WARSAW, JUNE 2025

# ORLEN Transition Plan

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# ORLEN’s pathway to Net Zero

# We are among Central Europe’s leading energy suppliers

## UPSTREAM & SUPPLY

**8.6** [bcm]
ANNUAL NATURAL GAS PRODUCTION FROM ASSETS ACROSS POLAND, NORWAY, CANADA, AND PAKISTAN

**~20** [bcm]
ANNUAL NATURAL GAS DELIVERIES TO CENTRAL EUROPEAN MARKETS

## DOWNSTREAM

**38.2** [Mt]
ANNUAL CRUDE THROUGHPUT BY A TOTAL OF SEVEN REFINERIES

**~40**
PETROCHEMICAL PRODUCTS, MARKETED IN MORE THAN 60 COUNTRIES

## ENERGY

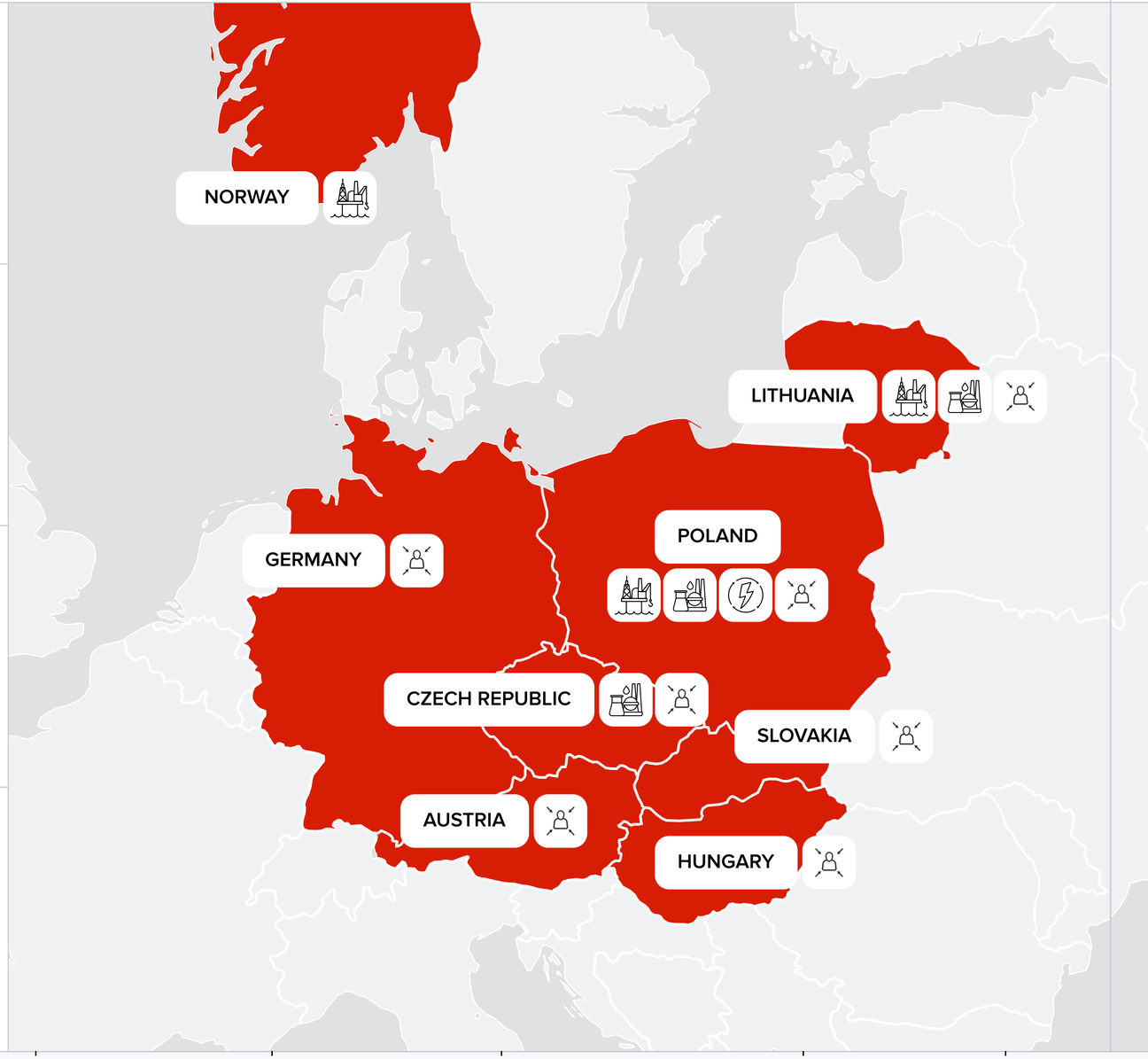
**16.9** [TWh]
ANNUAL POWER PRODUCTION

**1.5** [GW]
INSTALLED RES CAPACITY

## CONSUMERS & PRODUCTS

**4**
PRODUCT GROUPS INCLUDING FUEL RETAIL, NON-FUEL RETAIL, ENERGY, AND GAS

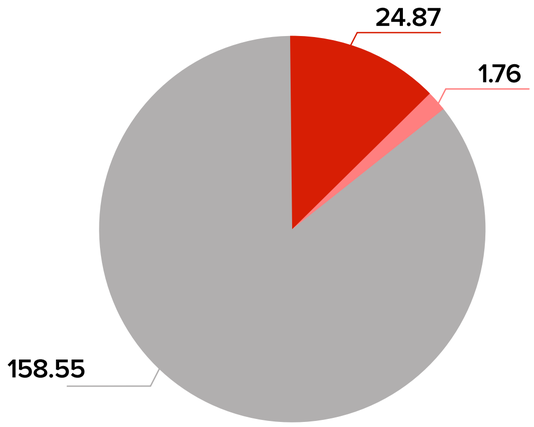
**~3,500**
SERVICE STATIONS ACROSS POLAND, GERMANY, THE CZECH REPUBLIC, SLOVAKIA, LITHUANIA, AND HUNGARY



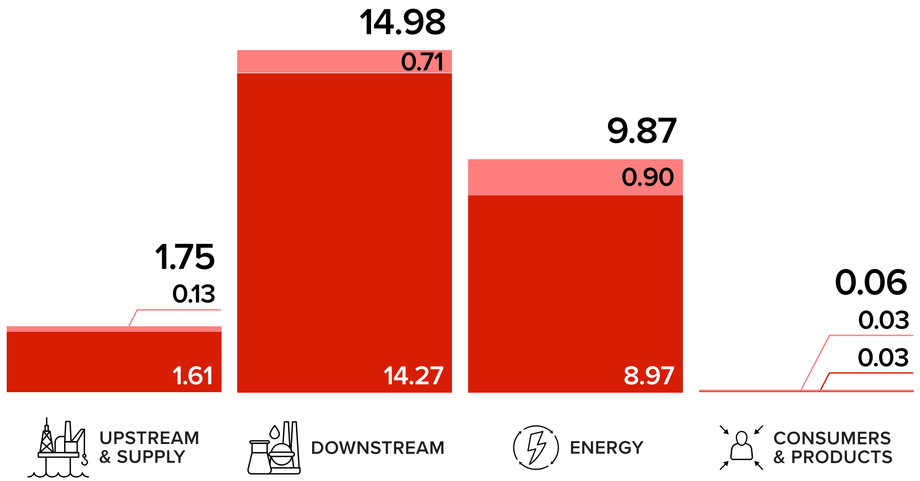
# The vast majority of GHG emissions across the Group's value chain result from the combustion of ORLEN products by customers

2024

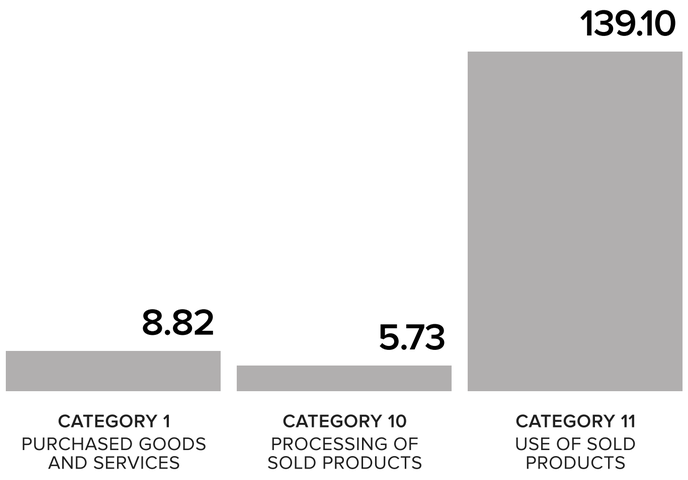
## SCOPE 1, 2 & 3 EMISSIONS [Mt $CO_2e$]




## SCOPE 1 & 2 EMISSIONS BY SEGMENT[1] [Mt $CO_2e$]




## SCOPE 3 EMISSIONS BY CATEGORY[2] [Mt $CO_2e$]




### Scope 3 emissions contribute over 80% to the Group's total emissions profile

Scope 1 emissions account for just under 20% of the Group's total emissions, while indirect emissions attributable to power and heat consumption (Scope 2) represent a comparatively small proportion. Scope 3 emissions, which span both the upstream value chain (e.g., sourcing of feedstocks, supplier transport activities) and downstream value chain (primarily customers' use of ORLEN products), collectively amount to more than 80% of the Group's total emissions and as such represent the largest component of its climate impact.

### Most direct emissions are generated by Downstream and Energy

The majority of direct GHG emissions from the Group's own operations (Scope 1) originate in the Downstream and Energy segments, in particular from industrial operations such as power plants, CHP plants, and refining and petrochemical facilities.

Nearly all operations responsible for these emissions are covered by the EU ETS. An exception to this is the Upstream & Supply segment, which generates significant methane emissions.

### Use of sold conventional fuels generates the majority of emissions in the value chain

Emissions falling within Scope 3 Category 11 result from the use of products that come from the ORLEN Group's refining operations or that are imported and resold by it to end customers.

The majority of these emissions arise from customer use of fuels such as petrol and diesel, as well as from the combustion of sold natural gas.

1. Scope 2 data calculated according to the location-based method.
2. The bar chart presents only the three largest categories, collectively representing 97% of the Group's aggregate Scope 3 emissions.

SCOPE 1 SCOPE 2 SCOPE 3

# In recent years, we have significantly stepped up our sustainability and decarbonisation efforts

## 2019

**BASE YEAR FOR DECARBONISATION TARGETS**
The year 2019 was selected as the base year for decarbonisation targets because subsequent years were marked by significant disruptions, including the COVID-19 pandemic and the energy crisis, which caused substantial and unforeseen fluctuations in emission levels

## 2020

**04M** Energa
**ACQUISITION OF ENERGA**
Following the ORLEN Group's acquisition of the ENERGA Group, the Ostrołęka C power plant project was redesigned from a coal-fired unit to a combined-cycle gas turbine (CCGT) unit

**09M**
**ORLEN STRATEGY 2030 AND 2050 NET ZERO TARGET**
In 2020, ORLEN committed to achieving net-zero emissions by 2050 and published its first decarbonisation strategy

**12M**
**ESG-LINKED BONDS**
Issue of ESG-linked bonds with a total nominal value of PLN 1 billion

## 2021

**05M**
**GREEN EUROBONDS**
Issue of EUR 500 million worth of green bonds under the EUR 5 billion bond programme

**04M**
**ORLEN GROUP SUSTAINABLE STRATEGY FOR 2021–2023**
The Group's first Sustainability Strategy, comprising six priorities across three ESG pillars and including 16 distinct initiatives

## 2022

**08M** LOTOS
**MERGER WITH LOTOS**
Including the acquisition of 70% of the Gdańsk Refinery

**11M** PGNiG
**MERGER WITH PGNIG**
Including expansion of Upstream & Supply operations

**12M**
**ESTABLISHMENT OF CLIMATE AND SUSTAINABILITY GOVERNANCE STRUCTURES**
Establishment of the Climate and Sustainability Council, appointment of the Representative for Climate, and formation of the Supervisory Board's Social and Environmental Responsibility Committee

**12M**
**DISCLOSURE OF SCOPE 3 EMISSIONS**
Disclosure of our entire carbon footprint

## 2023

**12M**
**ORLEN GROUP SUSTAINABLE STRATEGY FOR 2025–2035**
The Group's strategy and goals for minimising climate impact, promoting environmental stewardship, enhancing working conditions, fostering local community engagement, and embracing responsible governance (18 streams across 5 pillars)

**06M**
**ORLEN GROUP CLIMATE POLICY**
Further elaboration of actions aimed at achieving Net Zero by 2050. including the Biodiversity Policy

**02M**
**2030 STRATEGY UPDATE**
Update of the 2030 decarbonisation targets, including the announcement of the planned coal phase-out by 2035 (for power and heat) and methane emission and routine flaring reduction targets by 2030.

## 2024

**02M**
**ORLEN OUTLOOK**
Publication of a report on various energy transition pathways for Central Europe, including the identification of key challenges and opportunities for different countries within the region

**11M**
**OIL AND GAS DECARBONIZATION CHARTER (OGDC) MEMBERSHIP**
Intensification of international collaborations with peer Oil & Gas companies to reduce GHG emissions, including methane

## 2025

**05M**
**ORLEN TRANSITION PLAN**
Publication of the ORLEN Group's transition plan, outlining measures to achieve Net Zero

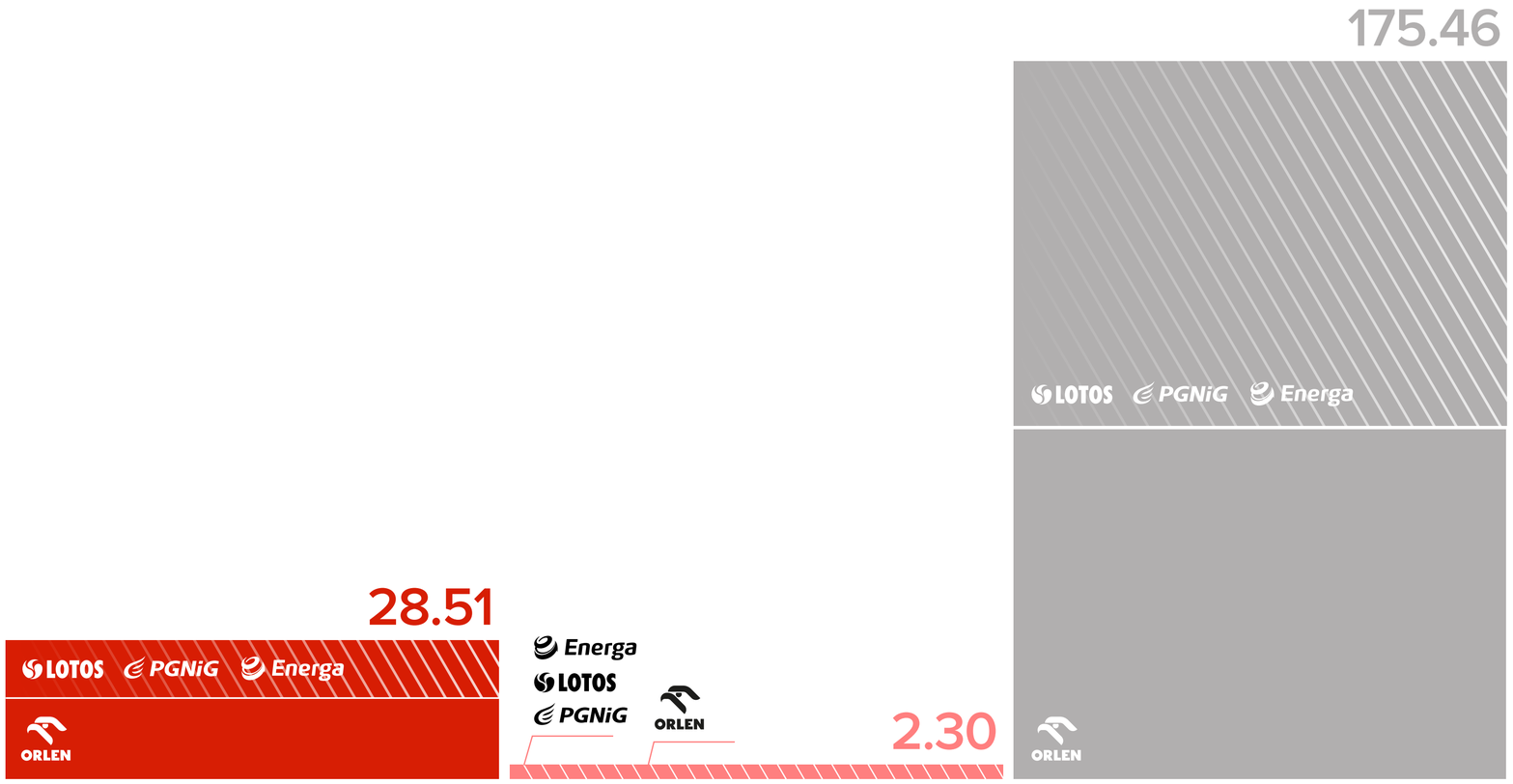
**04M**
**UPDATE OF CLIMATE POLICY AND SUSTAINABLE STRATEGY**
Update of the Group's sustainability targets, extending the Strategy's timeframe until 2035

**01M**
**ORLEN STRATEGY 2035**
Update of the Group's 2030 decarbonisation targets, publication of 2035 decarbonisation targets, and announcement of the intention to phase out coal-fired power generation by 2030

# Following the completion of a series of M&As, we recalculated our base year emission levels to account for all Scope 1-3 emissions

**ORLEN GROUP'S RECALCULATED BASE YEAR EMISSIONS** [Mt $CO_2e$]

2019




EMISSIONS PRIOR TO RECALCULATION

EMISSIONS FROM ACQUIREES

## Recalculation of base year emission levels

Following ORLEN's mergers with ENERGA, LOTOS and PGNiG Groups, we recalculated our emissions for the 2019 base year in conformity with the GHG Protocol guidelines, which require such recalculations in the event of changes in the reporting entity's structure. It should be noted that direct Scope 1 emissions had previously been calculated by all the acquirees, whereas Scope 3 and partially Scope 2 emissions were calculated for the first time by ORLEN after the mergers were finalised.

## Updated emissions and decarbonisation targets

As a result of these steps, and the inclusion of emissions from the acquired assets across all three scopes retroactively from 2019, the baseline values for emission reduction targets were substantially revised to reflect the significantly expanded emissions boundary.

Scopes 1 and 2 emissions increased primarily due to the expansion of operations in conventional power generation, heating, and refining. Additionally, higher volumes of natural gas and conventional fuel sales contributed to a notable rise in Scope 3 Category 11 emissions.

# The mergers have enabled the inclusion of the acquired assets in our decarbonisation plans

| ACQUISITION DATE | OPERATING SEGMENTS | KPIs | BASE YEAR SCOPE 1 & 2 EMISSIONS |
|---|---|---|---|
| Energa 2020 04M | | **4.6** TWh/year power and heat generation | **3.42** Mt $CO_2e$ |
| LOTOS 2022 08M | | **7** Mt/year annual crude throughput[1] | **1.69** Mt $CO_2e$ |
| PGNiG 2022 11M | | **~8** bcm/year natural gas production | **8.85** Mt $CO_2e$ |

UPSTREAM & SUPPLY · DOWNSTREAM · ENERGY · CONSUMERS & PRODUCTS

## Mergers' impact on decarbonisation plans

Following the acquisition of the ENERGA, LOTOS, and PGNiG Groups, we have incorporated their assets, which had not been previously covered by any decarbonisation strategy, into our decarbonisation plans, thus significantly increasing the ambition of our emission reduction targets.

## Identification of decarbonisation levers across the expanded Group

Following the recalculation of our base year emission levels, we updated our baseline emissions footprint and developed strategies incorporating the acquired assets. Consequently, coal-fired power and CHP plants operated by ENERGA and ORLEN Termika are now included in the coal phase-out targets, methane emissions from natural gas extraction are being actively reduced, and emissions from our Downstream segment and fuel sales have been integrated into our emissions reduction plans, encompassing both direct emissions and those across the entire value chain.

## Synergies driving emission reductions

As a result, we are leveraging post-merger synergies to develop new business lines while simultaneously pursuing a broader emission reduction agenda, thereby amplifying its contribution to global decarbonisation efforts.

1. Including throughput attributable to ORLEN's 70% ownership interest in the Gdańsk Refinery.
2. 2019 as the base year.

# Value maximization of our core business capabilities is essential to financing the ORLEN Group's energy transition

| LOGIC BEHIND GROWTH PROJECTS | Maximising value from the existing asset base | Investing in new, sustainable business lines |
|---|---|---|
| GROWTH TRAJECTORIES AND STRATEGIC OBJECTIVES UNTIL 2035 | Investment in high-return assets to finance energy transition | Development of new competitive products and businesses driving the energy transition |

**12** [bcm]
annual natural gas production

**4.3** [GW]
installed gas-fired power and heat generation capacity

**15** [bcm]
contracted gas supplies annually

**10** [million]
VITAY ecosystem users

**97** [%]
refining capacity utilisation

**>120** [TWh]
retail electricity and gas sales

**4** [mtpa]
annual $CO_2$ storage capacity

**0.9** [GW]
electrolyser capacity for hydrogen production

**26.1** [%]
share of renewables in transport fuels

**12.8** [GW]
installed renewable energy capacity

**250** [thousand tonnes]
recycling capacity

**1** [TWh]
electricity supplied to EVs

## FOUNDATIONS FOR GROWTH

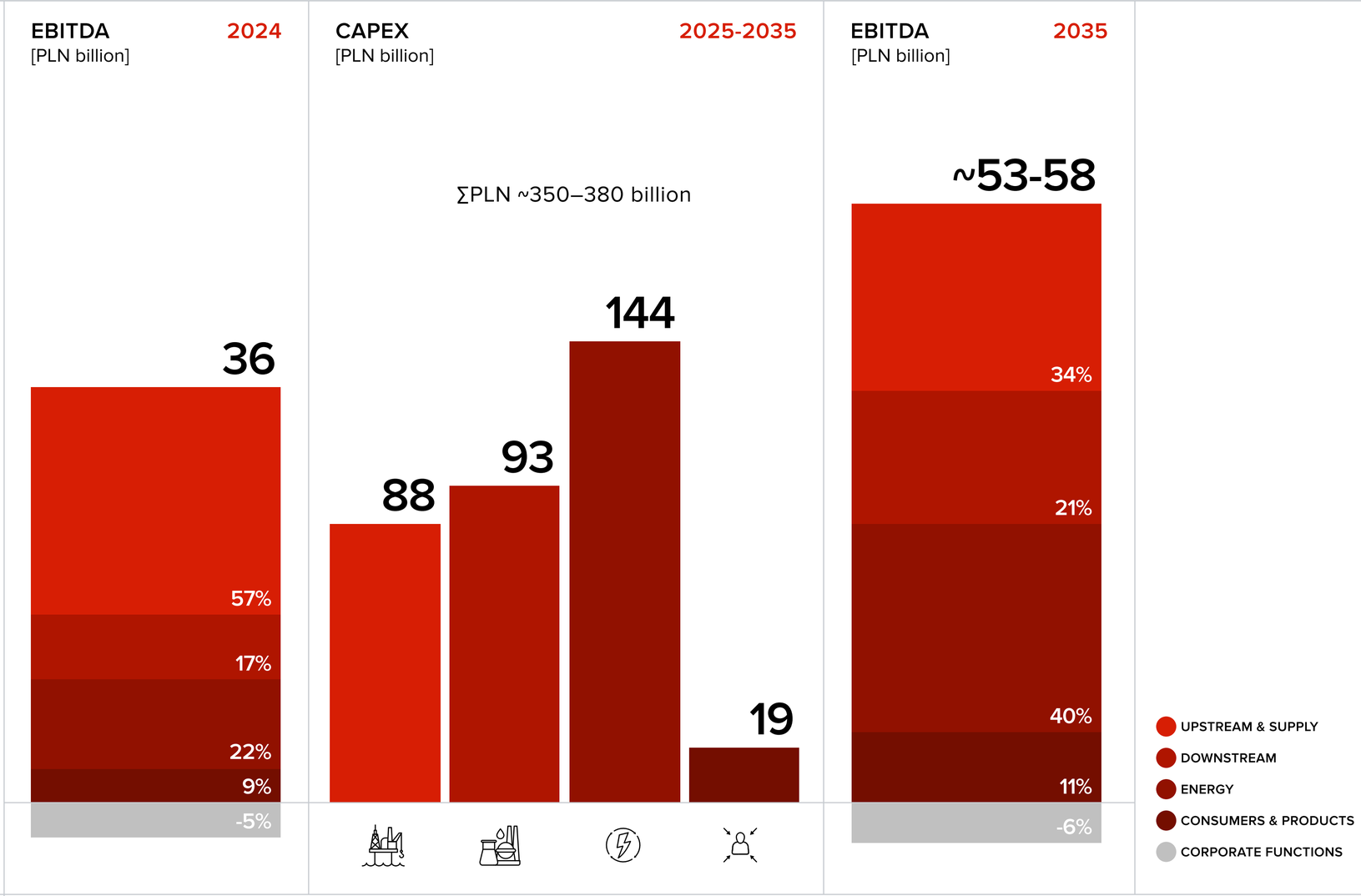
### ASSET OPTIMISATION

OPERATIONAL EFFICIENCY | PORTFOLIO OPTIMISATION | TRANSITION AND INTEGRATION OF BUSINESS LINES

### PRAGMATIC CAPITAL MANAGEMENT

LOW-CARBON PROJECTS | ENSURING REQUIRED RETURNS ON INVESTMENT | PARTNERSHIPS FOR THE DEVELOPMENT OF NEW BUSINESS LINES

# New business lines will enhance profitability and diversify our revenue streams




- Average annual CAPEX will amount to PLN 32–35 billion, decreasing from approximately PLN 43–47 billion in 2025–2027 to about PLN 21–23 billion in 2031–2035.
- The areas requiring the largest investment include the Energy segment (~40%, comprising RES and CCGT) and Downstream (~27%, covering alternative fuels and asset decarbonisation projects).
- Average annual EBITDA is projected to increase from approximately PLN 34–36 billion in 2025 to about PLN 53–58 billion by 2035.
- The primary EBITDA contributors will be the Energy segment (36%, from renewables and CCGT) and Upstream & Supply segment (36%, driven by increased production in Norway).

## Growth supporting decarbonisation in the region

Our aim is to secure future profitability by investing in natural gas supplies, the decarbonisation of energy assets, and sustainable transport fuels. At the same time, we are enabling the energy transition in Poland and the broader region in line with the unique pace of growth, resilience, and demand patterns of Central Europe's economies as compared to other European countries.

## Pragmatic energy transition

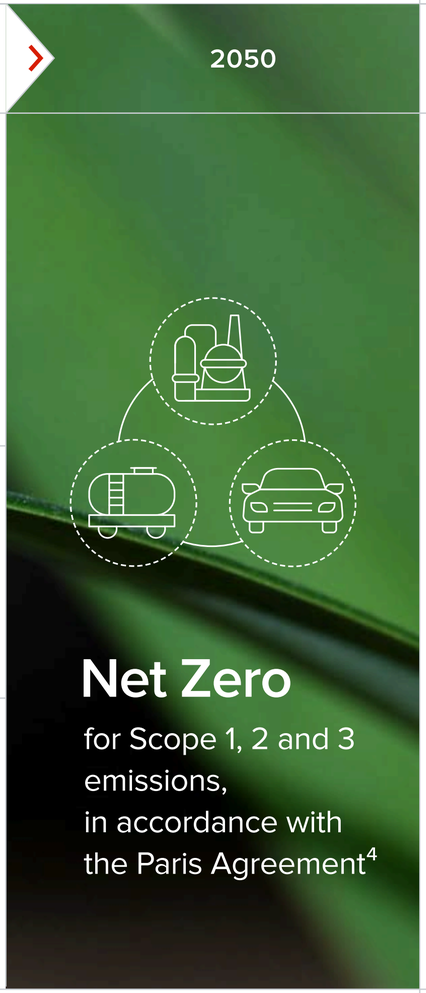
Given the current macroeconomic environment, we must balance growing demand for energy, investor expectations, and decarbonisation commitments. With this in mind, we are pursuing a pragmatic approach to energy transition, focused on ensuring Poland's and Central Europe's energy security, while maintaining competitiveness and flexibility, underpinned by stable earnings from traditional business activities across our operating segments.

## Investing in new, sustainable business lines to secure future profitability

Earnings from traditional operations in the Upstream & Supply and Downstream segments remain at levels that are sufficient to finance investment in new business lines, particularly the expansion of the Energy segment. By 2035, the share of this segment in the Group's earnings will increase significantly.

# On our pathway to Net Zero, we have set emission reduction targets for 2030 and 2035

| DECARBONISATION TARGETS | 2030 | 2035 | 2050 |
|---|---|---|---|
| **Oil & Gas** absolute emissions [Scope 1+2][1] | -13 [%] | -25 [%] | |
| **Power & Heat** emissions intensity [Scope 1][2] | -40 [%] | -55 [%] | |
| **Net Carbon Intensity** emissions intensity [Scope 1+2+3 Category 11][3] | -10 [%] | -15 [%] | |




Base year: 2019

1. Scope 1 and Scope 2 GHG emissions from Oil & Gas operations, measured in Mt CO2e.
2. Scope 1 GHG emission intensity in the Power & Heat egenration, measured in kg CO2e/MWh.
3. Emission intensity of produced energy products (Net Carbon Intensity), measured in g CO2e/MJ for Scopes 1 and 2, and Category 11 of Scope 3 GHG emissions. Emissions from Petrochemicals production (non-energy products) are excluded from the NCI.
4. Our ambition to reduce emissions aligns with the goal of limiting global warming to 1.5°C by 2050. The achievement of our long-term targets will be influenced by technological progress and the evolving regulatory and legal landscape. These factors may create more or less favorable conditions for the energy transition, potentially accelerating or decelerating the pace of our strategy's implementation.

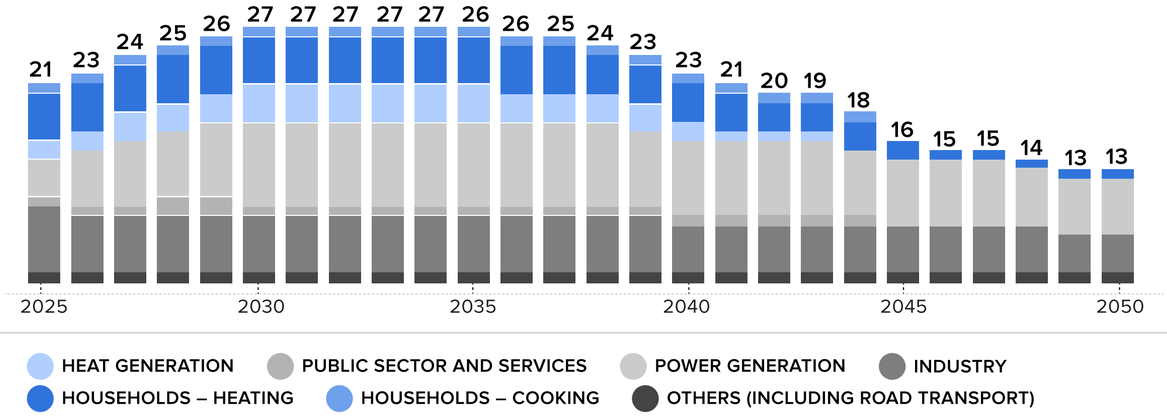
# Central Europe in the context of energy transition

# As a transitional fuel, natural gas will play a significant role on the pathway to Net Zero, progressively replacing coal

## Natural gas

+ Natural gas demand in Poland could exceed 27 bcm annually within the next five years and is expected to remain high thereafter. Consequently, the share of natural gas in Poland's power generation mix will inevitably increase over the coming years.
+ The rapid phase-out of coal and accelerated deployment of renewables will require Poland to significantly expand its gas-fired generation capacity within the next decade. This means that, in the short-to-medium term, natural gas will become one of the pillars of the country's electricity system. Gas-fired power plants will also play a key role in balancing the operation of renewable energy assets. Thanks to their operational flexibility, these plants can rapidly increase output, for example during shortfalls in wind and solar energy generation, a factor particularly relevant at Poland's latitude.
+ As Poland strives to reduce GHG emissions, natural gas represents an essential bridge in the energy transition, enabling a gradual shift towards more sustainable and ultimately zero-emission energy sources.

**POLAND'S NATURAL GAS DEMAND** [bcm] **2025-2050**

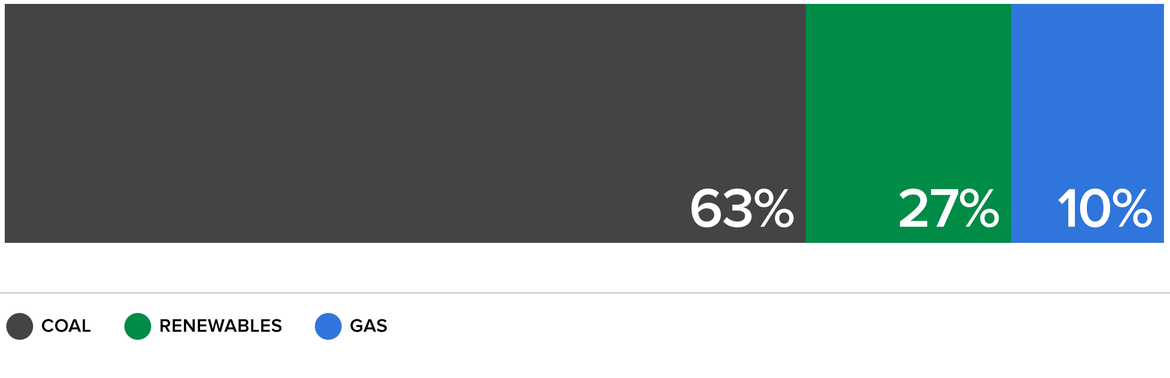



Source: In-house analysis.

## Coal

+ Coal continues to play a significant role in Central Europe's energy sector, particularly in Poland, where over 60% of electricity generated in 2024 came from coal-fired sources. This high dependency on coal for domestic electricity generation results in some of the highest carbon intensity metrics in the region, creating major challenges for Poland's decarbonisation efforts and energy transition.
+ Furthermore, coal is extensively used for combined heat and power generation, and Poland has one of the most extensive district heating networks in Europe. In this sector, dependence on fossil fuels, including coal, is even greater, making the transition to renewable energy sources more complex compared to electricity generation alone.

**POLAND'S POWER GENERATION MIX** **2024**



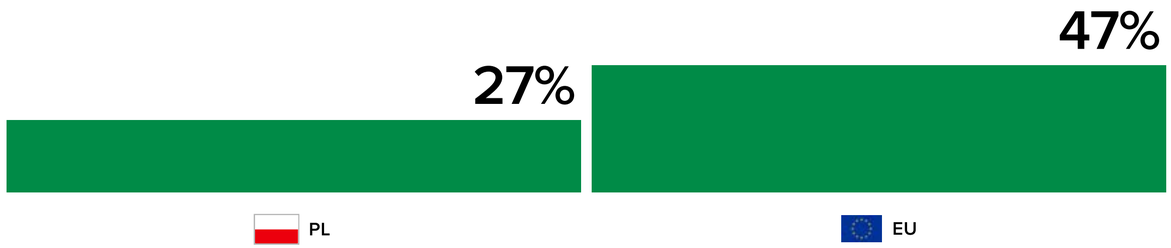

Source: PSE S.A.

# Poland faces significant challenges on its path to Net Zero due to relatively low utilization of renewable energy sources and the absence of nuclear energy

## Renewables

+ With the accelerating electrification of economies, installed renewable energy capacity in Central Europe is expected to grow rapidly – potentially at a faster rate than in other European regions. Despite renewables' increasing contribution to the country's energy mix, in 2024 Poland achieved only a 27% share of electricity from renewable sources, ranking below most other EU member states.
+ The absence of nuclear power and continued heavy reliance on fossil fuels keep Poland among the region's most carbon-intensive economies, which adversely affects its competitiveness. In this context, the rapid expansion of onshore and offshore wind energy, solar PV power, biomass, and biogas assets is crucial for reducing GHG emissions and mitigating the economic costs of fossil fuel dependency.
+ The energy transition requires intensified renewable energy deployment to capitalise on electrification opportunities and support sustainable development. What is more, renewable energy is essential for the production of zero-emission energy carriers such as hydrogen and for achieving goals related to zero-emission mobility.

**SHARE OF RENEWABLES IN POWER GENERATION MIX** 2024




Source: Eurostat.

## Nuclear energy

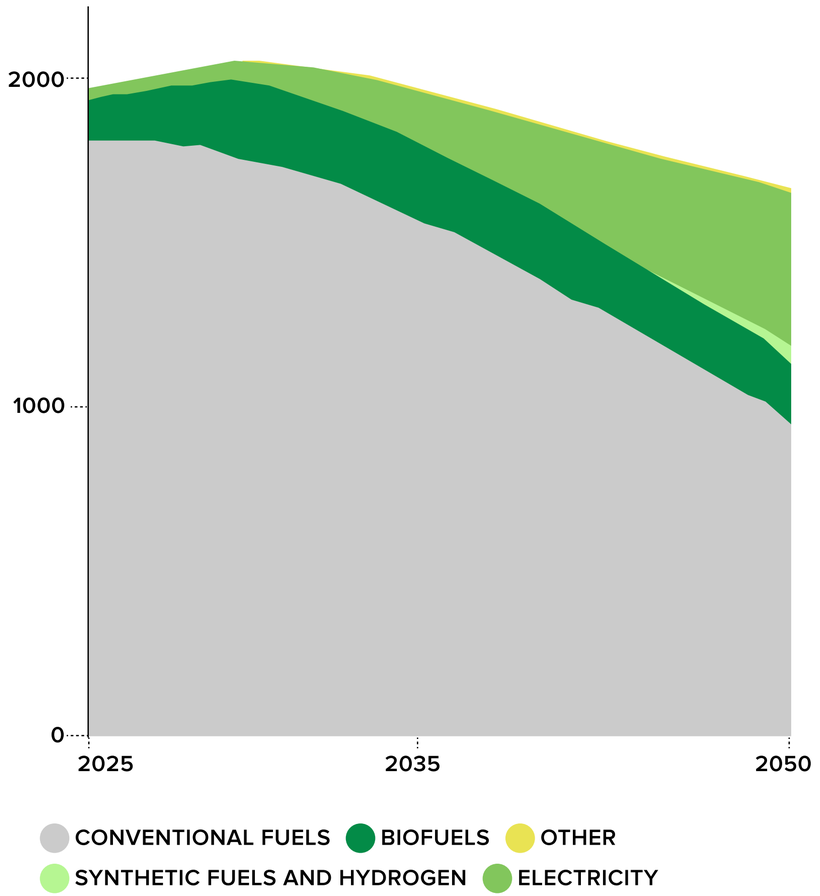
+ Nuclear power plays a significant role in Central Europe's energy transition, contributing substantially towards achieving climate neutrality and ensuring the region's energy security. Many Central European countries view nuclear power development as essential to reducing reliance on energy imports. The region is witnessing a nuclear energy revival, characterised by growing investments in new projects and the upgrades of existing nuclear assets.
+ Examples include new reactor units under construction in Poland, Slovakia, the Czech Republic, and Romania, as well as plans to develop small modular reactors (SMRs), which can offer stable and reliable energy supplies. Nuclear power is increasingly viewed as central to achieving the EU's ambitious climate objectives, which call for substantial GHG emission reductions by 2050.
+ Currently, the absence of nuclear power in Poland perpetuates dependence on carbon-intensive fossil fuels, complicating the energy transition and increasing the burden of meeting climate objectives on both the society and the economy.

**NUCLEAR POWER IN EUROPE** 2024


Source: In-house analysis.

# We are committed to decarbonize transport, but its pace depends on changes in consumer habits and technological development

**FINAL ENERGY CONSUMPTION IN TRANSPORT IN CENTRAL EUROPE[1] [PJ]** 2025-2050




1. Central Europe includes Poland, the Czech Republic, Slovakia, Hungary, and Lithuania.
Source: In-house analysis.

## Conventional fuels

+ Petroleum-based fuels will remain critical for transport in Central Europe for at least the next decade. As such, refineries will have to continue to operate to meet demand until alternative energy sources effectively replace conventional solutions. By contrast, Western Europe, being more advanced in energy transition, is expected to experience an earlier decline in fuel demand, driving a reduction in petroleum refining capacities.
+ End-user consumption of fuels accounts for the largest share of our overall carbon footprint. This consumer-driven demand dictates the need for fuel production and significantly influences the pace of decarbonisation of the fuel industry.

## Biofuels and biomethane

+ Biofuels will be instrumental in supporting transport decarbonisation in Central Europe. EU regulations require that the share of renewable energy in transport be steadily increased, and biofuels are positioned to play a crucial role in this process, either through higher bio-component blends or entirely biomass- and biogas-derived fuels. Their ability to seamlessly replace conventional fuels, particularly as substitutes for diesel, makes them a pragmatic solution – especially in heavy-duty transport, where electrification options remain limited, and in aviation through the adoption of sustainable aviation fuels (SAF).
+ Biofuels such as biodiesel and bioethanol can substantially contribute to GHG reductions. Increasing their market share will require aligning national policies with EU regulations and investing in new technologies, which presents both challenges and opportunities for the sector.

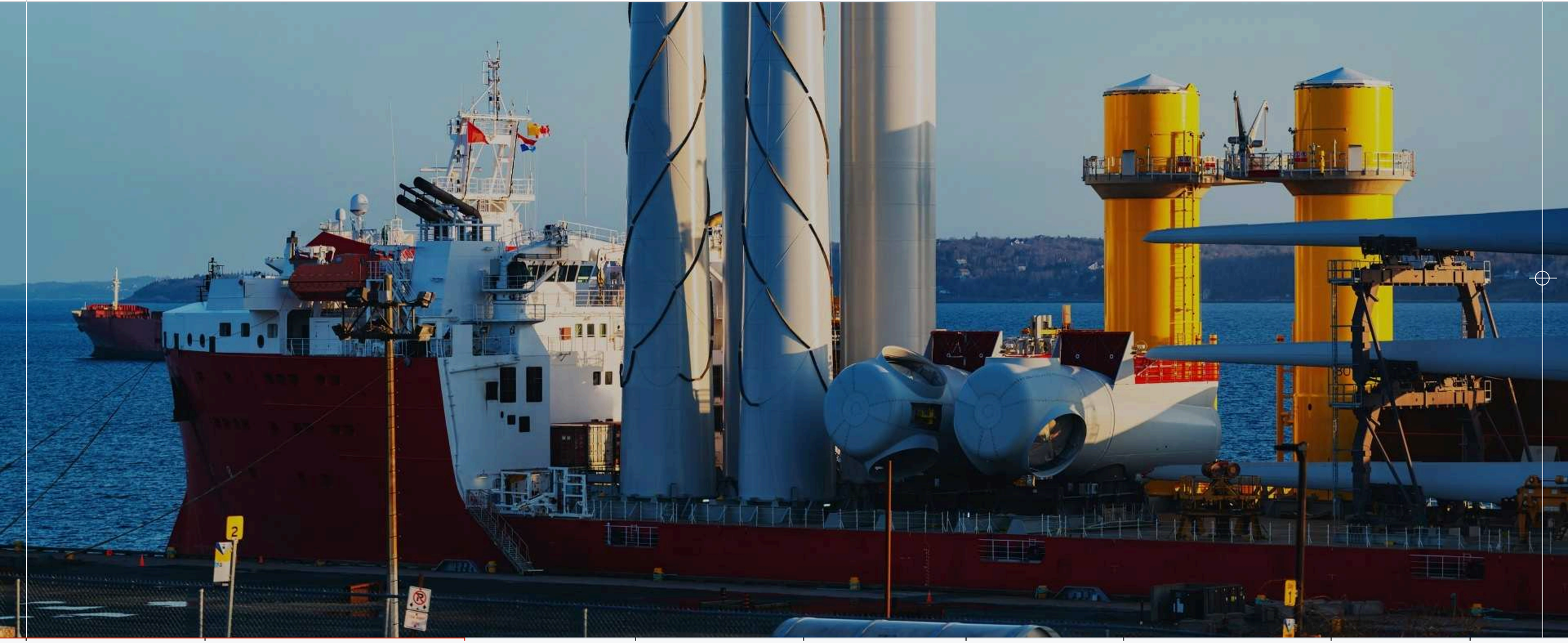
## Electromobility

+ Electric mobility in Central Europe is progressing more slowly than in other parts of Europe, primarily due to a lower penetration of electric vehicles (EVs) and higher carbon intensity of electricity generation. Demand for electricity in transport will mainly be driven by the passenger vehicle segment, while heavy-duty transport, predominantly diesel-based, faces limited opportunities for electrification.
+ Consequently, diesel will remain the dominant fuel for heavy-duty transport in the coming years, whereas electrification will become increasingly prominent in passenger transport. Expanding the infrastructure to facilitate rapid and convenient charging of electric vehicles will be critical to the growth of electric mobility in the region.

## Synthetic fuels and hydrogen

+ Synthetic fuels produced from renewable energy sources and $CO_2$ can be used in existing internal combustion engines, which facilitates their integration into current infrastructure. Hydrogen, widely recognised as a fuel of the future, has the potential to meet a substantial portion of transport energy needs, especially in heavy-duty applications, where it can be utilised in fuel-cell vehicles.
+ EU regulations actively encourage the use of low- and zero-emission hydrogen and synthetic fuels. As production technologies and related infrastructure continue to evolve, the importance of these fuels in reducing GHG emissions will steadily increase. Nevertheless, achieving decarbonisation targets will require sustained investment in renewables and substantial development of production and distribution infrastructure.

# Decarbonisation strategy



# We are delivering progress against our decarbonisation strategy by implementing clearly defined decarbonisation levers

## OIL & GAS

**Scope 1+2** Absolute emissions
[Mt $CO_2e$]

**PROGRESS**

16.8 Mt $CO_2e$

**-7%**
15.7 Mt $CO_2e$

**TARGETS**

2019
2024
2030 **-13%** Near Zero Upstream Methane Emissions, Zero Routine Flaring
2035 **-25%**

## POWER & HEAT

**Scope 1** Emissions intensity
[kg $CO_2e$/MWh]

**PROGRESS**

377 kg $CO_2e$/MWh

**-17%**
313 kg $CO_2e$/MWh

**TARGETS**

2019
2024
2030 **-40%** Coal phase-out in power generation
2035 **-55%** Coal phase-out in heat generation

## NET CARBON INTENSITY (NCI)

**Scope 1+2+3 Category 11** Emissions intensity
[g $CO_2e$/MJ]

**PROGRESS**

78 g $CO_2e$/MJ

**-3%**
76 g $CO_2e$/MJ

**TARGETS**

2019
2024
2030 **-10%**
2035 **-15%**

## NET ZERO

**Scope 1+2+3**
In accordance with the Paris Agreement

**PROGRESS**

206 Mt $CO_2e$

**-10%**
185 Mt $CO_2e$

**TARGET**

2019
2024
2050 **Net Zero**

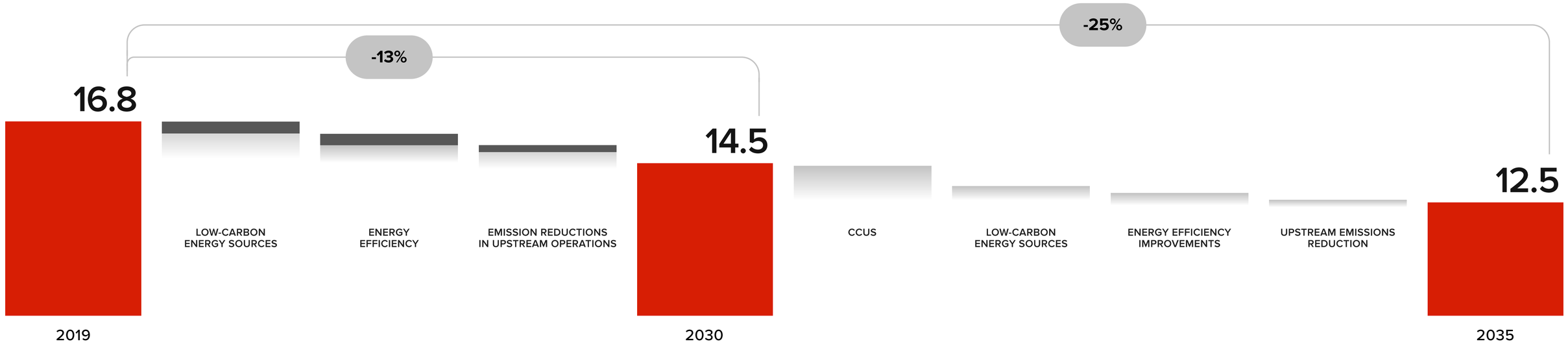
## LEVERS

- LOW-CARBON ENERGY SOURCES
- ENERGY EFFICIENCY
- CCUS
- UPSTREAM EMISSIONS REDUCTION
- RENEWABLE ENERGY SOURCES
- HEATING SECTOR TRANSITION
- GAS-FIRED POWER & HEAT GENERATION
- SMALL MODULAR REACTORS (SMR)
- LOW AND ZERO-CARBON ENERGY
- CARBON MANAGEMENT SERVICE
- ALTERNATIVE FUELS
- DECARBONISATION OF OPERATIONS

# By 2035, we will reduce emissions from Oil & Gas operations by 25% in absolute terms

## GHG EMISSIONS REDUCTION IN OIL & GAS, SCOPES 1 AND 2 [Mt $CO_2e$]

IMPLEMENTED LEVERS REDUCTION POTENTIAL




### LOW-CARBON ENERGY SOURCES

Emission reductions in both Upstream & Supply, and even to a greater extent in Downstream, are driven by increased use of low-carbon energy sources.

We achieve emissions reduction by phasing out our own generation capacity reliant on high-carbon sources and by transitioning to greater consumption of energy originating from renewable and low-carbon sources. This shift covers electricity, heat, and other energy carriers, including renewable and low-carbon hydrogen and biomethane. Between 2019 and 2024, improvements in the carbon intensity of consumed energy resulted in approximately 300 kt $CO_2e$ emissions reduction.

LEARN MORE

### ENERGY EFFICIENCY

We continuously strive to enhance energy efficiency and thus reduce emissions from our own operations.

Initiatives such as heat recovery and electrification enable ORLEN to decrease its energy consumption and associated GHG emissions.

Between 2019 and 2024, energy efficiency projects delivered emissions reduction. of approximately 450 kt $CO_2e$.

### UPSTREAM EMISSIONS REDUCTION

In 2023, we announced targets for our upstream operations: achieving zero routine flaring and near-zero methane emissions by 2030. These commitments were reaffirmed in the ORLEN Strategy 2035 and through our membership in the Oil & Gas Decarbonization Charter (OGDC).

OGDC THE OIL & GAS DECARBONIZATION CHARTER

Between 2019 and 2024, upstream operational improvements resulted in reducing emissions by approximately 200 kt $CO_2e$.

LEARN MORE

### CCUS

The development of carbon capture, utilisation, and storage (CCUS) technologies will contribute to reducing direct emissions from ORLEN's production facilities, thus enabling emission reductions in absolute terms.

The feasibility of carbon capture at ORLEN's facilities depends on developing transmission infrastructure and securing suitable $CO_2$sequestration sites. CCUS represents a crucial decarbonisation lever for our refining and petrochemical assets, with large-scale deployment planned post-2030.

Renewable hydrogen may serve as an alternative decarbonisation lever to CCUS. Ultimately, the precise contributions of these decarbonisation levers may vary depending on the selection of the most economically viable solutions.

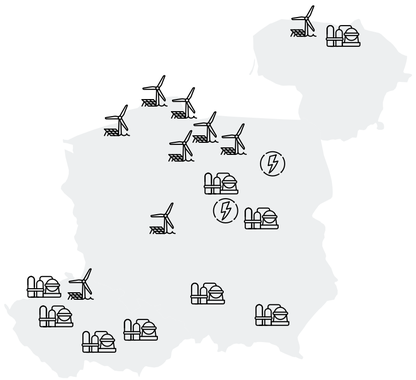
LEARN MORE

# We are expanding our renewable and low-carbon hydrogen production and utilisation capabilities to decarbonise our operations and produce sustainable transport fuels

Renewable and low-carbon hydrogen, along with its derivatives, represent a key decarbonisation driver, enabling significant reductions in emissions from our own operations and facilitating the production of zero-emission fuels.

We are investing in various feedstock sourcing options and conversion technologies, including the production of RFNBO[1] and low-carbon hydrogen, aiming to achieve optimal decarbonisation outcomes while minimising regulatory compliance costs. At the same time, we are reviewing maritime import options for hydrogen and its derivatives, as well as assessing the feasibility of pipeline imports through the European Hydrogen Backbone (EHB).

**EXISTING AND PLANNED LOW-CARBON AND RENEWABLE HYDROGEN PRODUCTION ASSETS**



- EXISTING SOURCES AT PRODUCTION FACILITIES
- RENEWABLES-POWERED ELECTROLYSER
- MUNICIPAL WASTE-TO-HYDROGEN PROCESSING

## DEMAND FOR LOW-CARBON AND RENEWABLE HYDROGEN 2035

| REFINING | FERTILIZERS | SYNTHETIC FUELS | TRANSPORT FUELS |
|---|---|---|---|
| $H_2$ for refining processes | $H_2$ for fertiliser production | $H_2$ for synthetic fuel production | $H_2$ as a transport fuel[2] |
| ~210 [kt] | ~110 [kt] | ~30 [kt] | ~12 [kt] |

Our strategy foresees the use of 50 kt per year of low-carbon and renewable hydrogen for refinery production by 2030, and 210 kt per year by 2035.

We maintain flexibility in achieving these volumes by investing in a diversified portfolio of hydrogen production technologies. The final split between RFNBO hydrogen and low-carbon hydrogen will depend on the evolving regulatory framework, the deployment of enabling infrastructure (e.g. the European Hydrogen Backbone – EHB), and the continued development of hydrogen markets.

By 2035, our fertiliser business will utilise up to 110 kt of low-carbon and renewable hydrogen per year for ammonia production.

Given the scale of upcoming regulatory requirements and the challenging market conditions for ammonia production in Central and Eastern Europe, we anticipate that domestic production may be partly replaced by imports, both from within and outside the EU.

We anticipate the use of over 40 kt per year of hydrogen and synthetic fuels in hard-to-abate transport sectors, including aviation and heavy-duty road haulage.

We are committed to developing a fully integrated hydrogen ecosystem – from the production of automotive hydrogen to the construction of dedicated hydrogen refuelling stations. Through these initiatives, hydrogen will become a cornerstone of the energy transition in the transport sector, supporting emissions reduction and sustainable development across the value chain.

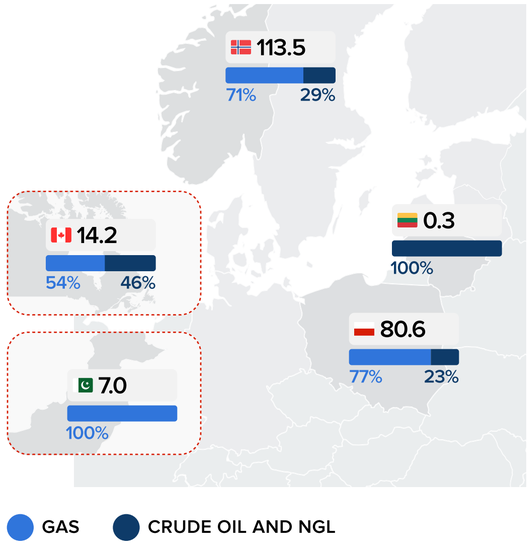
1. RFNBO – Renewable Fuels of Non-Biological Origin.
2. Czech transport-related volumes are included within the hydrogen volumes for refining processes, as the electrolyser will serve both purposes.

# We are reducing methane emissions from upstream operations and undertaking decarbonisation investments while increasing our natural gas production

By 2030, ORLEN will adapt its upstream processes to comply with the EU Methane Regulation and OGDC guidelines, aiming not to exceed specified methane emission intensity targets.

Through targeted investments in GHG emission reductions, we intend to achieve our Zero Routine Flaring and Near Zero Upstream Methane Emissions goals by 2030, while maintaining stable hydrocarbon production, which is essential for ensuring our region's energy security.

**AVERAGE HYDROCARBON PRODUCTION BY COUNTRY AND SHARE** 2024
[kboe/d][2]




GAS CRUDE OIL AND NGL

## UPSTREAM EMISSIONS REDUCTION MEASURES 2035

| FLARING | | VENTING | | FUGITIVE |
|---|---|---|---|---|
| **Elimination of routine flaring** | **Ensuring 99% flare combustion efficiency** | **Reducing methane emissions from waste gas** | **Elimination of wellbore syphoning** | **Implementation of LDAR[1]** |
| We will eliminate routine flaring of methane previously deemed uneconomic due to low quality or local constraints.<br>Captured gas will be treated, compressed, and either transported to market, used on-site for energy generation, or reinjected into reservoirs. | We have conducted combustion efficiency assessments for all representative operational flares. By 2026, we will implement necessary upgrades to achieve the required combustion efficiency across all operational flares. | We are implementing innovative technological modifications in nitrogen removal units to significantly reduce methane emissions during nitrogen extraction processes. These solutions reduce methane concentrations in waste gases to trace levels, lowering the Group's direct GHG emissions. The applicable technologies include optimised cryogenic processing and advanced methane recovery systems. | We have reviewed zero-carbon methods for the removal of formation water, which obstructs hydrocarbon production. Chemical and mechanical methods will be employed to eliminate the need for wellbore syphoning and temporary venting of gas to the atmosphere. | We have inventoried components identified as methane emission sources.<br>In 2025, we will implement a comprehensive LDAR programme designed to reduce methane leaks through regular detection and repair activities.<br>The results of LDAR inspections and other identified methane releases will be aggregated within a dedicated IT system for methane emission management. |

### Utilisation of waste gas for power generation purposes

ORLEN Group companies have a track record of implementing solutions that reduce GHG emissions from upstream operations by using methane to generate electricity and heat. ORLEN Termika utilises methane captured from coal mine degasification activities in southern Poland to power its combined heat and power plants. Similarly, ORLEN Petrobaltic has established the Energobaltic CHP plant on the Baltic coast, which utilises waste gas, thereby avoiding routine flaring on offshore rigs.

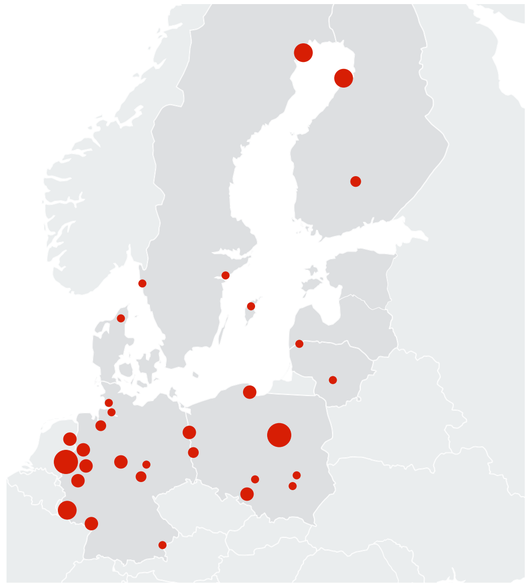
1. LDAR – Leak Detection And Repair.
2. Production levels as at Q4 2024.

# We are building a comprehensive value chain for carbon capture, utilisation, transport, and storage (CCUS), enabling effective $CO_2$ management within and beyond the ORLEN Group

The development of a complete CCUS value chain will allow us to reduce direct emissions and offer Carbon Management service to emitters from hard-to-abate sectors, thereby reducing overall Net Carbon Intensity.

ORLEN is actively developing CCUS infrastructure by leveraging regulatory support, ensuring compliance with the Net Zero Industry Act, and forming strategic partnerships.

**MAJOR $CO_2$ EMITTERS IN HARD-TO-ABATE SECTORS IN THE REGION** [mtpa] 2023



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## ORLEN'S POSITIONING WITHIN THE CCUS VALUE CHAIN 2035

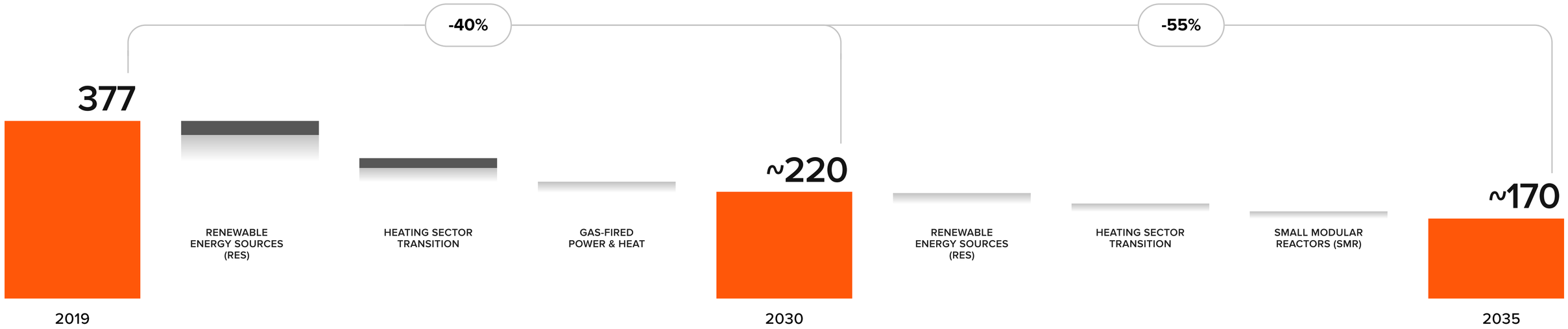
| CARBON CAPTURE AND UTILISATION | CARBON MANAGEMENT | STORAGE |
|---|---|---|
| **$CO_2$ capture from ORLEN's production facilities**<br>Utilisation of $CO_2$ and bio-based $CO_2$ for synthetic fuel production<br>**~1,1** [mtpa] | **Carbon Management services for third parties**<br>Capture and storage of $CO_2$ from companies in hard-to-abate sectors | **Onshore and offshore geological storage**[1]<br>**~4,0** [mtpa] |
| Advances in carbon capture technology enabling reductions in $CO_2$ emissions from refining and petrochemical facilities will significantly contribute to lowering direct emissions from ORLEN's own operations, which will lead to absolute emission reductions.<br>Moreover, we plan to utilise part of the captured emissions, particularly biogenic $CO_2$, for the production of synthetic fuels. | We aim to develop a comprehensive CCUS value chain to effectively reduce direct emissions from our facilities, while simultaneously enabling the decarbonisation of challenging sectors such as metallurgy, chemical production, and cement production.<br>Through investments in advanced technologies, infrastructure development, and cross-industry partnerships, we are committed to building comprehensive CCUS capabilities. | Captured $CO_2$ will be stored in geological formations located both offshore and onshore.<br>Ownership of suitable sequestration sites, in keeping with the objectives of the Net Zero Industry Act, enables us to offer Carbon Management services to third parties as well as store $CO_2$ captured at ORLEN Group's own facilities. |

1. Subject to regulatory developments in Poland and the Baltic Sea region.

# By 2035, we will reduce emission intensity in power and heat generation by 55%, which will be driven by investments in renewable and low-carbon energy sources

## REDUCTION OF EMISSIONS INTENSITY IN POWER & HEAT, SCOPE 1 [kg $CO_2$e/MWh]

IMPLEMENTED LEVERS  REDUCTION POTENTIAL




### RENEWABLE ENERGY SOURCES (RES)

Renewable energy is, and will remain, a critical area of growth. By 2030, our installed renewable energy capacity will grow from the current 1.5 GW to 9 GW, reaching 12.8 GW by 2035.

Our continued expansion will focus primarily on offshore and onshore wind as well as photovoltaic assets, both in Poland and other geographies. We are pursuing development that meets our own energy requirements and addresses increasing demand for zero-carbon energy to produce synthetic fuels.

LEARN MORE

### HEATING SECTOR TRANSITION

In 2024, we announced a comprehensive climate-neutrality plan for heat generation. By 2035, we aim to develop a system based on gas-fired power and heat generation supported by renewables, innovative technologies, and waste-to-heat energy.

The heating sector transition, including the decarbonisation of Warsaw's district heating system – the largest in the EU – is a cornerstone of our commitment to a just energy transition. Successful delivery of these plans will enable the ORLEN Group to fully phase out coal by 2035.

LEARN MORE

### GAS-FIRED POWER & HEAT

The development of gas-fired power plants in Poland, with planned capacity growth from 1.8 GW to 4.3 GW, plays a pivotal role in the transition of the Polish power generation system. These plants replace the most carbon-intensive and inefficient coal units, contributing significantly to $CO_2$ emission reductions.

Additionally, gas-fired power plants ensure grid stability amidst rapid renewable energy expansion. Thus, investments in gas-fired generation are viewed as an essential transitional measure, enabling the gradual coal phase-out while maintaining energy security.

LEARN MORE

### SMALL MODULAR REACTORS (SMR)

Through ORLEN Synthos Green Energy, we plan to deploy the BWRX-300 technology – an innovative, zero-carbon solution supporting the decarbonisation of power generation, industry, and district heating.

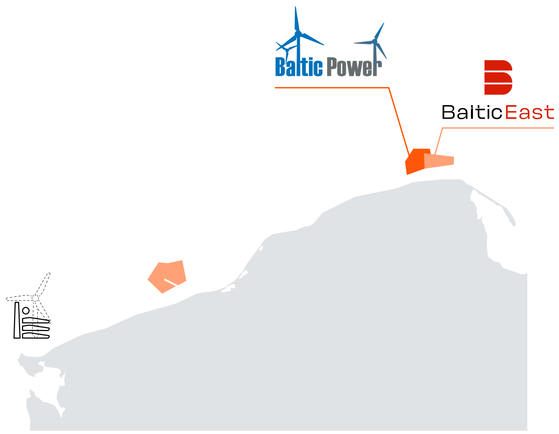
Our goal is to achieve 0.6 GW of installed SMR capacity by 2035, capitalising on internal synergies and addressing the growing demand for zero-emission energy within the ORLEN Group.

# In 2026, we will commission Baltic Power, and by 2035 we will deliver further offshore wind farm projects

We are actively developing offshore wind power capacities, a central element of the ORLEN Group's energy transition.

In 2025, we plan to complete an installation terminal in Świnoujście, and in 2026, we will commission the Baltic Power project, the first wind farm in the Polish sector of the Baltic Sea. By 2035, we intend to develop further licence areas, contributing to emission reductions and supporting the decarbonisation of Poland's energy mix.

**DEVELOPMENT OF OFFSHORE WIND POWER**




BALTIC POWER
LICENCES HELD
INSTALLATION TERMINAL

## KEY OFFSHORE WIND PROJECTS

| INSTALLATION TERMINAL 2025 | BALTIC POWER 2026 | BALTIC SEA LICENCES 2035[1] |
|---|---|---|
| **Completion of the installation terminal in Świnoujście** | **Completion of the Baltic Power offshore wind farm** | **Licenses for the construction of further offshore wind farms on the Baltic Sea** |
| **10** [GW]<br>TERMINAL HANDLING CAPACITY | **1.2** [GW]<br>TOTAL CAPACITY | **5.2** [GW]<br>LICENCES FOR NEW OFFSHORE WIND FARMS |
| The ORLEN Group made a strategic decision to construct Poland's first installation terminal for offshore wind farms in Świnoujście, intended to be one of the most advanced facilities of its kind in Europe. Completed in 2025, the terminal will enable assembly and loading of wind turbine components for offshore projects, including Baltic Power, and will service projects totalling over 10 GW of capacity by 2040.<br>Situated on a 20-hectare site, the terminal supports the decarbonisation of power generation operations and regional economic development. | The Baltic Power offshore wind farm represents a milestone in the development of Poland's energy sector.<br>This joint venture between ORLEN and Northland Power is the most advanced offshore wind project in the Polish sector of the Baltic Sea. Located 23 km from shore, this 1.2 GW farm will begin producing zero-emission electricity in 2026.<br>The commissioning of Baltic Power will significantly reduce ORLEN's $CO_2$ emissions intensity associated with electricity generation. | We are initiating development work for a further five offshore wind farm projects.<br>The initial phase will encompass wind resource assessment, preliminary geotechnical surveys, and environmental impact assessments, all vital for the administrative and design procedures.<br>Four of the five locations are situated on the Oder Bank, near Kołobrzeg. The fifth project, Baltic East, covers an area of approximately 110 km$^2$ and has a target installed capacity of approximately 1 GW. |

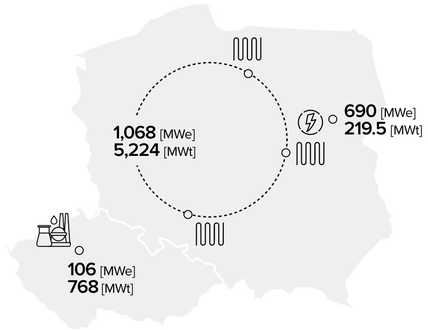
1. Within the decarbonisation strategy's timeframe (up to 2035), we plan to complete projects for Baltic East and two other licences.

# By the end of 2030, we will cease coal-based electricity generation, and by 2035 we will fully phase out coal from our heat generation assets

We strive to significantly reduce the share of coal in our energy mix, including fully eliminating its use in power generation by 2030. Achieving this goal will be facilitated by investments in low- and zero-carbon energy sources. As a result, we will substantially reduce the ORLEN Group's emissions, thereby supporting the energy transition of Poland and the wider region.

Managing the coal phase-out responsibly is essential for a just transition, as it ensures a progressive and balanced exit from coal, which takes into account the needs of local communities and employees.

**LARGEST COAL ASSETS OF THE ORLEN GROUP** 2024




DOWNSTREAM

POWER GENERATION

HEAT GENERATION

## COAL PHASE-OUT STAGES WITHIN THE ORLEN GROUP

| DOWNSTREAM 2029 | POWER GENERATION 2030 | HEAT GENERATION 2035 |
|---|---|---|
| **Coal Phase-out in Downstream** | **Coal phase-out at Ostrołęka B power plant** | **Coal phase-out in combined heat and power production** |
| **106** [MWe]<br>**768** [MWt] | **690** [MWe]<br>**219.5** [MWt] | **1,068** [MWe]<br>**5,224** [MWt] |
| In Litvinov, the Czech Republic, ORLEN Unipetrol operates a refinery-integrated combined heat and power (CHP) plant, fired by lignite coal.<br>The plant is currently intended to be shut down and replaced by a gas-fired unit. This transition will translate into to an annual GHG emission reduction of over 0.5 Mt $CO_2$e, substantially supporting the decarbonisation of the ORLEN Group's Downstream segment. | Ostrołęka B is the ORLEN Group's sole utility-scale power plant burning hard coal. Until the end of 2030, a single coal-fired unit will continue to operate, co-firing 50% biomass.<br>2030 will mark the final operational year of Ostrołęka B, representing a significant step toward the energy transition and reducing the carbon intensity of our electricity generation. | The majority of the ORLEN Group's coal assets are primarily used to produce heat for district heating networks. Given the critical social function of these systems, their energy transition must fully address social implications.<br>By 2035, we plan to completely phase out coal, including from our CHP assets, as part of our Heating Sector Transition Programme. These plans encompass coal exit from the largest district heating system in the EU, located in Warsaw. |

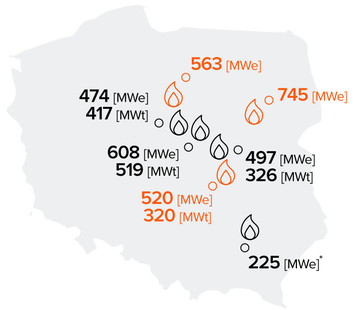
# Expansion of gas-fired power generation contributes to the stability of the Polish electricity system

We continue to develop gas-fired power capacity, supporting the decarbonisation of Poland's energy mix and reducing coal dependency.

Combined cycle gas turbine power plants offer high operational flexibility and can transition rapidly from idle to full load. This positions them as critical enablers of system stability in an evolving grid increasingly shaped by the intermittency of renewable sources.

The construction of new gas-fired units in the coming years will enable us to achieve our strategic target of 4.3 GW of installed power generation capacity.

**EXISTING AND PLANNED GAS-FIRED ASSETS**




PLANNED GAS-FIRED PLANTS

EXISTING GAS-FIRED PLANTS

## KEY GAS-FIRED POWER PROJECTS

### GRUDZIĄDZ CCGT 2026

**Commissioning of a CCGT unit in Grudziądz**

**563** [MWe]

The development of power generation capacity in northern Poland will reduce the region's reliance on coal and ensure secure and continuous electricity supply in an area undergoing intensive renewable energy growth.

The construction of the 563 MWe CCGT unit in Grudziądz commenced in May 2022, with commissioning scheduled for 2026.

### OSTROŁĘKA CCGT 2026

**Commissioning of a CCGT unit in Ostrołęka**

**745** [MWe]

Following the ORLEN Group's acquisition of the ENERGA Group, the Ostrołęka C power plant project was redesigned from a coal-fired unit to a combined-cycle gas turbine (CCGT) unit.

The construction of the 745 MWe Ostrołęka CCGT plant began in March 2022, with commissioning slated for 2026.

### SIEKIERKI CCGT 2030

**Commissioning of a CCGT unit at Warsaw's Siekierki CHP plant**

**520** [MWe]
**320** [MWt]

The Siekierki CCGT unit is a cornerstone investment project under our Heating Section Transition Programme. It will accelerate the decarbonisation of Warsaw's district heating system, which is the largest such network in the EU, and ultimately enable full coal phase-out by the ORLEN Group.

Development work for the project is currently underway. The unit, designed to provide electricity and heat generation capacity of 520 MW and 320 MW respectively, is expected to come online in 2030.

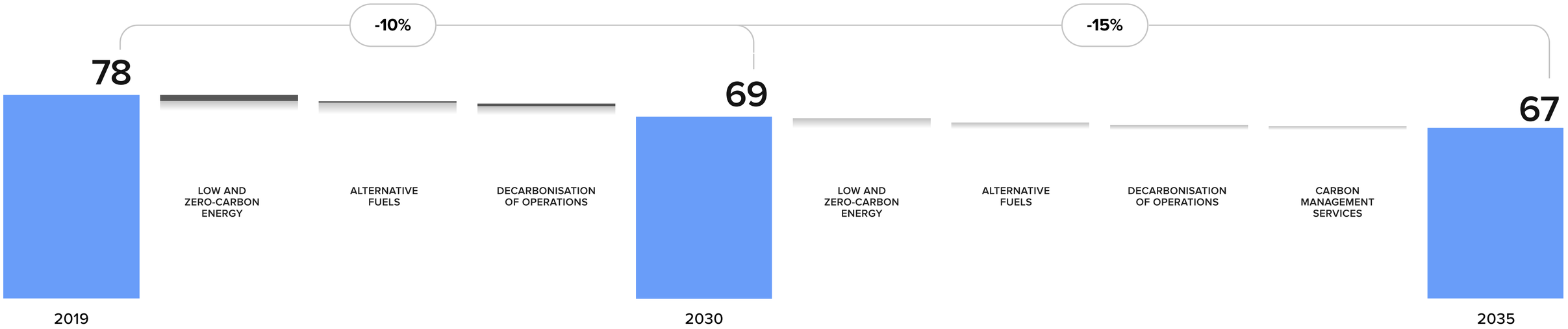
* Capacity attributable to the ORLEN Group's share in the Stalowa Wola CHP plant. The total CCGT unit capacity is 450 MWe.

# Efforts to increase the supply of low- and zero-emission energy will enable us to achieve a 15% reduction in Net Carbon Intensity (NCI) by 2035

**REDUCTION OF NET CARBON INTENSITY,** SCOPE 1, 2, AND 3 CATEGORY 11 [g $CO_2$e/MJ]

**IMPLEMENTED LEVERS** **REDUCTION POTENTIAL**

We have developed a dedicated Net Carbon Intensity (NCI) calculation methodology to measure carbon intensity per unit of energy produced.




## LOW AND ZERO-CARBON ENERGY

The development of low- and zero-carbon energy sources drives our energy transition. Our priority is to significantly increase electricity generation from renewables, which will enable us to meet the growing demand for energy while minimising direct and indirect emissions across our entire value chain and ultimately reducing our NCI.

## ALTERNATIVE FUELS

Increasing the production of alternative fuels is critical for the decarbonisation of transport, as these fuels effectively replace conventional petroleum products responsible for a substantial share of our value chain emissions.

The expansion of facilities producing advanced biofuels, increased production of automotive hydrogen, and the development of synthetic fuels directly support the decarbonisation of transport and achievement of our NCI target.

## DECARBONISATION OF OPERATIONS

By improving energy efficiency, reducing methane emissions, capturing and storing emissions from our own facilities, using lower-carbon energy sources, and phasing out coal from power generation, we reduce Scope 1 and 2 emissions.

These actions contribute to emission reductions in absolute terms, thereby also decreasing our NCI.

## CARBON MANAGEMENT SERVICE

The development of CCUS technologies will contribute to reducing the ORLEN Group's Scope 1 emissions. However, capturing and storing emissions from third-party sources does not affect the Group's emissions within any of the three scopes.

The NCI metric accounts for these technological offsets, allowing the recognition of $CO_2$ emissions reduction occurring outside our own operations.

LEARN MORE

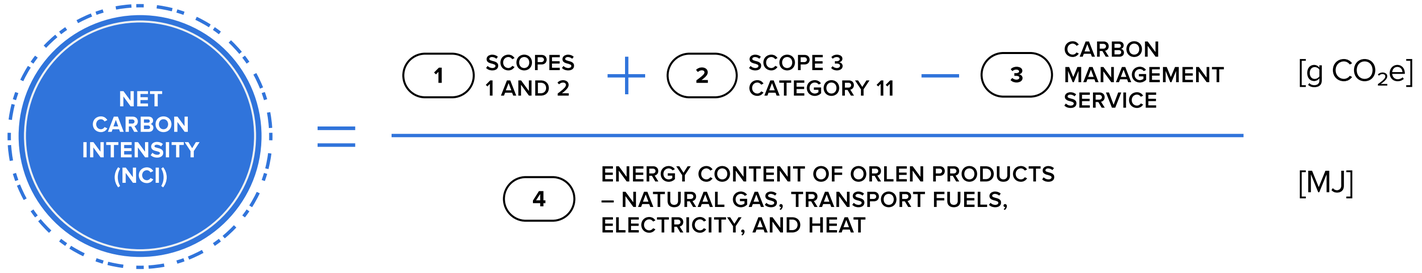
# We have developed a methodology to calculate our Net Carbon Intensity (NCI), enabling the monitoring of GHG emission reductions across our value chain

## NCI METRIC

The largest source of emissions across the ORLEN Group's value chain is the end-use of our products by customers, accounting for more than 80% of the Group's total emissions. These emissions are classified as Scope 3 Category 11.

Our Net Carbon Intensity (NCI) calculation methodology is a key tool for monitoring decarbonisation progress, as it takes into account both direct emissions and those resulting from the use of ORLEN products. It is designed to enable assessment of the impact of all decarbonisation measures taken by ORLEN.

A production-based approach was adopted to mitigate the risk of double-counting, while still capturing all relevant areas and material emissions where future development is expected to most significantly contribute to reducing carbon intensity.




1

### SCOPE 1 AND 2

The NCI metric includes direct emissions (Scope 1) – from process-related, technological, and fugitive sources, as well as indirect emissions (Scope 2) resulting from the generation of electricity purchased and used in the Group's own operations. Such emissions are associated with upstream operations, crude oil refining, and the generation of electricity and heat from carbon-intensive sources.

The calculations include all emissions from processes that enable the Group to produce energy in the form of liquid fuels, natural gas, as well as electricity and heat, whether under the control of ORLEN Group companies acting as operators or through significant equity interests without direct control as operators.

The NCI metric excludes emissions from the production of petrochemical products and fertilizers, as these do not contribute to energy output and are therefore not within the functional boundary of NCI.

2

### SCOPE 3 CATEGORY 11

NCI also includes the Group's most material value chain emissions, specifically Scope 3 Category 11 emissions arising from the end-use of sold products.

Under the production-based approach, the calculations include emissions from the use of natural gas extracted by the ORLEN Group, and emissions from end-use combustion of fuels produced by all Group refineries.

Our development plans for expanding the natural gas production and output of conventional fuels directly affect the volume of Scope 3 Category 11 emissions. As such, they have a material impact on the forecast trajectory of our NCI target and its delivery.

3

### CARBON MANAGEMENT SERVICE

ORLEN's activities related to the transport and storage of $CO_2$ (CCUS), which enable a reduction of third-party GHG emissions, are accounted for in the calculations of Net Carbon Intensity (NCI) as a form of technological offset.

4

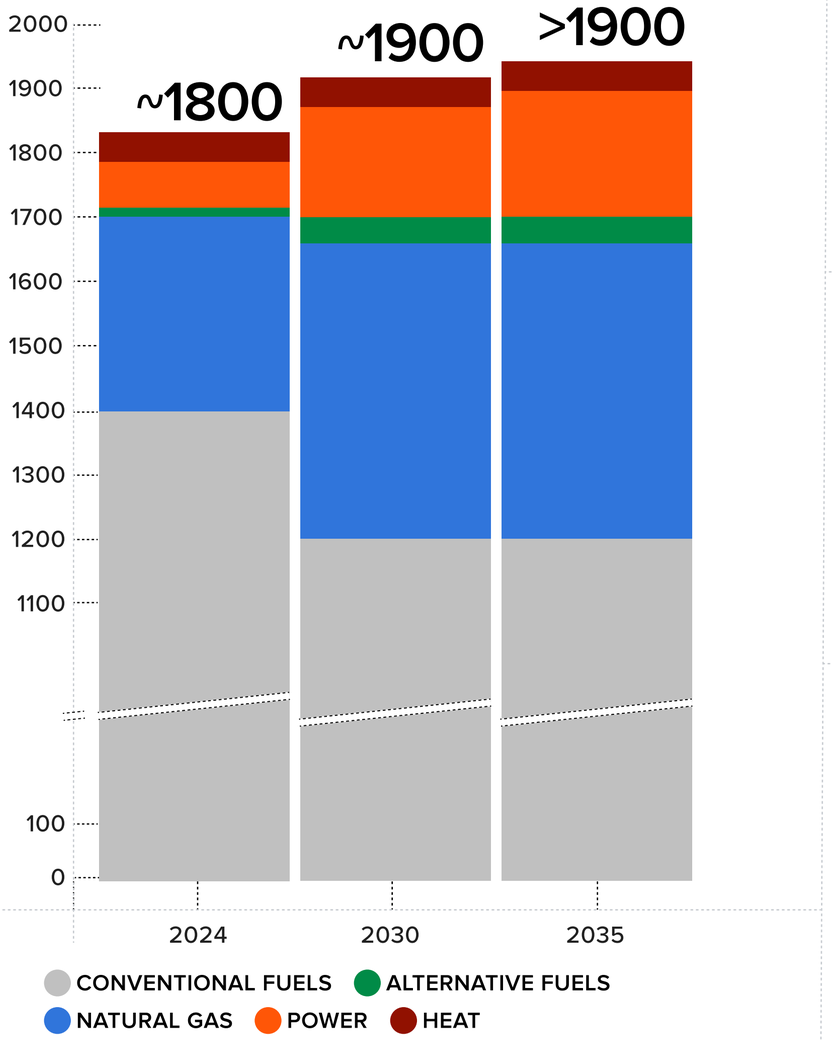
### ENERGY CONTENT OF ORLEN PRODUCTS

All energy products of the ORLEN Group are included in the NCI, encompassing both emission-intensive conventional fuels produced at our refineries – such as diesel oil, gasoline, aviation fuel, and marine fuel – as well as zero-carbon alternatives, including biofuels, automotive-grade hydrogen, and synthetic fuels. The NCI also reflects natural gas extracted by the ORLEN Group through its upstream operations in Poland, Norway, Canada, and Pakistan.

Additionally, the metric accounts for power and heat produced by the Group based on conventional fuels, such as natural gas, and renewable energy sources, including wind power, solar PV, hydropower, biogas, and biomass.

# We aim to increase energy production while simultaneously reducing associated emissions

## ENERGY PRODUCED BY THE ORLEN GROUP [PJ]




### RENEWABLE, GAS-FIRED, AND NUCLEAR POWER & HEAT GENERATION

The decarbonisation of power and heat generation, in the context of progressing electrification, is central to our energy transition strategy. By expanding wind and photovoltaic capacities, increasing biomass utilisation, and developing zero-emission Small Modular Reactors (SMRs) and low-carbon gas-fired plants, we will be able to supply increasingly larger volumes of electricity and heat, while simultaneously reducing emissions across our entire value chain.

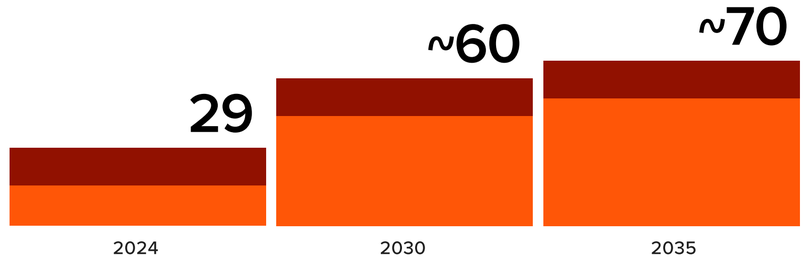
### SUSTAINABLE TRANSPORT

We are investing in biofuel production, including constructing an HVO facility in Płock with an annual capacity of 300 kt, and producing bio-components for diesel and aviation fuels. Additionally, we plan to launch Poland's first next-generation bioethanol unit with an annual capacity of 25 kt. These sophisticated biofuel projects underscore our commitment to reducing emissions from the transport sector.

### NATURAL GAS

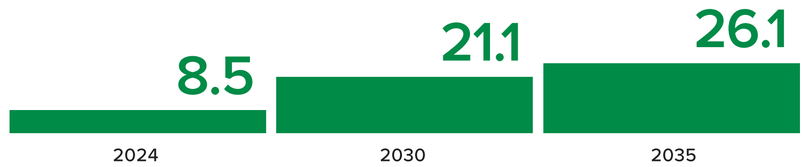
We are committed to increasing our own natural gas production, viewing it as essential to the energy transition and Central Europe's energy security. We plan to maintain stable production in Poland and expand production on the Norwegian Continental Shelf, where output exceeded 4.5 bcm in 2024. Concurrently, we are active in the midstream market, securing LNG supplies.

## POWER AND HEAT PRODUCTION [TWh]

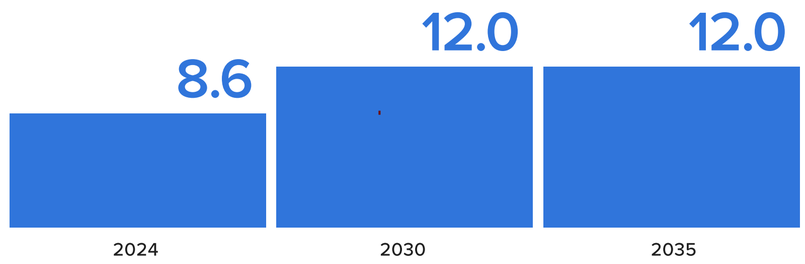



## SHARE OF RENEWABLES IN FUEL MIX [%]

Calculated according to RED III methodology




## NATURAL GAS PRODUCTION [bcm]



# Circular economy

By adopting a circular economy approach, we maximise value, support sustainable development, and enhance our competitiveness.

## Our approach to circular economy

Four pillars underpin our circular economy strategy, enabling us to integrate its principles into processes, products, and services. Through optimised resource utilisation, promotion of renewable feedstocks, and the creation of new value chains, we support the growth of modern, sustainable industry.

The circular economy is applicable across all our business segments, which reflects the objectives of the ORLEN 2035 Strategy. A critical aspect of the energy transition is securing access to innovative feedstocks, particularly within the Downstream segment. We are therefore expanding our own production capacities for biofuels and circular resources, while simultaneously building partnerships and circular supply chains.

Our initiatives also include improving process efficiency through the deployment of energy-saving technologies and upgrades of existing facilities.

UPSTREAM & SUPPLY

DOWNSTREAM

LEARN MORE

ENERGY

CONSUMERS & PRODUCTS

### PILLARS OF THE CIRCULAR ECONOMY

| Eco-design and circular decomissioning | Closed-loop processes | Circular resources | New business streams |
|---|---|---|---|
| The principles of circularity are integrated into the design phase of products, services, and processes, as well as being considered during asset decommissioning. | Optimisation of production processes and business operations, including enhanced energy efficiency, to reduce resource consumption. | Development of product lines based on circular inputs. | Creation of innovative, circular business models tailored to evolving market and consumer trends. |

**PARTNERSHIPS WITH TRANSITION LEADERS**

**INNOVATIVE TECHNOLOGIES**

We implement circular economy solutions across processes, products, and services, optimising resource consumption and utilising bio-based feedstocks and recycled materials

## PETROCHEMICAL SECTOR TRANSITION

### EMISSIONS REDUCTION

Reducing the carbon intensity of petrochemical production is a core element of our decarbonisation strategy.

The New Chemicals project realised at the Płock Complex will deliver an approximately will deliver a 15-30% reduction in emission intensity per unit of product. This will enable us to supply more competitive petrochemicals with a lower carbon footprint.

**15% - 30%** 2030 vs 2024

reduction in petrochemical production emission intensity [$tCO_2$/HVC] at the Płock Complex.[1]

### RECYCLING

We are building a broad portfolio of recycling projects for the efficient recovery and processing of plastic waste into circular petrochemicals.

A key example of our development in this area is the ORLEN Group company REMAQ, specialised in mechanical recycling, currently operating with an installed annual capacity of 35 kt.

Chemical and mechanical recycling capacities will be further expanded in the coming years, notably through participation in the international NEXTLOOP[2] project.

**+115 kt** 2030 vs 2024

increase in chemical and mechanical recycling capacity

### BIO-BASED FEEDSTOCK

Our petrochemical business is scaling up the use of renewable bio-based feedstocks to gradually replace fossil-based raw materials.

By 2030, we aim for 8% of product sales to originate from renewable and circular inputs.

**+ 7 pp** 2030 vs 2024

increase in the share of products based on renewable and circular inputs in total sales

1. GHG emissions reduction resulting from the New Chemicals project will depend on the final optimized scope of the project, which will be presented by September 2025.
2. The NEXTLOOPP project aims to create and commercialise circular food-grade recycled polypropylene (rPP) from post-consumer waste.

# Just transition

# A just transition requires a holistic approach involving collaboration, growth, and engagement across diverse stakeholder groups

| JUST TRANSITION STAKEHOLDER GROUPS | METRICS | INITIATIVES |
|---|---|---|
| **Employees**<br>Leveraging human capital to support the energy transition | **~65** [thousand]<br>ORLEN Group employees<br>**~60** [%]<br>trainees from various programmes offered permanent employment opportunities<br>**75**<br>Bona Fide scholarship winners across seven editions of the Programme<br>**60**<br>students enrolled in two editions of the $H_2$ Academy programme | + Reskilling and upskilling programmes: facilitating career transition and enhancing employee qualifications<br>+ Mentorship programmes and establishing centres of competence for employees<br>+ Creating new employment opportunities within the energy transition sector<br>+ Supporting education and training for future-oriented professions related to the energy transition, including through the Bona Fide programme and $H_2$ Academy<br>+ Ensuring equal training and professional development opportunities |
| **Local communities**<br>Supporting regional development and building awareness around the energy transition | **31**<br>dedicated community engagement programmes | + Investments in infrastructure enhancing regional energy security<br>+ Improving the investment attractiveness of regions undergoing transition<br>+ Social projects focused on environmental education<br>+ Conducting community consultations and facilitating dialogue on transition progress |
| **Business partners and customers**<br>Establishing collaborations to drive sustainable development | **~23** [thousand]<br>business partners<br>**~5** [million]<br>customers using the VITAY app | + Maintaining open dialogue with business partners and customers<br>+ Supporting business partners in sustainable development efforts<br>+ Strengthening collaboration with partners to achieve shared sustainability objectives<br>+ Educating customers about the benefits and opportunities of the energy transition<br>+ Establishing platforms for cooperation and innovation |

# Utilizing the broad potential or our activities, we support local governments in their energy transition efforts

## ORLEN'S B2G[1] OFFER

### Comprehensive offer for local governments

We have established an integrated portfolio of products and services tailored specifically for local governments, addressing their needs and challenges related to energy transition and sustainable development across four pillars: energy infrastructure, transport, circular economy, and buildings.
Our offering includes energy and related products, such as electricity supply, RES systems, energy storage solutions, heat pumps, EV chargers, and access to low- and zero-carbon fuels.

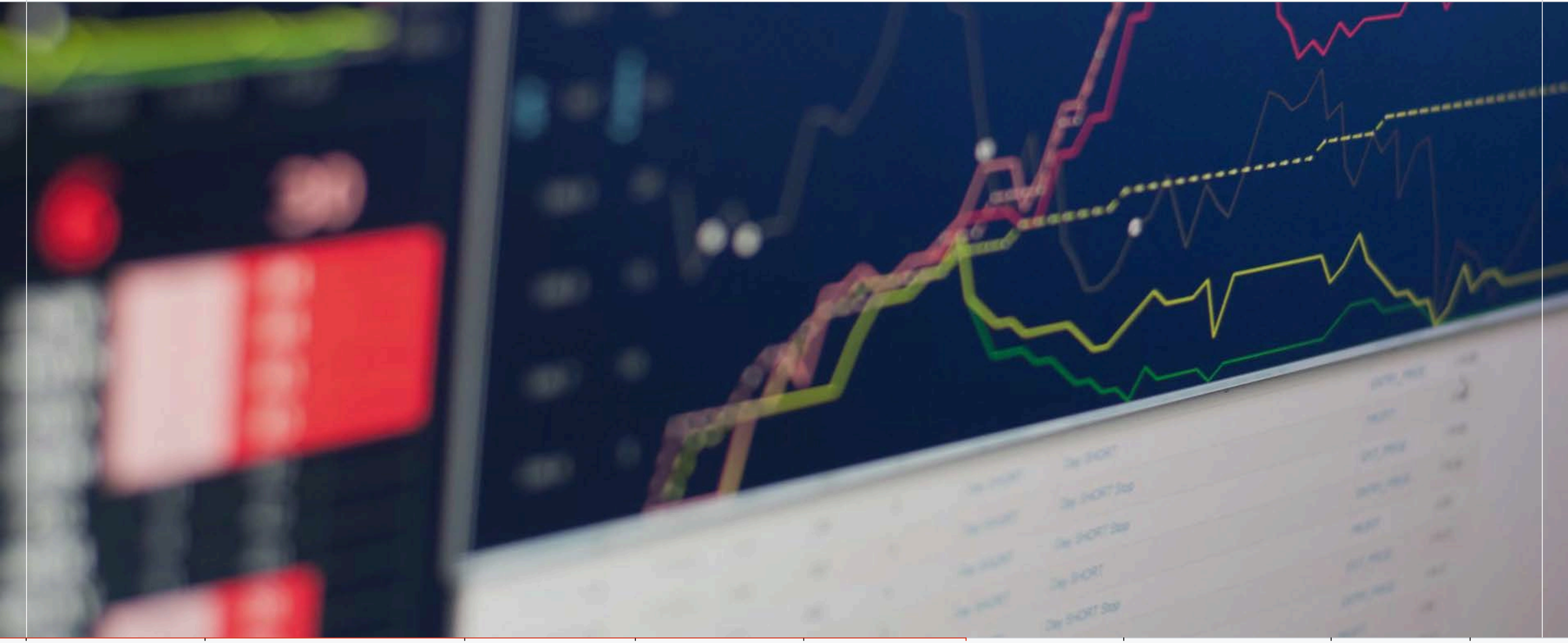
## EXAMPLES OF INITIATIVES FOR LOCAL GOVERNMENTS

| | Energy infrastructure | Transport | Circular economy | Buildings |
|---|---|---|---|---|
| CURRENT INITIATIVES | Modernisation of electricity distribution networks, including street lighting upgrades | Development of EV charging networks and hydrogen refuelling stations | Recovery of used oil for biofuel production | Emissions reduction in Warsaw's district heating system through the phase-out of coal |
| INITIATIVES UNTIL 2035 | **~40** [billion]<br>In capital expenditure dedicated to electricity distribution network upgrades | **1** [TWh]<br>Of electricity supplied annually to the electromobility market<br>**12** [kt]<br>Of automotive hydrogen supplied annually, intended primarily for use in buses and heavy-duty vehicles | **100** [thousand tonnes]<br>Of municipal waste utilised annually to produce bio-based hydrogen[2] and recycled carbon fuels (RCF[3]) for transport | **59** [%]<br>Reduction in GHG emissions from district heating systems compared to 2024, achieved by decarbonising assets and utilising waste heat from sewage, flue gases, and cooling systems |

For more information on our efforts to support the energy transition of urban areas and local governments, please see our ORLEN for Cities report.

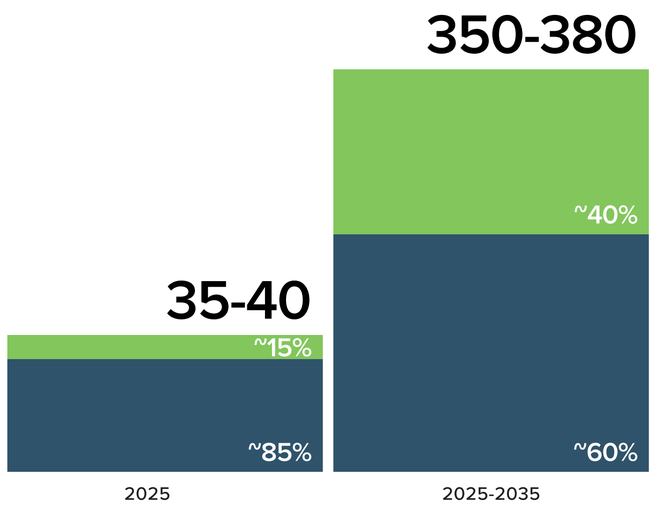
1. B2G (business-to-government): refers to commercial relationships between businesses and public sector entities.
2. Hydrogen produced from biomass.
3. Hydrogen derived from waste materials unsuitable for material recovery in accordance with Article 4 of Directive 2008/98/EC, referred to as Recycled Carbon Fuels (RCF).

# Capital allocation



# We plan to allocate more than 40% of our capital expenditure to low-carbon projects

## INVESTMENT EXPENDITURE BREAKDOWN FOR 2025 AND UNTIL 2035 — CAPEX AND M&A [PLN billion]

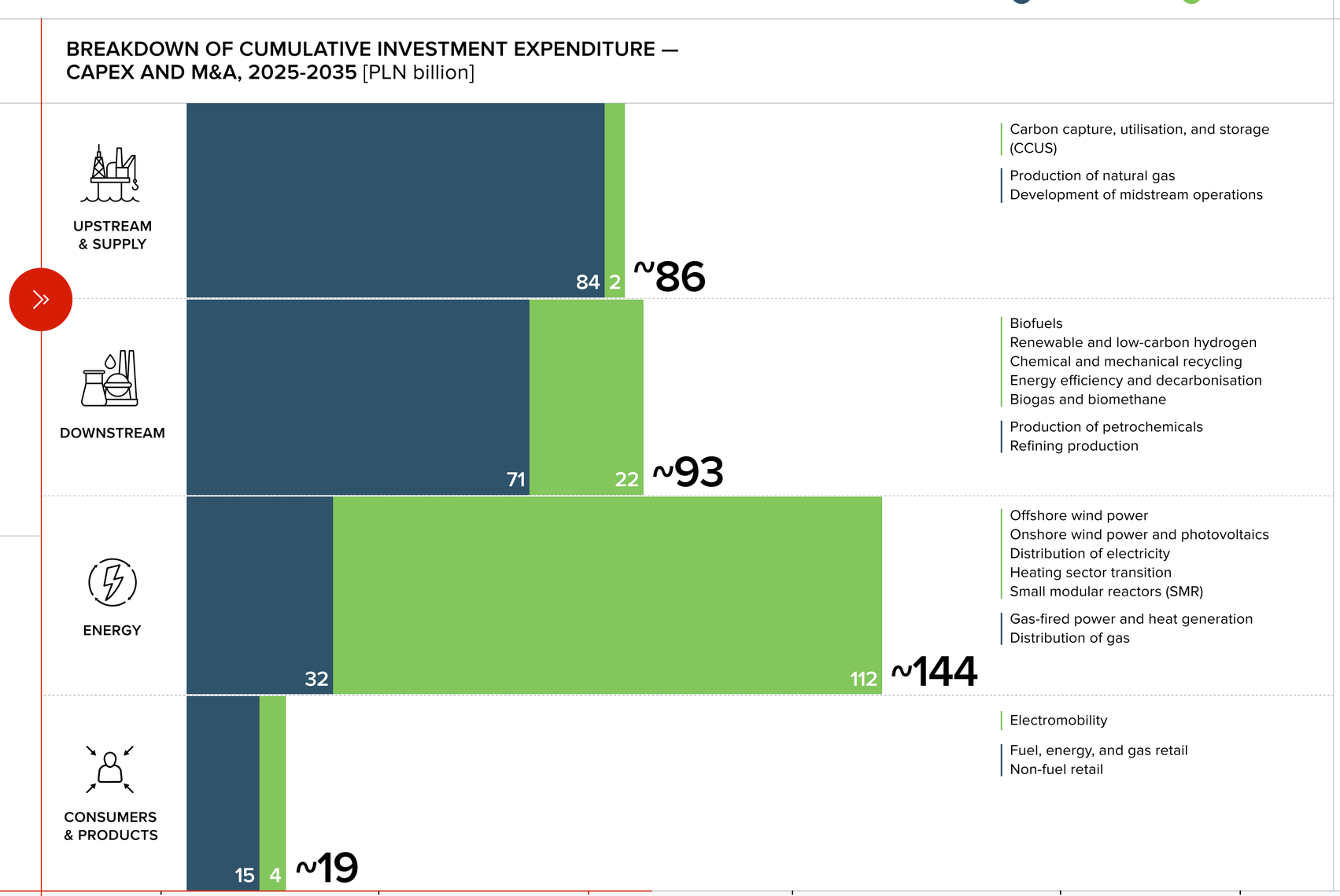



## Definition of conventional and low-carbon capital expenditure

Low-carbon capital expenditures refer to all investment projects supporting the energy transition. The implementation of such initiatives contributes to the reduction of our GHG emissions and supports the achievement of the ORLEN Group's decarbonisation targets. Key investment areas include developing zero-carbon energy and fuel production, and projects supporting the circular economy.

The remaining capital expenditure on conventional projects relates primarily to the continued development of natural gas operations, including its extraction, import, and utilisation as a fuel in the energy sector, as well as to the maintenance and upgrade of petrochemical and refining production assets, including the New Chemicals project.

## BREAKDOWN OF CUMULATIVE INVESTMENT EXPENDITURE — CAPEX AND M&A, 2025-2035 [PLN billion]



# To successfully carry out the energy transition of the Group, we have introduced differentiated hurdle rates each investment project category

## Adjusting hurdle rates to the energy transition

We have introduced minimum required hurdle rates tailored specifically to each type of investment projects and their financing costs.
This approach allows us to accurately reflect the real costs and risks associated with each initiative while evaluating its economic viability within the context of energy transition challenges. Consequently, we can better manage project financing, minimise risks, and support projects that are both economically feasible and consistent with sustainability objectives.

## Expected average EU ETS emission prices

2025-2030

**107.94** [tonne $CO_2$]

2031-2035

**171.98** [tonne $CO_2$]

| **FLEXIBLE CAPITAL EXPENDITURE** [PLN billion] 2025-2035 | | **MINIMUM HURDLE RATES** | **DIFFERENTIATION BY EMISSION IMPACT** | | |
|---|---|---|---|---|---|
| | | | EMISSIONS REDUCTION | NEUTRAL | EMISSIONS INCREASE |
| ~270-290 | | | | | |
| ~120-130 | **Value maximisation**<br>Value maximisation projects are expected to yield the highest returns and provide revenue streams to finance the energy transition. | ~10-12% | >10% | >11% | >12% |
| ~60 | **Asset optimisation**<br>Asset portfolio optimisation comprises initiatives intended to support the energy transition while generating competitive returns. | ~8-10% | >8% | >9% | >10% |
| ~90-100 | **Innovative and sustainable product portfolio**<br>Development of new sustainable business lines is fundamental to securing future competitiveness and mitigating transition risks. | ~7-9% | >7% | >8% | >9% |

# We are regularly increasing external funding to finance transition projects

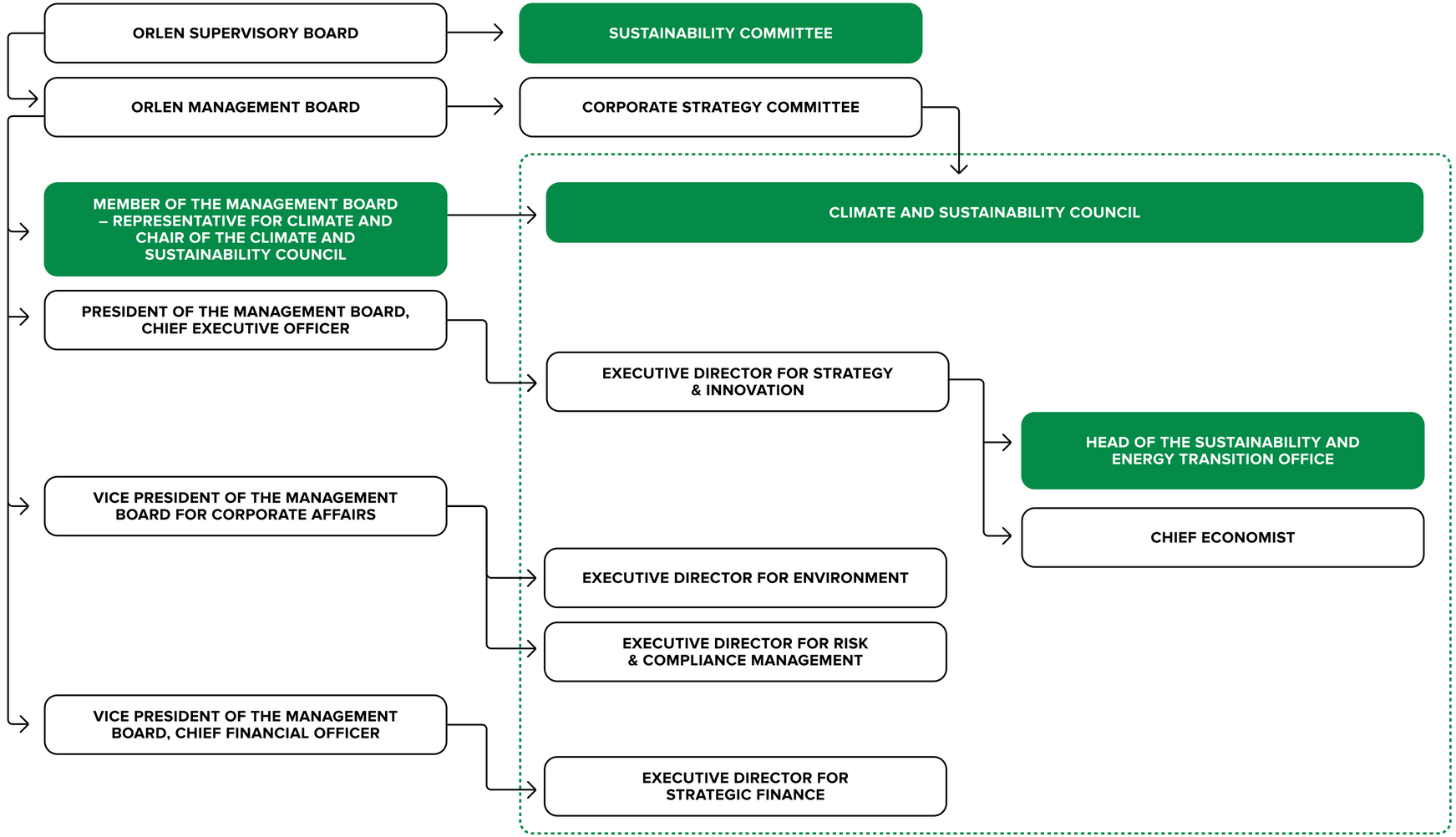
| SELECTED SOURCES OF FUNDING | CHARACTERISTICS OF FINANCED PROJECTS | SECURED FUNDING [PLN billion] | FINANCED PROJECTS | |
|---|---|---|---|---|
| **Loans from Poland's National Recovery and Resilience Plan** | Projects supporting specific EU policy objectives meeting the 'Do No Significant Harm' (DNSH) criteria.<br><br>Implementation period: 2022–2036. | ~7.7 | ENERGY | + Electricity distribution network |
| **Loans from the European Investment Bank (EIB)** | Projects supporting EU policy objectives and aimed at reducing fossil fuel dependence.<br><br>Implementation periods: 2021–2023 and 2023–2025. | ~5 | ENERGY<br>DOWNSTREAM | + Electricity distribution network<br>+ Biofuels<br>+ Research and development |
| **Issue of Green Eurobonds** | Projects independently verified by V.E, ISS Corporate, certified under the Climate Bonds Initiative, and consistent with UN Sustainable Development Goals. These criteria form the basis of ORLEN's Green Finance Framework.<br><br>Implementation period: 2018–2023. | ~2* | ENERGY<br>CONSUMERS & PRODUCTS | + Offshore and onshore wind farms<br>+ Solar PV farms<br>+ EV charging networks<br>+ Hydrogen refuelling infrastructure |

* Under the Green Finance Framework, 7-year Green Eurobonds issued in 2021 raised EUR 500 million (equivalent to over PLN 2 billion).

# Management of climate-related issues

# Sustainability and management of climate-related issues are deeply embedded in our corporate governance frameworks

## MANAGEMENT OF CLIMATE- AND SUSTAINABILITY-RELATED ISSUES




## Management of climate-related issues

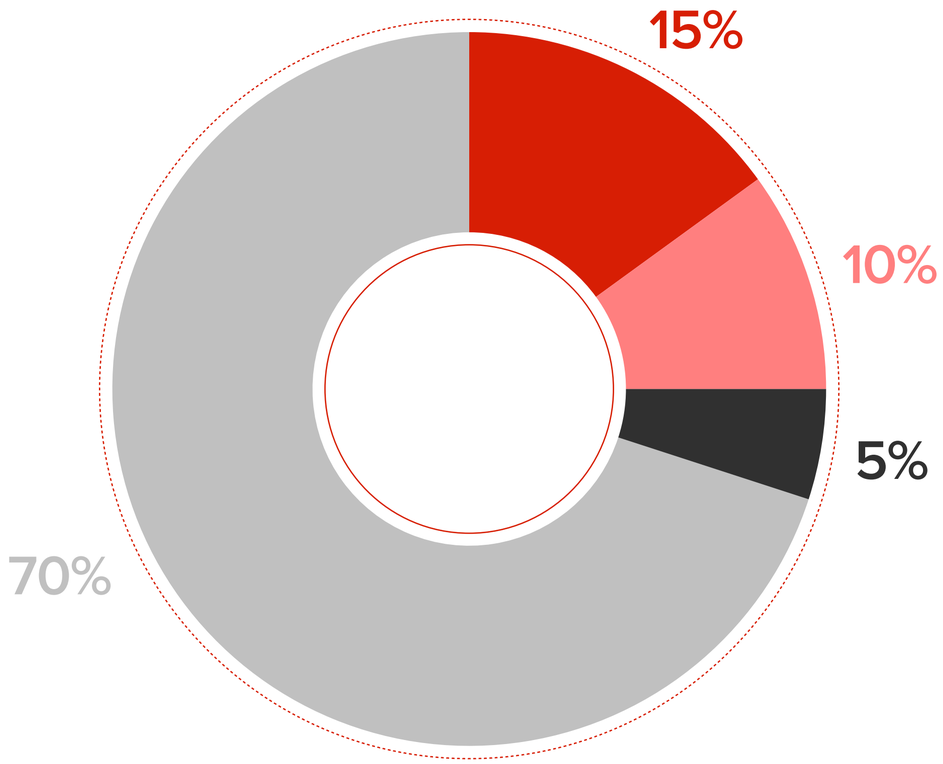
In order to be able to manage sustainability in an informed and proactive manner, we have adequately modified our governance structures.

We have designated a Member of the Management Board as the Representative for Climate, who is responsible for overseeing climate-related matters across our organisation. In 2022, we established the Climate and Sustainability Council to set strategic directions for key focus areas, including just transition, circular economy, and decarbonisation. Additionally, the Supervisory Board's Sustainability Committee monitors our progress in these key areas.

This governance framework ensures comprehensive sustainability management and supports the effective implementation of our climate and environmental strategies.

# GHG emission reduction targets are integrated into the remuneration of the Management Board and other senior executives

**BREAKDOWN OF MANAGEMENT BOARD INCENTIVE SCHEME OBJECTIVES** **2025**




**QUALITATIVE OBJECTIVES:**

- **IMPLEMENTATION OF ORLEN 2035 STRATEGY**
- **DECARBONISATION AND SUSTAINABILITY PERFORMANCE**

**QUANTITATIVE OBJECTIVES:**

- **REDUCTION IN ACCIDENT RATES TRR/LTIFR**
- **OTHER QUANTITATIVE BUSINESS OBJECTIVES**

## Incorporation of climate targets into Management Board remuneration systems

The ORLEN Group's GHG reduction initiatives have been operationalised and incorporated into our Management by Objectives (MBO) scheme. As a result, progress against targets covered by the decarbonisation initiatives has a direct effect on annual bonuses awarded to our Management Board and executive management staff, ensuring the Group's alignment with sustainable development goals.

## Structure of variable remuneration for the Management Board and other senior executives

The incentive scheme for the Management Board comprises both qualitative and quantitative objectives.

In 2025, the qualitative objectives account for 25% of the bonus and include:

+ implementation of the ORLEN 2035 strategy,
+ decarbonisation and sustainability performance.

Within this, the climate action- and sustainability-linked incentive represents 10% of the total bonus in 2025 and is contingent upon:

+ execution of decarbonisation measures contributing to achieving GHG emission reductions in line with our operational targets for 2030 and 2035, and the overarching Net Zero 2050 goal,
+ delivery on tasks across the five pillars of the Group's Sustainability Strategy, i.e. Climate, Environment, Employees, Communities, and Governance, including ensuring gender diversity at top governance bodies.

In 2025, the quantitative objectives account for 75% of the bonus and include:

+ reducing the accident rate (TRR) (and where applicable: LTIFR for the ORLEN Group and its external contractors),
+ other targets, such as improvements in operational efficiency metrics, cost efficiency, and Total Shareholder Return (TSR) relative to the market.

Furthermore, detailed targets related to the implementation of specific decarbonisation and sustainability projects are linked directly to performance bonuses payable to senior executives reporting directly to the Management Board and responsible for the delivery of specific GHG reduction initiatives across ORLEN S.A. and other Group companies.

# We have adopted consistent positions on key climate policy matters

## OUR APPROACH TO CLIMATE ACTION

### PARIS AGREEMENT

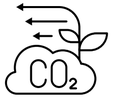
We are committed to climate and environmental protection and support the Paris Agreement's objective of limiting global temperature rise to well below 2°C as well as pursuing efforts to restrict this increase to 1.5°C. We aim to achieve Net Zero across Scope 1, 2, and 3 emissions by 2050, in accordance with both the Paris Agreement and the European Union's climate objectives.


### CARBON PRICING

We recognise the importance of carbon pricing in enabling the energy transition and decarbonisation. However, it is crucial to ensure that carbon pricing mechanisms do not undermine the competitiveness of European industry. We support measures and frameworks that maintain business competitiveness and operational integrity, prevent carbon leakage, and avoid disproportionate cost increases for end consumers.


### METHANE EMISSIONS

We advocate for policies aimed at methane emission reductions as a vital component of decarbonisation efforts. We support implementing measures and commitments that maintain energy security, while avoiding costs disproportionate to the achieved environmental benefits.




### CARBON REMOVALS

We support clear regulations on GHG removals. This requires well-defined guidelines and sectoral accountability mechanisms to ensure effectiveness and transparency of carbon removal initiatives. Currently, in the context of our decarbonisation plans up to 2035, we focus exclusively on CCUS technology and do not consider other GHG removal methods in achieving our targets.

### TECHNOLOGICAL NEUTRALITY

We support technological neutrality by promoting the development of all solutions that contribute to decarbonisation, including energy efficiency, renewable energy sources, nuclear energy, and CCUS. Climate policies and regulations should remain technology-neutral, avoiding prescriptive approaches, given inherent uncertainties associated with long-term technological evolution.

### NATURAL GAS

We recognise natural gas as a critical transition fuel. It offers a cleaner alternative to coal, enhances energy security, and provides essential support to renewable energy sources by mitigating challenges related to intermittent energy supply.

### SUSTAINABLE MOBILITY

We are committed to decarbonising the transport sector, placing a particularly strong focus on alternative fuels, including biofuels, synthetic fuels, and renewable hydrogen, as well as advancing electromobility as an integral component of our sustainability strategy.

### ENERGY EFFICIENCY

We view energy efficiency as a fundamental element of our decarbonisation strategy across both the Upstream & Supply and Downstream segments. By prioritising energy efficiency, we aim to enhance the sustainability of our operations and achieve significant reductions in greenhouse gas emissions.

### JUST TRANSITION

Recognising the importance of a Just Transition, we advocate that the decarbonisation process be equitable and socially inclusive, take into account economic conditions, and ensure adequate support for industries and communities adapting to a low-carbon future.

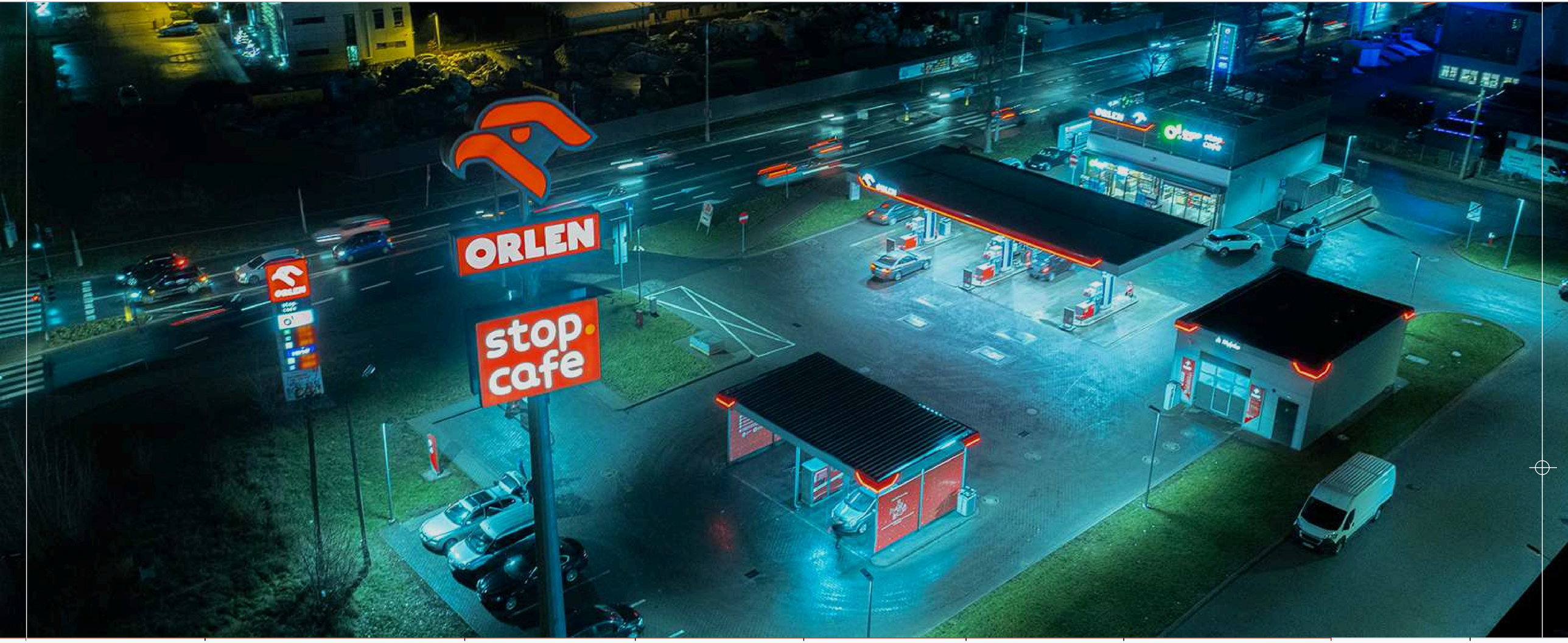
### TRANSPARENCY

Our activities fully comply with all national and EU-level disclosure obligations, and we strictly adhere to transparency requirements. We actively support interaction and dialogue with governments and regulatory bodies at European, national, and local levels.

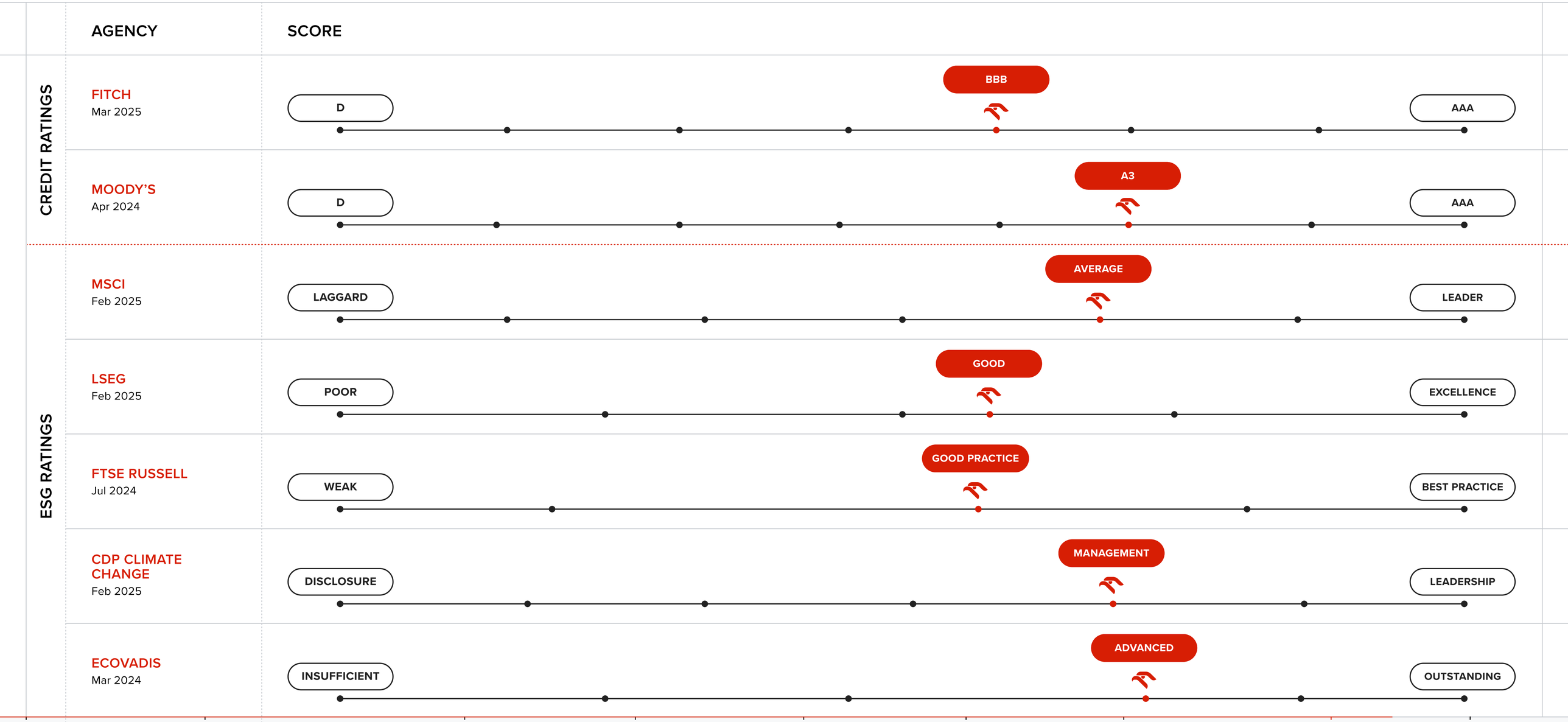
# We collaborate with international organisations to effectively implement our energy transition strategy across the region

| ORGANISATION | ORLEN'S INVOLVEMENT |
|---|---|
| BUSINESS & SCIENCE POLAND | Business & Science Poland is a cross-sector platform facilitating collaboration between experts from Poland's largest business organisations. It engages in dialogue with representatives of the European Commission, the European Parliament, the Permanent Representation of Republic of Poland to the EU, and international organisations.<br>ORLEN helps shape the organisation's positions on EU regulatory processes and is an active contributor to its meetings. |
| CEFIC | CEFIC provides a platform for dialogue with policymakers and collaboration among stakeholders to create the enabling conditions necessary for transitioning Europe's chemical industry towards climate neutrality and global competitiveness.<br>ORLEN actively supports the Antwerp Declaration endorsed by CEFIC. |
| FUELSEUROPE | FuelsEurope is committed to supporting the EU's objective of climate neutrality by 2050. It advocates for appropriate EU policy frameworks that enable fuel producers to achieve climate neutrality goals, while ensuring energy supply security and industry competitiveness.<br>ORLEN's policy priorities are consistent with those of FuelsEurope, particularly with regard to the EU Green Deal legislation and competitiveness considerations. |
| HYDROGEN EUROPE | Hydrogen Europe promotes policy initiatives supporting hydrogen technologies, coordinates research and development activities, and represents the unified voice of the European hydrogen sector, pursuing sustainable growth and job creation.<br>ORLEN views hydrogen as a crucial element in facilitating the energy transition and is an active member of Hydrogen Europe. |
| INTERNATIONAL GAS UNION | The International Gas Union (IGU) aims to improve quality of life by promoting gas as a key driver for a sustainable energy future.<br>IGU's objectives align closely with ORLEN's strategic priorities, which recognise the instrumental role of natural gas in advancing the energy transition while ensuring energy security, affordability, and sustainability (the "energy trilemma"). |
| IOGP | IOGP is committed to supporting the EU's goal of achieving Net Zero by 2050. The organisation advocates for a balanced approach to European energy, climate, and industrial policies to ensure harmonisation between resilience, sustainability, and competitiveness on the path to carbon neutrality.<br>IOGP's position reflects ORLEN's strategic priority of supporting the energy transition while strengthening the energy trilemma. |
| OGDC | Oil & Gas Decarbonization Charter (OGDC) aims to accelerate the decarbonisation of the oil and gas sector through closer industry collaboration and knowledge-sharing among leading global oil and gas companies.<br>OGDC's primary objectives include achieving Net Zero by 2050, reducing methane emissions to near-zero by 2030, and eliminating routine gas flaring by 2030.<br>OGDC's goals align closely with ORLEN's strategic objective of reducing the emission intensity of upstream operations. |
| POLISH CHAMBER OF CHEMICAL INDUSTRY | The Polish Chamber of Chemical Industry (PIPC) represents the chemical industry before governmental authorities in Poland and other countries, as well as international organisations. PIPC prioritises supporting legislative frameworks conducive to the sector's development and promoting innovative solutions.<br>ORLEN actively contributes to shaping the Chamber's stance on EU regulatory processes and is an active participant in its meetings. |
| WINDEUROPE | WindEurope promotes national and international policies and initiatives that support the development of wind energy markets, infrastructure, and technologies in Europe and globally, contributing to a cleaner and more sustainable energy future.<br>Wind power is a central element of ORLEN's energy transition strategy. |

# Disclosures



# Our commitments and transparency will drive strong performance in credit and ESG ratings



# We transparently report on our carbon footprint and deliver on our transition commitment on the path to Net Zero

## GHG EMISSIONS[1]

| | | UNIT | 2019 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|
| SCOPE 1 | **Total** | **Mt $CO_2e$** | **28.51** | **28.06** | **25.58** | **24.75** |
| | Upstream & Supply | Mt $CO_2e$ | 2.70 | 2.06 | 1.74 | 1.47 |
| | Downstream | Mt $CO_2e$ | 15.05 | 15.21 | 14.05 | 14.27 |
| | Energy | Mt $CO_2e$ | 10.71 | 10.76 | 9.75 | 8.97 |
| | Consumers & Products | Mt $CO_2e$ | 0.04 | 0.03 | 0.03 | 0.03 |
| SCOPE 2[2] | **Total** | **Mt $CO_2e$** | **2.30** | **1.81** | **1.92** | **1.76** |
| | Upstream & Supply | Mt $CO_2e$ | 0.24 | 0.14 | 0.12 | 0.13 |
| | Downstream | Mt $CO_2e$ | 0.75 | 0.76 | 0.86 | 0.71 |
| | Energy | Mt $CO_2e$ | 1.28 | 0.87 | 0.91 | 0.90 |
| | Consumers & Products | Mt $CO_2e$ | 0.04 | 0.04 | 0.04 | 0.03 |
| SCOPE 3[3] | **Total** | **Mt $CO_2e$** | **175.46** | **172.17** | **170.16** | **158.55** |
| | C1. Purchased goods and services | Mt $CO_2e$ | 17.67 | 14.63 | 10.38 | 8.82 |
| | C3. Fuel- and energy-related emissions not included in Scope 1 or Scope 2 | Mt $CO_2e$ | 3.09 | 2.82 | 4.25 | 4.06 |
| | C4. Upstream transport and distribution | Mt $CO_2e$ | 0.58 | 0.61 | 0.48 | 0.45 |
| | C5. Waste generated in operations | Mt $CO_2e$ | 0.03 | 0.02 | 0.01 | 0.01 |
| | C9. Downstream transport and distribution | Mt $CO_2e$ | 0.28 | 0.27 | 0.49 | 0.40 |
| | C10. Processing of sold products | Mt $CO_2e$ | 2.91 | 3.95 | 6.04 | 5.73 |
| | C11. Use of sold products | Mt $CO_2e$ | 150.90 | 149.87 | 148.52 | 139.10 |
| BIOGENIC EMISSIONS | | Mt $CO_2e$ | 0.56 | 0.63 | 0.61 | 0.39 |

## DECARBONISATION PROGRESS

| | UNIT | 2019 | 2022 | 2023 | 2024 | 2030 | 2035 |
|---|---|---|---|---|---|---|---|
| Oil & Gas | Mt $CO_2e$ | 16.8 | 16.8 [0%] | 15.6 [-7%] | 15.7 [-7%] | 14.5 [-13%] | 12.5 [-25%] |
| Power & Heat | kg $CO_2e$/MWh | 377 | 380 [+1%] | 337 [-11%] | 313 [-17%] | ~220 [-40%] | ~170 [-55%] |
| Net Carbon Intensity | g $CO_2e$/MJ | 78 | 80 [+2%] | 77 [-2%] | 76 [-3%] | 69 [-10%] | 67 [-15%] |
| Routine Flaring | kt $CO_2e$ | 46 | 39 | 33 | 27 | - | - |
| Methane venting[4] | kt $CO_2e$ | 294 | 335 | 323 | 176 | - | - |
| Coal-based power generation[5] | TWh | 2.5 | 3.4 | 2.1 | 1.4 | - | - |
| Coal-based heat generation[6] | TWh | 18.7 | 15.8 | 15.3 | 13.9 | 5,6 | - |

## ENERGY TRANSITION PROGRESS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RES | GW | 0 | 0.7 | 0.9 | 1.5 | 9 | 12.8 |
| Gas-fired CCGT | GW | 1.1 | 1.8 | 1.8 | 1.8 | 4.3 | 4.3 |
| BESS | GW | - | - | - | <0.1 | 0.8 | 1.4 |
| SMR | GW | - | - | - | - | - | 0.6 |
| Share of renewable energy in fuel mix | % | - | - | - | - | 21.1 | 26.1 |
| Low and zero-carbon H2 for refining processes | kt | - | - | - | - | 50 | 210 |
| Secured biomethane | bcm | - | - | - | - | 0.15 | 0.24 |
| Recycling capacity | kt | - | - | 35 | 35 | 150 | 250 |
| CCUS | mtpa | - | - | - | - | - | 4 |

1. Consolidated emissions calculated on an operational control basis.
2. Scope 2 emissions calculated using the location-based method.
3. Presented Scope 3 GHG emission categories are relevant and included in the emissions inventory.
4. Methane venting emissions in Upstream & Supply, expressed in $CO_2$ equivalent ($CO_2e$).
5. Energy produced by the Ostrołęka B coal-fired power plant.
6. Heat and power produced by coal-fired co-generation and heating plants.


Energy of tomorrow
starts today
ORLEN