Strategic development directions of ORLEN Group

Warsaw, 14 July 2020

Agenda

1. **Energy transition in Poland**
2. Strategic aspirations of ORLEN Group
3. Key investment drivers

The fundamental challenge of the Polish energy sector is the need for its deep transition

- **Transition of the Polish energy system is necessary** due to economic, social and regulatory reasons. In Poland it can form a greater challenge than in other EU Member States.
- **The national energy system is based on coal,** has limited potential for the development of solar and hydro power and does not have nuclear power.

- **The use of fossil fuel in the economy will come under greater decarbonization pressure,** and electricity will become the leading source of energy.
- **Natural gas will gain in importance** as a transition technology, with lower level of emissions than coal-based energy, which will additionally stabilize the target system based on renewable energy. The increasing role of gas will require the diversification of supply sources and the development of transmission infrastructure.

- **The key changes in the Polish system are the progress of electrification** of industry, insulation and cooling of buildings and transportation, a strong increase in renewable energy and a decrease in coal energy production.
- **T&D grid will require modernization,** expansion and strengthening of the system stabilization mechanisms (using new technologies such as energy storage).

The pressure of investors, consumers and the regulator as well as the development of technology enable the energy transition based on RES and natural gas

Trends

Customers: expecting low-carbon, renewable fuels

- **2/3 of the global population** recognizes the **changing climate as a threat** to their countries**.**
- More and **more customers** are choosing **alternative drives in the automotive industry** (electric and hybrid vehicles), they also choose **low-emission energy for homes** (gas, prosumer renewable energy).

Technologies: enable cost-effective energy transition

- **Increase in profitability of renewable energy technologies** (offshore and onshore wind farms, PV): cheapest energy sources after 2025.
- After 2030 an economically profitable increase in the scale of applications of electric and hydrogen vehicles in transportation, energy storage in RES is expected.

Regulations: the need to decarbonise and reconfigure the assets

- **Over 1200 regulations** on **decarbonization and climate protection after the Paris** Agreement against 60 in 1997 after Kyoto.
- **Institutional investors with assets worth USD 10 trillion** have pledged to **limit investments** in highly emission fossil fuels (coal, oil).

Source: PKN ORLEN's study

Key factors determining the reconfiguration of the mix in the fuel and energy sector

Electricity, including RES

The progressive decrease in the cost of renewable energy technology and energy storage will result in the **dynamic development of the dispersed RES energy and a significant increase in demand for electricity**

Gas

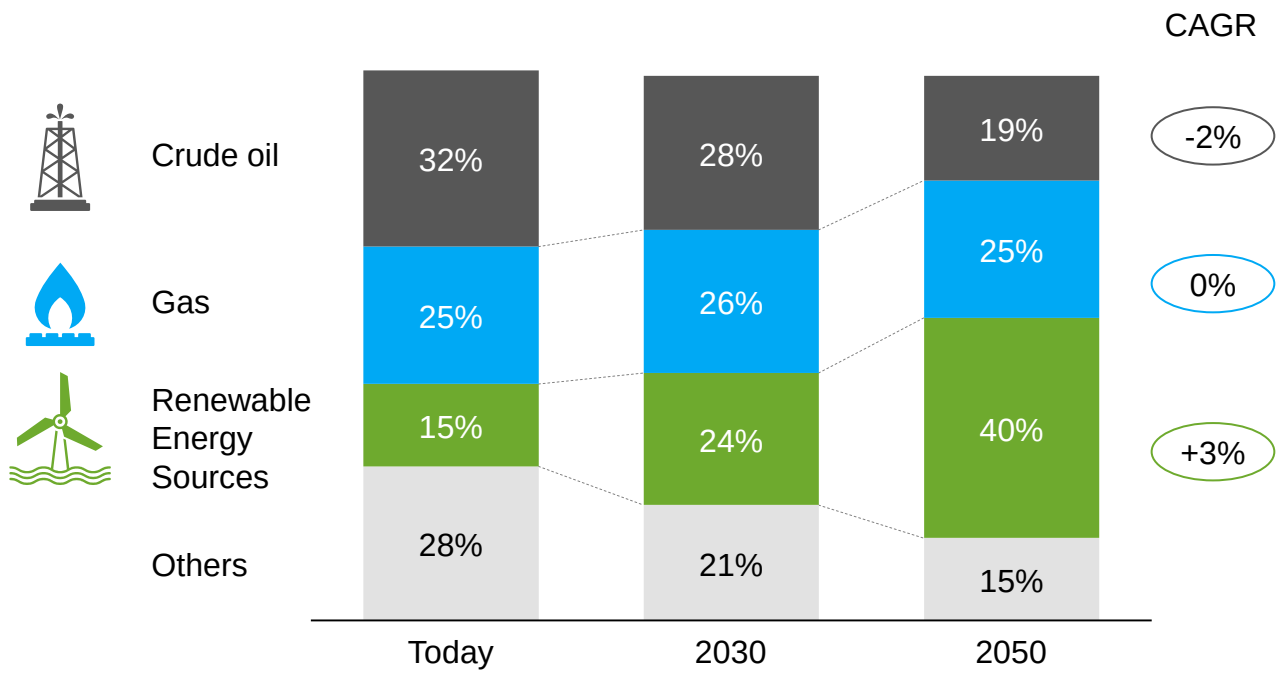
The need to reduce emissions of the industry and the real estate segment determines the **growing importance of gas power and further increase in demand for this fuel.**

Crude oil

Popularization of alternative (electric) drives, increased demand for biofuels in aviation and maritime transport, development of chemical recycling determine the **decrease in demand for crude oil-based feedstock and petroleum fuels.**

The growing importance of renewable energy and gas will significantly change the European energy mix

Share of carriers in final energy consumption in Europe
%



Comments

- Demand and margins pressure
- Structural oversupply

- Important transition fuel
- In the long run, a balancing medium for renewable sources (RES)

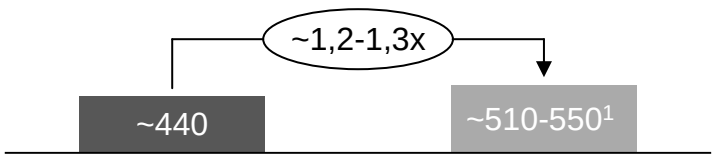
- The most important direction of energy investments
- The biggest beneficiary of new regulations and support systems

Source: IEA baseline scenario, BCG analysis

Central and Eastern Europe is one of the few regions in Europe with an ever increasing demand for energy resources

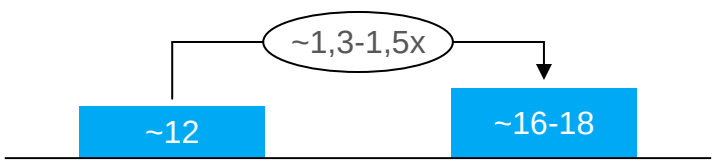
Electricity demand, TWh

Electricity



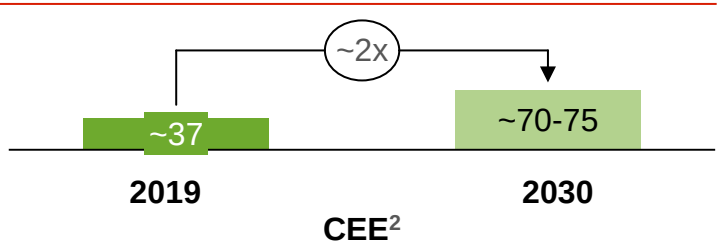
Installed capacity in gas energy, GW

Gas



Planned capacity installed in RES, GW

RES



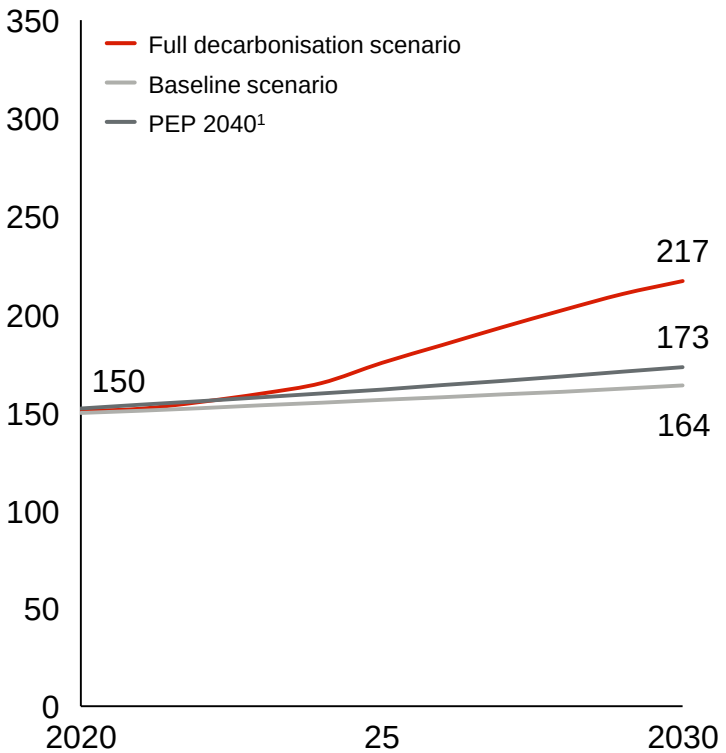
Key findings

- Central and Eastern Europe is one of the few regions in Europe with a constantly **growing demand** for electricity
- In Central and Eastern Europe there is currently less capacity in gas than required for balancing future renewable energy sources.
- Many coal sources in mixes of Central and Eastern European countries require **a change to renewable fuels.**
- In Central and Eastern Europe there is a lower share of RES in the mix than Western Europe.

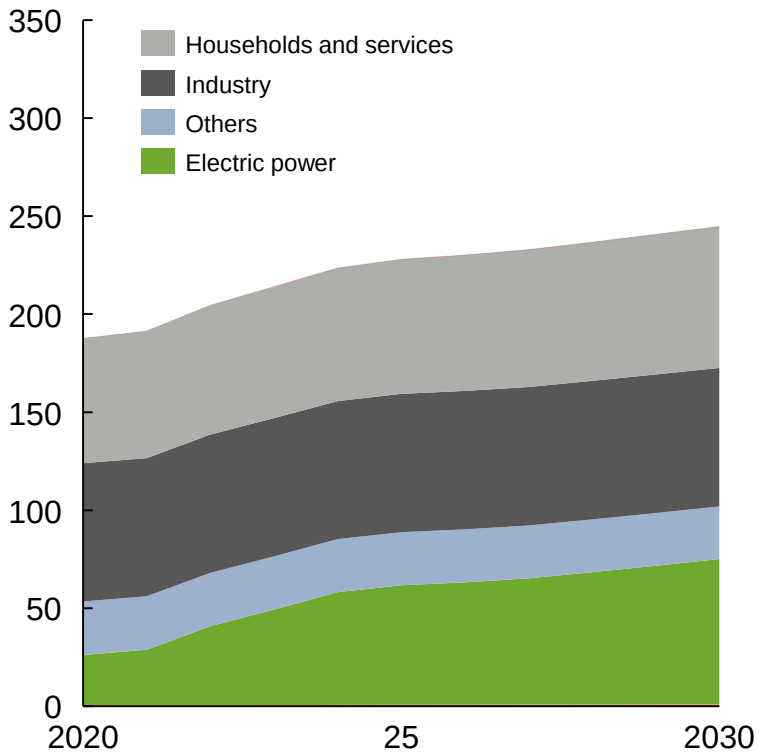
1. Depending on scenario (lower range for Sustainable Transformation Scenario)
2. CEE: Bulgaria, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia.
Source: IEA, ENTSO-E, IRENA, PEP2040, ARE, BCG analysis

In turn, the transition in Poland will lead to an increase in demand for electricity and natural gas

Demand for electricity in Poland, TWh



Demand for natural gas in Poland, TWh



Key findings

- The energy transition in Poland will cause significant changes in the national energy system, especially causing an **increase in demand for electricity and natural gas** as a fuel for energy production.
- **The growing demand for electricity will drive demand for gas.** Gas-fired power plants will gradually replace (shut down due to end of life) coal-fired power plants and cogeneration plants. They will also provide a stable source to meet new demand and stabilize the growing share of renewable energy.

1. Electricity demand according to PEP2040 estimates, assuming own use and transmission losses in the grid of ~16%

Source: Poland's Energy Policy (PEP) November 2019, Global Energy Perspective McKinsey & Company

The largest companies in the sector participate in the energy transition process, expanding the scope of their activities to other areas

Activity dimensions	Shell	bp	TOTAL	equinor	eni	OMV	MOL	ORLEN
Gas	✓	✓	✓	✓	✓	✓	✓	✓
Biofuels	✓	✓	✓		✓		✓	✓
Conventional energy		✓				✓	✓	✓
RES	✓	✓	✓	✓	✓		✓	✓
Sale of electricity (B2C)	✓		✓			✓	✓	✓
E-mobility	✓	✓	✓	✓	✓	✓	✓	✓
Hydrogen in transportation	✓		✓	✓	✓	✓		✓

✓ – strategy element or area at development stage

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2. **Strategic aspirations of ORLEN Group**
3. Key investment drivers

ORLEN Group has a leading market position and strong financial foundations

Refinery and petrochemicals

Leading player
of refining in Europe
~33 m tonnes of crude oil throughput

Significant
petrochemical producer in Europe in all product groups

Efficiency
high cost position of major assets

Retail

The largest network in the region
>2800 petrol stations in in Central and Eastern Europe

The most valuable brand in Poland

Over 3 mln of new customers
Retail customers on the energy sales market[1]

Power

Over 1,0 GW
of installed capacity in gas

Over 400 MW
capacity installed in RES, mainly in wind and water energy[1]

Over 40 000
Prosumers connected to the power grid[1]

Financial strength

Strong financial position
~ PLN bn 111 of revenues of PKN ORLEN and PLN bn 11 of revenues of Energa

High returns
~15% return on capital employed (ROACE LIFO, av. in 2016-19)

Low debt
Net debt/EBITDA (PKN ORLEN and Energa) at the level~ 1,0[2]

1. As a result of acquisition of Energa
2. Index for consolidated proforma results of ORLEN and Energa for 2019, including the purchase price of Energa share.

The start position predestines ORLEN Group to be a leader of the energy transition in Poland and in the region

Strong financial position

- **PKN ORLEN is the largest company** in Central and Eastern Europe, with high operating cash flow
- **PKN ORLEN has a number of project financing options,** ensuring process flexibility

Experience in M&A

- **PKN ORLEN has carried out a number of successful acquisitions and integrations** also in difficult macroeconomic conditions, e.g. Unipetrol in the Czech Republic, the refinery in Mažeikiai in Lithuania, and recently the acquisition and commencement of integration with Energa and experience related to the process of acquisition of Lotos

Strong position and recognition in the region

- **The ORLEN brand is widely recognized** thanks to the strong relations of the Group with its clients, employees and cooperating institutions; in the area of its activity ORLEN Group is recognized as one of the best companies in the energy and fuel sector

Experience in implementing large investment projects

- **Within the last 5 years PKN ORLEN implemented three investment megaprojects**, including the most modern gas-steam power plants in Poland (CCGT)

A growing position in the energy sector

- **In years 2017-2018, PKN ORLEN has launched the gas-steam units** (CCGT) in Włocławek and Płock; The Group also has a license to build an offshore wind farm with a capacity of ~1200 MW in the Baltic Sea
- In 2020 PKN ORLEN took over the majority share in **Energa Group**

Very good operating results

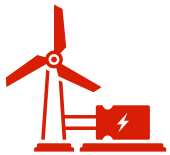
- **PKN ORLEN's refineries have high operational ratios** and are in the second quartile in comparison with their European counterparts (in terms of the ‚Net Cash margin'); Płock is considered one of the best refineries

Over the next decade, ORLEN Group will seek to take a leading position as a sustainable multi-energy group

Vision and direction of transformation of ORLEN Group by 2030

One of the leading players in Europe

Geographic development in Europe along the entire value chain



Leader of energy transition in Poland and the region

The largest portfolio of attractive assets in renewable and low-emission energy

Provider of integrated customer services

Handling fuel, energy and purchasing needs in an integrated manner based on current and new channels and digital technologies

A socially responsible group

Strong investments in sustainable development, decarbonization, initiatives related to the circular economy and social initiatives

A stable source of attractive returns for shareholders

Maximizing the value of the company in order to provide financing for the energy transition

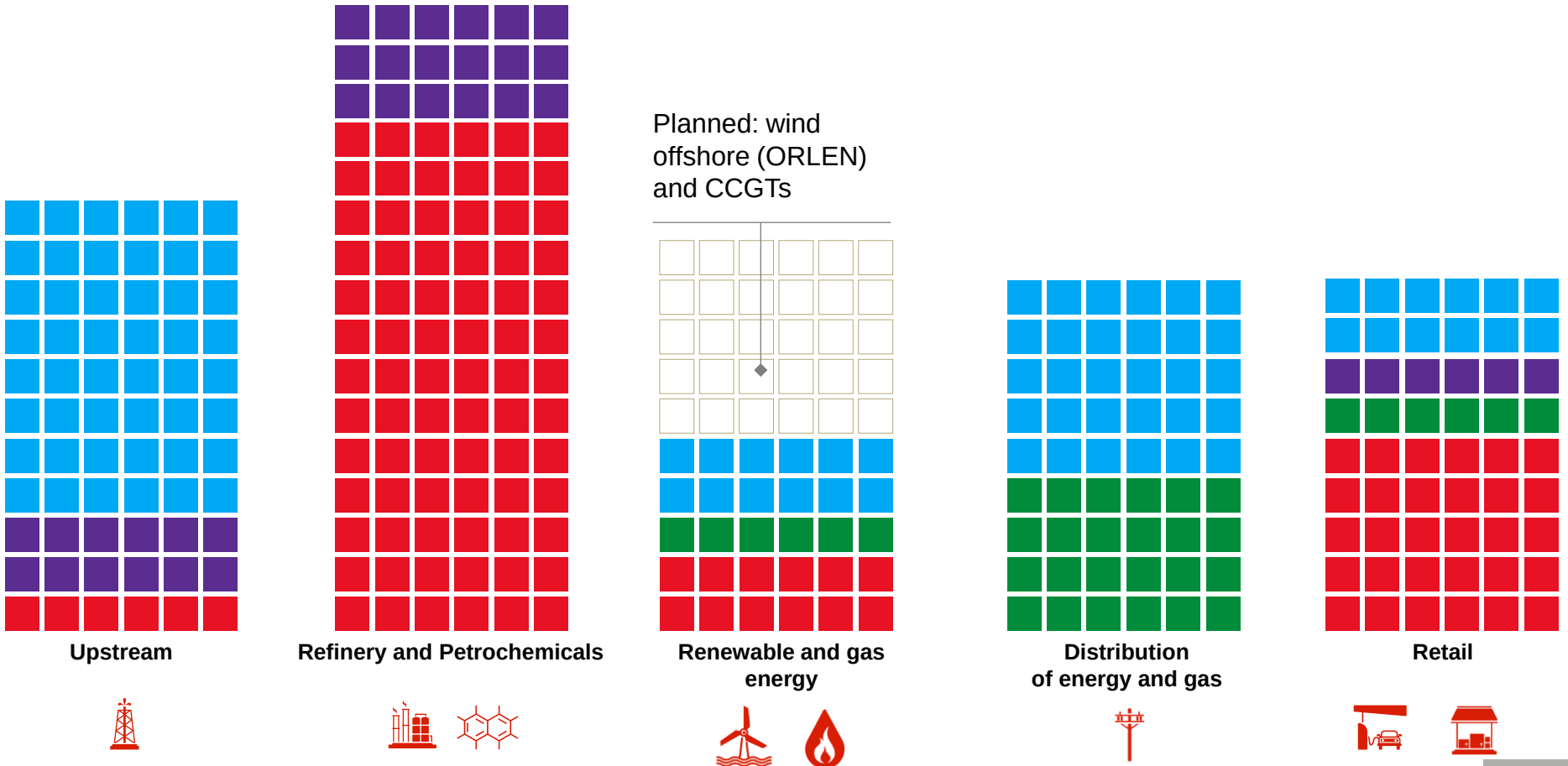
ORLEN Group’s aspiration assumes active management of the business portfolio through the development of current and new areas

Strategic logic	Main segment and business areas			
Maximizing the results	Upstream	Refinery	Fuel retail	Energy and gas distribution
Strategic development	Petrochemicals	Renewable power	Gas power	Non-fuel retail
Investing in the future	New mobility	Hydrogen technologies	Recycling	R&D and digitalization

The basis for achieving our vision is the construction of an integrated and diversified multi-energy group

ORLEN Group activity after mergers across business segments (illustrative)

ORLEN Lotos Energa PGNiG



Source: Annual reports of the companies

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PGNiG is one of the largest gas companies in Central and Eastern Europe

Key indicators, 2019

	PGNiG Group		Exploration and production	Trading and storage	Gas distribution	Electricity and heat production
EBITDA:	PLN 5.5 bn	=	3.4	-0.5	2.0	0.9
Revenues:	PLN 42 bn					
EV / EBITDA:	5.2					
Employment:	24.8 th.					

Exploration and production

- **1.2** m t — of crude oil, condensate and NGL production
- **4.5** bn m3 — of natural gas production
- **40** m boe — of production (~30 in Poland, ~10 in Norway and Pakistan)
- **54** — licenses for the exploration and production of oil and gas in Poland
- **>2** th. — of production wells
- **858** m boe — of gas and oil resources in 5 countries

Trading and storage

- **29.8** bn m³ — of gas sales
- **8.9** bn m³ — of gas trading on the Polish Power Exchange
- **13.5** bn m³ — of imported gas
- **3.2** bn m³ — of storage capacity

Gas distribution

- **7** m — number of customers
- **1 595** — Number of municipalities connected to the gas network
- **11.5** bn m³ — of distributed gas
- **191** th. km — The length of the distribution network with connections

Electricity and heat production

- **1.2** GW — of electric generation capacity
- **5.1** GW — of heat generation capacity
- **3.9** TWh — Electric power sales
- **39.2** PJ — Heat sales

Source: Annual report 2019

Integration of ORLEN and PGNiG will allow the joint preparation of responses to strategic challenges in both companies

Strategic challenges and benefits of integration

SELECTED EXAMPLES

PGNiG

Reversing the trend of declining oil and gas production in Poland
Integration with PKN ORLEN will help to improve the management of fossil fuel resources in Poland and implement best practices of operational and investment efficiency.

Gas power development program
PKN ORLEN's experience in managing two CCGT units will enable PGNiG to manage the new units in Stalowa Wola and Żerań in the best way and use the scale in development plans.

Smoothing out the business cycle
PGNiG is heavily exposed to changes in oil and gas prices due to the dominant upstream segment. Merger with PKN ORLEN's downstream segment PKN ORLEN, which usually has a reverse cycle, will allow one to achieve more stable financial results.

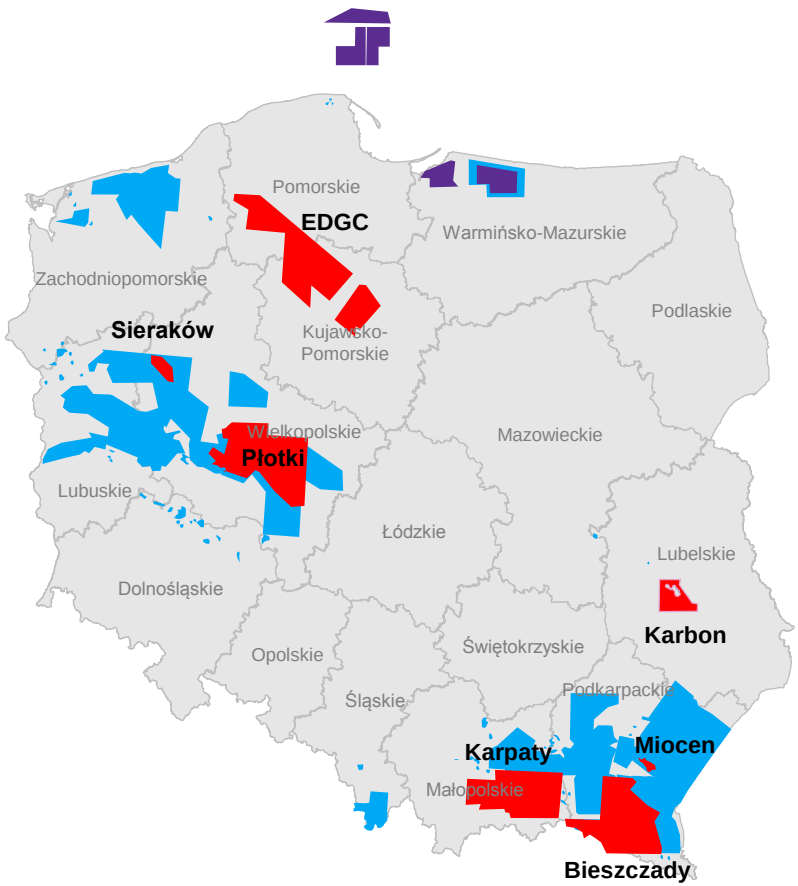
ORLEN

Ensuring long-term growth
Forecast development of the Generation and Distribution segments and PGNiG's competences in the area of natural gas will allow for long-term growth in fields relevant to the energy transition.

Limited upstream segment (in comparison with other companies in the sector)
Integration with PGNiG will allow the consolidation of the upstream portfolio in Poland and strengthen the upstream segment in ORLEN (also by smoothing out the business cycle for the downstream segment).

Strengthening balance sheets and stable financial flows
The growing segment of gas distribution in PGNiG offers stable financial flows, not dependent on the economic situation, providing the cash necessary to finance investments.

The integration of the upstream segment in Poland will allow for better reserves management and operational transition



Potential benefits of integration:

- Implementation of cost synergies thanks to consolidation of operating activities, purchases and management in the short term
- Enabling the increase in production and optimization of resource use in Poland
- Strengthening operational efficiency in upstream activity

Source: Information of the companies

In addition to operational and financial synergies PKN ORLEN will be able to achieve combination synergies between segments

ORLEN Lotos Energa PGNiG

Example synergy opportunities between value chains

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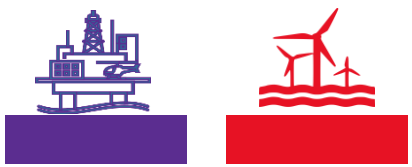

Optimization of offshore wind energy development by leveraging existing capabilities from Lotos Offshore E&P (in the field of exploitation of fields in the Baltic Sea)

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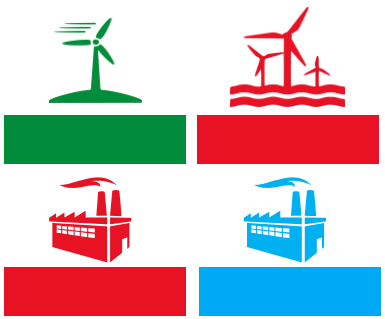

Balancing of irregular production profile from renewable energy sources by gas units

Optimizing trade on the wholesale electricity market by managing a broad portfolio of assets

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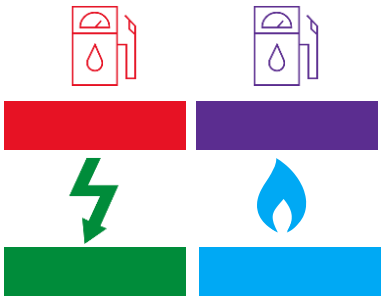

Extended commercial offering to customers in the field of fuels, gas and energy (e.g., dual gas & power offering, full B2B coverage with gas, fuel and electricity – „one invoice", Vitay loyalty program expansion)

ORLEN. FUELLING THE FUTURE