



Operatørkonferansen 2023

Solastranden ◀

15.11.2023 ◀

Agenda



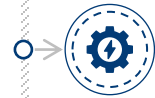
▶ The Big Picture
Orlen Group's 2030 Strategy



▶ The strategy of PGNiG Upstream Norway AS



Disclaimer



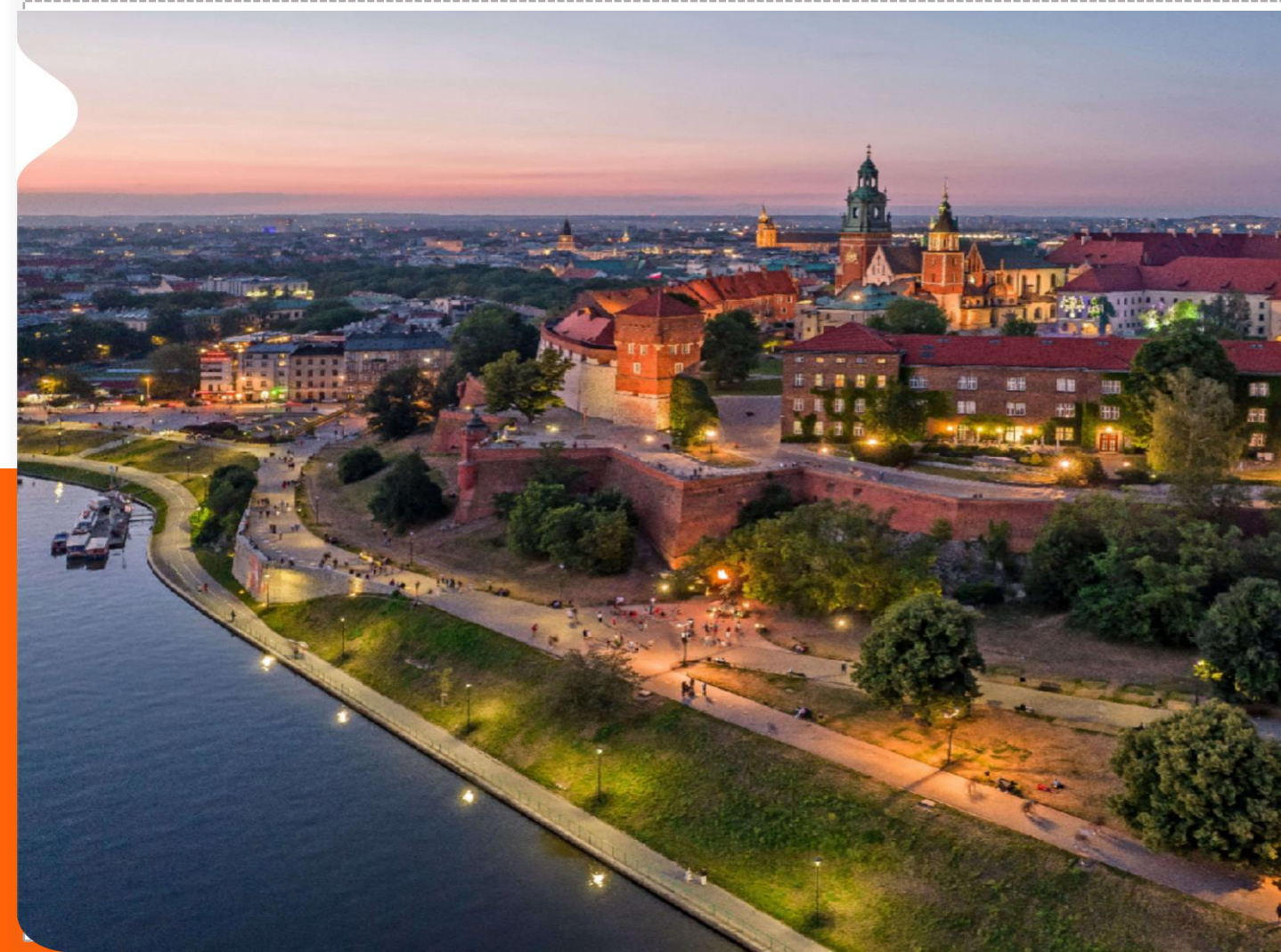
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1. The Big Picture





AUGUST 2023

ORLEN Group Company Overview

Powering the future. Sustainably.

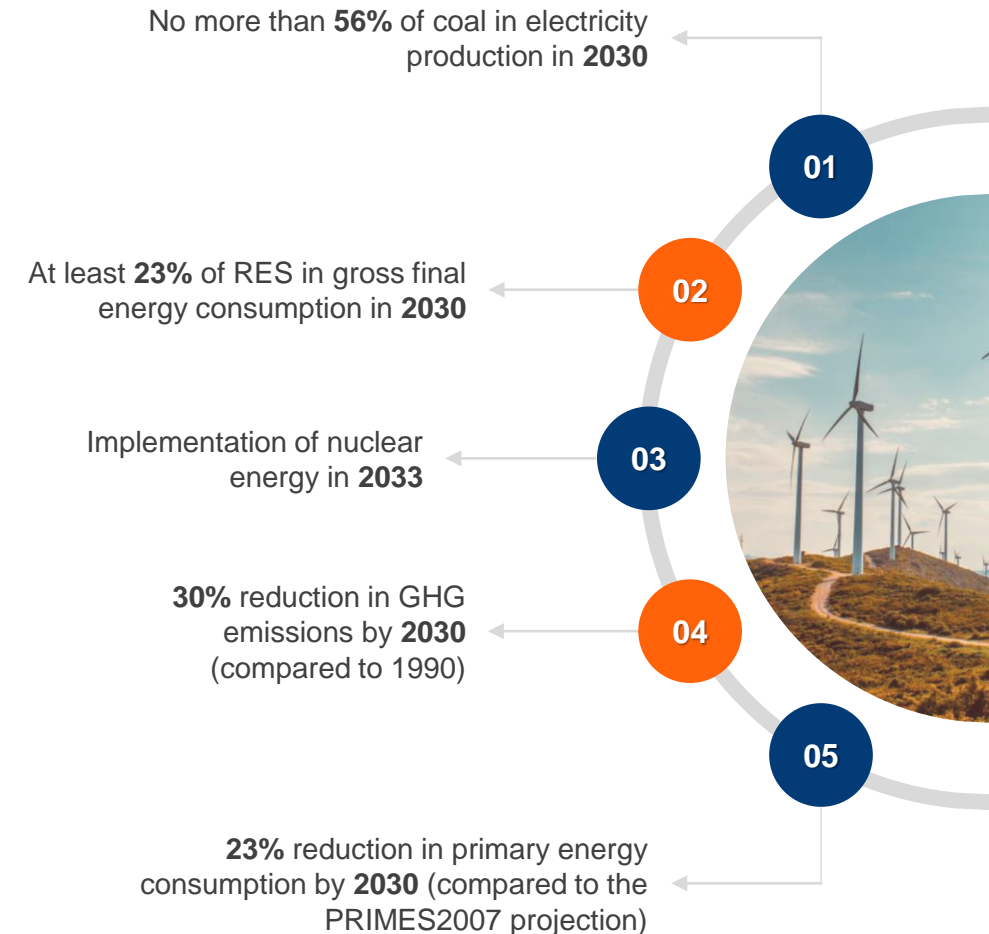
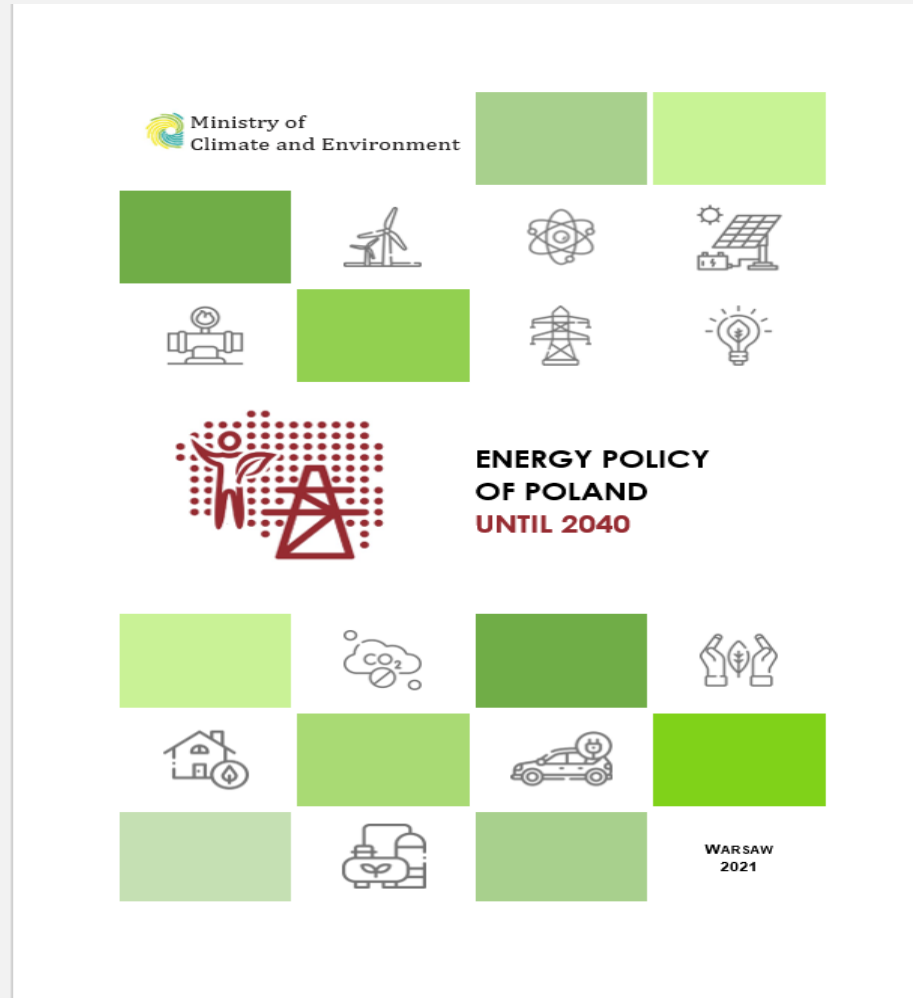


The Energy Transition

Energy Policy of Poland Until 2040 - The Polish Challenge



Poland has the highest share of coal in national energy production among European countries - in **2022** as much as **72 percent** of its electricity was generated from coal.



The Orlen Group – 2030 strategy

Adjusting strategy to the new market context



New configuration of the Group

Integration with Lotos Group, PGNiG and Energa opens up new growth opportunities

Support for the energy transition through coordinated transformation of a broad group of assets



Geopolitical changes and economic cycles

War in Ukraine and constraints on energy and commodity flows

Disruptions on fuel and commodity markets (crude oil, gas); price volatility of energy and commodities



Long-term trends

New regulations, including Fit for 55, REPowerEU, RED III and extended EU taxonomy; rising prices of emission allowances (EUA)

New funding opportunities: (e.g. sustainable finance) while changing the availability of capital



New business opportunities

Petrochemicals: i.e. advanced recycling

Low-carbon fuels: biofuels and synthetic fuels

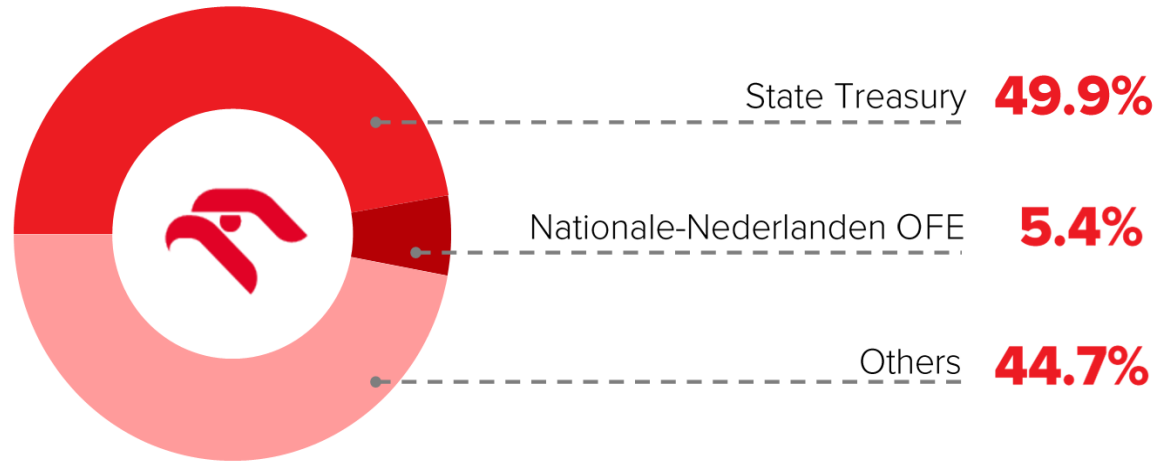
E-mobility: charging infrastructure

Renewable hydrogen in transport, industry and energy generation



The Orlen Group – The biggest multi-utility player in Central Europe

Shareholders structure*



- # 1 on the Warsaw Stock Exchange, listed since 1999
- Market Cap.: PLN 73,9 bn**
- Ranked #283 in Forbes Global 2000
- Ranked #216 in Fortune Global 500

* Data as of 21.06.2023 - AGM

** Data as of 24.08.2023



ORLEN Group's 2030 Strategy

UPDATE

February 28th 2023

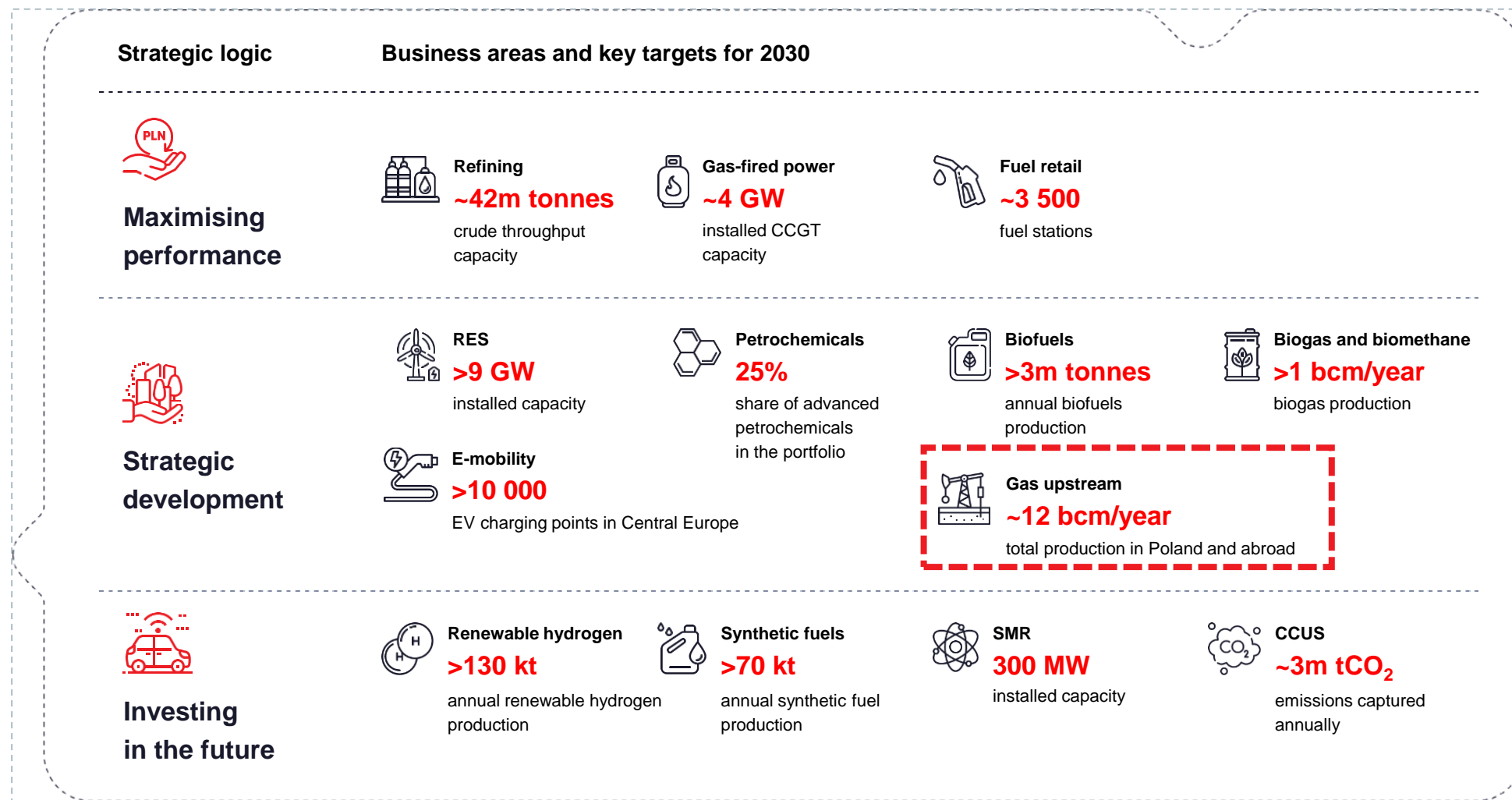
The Orlen Group – Decarbonization targets confirm our commitment to achieve carbon neutrality in 2050

2030 targets

2050 targets



The Orlen Group – 2030 Strategy

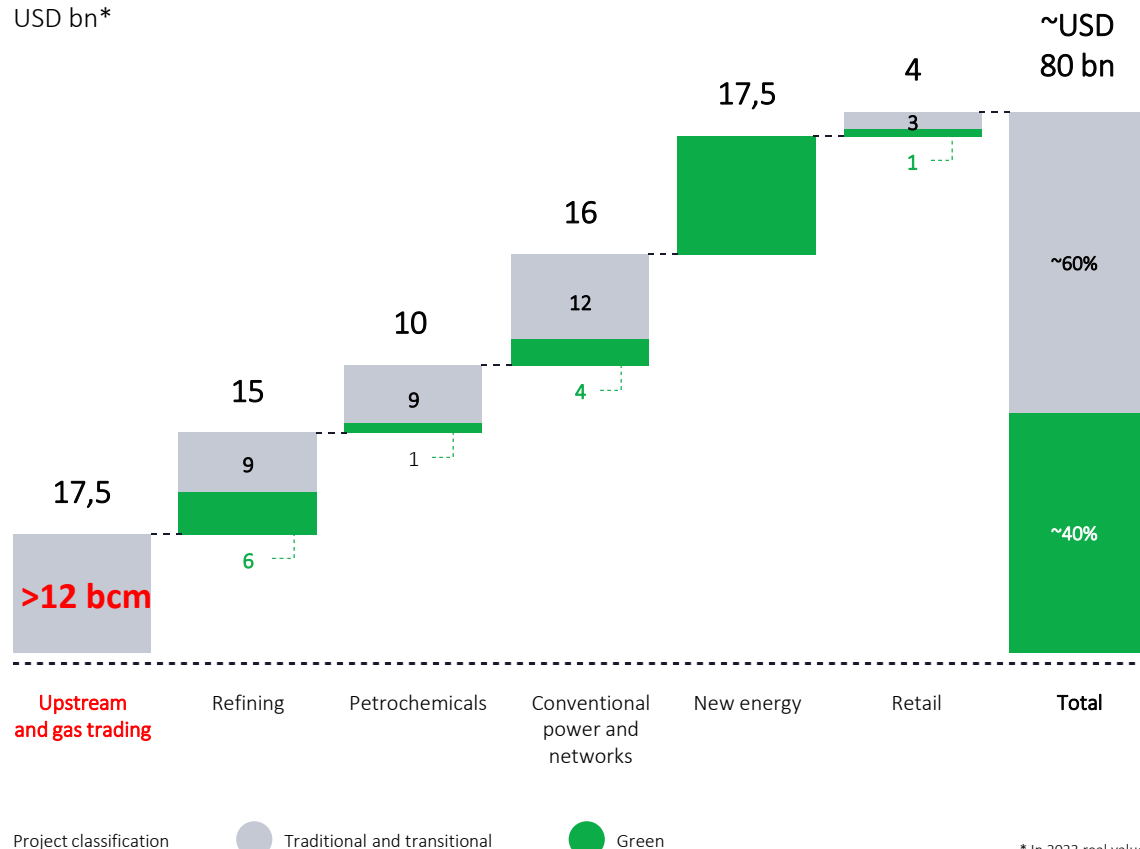



Gas upstream
~12 bcm/year
 total production in Poland and abroad

The Orlen Group - Decarbonization strategy

CAPEX spending in 2023–2030 - split by segments

USD bn*



1. Emissions volume in the Refining, Petrochemicals and Upstream segments, measured as Mt CO₂e, for Scope 1 and 2 GHG emissions.
 2. Carbon intensity in the Energy (Power and Heat) segment, measured as kgCO₂e/MWh, for Scope 1 GHG emissions.
 3. Carbon intensity of sold energy products, measured as gCO₂e/MJ, for Scope 1, 2 and 3 GHG emissions.
 4. Our ambition to reduce emissions is consistent with the goal of limiting climate warming to 1.5 °C by 2050. The achievement of our long-term targets will depend on the technological progress and the regulatory and legal context. Those factors may create more or less favourable conditions for the energy transition and accelerate or reduce the pace of our strategy implementation.

* In 2023 real values. USDPLN 4.0

2030 targets

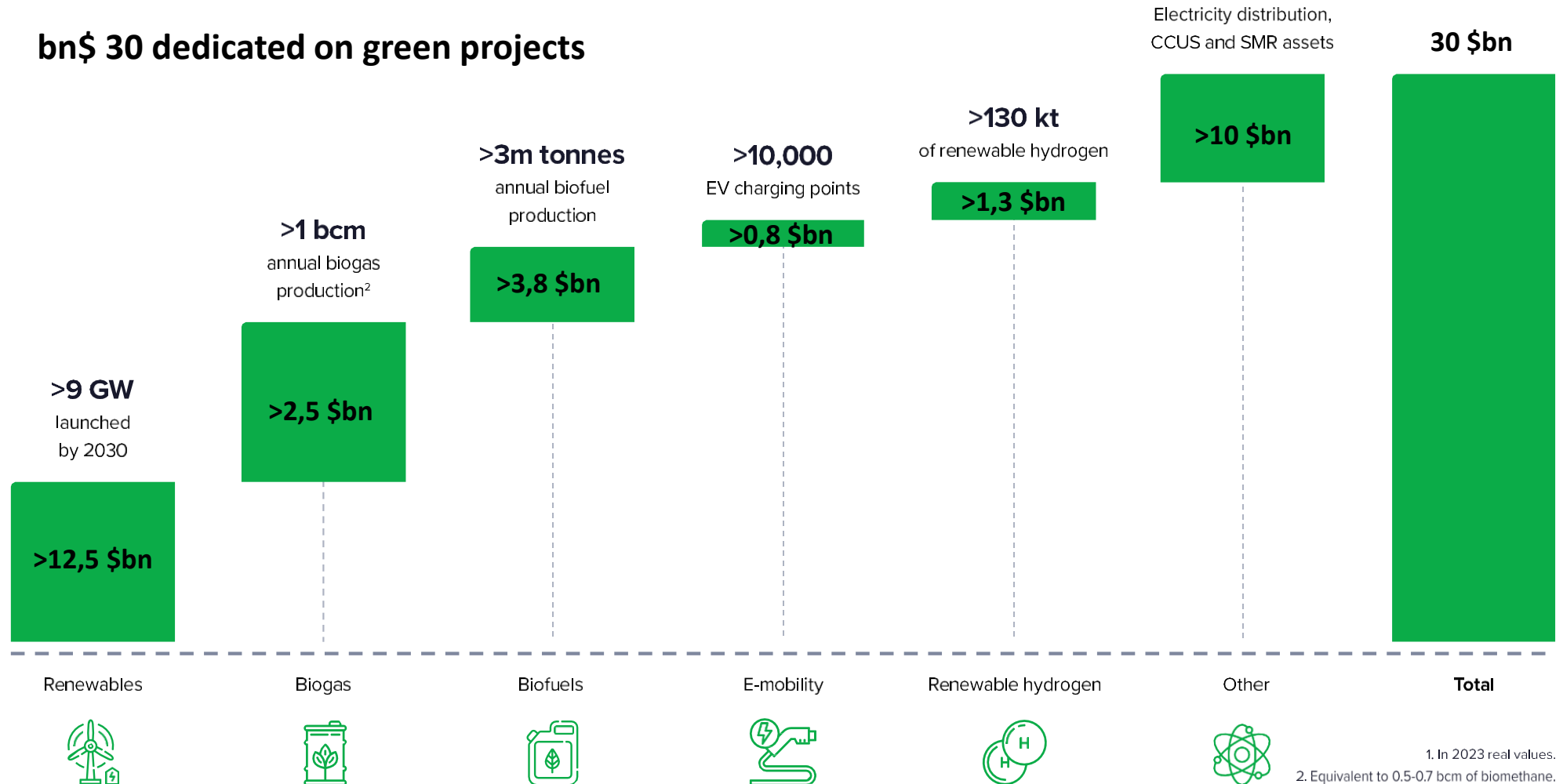
- 25% in absolute emissions from Refining, Petrochemicals and Upstream ¹
- 40% in emissions intensity in Energy ²
- 15% in net carbon intensity (NCI) ³

2050 target

Net Zero
in 2050 for Scope 1, 2 and 3 emissions, in accordance with the Paris Agreement ⁴

The Orlen Group - Leader of green energy in Central Europe

bn\$ 30 dedicated on green projects



1. In 2023 real values.
2. Equivalent to 0.5-0.7 bcm of biomethane.

The Orlen Group - Decarbonization strategy

Orlen commits to reduce absolute emissions from Refining, Petrochemicals and Upstream by 25%

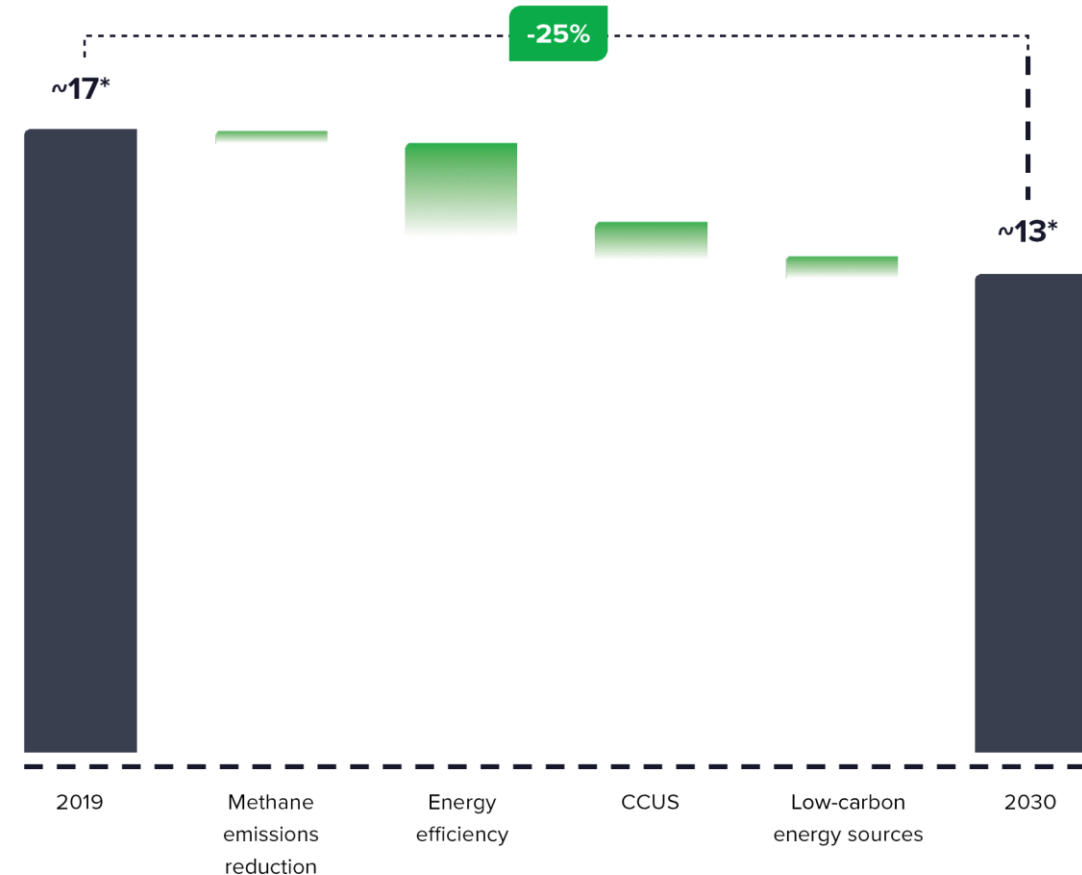
Orlen commits to:

- Reduction of methane emissions and flaring in upstream operations – Zero Routine Flaring and Zero Venting targets
- implementation of energy efficiency solutions at our refining, petrochemical and upstream locations
- Deployment of carbon capture, utilization and storage technologies (CCUS)
- Use of energy from low- and zero-carbon sources in the Refining, Petrochemical and Upstream facilities



The supply of Natural Gas from Norway plays a key transitional role in reaching this target

GHG emissions in Refining, Petrochemicals and Upstream (MtCO₂e)



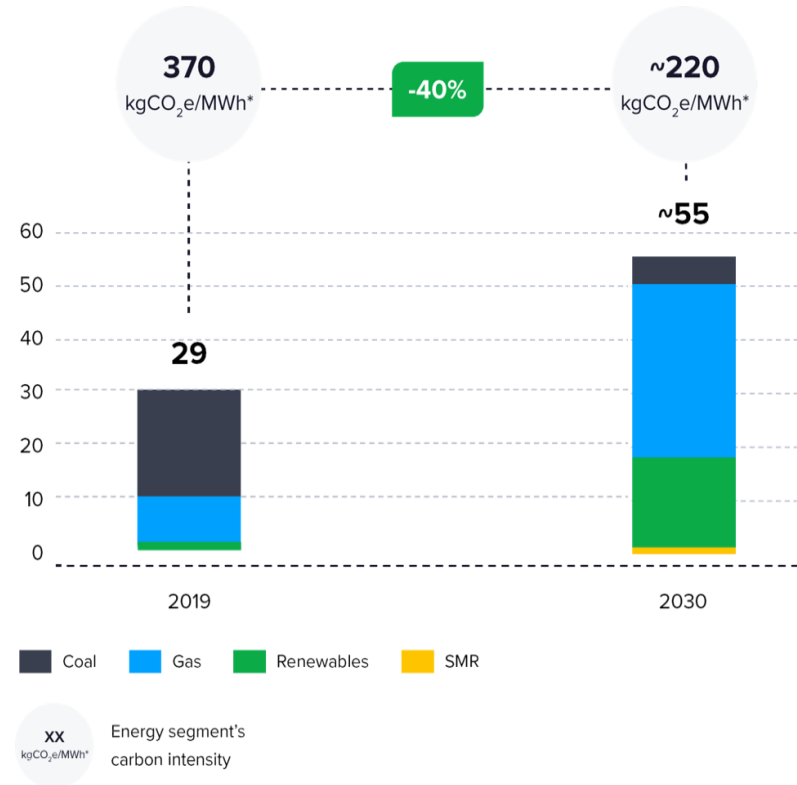
The Orlen Group - Decarbonization strategy

Large investments in low- and zero-carbon energy sources

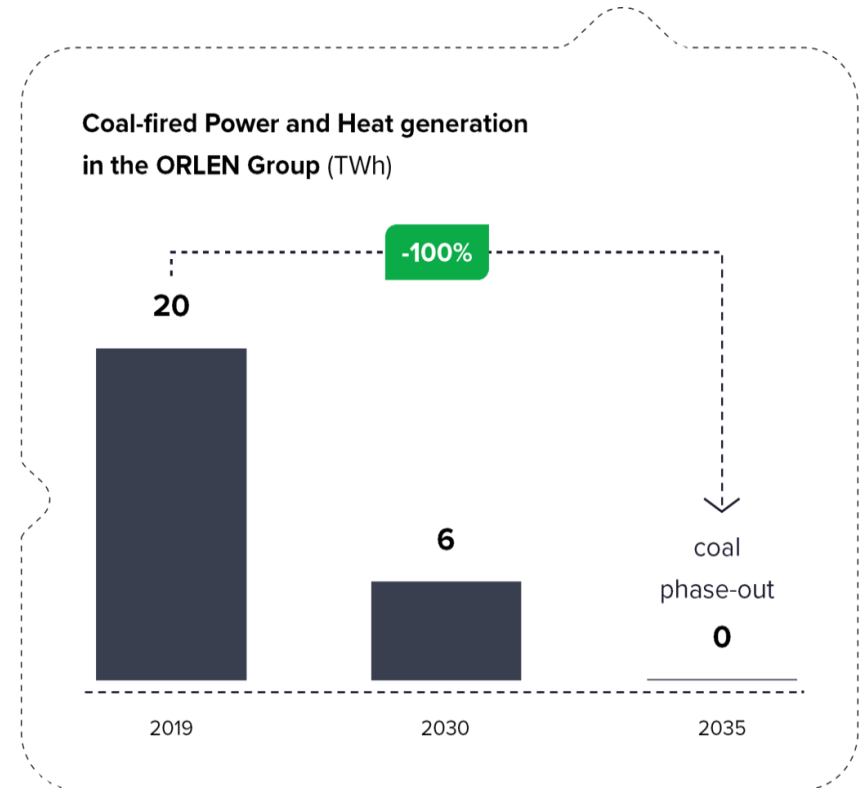
Orlen commits to reduce carbon intensity (kg CO₂e/MWh) in the Energy segment by 40% by 2030 and phase out coal by 2035

The supply of Natural Gas from Norway plays a key role in reaching this target

Power and Heat generation in the Orlen Group, TWh



Coal-fired Power and Heat generation in the ORLEN Group (TWh)

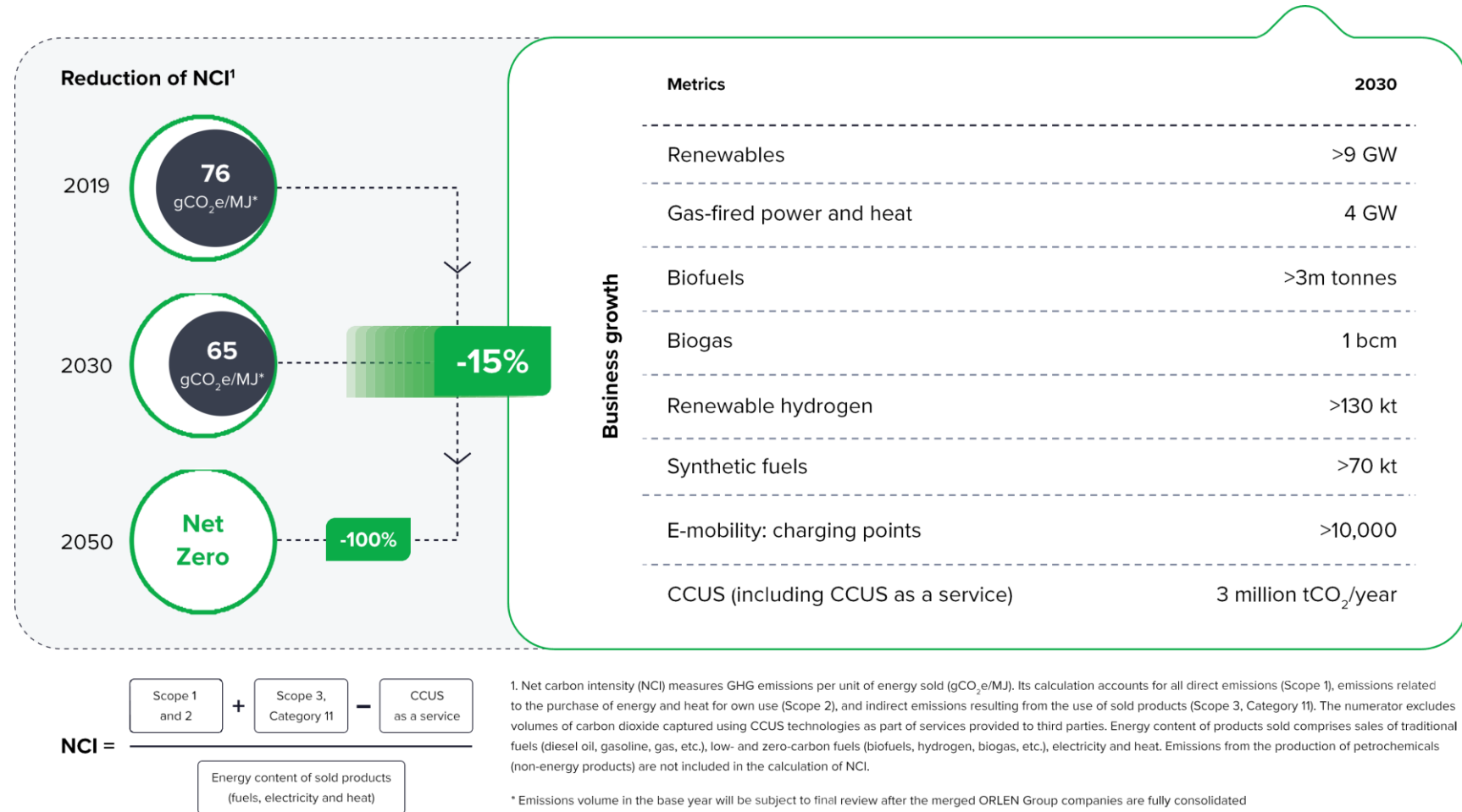


- The target applies to Scope 1 GHG emissions in Energy (Power & Heat), calculated on an equity share basis.
* Emission volume in the base year will be subject to final review after the merged ORLEN Group companies are fully consolidated.

The Orlen Group - Decarbonization strategy

Orlen Group's energy transition will allow to reduce NCI (gCO₂e/MJ) by 15% by 2030

The supply of Natural Gas from Norway plays a key role in reaching this target in the GFPH segment



The Orlen Group - Decarbonization strategy

Orlen will strengthen its position of a key player in Central Europe in gas production



Major gas production operator

Maintaining gas exploration and stable production in Poland

Investments to ramp up production in Norway

Attractive international asset portfolio



Reliable gas supplier in the region

New LNG supply contracts for Poland secured

Development a fleet of own and chartered gas tankers



Utsira High projects

Skarv Satellites

Valhall PWP-Fenris

Yggdrasil

2. The strategy of PGNiG Upstream Norway AS



Baltic Pipe, First Gas transported 1st November



The Baltic Pipe Project is a strategic gas infrastructure project with the objective to provide a new gas supply corridor to the Central European market.



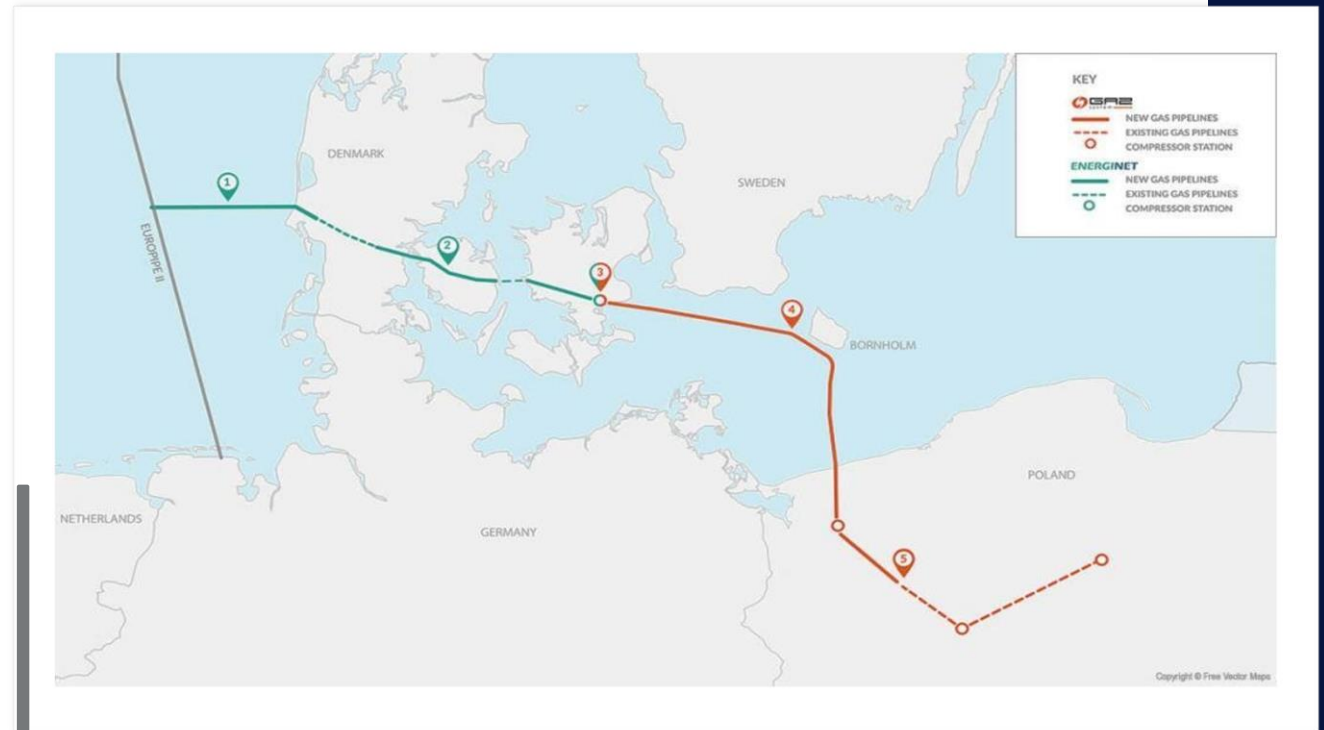
In January 2018 PGNiG signed a long-term capacity agreement for the Baltic Pipe. PGNiG Group is now committed to long term gas supplies from Norway.



Baltic Pipe is a gas pipeline between the Norwegian Continental Shelf and the Polish transmission network. This investment consists of the construction of Norway-Denmark and Denmark-Poland interconnections.

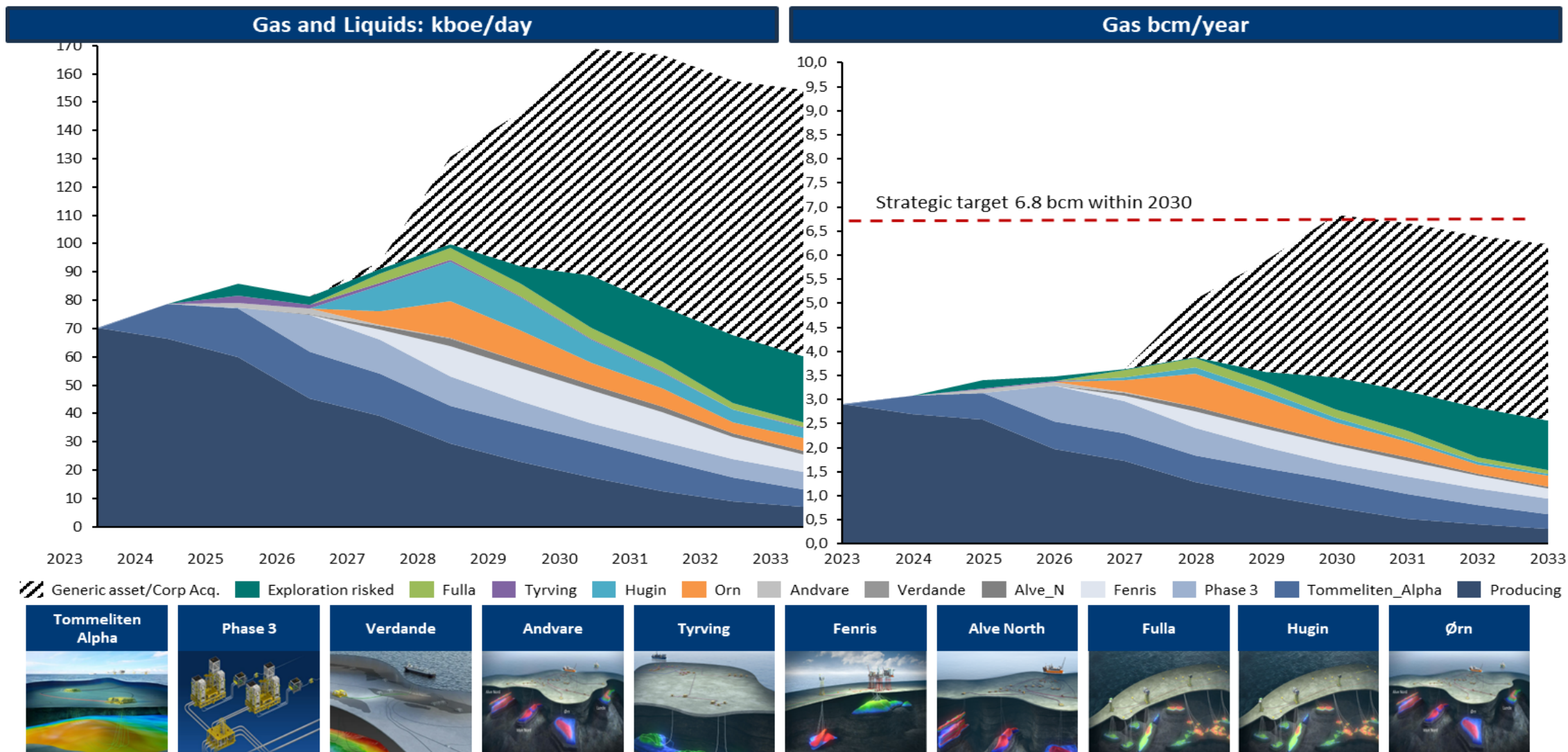


The Baltic Pipe project was completed in November 2022, allowing the import of 10 bcm/year to Poland and reversed flow of 3 bcm/year of natural gas to Denmark. Orlen Group reserved 8 bcm/year of the import capacity.



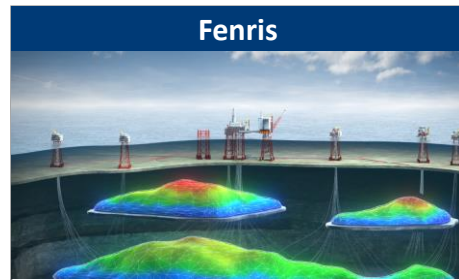
Production development

Participant in nine (five major) PDO's that is expected to deliver significant volumes in the future



Approximately 70% of the 2024 CAPEX related to the PDO projects

AkerBP is strong operator on the NCS



Fenris

Operator:
AkerBP

Equity:
22.2%

Development:
Joint development with Valhall.
Unmanned installation: tie-in

Status (YTD August):
5.7% done (planned 6.2%)

Production:
2027 – 2049 (2023)

Reserves:
41.2 mboe

CAPEX 2024:
2,879 mNOK

CAPEX 2023 - 2033:
8,030 mNOK



Yggdrasil (Hugin/Fulla)

Operator:
AkerBP

Equity:
12.3% (Hugin/Fulla)

Development:
New subsea infrastructure,
processing platform incl. living
quarter, NUI

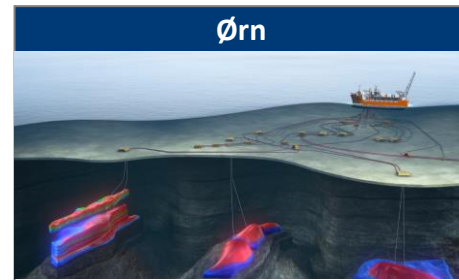
Status (YTD August):
6.1% done

Production:
2027 – 2051

Reserves:
35.2 mboe

CAPEX 2024:
2,734 mNOK (incl. infrastructure)

CAPEX 2023 - 2033:
9,474 mNOK (incl. infrastructure)



Ørn

Operator:
AkerBP

Equity:
40% (Unit)

Development:
SSP development, subse tie-
back to Skarv FPSO

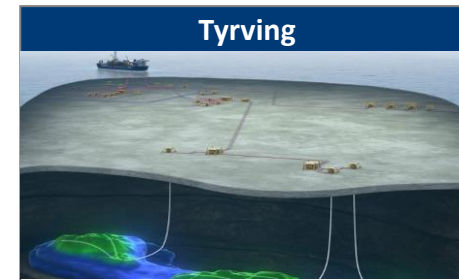
Status (YTD August):
18.2% done (21.4%)

Production:
2027 – 2035

Reserves:
20.2 mboe

CAPEX 2024:
1,048 mNOK

CAPEX 2023 - 2033:
2,978 mNOK



Tyrving

Operator:
AkerBP

Equity:
12%

Development:
Subsea tieback to the Alvheim
FPSO

Status (YTD August):
31.8% done

Production:
2025 – 2040

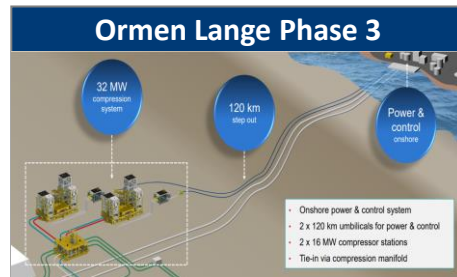
Reserves:
3.0 mboe

CAPEX 2024:
454 mNOK

CAPEX 2023 - 2033:
734 mNOK

Approximately 70% of the 2024 CAPEX related to the PDO projects

AkerBP is strong operator on the NCS



Operator:
Shell

Equity:
14.0%

Development:
Subsea Compression, increase the recoverable to 85%

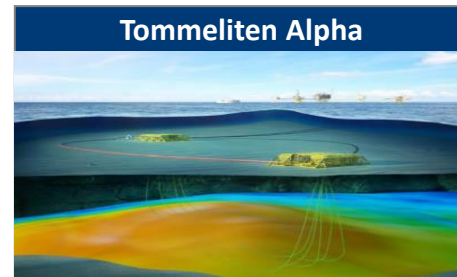
Status (YTD August):
78% done (planned 70%)

Production:
2025 – 2047

Reserves:
36.3 mboe

CAPEX 2024:
367 mNOK

CAPEX 2023 - 2033:
1,051 mNOK



Operator:
ConocoPhillips

Equity:
42.2%

Development:
Tie-back to ConocOperated Ekofisk

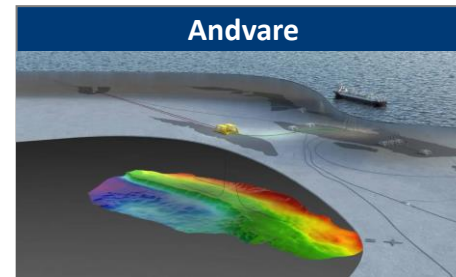
Status (YTD August):
78% done (80% planned)

Production:
2024 – 2049

Reserves:
59.0 mboe

CAPEX 2024:
368 mNOK

CAPEX 2023 - 2033:
3,058 mNOK



Operator:
Equinor

Equity:
15%

Development:
Subsea tie-back to Norne

Status (YTD August):
Planning – well to be drilled

Production:
2024 – 2049

Reserves:
1.4 mboe

CAPEX 2024:
89 mNOK

CAPEX 2023 - 2033:
87 mNOK



The Plan assumes funds for 6(8) wells:

- PL 211CS Adriana/Sabina, expected to be postponed from 2023 to 2024 (spud 8th December)
- Cerisa, well postponed from 2023 to 2024 (Jan-Feb)
- Tomcat, PGNiG operated well (June – Aug)
- Løvemeis pilot/keeper (July-Sep)
- Skarv E-trend, postponed from 2023 to Q4 2024
- Frida Kahlo, Nov-Dec

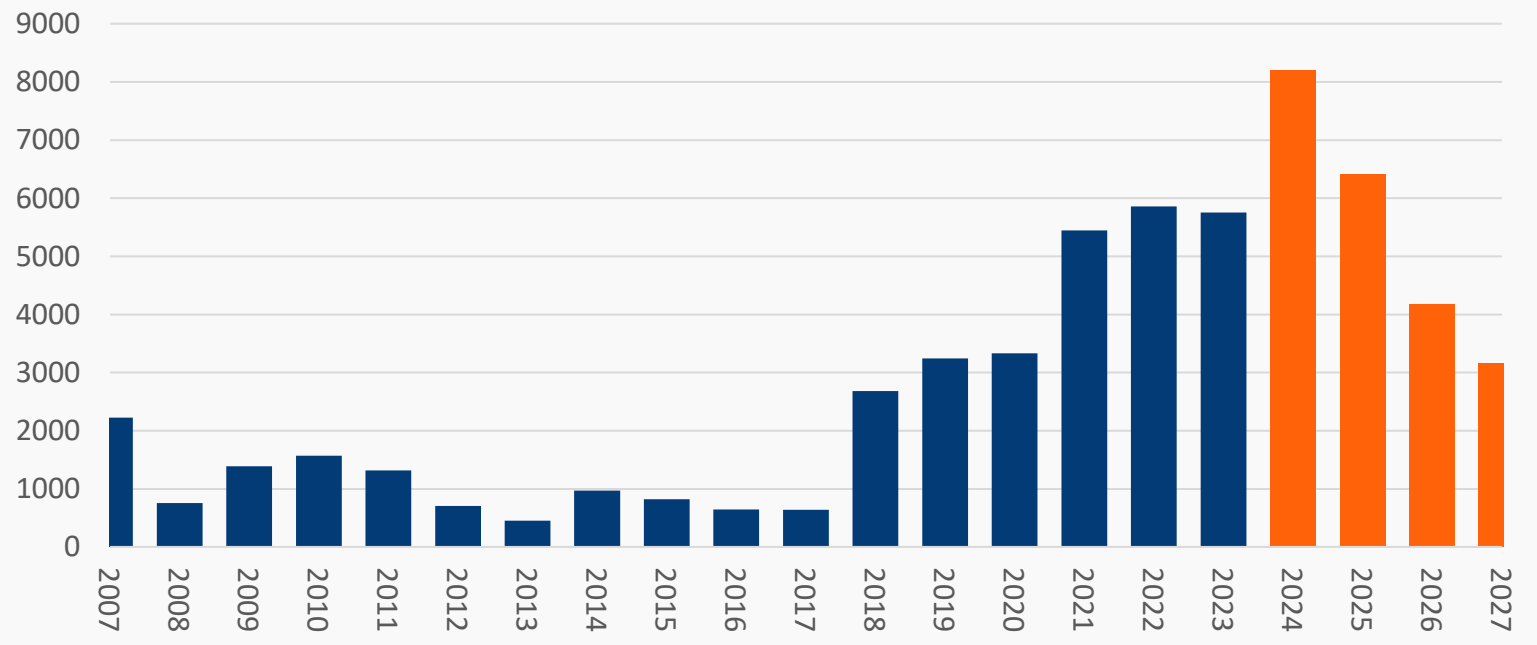
- Tyrving Trell North, sidetrack from production drilling Q1 2024
- Hugin Ypsilon, sidetrack Nov

- Kongeørn (PL942) excluded from

PUN Investments on the NCS



PUN Investment Cash Flow (mNOK)



PUN Development Projects	PDO Year	First Gas/Oil
Tommeliten Alpha	2021	2024
Ormen Lange Phase 3	2021	2025
King Lear / Fenris	2022	2027
Ørn	2022	2026
Alve North	2022	2025
Verdande	2022	2025
Andvare	2022	2025
Yggdrasil	2022	2027
Tyrving	2022	2025

- ▶ Total investments in Norway from 2007 to date exceeds NOK 38 billion.
- ▶ In 2022 PGNiG Upstream Norway invested NOK 5,8 billion
- ▶ PUN submitted 7 PDO's by year-end 2022 for the Yggdrasil, Tyrving, Ørn, Alve Nord, Fenris, Verdande and Andvare projects
- ▶ Over the next 4 years PUN will invest close to 22 billion NOK. On an aggregated level these investments will yield an average IRR in excess of 25%.
- ▶ New developments will enable organic increase in gas output to around 4 bcm/annum (in 2028)

Forward Looking and Summary

Portfolio expected to deliver strong results also in the future



92 licenses on the NCS

- › PGNiG has built a profitable and sustainable upstream business in Norway since 2007
 - › 18 producing assets
 - › 9 developing assets
- › Low maturity of existing portfolio with planned growth



Delivered 7 major PDO's in 2021 and 2022

- › Delivered 2 PDO's in 2021: Ormen Lange Phase 3 and Tommeliten Alpha
- › Delivered 7 PDOs in 2022: Yggdrasil, Tyrving, Ørn, Alve Nord, King Lear (Fenris).Cape Vulture (Verdande) and Gjøk (Andvare)



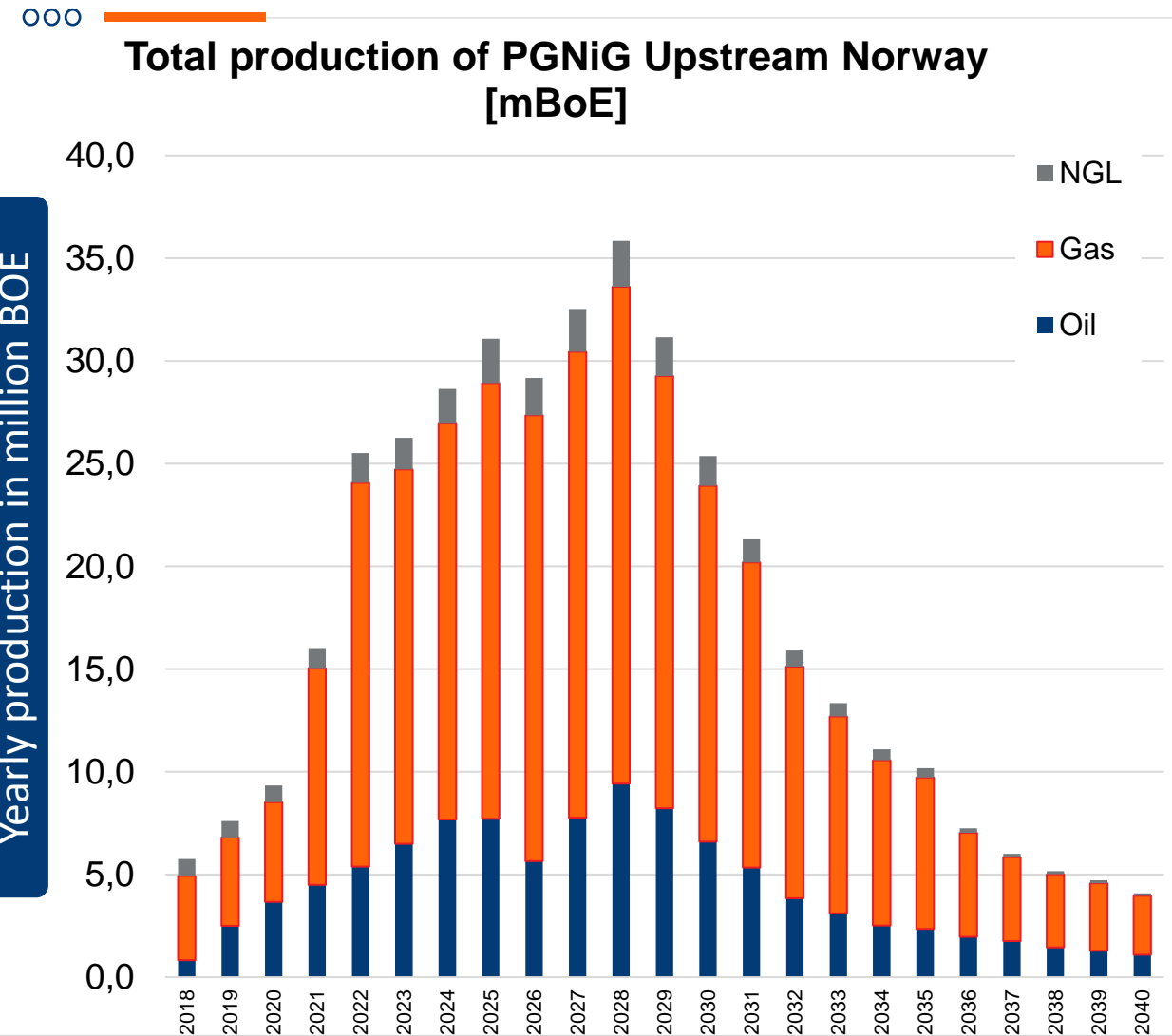
Active in exploration

- › Active in the upcoming APA round
- › Mixed exploration results from the 2022 drilling
 - › Discovery in PL 941 Newt
 - › Dry well in operated Copernicus prospect
- › Next operated well(s) expected in 2024
- › Exploration to continue to be an important contributor for the longer-term sustainability of the gas strategy



Business development

- › Strategic M&A acquisition and investment decision in the period 2017 – 2022, has materialized a robust portfolio from development to production, expected to produce above 3.5 bcm/year
- › Future pro-active Business Development & Exploration will also focus the portfolio towards gas





PGNiG | **UPSTREAM
NORWAY**

ORLEN GROUP

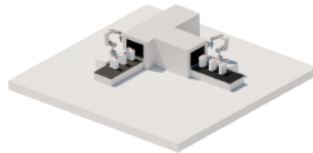
The Orlen Group – The biggest multi-utility player in Central Europe

Refining



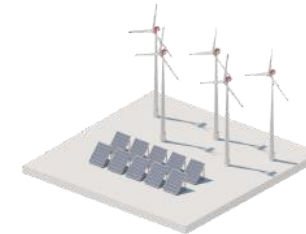
- 7 refineries in Poland, Lithuania and Czechia with max. crude oil throughput of 42.6 mt/y (~ 860 kbd).
- Strategic location of refineries with an access to crude oil pipelines, product pipelines and sea terminals.
- Diversification of crude oil supplies.

Petrochemicals



- Petrochemical assets fully integrated with refining.
- Wide portfolio of petchem products sold to more than 60 countries.

Energy



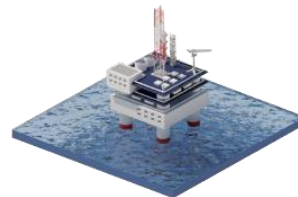
- Installed capacity: 5.1 GWe (electricity) / 13.4 GWt (heat).
- > 60% of electricity production comes from zero and low-emission sources (renewables and modern CCGT's).
- > 200 th. km of electricity network
- First offshore wind farm project on the Baltic Sea up to 1.2 GWe in the pipeline.

Retail



- ORLEN – the most recognizable and valuable Polish brand worth ~ PLN 10 bn.
- ~ 3200 fuel stations in 6 countries – the largest retail network in CEE.
- ~ 2600 fuel stations equipped in non-fuel concept.
- ~ 670 alternative fuel stations (621 EV chargers, 47 CNG stations and 4 hydrogen stations).
- ~ 8300 pick-up / sending parcels locations in Poland.

Upstream



- Onshore and offshore activities in Poland, Norway, Canada, Pakistan and Lithuania.
- ~ 1280 m boe 2P crude oil and gas reserves.
- ~ 170 k boe/d average hydrocarbon production.

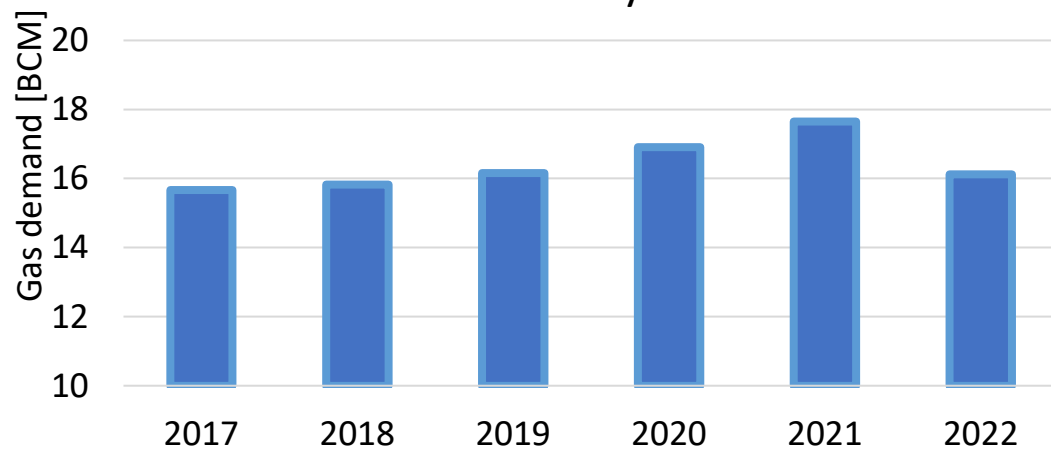
Gas



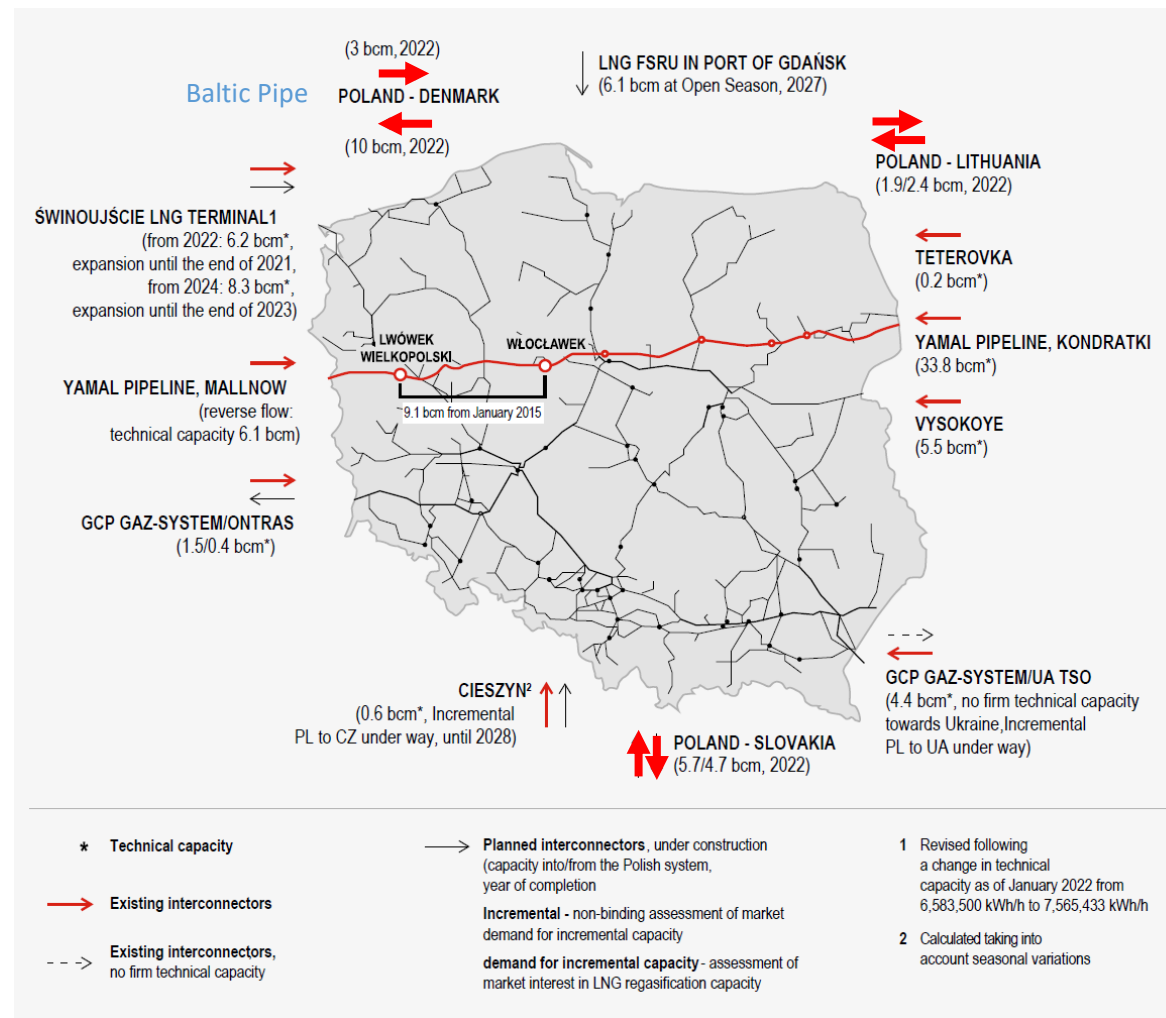
- The biggest importer and gas supplier for business and households in Poland.
- Long term contracts for LNG supplies.
- Norwegian gas portfolio – own production and supply contracts.
- ~ 3.2 bcm gas storage capacity.
- > 200 th. km of gas distribution network with service lines / 7.4 m customers / ~ 70% coverage of Poland.

Poland's gas market

Poland's Gas Demand in years 2017-2022



- Demand for natural gas in Poland is expected to grow to 30 bcm because the share of coal is reduced in electricity generation and building heating.
- Historically, Poland was dependent on natural gas supplies from the eastern direction. Efforts during the last decade enabled successful diversification, with commissioning of an LNG terminal in Świnoujście and construction of the Baltic Pipe.



M&A track record on the NCS of PGNiG

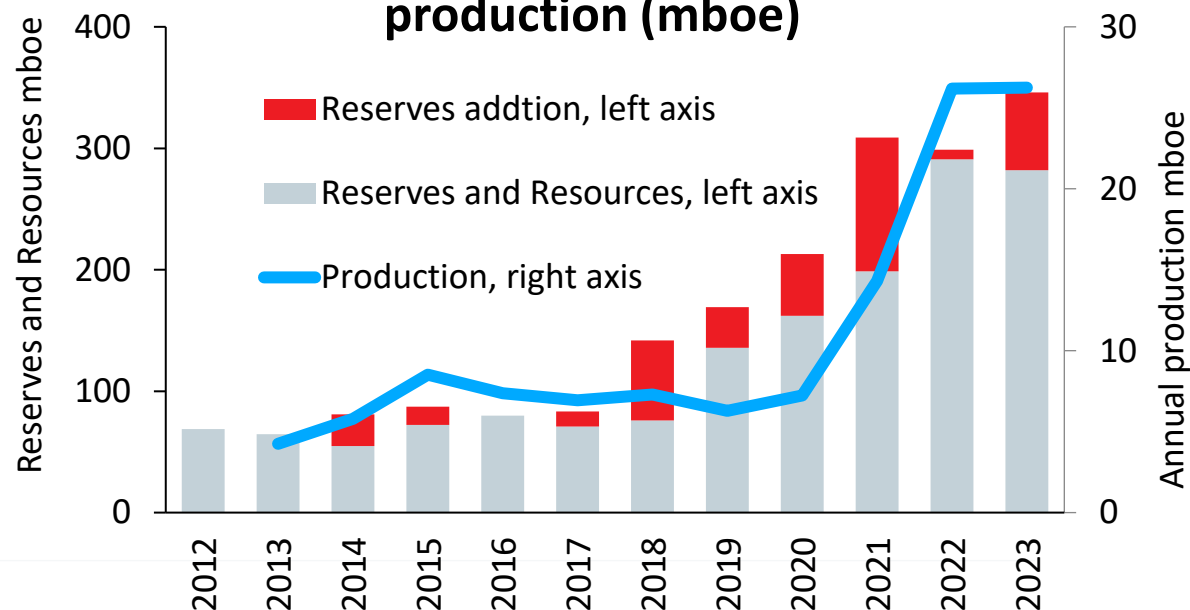
Upstream Norway

PGNiG Upstream Norway conducts active development activities (so-called 'business development') aimed at creating an optimal structure of its assets, mainly by acquiring shares in:

- hydrocarbon producing assets
- deposit development projects
- exploration licenses, the so-called 'Farm-in'

In years 2014-2023 PGNiG Upstream Norway considered multiple significant M&A projects and many more minor ones. Out of them more than ten were successful acquisitions, thus resulting in healthy 30% success ratio.

Year end development of reserves and production (mboe)



Acquisition of a 35% stake in Norwegian PL460 (including Skogul) from AkerBP

Acquisition of a 22,2% stake King Lear Discovery from Total
Purchase of a 20% stake in Duva field from Wellesley Petroleum and a 10% stake in Duva field from Pandion Energy

Acquisition of Ineos assets including Ormen Lange (14%), Alve (15%), Marulk (30%)

Merger with Orlen Group

Production capacity of 6+ bcm

2017

2018

2019

2020

2021

05-2022

11-2022

05-2023

2023+

Purchase of a 42,38% stake in Tommeliten Alpha discovery from Equinor for \$220m

Purchase of a 3,3% stake in Gina Krog field and 11,9175% in Alve Nord field from AkerBP
Acquisition of a 6.45% stake in the Kvitebjørn and 3.225% in the Valemon field from Norske Shell

Acquisition of 40% stake in Orn discovery from Wellesley

Acquisition of LOTOS Exploration & Production Norge with assets including Gungne (15%), Sleipner Ost (15%), Sleipner Vest (15%), Yggdrasil (~12%), Yme (20%) and Adrianna Sabina (10%)