing Management Board's Report on activities of the Capital Group of PGE Polska Grupa Energetyczna S.A. was approved for publication by the Management Board of the parent company on August 8, 2017.

Warsaw, August 8, 2017

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

**President
of the Management Board** **Henryk Baranowski**

**Vice-President
of the Management Board** **Wojciech Kowalczyk**

**Vice-President
of the Management Board** **Marek Pastuszko**

**Vice-President
of the Management Board** **Paweł Śliwa**

**Vice-President
of the Management Board** **Ryszard Wasilek**

**Vice-President
of the Management Board** **Emil Wojtowicz**

Glossary

Ancillary control services (ACS)	services provided to the transmission system operator, which are indispensable for the proper functioning of the national power system and ensure the keeping of required reliability and quality standards.
Achievable capacity	the maximum sustained capacity of a generating unit or generator, maintained continuously by a thermal generator for at least 15 hours or by a hydroelectric generator for at least five hours, at standardized operating conditions, as confirmed by tests.
Balancing market	a technical platform for balancing electricity supply and demand on the market. The differences between the planned (announced supply schedules) and the actually delivered/off-taken volumes of electricity are settled here. The purpose of the balancing market is to balance transactions concluded between individual market participants and actual electricity demand. The participants of the balancing market can be the generators, customers for electricity understood as entities connected to a network located in the balancing market area (including off-takers and network customers), trading companies, electricity exchanges and the TSO as the balancing company.
Base, baseload	standard product on the electricity market: a constant hourly power supply per day in a given period, for example week, month, quarter or year.
Best Practices	Document „Best Practice for GPW Listed Companies 2016” adopted by the resolution of the GPW Supervisory Board of October 13, 2015 and effective from January 1, 2016.
Biomass	solid or liquid substances of plant or animal origin, subject to biodegradation, obtained from agricultural or forestry products, waste and remains or industries processing their products as well as certain other biodegradable waste in particular agricultural raw materials.
Black energy	popular name for energy generated as a result of combustion of black coal or lignite.
CCS	Carbon Capture and Storage Technology used to capture CO ₂ from the emissions of fossil fuel power plants followed by its underground storage.
CDM	Clean Development Mechanisms, one of the flexible mechanisms introduced under Article 12 of the Kyoto Protocol.
CER	Certified Emission Reduction.
Co-combustion	the generation of electricity or heat based on a process of combined, simultaneous combustion in one device of biomass or biogas together with other fuels; part of the energy thus generated can be deemed to be energy generated with the use of renewable sources.
Co-generation	the simultaneous generation of heat and electricity or mechanical energy in the course of one and the same technological process.
Constrained generation	the generation of electricity to ensure the quality and reliability of the national power system; this applies to generating units in which generation must continue due to the technical limitations of the operation of the power system and the necessity of ensuring its adequate reliability.
Distribution	transport of energy through distribution grid of high (110 kV), medium (15kV) and low (400V) voltage in order to supply the customers.
Distribution System Operator (DSO)	a power company engaging in the distribution of gaseous fuels or electricity, responsible for traffic in the gas or electricity distribution systems, current and long-term security of operation of the system, the operation, maintenance, repairs and indispensable expansion of the distribution network, including connections to other gas or power systems.
ERO	Energy Regulatory Office (pol. URE).
ERU	Emission Reduction Units.
EUA	European Union Allowances: transferable CO ₂ emission allowances; one EUA allows an operator to release one tonne of CO ₂ .
EU ETS	European Union Greenhouse Gas Emission Trading Scheme) EU emission trading scheme. Its operating rules are set out in the ETS Directive, amended by the Directive 2009/29/EC of the European Parliament and of the Council of April 23, 2009 (OJ EU L. of 2009, No. 140, p. 63–87).
Generating unit	a technically and commercially defined set of equipment belonging to a power company and used to generate electricity or heat and to transmit power.
GJ	Gigajoule, a unit of work/heat in the SI system, 1 GJ = 1000/3.6 kWh = approximately 278 kWh.
GPZ	main power supply point, a type of transformer station used for the processing or distribution of electricity or solely for the distribution of electricity.
Green certificate	popular name for energy generated from renewable energy sources.
GW	gigawatt, a unit of capacity in the SI system, 1 GW = 109 W.
GWe	one gigawatt of electric capacity.
GWt	one gigawatt of heat capacity.
HICP	Harmonised Index of Consumer Prices
High Voltage Network (HV)	a network with a nominal voltage of 110 kV.

Highly efficient co-generation	the generation of electric or mechanical power and useful heat through co-generation, in such a way as to ensure savings of primary energy used in: (i) a co-generation unit in the amount not lower than 10 per cent. as compared to generation of electric power and heat in separated systems with reference efficiency for separated generation; or (ii) co-generation unit with an installed capacity under 1 MW as compared to generation of electric power and heat in separated systems with reference efficiency for separated generation.
IGCC	Integrated Gasification Combined Cycle.
Installed capacity	the formal value of active power recorded in the design documentation of a generating system as being the maximum achievable capacity of that system, confirmed by the acceptance protocols of that system (a historical value, it does not change over time).
IRiESP	the Transmission Network Operation and Maintenance Manual required to be prepared by a transmission system operator pursuant to the Energy Law; instructions prepared for power networks that specify in detail the terms and conditions of using these networks by system users as well as terms and conditions for traffic handling, operation and planning the development of these networks; sections on transmission system balancing and system limitation management, including information on comments received from system users and their consideration, are submitted to the ERO President for approval by way of a decision.
IRZ	Cold Intervention Reserve Service – service consisting of maintaining power units ready for energy production. Energy is produced on request of PSE S.A.
JI	Joint Implementation: one of the flexibility mechanisms introduced under Article 6 of the Kyoto Protocol.
Kyoto Protocol	the Kyoto Protocol to the United Nations Framework Convention on Climate Change of December 11, 1997 (Dz.U. of 2005, No. 203, Item 1684), in force since February 16, 2005.
KSE	the National Power System, a set of equipment for the distribution, transmission and generation of electricity, forming a system to allow the supply of electricity in the territory of Poland.
KSP	the National Transmission System, a set of equipment for the transmission of electricity in the territory of Poland.
kV	kilo volt, an SI unit of electric potential difference, current and electromotive force; 1kV= 103 V.
kWh	kilowatt-hour, a unit of electric energy in the SI system defined as the volume of electricity used by the 1 kW equipment over one hour. 1 kWh = 3,600,000 J = 3.6 MJ.
Low Voltage Network (LV)	a network with a nominal voltage not exceeding 1 kV.
LTC	Long-term contracts on the purchase of capacity and electricity entered into between Polskie Sieci Elektroenergetyczne S.A. and electricity generators in the years 1994-2001.
Medium-voltage network (MV)	an energy network with a nominal voltage higher than 1 kV but lower than 110 kV.
MEV	Minimum Energy Volumes.
MIFID II	Markets in Financial Instruments Directive II - a legal act relating to the financial instruments market, that is applicable to both financial sector entities (banks) and non-financial corporations (eg energy companies).
MSR	Market Stability Reserve (relating to CO ₂)
MW	a unit of capacity in the SI system, 1 MW = 106 W.
Mwe	one megawatt of electric power.
MWt	one megawatt of heat power.
NAP	National emissions Allocation Plan, prepared separately for the national emission trading system and for the EU emission trading system by the National Administrator of the Emission Trading System.
NAP II	National CO ₂ emissions Allocation Plan for the years 2008-2012 prepared for the EU emission trading system adopted by the Ordinance of the Council of Ministers of July 1, 2008 (Dz. U. of 2008, No. 202, item 1248).
NCBiR	National Center for Research and Development
Nm ³	normal cubic meter; a unit of volume from outside the SI system signifying the quantity of dry gas in 1 m ³ of space at a pressure of 101.325 Pa and a temperature of 0°C.
NO _x	nitrogen oxides.
Operational Capacity Reserve (ORM)	ORM constitutes of generation capacities of active Production Scheduling Units (JGWa) in operation or layover, representing excess capacity over electricity demand available to the TSO under the Energy Sale Agreements and on the Balancing Market in unforced generation
Peak, peakload	a standard product on the electricity market; a constant power supply from Monday to Friday, each hour between 7:00 a.m. and 10:00 p.m. (15-hour standard for the Polish market) or between 8:00 a.m. and 8:00 p.m. (12-hour standard for the German market) in a given period, for example week, month, quarter or year.
Peak power pumped storage plants	a special kind of hydroelectric power plants. In addition to river flow and the difference in the water table levels they need two bodies of water connected with a channel or a pipeline. The power station is situated next to the lower lake or at the dam of the upper lake. The pumped storage facilities provide ancillary control services for the national power system. Their functions are to secure stability, provide passive energy, store excessive power in the system and supply power to the system in peak time. The pumped storage plants that have a natural

inflow of water to the upper lake also generate electricity from renewable sources. The main off-taker of electricity produced by the peak power pumped storage power stations and their services is TSO

Property rights	negotiable exchange-traded rights under green and co-generation certificates
PSCMI1	Polish Steam Coal Market Index
RAB	Regulatory Asset Base.
Red certificate	a certificate confirming generation of electricity in co-generation with heat.
Red energy	popular name for electricity co-generated with heat.
Regulator	the President of ERO, fulfilling the tasks assigned to him in the energy law. The regulator is responsible for, among others, giving out licenses for energy companies, approval of energy tariffs, appointing Transmission System Operators and Distribution System Operators.
Renewable Energy Source (RES)	a source of generation using wind power, solar radiation, geothermal energy, waves, sea currents and tides, flow of rivers and energy obtained from biomass, landfill biogas as well as biogas generated in sewage collection or treatment processes or the disintegration of stored plant or animal remains.
SAIDI	System Average Interruption Duration Index - index of average system interruption time (long, very long and disastrous), expressed in minutes per customer per year, which is the sum of the interruption duration multiplied by the number of consumers exposed to the effects of this interruption during the year, divided by the total number of off-takers. SAIDI does not include interruptions lasting less than three minutes and is determined separately for planned and unplanned interruptions. It applies only to breakdowns in the medium (MV) and high voltage (HV).
SAIFI	System Average Interruption Frequency Index - index of average system amount of interruptions (long, very long and disastrous), determined as number of off-takers exposed to the effects of all such interruptions during the year divided by the total number of off-takers. SAIFI does not include interruptions lasting less than three minutes and is determined separately for planned and unplanned interruptions. It applies only to breakdowns in the medium (MV) and high voltage (HV).
SNCR	selective non-catalytic reduction
Tariff	the list of prices and rates and terms of application of the same, devised by an energy enterprise and introduced as binding on the customers specified therein in the manner defined by an act of parliament.
Tariff group	a group of customers off-taking electricity or heat or using services related to electricity or heat supply to whom a single set of prices or charges and terms are applied.
TFS	Tradition Financial Services, an electricity trading platform used for concluding various transactions, purchase and sale of conventional energy, property rights, renewable energy and CO ₂ emission allowances.
TGE	Towarowa Gielda Energii S.A. (Polish Power Exchange), a commodity exchange on which trading can take place in electricity, liquid or gas fuels, extraction gas, emission allowances and property rights whose price depends directly or indirectly on electric energy, liquid or gas fuels and emission allowances, admitted to commodity exchange trading.
TPA, TPA rule	Third Party Access, the owner or operator of the network infrastructure to third parties in order to supply goods/services to third party customers.
Transmission	transport of electricity through high voltage (220 and 400 kV) transmission network from generators to distributors.
Transmission System Operator (TSO)	a power company engaging in the transmission of gaseous fuels or electric energy, responsible for traffic in a gas or power transmission system, current and long-term security of operation of that system, the operation, maintenance, repair and indispensable expansion of the transmission system, including connections with other gas or power systems. In Poland, for the period from July 2, 2014 till December 31, 2030 Polskie Sieci Elektroenergetyczne S.A. was chosen as a TSO in the field of energy transmission.
TWh	terawatt hour, a multiple unit for measuring of electricity unit in the system SI. 1 TWh is 109 kWh.
Ultra-high-voltage network (UHV)	an energy network with a voltage equal to 220 kV or higher.
V (volt)	electrical potential unit, electric voltage and electromotive force in the International System of Units (SI), $1 \text{ V} = 1\text{J}/1\text{C} = (1 \text{ kg} \times \text{m}^2) / (\text{A} \times \text{s}^3)$.
W (watt)	a unit of power in the International Systems of Units (SI), $1 \text{ W} = 1\text{J}/1\text{s} = 1 \text{ kg} \times \text{m}^2 \times \text{s}^{-3}$.
Yellow certificate	a certificate confirming generation of energy in gas-fired power plants and CCGT power plants.
Yellow energy	popular name for energy generated in gas-fired power plants and CCGT power plants.