

Energy for a Secure Future. Flexibility.

PGE Group's 2035 Strategy



# PGE Group's 2035 Strategy Agenda

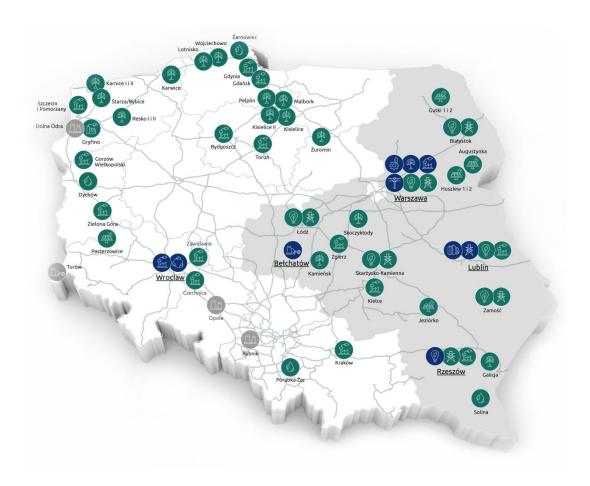
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# Throughout the 2035 Strategy horizon, the PGE Group will continue to be the cornerstone of Poland's energy system

Our operational scale, asset portfolio, and deep expertise in the energy sector form a strong foundation for developing flexible energy services and building a sustainable energy system.

- **42 000** employees
- **5.8 m** end users
- 18.9 GW installed capacity
- **56.2 TWh** electricity generation
- 40% of the national electricity distribution area
- 20% share of the district heating market



# The PGE Group's 2035 Strategy to addresses the growing volatility and unpredictability of the business environment



New technologies are redefining business models, requiring continuous adaptation and investment in new skills.



Aspirations and regulatory requirements are influencing investment directions and the way business is conducted.



The evolution of social preferences and demographics are changing the structure of energy demand and consumption patterns.



Geopolitical instability highlights the importance of supply security, diversification of energy sources and the resilience of value chains.



The growth in installed capacity of decentralised renewable energy sources is permanently changing the way the energy system operates.



We operate in a reality where volatility, more than ever before, is a challenge that demands resilience and the ability to respond quickly and effectively.

## Energy security will be driven by megaprojects crucial to system integrity

Involving companies

capable of executing strategically important
energy and infrastructure mega projects is
crucial in ensuring balance and stability.

Credibility, consistency, and scale of operations are the answer to the challenges of the energy transition.

As a market leader, PGE undertakes rational and sustainable actions to support a competitive economy and energy security.



The PGE Group's 2035 Strategy has been designed to meet market challenges and stakeholder expectations and to ensure the Group's sustainable development through its participation in the execution of the most important projects for the growth of the Polish economy.

# The response to market changes must address the increase in demand for electricity with a significant change in the structure of supply

**Electrification based on clean energy** enables the achievement of decarbonisation targets and reduces dependence on imported fossil fuels.

2024

#### Changes in installed capacity\* in the Polish Power System

# 28 28 Peak demand 29

Gas capacity

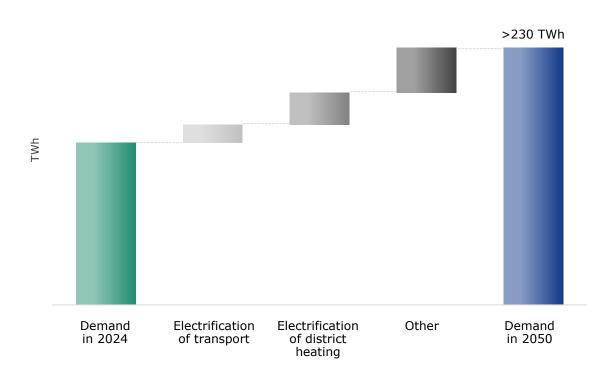
Renewables

#### \* PSE data, excluding industrial power plants

Coal capacity

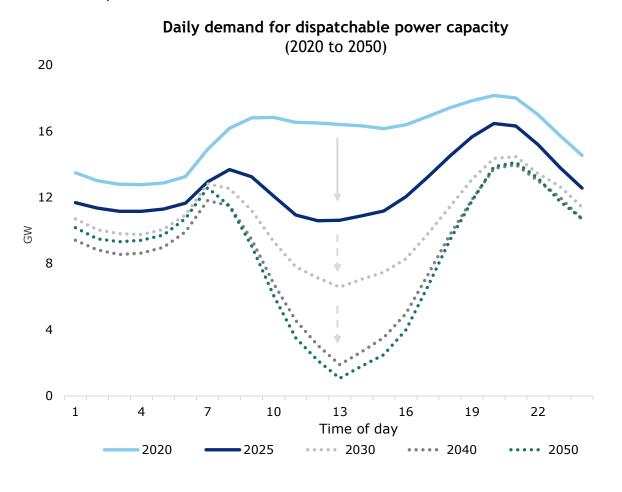
2014

#### Structure of energy demand growth in the Polish Power System

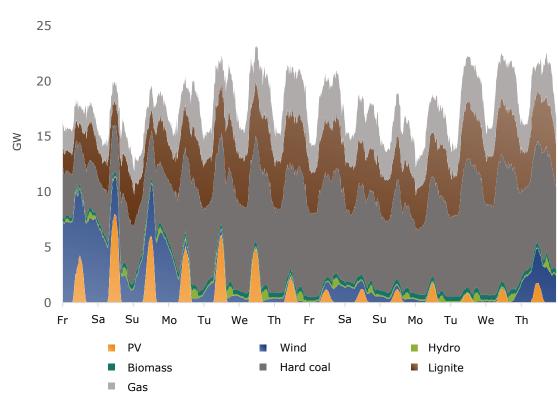


# PGE defines Security as Flexibility that enables further development of renewable energy sources while ensuring the stability of the power system

Volatility on both the supply and demand sides is increasing in the short and medium term. This requires greater flexibility in both energy generation and consumption.



# Structure of electricity production in Poland (example of a dunkelflaute period)



# PGE will introduce solutions that transfer the benefits of market structure changes into tangible price effects for active customers

The development of renewable energy sources is contributing to a decline in wholesale prices, but increased electricity price volatility poses a challenge to many market participants, who need to improve their ability to effectively manage of load profiles.

#### **Evolution of cooperation models**

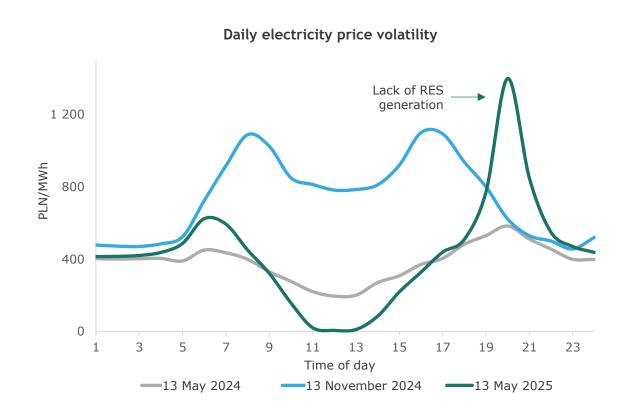
Increased customer activity will create space for partnershipbased dialogue with utilities, which will facilitate better tailoring of offerings, stabilise revenues, and reduce regulatory risks.

#### **Customer activation**

Business customers (and later also residential customers) will become active participants in electricity and flexibility markets, and their adaptive approach to purchasing electricity and managing their load profile, will enable them to optimise their costs and benefit from periods of lower prices.

#### **Digitalisation**

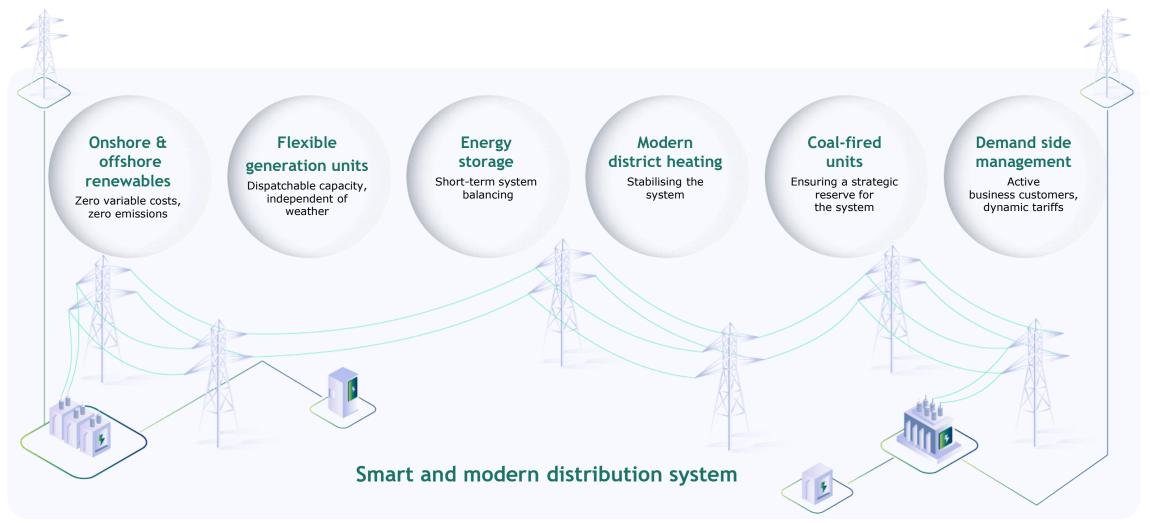
Digitalisation and automation will allow for easier optimisation of energy costs and generate additional revenues, e.g. through DSR services, energy storage participation in capacity auctions and flexibility services.



Source: Towarowa Giełda Energii SA (TGE)

# The development of smart grid is determining a new energy system architecture

A reasonable balance, increased flexibility and the ability to integrate renewable energy sources are essential for a secure and successful energy transition.



## Mission: Providing Energy for a Secure Future



#### **Energy supply security**

We ensure stable energy supplies thanks to flexible sources, smart grid infrastructure and energy storage facilities.



#### Group's value creation

We focus on creating long-term shareholder value while respecting our employees.



# Supporting the competitiveness of the Polish economy

We are investing in the sustainable transition to ensure competitive electricity prices, energy independence and efficient infrastructure.





By supporting the competitiveness of Poland's economy, energy security and the domestic supply chain, we are taking rational and sustainable measures to grow PGE's value.

#### **Dariusz Marzec**

President of the Management Board

# Vision: A leader in modern energy, flexibility, distribution, and district heating



# Optimal and effective organisational model

Effective and transparent cooperation with stakeholders will be key to the implementation of the PGE Group's Strategy.

# Stakeholders and the Group's context

Public administration and regulator

Transmission System Operator

Shareholders

Customers

**Suppliers** 

Scientific community

Financial and commodity markets

Local communities

Business partners





**DIALOGUE** 



**ESG** 



**INNOVATIVENESS** 



LOCAL CONTENT

#### **PGE Group**

# PGE S.A. Corporate Centre

- Strategy and asset management
- Wholesale trade and Market Access
- Investments and strategic partnerships
- Financing
- Regulatory management
- Organisational culture and communications
- Innovation and digitalisation
- Shared Services Centres
- Process management

#### **Business segments**

- Implementation of investments, initiatives and transition projects
- Operation and maintenance (O&M)
- Operational excellence
- Responsible employer role
- Infrastructure security

Cooperation and clear division of responsibilities within the PGE Group as the basis for efficiency

# A comprehensive approach to the ICT development

A strategic transformation of our ICT area will streamline the implementation of our business strategy by building a flexible, scalable and secure environment that supports the daily work of users and enables us to maintain our competitive edge in dynamic energy markets.



#### Building value based on effective data utilisation:

AI-enhanced asset management

Innovative digital services for customers

Power grid optimisation and predictive maintenance

Digital skills of employees

Cybersecurity

Resilience of infrastructure, communications, and applications

Efficient business and administrative processes

# An offering of flexibility for customers, system security, and RES development

#### PGE Group's offering for the TSO - PSE S.A.



#### Capacity mechanisms

Power availability in critical moments power plants ensure operational readiness, ensuring security of energy supply.



#### **Balancing services**

Balancing capacities enable rapid response to volatility in the system - we help maintain the balance between energy production and consumption.



#### **Ancillary services**

We provide services that support system operation, such as frequency and voltage regulation, thereby increasing the network's immunity to interference.

#### PGE Group's offering for customers, consumers, and producers

CUSTOMERS	PGE OFFERING
Producers and consumers in the DSO Grid	Distribution services and connection offering
Business partners	<ul> <li>Integrated electricity, heat and flexibility services</li> </ul>
Residential customers	
Renewable Energy producers and Energy Storage operators	Market Access, PPA, aggregation and balancing
Distributors and consumers of district heating	Efficient supply of district heating and hybrid solutions
Trading companies	Transparent, open-market electricity sales and bilateral contracts

## A responsible approach to transition

The coal-based energy segment is most exposed to dynamic changes in the energy market and must be covered by a responsible transition plan based on multilateral cooperation and dialogue.

Generation mix shift

The need to maintain power reserve in the system

Decline in demand for coal-based energy

Building new competencies

Circular Economy

DIALOGUE WITH EMPLOYEES

COOPERATION WITH LOCAL COMMUNITIES

COORDINATION WITH THE TRANSMISSION SYSTEM OPERATOR



Utilisation of infrastructure for the implementation of new investments by the Group



Cooperation with the administration and Transmission System Operator



Dialogue, cost rationalisation and optimal asset management



Reskilling of employees, engagement in growth segments



Reclamation and repurposing of retired power plant sites

# Consistent approach to value creation and investment financing

Disciplined investment policy

IRR >7.5%

Adequate debt level

NetDebt/EBITDA < 3.5x

Optimal **financing model** 

**Significant share of** project finance

Balanced risk profile

**BBB+rating** 



**Investment discipline** defining a selective approach to projects\*, conservative macroeconomic assumptions and social responsibility.



Stable financial position supporting energy **security**. Maximising the utilisation of opportunities for preferential financing (including the subsidies and ESG funds).



Partnerships with Polish and international financial institutions to facilitate access to innovative financing models.

<sup>\*</sup> IRR rate >7.5% can be reduced for projects with secured revenue streams (e.g., CfD, PPA, etc.).

## Potential for regular dividend payments

#### Dividend payments planned upon achieving the following criteria:

- 1 Recurring net profit
- Prospect of positive free cash flow for a minimum of 2 years
- Maintenance of investment rating
- Absence of one-off events having significant impact on cash flow



Addressing the issue of financing the operational gap in coal-based energy segment (particularly in the lignite mining) will accelerate dividend payments.

# Role of the PGE Group's segments

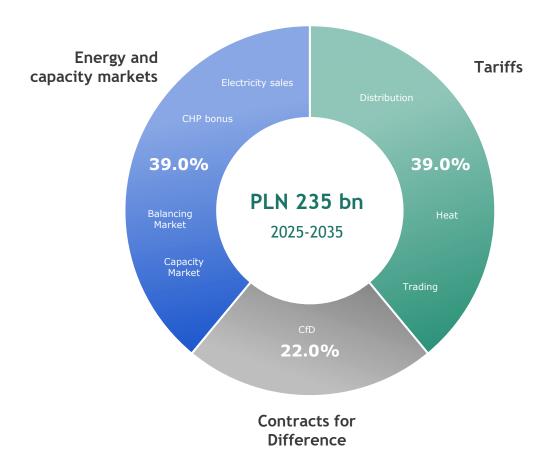


	Distribution	Renewables	Gas energy	Energy Storage	Integrated district heating systems	Coal Energy	Business partners	Residential customers	Nuclear power
Key strategic aspiration	+11 GW additional connected RES capacity	28 TWh electricity*	<b>10 GW</b> power capacity	18 GWh capacity*	100% heat from zero- and low-emission sources	Asset optimisation	#1 flexibility services for business	<b>#1</b> Customer service	Location assessment programme
Cumulative CAPEX 2025-2035	PLN <b>75</b> bn	PLN <b>85</b> bn	PLN <b>37</b> bn	PLN <b>14</b> bn	PLN <b>18</b> bn	PLN <b>5</b> bn	PLN <b>0.5</b> bn	PLN <b>0.6</b> bn	Research expenditure: several hundred million PLN
EBITDA in 2035	PLN <b>10</b> bn	PLN <b>10.2</b> bn	PLN <b>7</b> bn	PLN <b>2.1</b> bn	PLN <b>2.8</b> bn	-	PLN <b>0.8</b> bn	PLN <b>0.5</b> bn	-

<sup>\*</sup> Total production/capacity of projects implemented with PGE's participation

# A balanced capital expenditure structure supported by stable, regulated revenues and secured opportunities for profitable growth.

#### **CAPEX** by monetisation mechanisms

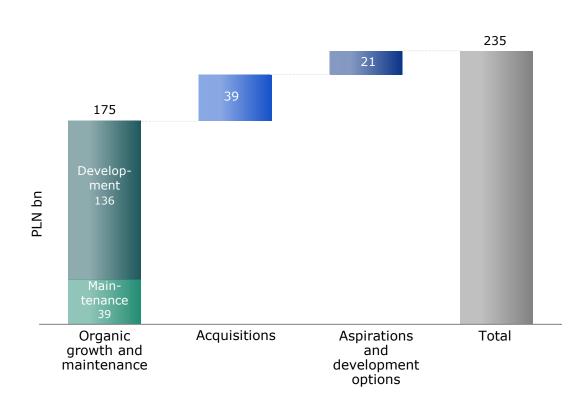


The Group's balanced capital expenditure structure will be underpinned by stable, regulated revenue streams and will be positioned to capitalise on growth opportunities arising from capacity mechanisms and balancing services.

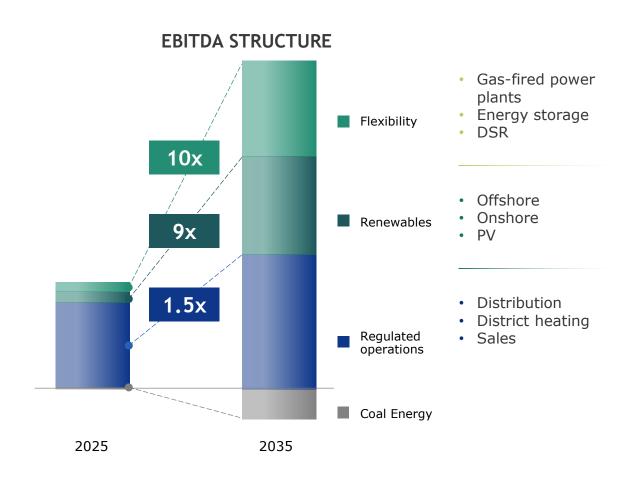
## CAPEX structure and expected evolution of EBITDA structure

Around 25% of CAPEX is made up of acquisitions and development options, which will be implemented depending on the financial capabilities and availability of opportunities that build PGE Group's value.

#### CAPEX 2025-2035



EBITDA secured by distribution and regulatory mechanisms, with growth potential stemming from RES and flexibility.



## A sustained driver of domestic supply chain development

# PGE Group's investments - a catalyst for building the domestic supply chain

PGE's investment programme is set to generate sustained demand for innovative products, services, and technologies, while strengthening partnerships with Polish businesses and the research sector.

#### Local content in CAPEX and OPEX

By directing a significant share of lifecycle investments to Polish companies, PGE strengthens the domestic economy and nurtures local know-how.

Through lasting partnerships, the Group actively contributes to building regional capabilities, stimulating growth in both infrastructure and talent.

PGE Group aims to gradually increase the share of the domestic supply chain in the implementation of its investment programme.

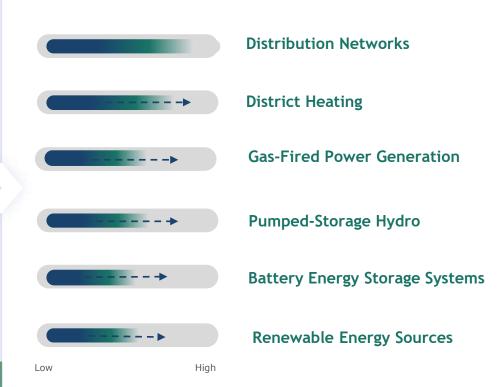
#### Key elements of the supply chain

- Construction and installation services
- Technologies
  (e.g. transformer stations, cables, ICT, smart meters)
- Infrastructure
  (e.g. distribution networks,
  installation and service ports)
- Service and long-term O&M support
- Components
  (e.g. steel structures, towers)
- Design and education (technical schools, universities, international cooperation)

PLN 150+ bn

Estimated local content value by 2035

#### Local content by segment



# Expected results of the PGE Group's Strategy by 2035



PLN 30 bn EBITDA

**#ValueCreation** 



10 GW FLEXIBLE GAS POWER PLANTS

#Flexibility



28 TWh RENEWABLE ENERGY

#CleanEnergy



**75%**CO<sub>2</sub> EMISSIONS REDUCTION

#Responsibility



PLN 235 bn TOTAL CAPEX

#EnergySecurity



+11 GW
RES CONNECTION CAPACITY
TO SMART GRID

#ReliableDistribution





Flexibility. A Strategic Philosophy for Creating Value



# An energy system relies on the coordinated use of complementary technologies to maintain reliability and resilience

Technology	Coal plants	Gas CCGT	Gas OCGT	District heating (incl. CHP)	Nuclear	Wind	Solar	Hydro	Pumped hydro storage	Battery storage	Demand-side Management
Unit's role	Peak-reserve	Peak/base	Balancing/ Reserve	Determined by heat production	Baseload	RES	RES	RES	Balancing/ reserve	Balancing	Reserve
Average yearly load factor (h/year)	500 - 3 000	2 000 - 5 000	250 - 1 900	200 - 8 000	>7 500	onshore: 1 500 - 3 000 offshore: 3 500 - 4 500	900 - 1 200	3 500 - 6 000	500 - 2 000	500 - 2 000	<500
Availability <sup>1</sup> (limiting factors)	Scheduled repairs Trade margin	Scheduled repairs Trade margin	Scheduled repairs Trade margin	Determined by district heating production	Scheduled repairs	Weather-dependant	Time of day and weather-dependant	Determined by hydrological conditions	Reservoir capacity (several hours of operation)	Storage capacity (typically up to 4h)	Impact on the company's core business (minuteshours of operation)
Flexibility <sup>2</sup>		Emitting to	echnologies								

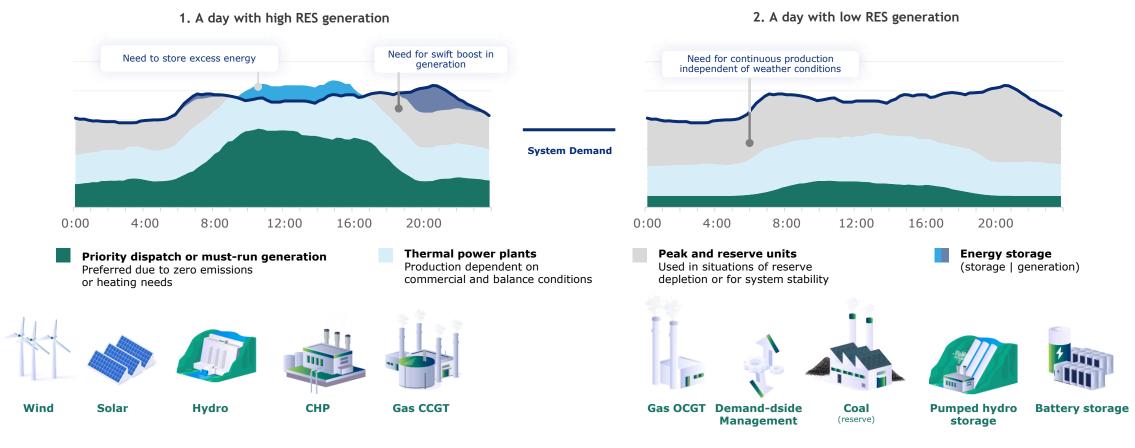
<sup>&</sup>lt;sup>1</sup> Availability – readiness to provide power to the grid

<sup>&</sup>lt;sup>2</sup> Flexibility – ability to quickly ramp up production or reduce consumption in response to the Operator's dispatch orders or market price signals

## The evolving energy mix requires greater flexibility both in energy generation and consumption

The way we meet our energy needs throughout the day is evolving and becoming increasingly dynamic. The traditional model, shaped by the characteristics of conventional energy sources, is giving way to a complex system defined by distributed generation, regulations that promote low-emission technologies, and the development of flexible balancing mechanisms.

#### Structure of power demand coverage in the Polish Power System in two scenarios



# Integrating district heating with the power grid will enhance the system's overall flexibility

District heating systems can provide demand-side flexibility by absorbing surplus electricity and converting it into thermal energy. The combination of flexible gas cogeneration, renewables, and Power-to-Heat technologies enhances the integration of heating networks with the electricity system.

Operational flexibility: managing daily fluctuations in supply and demand

#### **TECHNOLOGIES**

Cogeneration
Electrode boilers
Heat accumulators

Large-scale heat pumps

Reaction time

Power sufficiency

#### **OPTIMISATION MEASURES**

Adapting to delivery of ancillary services Increasing the daily operating range of devices

#### Medium-term flexibility: balancing fluctuations in demand related to weather conditions

Thermal inertia of the heating network

Medium-term heat storage
Controllable heat consumption

Reducing transmission losses

Efficiency of heating systems

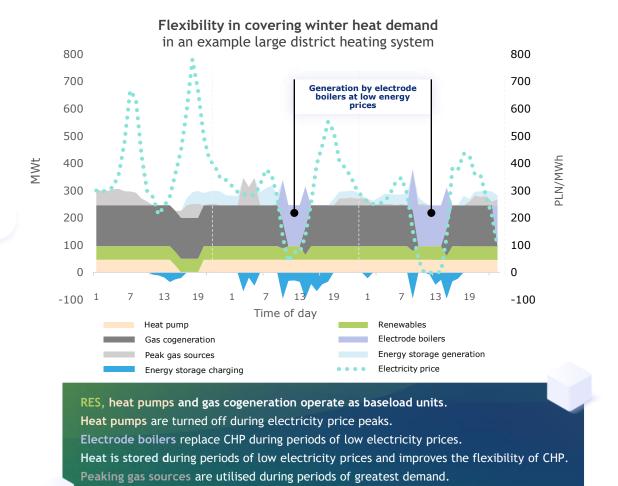
IoT and AI-based network management automation

#### Power adequacy: during winter period

Cogeneration

Biomass and gas boilers, Waste-to-Energy, geothermal Securing contracted power and heat supply from new sources

Hybrid solutions and new models of cooperation with customers



## The flexibility portfolio as a driver of diversified revenue streams

To ensure the secure and stable functioning of the Polish Power System, the Transmission System Operator determines the necessary power configuration using advanced tools.

#### Why flexibility?

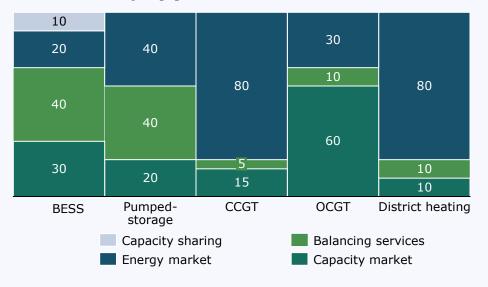
Flexibility is a **key feature of modern energy** systems, essential for maintaining their stability and resilience.

A diverse set of tools supporting the PGE Group's market strategy enables the **effective development of optimal and adaptive business models**.

With years of experience, the PGE Group is committed to consistently creating value across energy trading, technical and commercial balancing services, and participation in the capacity market.

#### Diversified revenue streams

Illustrative structure of energy and capacity revenue streams by individual technologies [%]



## PGE Group's flexibility portfolio

The PGE Group treats flexibility requirements as a priority, developing and optimising its own portfolio of dispatchable sources in line with the available remuneration mechanisms.

#### **Dispatchable Generation**

Ensuring a reliable power supply independent of weather conditions:

- New-build gas power plants
- Optimised coal power plants



#### **Battery Storage And Pumped-Storage**

Managing energy surpluses and supporting the systemic integration of RES:

- Pumped-storage power plants
- Electrochemical (battery) storage systems



#### **District Heating**

Smart linking of sectors to the benefit of the system and consumers:

- Combined Heat and Power (CHP)
- Electrode boilers, storage, and heat pumps
- Thermal inertia of the heating network



Effective management of such a diversified portfolio will be made possible by a new ICT architecture that supports business processes through AI-based solutions.

#### Priority flexibility mechanisms for the PGE Group

Management of generation, storage, and demand-side resources

- Rotating masses inertia for system stabilisation (grid forming)
- Capacity sharing

- Balancing services
- Capacity mechanisms
- Demand aggregation and management
- Flexibility platform for the DSOs



Strategic aspirations





# #1 Energy distribution

Railway Energy Services

- Increase in connected RES capacity by 11 GW (+125%) and consumers by 12 GW (+14%)
- Twofold increase in the Regulated Asset Base to PLN 57 bn

## #1 Energy distribution

#### Smart grid connection availability more than doubled

#### Our motivation:

Supporting the growth of renewables

Increasing the reliability of the grid

Improving the investment attractiveness of distribution areas

Stable tariff revenues

Electrification of the economy

Increasing energy security



#### PGE S.A.

Strategic outlook

Investment financing Strategic and ownership supervision

#### **PGE Dystrybucja**

Operational Outlook

#### PGE Energetyka Kolejowa

Operational Outlook

CAPEX

PLN 37 bn

until 2030

PLN 75 bn

until 2035

**EBITDA** 

PLN 8 bn

until 2030

PLN 10 bn

until 2035

#### For whom:

#### **Prosumers**

Development of distributed generation (PV, heat pumps)

#### **Energy customers**

Reliable power supply

#### **Producers**

Increased availability of connection capacity

#### **PGE** shareholders

Element of building the Group's value

# Smart development of distribution networks for the benefit of customers, energy producers, and the security of infrastructure

Over 70% of RES are connected to the low- and medium-voltage grid, which means that the technical and operational capacity to handle bi-directional energy flows is essential for security of supply in an electrified economy.

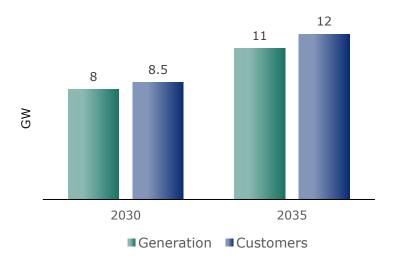
#### PGE Dystrybucja PGE Energetyka Kolejowa

1 Support for the development of RES and electrification  Increasing the capacity of connected RES, consumers and EV charging stations through a targeted investment programme.  Reducing the duration of planned and unplanned outages by modernising infrastructure and leveraging distributed flexibility resources.  Reducing SAIDI compared to the 2019-2024 average  Reducing fault repair cost per kilometre of the distribution network  Reducing fault repair cost per kilometre of the distribution network  Affordability of distribution service customers.  Rational investments and operational excellence delivering tangible benefits to distribution service customers.	Strategic drivers of infrastructure development				Goals for 2035
outages by modernising infrastructure and leveraging distributed flexibility resources.  -30% Reducing SAIDI compared to the 2019-2024 average  Technological development and cybersecurity  New operational technologies and IT as essential enablers of business activity: predictive analytics, SCADA, GIS, and IoT.  Reducing fault repair cost per kilometre of the distribution network  Reducing fault repair cost per kilometre of the distribution network  Maintaining the growth of the average distribution fees below the wage growth in the enterprise sector		>	consumers and EV charging stations through		
and cybersecurity  Retinological development enablers of business activity: predictive analytics, SCADA, GIS, and IoT.  Rational investments and operational excellence delivering tangible benefits to distribution service  **Affordability of distribution**  **Retinological development enablers of business activity: predictive analytics, scanding the distribution network  **Maintaining the growth of the average distribution fees below the wage growth in the enterprise sector			outages by modernising infrastructure and	-30%	•
Affordability of distribution  Rational investments and operational excellence delivering tangible benefits to distribution service  Affordability of distribution fees below the wage growth in the enterprise sector		>	enablers of business activity: predictive analytics,	-30%	kilometre of the distribution
			delivering tangible benefits to distribution service	✓	distribution fees below the wage

# Greater connected capacity and user-friendly connection procedures

PGE Group is determined to ensure an increase in the availability of connection capacity, reduce waiting times and increase the user-friendliness and transparency of the process.

# Cumulative connected capacity of new customers and generation sources (compared to 2025)



Number of connected customers (annual average)

75 000 80 000 82 000
2025 2030 2035

# <250 days

Shorter average connection waiting time for residential customers

+30 p.p.

Improving the Customer Effort Score in connection processes

PLN 25 bn

for connections for the period of 2025-2035

#### Facilitation package for investors

Review, simplification, and automation of connection procedures — including a reduction in the number of forms and actions required from customers

Digitalisation of all key processes

A commercial grid connection offering, and partnership-based cooperation in project implementation

Full transparency of the investment and grid connection processes

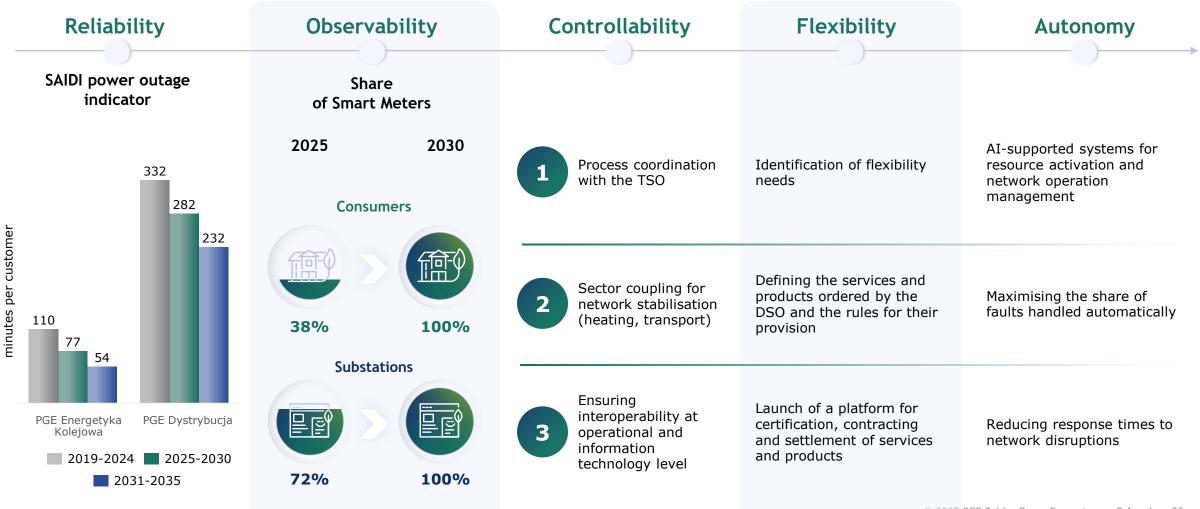
# Customer-Friendly Service Programme "Stay in Touch"

Individual approach to all customer groups through multiple communication channels — with dedicated support for the senior citizens and people with limited mobility (PLM)

Simplification of the connection procedures and the use of plain, accessible language in contracts, terms and conditions, and during customer interactions

# Modernised and digital network infrastructure as the foundation for the electrification of the economy

The road to Net Zero runs through the electrification of the economy, supported by the digitalisation and automation of the power grid. The key milestones on this journey are still ahead.



# LTE 450: digital connectivity for more efficient and resilient energy infrastructure





Thanks to PGE's construction of a communication network using a dedicated 450 MHz band, it is possible to provide an interference-resistant communication and data transmission, both for the energy sector and for public safety services.



#### Services for external users

- Support for emergency and defence services during crises or natural disasters
- A unified, standardised broadband communication network for national security

#### LTE450-based services for the energy industry

- Connecting Smart Meters to the DSO systems
- Ensuring interoperability between DSOs
- Standardisation and end-to-end network configuration
- 24/7 Operational supervision

#### LTE 450 Independent multi-service network

- Dispatch communication and broadband data transmission as well as support for IoT communication (remote readings, control)
- 36-hour communication backup in emergency situations
- Independence from the availability of commercial operators' services



#### LTE450: designed with safety in mind

- Dedicated frequencies
- SIM cards with their own encryption keys
- 24/7 Network Monitoring Centre and CERT
- Use of own infrastructure, emergency power supply and tele-transmission equipment
- ICT security systems



**Excellent** propagation

EXPANSION OF THE LTE450 NETWORK ACROSS POLAND

Reliability and business continuity

Low energy consumption

High quality and speed of transmission

# Development programmes focused on customer needs and improvement of network reliability and observability



#### Key development programmes

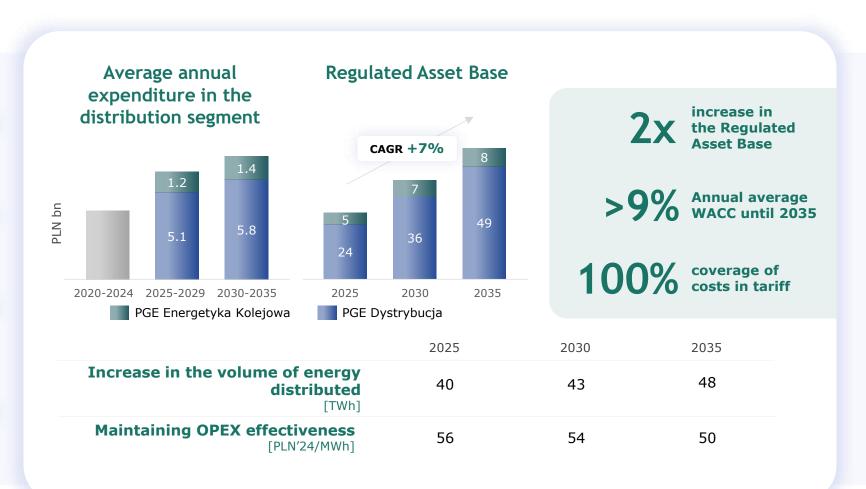
**Development of ICT** tools and **artificial intelligence** to **maintain quality and operational continuity** in times of dynamic technological, climatic and social changes.

- Replacement of MV/LV and HV/MV transformers
- Modernisation and expansion of Primary Substations (GPZ) and Power Supply Systems (MUZa)
- Underground cabling of 10,000 km of distribution networks
- Construction of energy storage facilities for internal and grid-related (non-commercial) purposes
- Development of an independent LTE450 communication network
- Development of the Central Power Dispatch Centre and launch of the Central Distribution Management System
- Installation of Smart Meters at substations and end-user locations
- Implementation of modern IT tools (e.g. GIS and EAM) to improve technical asset management

# Rational development of the distribution segment as a foundation for the PGE Group's value growth

PGE Group's investments will be focused on increasing connection capacity, observability and controllability, as well as on automating grid operation. Operational efficiency and alignment of development directions with transformation priorities will ensure solid levels of profitability.

- Long-term outlook for the electrification of the economy
- Developing the Regulated Asset Base in alignment with the directions incentivised by the Energy Regulatory Office
- Planning growth with the use of flexibility services
- Digitalisation and automation
   necessary for the continuity
  of operation of smart grids and
  the cost efficiency of DSOs





# **#1 Renewable Energy**

- 9 GW of installed capacity
- 28 TWh of green electricity for a competitive economy
- Key source of zero-emission EBITDA exceeding PLN 10 bn



Onshore RES



### #1 Renewable Energy

#### 26 TWh of green electricity from offshore and onshore RES

#### Our motivation

Decarbonisation of the generation mix and maintenance of the position as the leading supplier of green electricity to the grid

Financial potential and competencies to implement megaprojects

Ability to secure long-term revenues through CfDs

Change in the perception of the Group by stakeholders, including financial institutions



#### PGE S.A.

Strategic outlook

Investment financing
Sourcing and managing partnerships
Sale of electricity and balancing services
Coordination of cPPA conclusion

#### **PGE Baltica**

Operational outlook (Offshore wind)

#### **PGE Energia Odnawialna**

Operational outlook (Onshore RES)

**CAPEX** 

PLN 34 bn

until 2030

PLN 85 bn

until 2035

**EBITDA** 

**PLN 3.6 bn** 

until 2030

PLN 10.2 bn

until 2035

#### For whom

#### **Energy consumers**

Supply of green electricity at competitive rates

#### **PGE shareholders**

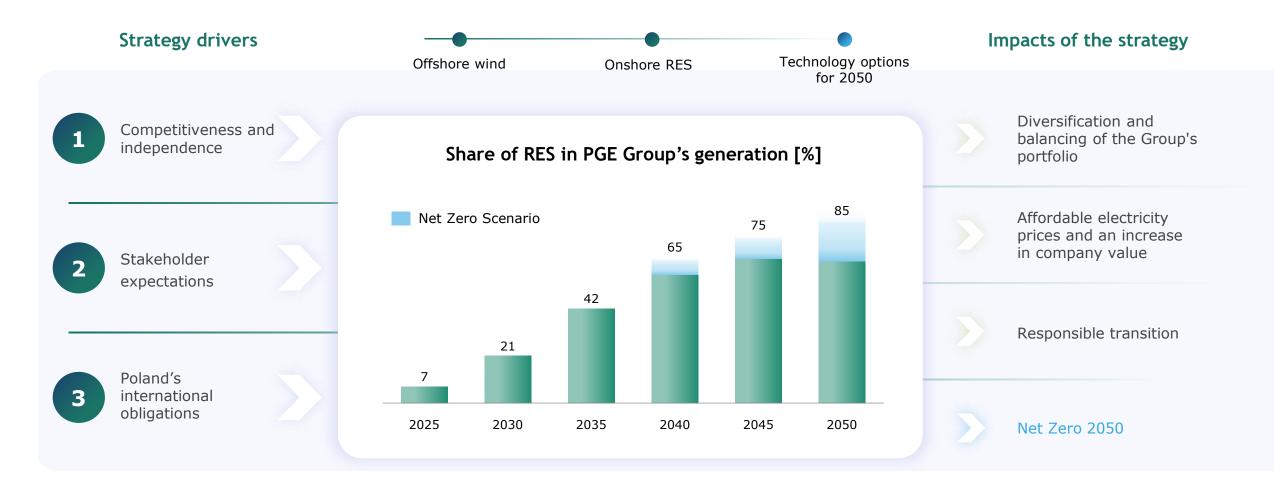
Element of building the Group's value

#### **Project partners**

Market access for electricity and balancing power

# Clean energy for economic competitiveness and resource independence

Affordable energy is key to business competitiveness, clean transport and efficient district heating. PGE Group's investments and competencies will allow Poland to reduce its reliance on fuel imports and meet its emission reduction targets.



# Offshore wind power offers a unique opportunity to develop a new branch of industry, providing affordable and sustainable energy

#### High efficiency and low emissions

The highest capacity utilisation factors among the RES technologies developed in Poland, and minimal CO<sub>2</sub> emissions over the entire life cycle contribute to the achievement of the climate neutrality goal.

4 GW

11 m tonnes
of avoided annual
CO<sub>2</sub> emissions

**Local Content** 

**Growing share of Local Content** 

The share of the Polish industry in the supply chain of the implemented projects is growing and is maintained at levels consistent with the assumptions of the Sectoral Agreement for the Development of Offshore Wind.

# Scalability and optimal use of undeveloped marine space

The use of high-power turbines allows reduction of the impact of Offshore Wind Farms on the environment and is in line with current maritime development plans.

14+ MW
capacity of a single
wind turbine

Infrastructure development

Impact on the Polish economy

Development of PGE's offshore wind farm support infrastructure in Poland, including projects such as the installation terminal in Gdańsk.

#### Revenue security in the long term

The President of Energy Regulatory Office (ERO) granted the Baltica 2 and Baltica 3 projects the CfD contract, which secures the revenues of these assets over a 25-year horizon.

Secured revenues over a **25-year** horizon

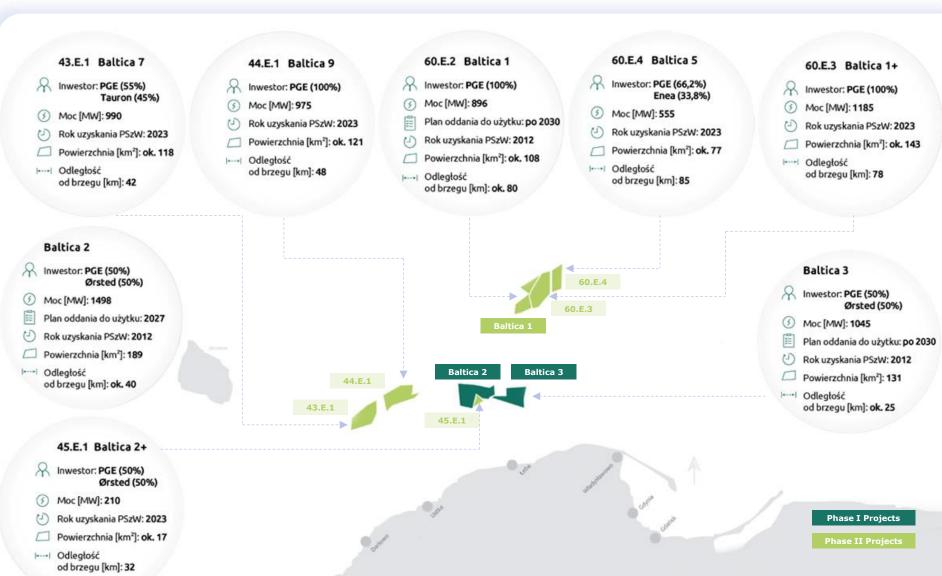
Financing using the **Project Finance** formula

#### Limited financial risks

Offshore can be financed under the project finance formula, thus reducing the impact of the investment on the balance sheet.

# Development potential of the PGE Group's offshore wind farms

A coherent strategy for developing subsequent offshore areas focuses on the most efficient projects

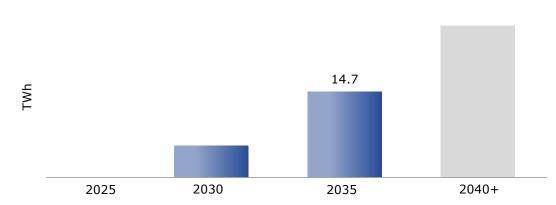


# Offshore wind farms will be a key source of zero-emission electricity for the PGE Group

Offshore Wind Energy will play a key role in building value and transforming the PGE Group's generation portfolio.



# Annual electricity sales\* of offshore projects with the PGE Group's participation



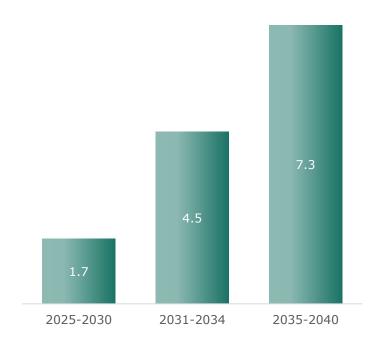
<sup>\*</sup> Graph shows the total volume of electricity sold by installations, regardless of the partnership structure



7.5 m
households

# Offshore offers the prospect of energy price stabilisation thanks to the Contracts for Difference mechanism

Expected average annual revenues from offshore projects



The key milestones on the path to achieving the full strategic aspirations of the PGE Group in the coming years will be:

Contract for Difference auctions

Strategic partnerships

The years 2025-2029 will be decisive for the possibility of commercialisation of Phase II offshore development projects in Poland based on Contracts for Difference (the difference between the market price of electricity and the strike price bid by the investor).

The PGE Group is preparing to take part in auctions to secure the revenue side of its projects.

Trusted partners can bring knowledge, experience and synergies to projects, which can ultimately determine the competitiveness of those projects.

The synergies achieved, such as consistent power dispatch planning or commercial and technical management, can translate into real savings for end users.

## Development of onshore wind energy

Onshore wind energy in the best locations in terms of productivity and access to the grid is a source of clean energy, allowing the PGE Group's generation portfolio to stay competitive.

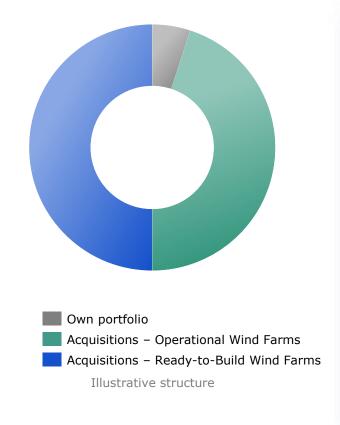


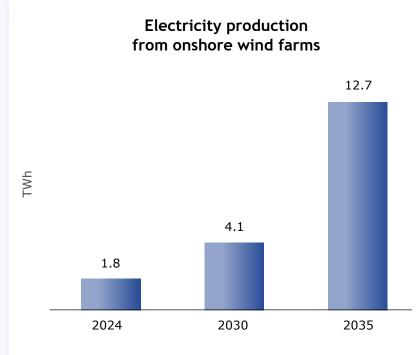
#### Onshore wind farms

- The area of active M&A activity acquisitions of operational and ready-to-build projects
- New financing models
- Organic growth leveraging the PGE Group's internal competencies
- Maximisation of installed capacity within a single grid connection
- Repowering in the most productive locations
- Partnerships in the development phase
- Expansion of in-house service capabilities and continuous efficiency improvement

4 GW in 2035

**12.7 TWh** in 2035





## Development of photovoltaics and hydropower

Short development timelines, scalability, and the potential for integration with onshore wind farms and energy storage systems make selected PV projects a complementary renewable asset.



#### **PV** farms

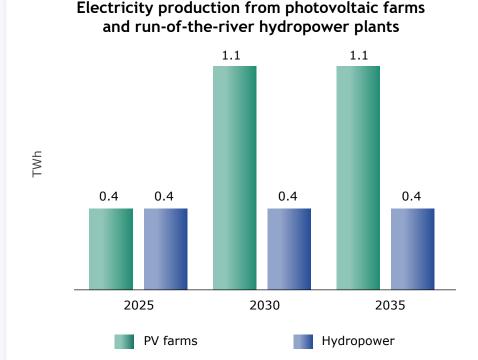


# Run-of-the-river hydropower plants

- Selective project development
- Focus on the largest installations and load profile optimisation
- Utilisation of shared grid connections' potential to maximise the value of individual locations
- Optimisation of asset maintenance costs with attention to safety and functions related to water management

1 GW and 1.1 TWh

0.1 GW and 0.4 TWh





# #1 Flexible gas capacity

- 10 GW flexible, low-emission generation units
- 100% readiness for transition to zero-emission fuels



### #1 Flexible gas capacity

#### 10 GW of dispatchable capacity, enabling a safe energy transition

#### Our motivation

Maintaining the position of the leading electricity supplier to the Polish Power System

Strong financial capacity and expertise to execute large-scale and complex projects

Strategically located sites, suitable for largescale investments within the PGE Group

Stable revenue streams from capacity mechanisms and effective monetisation of market volatility in energy and ancillary services



# **PGE S.A.**Strategic outlook

Investment financing (including project finance)

Developing an auction strategy

Capacity obligations management

Optimisation of gas contracting sources

Monetisation of the commercial flexibility of assets

Analysing opportunities for partner engagement

## **Gas Power Segment**Operational outlook

**CAPEX** 

PLN 27 bn

until 2030

PLN 37 bn until 2035 **EBITDA** 

PLN 4 bn

until 2030

PLN 7 bn until 2035

#### For whom

#### **System operator**

Stabilisation of the Polish Power System

#### **Energy consumers**

Guaranteed energy supply

#### Renewables

Greater integration capacity for RES

#### **PGE shareholders**

Element of building the Group's value

# Supplementing the power balance during periods of low RES generation

Without the addition of new, controllable generation sources, further integration of renewable energy into the system will not be feasible. By expanding its gas-fired generation portfolio, the PGE Group is positioning itself as a key driver of the energy transition.



- The most competitive and **controllable** generation assets during the energy transition.
- Emitting three times less CO<sub>2</sub> than coal and with only half the maintenance costs.
- Flexible contracts and new gas supply sources enhance commercial performance.
- Sites located adjacent to existing power plants reduce capital expenditures compared to greenfield projects and allow recruitment of qualified personnel.
- Gas turbines will provide peak-reserve capacity, offering rapid start-up capabilities and the potential for continuous operation.
- Project revenues will be secured through capacity market auctions, energy sales, and the provision of balancing services.
- Although less efficient than combined cycle gas turbines (CCGTs), their reserve-mode operation will result in relatively low CO2 emissions.

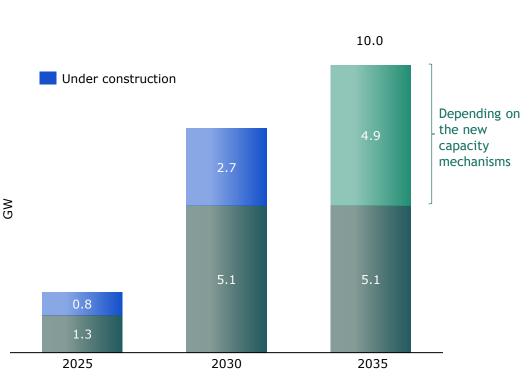


All new units will be designed to accommodate the use of decarbonised gases in the future, with the fuel switch subject to technical feasibility and economic viability.

# PGE Group's aspirations regarding gas energy

The revenue streams of the gas-fired units will be based on the capacity market, electricity sales, and the provision of balancing services.





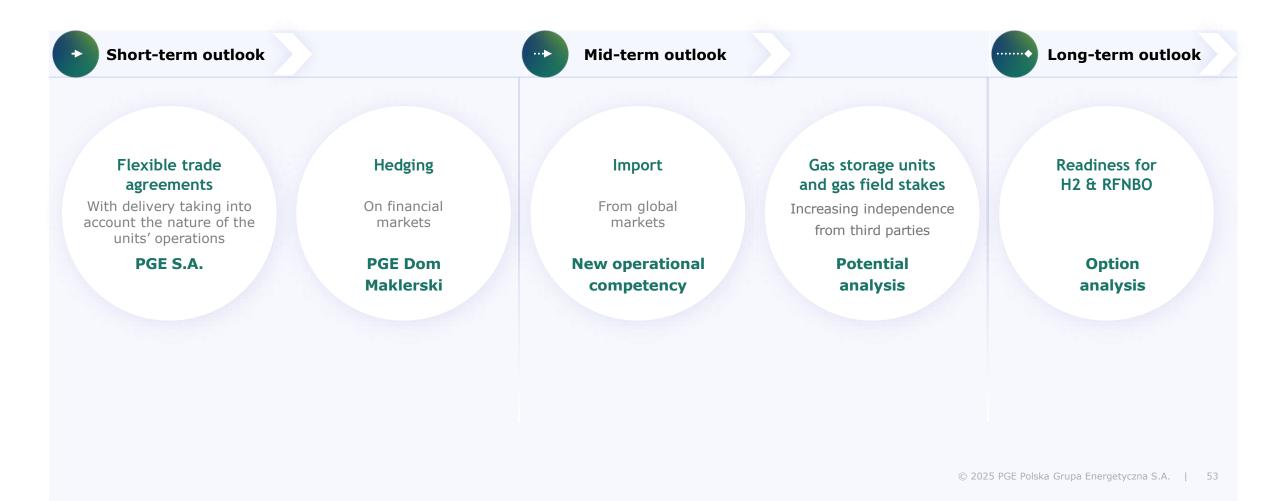


The extent of the capacity implemented in excess of 5.1 GW will depend on the attractiveness and predictability of their compensation mechanisms (extension of the capacity mechanisms)

# Securing gas supplies

The growing demand for gas fuel with the variable consumption profile necessitates the adoption of more flexible supply solutions. The PGE Group plans to take measures aimed at optimising supply costs and reducing dependence on a limited number of suppliers.

In the long term, the objective is to replace conventional fuels with zero-emission energy sources.





# #1 Energy Storage

- 60% market share in storage capacity in Poland
- Complementarity of chemical, physical and thermal technologies



District Heating



### **#1 Energy Storage**

#### 18 GWh capacity for RES integration and market balancing

#### Our motivation

Sustaining the position as the leading electricity supplier to the Polish Power System

Ensuring system balance through integration and management of the Group's own renewable energy sources

Strategically located sites for investment in both large-scale and distributed electricity and heat storage facilities

Unlocking new revenue streams through the monetisation of energy market volatility



#### PGE S.A.

Strategic outlook

Investment financing Commercial storage management Acquisitions

PGE Energia Odnawialna (physical and chemical storage) Operational outlook

> **PGE Energia Ciepła** (thermal storage) Operational outlook

CAPEX

PLN 9 bn

until 2030

PLN 14 bn until 2035

**EBITDA** 

PLN 1.7 bn

until 2030

PLN 2.1 bn

until 2035

#### For whom

#### **Transmission System Operator**

Short-term system balancing

#### **Energy consumers**

Energy prices stabilisation

#### Renewables

Greater integration capacity for RES

#### **PGE** shareholders

Element of building the Group's value

# Broad exposure to available energy storage technologies

Energy storage facilities will enable reliable short-term system balancing and support the continued integration of renewable energy sources. Through price arbitrage opportunities, they can also contribute to the stabilisation of electricity and heat prices.



Battery energy storage system (BESS)

Technical and commercial balancing for renewable energy sources and local grid balancing (distributed storage).

Revenue from capacity mechanisms reinforced by revenue from the balancing services market and energy market arbitrage.



Pumped-Storage Hydro (PSH)

Participation in daily balancing and the full range of regulatory ancillary services (e.g. blackstart).

PSH Młoty – additionally reduction of flood risk thanks to the support of water management.



**Heat storage** 

Combining renewable electricity and district heating by using surplus RES production.

Optimising the operation of cogeneration sources.



PGE Energia Odnawialna

PGE Energia Ciepła

## PGE Group's diversified energy storage portfolio

The energy storage facilities being developed by the PGE Group will incorporate a range of complementary technologies, enabling more effective utilisation of the Group's locations and generation assets.



Battery energy storage system (BESS)

Organic growth, incl. the use of coal asset locations

Acquisitions of operational and ready-to-build projects



Pumped-Storage Hydro (PSH)

PSH Młoty project with location decision in Q3 2026

The implementation depends on a new power or capacity mechanism and subsidies for the part dedicated to flood protection

Strategic partnership with NFOŚiGW

Potential acquisitions

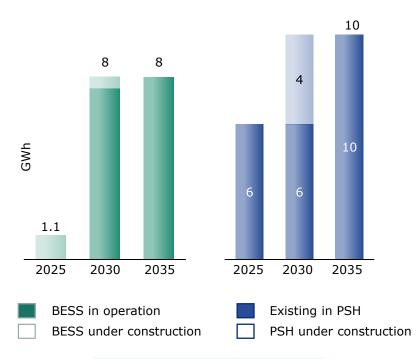


**Heat storage** 

An integral part of district heating systems at 12 locations, improving the energy efficiency of the system

Heat storage tanks up to 60 000 m<sup>3</sup> preferred





8 GWh in 2035 10 GWh

**0.5 GWh** in 2035

>60%
market share in 2035



# #1 Clean district heating



- Reducing CO<sub>2</sub> emissions by 60% by 2035
- Developing energy efficient systems in cooperation with local governments
- Integrating district heating with the electricity sector to enhance overall system flexibility



### #1 Clean district heating

#### Leader in integrated, efficient district heating systems



Keeping the local heat markets' leadership

Supporting the flexibility of the power system through the Group's commercial competencies

Optimisation of operation of generation and distribution assets

The combination of stable tariff revenues and CHP support mechanisms ensures return on investment and maintains EBITDA stability



#### PGE S.A.

Strategic outlook

Financing of investments
Optimising gas contracting sources
Monetising the commercial flexibility of assets

PGE Energia Ciepła Operational outlook

**CAPEX** 

PLN 9.3 bn

until 2030

PLN 18 bn

until 2035

including **PLN 3 bn** for network acquisitions and modernisation **EBITDA** 

PLN 2.7 bn

in 2030

**PLN 2.8 bn** 

in 2035

For whom

**Heat consumers** 

Reliability of heat supply

**Heating distributors** 

Thermal power availability

**Local governments** 

Energy security and financing the necessary expenditures for network modernisation

**PGE shareholders** 

Element of building the Group's value

**Environment and climate** 

Reduction in CO<sub>2</sub> and NO<sub>x</sub> emissions, and water use

## District heating on the road to climate neutrality

A roadmap is being developed for each heating system location to achieve climate neutrality while maintaining the price competitiveness of district heating.



Transformation of generation assets

**Maximising** the potential of Power-to-Heat

Replacing the old coal-fired units with new high-efficiency gasfired units

Construction of heat accumulators at all locations to optimise power in the sources

-60%

Reduction in CO<sub>2</sub> emissions by 2035 (compared to 2021)



Modernisation and development of network infrastructure

Reduction of transmission losses and gradual

implementation of lowtemperature networks

Optimal power and generation management thanks to **integration** into heat distribution networks

Implementing Smart Heat technologies

-3 p.p.

Reduction in average network losses (compared to 2021)



Scoping effective pathways to achieving climate neutrality

Striving to achieve the status of **efficient district heating systems** in integrated locations

**Research and analysis** on the possibility of using SMR units, zero-emission fuels, or CO<sub>2</sub> capture

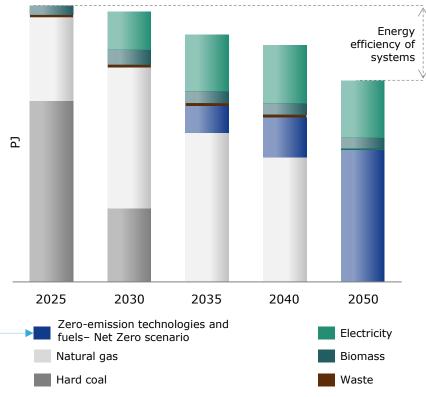
Technical and economic assessment of the possibility of **fuel-switching in gas units** and preparation of the supply chain

### **Net Zero**

by 2050

based on new technologies and zero-emission fuels

### Structure of district heating production



The level of production utilising electricity will have greater potential with increased commercial production management capacity and regulatory incentives for *Power-to-Heat*.

### Development and integration of efficient heat markets

Progressive decarbonisation will be supported by initiatives aimed at developing a comprehensive offering based on synergies within the PGE Group.

#### **Network integration**

- Cooperation with local governments and businesses to fully harness the potential of local heating resources
- Increasing the **integration** between heat production and distribution to optimise development at each location

#### Integration indicator

Increasing the share of own distribution in total heat sales



#### Development of heat markets and product and service offerings

- Intensifying sales and promotion of district heating
- Offering **an integrated solution** that extends the value chain through cross-selling and synergies within the Group
- Developing generation assets in new locations, including hybrid and decentralised (off-grid) energy sources

#### **LCOH**

Competitiveness of district heating compared to individual solutions



# Increasing flexibility and energy efficiency

- Implementation of ICT tools, including ML and AI, to manage the operation of generation assets and heating networks
- Construction of heat accumulators to optimise the performance of the district heating system
- Adaptation of the installations for efficient operation across a wide load range

#### Heat storage

Supporting the efficient operation of district heating systems



### Investments in the transformation and modernisation of district heating systems

The transformation of district heating assets will allow us to achieve climate neutrality while maintaining price attractiveness and security of supply.



# Transformation of generation assets

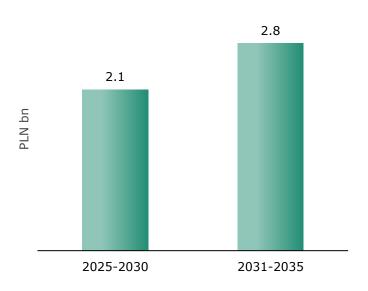
- Phasing out coal-fired heating units
- Deploying gas-fired cogeneration as a flexible transitional technology that enables a rapid shift away from imported coal and supports the future use of zero-emission fuels
- Implementing Power-to-Heat technologies powered by clean electricity, such as electrode boilers and heat pumps



### Modernisation and development of network infrastructure

- Acquisition of heat distribution networks
- Integration of the generation assets under development
- Optimisation of the network structure accounting for the role of waste heat, off-grid and hybrid systems





#### PLN 15 bn

Development and maintenance of district heating assets until 2035

#### PLN 3 bn

Potential acquisitions and modernisations of district heating networks



# #1 Responsible transition

- Responsible transition while ensuring energy security
- Efficient asset management
- Reduction of CO<sub>2</sub> emissions



### #1 Responsible transition

A responsible approach to changing the generation mix, with respect for the role of employees and local communities, fully aligned with the needs of the TSO - PSE S.A.

#### Our motivation

Responsibility for employees and local communities

Leveraging the potential for further regional development

Acting in line with the principles of sustainable development



#### PGE S.A.

Strategic outlook

Setting standards and directions for the activities of segment companies

Coordination of activities related to the transfer of employees within the Group

Competency model management

#### **PGE PAK Energia Jądrowa**

Operational outlook

#### **PGE GIEK**

Operational outlook

Cost rationalisation and optimal asset management
Social dialogue
Reclamation of post-industrial sites

#### For whom

#### **Transmission System Operator**

Power system stability

#### **Energy consumers**

Providing secure energy during the transition

#### **PGE Employees**

Transparency and socially responsible process management

#### **Local communities**

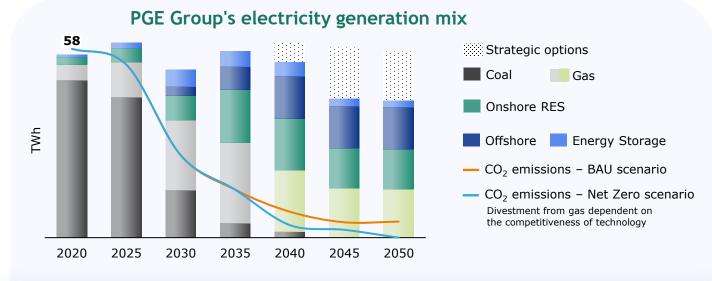
Harnessing the potential of existing locations for the energy transition

### PGE's transition on the path to Net Zero



The implementation of flexibility initiatives will enable PGE Group to responsibly expand its portfolio of renewable sources.

Due to a significant decline in coal-based energy production volumes - caused by market and regulatory factors - PGE will focus on large-scale low- and **zero-emission projects** that enable rapid growth in the clean generation market.



	2030	2035	2050
<b>CO<sub>2</sub> emissions</b> (scope 1: fuel combustion) vs. 2024	-50%	-75%	-99% – Net Zero scenario -92% – BAU scenario
Average emissions of electricity production [kgCO <sub>2</sub> /MWh]	415	230	0 – Net Zero scenario 90 – BAU scenario
Average variable cost of generation in the Group's portfolio	390	368	250
[PLN'24/MWh]			*RALL – husingss as usual

\*BAU - business as usual

Production at coal-fired power plants after 2035 depends on the demand of the Transmission System Operator and on the mechanism for financing the operational gap

## A responsible approach to the transition from coal energy

# Change in generation mix

- Competitiveness of coalfired power plants limited by CO<sub>2</sub> emission prices
- Change in the nature of operation of coal-fired units from baseload to peak-reserve
- Loss of profitability of coal operations

# Decline in coal energy demand

- The need for cost optimisation to reduce losses
- The need for rational asset management based on clear criteria and standards

# Need to maintain power in the system

- Coordination of available capacity with TSO's actual needs
- The need to implement a long-term financing mechanism for critical assets

# Evolution of the competence profile

- A qualified, experienced and committed team of employees
- Employment potential in PGE Group's growth segments

# Circular Economy

- Utilising opportunities for a business use of reclaimed land
- Effective management of decommissioned power plant assets

# DIALOGUE WITH EMPLOYEES COOPERATION WITH LOCAL COMMUNITIES COORDINATION WITH THE TRANSMISSION SYSTEM OPERATOR

Utilisation of infrastructure for the implementation of new investments by the Group

Optimised asset management and cost rationalisation

Cooperation with the public administration and the Transmission System Operator Reskilling of employees, engagement in growth segments

Reclamation and repurposing of retired power plant sites

### Energy security at the core of PGE GiEK's transition

Cooperation with the public administration and the Transmission System Operator

#### Energy security and flexibility

During the coming decade, coal-fired units will be needed to ensure the safe operation of the Polish Power System. The lack of market and regulatory mechanisms makes it impossible to cover the costs of their operation and the scale of the losses will be a significant burden on the Group's balance sheet.

Maintaining these units in the system requires the implementation of new support mechanisms.

2028 2035 Energy generation potential Energy market margin Balancing capacity sales Long-term capacity market contracts Capacity market for existing units Illustrative diagram - not intended to indicate the decommissioning timelines of individual units

# Optimal asset management in the transformation of PGE GiEK

Optimised asset management and cost rationalisation

#### Optimal asset management

The necessity to maintain assets while limiting their market utilisation requires particular diligence in managing operational costs and maintenance expenses. It also reflects our broader economic and social responsibility. A rational cost approach will support the responsible transformation of the sites, ensuring optimal availability and flexibility.

Effective performance of capacity obligations and balancing services	Optimisation of expected availability and failure rate in relation to their roles in the power system
An overhaul policy tailored to the market mission of the assets	Taking into account the evolving operational profiles of units and shifting performance objectives
Maintaining a balance between extraction potential and generation potential	Adjusting lignite mining capacity to match energy demand

### People at the heart of transition of PGE GiEK

Reskilling of employees, engagement in growth segments

#### Further professional development within the PGE Group

PGE GiEK's highly qualified workforce provides a strong potential for the Group's development projects.

#### RESKILLING

# We enable professional reorientation

Transformation requires evolution of qualifications

We support the development of employees in new areas in line with the Group's Strategy

In addition, we train employees in competence centres

#### PROFESSIONAL CAREER CONTINUATION

# Responsible HR policy within PGE GiEK

Maximising the efficiency of structured internal transfers to positions critical for the delivery of ancillary services

# Continuation of employment within the Group

Employees affected by the transformation will be offered job opportunities:

- At gas-fired power plants
- At the branches of PGE Energetyka Kolejowa
- At the branches of PGE Energia Ciepła
- In other development projects across the PGE Group
- In PGE's battery energy storage investments

#### PROTECTIVE PROGRAMMES

# Support for individuals choosing to leave the PGE Group

Employees choosing to continue their careers outside the PGE Group will receive support under:

- Concluded social contracts
- Dedicated voluntary departure programmes
- Statutory social protection
- Cooperation with regional employers

## Directions for potential development of the PGE GiEK sites

**Utilising existing PGE GiEK** sites for the implementation of new investments by PGE Group



#### Research and analysis on nuclear energy

- Bełchatów large nuclear units
- Turów SMR

#### New gas-fired power plants

- Gryfino (CCGT and OCGT)
- Rybnik (CCGT and OCGT)
- Turów (CCGT)

#### Combined heat and power units

- Gryfino
- Bełchatów
- Rybnik
- Turów

#### **Energy storage** and RES

- Gryfino
- Bełchatów
- Rybnik
- Turów

#### Circular economy

Responsible development of post-power plant sites

#### ENTITY RESPONSIBLE FOR IMPLEMENTATION

**Research phase** carried out by PGE S.A.

PGE S.A. **Energetyka Gazowa**  **PGE Energia Ciepła** as well as via Joint **Venture with other** partners

**PGE Energia Odnawialna** 

**PGE Ekoserwis** in cooperation with PGE GiEK and its subsidiaries

PGE GiEK will provide competencies and resources for optimal use of the potential of each location

### Nuclear energy as a long-term strategic option

For the period beyond 2035, the PGE Group will continue to develop additional strategic options, seeking the most effective pathways to achieve the Net Zero scenario. The key criterion will remain the creation of Group value based on zero-emission generation, while supporting the competitiveness of the economy.



Nuclear technologies including SMR

"Nuclear power in PGE" Location assessment programme

3 **locations**preselected for
detailed analysis
(Bełchatów, Turów, Konin)

#### Strategic Rationale

Participation in a crucial part in the energy transition in Poland.

#### **PGE Group's Plans**

Until 2035, spending only on preparation of projects for administrative and investment decisions.

Subsequent decisions will depend on the results of location research and market demand.

#### Project Profitability

Depending on state aid

mechanisms.

# New Group Competencies

Readiness to participate in Polish Nuclear Power Programme (PPEJ) as a unit operator, offering (amongst other things) qualified staff, service and operational competencies, as well as sales support.

#### Safety

Multi-criteria analyses of safety at the construction and operation stages.

# Circular economy as a part of responsible transition

# We are committed to the responsible use of resources and to protecting our environment

#### Rehabilitation

Rational management of the decommissioning and reclamation of postindustrial locations

# Partnerships and new technologies

PGE Group coordinated activities

# Efficient waste management

Development of new solutions aimed at increasing the level of waste recovery to 75%



# Management of Combustion Byproducts

Management of current CBP generation and resources accumulated in storage facilities

#### Responsible consumption

Shaping behaviours and processes that support the protection of natural resources and the environment



- Reducing expenditure through better preparation of investment sites
- Extending the lifetime of products, materials and resources to reduce operating costs
- Optimising costs and expenditures through a strategic, long-term approach to asset management throughout their lifecycle
- Reducing disposal and reclamation costs for production assets and generating income from unproductive assets (net RecEx)

PGE Group strategic target

Net RecEx = PLN 0



## #1 Offering for business partners

- A comprehensive and advanced range of energy solutions
- Proactive cooperation with customers in the energy and balancing market



## #1 Offering for business partners

## Advanced, partnership-based comprehensive solutions for businesses in Poland

## Our motivation

Enabling customers to access optimal solutions for purchasing electricity to improve their competitiveness

Building revenues from access to capacity mechanisms, the balancing market and ancillary services

Monetisation of the potential for aggregation of market participants

Increasing margins outside the regulated segment

Facilitating sensible use of energy and distribution services for customers



### PGE S.A.

Strategic perspective

Optimisation of the portfolio of capacity services and energy trading Development of commercial strategy and customer segmentation Resource aggregation

### PGE Energetyka Kolejowa

Operational perspective

### **PGE Obrót**

Operational perspective

CAPEX

PLN 0.5 bn until 2035

**EBITDA** 

PLN 0.8 bn

until 2035

## For whom

### **Business partners**

Competitive prices through access to capacity and electricity markets Active participation in the energy market Use of prosumer solutions (generation

### **PGE** shareholders

sources, storage, DSR)

Element of building the Group's value

## Changing market dynamics results in favourable price outcomes for active participants

Growth of RES favours a decrease in wholesale prices, but the increased volatility of energy prices is a challenge for many market participants. Flexibility in both generation and demand reduces costs and improves competitiveness.

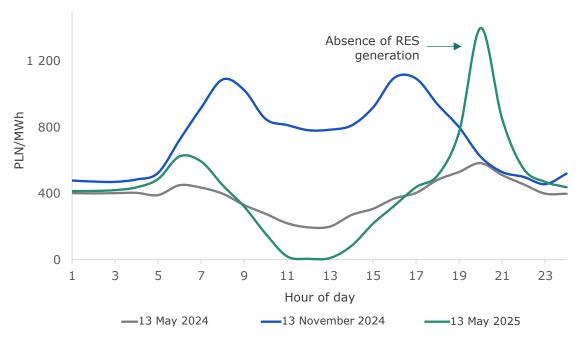
**PGE** Group's offering will meet the expectations of business partners by comprehensively addressing their energy management needs.

- Providing customers with access to energy, capacity and balancing services
- Supporting customers in managing their energy storage, PV installations and heat pumps
- Aggregation of customers' production and storage resources and enabling them to be part of the DSR
- Preparation of a wide range of flexible forms of energy purchase, e.g. as part of cPPAs or indexed price formulas
- Support in effective management of the consumption profile

**Effective management of the electricity and heat** consumption profile will allow our customers to reduce their exposure to the volatility of energy prices on the market and ultimately reduce costs.

## Market participants can enhance their ability to effectively manage consumption and generation profiles

### Daily electricity price volatility



Source: Towarowa Giełda Energii SA (TGE)

# The evolving needs of business customers require offerings tailored to their specific requirements

### **PGE Group offering**

### **Electricity and heat**

foundation of the offering and margin base

Sale of electricity and heat in formulas and supply models tailored to the needs of business partners, including the connection process.



## **Business partners**

### Diverse sales formulas, including:

- cPPA contracts
- Fixed price contracts
- · Indexed-linked contracts
- Contracts with safeguards
- Mixed formulas

### Diverse delivery models, including

- Electricity and district heating and cooling
- Hybrid hubs

- Construction and operation of own RES
- · Virtual sales models

# [H.]

### Rail customer

- Tailor-made contracts for the sale of energy (including green energy) to rail carriers
- Construction of hydrogen railway stations and hydrogen supply in locations facing electrification challenges



### Additional energy services

flexibility and activity on the market

Modern services supporting active participation in the energy transition through energy, capacity and flexibility services markets.

### Select services:

- DSR Aggregation
- · Provision of Balancing Service Provider Functions
- Development and management of customer installations (PV, storage, heat)

 Solutions enabling recovery of trains' braking energy



### Advisory and technical support

optimisation and efficiency

Comprehensive advice and support in energy management – from needs analysis to implementation of solutions.

### Advisory scope including, i.a.:

- Energy efficiency
- · Cost and consumption optimisation
- Planning for the energy transition

- Catenary construction and maintenance services
- Solutions supporting energy efficiency on railways, including *eco-driving*

# Comprehensive energy solutions for business customers as a driver of value in the business segment

Development of cooperation models that promote comprehensive and long-term solutions enabling benefit sharing and improving the competitiveness of the national economy

The offering for business partners will be based on long-term partnerships tailored to individual needs. The development of the offering will be implemented in a way that ensures long-term profitability for the partner's business segment.

Selective offering

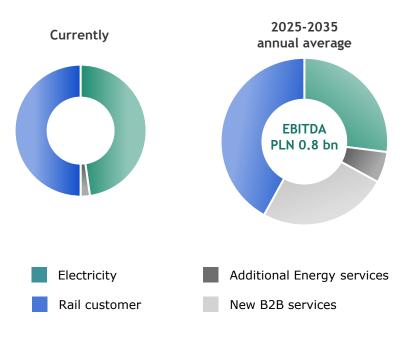
Sources of value for PGE Group

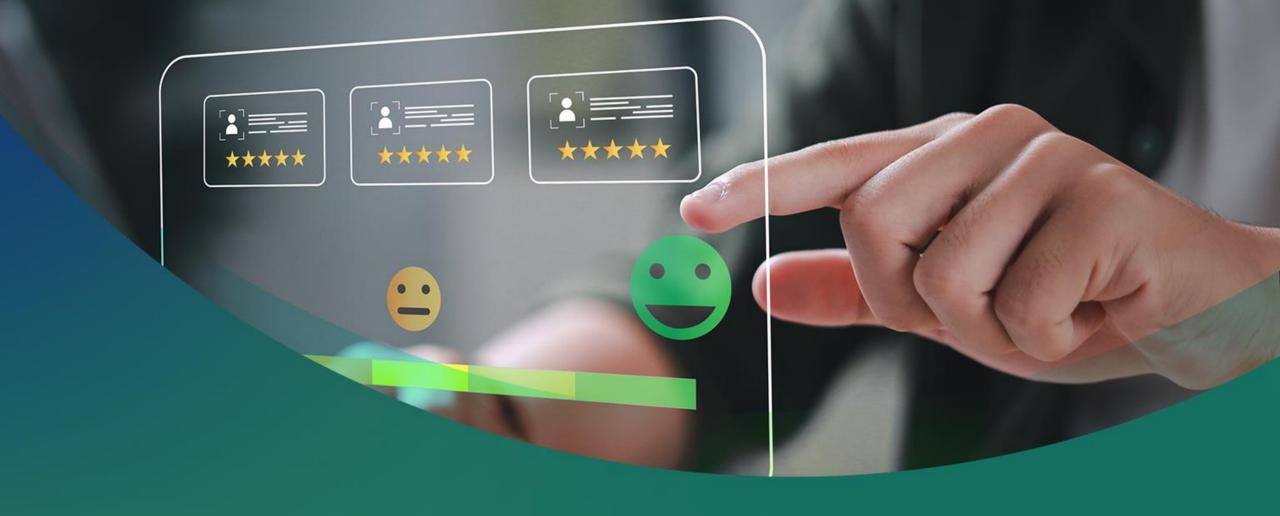
Partnership-based value creation

Prioritising margin over volume

Long-term collaboration

## **Expected margin effects**





## **#1 Quality of Customer Service**

- Maintaining the customer satisfaction index at the level at least 85 points
- Availability of remote and face-to-face service channels



## **#1 Quality of Customer Service**

## Effective communication channels enabled by Customer Service Points availability and advanced digital solutions

## Our motivation

Strengthening the positive image of the PGE Group

Developing non-tariff margin sources

Improving Customer Service efficiency

Ensuring security of energy supply

Advanced prosumer energy solutions



## PGE S.A.

Strategic outlook

Forecasting the consumption profile of the customer portfolio Optimising energy contracting in the retail portfolio Defining service and communication standards

### **PGE Obrót**

Operational outlook

## **PGE Dystrybucja**

Customer Service outlook

CAPEX

PLN 0.6 bn until 2035

**EBITDA** 

PLN 0.5 bn

until 2035

## For whom

### **Residential customers**

Reliability of energy supply Enabling participation in the energy transition Availability of user-friendly contact channels Option to purchase additional services

## We will enable residential customers to choose convenient contact channels tailored to their needs

The PGE Group will maintain the traditional face to face Customer Service Points and develop digital channels tailored to the changing needs of key customer groups and technological capabilities.



## Convenient contact channels

- **Customer Service Points** availability of traditional faceto-face forms of contact
- **Digital and mobile access** self-service via a mobile application and Customer Portal, 24/7 availability of services





## We provide residential customers with security and opportunity to participate in the energy transition

The PGE Group will provide residential customers with a stable supply of electricity at competitive prices and enable them to participate in the energy transition.





- Reliability of supply stable and reliable access to electricity and heat
- Availability of green energy the option to choose electricity and heat from renewable sources
- Tailored delivery formula products with a guaranteed price or dynamic tariffs – tailored to customer preferences and consumption profiles
- **Virtual prosumers** a platform that provides participation in the production of renewable energy without the need to physically own an installation



## **Energy-related services**

- Sales, assistance and servicing of installations
  - dynamic development of the PRO-EKO offer and energyrelated service packages
- **Energy consulting and intelligent monitoring** 
  - Customer applications that enable consumption tracking, generating reports and presenting recommended actions to achieve savings
- Possibility to participate in the flexibility market - active participation in the energy transition by supporting the stability of the system (through a portfolio of individual customers aggregated by DSO)



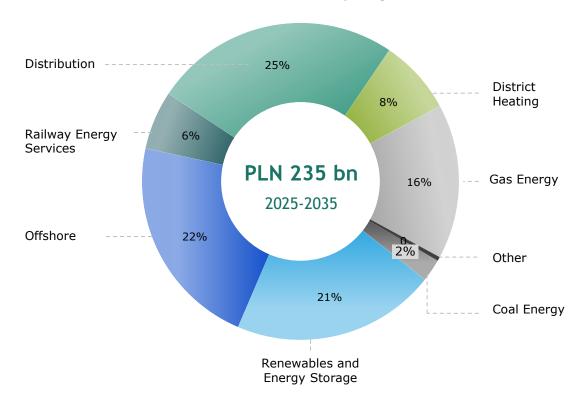
Financial effects



# An ambitious development programme based on regulated revenues and building growth potential in RES and flexibility

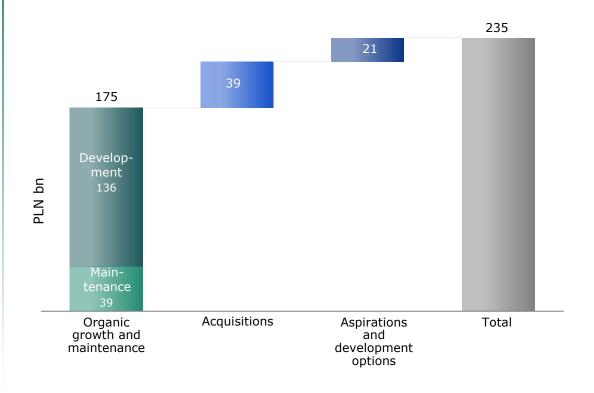
An investment programme focused on grid infrastructure, renewables and flexibility.

## CAPEX breakdown by segment

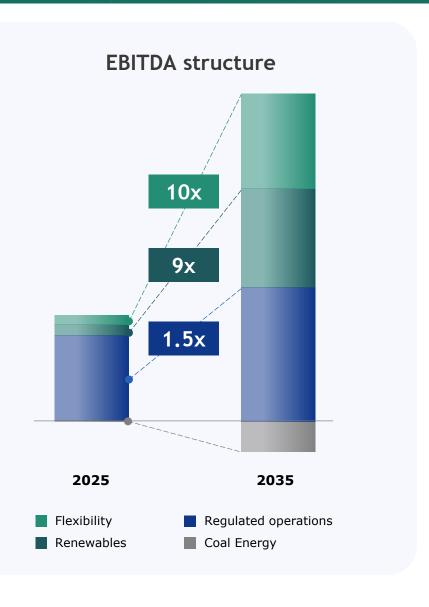


Approximately 25% of CAPEX consists of acquisitions and development options, which will be pursued depending on the PGE Group's financial capacity and the availability of value-enhancing opportunities.

### CAPEX 2025-2035



# EBITDA secured by distribution and regulatory mechanisms with growth potential driven by renewables and system flexibility



- Gas-fired power plants
- Energy storage
- DSR

- Capacity mechanisms and market valuation of flexibility
- Integration of PGE Group's resources and competencies
- A partnership and profitable offering for business

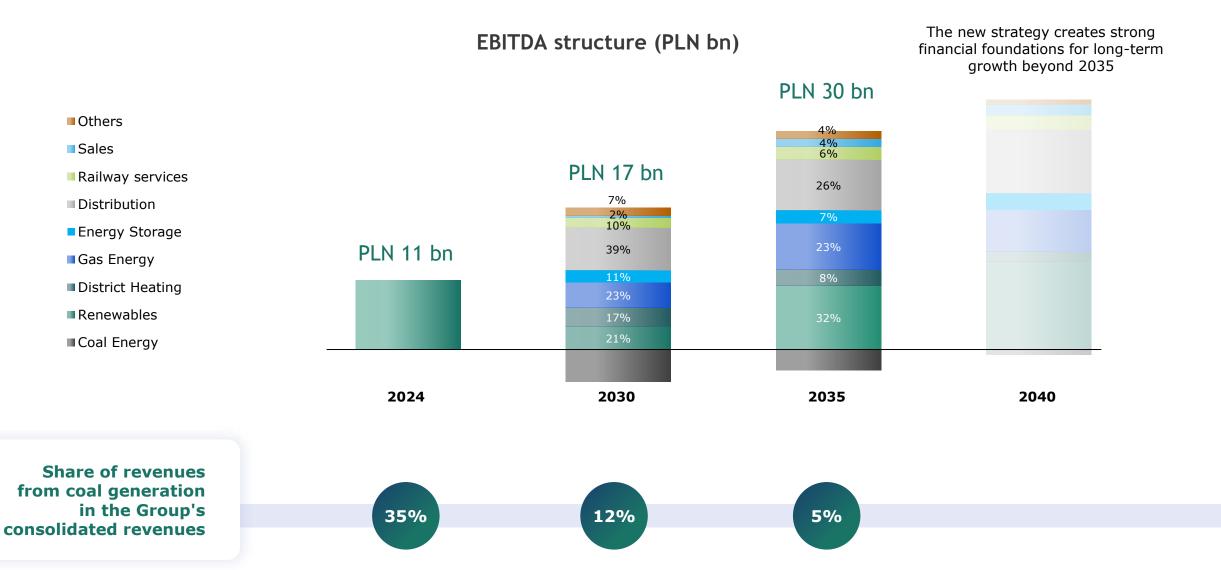
- Offshore
- Onshore
- PV

- Focus on large projects
- Optimisation of financing structures
- Operational excellence

- Distribution
- District heating

- Rational investments
- Modernisation and digitisation of assets
- Greater observability and manageability of the infrastructure

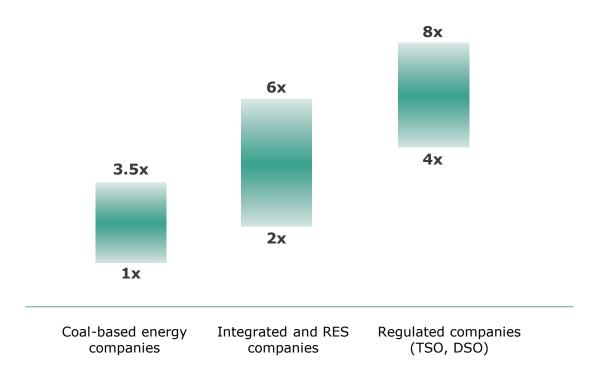
# EBITDA evolution towards regulated segments, renewables, and mechanisms that reward flexibility



# Business profile transformation will give the PGE Group greater ability to finance its growth

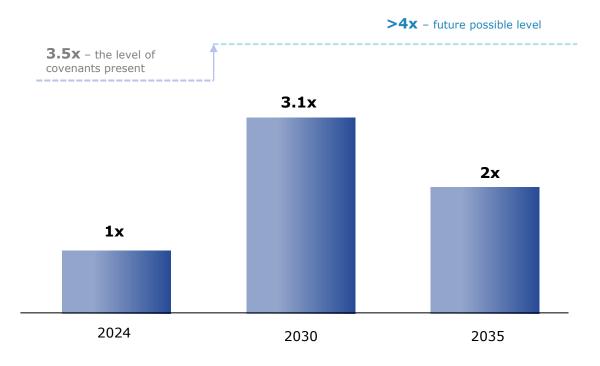
At present the PGE Group maintains a low net debt-to-EBITDA ratio compared to the industry in general.

## Typical NetDebt/EBITDA ratios of energy companies by business profile



The Group aims to improve its risk profile by adopting new growth financing models, enabling a safe increase in net debt levels while maintaining its credit rating and keeping financial costs under control.

## Forecast of net financial debt to EBITDA of the PGE Group



## Sources of financing for the investment programme (1/2)



## **New Gas Capacities**

# **District Heating**



### REVENUE STREAMS

- Capacity Market
- **Balancing capacities**
- **Energy market**

- · Sale of electricity and heat
- Capacity Market
- **Balancing capacities**

- Regulated revenue
- Non-tariff revenues

### FINANCING



- The growing potential of project finance
- Potential involvement of Polish banks and structures with the participation of export agencies (KUKE) and development financing banks (BGK)
- Significantly reduced credit risk due to securing a stable source of revenue based on support from the won capacity market auctions
- · Growth financed mainly based on the company's financial surpluses and the Group's balance sheet
- Maximising the use of preferential financing
- Project financing especially where the decarbonisation plan allows splitting out the part of the assets remunerated by the support system
- · Greater availability of project finance in the event of implementation of the national Strategy for District Heating, including support mechanisms for Power-to-Heat

- Financing based on the financial surpluses of companies (EBITDA)
- Involvement in obtaining aid funds (grants, preferential loans) - for infrastructure and R&D projects, to limit the growth rate of distribution rates

## Sources of financing for the investment programme (2/2)







- Contract for Difference
- Sale of electricity

- Sale of electricity (i.a. wholesale market and PPA)
- Guarantees of origin

- Capacity Market
- **Balancing capacities**
- Energy market

### FINANCING



- Strong demand from financial institutions to provide project finance financing - allows minimisation of own contribution
- · Syndicated investment loans with the participation of a very wide group of financial institutions, including commercial banks, export agencies and multilateral institutions
- Building unique know-how through cooperation with renowned industry partners

- High financing and refinancing potential in the project finance model
- The limited supply of wind projects available on the market causes a significant appetite on the part of financial institutions for properly structured transactions
- Investment loans granted by banking syndicates, including commercial banks, export agencies and multilateral institutions

- Growing potential of project financing the market is at the stage of building experience and market standards
- Investment loans granted by banking syndicates, including commercial banks, export agencies and multilateral institutions
- Technology that fits into aid programmes and "green" debt financing

## ESG as a source of stakeholder value

The strategic goals of the PGE Group are adopted with the aim of positively impacting the surroundings. Integrating the ESG aspects into management practices ensures complete alignment with sustainability principles.

## **ENVIRONMENTAL**

Minimising the negative impact of operations on the environment and implementing initiatives contributing to environmental protection

- New dispatchable generating units
- Expansion of the RES portfolio
- Grid modernisation enabling more RES connections and less re-dispatching
- · Implement biodiversity conservation and water management policy objectives
- · Implement circular economy principles and reduce resource consumption

### SOCIAL

Support for the responsible transition of the Polish economy, care for employees and relations with communities

- Reducing the risk of energy price increases and strengthening security of supply
- Stable working conditions and a partnershipbased approach to local communities
- Engaging local authorities in planning a responsible transformation
- Supporting employee development and fostering their commitment

## **GOVERNANCE**

Standards of organisational management

- Organisational resilience and transparency
- Management of processes and organisational culture
- Principles of responsible ESG-compliant corporate governance
- Recognition of minority shareholders' rights

Net Zero by 2050

-75% CO<sub>2</sub> emissions by 2035

-76% NOx emissions by 2035

Gender pay gap: <5%

**Aspiration and Zero Accident Policy** 

>30% variable remuneration for the Management Board depending on the achievement of ESG targets

>90% anti-corruption training for particularly exposed job positions



Operating Model



## Optimal and effective operating model

Effective and transparent cooperation with stakeholders will be key to the successful implementation of the PGE Group Strategy.

## Stakeholders and the Group's context

Public administration and regulator

Transmission System Operator

Shareholders

Customers

**Suppliers** 

Scientific community

Financial and commodity markets

Local communities

Business partners

### RESPONSIBILITY



**DIALOGUE** 



**ESG** 



**INNOVATIVENESS** 



LOCAL CONTENT

## **PGE Group**

## PGE S.A. Corporate Centre

- Strategy and asset management
- Wholesale trade and Market Access
- Investments and strategic partnerships
- Financing
- Regulatory management
- Organisational culture and communications
- Innovation and digitalisation
- Shared Services Centres
- Process management

## **Business segments**

- Execution of investments, initiatives, and transition projects
- Operation and maintenance (O&M)
- Operational excellence
- Role of responsible employer
- Infrastructure security

Cooperation and clear division of responsibilities within the PGE Group

as the foundation of efficiency

## Constructive dialogue with the regulators

**Financing** 

The energy transition requires a predictable and sustainable regulatory framework that supports, rather than hinders, the implementation of capital-intensive infrastructure projects and the creation of solutions for the benefit of energy consumers.

PGE Group will substantively and constructively participate in regulatory processes at the national and international level, especially in areas directly resulting from its mission:

Creating support systems and market mechanisms 1. Extension of power mechanisms for dispatchable capacity Safe adapted to the specifics and scale of investment 2. Revenue stabilisation mechanisms for zero-emission units projects and considering the volatility of the transition 3. Facilitating investments 4. Transitional solutions for coal and gas units environment **Energy supply** security 1. Clearly defined and realistic energy and climate targets Harmonious 2. Mechanisms for stabilising CO2 and fuel prices Predictability of the EU energy market, stability development of 3. Development of balancing markets and flexibility of the EU ETS, mitigation of investment and 4. Changes in the retail market – benefits to consumers and suppliers national and EU operational risks thanks to the revision of regulations that did not meet the needs of markets Supporting the the energy transition competitiveness of the Polish economy 1. Maintaining the price competitiveness of energy and district heating Gaining trust of consumers and local communities Social 2. Considering the pace of commercialisation of zero-emission by ensuring a balance between aspirations, technologies acceptance financial and technological capabilities 3. Transparent and constructive dialogue with stakeholders on energy policy priorities Group's value creation 1. Availability of an adequate level of financial support instruments Providing funds for investment and profitable proportional to the scale of the challenges

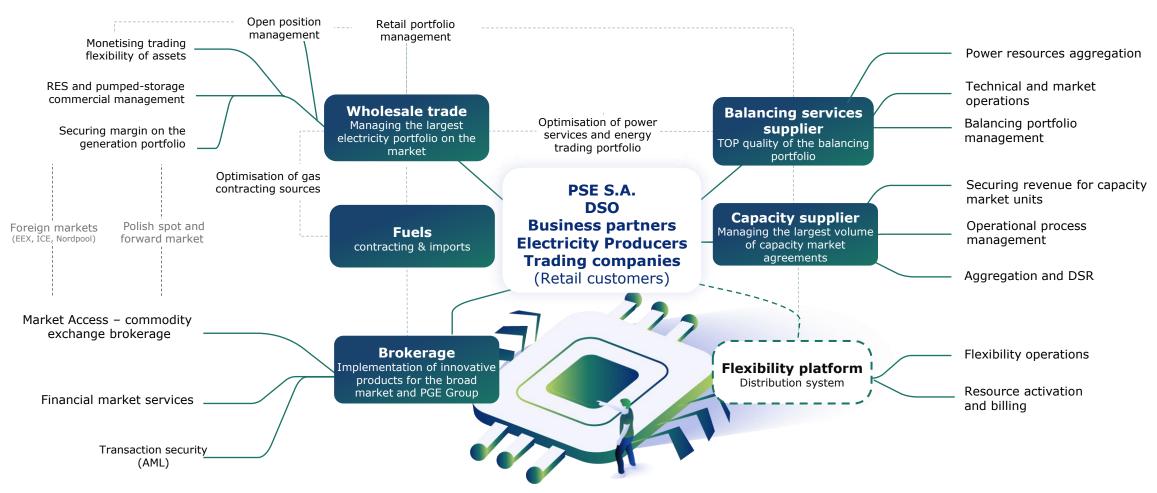
operation while maintaining affordability for

customers

2. Ensuring an adequate return through tariff mechanisms

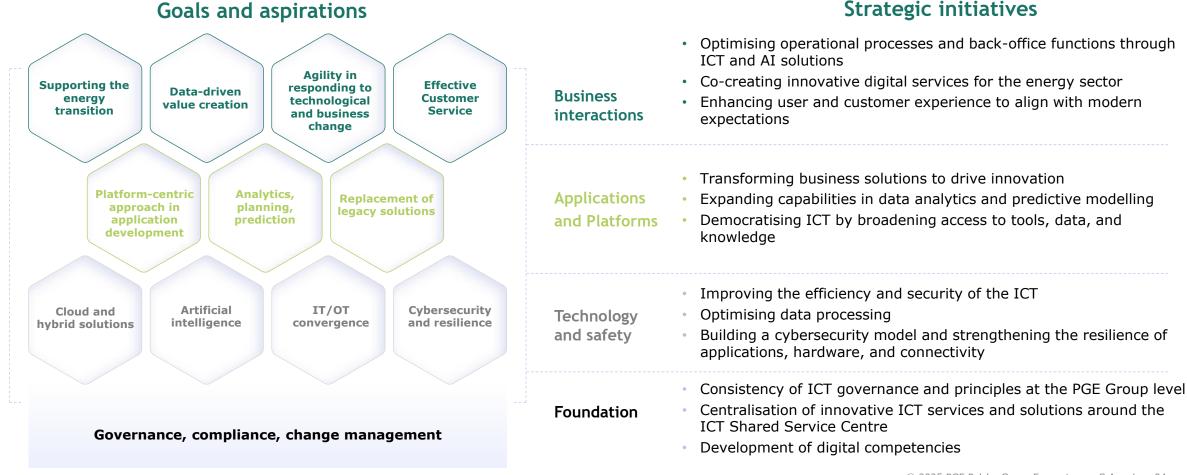
## Energy, capacity and flexibility platform

The PGE Group is strengthening its competencies, organisational structures, and systems to lead the energy trading, power system balancing, and effective collaboration with the PSE S.A. (TSO) and DSOs, contributing to the development of a modern and efficient energy market.



## Comprehensive approach to ICT development

The strategic transformation of our ICT landscape is designed to empower the execution of our business strategy by creating a flexible, scalable, and secure digital environment. This foundation will not only support users in their daily operations but also enable the organisation to sustain a competitive edge in the rapidly evolving energy market.



## Strategic talent management

In the face of dynamic changes, we focus on **developing our employees – their competencies**, **motivation**, **and ability to co-create the PGE Group**.

Being an organisation ready for future challenges, we are committed to **promoting digital skills**, **responsible leadership**, and facilitating cross-generational communication.

## Competencies of the future:

We support the development of technical, social, and leadership skills – we build an organisation ready for change through the development of knowledge, motivational leadership and a culture of cooperation.

## Diversity and collaboration:

We want to create space for both innovators and those who bring experience. We support the building of teams based on diverse perspectives, with equal opportunities for women in the energy sector.



### **ZERO** workplace accidents

- ground rule in the PGE Group



## Low employee turnover rate

 reflects the stability of employment and staff satisfaction



## The real impact of women on the organisation

high share of women in key positions



### Min. 80% Staff retention

after employment under an employment contract for the next
 12 months



### Equity in remuneration

– pay gap below 5%



## Succession plan for key positions

- we groom successors



An environment of respect and equal opportunities for all

## Efficient asset management

Our Group implements systematic and coordinated principles and initiatives to manage its assets, risks, and spending for sustainable achievement of strategic goals.

## **PGE Group's Strategy**

## PGE Group's Asset Management Policy

Sets standardised rules and practices for managing production assets across the PGE Group.

## General Procedure for Asset Management System

Defines the rules governing the scope of powers and the manner of conducting activities relating to the PGE Group's asset management.

## Strategic Asset Management Plan (SAMP)

Defines strategic objectives for asset management, the methodology for creating AMOP and the functioning of SAM in group members.

Strategic goals asset management

## Asset Management Operating Plan (AMOP)

Defines the activities and resources, responsibilities and timelines for the implementation of the SAMP and the achievement of asset management objectives for the Group companies.

**Operational indicators** 

## Results of implementing strategic priorities:

- Ensuring the security of energy and heat supply to customers
- Building value for PGE Group's shareholders

- Compliance with the principles of sustainable development
- · Safe use of assets

## Comprehensive risk management

The PGE Group employs a GRC model designed to enable the organisation to achieve its business objectives in an ethical, predictable manner, in compliance with legal and market requirements.





## **Corporate Governance**



## Risk



## Compliance

The establishment of risk, investment and sustainable development committees at the highest management level, reporting directly to the Management Board of PGE S.A., ensures supervision over the effectiveness of risk management processes throughout the PGE Group.

The function of monitoring, coordinating and supporting risk management is performed by the department responsible for risk management, which enables **independent** assessment of risks and their impact on the operations of the PGE Group.

Separating compliance functions strengthens operational compliance with legal regulations and internal standards and increases the effectiveness of monitoring the regulatory environment and identifying potential gaps.

## Integrated IT tools

Risk management support systems enable monitoring, analysis and reporting of operational risks.

## Risk registry

Identified risks are documented in dedicated databases, which enables their systematic monitoring and assessment of the effectiveness of mitigation measures.

## Resilience and security of processes and assets

Technical risks

Due to ongoing market and environmental changes we see a **need to increase security and resilience**.

We aim to **ensure business continuity**, asset security and protection of sensitive data.

In our activities, we consider the potential impact of various risks, including:

Threats in the digital domain

Climate change

Extreme weather events

Social changes

Financial risks and economic uncertainty

Terrorism and physical attacks

Political crises

Technological advancement and the adoption of a securityby-design approach are key to maintaining both competitiveness and resilience.

By leveraging cutting-edge solutions, we aim to ensure the reliability and quality of our products and services, while offering our customers access to multifunctional tools and intuitive, user-friendly interfaces.

To safeguard critical infrastructure, our initiatives are closely coordinated with key stakeholders and public administration, ensuring a comprehensive approach to physical security.

We conduct reviews of security requirements and best practices and prepare business continuity and crisis response plans.

We **implement initiatives** enabling the entire Group to comply with the standards on counteracting money laundering and terrorist financing.

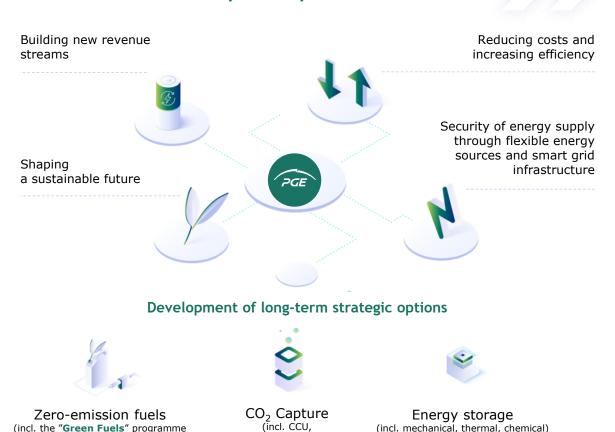


## Research, development, and innovative technologies

Alongside the development of generation units, the PGE Group will pursue strategic options in areas that enable achieving zero emissions while ensuring the security of the power system.

## Research and Development priorities

for the RFNBO supply chain)



Direct Air Capture)

## Effective implementation process



Analysis of the technological challenges faced by the PGE Group's companies



Identifying innovative solutions to meet requirements and improve the functioning of the PGE Group's companies



Connecting partners and science with the PGE Group's companies through pilot implementations and PoC



Successful deployment in business lines and commercialisation on the market

## Stakeholder integration in Research and Development

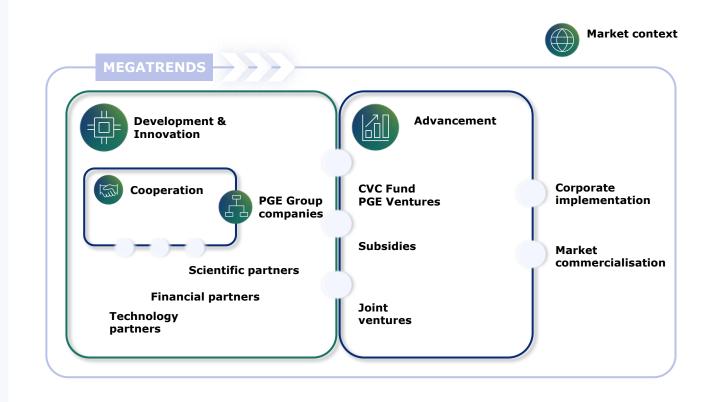
R&D initiatives will serve to test concepts, technologies, and new business models by linking PGE with scientific communities, financial partners, and customers, thus providing innovative services and products.

Leveraging the knowledge, experience, and resources of all stakeholders, in combination with the PGE brand, will create a dynamic development platform.

The use of internal competence centres allows us to effectively respond to changes in the environment and the needs of customers.

Cooperation with external technological and scientific partners enables us to share resources and mitigate risks in research and development projects.

Cooperation with capital partners enables effective scaling of development projects and diversification of financing sources.



## Improving the management system in line with ESG principles

## **ESG Ratings**

As part of our commitment to sustainability, the PGE Group is regularly evaluated by independent ESG rating agencies. These assessments examine the Group's transparency, its management of ESG risks and opportunities, and its broader environmental footprint.

_	ESG Ratin	g	Sustainable   Fitch
	Rating	Pt. ranges	
	5	0-12.5	
	4	12.5-37.5	PGE Group's
	<u>3</u>	37.5-62.5	current score 53
	2	62.5-87.5	(2025)
	1	87.5-100	

**PGE Group aims** to improve its ESG rating by 2030

## Sustainable Development Statement

Since 2025, PGE has been reporting its impact on the environment in sustainability statements included in the Management Board Report.

The statement is based on the guidelines of the CSRD directive and the accompanying ESRS reporting standards.



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