ORLEN GROUP'S

2019

INTEGRATED
REPORT

ORLEN

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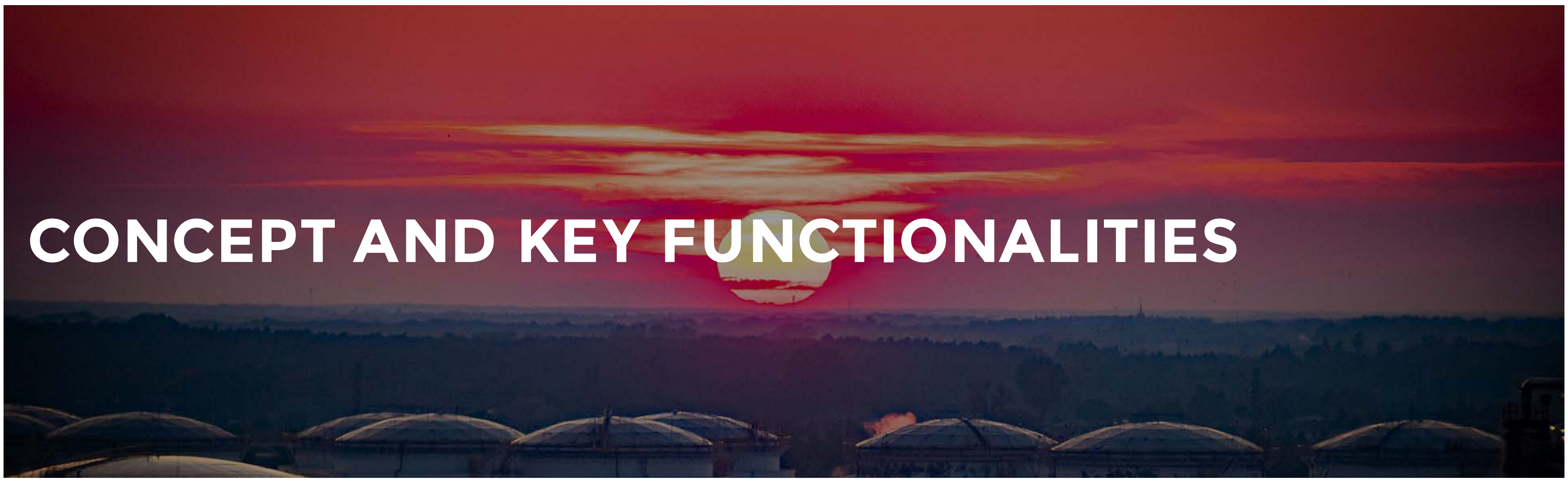
OUR
REPORT



CONCEPT AND KEY FUNCTIONALITIES

GRI indicators: 102-45, 102-50, 102-51, 102-52, 102-48, 102-49, 102-45, 102-10, 101, 102-54, 102-56

Capitals:

We present the ORLEN Group's Annual Report, prepared as an integrated report. This sixth integrated report is a key and comprehensive document describing the financial and non-financial activities of the ORLEN Group.

This Integrated Report is addressed to all ORLEN Group Stakeholders, in particular the capital market participants, customers, subcontractors, suppliers, local communities, and employees.

GRI: 102-45

This Integrated Report includes data on the Polski Koncern Naftowy ORLEN Group (the “ORLEN Group”) and Polski Koncern Naftowy ORLEN S.A. (“PKN ORLEN”, the “Company”) for 2019.

GRI: 102-50, 102-51, 102-52

The previous report, for 2018, was published in June 2019 .Integrated reports are issued on an annual basis and are continuously evolving, to reflect changes within the ORLEN Group and in its environment.

GRI: 102-48, 102-49

There were no significant changes from the previous reporting period in the scope, boundaries, or measurement methods applied in this Report. What was changed was the data presentation method with respect to the following GRI indicators:

- 102-8 Information on employees and other workers – the 2018 data was restated following a change of the methodology for assigning PKN ORLEN employees to the respective education level categories;
- 302-1 Energy consumption within the organisation – the 2018 data for Total consumption was restated following a change in the calculation method.

GRI: 102-45

Some aspects of the non-financial activities are presented using the examples of selected ORLEN Group companies whose business scope is of key significance to the Group.

GRI: 102-10

Significant changes in the organisation’s size, structure, ownership, and its supply chain during the reporting period

In 2019, there were no significant changes in the structure or value chain that would result in a change of the business model. The changes made in the Group’s structure were in pursuance of the strategy to focus on core business and allocate the released capital to development of the Group’s business areas that offer the greatest growth potential. In 2019, PKN ORLEN S.A. bought out minority interests in ORLEN KolTrans S.A., thus becoming its sole shareholder. Additionally, PKN ORLEN S.A. purchased shares in ORLEN Usługi Finansowe sp. z o.o. and SIGMA BIS S.A. In consequence, as at December 31st 2019, PKN ORLEN S.A. held, respectively, 100% and 66% of total voting rights in those companies.

2019 was the first full year of implementing the Strategy for 2019−2022, announced on December 20th 2018. The vision for PKN ORLEN’s growth set out in the new strategy fits well with global trends in the use of primary energy sources, technological progress and social processes, which are bound to create new consumer behaviours and expectations. PKN ORLEN aims to focus on solidifying its market position, becoming more customer-oriented, exploiting the integrated value chain, with a growing role of the petrochemical business and prudent continuation of projects in the Upstream segment. The focus on value-creating innovations is an important element of the strategy.

GRI: 101

Reporting standards and methodologies

This Report has been prepared in accordance with:

- **Art. 49b.1 and Art. 55.2b-e of the Polish Accounting Act of September 29th 1994**, as amended, which implements the guidelines of Directive 2014/95/EU of the European Parliament and of the Council of October 22nd 2014 on disclosure of non-financial and diversity information; To comply with the requirements set out in those regulations, in March 2020 we issued the 'Non-Financial Statement of the ORLEN Group and PKN ORLEN S.A. for 2019'.
- **International Financial Reporting Standards (IFRS)**, including the International Accounting Standards (IAS) and Interpretations of the Standing Interpretations Committee (SIC) and the International Financial Reporting Interpretations Committee (IFRIC), as endorsed by the European Union (EU).

The layout and contents of the publication are based on the recommendations and guidelines of the **International Integrated Reporting Council**.

GRI: 102-54

Description of the non-financial activities of the ORLEN Group has been prepared in accordance with the international standards for reporting on economic, environmental and social impacts of an organisation – **GRI Standards 2016, Core option**. The ORLEN Group reports its ESG issues according to those standards .

PKN ORLEN is taking measures to increasingly meet the **Task Force on Climate-related Financial Disclosures** guidelines on disclosure of information on climate and also refers to the **Sustainalytics ESG Rating**.

The publication identifies and presents activities aimed at **achieving the Sustainable Development Goals**

The ESG section presents the ORLEN Group's best practices and key ESG data.

Preparation of this Report included the following stages:

- Confirmation of significant business and social responsibility issues relevant to the ORLEN Group, and their materiality,
- Confirmation of the Stakeholder Map and relevant reporting aspects,
- Collection of data showing implementation of the policies, strategies and objectives of corporate social responsibility, as well as the due diligence procedures and risk management policies and how they are put into effect at the ORLEN Group,
- Preparation of this ORLEN Group Report for 2019, based on the collected data in accordance with the Polish Accounting Act of December 15th 2016 (Dz.U. of 2017, item 61), GRI Standards 2016 (Core option), and guidelines for integrated reporting issued by the Integrated Reporting Council. This Integrated Report has also been prepared based on the Directors' Report on the operations of the ORLEN Group and PKN ORLEN S.A. in 2019, the Consolidated Financial Statements of the ORLEN Group for the year ended December 31st 2019 and the Non-Financial Statement of the ORLEN Group and PKN ORLEN S.A. for 2019, all published in March 2020.
- External assurance of this Report based on the ISAE 3000 standard.

Key functionalities

This Integrated Report is only available online, with a number of functionalities and tools facilitating access to its contents, including:

- **Interactive key performance indicators** reflecting current and historical data
- **Glossary of financial and industry-specific terms**
- **Table of GRI Indicators**, based on which the non-financial performance is reported
- All multimedia content of this Integrated Report is available in the **Multimedia Centre**
- Key publications relating to the ORLEN Group's operations in 2019 are downloadable from the **Document Centre**
- Selected figures are available in the **Charts and Tables Centre** and **ORLEN in figures**
- An instructional video on how to navigate this Report is available in the **Help** section

This Report also contains interactive infographics, including the **business model**, **the value creation model**, and the **map of markets**.

It is possible to generate a **pdf file** of this Report.

Users can complete an interactive **questionnaire** to provide feedback on this Report.

Integration

We have defined our key areas with the principle of integration in mind, which is reflected in the very structure of this Report:

- **Our report**
  Concept, methodology and key functionalities
- **ORLEN Group**
  What the organisation deals with and its achievements in each area of operations (business segment)
- **Our environment**
  The ORLEN Group's macroeconomic, market, regulatory and other environments
- **Governance principles**
  The Group's corporate governance, relation between corporate units and key assumptions underlying management of the ORLEN Group
- **Our strategy**
  Pillars of our strategy, its implementation and development directions
- **Our responsibility**
  CSR strategy and its implementation, including in particular social, employee, human rights and anti-corruption and anti-bribery aspects
- **Environment and climate**
  Environmental issues, including water, effluents, air emissions and waste
- **Risks and opportunities**
  The enterprise risk management system, opportunities and challenges faced by the ORLEN Group
- **Financial results**
  To what extent we have achieved our strategic goals
- **Outlook 2020+**
  Long-term prospects

Connectivity

The contents of this Report are not static. Each sub-section is linked to:

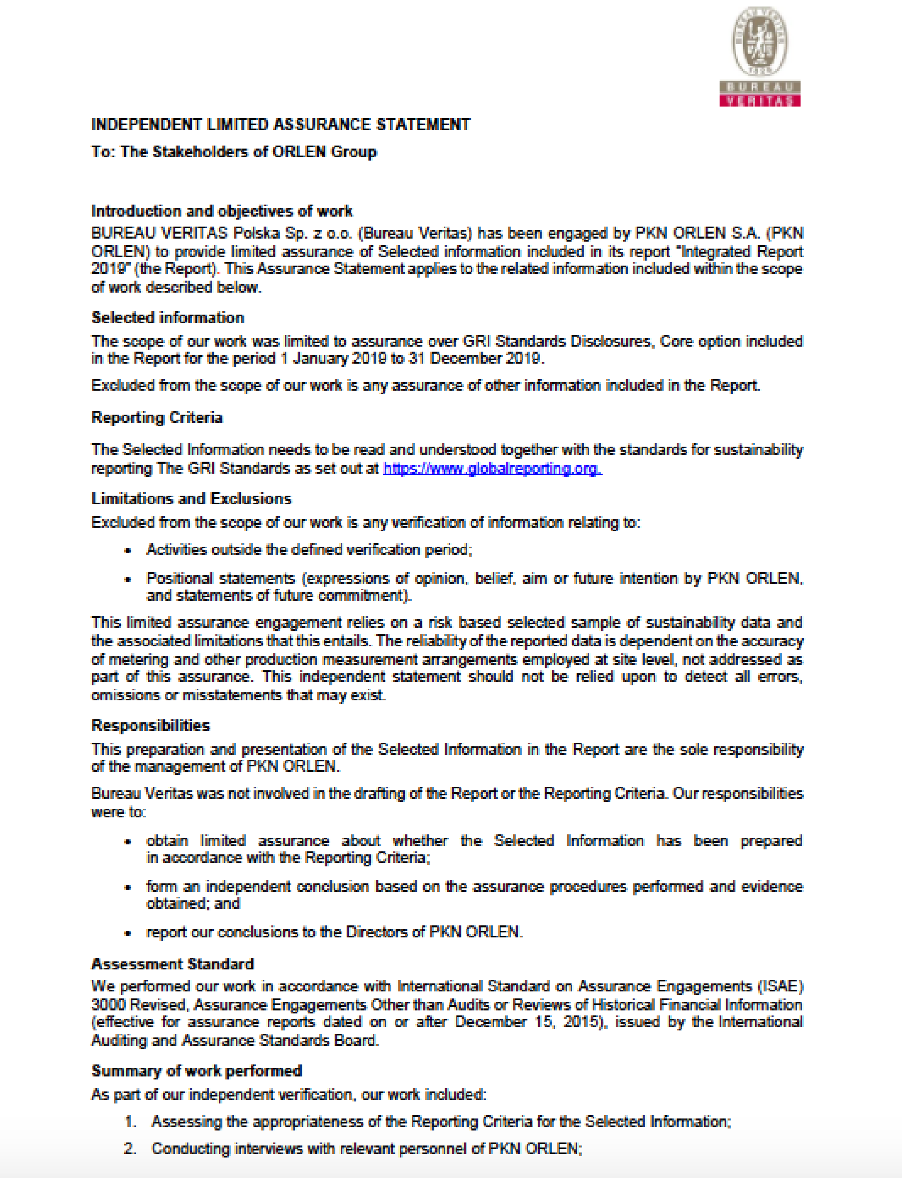
- **Capitals** – The content may be defined by production, intellectual, natural, social, human and financial capitals. This linkage enables easier access to information on the capitals, which often overlap, building the Company value in different areas.
- **GRI indicators –** This Report presents non-financial data in compliance with the Core version of the Global Reporting Initiative Standards. Each internal page contains information on the relevant GRI indicator, along with several other tools, such as the GRI search and the GRI content index.
- **Related sections –** Each page of this Report is linked to two other pages with similar or supplementary topics.

GRI: 102-56

Report review and assurance

It is our policy to arrange for external assurance of or integrated reports by an independent organisation. The auditor performs an independent assessment of profile and specific indicators developed in accordance with the GRI Standards. The ORLEN Group's Integrated Report for 2019 was audited by BureauVeritas Polska.

Auditor's opinion



INDEPENDENT LIMITED ASSURANCE STATEMENT

To: The Stakeholders of ORLEN Group

Introduction and objectives of work

BUREAU VERITAS Polska Sp. z o.o. (Bureau Veritas) has been engaged by PKN ORLEN S.A. (PKN ORLEN) to provide limited assurance of Selected information included in its report "Integrated Report 2019" (the Report). This Assurance Statement applies to the related information included within the scope of work described below.

Selected information

The scope of our work was limited to assurance over GRI Standards Disclosures, Core option included in the Report for the period 1 January 2019 to 31 December 2019.

Excluded from the scope of our work is any assurance of other information included in the Report.

Reporting Criteria

The Selected Information needs to be read and understood together with the standards for sustainability reporting The GRI Standards as set out at https://www.globalreporting.org.

Limitations and Exclusions

Excluded from the scope of our work is any verification of information relating to:

- Activities outside the defined verification period;
- Positional statements (expressions of opinion, belief, aim or future intention by PKN ORLEN, and statements of future commitment).

This limited assurance engagement relies on a risk based selected sample of sustainability data and the associated limitations that this entails. The reliability of the reported data is dependent on the accuracy of metering and other production measurement arrangements employed at site level, not addressed as part of this assurance. This independent statement should not be relied upon to detect all errors, omissions or misstatements that may exist.

Responsibilities

This preparation and presentation of the Selected Information in the Report are the sole responsibility of the management of PKN ORLEN.

Bureau Veritas was not involved in the drafting of the Report or the Reporting Criteria. Our responsibilities were to:

- obtain limited assurance about whether the Selected Information has been prepared in accordance with the Reporting Criteria;
- form an independent conclusion based on the assurance procedures performed and evidence obtained; and
- report our conclusions to the Directors of PKN ORLEN.

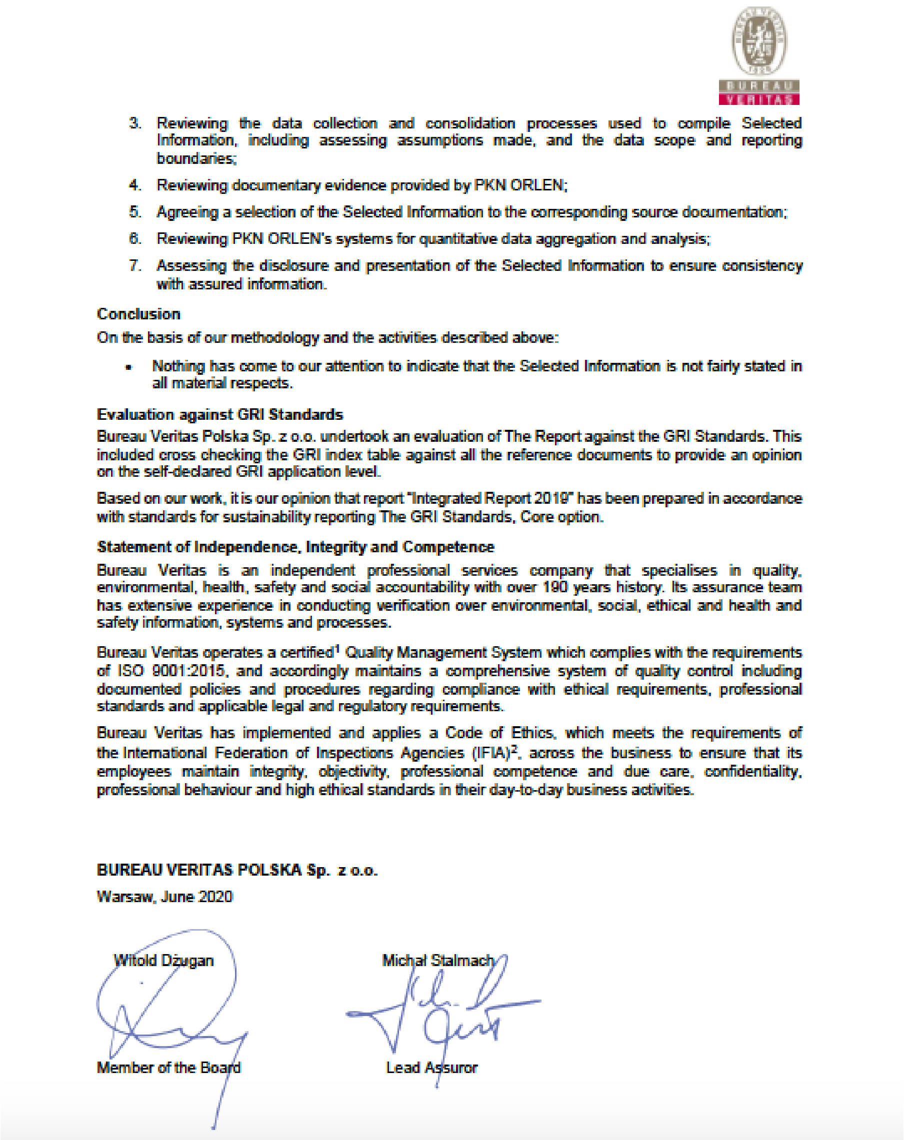
Assessment Standard

We performed our work in accordance with International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (effective for assurance reports dated on or after December 15, 2015), issued by the International Auditing and Assurance Standards Board.

Summary of work performed

As part of our independent verification, our work included:

1. Assessing the appropriateness of the Reporting Criteria for the Selected Information;
2. Conducting interviews with relevant personnel of PKN ORLEN;



3. Reviewing the data collection and consolidation processes used to compile Selected Information, including assessing assumptions made, and the data scope and reporting boundaries;
4. Reviewing documentary evidence provided by PKN ORLEN;
5. Agreeing a selection of the Selected Information to the corresponding source documentation;
6. Reviewing PKN ORLEN's systems for quantitative data aggregation and analysis;
7. Assessing the disclosure and presentation of the Selected Information to ensure consistency with assured information.

Conclusion

On the basis of our methodology and the activities described above:

- Nothing has come to our attention to indicate that the Selected Information is not fairly stated in all material respects.

Evaluation against GRI Standards

Bureau Veritas Polska Sp. z o.o. undertook an evaluation of The Report against the GRI Standards. This included cross checking the GRI index table against all the reference documents to provide an opinion on the self-declared GRI application level.

Based on our work, it is our opinion that report "Integrated Report 2019" has been prepared in accordance with standards for sustainability reporting The GRI Standards, Core option.

Statement of Independence, Integrity and Competence

Bureau Veritas is an independent professional services company that specialises in quality, environmental, health, safety and social accountability with over 190 years history. Its assurance team has extensive experience in conducting verification over environmental, social, ethical and health and safety information, systems and processes.

Bureau Veritas operates a certified[1] Quality Management System which complies with the requirements of ISO 9001:2015, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Bureau Veritas has implemented and applies a Code of Ethics, which meets the requirements of the International Federation of Inspections Agencies (IFIA)[2], across the business to ensure that its employees maintain integrity, objectivity, professional competence and due care, confidentiality, professional behaviour and high ethical standards in their day-to-day business activities.

BUREAU VERITAS POLSKA Sp. z o.o.

Warsaw, June 2020

Witold Dzugan
Member of the Board

Michal Stalmach
Lead Assuror

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The Management Board of PKN ORLEN confirms that the ORLEN Group's Integrated Report for 2019 contains a comprehensive description of the ORLEN Group's financial and non-financial activities, and gives assurance as to the truthfulness, accuracy and reliability of the information it contains.

Daniel Obajtek
President of the Board

Zbigniew Leszczyński
Member of the Board

Józef Węgrecki
Member of the Board

Patrycja Klarecka
Member of the Board

Michał Róg
Member of the Board

Armen Artwich
Member of the Board

Jan Szewczyk
Member of the Board

Adam Burak
Member of the Board

RELEVANCE MATRIX

GRI indicators: 101, 102-46, 102-47, 102-49, 102-44, 103-1

Capitals:

GRI: 101, 102-46, 102-47

External and internal Stakeholders are involved in the process of selecting relevant aspects to be reported by the ORLEN Group.

The process of defining relevant reporting aspects at the ORLEN Group included the following activities:

Identification

In December 2017, representatives of the ORLEN Group and its stakeholder environment took part in a meeting (Stakeholder Panel) organised according to the international AA1000SES standard on managing stakeholder relations. The consultations concerned priority directions for sustainable and responsible business, as well as formulating expectations as to disclosures relating to the Company's operations and their social and economic impacts, including determination of their materiality. The panel was attended by representatives of industry organisations and institutions, academics, social partners, suppliers, and customers.

Prioritisation

To update and select relevant aspects to be reported by the ORLEN Group, consultations were held in late 2019 and early 2020 with the ORLEN Group's key reporting areas.

Validation

External and internal Stakeholders completed questionnaires covering, among other things, economic, social and environmental reporting aspects. The Stakeholders assessed the materiality of each aspect as 'low', 'medium', or 'high'.

As a result, the final list of the ORLEN Group's relevant reporting aspects was prepared, specifying their materiality to the ORLEN Group and its Stakeholders.

Relevant reporting aspects identified by external and internal Stakeholders

GRI: 102-49

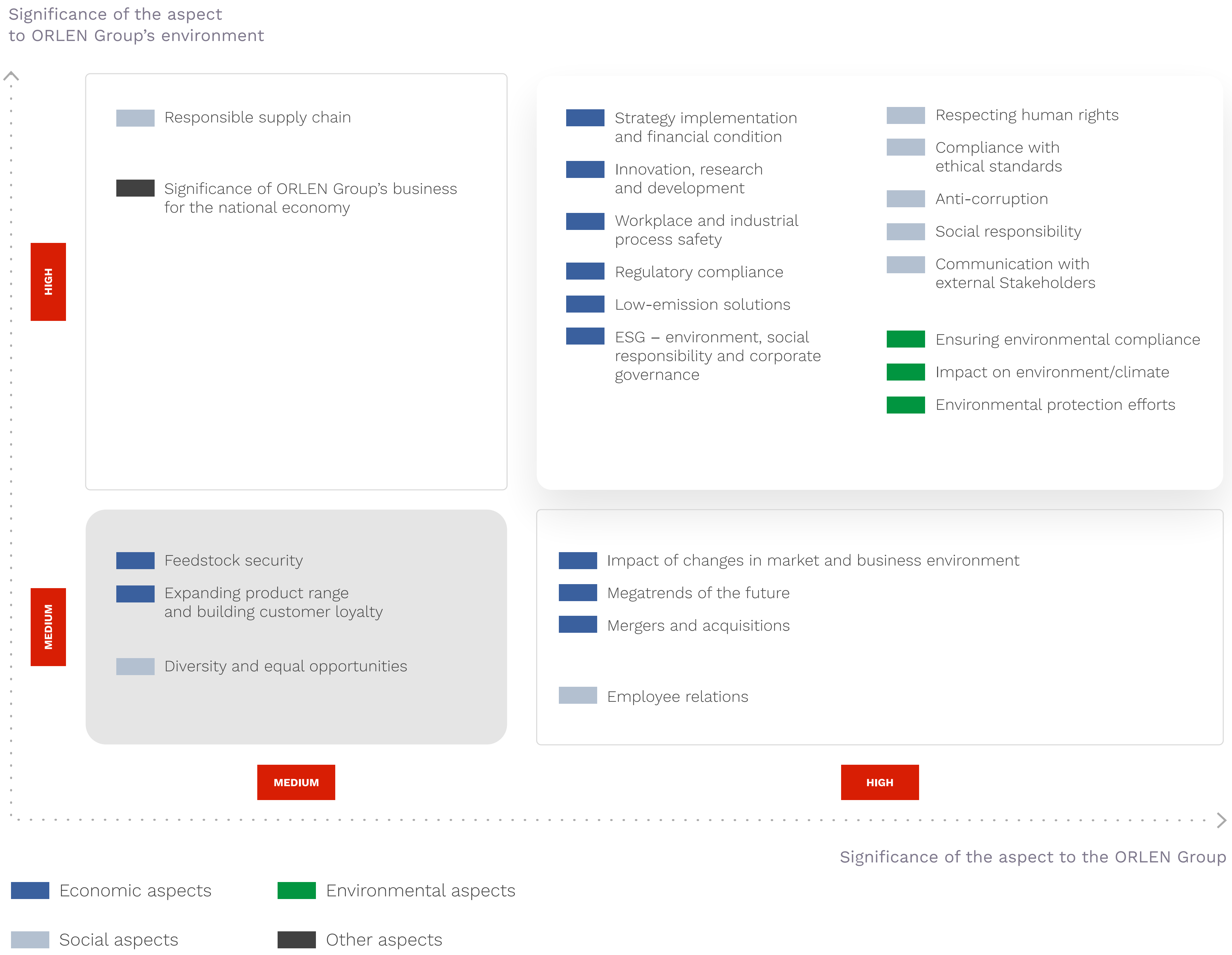
Following analyses and consultations with internal and external Stakeholders, the following changes were made to the list of aspects:

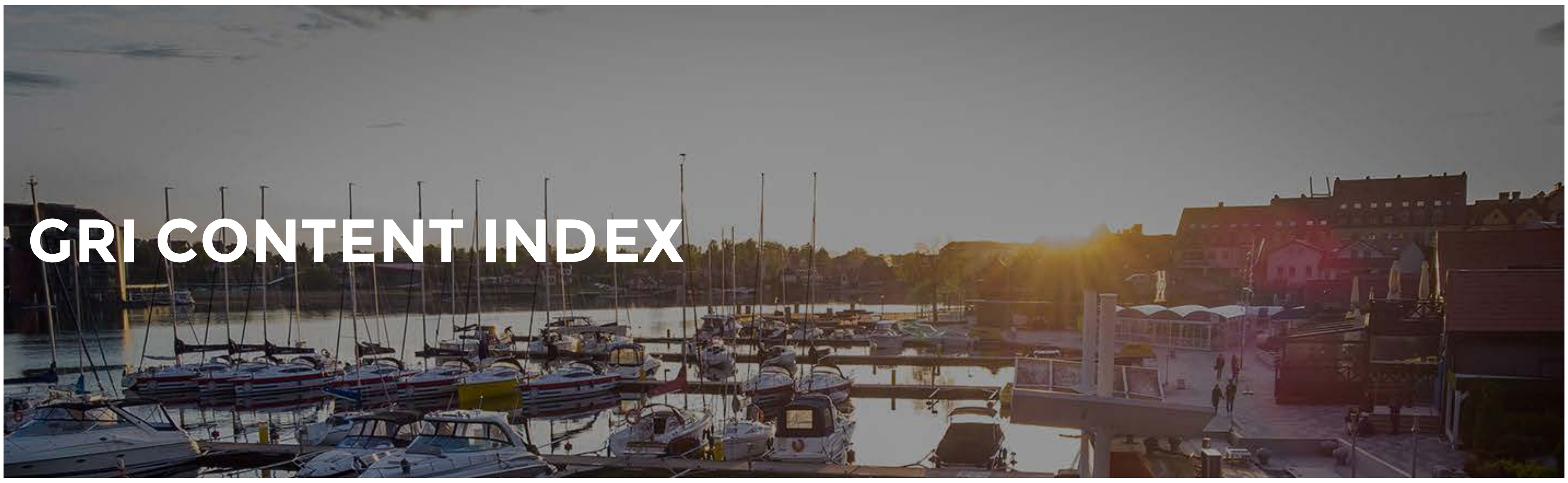
- Economic aspects: new aspects, i.e. 'Mergers and acquisitions', 'Low-emission solutions' and 'ESG – environmental, social and governance factors';
- Social aspects – the 'Social responsibility' aspect was created, combining two previously separate aspects, namely 'Participation in social life and impact on local communities' and 'Responsibility towards key stakeholders';
- Environmental aspects – the 'Environmental impacts' aspect was renamed to 'Environmental/climate impacts'.

GRI: 102-44, 103-1

As a result, the final list of the ORLEN Group's relevant reporting aspects was prepared, specifying their materiality (i.e. low, medium and high) to the ORLEN Group and its Stakeholders, as shown in the figure .

Materiality matrix





GRI CONTENT INDEX

GRI indicators: 102-55

GRI: 102-55

GRI Standard Number	Standard	Number of disclosure	Number of indicator	Place in the raport
GRI 101			Foundation and basis of reporting	Relevance matrix Concept and key functionalities
GRI 102	General Disclosures 2016	102-1	Report the name of the organisation	About the ORLEN Group
GRI 102	General Disclosures 2016	102-2	Activities, brands, products, and services	Our products, services and brands Responsibility towards society
GRI 102	General Disclosures 2016	102-3	Report the location of the organisation's headquarters	ORLEN Group's structure
GRI 102	General Disclosures 2016	102-4	Location of operations, including number of countries where the organisation operates, and names of countries where either the organisation has significant operations or that are specifically relevant to the sustainability topics covered in the report	ORLEN Group's structure
GRI 102	General Disclosures 2016	102-5	Ownership and legal form	Shares and shareholding structure ORLEN Group's structure
GRI 102	General Disclosures 2016	102-6	Markets served	ORLEN Group's structure
GRI 102	General Disclosures 2016	102-7	Scale of the organisation	About the ORLEN Group
GRI 102	General Disclosures 2016	102-8	Information on employees and other workers	Responsible employer
GRI 102	General Disclosures 2016	102-9	Supply chain	Responsibility towards suppliers
GRI 102	General Disclosures 2016	102-10	Significant changes in the organisation's size, structure, ownership, or its value chain during the reporting period	Concept and key functionalities
GRI 102	General Disclosures 2016	102-11	Explanation of whether and how the precautionary approach or principle is addressed by the organisation	Integrated management system
GRI 102	General Disclosures 2016	102-12	Externally developed economic, environmental and social charters, principles, or other initiatives to which the organisation subscribes or which it endorses	CSR strategy
GRI 102	General Disclosures 2016	102-13	Membership of associations	Organisations and associations
GRI 102	General Disclosures 2016	102-14	Statement from senior decision-maker	Letter from the President of the Management Board
GRI 102	General Disclosures 2016	102-15	Key impacts, risks, and opportunities	Risk Management Opportunities

GRI Standard Number	Standard	Number of disclosure	Number of indicator	Place in the raport
GRI 102	General Disclosures 2016	102-16	Values, principles, standards, and norms of behaviour	Core Values and standards of conduct
GRI 102	General Disclosures 2016	102-17	Internal and external mechanisms for seeking advice on ethical and lawful behaviour, and matters related to organisational integrity	Respecting human rights
GRI 102	General Disclosures 2016	102-18	Governance structure of the organisation, including committees of the highest governance body	Management and supervisory bodies
GRI 102	General Disclosures 2016	102-22	Number and gender of members of the highest governance body and its committees	Management and supervisory bodies
GRI 102	General Disclosures 2016	102-35	Remuneration policies	Remuneration policy
GRI 102	General Disclosures 2016	102-40	List of stakeholder groups engaged by the organisation	Our stakeholders
GRI 102	General Disclosures 2016	102-41	Employees covered by collective bargaining agreements	Responsible employer
GRI 102	General Disclosures 2016	102-42	Basis for identification and selection of stakeholders with whom to engage	Our stakeholders
GRI 102	General Disclosures 2016	102-43	Approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group	Our stakeholders Corporate governance rules Responsibility towards customers
GRI 102	General Disclosures 2016	102-44	Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns, including through its reporting	Responsibility towards customers Relevance matrix
GRI 102	General Disclosures 2016	102-45	Entities included in the consolidated financial statements	ORLEN Group's structure Concept and key functionalities
GRI 102	General Disclosures 2016	102-46	Defining report content and topic boundaries	Relevance matrix
GRI 102	General Disclosures 2016	102-47	List of material topics	Relevance matrix
GRI 102	General Disclosures 2016	102-48	Explanation of the effect of any restatements of information provided in previous reports, and the reasons for and impact of such restatements (e.g. mergers, acquisitions, change of base year/period, nature of business, measurement methods)	Concept and key functionalities
GRI 102	General Disclosures 2016	102-49	Changes in reporting (significant changes from previous reporting periods in the material topics and aspect boundaries)	Relevance matrix Concept and key functionalities
GRI 102	General Disclosures 2016	102-50	Reporting period	Concept and key functionalities
GRI 102	General Disclosures 2016	102-51	Date of most recent report (if any)	Concept and key functionalities
GRI 102	General Disclosures 2016	102-52	Reporting cycle	Concept and key functionalities
GRI 102	General Disclosures 2016	102-53	Contact point	Contact
GRI 102	General Disclosures 2016	102-54	Indication of whether the report has been prepared in accordance with the GRI Standards in the Core option or the Comprehensive option	Concept and key functionalities
GRI 102	General Disclosures 2016	102-55	GRI index	GRI content index
GRI 102	General Disclosures 2016	102-56	Policy and current practice for external assurance	Concept and key functionalities

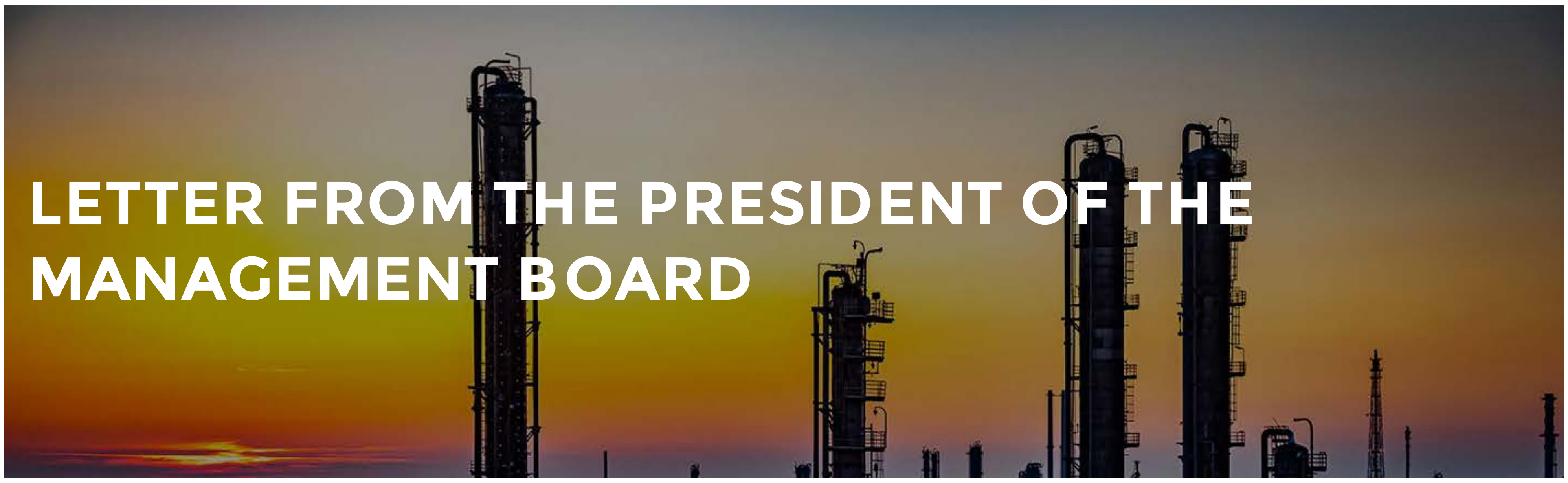
GRI Standard Number	Standard	Number of disclosure	Number of indicator	Place in the raport
GRI 103	Management Approach 2016	103-1	Explanation of the material topic and its boundary	Relevance matrix Research and technological development Retail Upstream Downstream Corporate functions Regulatory environment Corporate governance rules ORLEN Group strategy Respecting human rights Responsible employer Safety of employees and contractors Counteracting corruption and bribery Responsibility towards customers Environmental and climate responsibility Capital expenditure on environmental protection Environmental protection efforts and biodiversity Risk Management Opportunities Management's discussion and analysis of 2019 financial results
GRI 103	Management Approach 2016	103-2	The management approach and its components: environment, society, human rights, anti-corruption, HR, with an indication of important themes in each area	Research and technological development Retail Upstream Downstream Corporate functions Regulatory environment Corporate governance rules ORLEN Group strategy Respecting human rights Responsible employer Safety of employees and contractors Counteracting corruption and bribery Responsibility towards customers Environmental and climate responsibility Capital expenditure on environmental protection Environmental protection efforts and biodiversity Risk Management Opportunities Management's discussion and analysis of 2019 financial results
GRI 103	Management Approach 2016	103-3	Evaluation of the management approach	Integrated management system Respecting human rights Counteracting corruption and bribery Downstream Responsibility towards suppliers Letter from the President of the Management Board Responsibility towards customers Responsible employer Strategy implementation in 2019 Research and technological development Safety of employees and contractors Regulatory environment Energy Management ESG Our commitments Corporate governance rules Environmental and climate responsibility Environmental protection efforts and biodiversity Market environment Outlook 2020+ Main page/How we develop our business
GRI 201	Economic Performance 2016	201-1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments	ORLEN factbook

GRI Standard Number	Standard	Number of disclosure	Number of indicator	Place in the raport
GRI 203	Indirect Economic Impacts 2016	203-1	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, inkind, or pro bono engagement	Responsibility towards society
GRI 203	Indirect Economic Impacts 2016	203-2	Identification and description of significant indirect economic impacts, including the extent of impacts	Responsibility towards society
GRI 204	Procurement Practices 2016	204-1	Proportion of spending on local suppliers at significant locations of operation	Responsibility towards suppliers
GRI 205	Anti-corruption 2016	205-1	Percentage and total number of operations assessed for risks related to corruption and the risks identified	Counteracting corruption and bribery
GRI 205	Anti-corruption 2016	205-2*	Communication and training about anti-corruption policies and procedures	Counteracting corruption and bribery
GRI 301	Materials 2016	301-1	Materials used by weight or volume	Feedstocks and production processes
GRI 302	Energy 2016	302-1*	Energy consumption within the organisation by type of raw material	Energy management
GRI 302	Energy 2016	302-4	Reduction of energy consumption	Energy management
GRI 303	Water 2016	303-1	Total water withdrawal per unit of production by source	Water
GRI 303	Water 2016	303-3	Percentage and total volume of water recycled and reused	Water
GRI 304	Biodiversity 2016	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	Environmental protection efforts and biodiversity
GRI 305	Emissions 2016	305-1	Total direct greenhouse gas emissions by weight	Air emissions
GRI 305	Emissions 2016	305-6	Emissions of ozone-depleting substances by weight	Air emissions
GRI 305	Emissions 2016	305-7	NOx, SOx, and other significant air emissions by type and weight	Air emissions
GRI 306	Effluents and Waste 2016	306-1	Total water discharge by quality and destination	Effluents
GRI 306	Effluents and Waste 2016	306-2*	Waste by type and disposal method	Waste
GRI 306	Effluents and Waste 2016	306-3	Total number and volume of significant spills	Safety of employees and contractors
GRI 306	Effluents and Waste 2016	306-4	Weight of transported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	Waste
GRI 307	Environmental Compliance 2016	307-1	Monetary value of fines and total number of non-monetary sanctions for non-compliance with environmental laws and/or regulations	Environmental and climate responsibility
GRI 308	Supplier Environmental Assessment 2016	308-1	Percentage of new suppliers that were screened using environmental criteria	Responsibility towards suppliers
GRI 401	Employment 2016	401-1*	New employee hires and employee turnover	Responsible employer
GRI 401	Employment 2016	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Responsible employer

GRI Standard Number	Standard	Number of disclosure	Number of indicator	Place in the raport
GRI 403	Occupational Health and Safety 2016	403-2	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Safety of employees and contractors
GRI 403	Occupational Health and Safety 2016	403-3	Workers with high incidence or high risk of diseases related to their occupation	Safety of employees and contractors
GRI 403	Occupational Health and Safety 2016	403-4*	Health and safety topics covered in formal agreements with trade unions	Responsible employer
GRI 404	Training and Education 2016	404-1	Average hours of training per year per employee by gender, and by employee category	Responsible employer
GRI 404	Training and Education 2016	404-2	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Responsible employer
GRI 405	Diversity and Equal Opportunity 2016	405-1	Composition of governance bodies and breakdown of employees per employee category according to gender, age group and other indicators of diversity	Diversity policy
GRI 414	Supplier Social Assessment 2016	414-1	Percentage of new suppliers that were screened using social criteria	Responsibility towards suppliers
GRI 416	Customer Health and Safety 2016	416-2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	Responsibility towards customers
GRI 417	Marketing and Labeling 2016	417-1	Type of product and service information required by the organisation's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	Feedstocks and production processes
GRI 418	Customer Privacy 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Responsibility towards customers
Indicators specified in the Oil and Gas Sector Supplement:				
OG-8	Benzene, lead and sulfur content in fuels			Feedstocks and production processes
OG-13	Number of process safety events, by business activity			Safety of employees and contractors
OG-14	Volume of biofuels produced and purchased meeting the sustainability criteria			Feedstocks and production processes

** Indicator reported partially*

ORLEN GROUP



LETTER FROM THE PRESIDENT OF THE MANAGEMENT BOARD

GRI indicators: 102-14, 103-3

Capitals:

Ladies and Gentlemen, Dear Shareholders,

GRI: 102-14, 103-3

The success of the ORLEN Group and other fuel and energy companies is largely determined by their ability to respond to economic and market shifts, not only in order to maximise profits but also to strengthen their competitive position. Looking back at 2019, I can proudly say we managed to attain these goals. We make business decisions that will fully leverage the ORLEN Group's potential in the coming years, while ensuring strong growth and strengthening of its competitive edge. The efforts implemented on the basis of these decisions will benefit our shareholders, customers and, most importantly, Poland's economy.

The ORLEN Group delivered solid financial performance in 2019 despite a marked deterioration in the macroeconomic environment. Regulatory changes, global economic trends and the situation in global trade made our business environment increasingly competitive. The significant contribution of power generation to the Group's earnings demonstrates that our choice of a path towards building a strong multi-energy group is fully justified.

> We processed almost 33.9m tonnes of crude oil and reported record-high sales volumes of 43.3m tonnes last year. We consistently exploited our refining potential across the ORLEN Group. Imports from Lithuania's Mažeikiai refinery were stepped up to satisfy demand in Poland. This helped improve the refinery's performance and bolstered our earnings.

The Group's 2019 LIFO-based EBITDA (LIFO-based earnings before depreciation and amortisation) before impairment of non-current assets stood at PLN 9.2bn, an increase of more than PLN 0.8bn year on year. This excellent result was largely attributable to the solid performance reported by our retail business, which delivered over PLN 3bn in EBITDA, the best result in the Group's history.

2019 saw a cut in Russian oil supplies delivered over the Druzhba Pipeline that lasted 46 days and was the longest such interruption to date. The ORLEN Group was well prepared for that development having consistently implemented its strategy of diversifying crude supply sources. We had built and strengthened our relationships with new and existing partners, including in Africa, the US and the Persian Gulf.

Capital projects are a key driver of the Group's growth, with PLN 5.5bn allocated to such investments last year. We successfully completed the construction of a PPF splitter unit in Lithuania's Mažeikiai and a metathesis unit in Płock. As part of our efforts to convert ORLEN Południe into a modern biorefinery, we launched construction of a plant for making bio propylene glycol in our Trzebinia-based plant. We also purchased a licence and front-end engineering design to build a next generation bioethanol unit in Jedlicze. In ANWIL we launched projects that will help increase the subsidiary's fertiliser production capacity by half. In 2020, we commenced construction of a visbreaking unit in Płock with a view to maximising crude conversion. We made progress in implementing our strategic Petrochemicals Development Programme, with plans to establish a Research and Development Centre by the end of this year.

Solid performance in the power generation segment was a major contributor to the Group's LIFO-based EBITDA. Therefore, we resolved to step up our activities in this area, which will further enhance energy security of the ORLEN Group, Poland and the entire CEE region. Our key priority last year was to commence the acquisition process of the ENERGA Group, which we did by announcing a tender offer for 100% of its shares. The process was successfully completed in March 2020.We managed to satisfy all the conditions necessary to carry out Poland's largest energy market transaction in just four months, which made it the fastest as well as the biggest process of its kind in our country. We also continued our efforts to finalise the merger with Grupa LOTOS. A due diligence review of the company commenced in April 2018 and ended late last year. We expect the European Commission's decision on the merger with LOTOS by the end of July 2020.

The ENERGA Group acquisition and the merger with Grupa LOTOS as well as the proposed offshore project in the Baltic Sea fit into PKN ORLEN's long-term strategy to build a multi-utility company with an established international position. As a strong single entity, we will be enable to better compete in global markets and strengthen our financial stability.

Another major contribution to Poland's transition to a low-carbon economy will be a hydrogen purification unit planned to be built at ORLEN Południe in Trzebinia. Last year we signed a letter of intent with PESA Bydgoszcz on the development of hydrogen-powered rail transport. We expand our hydrogen capabilities – we own hydrogen refuelling infrastructure in Germany and we are set to deploy hydrogen fuel stations in the Czech Republic in 2021. In Poland, we mainly focus on collaborative partnerships contributing to the advancement of hydrogen-powered city transport. We have already signed cooperation agreements with Krakowski Holding Komunalny, the Upper Silesian Metropolitan Area and the City of Płock, with further locations to follow soon.

We continued to leverage the potential of our retail business, which again reported a record-high operating profit, driven by a 4% growth in sales volumes, higher market shares in Poland, Germany and the Czech Republic, and a mid-teen rise in non-fuel margins. We proceeded with a rapid rollout of the food and store format across the markets, including Poland, where 164 new O!SHOP brand convenience stores opened, and Germany, where the number of star Connect locations more than doubled. PKN ORLEN's retail network expanded into Slovakia, with ten service stations operating on that market at the end of 2019. The co-branding process began in the second half of the year, with all service stations already bearing the ORLEN brand. Our partnership with Robert Kubica and our presence in Formula 1, the world's highest class of auto racing with a global audience of almost two billion people, greatly contributed to building the awareness of our brand. The global exposure equivalent for the ORLEN brand exceeded the PLN 170m mark last year.

In the upstream segment, we consistently pursued our strategy of focusing on the most promising assets. As at the end of 2019, PKN ORLEN's total 2P oil and gas reserves were 197.3 mboe.

We strive to ensure that our activities meet the expectations of all stakeholders. We pay attention to environmental, social and governance (ESG) aspects in the management and setting directions for our business development. We are a responsible company, committed to sustainable development, encompassing especially support for local communities, promotion of safety, health and environment protection.

We provide fair and friendly working conditions for our employees. Our relations with internal Stakeholders and the external business environment are based on integrity, respect, dialogue, cooperation and engagement. For the ORLEN Group, as a leader of Poland's economy, a priority is to conduct business in a transparent manner, in keeping with the highest ethical standards. In 2019, we introduced a number of measures that further strengthened those standards. Examples include the provision of training on risks associated with corruption, methods of its prevention and reporting of any identified irregularities. We developed workplace bullying and discrimination prevention rules as another component of our anti-bullying policy. We improve our internal occupational health and safety regulations and processes seeking to emulate the highest standards in that area.

Last year, we actively engaged in projects promoting Polish sports and culture and, through the ORLEN Foundation, also in community and scholarship programmes.

We joined the fight against the coronavirus in Poland, allocating over PLN 100m to support health care staff, uniformed services and nursing homes. We took action to ensure all Poles were safe. The ORLEN Group's Jedlicze plant started production of hand sanitizer and our Trzebinia site – production of surface disinfectant. The other ORLEN Group companies and the ORLEN Foundation also joined the battle against the pandemic, the latter donating almost PLN 10m to hospitals across Poland.

I would like to thank all ORLEN Group employees for their engagement and great work, and the Supervisory Board for their support and valuable guidance. Our ambitious business goals and continuous growth could not have been achieved without you. I would also like to thank our Shareholders for the trust they place in us when making investment decisions. We have begun a new busy year together, which will see continuation of many landmark projects. I am confident the ORLEN Group will again deliver the goals that it has set itself.

Daniel Obajtek
CEO, President of the Management
Board
PKN ORLEN S.A.

ABOUT THE ORLEN GROUP

GRI indicators: 102-1, 102-7

Capitals:

The ORLEN Group is the largest corporation in Central and Eastern Europe, listed in prestigious global rankings such as Fortune Global 500 and Platts TOP250.

GRI: 102-1, 102-7

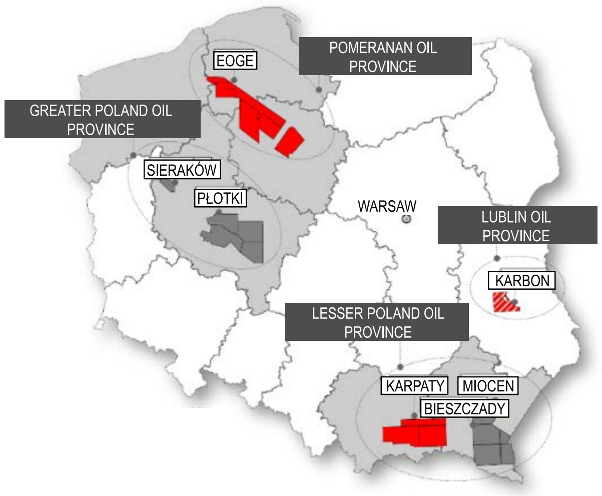
The ORLEN Group has operations in six home markets: Poland, the Czech Republic, Germany, Lithuania, Slovakia, and Canada. It owns state-of-the-art integrated assets with an annual processing capacity of over 35 million tonnes of various types of crude oil, and markets its products through the region's largest network of over 2,800 modern service stations. ORLEN's offering includes over 50 top-quality petrochemical and refining products, which are sold in more than 110 countries across 6 continents. The Group is a major player on the Polish energy market and Poland's largest industrial electricity producer, with a generation capacity of 1.8 GWe. The Group's upstream assets include 2P oil and gas reserves estimated at 197.3 m boe at the end of 2019. For a number of years ORLEN has been recognised as the most valuable Polish brand, worth PLN 4.7bn. PKN ORLEN is also the region's only company to be listed for the seventh consecutive time among The Most Ethical Companies by the US-based Ethisphere Institute.

ORLEN Group Key figures

Upstream

Canada

Poland



Exploration and production

projects in Poland and Canada

197.3 mboe

total 2P oil and gas reserves

18,200 boe/d

average production in 2019

Downstream

PRODUCTION

Refining
PKN ORLEN, Unipetrol,
ORLEN Lietuva, ORLEN Południe

Petrochemicals
PKN ORLEN, Unipetrol, Anwil,
Basell ORLEN Polyolefins

Power generation
CCGT Włocławek, CCGT Płock, Płock
and other heating and power plants

LOGISTICS

Road tankers

Rail

Pipelines

Terminals

SALES

Wholesale fuels and other refined products

Wholesale petrochemicals

Retailsale fuels and non-fuel products

More than 35m tonnes

of refining capacities at six ORLEN Group refineries[3] in Poland, the Czech Republic and Lithuania

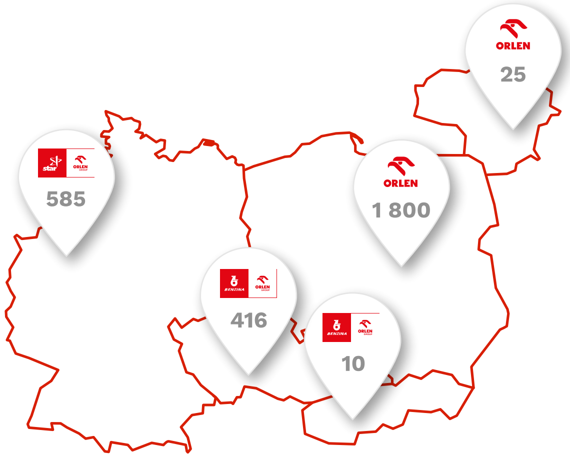
3,700 km

long pipeline network and 39 storage depots and terminals

Growth projects:

- Construction of a polyethylene unit in the Czech Republic
- Construction of a metathesis unit in Płock
- Construction of a PPF splitter unit in Lithuania
- Construction of a boiler house for the steam cracker in the Czech Republic
- Construction of a unit for separation of paraffins from the MaxEne reforming feedstock at PKN ORLEN

Retail



Over 2,800 service stations

16.4%
total share of the retail market (Poland, Germany, Czech Republic, Lithuania)

2,000
Stop Cafe and Stop Cafe Bistro locations in Poland, Czech Republic and Lithuania

Current status for June 2020

1) Before impairment of non-current assets of PLN 0.2bn.
2) Including the effect of IFRS 16.
3) Refineries in Płock, Trzebinia, Jedlicze, Mažeikiai, Kralupy and Litvínov.

Key events in 2019

JANUARY:

- Purchases of crude oil from West Africa
- Supply of US crude oil to ORLEN Group refineries
- PKN ORLEN's Q4 2018 consolidated financial results
- Environmental and wind speed surveys in PKN ORLEN's off-shore wind farm licence area in the Baltic Sea
- Partnership with Williams Racing and Robert Kubica

FEBRUARY:

- PKN ORLEN joins the Space3ac acceleration programme
- PKN ORLEN is ranked among the world's most ethical companies
- PKN ORLEN is named 'Top Employer'

MARCH:

- Recommendation on the highest ever dividend distribution to PKN ORLEN Shareholders
- Crude oil from Angola
- PKN ORLEN strengthens its relationship with Saudi Aramco
- Investments in railway fleet

- Cooperation with the National Centre for Agricultural Support

APRIL:

- Launch of a metathesis unit in Płock
- Suspension of REBCO supplies
- PKN ORLEN submits a financing proposal in connection with its intention to acquire a 100% stake in Ruch S.A.
- PKN ORLEN's Q1 2019 consolidated financial results
- The first ORLEN Group service station opened in Slovakia
- Letter of intent signed for cooperation between ORLEN Paliwa and PKP CARGO
- Wind surveys in the Baltic Sea
- Construction of PKN ORLEN's Research and Development Centre in Płock
- Launch of PKN ORLEN's Investment Academy

MAY:

- Contract for the construction of a plant for making bio propylene glycol in Trzebinia
- Construction of nitrogen fertilizer units begins at ANWIL
- PKN ORLEN supports the government in combating grey economy in the fuel sector
- Exploration work in the Rzeszów province
- PKN ORLEN joins the GovTech government programme

JUNE:

- Annual General Meeting of PKN ORLEN
- Modernisation of the TG1 turbine generator set at the Płock CHP plant
- ORLEN Południe invests in green energy sources
- ANWIL signs a contract for the construction of a granulation plant
- Cooperation agreement between ORLEN Projekt and Energa Invest
- Consolidation of maintenance assets at the ORLEN Group

JULY:

- PKN ORLEN and the PZU Group with a new joint marketing services procurement policy
- PKN ORLEN and PZU sign an Employee Capital Plan (PPK) management agreement
- PKN ORLEN's Q2 2019 consolidated financial results
- Investments in rail freight development
- PKN ORLEN files a formal application for the European Commission's approval of its proposed acquisition of Grupa LOTOS
- PKN ORLEN strengthens business relationships in Angola
- ORLEN Asfalt signs an agreement with a consortium of scientific institutions (the Gdańsk University of Technology, the Warsaw University of Technology and the Road and Bridge Research Institute) to carry out research into upgrading bitumen surfaces

AUGUST:

- PKN ORLEN, the Polish State Treasury and Grupa Lotos sign a memorandum of understanding concerning PKN ORLEN's intended acquisition of a controlling stake in the Gdańsk-based company

- Expansion of the PKN ORLEN's research infrastructure
- 10th edition of Verva Street Racing

SEPTEMBER:

- PKN ORLEN Strategic Research Agenda
- PGE and PKN ORLEN for the development of offshore wind energy generation in Poland
- Construction of the ORLEN Group service stations in Slovakia
- ORLEN Południe's environmental investment projects
- ANWIL signs a contract for the construction of auxiliary infrastructure for fertilizer units

OCTOBER:

- Launch of seabed surveys in the Baltic Sea as part of preparation for the offshore wind farm project
- PKN ORLEN and the Metropolitan Association of Upper Silesia and Dąbrowa Basin sign a letter of intent on cooperation for the development of zero-emission hydrogen-powered public transport services
- Electric vehicle chargers at the ORLEN Group service stations in Germany
- PKN ORLEN's Q3 2019 consolidated financial results
- ORLEN brand at the Company's service stations abroad

NOVEMBER:

- Extension of the cooperation agreement between ORLEN Lietuva and the Lithuanian Railways
- PKN ORLEN signs a contract for technical consultancy and PMC+ services for the project to extend the olefins production capacities in Płock
- ORLEN Południe opens a new central warehouse
- Construction of a visbreaker unit
- The first ORLEN Group service station opened in Bavaria

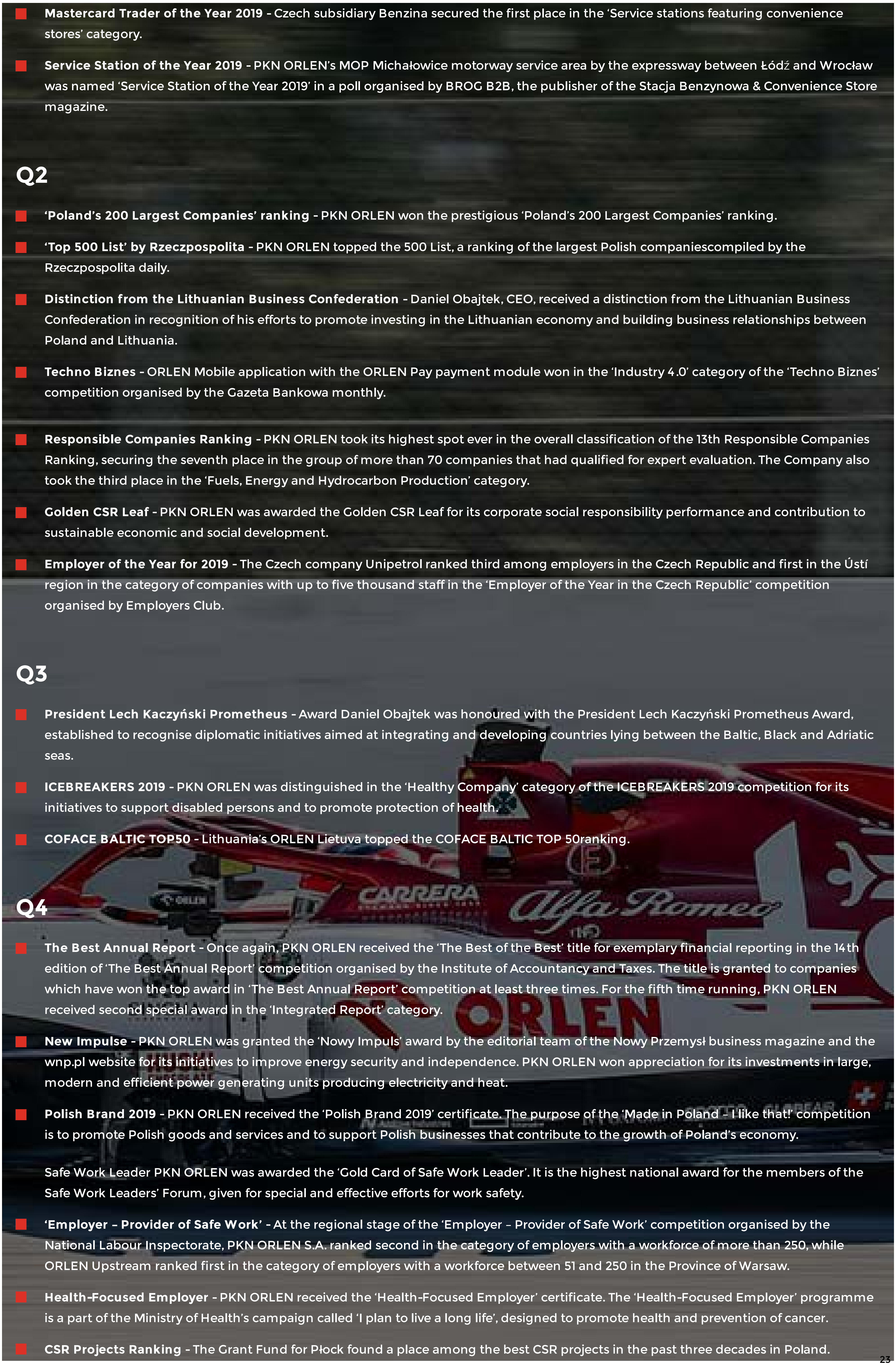
DECEMBER:

- PKN ORLEN announces a tender offer for 100% of ENERGA Group shares
- ORLEN Lietuva's refinery in Mažeikiai with railway connection to Latvia
- Strategic cooperation between PKN ORLEN and Pesa Bydgoszcz with a view to developing hydrogen technology

The most prominent awards and accolades received in 2019

Q1

- **The World's Most Ethical Company** - For the sixth time, PKN ORLEN was awarded the prestigious 'The World's Most Ethical Company' title for the observance of ethics in daily corporate life and setting ethical leadership standards.
- **Bulls and Bears** - Daniel Obajtek was named 'CEO of the Year' in the 25th edition of the 'Bulls and Bears' award for the PKN ORLEN stock performance and launching the acquisition of Lotos.
- **Top Employer Polska** - For the eighth consecutive time, PKN ORLEN was awarded the 'Top Employer Polska' title as Poland's leading employer.
- **Employer for Engineers** - PKN ORLEN won a place among the most attractive employers for engineers.



- **Mastercard Trader of the Year 2019 -** Czech subsidiary Benzina secured the first place in the 'Service stations featuring convenience stores' category.
- **Service Station of the Year 2019 -** PKN ORLEN's MOP Michałowice motorway service area by the expressway between Łódź and Wrocław was named 'Service Station of the Year 2019' in a poll organised by BROG B2B, the publisher of the Stacja Benzynowa & Convenience Store magazine.

Q2

- **'Poland's 200 Largest Companies' ranking -** PKN ORLEN won the prestigious 'Poland's 200 Largest Companies' ranking.
- **'Top 500 List' by Rzeczpospolita -** PKN ORLEN topped the 500 List, a ranking of the largest Polish companiescompiled by the Rzeczpospolita daily.
- **Distinction from the Lithuanian Business Confederation -** Daniel Obajtek, CEO, received a distinction from the Lithuanian Business Confederation in recognition of his efforts to promote investing in the Lithuanian economy and building business relationships between Poland and Lithuania.
- **Techno Biznes -** ORLEN Mobile application with the ORLEN Pay payment module won in the 'Industry 4.0' category of the 'Techno Biznes' competition organised by the Gazeta Bankowa monthly.
- **Responsible Companies Ranking -** PKN ORLEN took its highest spot ever in the overall classification of the 13th Responsible Companies Ranking, securing the seventh place in the group of more than 70 companies that had qualified for expert evaluation. The Company also took the third place in the 'Fuels, Energy and Hydrocarbon Production' category.
- **Golden CSR Leaf -** PKN ORLEN was awarded the Golden CSR Leaf for its corporate social responsibility performance and contribution to sustainable economic and social development.
- **Employer of the Year for 2019 -** The Czech company Unipetrol ranked third among employers in the Czech Republic and first in the Ústí region in the category of companies with up to five thousand staff in the 'Employer of the Year in the Czech Republic' competition organised by Employers Club.

Q3

- **President Lech Kaczyński Prometheus -** Award Daniel Obajtek was honoured with the President Lech Kaczyński Prometheus Award, established to recognise diplomatic initiatives aimed at integrating and developing countries lying between the Baltic, Black and Adriatic seas.
- **ICEBREAKERS 2019 -** PKN ORLEN was distinguished in the 'Healthy Company' category of the ICEBREAKERS 2019 competition for its initiatives to support disabled persons and to promote protection of health.
- **COFACE BALTIC TOP50 -** Lithuania's ORLEN Lietuva topped the COFACE BALTIC TOP 50ranking.

Q4

- **The Best Annual Report -** Once again, PKN ORLEN received the 'The Best of the Best' title for exemplary financial reporting in the 14th edition of 'The Best Annual Report' competition organised by the Institute of Accountancy and Taxes. The title is granted to companies which have won the top award in 'The Best Annual Report' competition at least three times. For the fifth time running, PKN ORLEN received second special award in the 'Integrated Report' category.
- **New Impulse -** PKN ORLEN was granted the 'Nowy Impuls' award by the editorial team of the Nowy Przemysł business magazine and the wnp.pl website for its initiatives to improve energy security and independence. PKN ORLEN won appreciation for its investments in large, modern and efficient power generating units producing electricity and heat.
- **Polish Brand 2019 -** PKN ORLEN received the 'Polish Brand 2019' certificate. The purpose of the 'Made in Poland – I like that!' competition is to promote Polish goods and services and to support Polish businesses that contribute to the growth of Poland's economy.

  Safe Work Leader PKN ORLEN was awarded the 'Gold Card of Safe Work Leader'. It is the highest national award for the members of the Safe Work Leaders' Forum, given for special and effective efforts for work safety.
- **'Employer – Provider of Safe Work' -** At the regional stage of the 'Employer – Provider of Safe Work' competition organised by the National Labour Inspectorate, PKN ORLEN S.A. ranked second in the category of employers with a workforce of more than 250, while ORLEN Upstream ranked first in the category of employers with a workforce between 51 and 250 in the Province of Warsaw.
- **Health-Focused Employer -** PKN ORLEN received the 'Health-Focused Employer' certificate. The 'Health-Focused Employer' programme is a part of the Ministry of Health's campaign called 'I plan to live a long life', designed to promote health and prevention of cancer.
- **CSR Projects Ranking -** The Grant Fund for Płock found a place among the best CSR projects in the past three decades in Poland.

- **Patron of Polish Athletics -** PKN ORLEN was awarded the ‘Patron of Polish Athletics’ title in the ranking by the Polish Athletics Federation and the Przegląd Sportowy daily.
- **HeroesON -** The ‘Golden HeroesON of the Public‘ award in the ‘Company’ category for projects pursued in 2018 to promote Polish history in the 20th century
- **The Legal 500 GC Powerlist: Central and Eastern Europe -** Janusz Szurski, attorney, Head of the PKN ORLEN Legal Office, was selected for ‘The Legal 500 GC Powerlist: Central and Eastern Europe’ ranking of the best European corporate lawyers.

SHARES AND SHAREHOLDING STRUCTURE

GRI indicators: 102-5

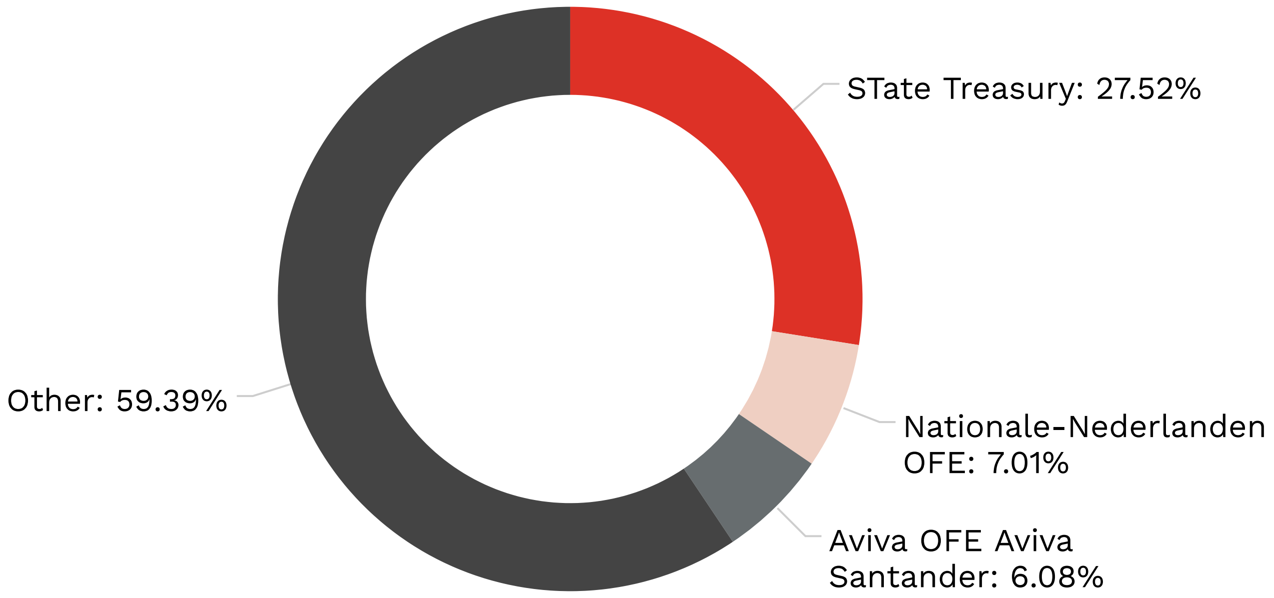
Capitals:

PKN ORLEN shares are traded on the main market of the Warsaw Stock Exchange in the continuous trading system and are included in the WIG, WIG20, WIG30, WIG-Poland and WIG-ESG general market indices and in the WIG-FUELS industry index.

GRI: 102-5

In 2019, the blue-chip WIG20 index fell by (5.6)% while the all-cap WIG index rose by 0.2% year on year. The price of PKN ORLEN shares dropped by (20.6)% in the period. Given the payment of dividend and its subsequent reinvestment, the annual rate of return on investment in ORLEN shares was 17.9% in PLN and 17.1% in EUR. In 2019, 194,296,820 PKN ORLEN shares were traded on the main market, a decrease of (7.8)% on 2018.

Shareholding structure of PKN ORLEN [1)]



1) PKN ORLEN shareholding structure as at the date of authorization of the Management Board Report

The current PKN ORLEN shareholding structure is available on the corporate website.

- The share capital of PKN ORLEN is divided into 427,709,061 ordinary bearer shares with a par value of PLN 1.25 per share. PKN ORLEN shares are freely transferable.
- The PKN ORLEN Management Board has no knowledge of any agreements which would results in future changes of holdings of Company shares.
- In 2019, the ORLEN Group did not operate any employee stock option scheme.
- In 2019, PKN ORLEN did not buy back its own shares.
- As at 31 December 2019, members of the PKN ORLEN Management Board did not hold any shares of the Company.
- As at 31 December 2019, none of the members of the Parent's Supervisory Board held any PKN ORLEN shares.

Key data regarding PKN ORLEN's shares

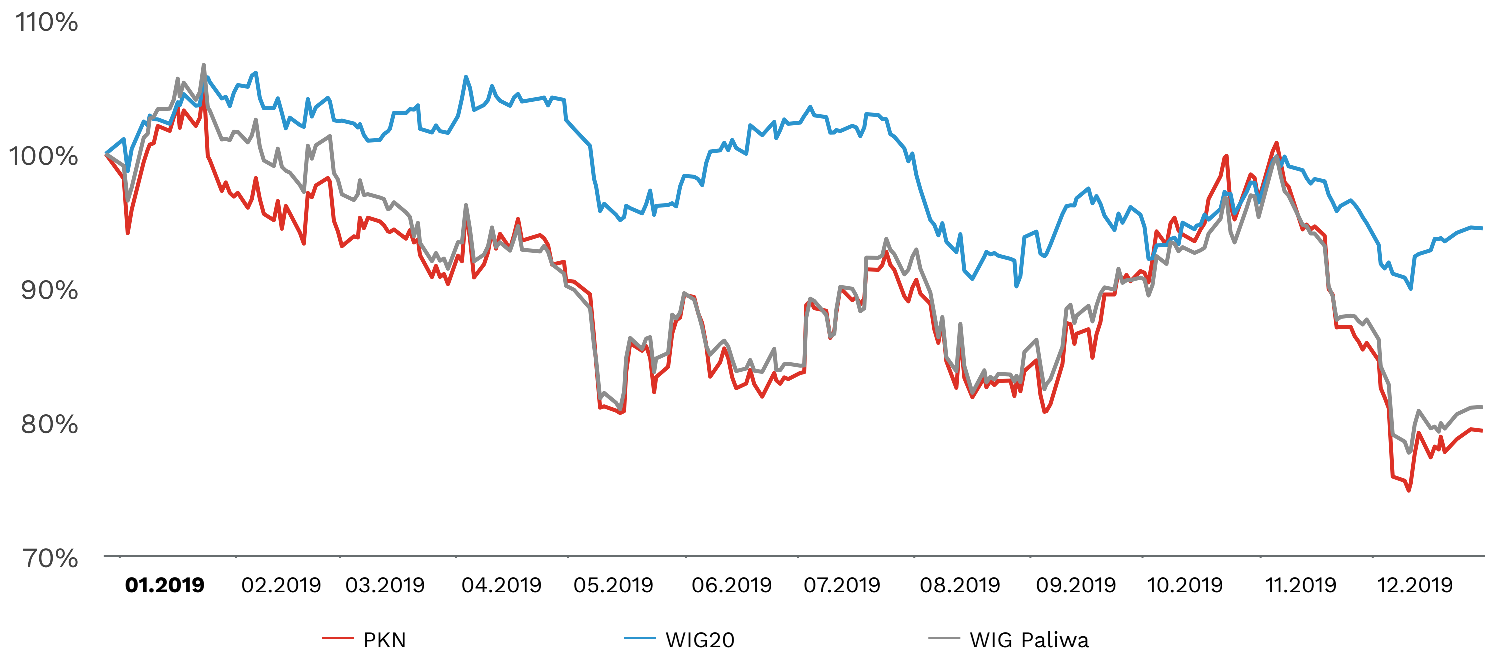
Key data	Unit	2019	2018	2017	change %
1	2	3	4	5	6= (3- 4)/4
Net profit attributable to equity owners of the Parent Company	mln PLN	4,300	5,556	6,655	(22.6)%
Highest share price [1]	PLN	113.75	113.50	134.00	0.2%
Lowest share price [1]	PLN	80.98	80.76	81.18	0.3%
Share price at the year-end [1]	PLN	85.82	108.15	106.00	-20.6%
Average price in the period [1]	PLN	97.40	94.83	109.37	2.7%
P/E[2] ratio average		9.7	7.3	7.0	32.9%
P/E[2] ratio at the end of the year		8.5	8.4	6.8	1.2%
Number of shares	Item	427,709,061	427,709,061	427,709,061	0.0%
Capitalisation at the year end	PLN mln	36,706	46,257	45,337	(20.6)%
Average daily trading value	PLN mln	76	81	91	(6.2)%
Average daily trading volume	Item	783,455	853,103	849,437	(8.2)%

1) Share price according to a closing share price. 2)
P/E – stock market price (P) /value of net profit per one share (earnings per share – EPS).

Quotations of PKN ORLEN on WSE in 1999 – 2019

Source: Own preparation based on the Warsaw Stock Exchange

Quotations of PKN ORLEN, WIG20 and WIG-FUELS on WSE in 2019 1)



1) Percentage change of quotations of PKN ORLEN, WIG 20 in relation to the listing of 28 December 2018.

Source: Own preparation based on the Warsaw Stock Exchange.

Major shareholdings

In 2019 and until the date of authorisation of this report, there were no changes in the structure of shareholders holding more than 5% of the PKN ORLEN share capital. The number of shares held by shareholders is presented based on the most recent official data acquired by the Company.

PKN ORLEN's shareholding structure as at January 1st 2019, December 31st 2019 and March 18th 2020

Shareholder	Number of shares and voting rights at the General Meeting (as at Jan 1 2019*)	Percentage of share capital and total voting rights at the General Meeting (as at Jan 1 2019*)	Number of shares and voting rights at the General Meeting (as at Dec 31 2019**)	Percentage of share capital and total voting rights at the General Meeting (as at Dec 31 2019**)	Number of shares and voting rights at the General Meeting (as at the report authorisation date***)	Percentage of share capital and total voting rights at the General Meeting (as at the report authorisation date***)
State Treasury	117,710,196	27.52%	117,710,196	27.52%	117,710,196	27.52%
Nationale-Nederlanden OFE	30,000,000	7.01%	32,544,000	7.61%	30,000,000	7.01%
Aviva OFE Aviva Santander	28,240,000	6.60%	25,000,000	5.85%	26,000,000	6.08%
Others	251,758,865	58.87%	252,454,865	59.02%	253,998,865	59.39%
Total	**427,709,061**	**100.00%**	**427,709,061**	**100.00%**	**427,709,061**	**100.00%**

** According to information from the PKN ORLEN AGM convened for June 26th 2018 and adjourned to July 17th 2018.*
*** According to information from the PKN ORLEN AGM convened for June 14th 2019.*
**** According to information from the PKN ORLEN AGM convened for March 5th 2020.*

Special control powers and voting rights

Detailed rules for the exercise of special control powers and voting rights are laid down in PKN ORLEN's Articles of Association. According to the provisions of the Articles of Association, one PKN ORLEN share confers one voting right at the Company's General Meeting. The voting rights of shareholders have been capped in the Articles of Association so that none of them may exercise more than 10% of total voting rights existing at the Company as at the date when the General Meeting is held. The cap on voting rights does not apply to the State Treasury and the depositary bank which has issued, on the basis of an agreement with the Company, depositary receipts in respect of Company shares (if this entity exercises voting rights conferred by Company shares).

- Shareholders whose voting rights are aggregated or reduced are jointly referred to as a "Shareholder Grouping". Detailed rules of such aggregation and reduction are specified in the Articles of Association. Shareholders forming a Shareholder Grouping may not exercise more than 10% of total voting rights existing at the Company as at the date when the General Meeting is held.
- If the aggregated number of shares registered at the General Meeting by shareholders forming a Shareholder Grouping exceeds 10% of total voting rights at the Company, the voting rights resulting from the number of shares held are subject to reduction, the rules of which have been specified in detail in the Articles of Association.
- The cap on voting rights described above does not apply to subsidiaries of the State Treasury.
- The State Treasury is entitled to appoint and remove one Member of the Supervisory Board. In addition, one member of the PKN ORLEN Management Board is appointed and removed by the entity authorised to exercise the rights attached to the shares held by the State Treasury as long as the State Treasury holds at least one share in the Company.
- Additionally, in accordance with the Articles of Association, as long as the State Treasury is entitled to appoint a Member of the Supervisory Board, a resolution granting consent for transactions involving any sale or encumbrance of shares in the following companies: Naftoport Sp. z o.o., Inowrocławskie Kopalnie Soli S.A. as well as the company to be established to operate the pipeline transport of liquid fuels, will require a vote in favour of its adoption by the Supervisory Board Member appointed by the State Treasury.

Special rights vested in the State Treasury as the Company's shareholder may also result from generally applicable provisions of law, i.e.:

- the Act on Special Rights Vested in the Minister Competent for Energy and their Exercise in Certain Capital Companies or Groups Conducting Business Activities in the Electricity, Crude Oil and Gas Fuel Sectors, dated March 18th 2010,
- the Act on Control of Certain Investments, dated of July 24th 2015,
- the Act on State Property Management, dated December 16th 2016.

Dividend policy

The Company has implemented a dividend policy based on its ratios, financial condition and including expansion plans. The recommendation of profit distribution for PKN ORLEN for 2019 was presented in section 12.7.5 of Consolidated Financial Statement for 2019.

Ratings

In 2019, PKN ORLEN's investment grade ratings granted by two leading rating agencies Fitch Ratings Ltd. and Moody's Investor Services were maintained at the level of BBB- with a stable outlook and Baa2 with a negative outlook, respectively. In December 2019, Moody's Investor Services changed PKN ORLEN's rating outlook from stable to negative, pointing out that the Company's acquisition plans may adversely affect its financial position.

CORE VALUES AND STANDARDS OF CONDUCT

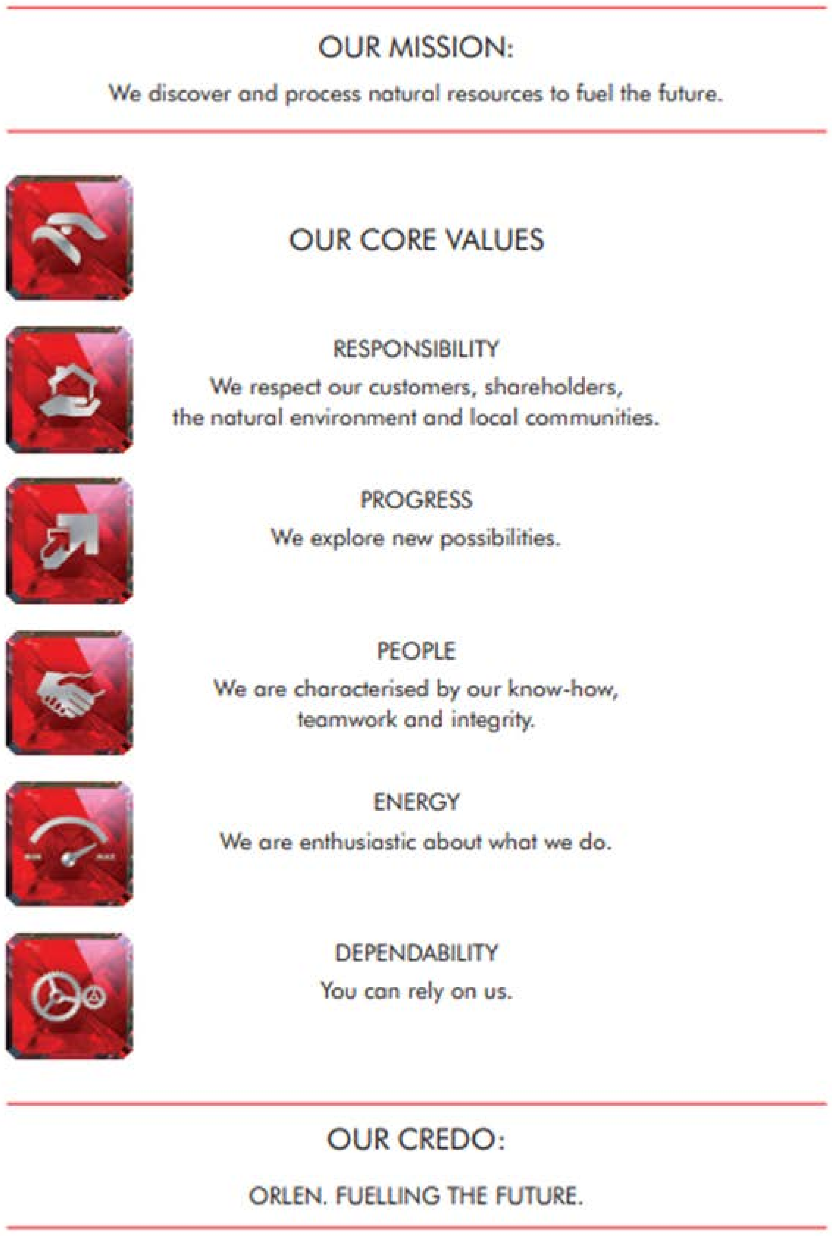
GRI indicators: 102-16

Capitals:

The 'Core Values and Standards of Conduct of PKN ORLEN S.A.' are the cornerstone of relations within the Company and with the external environment, including trading partners, local communities and the competitors.

GRI: 102-16

Our core values



OUR MISSION:

We discover and process natural resources to fuel the future.

OUR CORE VALUES

RESPONSIBILITY

We respect our customers, shareholders, the natural environment and local communities.

PROGRESS

We explore new possibilities.

PEOPLE

We are characterised by our know-how, teamwork and integrity.

ENERGY

We are enthusiastic about what we do.

DEPENDABILITY

You can rely on us.

OUR CREDO:

ORLEN. FUELLING THE FUTURE.

THE CORE VALUES AND STANDARDS OF CONDUCT
OF PKN ORLEN

SEPTEMBER 2012

The '**Core Values and Standards of Conduct of PKN ORLEN S.A.**' offer guidance on internal relations and relations with the Company's external Stakeholders. The document, prepared with a view to ensuring a fair and friendly working environment, defines principles of mutual relations at PKN ORLEN and ORLEN Group companies, which are based on integrity, respect in everyday relationships, and dialogue, cooperation and involvement of each staff member in building a culture consistent with the Company's core values. It promotes the fair treatment of all employees and customers regardless of their age, sex, job, denomination, nationality, convictions or beliefs. The document also contains provisions on anti-corruption procedures, as well as provisions on the obligation to comply with the rules of fair competition, transparency of business activities, mutual respect, and professionalism.

In order to reinforce the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' and promote desirable attitudes and behaviours among its personnel, the Group runs projects for employees such as the '**Distinguished PKN ORLEN Employee**' title awarded every year for socially-oriented attitudes and observance of the core values. The largest Group-wide corporate culture building project is **ORLEN Olympics**, the annual sports games for the Group's employees, which combine healthy fair play competition and the Company's core values. Over the past six years, the event attracted thousands of PKN ORLEN employees together with their families. Every year, two thousand employees compete in various sport disciplines, and often more than thirty thousand people participate in picnics (since 2016, as part of the Chemists' Day the picnic has also been open to the inhabitants of Płock).

The **employee volunteering programme** is another project enhancing the ORLEN Group's corporate culture. It offers a number of involvement opportunities for all employees, regardless of their job and position.

PKN ORLEN offers a wide range of internal communication channels to its employees (corporate television, intranet and newsletter), and hosts the **Open Door Day** for families of its employees and residents of Płock, combined with environmental protection and health and safety education, as well as traditional Christmas meetings of the Management Board with the employees.

The ORLEN Group has additionally joined the national '**Two Hours for the Family**' campaign. On May 15th, the International Day of Families, employees are free to leave two hours early to devote that time to family activities. The theme of the 2019 edition was 'Small and Big Family Trip'.

PKN ORLEN's value-based corporate culture is constantly evolving in response to the needs of the ever-changing environment. Our ethics policy is effective and embodies our commitment to meeting challenges and expectations.

The direction of changes and measures undertaken by PKN ORLEN is appreciated by both Polish and international experts. PKN ORLEN is the only company from Poland and CEE to have been repeatedly awarded the prestigious title of '**The World's Most Ethical Company**'.

RESEARCH AND TECHNOLOGICAL DEVELOPMENT

GRI indicators: 103-1, 103-2, 103-3

Capitals:

The ORLEN Group is pursuing the objectives outlined in its strategy, with a particular focus on maximising its integrated margin by increasing the refining conversion rates, improving the efficiency of asset management and the production capacities, and extending the petrochemical value chain. Support for R&D projects will soon be strengthened, following completion of the state-of-the-art Research and Development Centre.

GRI: 103-1, 103-2, 103-3

In 2019, new capacities, including the **metathesis unit**, were launched . They will be a major driver of our integrated margin, but also a tool to increase the production plant's operational flexibility. Moreover, the launch of the **PPF splitter** at ORLEN Lietuva will position the Lithuanian subsidiary as a significant player on the European petrochemical market.

PKN ORLEN is continuing intensive work on projects outlined in its **Petrochemicals Development Programme** . In 2019, it resulted in the execution of a technical consultancy and PMC+ contract for the Olefins project. In addition, major milestones were reached in our strategically important **bio projects** , including the purchase of a licence and front-end engineering design for a HVO unit.

Numerous growth-oriented activities are also being pursued by other ORLEN Group companies. They include a **project to intensify fertilizer production at Anwil**, which will deliver a capacity addition and plant upgrade, while allowing the company to leverage the economies of scale and synergies with the Group's other operations. Further ambitious projects are planned at the ORLEN Południe Group, including the construction of one of Europe's most advanced **propylene glycol units** and a **2nd generation bioethanol unit**. The Unipetrol Group is at the final stage of work on a new **polyethylene unit** with an annual capacity of 270 thousand tonnes. A project to increase distillate yields is under way at the ORLEN Lietuva Group, aimed at maximising margins.

The key objectives pursued by the ORLEN Group are expected to improve the efficiency of crude oil processing at its production plants, ensuring environmental compliance and intensifying petrochemical production, with concurrent process and energy efficiency gains, through the implementation of the Petrochemicals Development Programme.

PKN ORLEN

PKN ORLEN continued its efforts aimed at constructing three petrochemical facilities under the Petrochemicals Development Programme, namely the Olefins, Phenol, and Aromatic Derivatives plants.

As part of the first project, work was under way in 2019 on its business optimisation with a view to maximising the rate of return on the investment. Also, a technical consultancy and PMC+ (Project Management Contractor) contract was executed, which will help the Company to optimally prepare the project and deliver it within the planned budget and schedule. A licence agreement and front-end engineering design contract for the Phenol plant were concluded with UOP under the Phenol II project. As regards Aromatic Derivatives, work is ongoing to maximise the rate of return on the investment and to effectively integrate the new plant with other assets of the ORLEN Group.

As part of the BIO development , a number of other economically viable projects are being carried out, primarily at the refinery, including the construction of a separate unit for the production of biofuel components through the HVO process. In 2019, the licence and front-end engineering design were purchased under the project. Another significant venture is the construction of a visbreaking unit, which will increase the conversion rate of crude into high-margin distillates.

As part of the Research and Development Centre project, the building permit was obtained, preparatory work on the construction site was completed, and a contract with the project's general contractor, Budimex S.A., was executed on April 24th 2019. The following works were completed by the end of 2019: design work for the main facilities, construction work on the office building, and major works related to external systems and utilities.

In 2019, R&D projects were carried out jointly with Polish universities and scientific institutes. Such cooperation also involved foreign research centres, participating in joint initiatives under Horizon 2020. More than 50 R&D projects were in the pre-implementation or implementation phase in 2019, of which five were co-financed out of national public funds (the INNOCHEM sectoral programme) and under EU programmes (Horizon 2020). An example worth mentioning is the completion of the essential part of research on the 'Development of a process technology for hydrotreatment of diesel oil fractions with vegetable oils as a potential source of bio-components for diesel oil'. Following industrial tests in 2018, in 2019 approval tests were carried out concerning the use of diesel oil blended with a co-processed component. The work outcomes served to define the quality guidelines for diesel oil products. In addition, work on the KORMON project was continued in 2019, with a view to developing and installing dual corrosion sensors at the refinery.

In 2019, PKN ORLEN was also engaged in studies into the use of the innovative MaxEne technology from Honeywell UOP, which should contribute to achieving higher margins on fuels and petrochemicals at the Płock production plant. Should a decision on its implementation be made, the Płock production plant would be the first plant in Europe and the second one in the world to implement the MaxEne technology increasing the yields of high-margin products, such as gasoline, ethylene and paraxylene.

In 2019, PKN ORLEN published its **Strategic Research Agenda, which defines strategic areas of investment in innovation, new technologies and business models that are key to strengthening its competitive position until 2030+.** The Strategic Research Agenda is a tool which, while taking account of long-term challenges in the competitive and legislative environment, translates the goals of PKN ORLEN's business strategy into specific areas of research, development and innovation activity.

Eleven key innovation domains have been identified:

1. **Refining and petrochemical process technologies**
2. **Petrochemical product mix expansion**
3. **Next-generation materials**
4. **Fertilizer business expansion**
5. **Regulatory compliance**
6. **Efficient and low-carbon energy generation**
7. **Production and supply chain digitisation**
8. **Modern customer and service station of the future**
9. **New value chains**
10. **Innovative and digitally secure organisation**
11. **Hydrocarbon exploration and production technologies**

Thirty research programmes have been identified and prioritised within the domains listed above to provide a framework for innovation and R&D projects. Such a structure will enable efficient innovation management and comprehensive technology advancement across all business segments. Innovation will also help the Company to seize the opportunities that come with the development of new business models and transformation of many neighbouring industries, including electromobility, recycling, e-commerce, and logistics. The SAB places a strong focus on the need to further advance and adapt the technologies that shape today's reality, namely artificial intelligence, automation and BigData. Advances in technology enabling compliance with regulatory requirements and implementation of greenhouse gas emission and other environmental policies will play a major role.

The Unipetrol Group's

R&D projects are carried out through the Unipetrol Research and Education Centre (UniCRE) and Polymer Institute Brno (PIB). In 2019, further activities were undertaken under projects related to the production of biofuels and alternative fuels, as well as raw materials for their production and quality evaluation. For example, long-term research into the utilisation of vegetable oils and used cooking oils as feedstock for biofuel production delivered positive results. These topics were addressed in the conclusions prepared jointly with PKN ORLEN's R&D unit for the Horizon 2020 programme. Efforts to obtain financial grants will be continued in the next year. Presently, another rapidly growing research area is the pyrolysis of plastic waste. In the petrochemical segment, work was continued to develop the portfolio of polypropylene and polyethylene products. 2019 witnessed significant development of the company's research infrastructure in connection with the testing of a new Polyethylene (PE3) unit. Unipetrol continued to focus on monitoring the quality of monomers, obtaining the necessary certificates, and on catalyst testing and development. Furthermore, the company was engaged in projects to reduce greenhouse gas emissions and improve energy efficiency, utilise waste heat, optimise technologies, and upgrade energy generation sources. In an effort to adapt its product range to current regulatory changes, the company also carried out research into hydrogen technologies, alternative sources for fuel and polymer production, and other projects aligned with the circular economy concept. Unipetrol was strongly engaged in cooperation with universities of

Prague, Brno, Liberec, Usti, and with foreign research institutions. Major R&D activities in 2020 involved the production of biofuels, purchase and launch of a pilot plastic waste pyrolysis unit, stabilisation of the PE3 unit, and development of the polypropylene and polyethylene products portfolio.

ORLEN Lietuva Group

In 2019, the **ORLEN Lietuva Group** continued its project to construct a new hydrocracker. Implementation of this technology will increase the rates of crude oil conversion, reducing the output of heavy refining fractions and maximising margins. The project will also help meet the new, more stringent quality requirements applicable to the production of heavy oil fractions imposed by the IMO regulations.

Other work going on in 2019 was aimed at improving the plant's processes and increasing their efficiency. To this end, the PPF splitter unit was launched to produce polymer grade propylene from sub-standard gas feedstock. In addition, in order to comply with the more stringent SO_2 emission requirements, the company began using natural gas in the plant's processes.

ANWIL

ANWIL made further progress on its development work to increase fertilizer production by 0.5m tonnes annually, to approximately 1.5m tonnes. 2019 saw the launch of construction work on three key units of the complex, i.e. the nitric acid, neutralisation, and granulation units. Expansion of the fertilizers segment was prompted by growing demand for these products.

ANWIL also continued its joint research projects with the Institute of Soil Science and Plant Cultivation (agricultural engineering) and with the New Chemical Syntheses Institute (possible use of gypsum from the desulfurisation unit). Research into the possible application of potassium sulfate from biofuel production as an additive to nitrate fertilizers was run in collaboration with the Wrocław University of Technology. In the course of reviewing the existing raw materials base, CAN production tests were carried out for new anti-caking agents. Seeking to forge stronger ties with the ORLEN Group research centres, the company signed cooperation agreements with the Polymer Institute Brno with respect to quality testing of PVC, fertilizers, and plastic colorants.

An assessment of the economic rationale for a change in the Continuous Initiator Dosing (CID) method was also continued. As part of the work on the polymerisation unit, an ammonia water injection system was designed and implemented.

ORLEN Południe Group

The **ORLEN Południe Group** signed a contract for the construction of Poland's first unit to produce eco-friendly propylene glycol. The new plant with an annual capacity of 30 thousand tonnes will be of strategic importance to the ORLEN Group. Its construction will be possible thanks to full integration of the refining and chemical operations, as it will rely on glycerine from the production of biofuel components. Work was also continued on advanced biofuels. An agreement was signed for the purchase of a front-end-engineering design and licence for a 2nd generation bioethanol unit with an annual capacity of 25 thousand tonnes. The project will support the ORLEN Group in meeting the indicative targets. Moreover, in 2019 a decision was made to upgrade the Trzebinia CHP plant with a view to alleviating its emission intensity and improving its economic performance. Work involving market research on methanol and available production technologies was continued under the 'Analysis of the methanol production potential of ORLEN Południe S.A.' project. Under a contract with Fluor S.A., a feasibility study for the unit's construction was completed. Work also continued under the 'Biodegradable anti-caking agents for the fertilizer industry' and 'Development of biotechnology-based conversion of organic raw materials into lactic acid using microorganisms' projects, co-financed under the INNOCHEM Programme.

ORLEN Oil

ORLEN Oil conducted research work to implement new and modify existing products and to define new directions for the development of lubricant technologies. A number of measures were taken with a view to continuously improving the quality of oils in response to current demand reported by the sales division. Key research expenditure was incurred within the company's strategic segments, particularly the segment of motor oils for trucks and passenger cars, and of universal and speciality industrial oils. In 2019, technologies for 66 new products were developed and implemented, including speciality and universal industrial oils, service fluids, lubricants and other oils. Also, collaborative partnerships were maintained with research and scientific institutions, as well as Polish and international standardisation, certification and opinion-making institutions that influence the development directions for lubricants.

ORLEN Asfalt

As part of its research and development work, **ORLEN Asfalt** began work on new applications of HiMA bitumens in trunk road building. Delivered in association with the Warsaw University of Technology, the Gdańsk University of Technology and the Road and Bridge Research Institute, the project will help meet increased demand for modified and highly modified bitumens. In addition, the company was cooperating with the R&D and production departments at Paramo to launch the production of ORBITON HiMA in Pardubice and its sales on the Polish and Czech markets. A test production run was performed in November 2019.

DOWNSTREAM

GRI indicators: 103-1, 103-2, 103-3

Capitals:

Downstream in 2019

Production

	units	ORLEN Group	Poland	Czech Republic	Lithuania
Maximum processing capacity	**million t**	**35.2**	**16.3**	**8.7**	**10.2**
Utilization of processing capacity	%	96	99	90	93
White product yields	**%**	**80**	**83**	**81**	**74**
Utilization of Olefin installation capacity	%	79	78	80	–
Utilization of PTA installation capacity	%	95	95	–	–

Sales

	units	ORLEN Group	Poland	Czech Republic	Lithuania
TOTAL	**thousand t**	**32,740**	**17,620**	**6,608**	**8,512**
Refinery, including:	**thousand t**	**27,584**	**14,243**	**4,847**	**8,494**
fuels	thousand t	19,205	8,932	3,925	6,348
heavy fractions	thousand t	4,784	2,228	675	1,881
other refinery products	thousand t	3,595	3,083	247	265
Petrochemicals, including:	**thousand t**	**5,156**	**3,377**	**1,761**	**18**
olefins	thousand t	1,022	836	168	18
polyolefins	thousand t	519	0	519	–
benzene	thousand t	424	210	214	–
plastics	thousand t	343	252	91	–
fertilizers	thousand t	1,030	863	167	–
PTA	thousand t	647	647	–	–
other petrochemical products	thousand t	1,171	569	602	–

Logistics

	units	ORLEN Group	Poland	Czech Republic	Lithuania
Total length of used pipelines, including:	**km**	**3,720**	**1,888**	**1,741**	**91**
length of used raw materials pipelines	km	1,662	930	641	91
length of used product pipelines	km	2,058	958	1,100	–

Power Industry

	units	Poland[1]	Czech Republic[2]	Lithuania
Electric power installed	MWe	1,542	106	160
Heating power installed	MWt	3,742	1,399	1,040
Boiler's efficiency	%	93.0	90.3	91.7
Boiler's availability	%	84.8	70.4	72.3

1) Installed thermal and electrical capacity refers to the CHP plant in Płock and the CCGT plant in Włocławek. Availability and efficiency of boilers at the CHP plant in Płock
2) Installed thermal and electrical capacity as well as availability and efficiency of boilers at the Litvinov Power Plant.

Main production assets (refinery and petrochemical) of the ORLEN Group

Production assets of the ORLEN Group and main competitors in the Central and Easter Europe / production capacity [million t]

Source: Own preparation.

ORLEN GROUP

- The total production capacities of the **ORLEN Group** refineries are 35.2 million tonnes.

- **The PKN ORLEN refinery in Płock** is one of the most advanced integrated production facilities in Central and Eastern Europe, with a production capacity of 16.3 million tonnes/year. In petrochemicals, the key unit (Olefins) has a maximum production capacity of about 700 thousand tonnes of ethylene and about 380 thousand tonnes of propylene. Monomers manufactured at PKN ORLEN are used as feedstock for the polymer units at Basell Orlen Polyolefins and the PVC unit at ANWIL. PKN ORLEN also operates a modern PX/PTA complex with an annual capacity of around 690 thousand tonnes of terephthalic acid.
- The other Polish refineries, operating as **the ORLEN Południe Group in Trzebinia and Jedlicze**, manufacture bio-components, base oils, heating oils and hydrotreated paraffins as well as regenerate spent oils.
- The **ORLEN Lietuva refinery in Mazeikai** has a production capacity of 10.2 million tonnes/year and is the only such facility in the Baltic States (Lithuania, Latvia and Estonia).
- The **Unipetrol Group operates refineries in Kralupy and Litvinov,** with a combined production capacity of 8.7 million tonnes/year. The Unipetrol Group also owns petrochemical assets with combined production capacities of approximately 600 thousand tonnes/year of polymers, including 320 thousand tonnes of polyethyleneand approximately 280 thousand tonnes of polypropylene. Construction of a new Polyethylene III unit, with a capacity of approximately 270 thousand tonnes/year, is under way. Once completed, the unit will allow Unipetrol to increase the use of the Olefins installation and further integrate the petrochemical and refining operations.
- The Włocławek-based **Anwil** is the only manufacturer of polyvinyl chloride (PVC) in Poland and one of the major manufacturers of fertilizers and sodium hydroxide in the country. The annual production capacities are around 1.0 million tonnes/year of nitrogen fertilizers, approximately 0.4 million tonnes/year of PVC and granulates, and approximately 0.2 million tonnes/year of sodium hydroxide. Thanks to the planned construction of the third production installation of nitrogen fertilizers the production capacity of Anwil after 2021 will increase to approximately 1.5 million tonnes/year.
- **Basell ORLEN Polyolefins in Płock** operates facilities with a total production capacity of 900 thousand tonnes (420 thousand tonnes of polyethylene and 480 thousand tonnes of polypropylene). Products are marketed both in Poland and in foreign markets.

COMPETITION IN CENTRAL AND EASTERN EUROPE

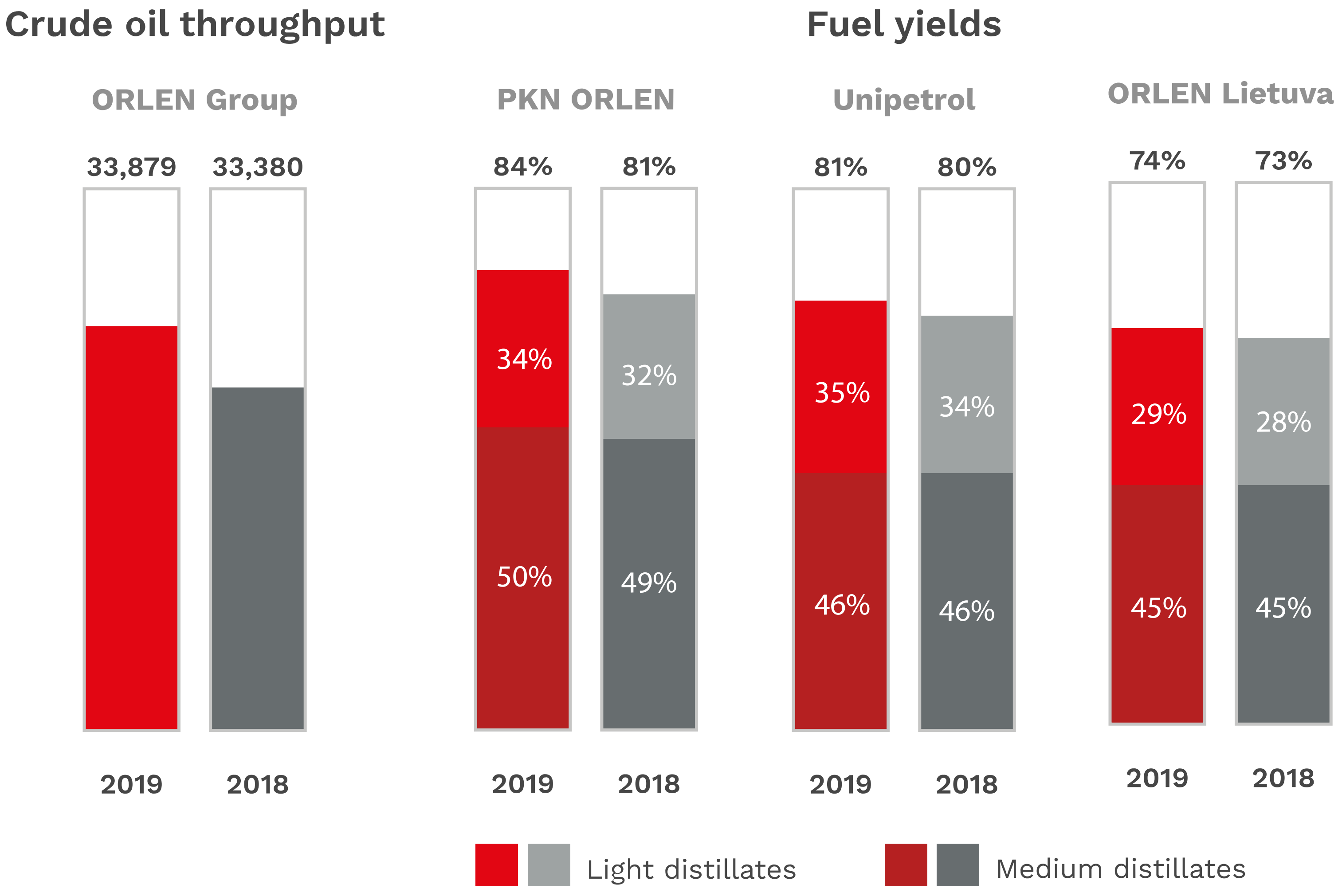
The largest **competitors of the ORLEN Group** are:

- LOTOS Group of Gdańsk – Poland's second largest refinery.
- Mitteldeutschland Refinery in Leuna/Spergau, located in south-eastern Germany, about 150 km from the Polish-German border, the country's most advanced refinery.
- PCK Refinery in Schwedt, located north-east of Berlin, about 20 km from the Polish-German border.
- Slovnaft refinery, an integrated refining and petrochemical group, with a leading position in the Slovak Republic, located near Bratislava.
- Mozyr refinery, a leading refinery in Belarus, located close to the Ukrainian border.

Key operational data

Volume of crude processed by the ORLEN Group in 2019 of 33.**9 million tonnes**, an increase of **1.5% (y/y)**, including:

- **Poland, an increase of 2.2% (y/y)** as a result of lower range of maintenance shutdowns (y/y) of HOG and PX/PTA units as well as lack of maintenance shoutdown of Olefins unit from year 2018.
- **the Czech Republic, an increase of 4.0% (y/y)** due to higher availability of the production installations in comparison with year 2018 (cyclical maintenance shutdowns at the Kralupy refinery and petrochemical units in Litvínov).
- **Lithuania, a decrease of (1.8)%** mainly due to a spring maintenance shutdown of the refinery and FCC unit.



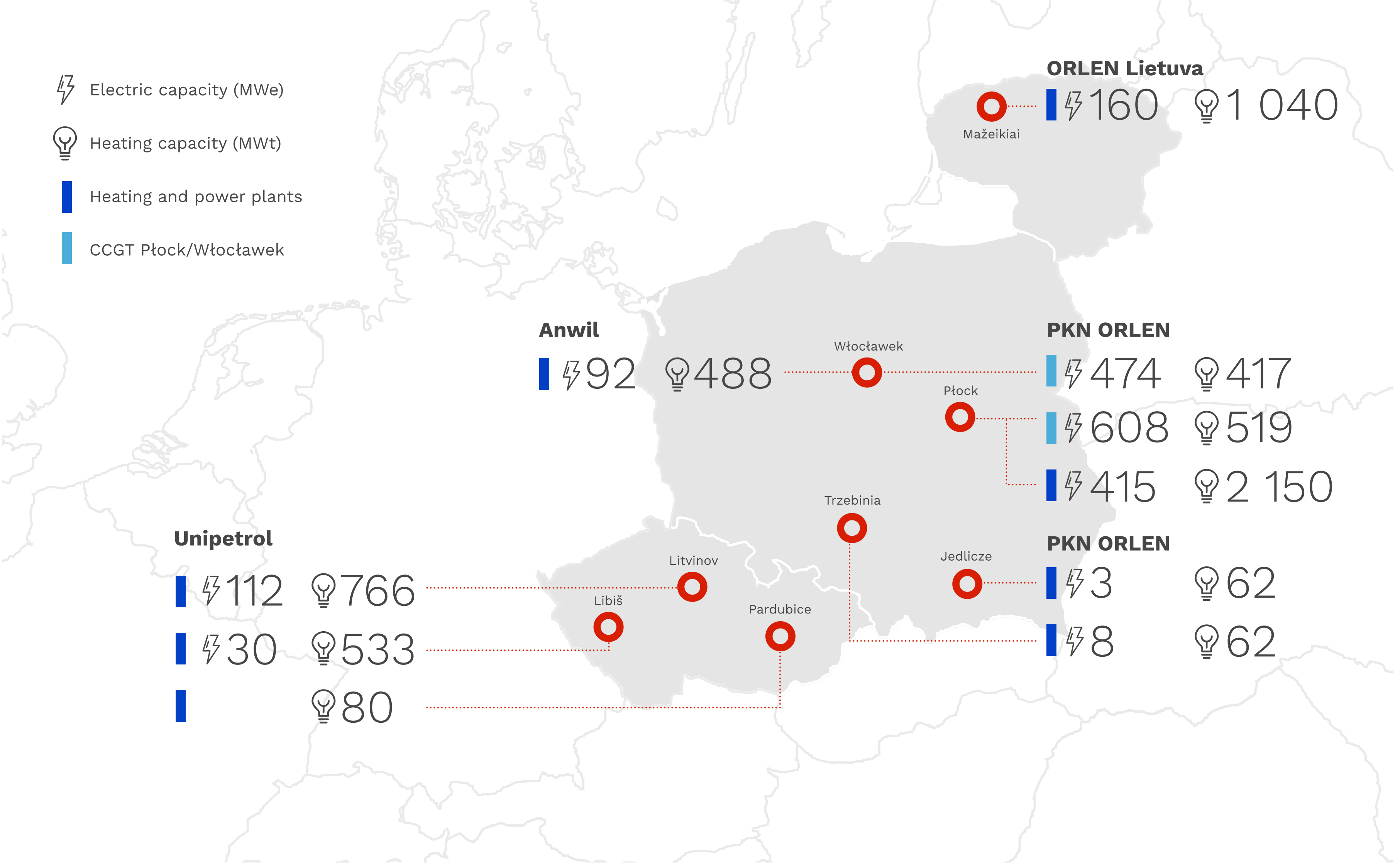
Source: Own preparation.

Key energy assets

The ORLEN Group is a significant producer of electricity and heat, used in large part to satisfy the Group's own production needs. It is also one of the largest consumers of gas in Poland and an active participant in the process of gas market liberalisation.

The ORLEN Group currently owns power generation assets in three countries. In Poland, they are located in Płock, Włocławek, Jedlicze and Trzebinia; in the Czech Republic – in Litvinov, Spolana, Kolin and Pardubice; and in Lithuania – in Mazeikiai.

Energy assets and their technical parameters in the ORLEN Group



Source: Own preparation.

CHP plants

- In terms of thermal capacity, **PKN ORLEN's high-efficiency combined heat and power plant in Płock** is the largest industrial plant of this kind in Poland and one of the largest in Europe. It is the main supplier of steam heat, heating water and electricity to the Group's production units in Płock and to external customers, including the city of Płock. Following the launch of a new TG7 turbine generator set and shutdown of the TG1 unit (which is to be upgraded) in 2019, the total installed power generation capacity of the CHP plant stands currently at 358.9 MW. The upgraded TG1 turbine generator set is to be put into operation in September 2021, bringing the plant's total power generation capacity to 428 MW. Boilers of the CHP plant are fired with heavy fuel oil derived from crude oil distillationand with natural gas.
- The **ORLEN Południe Group's CHP plant in Trzebinia** fully satisfies the Trzebinia plant's demand for steam heat and heating water, and partly its demand for electricity. The CHP plant is fuelled with natural gas and fine coal, a new gas-fired heat generation unit, covering around 50% of heat demand, having been brought on stream in 2019.
- The **ORLEN Południe Group's CHP plant in Jedlicze**, fired mainly with fine coal, is the Jedlicze plant's main supplier of heat in the form of process steam. Other fuels used at Jedlicze include natural gas, fuel oil and C4 fraction.
- The **Anwil CHP Plant** is the primary source of heat in the form of medium pressure process steam and, at the same time, the peak-load and reserve source of heat for the Włocławek chemical complex. For process purposes, Anwil relies mostly on low pressure process steam from the Włocławek CCGT unit owned by PKN ORLEN.
- The **Unipetrol Group's CHP plant in Litvínov** uses mainly lignite, fully meeting the Litvínov plant's heat demand and partially satisfying its electricity demand. Design work is now under way for a new CHP Plant project based on high-efficiency gas-fired cogeneration, which will ultimately replace the existing CHP plant. The new unit is to be launched in the second half of this decade.
- The **CHP plant in Spolana** is currently being upgraded in order to replace its existing coal-fired boiler house with a new heat source. In 2019, a start-up procedure for the new heat generation units (gas-fired boilers) was commenced, and final work is now under way to put the new heat source into operation.
- **The Paramo CHP plant** comprises two production plants, in Kolin and in Pardubice, both fuelled with natural gas.
- The **ORLEN Lietuva CHP plant** is a source of process steam used in production processes, while ensuring stability of the power system. The plant is fired with natural gas, refinery gases, C4 fraction, and heavy fuel oil.

CCGT

- **CCGT Włocławek** – since April 2019, after the gas turbine failure was removed, the unit has operated normally, supplying electricity and process steam to the Anwil complex. In the three quarters of 2019, the CCGT plant was an active participant of the electricity market, cooperating closely with PSE. Its relatively high installed capacity and significant flexibility made it possible for the plant to provide ancillary services to PSE, contributing to the power system's stability. In 2019, the CCGT plant produced over 2.6 TWh of electricity and supplied 1.1 PJ of heat in the form of process steam to Anwil.
- **CCGT Płock** – operated normally with warranty support and service agreements in place. Under the main service agreement (LTSA), the gas turbine was subject to the first planned overhaul in September, involving replacement of burners, modifications of the compressor blade fastening according to the supplier's recommendations, and general inspections as per the agreement. As a producer of heat and power in cogeneration, the CCGT plant covered the shortage of these utilities at the Płock Production Plant, while remaining an active participant of the electricity market and providing ancillary power reserve services to the transmission system operator PSE. In 2019, the unit generated 3.9 TWh of electricity and 3.2 PJ of steam supplied to the Płock Production Plant network.

Surplus electricity from the new CCGT assets is sold both on the wholesale energy market and to end customers.

Capacity market

In 2019 the Main Capacity Market Auction for 2024 was held, with PKN ORLEN securing a 357 MW capacity agreement for the CCGT unit in Włocławek. PKN ORLEN had also signed capacity agreements for the delivery period 2021–2023 under Main Auctions held in 2018. The CCGT plant in Płock, as a new facility, was awarded a five-year 389 MW capacity agreement (for 2021–2025), while the CCGT plant in Włocławek, as an existing unit, was awarded three one-year 351 MW capacity agreements for 2021–2023.

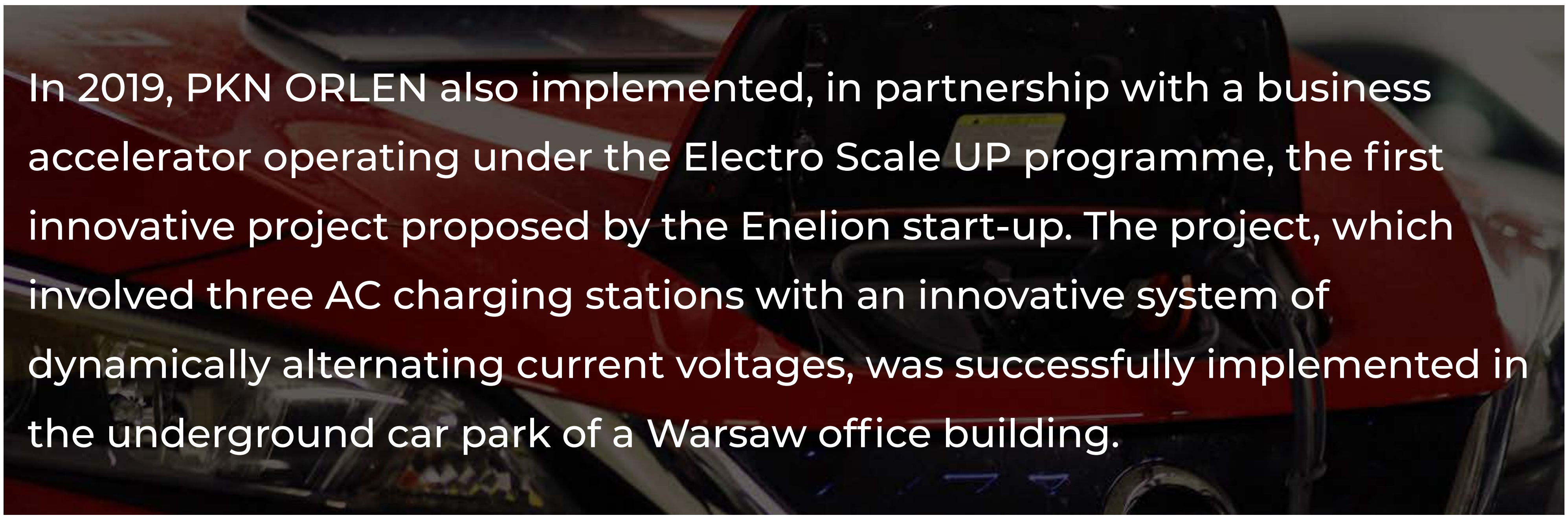
ORLEN Group's Photovoltaics (PV) Programme

Development of renewable energy sources (RES) is an element of PKN ORLEN's energy strategy. The end of 2019 saw the launch of the Group's Photovoltaics Programme, which will involve the set-up and coordination of PV projects across the ORLEN Group. In stage one of the PV Programme, the Group selected locations satisfying the relevant technical criteria for potential installation of photovoltaic units. Complete documentation necessary to secure a building permit and sign an agreement with a contractor of PV farms will subsequently be prepared for these locations. In the second stage of the Programme, the ORLEN Group will examine other properties and land where photovoltaic farms could potentially be located.

Electric mobility

In accordance with the ORLEN Group's updated Strategy for 2019–2022, electricity as an alternative vehicle fuel will be one of the key game-changing trends in the fuel market until 2025 and beyond. To meet that challenge, 39 charging stations had been launched at PKN ORLEN's urban, motorway and trunk road service stations by 2019, with further ones undergoing commissioning procedures. They can charge up to two vehicles at a time through 50 kW or 100 kW DC points, and one vehicle with up to 43 kW through the AC point. This essentially means that our charging stations are equipped with connectors supporting all electric vehicles now available on the European market. By 2021, PKN ORLEN intends to have 150 fast EV chargers deployed within its service station chain. In addition to developing its charging infrastructure, PKN ORLEN also decided to partially electrify its vehicle fleet. In 2019, nine new Nissan Leaf electric cars were made available to the Company's employees and have been in regular use ever since.

In 2019 an IT system was implemented to support the management of PKN ORLEN's charging station network, including an operator portal, as well as a website and mobile app for users. All the existing charging stations are being connected to the online system, which is being tested prior to market launch. Ultimately, its full implementation will enable motorists to make payments through the mobile application.



In 2019, PKN ORLEN also implemented, in partnership with a business accelerator operating under the Electro Scale UP programme, the first innovative project proposed by the Enelion start-up. The project, which involved three AC charging stations with an innovative system of dynamically alternating current voltages, was successfully implemented in the underground car park of a Warsaw office building.

Offshore Wind Power project

Through its special purpose vehicle Baltic Power, PKN ORLEN holds a licence (i.e. a permit to construct and use artificial islands, structures and equipment within Polish sea areas) to build offshore wind farms in the Baltic Sea with a capacity up to 1,200 MW, complete with technical equipment, measurement instrumentation and maintenance infrastructure. The Offshore Wind Power project is consistent with PKN ORLEN's strategy and is in line with long-term plans for development of Poland's energy sector. It will support generation of zero-emission energy which can be used for the Company's own consumption, processed, stored, or sold.

In 2019, deliverables of the technical consultancy contract, which consisted in a preliminary technical concept for the construction of an offshore wind farm, were handed over to the Company. It will provide the basis for subsequent work under the project, including the signing of an engineering design contract, which will cover, among other tasks, the preparation of a preliminary engineering design and building permit submission for the Offshore Wind Power project.

In terms of preliminary geotechnical work, a plan of geological operations for seabed drilling within the licence area was approved by the Polish Ministry of Environment, and a contract for preliminary geotechnical surveys for the offshore wind farm was signed. In 2019, the first stage of work at sea was finished, and analysis of the collected data is currently in progress.

In January 2019, Baltic Power secured grid connection conditions for the offshore wind farm. Having thoroughly reviewed these conditions and the draft grid connection agreement, the company began to negotiate their individual provisions with PSE. Work currently under way within Baltic Power's licence area involves environmental surveys, wind measurements and hydrometeorological studies. They are all progressing in line with the schedule, as necessary to duly prepare the Environmental Impact Assessment Report.

PKN ORLEN is also engaged in dialogue with potential business partners within the sector to secure infrastructure facilities for the construction and operation of the Offshore Wind Power project.

In 2019, a procedure was launched to contract an experienced business partner for the Offshore Wind Power project. Agreements were signed with legal and transaction advisors, and negotiations with a number of potential partners having relevant experience and know-how were commenced.

The ORLEN Group's logistic assets

The logistics infrastructure is one of the key elements of the ORLEN Group's competitive advantage.

The Group operates a network of complementary infrastructure assets: fuel terminals, onshore and offshore handling depots, transmission pipelines, rail transport, and transport by road tankers.

In 2019, pipelines were the primary mode of transport of feedstock and products used by the ORLEN Group. The total length of product and feedstock pipeline networks, both Group- and third party-owned, used by the ORLEN Group in Poland, the Czech Republic and Lithuania was nearly 3.7 thousand km (including 2.1 thousand km of product pipelines, and 1.6 thousand km of feedstock pipelines).

In **Poland**, PKN ORLEN uses 958 km of pipelines for fuel product transport: 620 km of pipelines owned by Przedsiębiorstwo Eksploatacji Rurociągów Naftowych S.A., as well as its own transport infrastructure with a total length of 338 km, comprising two sections: Płock – Ostrów Wielkopolski – Wrocław (319 km) and Wielowieś – Góra (19 km). Crude oil is transported mainly via the network of pipelines owned by Przedsiębiorstwo Eksploatacji Rurociągów Naftowych S.A. (total lengths of 887 km), and via the Group's own pipeline (43 km), connecting Góra and Żółwiniec (link to the PERN pipeline).

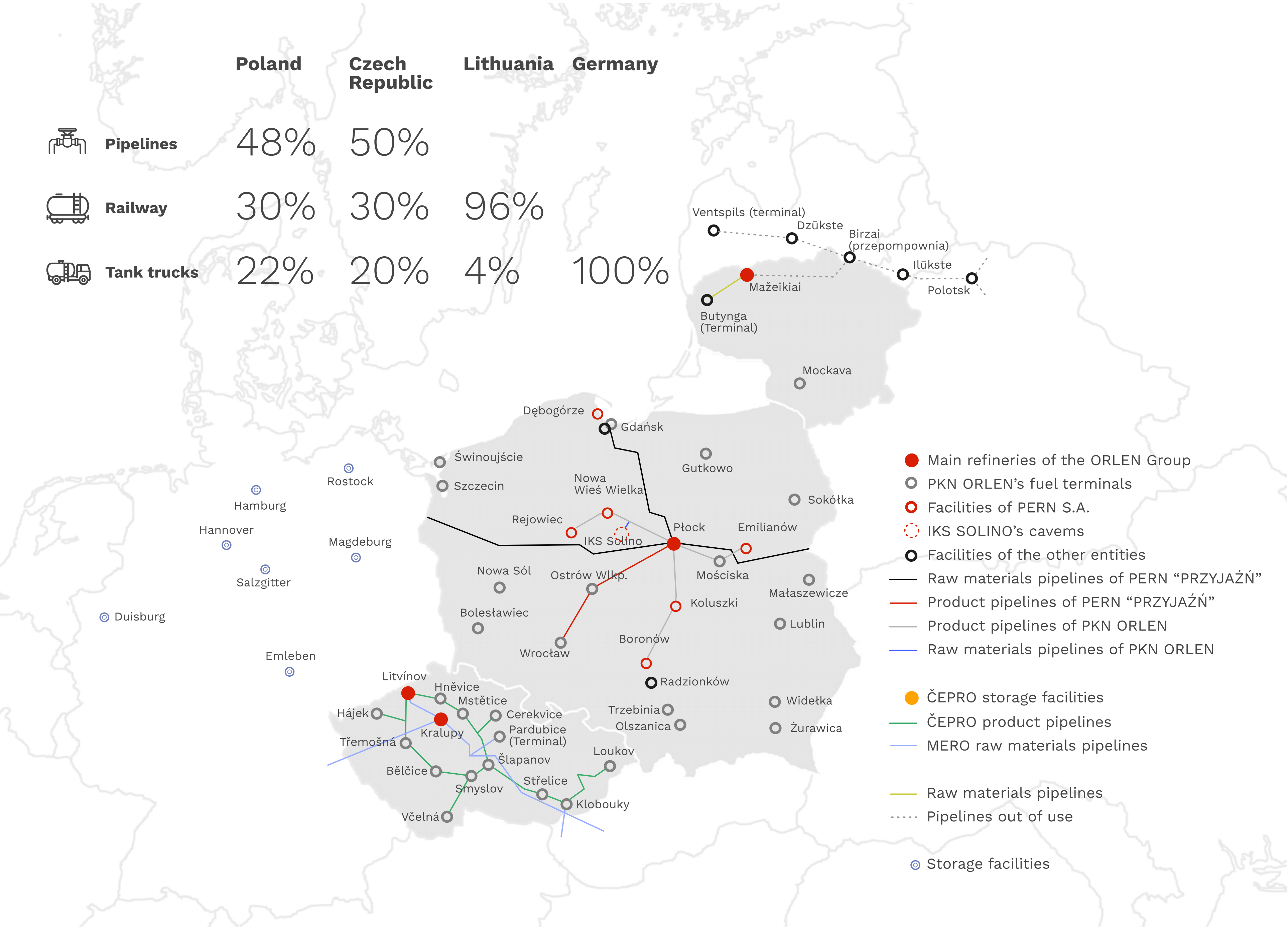
In 2019, the ORLEN Group used a total of 27 facilities in Poland to receive, store, dispatch and handle fuels (Group- and third party-owned fuel terminals). As at the end of 2019, the total storage capacity available to the Group within its own infrastructure and contracted from third parties was over 2.7 million m^3.

In 2019, the ORLEN Group used 1,741 km of pipelines in **the Czech Republic** (1,100 km of product pipelines operated by ČEPRO, and 641 km of feedstock pipelines operated by MERO), 7 storage and distribution depots owned by state-owned operator ČEPRO, 3 terminals owned by the Group and 7 external terminals not belonging to CEPRO.

The main component of the logistics infrastructure currently used on the **Lithuanian market** is a 91-km feedstock pipeline linking the Butinge terminal with the Mazeikiai refinery. Both the terminal and the pipeline are owned by ORLEN Lietuva.

On the **German market**, ORLEN Deutschland uses the storage and distribution capacities of seven third party-owned depots. Products are delivered by tank trucks, railway and barges.

Transport structure and logistic infrastructure used by the ORLEN Group in Europe in 2019



	Poland	Czech Republic	Lithuania	Germany
Pipelines	48%	50%		
Railway	30%	30%	96%	
Tank trucks	22%	20%	4%	100%

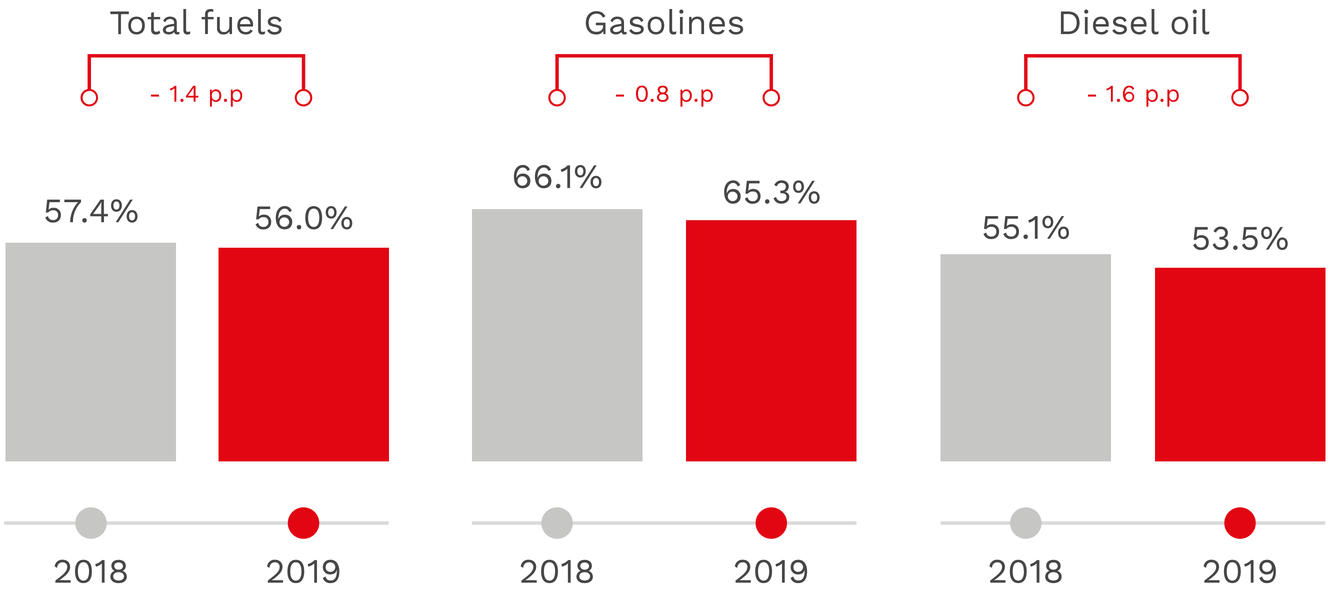
Source: Own preparation.

ORLEN Group’s market shares in the downstream segment

Wholesale of refining products

In 2019, the ORLEN Group was involved in wholesale distribution of refining products in Poland, the Czech Republic, Germany, Slovakia, Hungary, Austria, Lithuania, Latvia, Estonia and Ukraine, and in Western Europe, where products were delivered to transhipment terminals by sea. The ORLEN Group’s home markets are Poland, Lithuania and the Czech Republic. The Group has an extensive portfolio of refining products, including gasoline, diesel oil, A-1 jet fuel, light and heavy heating oil, bitumen, engine oils and a wide range of non-fuel products and semiproducts.

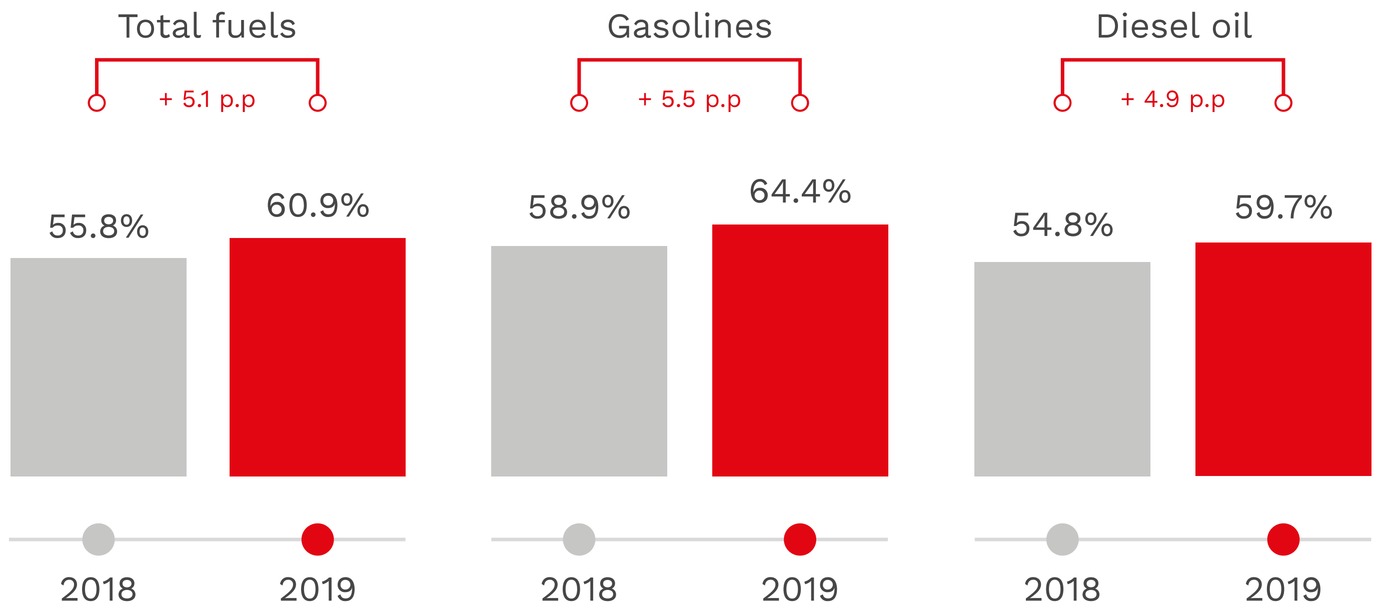
Market share in Poland



Source: Own preparation.

- Strong sales allowed the ORLEN Group to maintain the leading position in the Polish fuel sales market.
- Slight decrease in market share as a result of optimization of sources of supply and maximization of own production share in the sales structure.

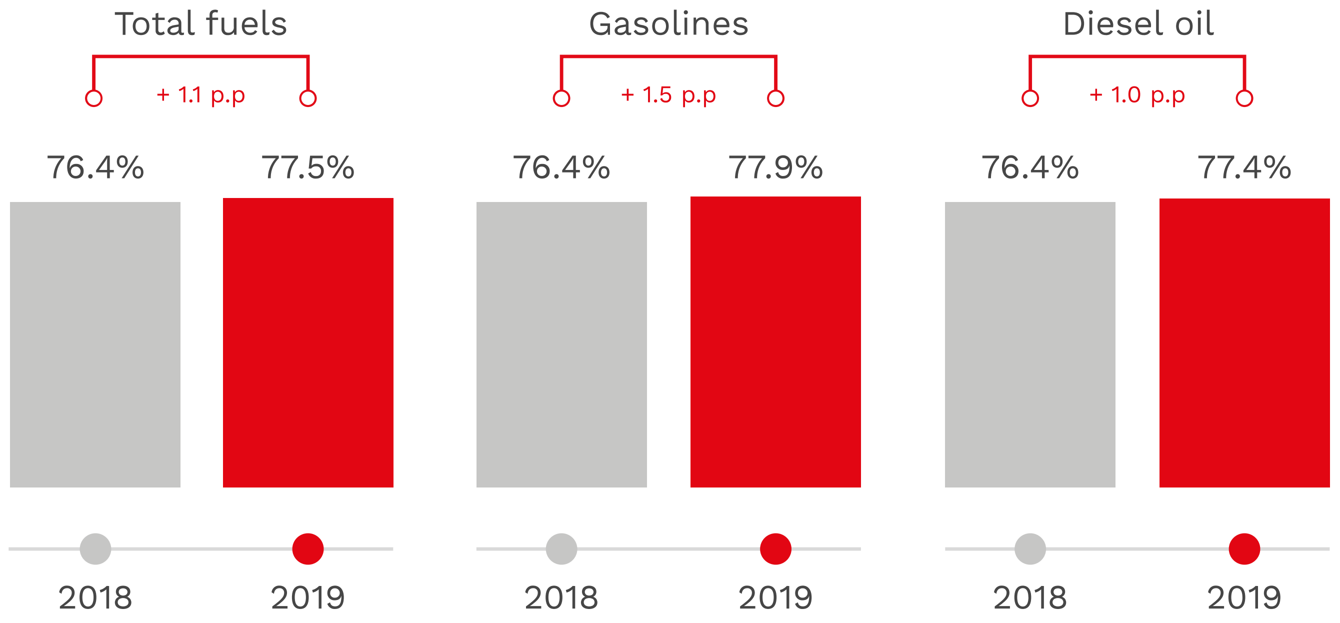
Market share in the Czech Republic



Source: Own preparation.

- The ORLEN Group is the leader in fuel sales in the Czech Republic.
- Further increase in total market share of 5.1 p.p. (y/y) in the range of gasoline and diesel oil.

Market share in the Baltic states



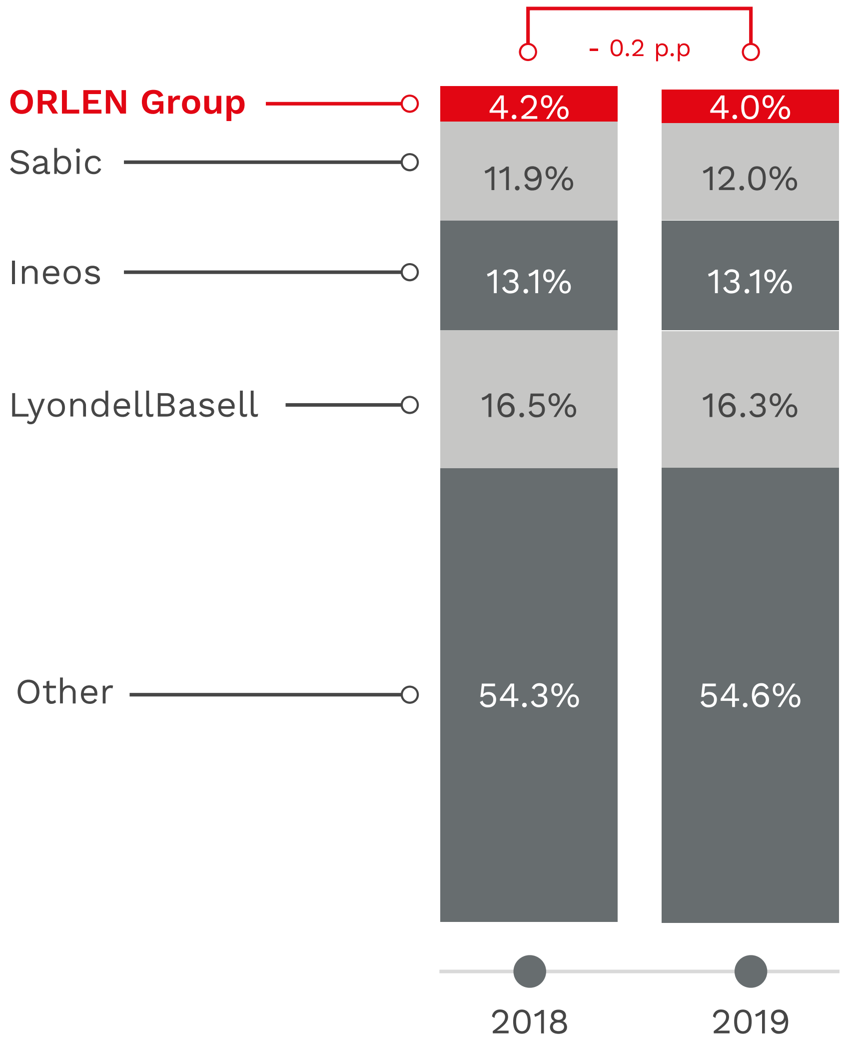
Source: Own preparation.

- The ORLEN Lietuva Group strengthened the leader position in the Baltic States markets despites strong price pressure from Finnish, Belarusian and Russian suppliers.
- Increase in the total shares on the Baltic States markets of 1.1 p.p. to the level of 77.5% attributable to increase in market share in Lithuania of 2.2 p.p. to 76.6%.

Wholesale of petrochemical products

The ORLEN Group is the largest petrochemical company in the Central and Eastern Europe, the only manufacturer of monomers and polymers on the Polish market, and the manufacturer of most of the petrochemical products available on the Czech market.

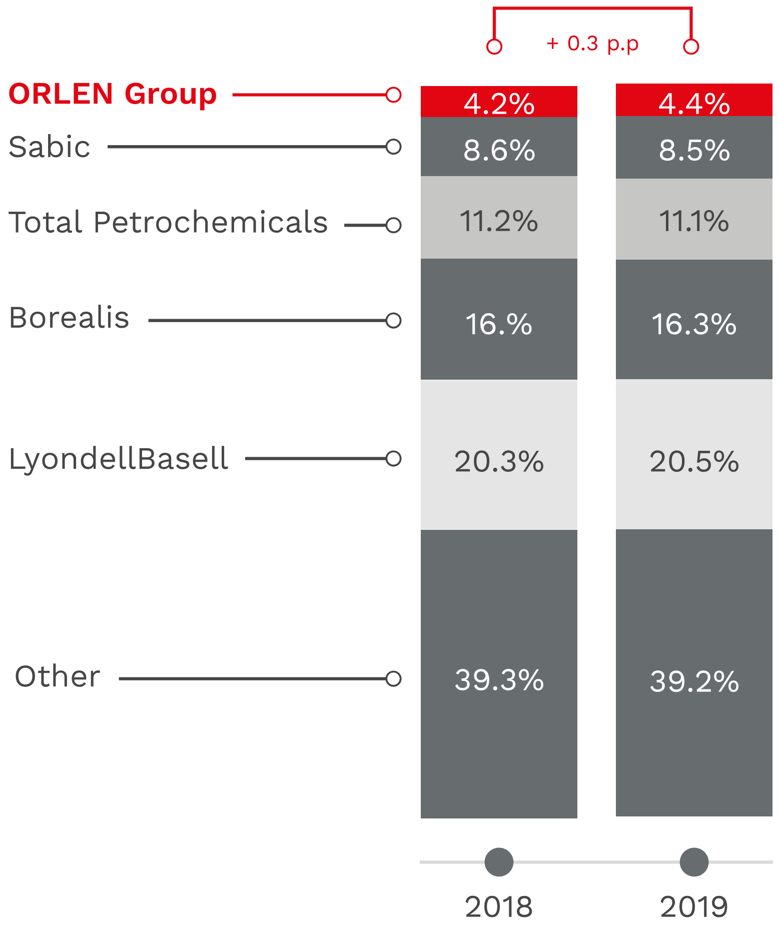
Polyethylene producers in Europe



Source: Own preparation based on POLYGLOBE.

- Europe's production capacities for high-density and low-density polyethylene are currently at around 13,287 thousand tonnes per year.
- Lyondell Basell Industries – the largest polyethylene manufacturer, with an annual production capacity of approximately 2,170 thousand tonnes, including its 50% share in Basell ORLEN Polyolefins Sp. z o.o. (BOP) and production assets in Germany, France and Poland.
- Ineos Olefins & Polymers Europe, with an annual production capacity of approximately 1,745 thousand tonnes and assets in Belgium, France, Germany, Italy and Norway and Sabic – production capacity of around 1,590 thousand tonnes per year and assets in Germany, the Netherlands and the UK.
- The total production capacity of the ORLEN Group, with production sites in Poland and the Czech Republic (including its 50% share in BOP), is approximately 530 thousand tonnes per year.

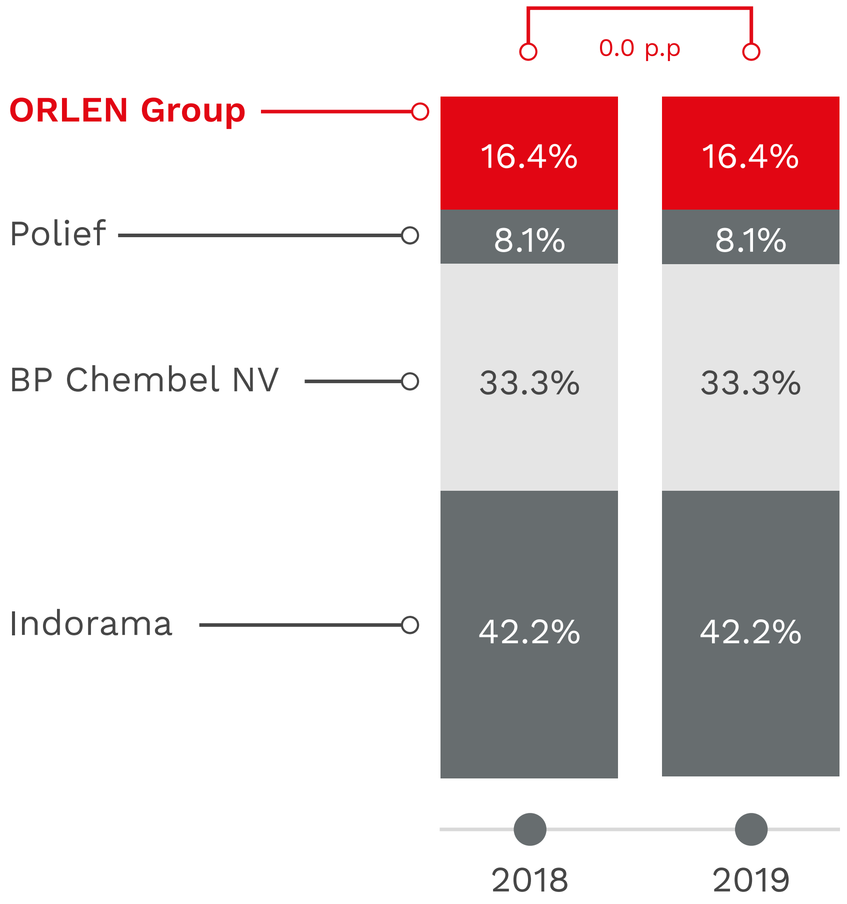
Polypropylene producers in Europe



Source: Own preparation based on POLYGLOBE.

- Europe's annual production capacities for polypropylene are at around 11,749 thousand tonnes.
- Lyondell Basell Industries has an annual production capacity of around 2,405 thousand tonnes (including its 50% share in BOP) and assets in Germany, France, Italy, Spain, UK and Poland.
- Borealis, with an annual production capacity of approximately 1,920 thousand tonnes and assets in Belgium, Germany, Austria and Finland.
- Total Petrochemicals, with a production capacity of around 1,310 thousand tonnes per year and assets located in Belgium and France.
- The total production capacity of the ORLEN Group, with production sites in Poland and the Czech Republic (including its 50% share in BOP), is approximately 520 thousand tonnes per year.

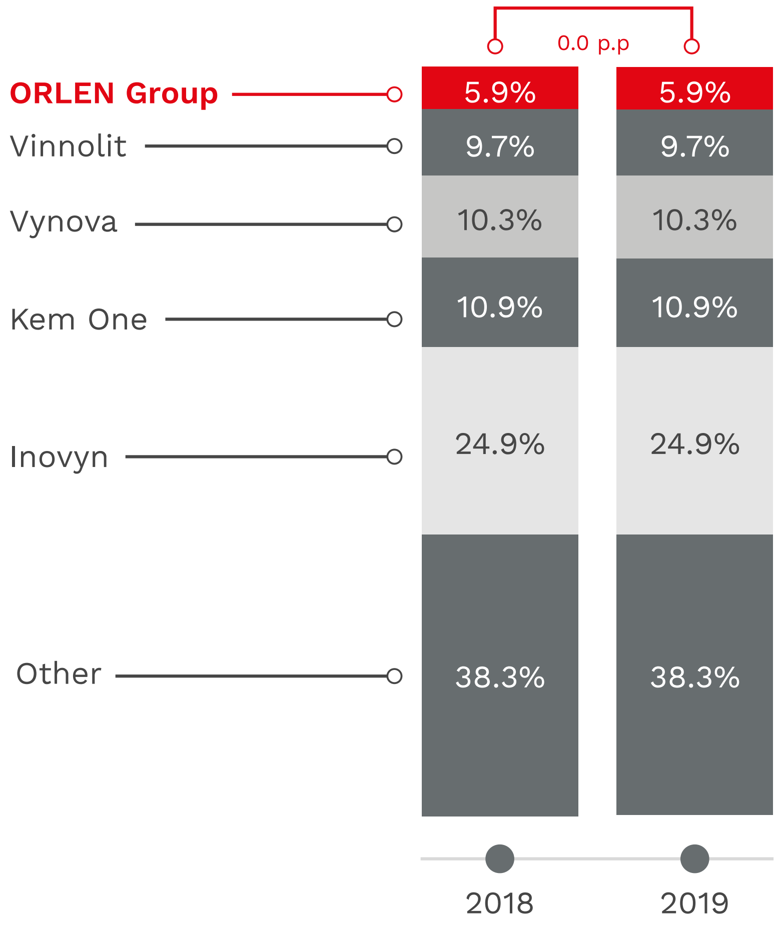
PTA producers in Europe



Source: Own preparation based on PCI.

- The European nominal PTA production capacities total 4,205 thousand tonnes per year.
- Indorama – Europe's largest PTA manufacturer (following the acquisition of Artlant), with a nominal production capacity of 1,775 thousand tonnes per year and assets located in Portugal, Spain and the Netherlands.
- BP Chembel NV – Europe's second largest PTA manufacturer, with an annual production capacity of 1,400 thousand tonnes, located in Belgium.
- PKN ORLEN is the only manufacturer in Europe to have production units fully integrated with paraxylene production, and its production capacity totals 690 thousand tonnes per year.

PVC producers in Europe



Source: Own preparation based on Market Analytics – Vinyls – 2019 (Nexant).

- The European nominal PVC production capacities total 8,060 thousand tonnes per year.
- Europe's leading PVC manufacturer – Inovyn, was formed following the combination of Ineos Chlor and Solvay; its annual production capacity is 2,005 thousand tonnes.
- Other manufacturers, such as Kem One, Vynova, and Vinnolit, have annual PVC production capacities estimated at 882 thousand, 830 thousand and 780 thousand tonnes, respectively.
- Other, including The Karpatneftekhim plant, with nominal production capacities of ca. 300 thousand tonnes annually.
- The ORLEN Group, with the annual production capacity of its Anwil and Spolana units at 475 thousand tonnes, ranks fifth on the European plastics market.
- Anwil's principal competitors are Inovyn and Vynowa in Europe and BorsodChem in Poland.

Sales volume of the Downstream segment

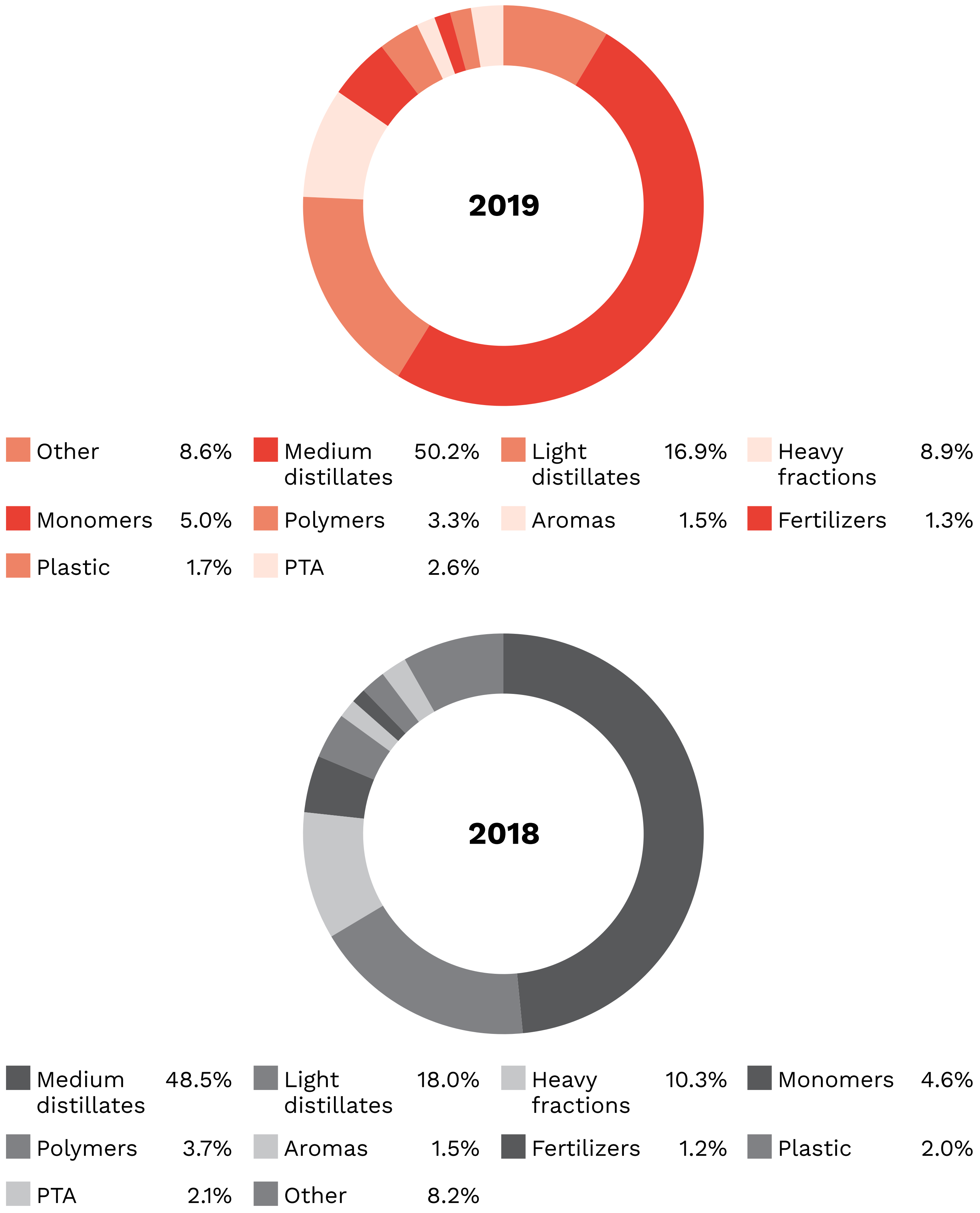
In 2019, the ORLEN Group's total Downstream sales reached 32,740 thousand tonnes, having gone up on 2018. Lower sales of refining products in Poland combined with growing sales on foreign markets were offset by rising sales of petrochemical products driven by higher availability of the Group's production assets.

The ORLEN Group sales in the Downstream segment [PLN million/thousand tonnes]

Sales	2019		2018		change %	
	Value	Volume	Value	Volume		
1	2	3	4	5	6=(2-4)/4	7=(3-5)/5
Light distillates[1]	12,098	5,231	12,925	5,450	(6.4%)	(4.0%)
Medium distillates[2]	35,916	13,974	34,787	13,653	3.2%	2.4%
Heavy fractions[3]	6,369	4,784	7,339	5,032	(13.2%)	(4.9%)
Monomers[4]	3,585	1,022	3,260	849	10.0%	20.4%
Polimers[5]	2,390	519	2,643	540	(9.6%)	(3.9%)
Aromas[6]	1,080	424	1,096	367	(1.5%)	15.5%
Fertilizers[7]	903	1,030	825	1,067	9.5%	(3.5%)
Plastics[8]	1,218	343	1,409	371	(13.6%)	(7.5%)
PTA	1,893	647	1,528	508	23.9%	27.4%
Other[9]	6,152	4,766	5,851	4,879	5.1%	(2.3%)
Total	**71,604**	**32,740**	**71,663**	**32,716**	**(0.1%)**	**0.1%**

1) Gasoline, LPG.
2) Diesel oil, light heating oil, jet fuel.
3) Heavy heating oil, bitumen, oils.
4) Ethylene, propylene.
5) Polyethylene, polypropylene.
6) Benzene, toluene, paraxylene, ortoxylene.
7) Canwil, ammonium sulphate, ammonium nitrate, other fertilizers.
8) PVC, PVC granulate.
9) Other contains mainly: brine, salt base, vacuum distillates, acetone, ammonia, butadiene, phenol, technical gases, glycols, caprolactam, caustic soda and sulphur. Additionally, in value terms revenues from sale of services of the segment and materials.

Sales revenue structure of the ORLEN Group Downstream segment



In 2019 and 2018 none of the ORLEN Group's leading customers accounted for more than 10% of the Group's total revenue.

Sales markets and market shares

Sales volume of the ORLEN Group in the Downstream segment on domestic markets$^{1)}$ (in thousands of tonnes)

Sales	2019	2018	change	change %
	2	3	4=(2-3)	5=(2-3)/3
Poland	17,620	17,777	(157)	(0.9%)
Baltics states	8,512	8,441	71	0.8%
Czech Republic	6,608	6,498	110	1.7%
Total	**32,740**	**32,716**	**24**	**0.1%**

1) by country of headquarter of company carrying out the sales.

Polish market

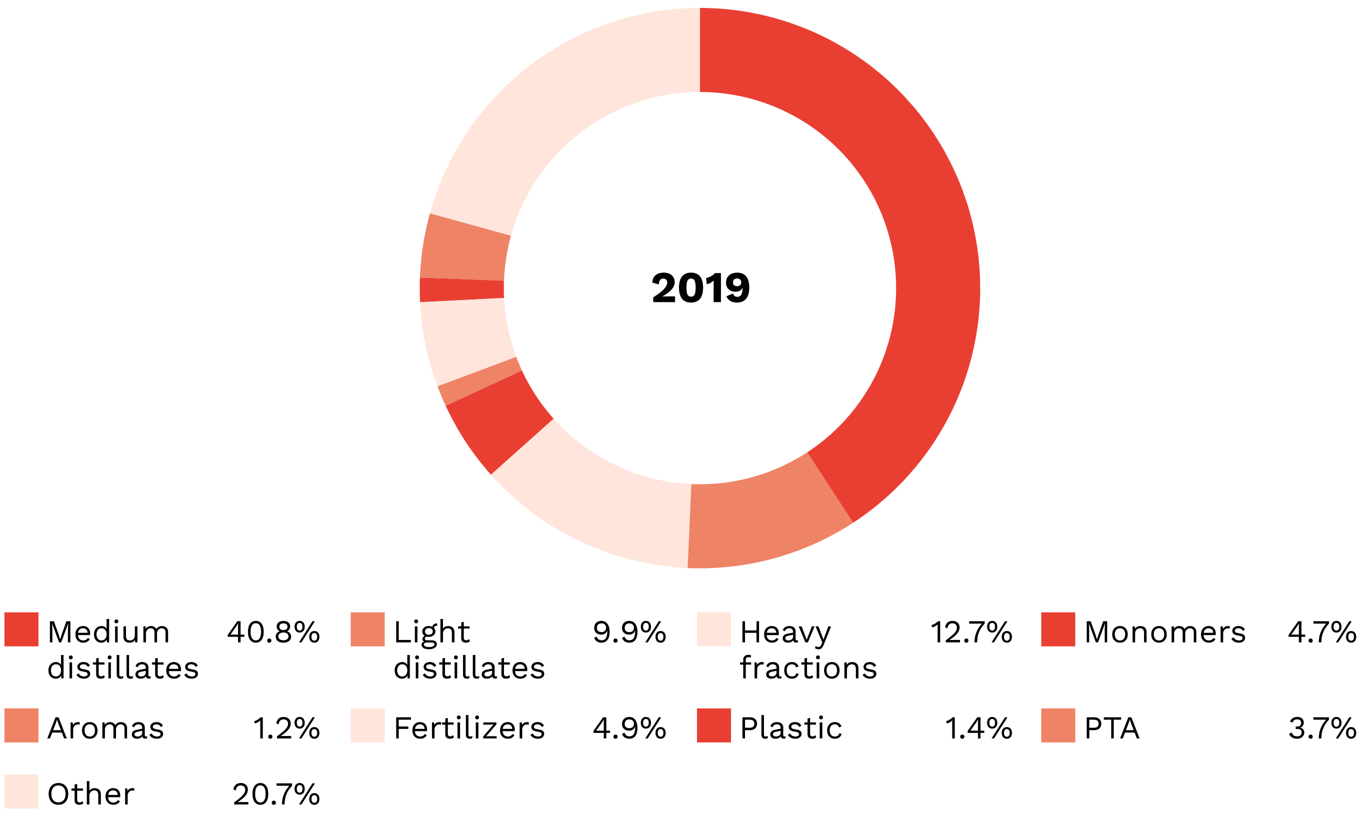
In 2019, Poland was among the fastest growing EU economies. Household consumption was on the rise, driven by an anticipated increase in public spending, labour market challenges and rising wages. Positive economic growth prospects were further supported by a low interest rate environment and realization of financial investments including EU funded.

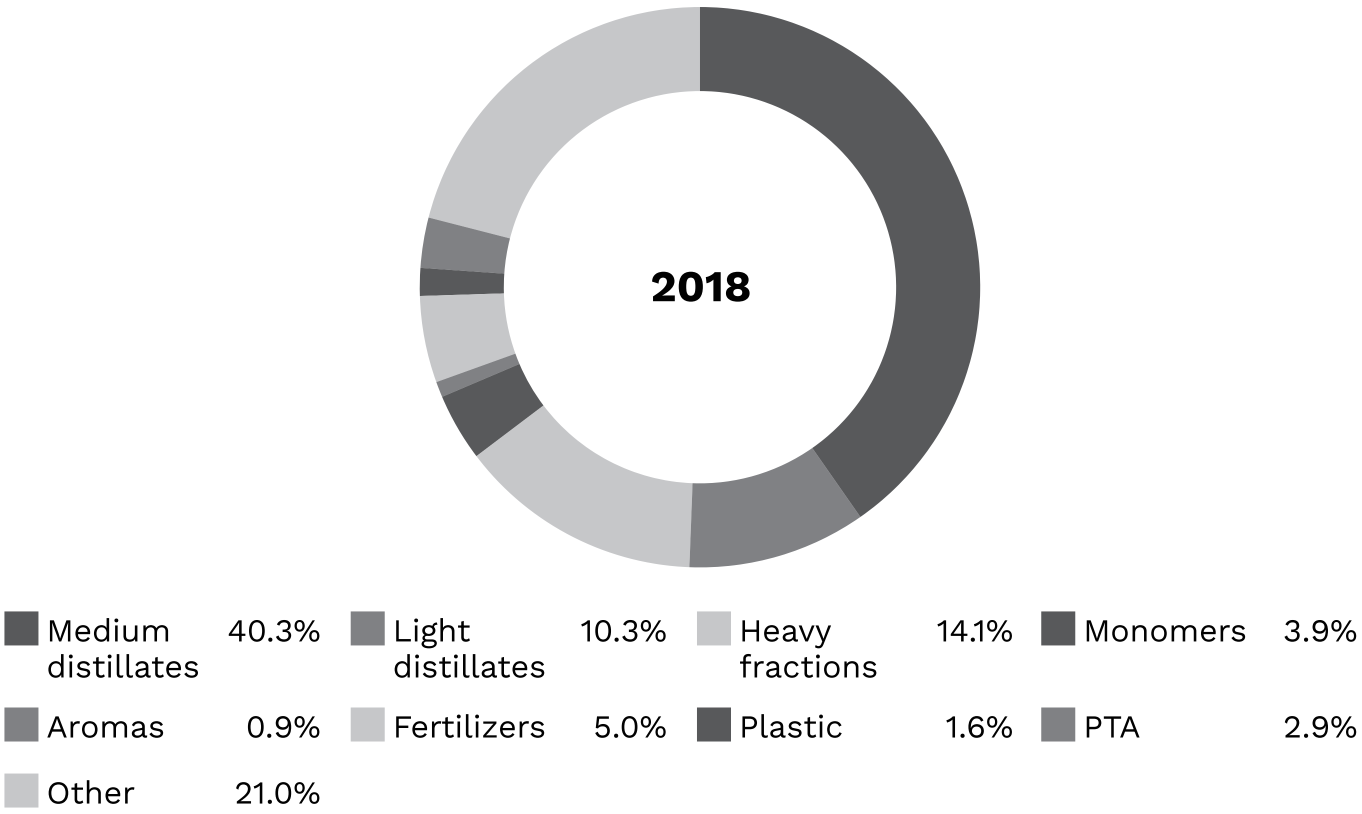
The ORLEN Group was a main supplier to major foreign fuel companies, while further expanding its operations in the SME sector though ORLEN Paliwa.

Sales volume of the ORLEN Group in the Downstream segment on the Polish market [thousands tonnes]

Sales	2019	2018	change	change %
	2	3	4=(2-3)	5=(2-3)/3
Light distillates	1,736	1,837	(101)	(5.5%)
Medium distillates	7,196	7,164	32	0.4%
Heavy fractions	2,228	2,503	(275)	(11.0%)
Monomers	836	693	143	20.6%
Aromas	210	164	46	28.0%
Fertilizers	863	881	(18)	(2.0%)
Plastics	252	276	(24)	(8.7%)
PTA	647	508	139	27.4%
Other	3,652	3,751	(99)	(2.6%)
Total	**17,620**	**17,777**	**(157)**	**(0.9%)**

Structure of sales volume of the ORLEN Group in the Downstream segment on the Polish market





In 2019, the ORLEN Group's sales in Poland reached 17,620 thousand tonnes, down (157) thousand tonnes year on year. The slight decline of the overall sales volume was attributable to lower sales of low-margin heavy refining fractions, down (275) thousand tonnes year on year, which was driven, among other factors, by a significant improvement in fuel yields at PKN ORLEN.

In 2019, PKN ORLEN continued to prepare for the upcoming IMO 2020 regulations with respect to production and sale of heavy fuel oil with a reduced sulfur content, which included the market launch of LSFO (low sulfur fuel oil). As of January 2020, the sulfur content cap for bunker fuels (also outside the Emission Control Areas) has been reduced from 3.5% to 0.5%.

Sales of light distillates in the Downstream segment alone dropped by (5.5)% year on year. As the Downstream segment delivers fuels also to the Retail segment, in 2019 the aggregate sales figure for light distillates sold by both segments increased 0.7% year on year.

A 0.4% year-on-year increase in sales of middle distillates was driven by higher sales of Jet A-1 aviation fuel. Sales of this fuel have been on the rise for several years now, propelled by strong growth of Poland's aviation services market. The ORLEN Group's share of aviation fuel sales on the Polish market remained at approximately 82.5%. The Group was also expanding into-plane fuel sales and continued its supplies to strategic customers, including the Polish Army. 2019 saw the launch of production and sales of the JP-8 aviation fuel to meet the needs of the US army units deployed in Poland. PKN ORLEN is also a Strategic Partner to IATA (the International Air Transport Association).

Sales of diesel oil remained more or less flat year on year, while sales of light fuel oil declined due to mild weather and consumers switching to more cost-effective energy carriers, mainly natural gas.

In the petrochemical segment in Poland, sales of monomers, aromatics and PTA went up year on year (by 20.6%, 28.0% and 27.4%, respectively), driven by higher availability of the Group's production facilities (with no scheduled maintenance shutdown of the Olefins unit in 2018). PVC sales were down by (8.7)% as a combined effect of unit shutdowns, falling demand, and more intensive competition from Russian, Ukrainian and US PVC producers. Sales of artificial fertilizers were down (2.0)% reflecting limited demand from retail customers caused by unfavourable weather conditions (high temperatures).

The Baltic States and Ukraine

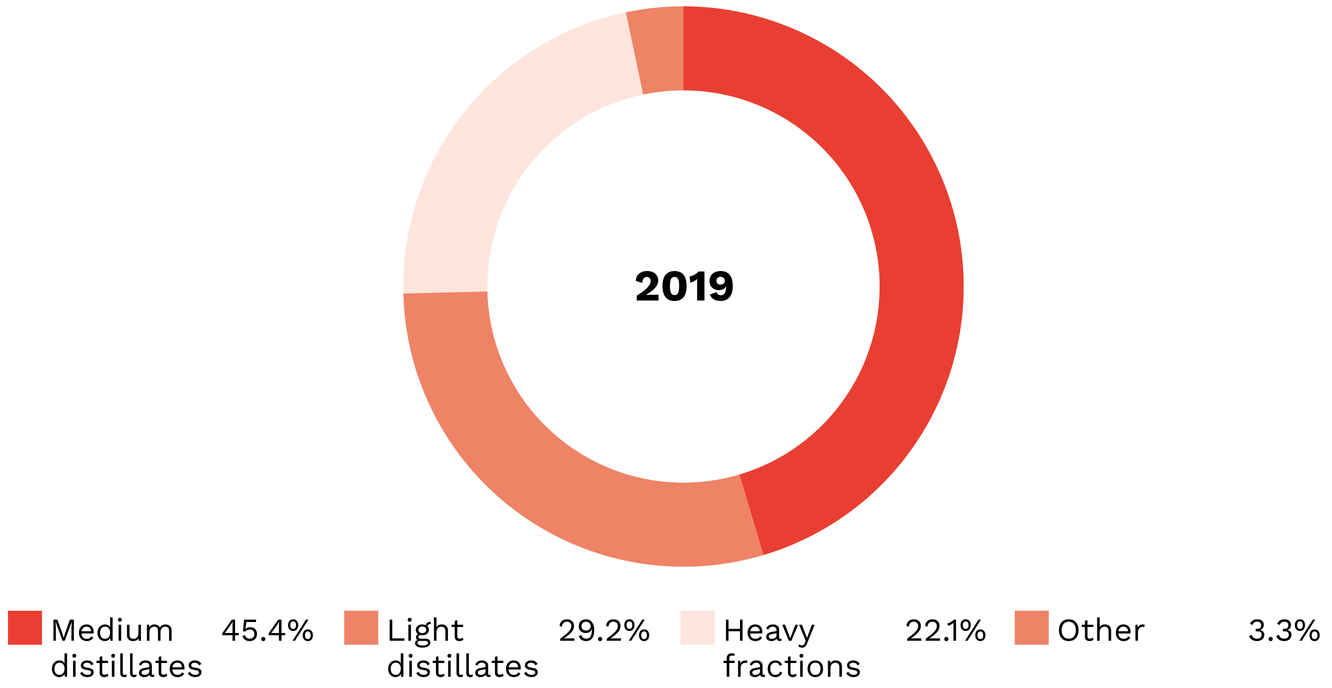
Despite weaker growth year-on-year, the Baltic States still reported positive GDP figures. According to preliminary data released by the International Monetary Fund (IMF), the 2019 GDP growth figures for Estonia and Latvia reached 3.2% and 2.8% (year on year), respectively.

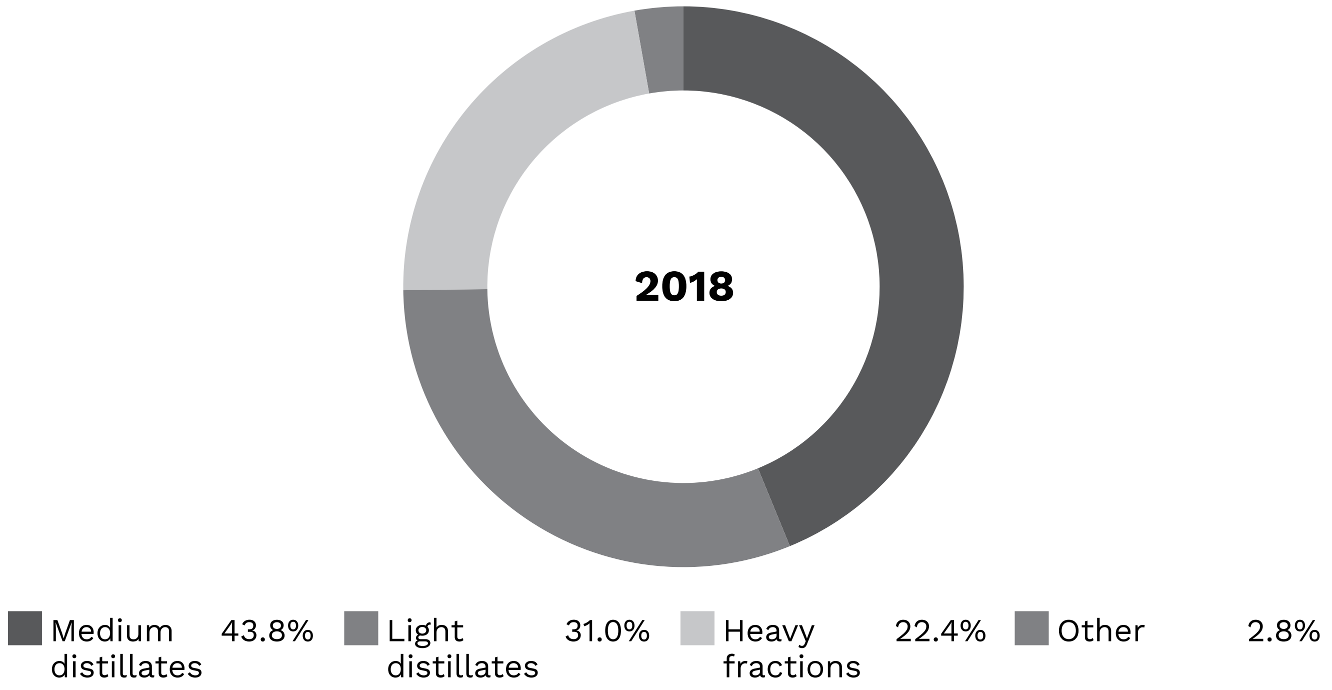
The Baltic States are attractive markets for Scandinavian, Russian and Belarusian fuel producers. The Scandinavian countries and Belarus have large surpluses of diesel oil and gasolines, and are constantly looking for opportunities to place the fuels abroad.

Sales volume of the ORLEN Group in the Downstream segment on the markets serviced by the ORLEN Lietuva Group [thousand tonnes]

Sale	2019	2018	change	change%
	2	3	4=(2-3)	5=(2-3)/3
Light distillates	2,486	2,614	(128)	(4.9%)
Medium distillates	3,862	3,700	162	4.4%
Heavy fractions	1,881	1,888	(7)	(0.4%)
Monomers	18	0	18	-
Other	265	239	26	10.9%
Total	**8,512**	**8,441**	**71**	**0.8%**

Structure of sales volume of the ORLEN Group in the Downstream segment on the markets serviced by the ORLEN Lietuva Group





Despite a challenging operating environment due to aggressive competitive policies of importers, the ORLEN Lietuva Group's sales volumes in

2019 rose 0.8% year on year, to 8,512 thousand tonnes. The best figures were reported for middle distillates, with sales going up 4.4%. Sales volumes of the Jet A-1 aviation fuel also rose considerably, up 24.9% year on year. Sales of diesel oil grew 2.1% year on year.

On the other hand, sales of light distillates declined by (4.9)% year on year.

ORLEN Lietuva actively participated in balancing the ORLEN Group's deficits on the Polish market. In 2019 significant product volume were supplied to Poland both by road and sea.

For several years now, Ukraine's economy has been growing at a satisfactory pace. According to the IMF, in 2019 the country's GDP grew 3.0% amid high inflation, of 8.7%. Ukraine continues to be perceived as an unstable, risk-laden market, which does not encourage new investment with a potential to drive growth in transport needs.

In 2019, the downward trend in gasoline consumption, which had continued for a number of years, finally reversed. The gasoline market rose by as much as 13.3%, while diesel oil consumption went up 5.3% year on year. The second half of 2019 saw a significant drop in the supply of diesel oil following imposition of a 4% duty on the Russian product supplied via pipeline. This put an end to diesel oil supplies via this route and meant that imports from Belarus, Lithuania and by sea needed to be significantly increased. In 2019, Jet A-1 consumption returned to 2018 levels, down (35)% on 2018, mainly as a result of closure of the legal loophole that permitted blending the Jet A-1 fuel with diesel oil.

In 2019, as in previous years, the Ukrainian fuel market faced strong pressures from Russian and Belarusian exporters offering competitively-priced products. Despite this, the ORLEN Lietuva Group's fuel sales hit a record high of nearly 1m tonnes. The largest contributors were sales of gasoline and the Jet A-1 fuel. Among factors that helped achieve such excellent results were supply constraints and its reputation of a reliable and trustworthy supplier.

The source of the ORLEN Lietuva Group's greatest competitive advantage is the precision and timeliness of supplies, regardless of any geopolitical developments in the region. The ORLEN Group has been building its position as a stable and reliable partner for years. It is the only Western oil group operating in Ukraine, whose condition is least affected by the unstable political landscape in Ukraine, not to mention the country's fraught relations with Russia.

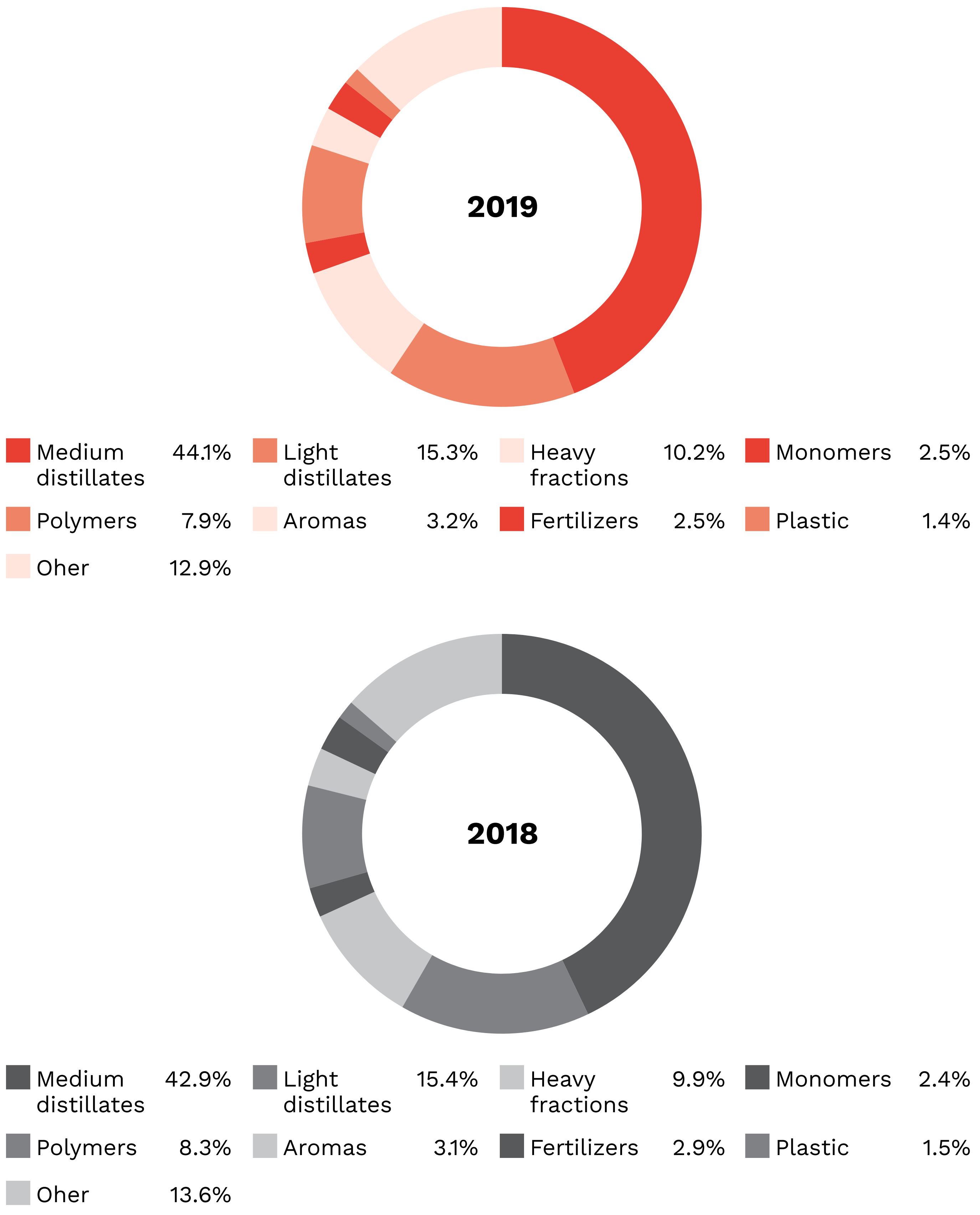
Czech market

The favourable macroeconomic climate and market conditions (GDP and consumption levels) have had a material effect on the ORLEN Group's sales performance in the Czech Republic.

Sales volume of the ORLEN Group in the Downstream segment on the Czech market [thousands tonnes]

Sales	2019	2018	change	change %
	2	3	4=(2-3)	5=(2-3)/3
Light distillates	1,009	999	10	1.0%
Medium distillates	2,916	2,789	127	4.6%
Heavy fractions	675	641	34	5.3%
Monomers	168	156	12	7.7%
Polimers	519	540	(21)	(3.9%)
Aromas	214	203	11	5.4%
Fertilizers	167	186	(19)	(10.2%)
Plastics	91	95	(4)	(4.2%)
Other	849	889	(40)	(4.5%)
Total	**6,608**	**6,498**	**110**	**1.7%**

Structure of sales volume of the ORLEN Group in the Downstream segment on the Czech market



Year 2019 was a period of recouping the Group's market shares and sales volumes lost following maintenance shutdowns of its production units in 2018, and of pursuing an ambitious strategic objective to introduce the UIC price index. The index was accepted by all market participants, including public institutions, having become part of the market practice. All contracts for 2020 were concluded based on UIC.

In 2019, the Unipetrol Group's sales volumes rose 1.7% year on year, to 6,608 thousand tonnes. Strong results were recorded on middle distillate (up 4.6% year on year), driven mainly by a 38.2% year-on-year increase in the sales of the Jet A-1 aviation fuel. Diesel oil sales grew 3.7% year on year, while a 1.0% year-on-year increase in light distillate sales was attributable to higher sales of gasoline (up 1.9% year on year).

In 2019, the Unipetrol Group continued selling its products to a broad customer base, including large fuel companies and hypermarket chains. Unipetrol sold its products on foreign markets, including Slovakia, Hungary, Germany, Austria and Poland, as part of the strategy to optimise product flow management within the ORLEN Group.

GRI: 103-1, 103-2, 103-3

Supply sources

Crude oil

PKN ORLEN supplies crude oil to the Płock refinery and to three other ORLEN Group refineries, in Litvínov and Kralupy in the Czech Republic, and in Lithuania's Mažeikiai.

In late April and early May 2019, due to contamination of Russian crude oil with organic chlorides and temporary suspension of deliveries via the Druzhba pipeline, there was a significant reduction in pipeline deliveries, as reflected by a change in the monthly structure of oil supplied under long-term contracts to Poland and the Czech Republic. The share of more expensive low-sulfur crudes imported by sea was increased to ensure the continuity of supplies and processing.

In 2019, two long-term contracts for oil deliveries via pipeline to the Płock refinery (with Rosneft Oil Company and Tatneft Europe AG), a long-term contract (with Saudi Arabian Oil Company) and a six-month contract (with Saudi Aramco Products Trading Company ("ATC"), a subsidiary of Aramco) for oil deliveries by sea were in force.

The feedstock for all refineries of the ORLEN Group was procured from oil producers and other companies operating on the international oil market. The crude oil supplied to Płock came primarily from Russia and Saudi Arabia, but was also imported from Angola, Kazakhstan, Nigeria, Norway, Poland, the United States and the United Kingdom. The refineries in the Czech Republic received the feedstock from Russia, Saudi Arabia, Azerbaijan, Kazakhstan, Libya, Nigeria and the United States. The Mažeikiai refinery was primarily supplied with Russian oil, with additional deliveries from Saudi Arabia, Kazakhstan, the United States and the United Kingdom.

In 2019, the share of Rosneft Oil Company in the crude supplies exceeded 10% of the ORLEN Group's total revenue.

Natural gas

The ORLEN Group is potentially the largest gas consumer in Poland and one of the largest in the Czech Republic and Lithuania. Natural gas is used by the Group in the production of heat, electricity, fuels and fertilizers. In Poland the ORLEN Group's combined potential for natural gas consumption exceeds 3bn Nm^3 per year, accounting for approximately 20% of total consumption. Natural gas is used by the Group mainly at the following locations:

- PKN ORLEN's Production Plant in Płock: for refinery, petrochemical, electricity and heat production.
- Anwil's Production Plant in Włocławek: for fertilizer production.
- CCGT unit in Płock: for electricity and heat production.
- CCGT unit in Włocławek: for electricity and heat production.
- Production Plants in Kralupy, Litvínov, Kolín and Pardubice (Unipetrol), and the Production Plant in Neratovice (Spolana): for refinery, petrochemical, electricity, heat and fertilizer production.
- Production Plant in Mažeikiai: for electricity and heat production.

Most deliveries of natural gas to the ORLEN Group companies in Poland are made under a five-year contract signed in 2016 by PKN ORLEN and PGNiG, and under additional contracts with major European gas suppliers. Gas is also purchased on the Polish Power Exchange. The ORLEN Group takes steps to ensure stability of supplies and to lower gas procurement costs through such measures as diversification of supply sources, centralisation of gas trading functions and further development of the trading expertise. The current portfolio of gas contracts allows the Group to optimise gas procurement costs by selecting the underlying gas indices and delivery points.

PKN ORLEN has gas transmission contracts with both domestic and foreign operators, ensuring full support in natural gas logistics for the Production Plant in Płock, CCGT Włocławek, and CCGT Płock.

PKN ORLEN has also been developing natural gas sales on both retail and wholesale markets.

ORLEN Group is engaged in a number of exploration and production projects to secure its own sources of natural gas.

In 2019, the value of deliveries by none of the suppliers of natural gas to the ORLEN Group accounted for more than 10% of the Group's total revenue.

RETAIL

GRI indicators: 103-1, 103-2

Capitals:

GRI: 103-1, 103-2

2019								
 RETAIL STATIONS		units	ORLEN Group	Poland	Germany	Czech Republic	Slovakia	Lithuania
	Total sales	thousand t	**9,817**	5,883	2,961	895	Nd	78
	Market share	%	**16.4**	34.1	6.6	24.6	nd	4.7
	Number of stations, including:	**number**	**2,836**	**1,800**	**585**	**416**	**10**	**25**
	Premium	number	1,930	1,737	–	160	10	23
	Economical	number	851	38	568	245	–	–
	Other	number	55	25	17	11	–	2
	CODO/COCO[1]	number	2,294	1,361	497	401	10	25
	DOFO/DODO[1]	number	542	439	88	15	–	–
 CATERING OUTLETS		units	ORLEN Group	Poland	Germany	Czech Republic	Slovakia	Lithuania
	Total, including:	**number**	**2,421**	**1,699**	**385**	**306**	**8**	**23**
	Stop Cafe	number	967	820	–	125	7	15
	Stop Cafe Bistro	number	342	321	–	21	–	–
	Stop Cafe 2.0.	number	727	558	–	160	1	8
	star connect	number	117	–	117	–	–	–
	star cafe	number	268	–	268	–	–	–

Current status for June 2020

The ORLEN Group is the undisputed **leader in retail fuel sales in Central Europe**. At the end of 2019, it operated a total of **2,836 service stations**, including 10 sites in Slovakia, the Group's new home market.

The number of stations and market share of the ORLEN Group on operating markets at the end of 2019

	Poland	Czech Republic	Germany	Lithuania	Slovakia
Market presence since	1999	1953	2003	2009	2019
Market share	34.1% +0.3 p.p. (r/r)	24.6% +1.3 p.p. (r/r)	6.6% +0.2 p.p. (r/r)	4.7% 0.0 p.p. (r/r)	-
	1,800 stations	416 stations	585 stations	25 stations	10 stations

Source: Own preparation.

More information on the ORLEN Group shares on individual markets and competitors can be found in the „Competitive Environment" section.

Sales volume of the Retail segment

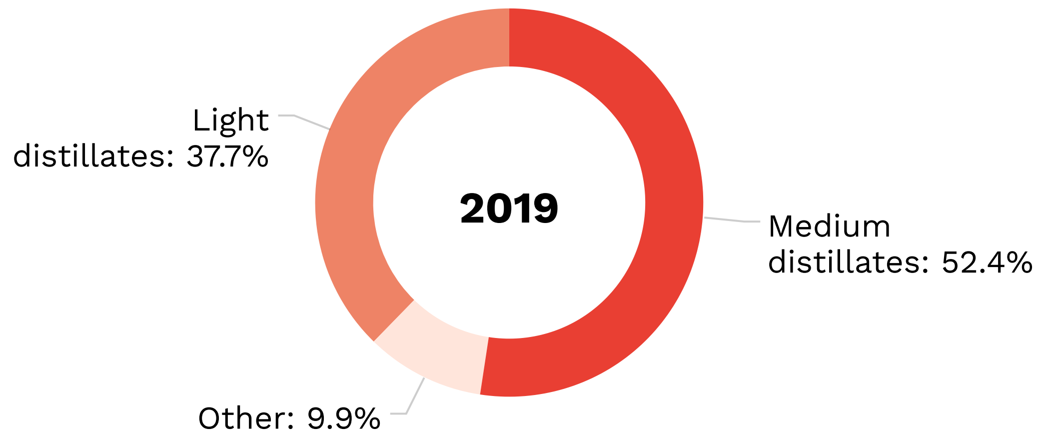
In 2019, the volume of sales of the ORLEN Group's Retail segment increased by 3.9% year on year, to 9,815 thousand tonnes, as a result of improved sales of all fuels across all operating markets (with the exception of LPG in Germany and Lithuania).

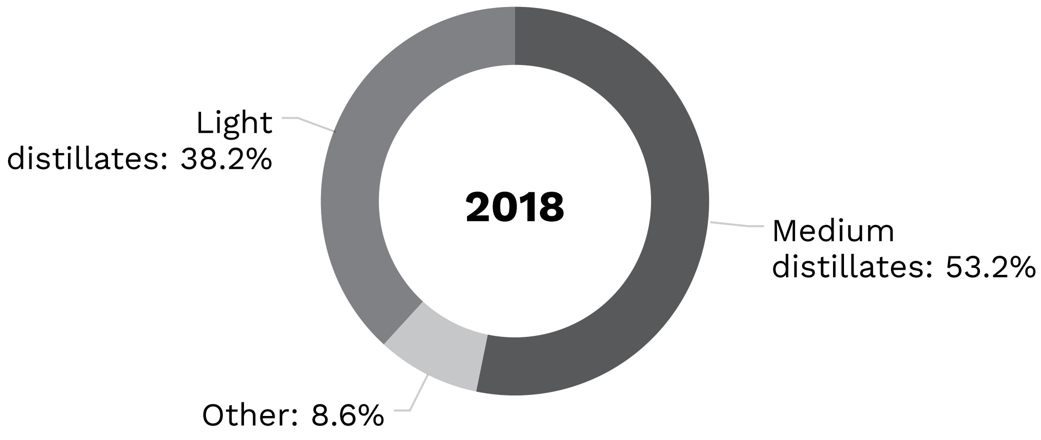
The ORLEN Group sales in the retail segment [PLN million/thousand tonnes]

Sales	2019		2018		change %	
	Value	Volume	Value	Volume		
1	2	3	4	5	6=(2-4)/4	7=(3-5)/5
Light distillates[1]	14,659.0	3,775.4	14,266.0	3,546.3	2.8%	6.5%
Medium distillates[2]	20, 405.0	6,039.1	19,879.0	5,900.2	2.6%	2.4%
Other[3]	3,846.0	0.0	3,194.0	0.0	20.4%	-
Other	**38,910.0**	**9,814.6**	**37,339.0**	**9,446.5**	**4.2%**	**3.9%**

1) Gasoline, LPG.
2) Diesel oil; light heating oil sold by ORLEN Deutschland.
3) Other value - includes revenues from sale of non-fuel goods and services.

Structure of sales revenue of the ORLEN Group in the retail segment





Markets

The ORLEN Group's retail home markets include Poland (where the retail business is managed by PKN ORLEN), Germany (with a retail chain operated by ORLEN Deutschland), the Czech Republic and Slovakia (service stations under the Benzina brand, a member of the Unipetrol Group – a subsidiary of the ORLEN Group), and Lithuania (a service station chain managed by AB ORLEN Baltics Retail, a subsidiary).

Sales volume of the ORLEN Group in the retail segment on domestic markets [thousands tonnes]

Sale	2019	2018	change	change %
1	2	3	4=(2-3)	5=(2-3)/3
Poland	5,883.0	5,695.7	187.3	3.3%
Germany	2,960.7	2,837.5	123.2	4.3%
Czech Republic	893.0	837.4	55.6	6.6%
Lithuania	77.9	75.9	1.9	2.5%
Total	**9,814.6**	**9,446.5**	**368.0**	**3.9%**

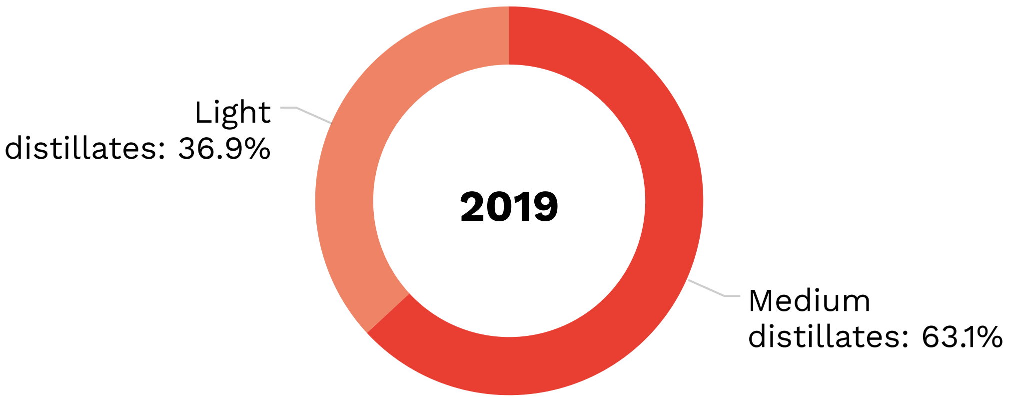
Polish market

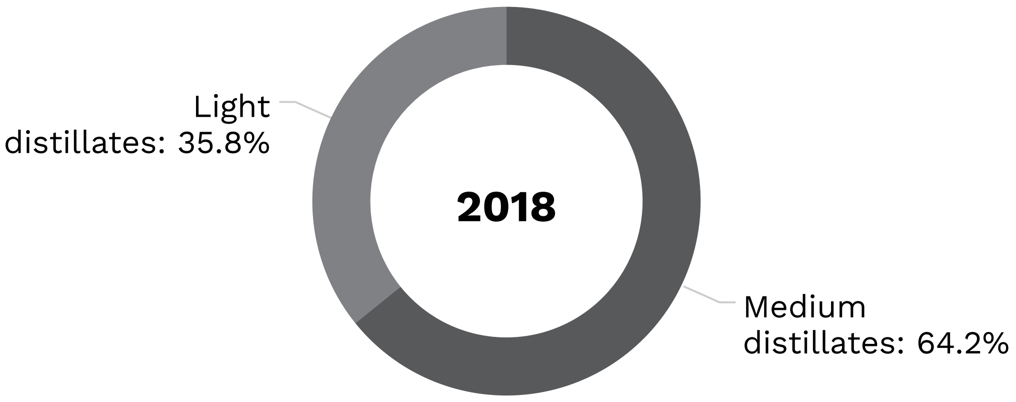
In 2019, the volume of fuel sales in the Retail segment grew by 3.3% year on year. A technical upgrade of our stations, expansion of the retail chain to include new outlets with strong sales volume capabilities and a higher number of service stations in which our new store and food & drink service format was deployed translated into an improved average annual flow per CODO station, to 4.8 million litres.

Sales volume of the ORLEN Group in the retail segment on the Polish market [thousands tonnes]

Sales	2019	2018	change	change %
	2	3	4=(2-3)	5=(2-3)/3
Light distillates	2,168.3	2,038.6	129.7	6.4%
Medium distillates	3,714.7	3,657.1	57.6	1.6%
Total	**5,883.0**	**5,695.7**	**187.3**	**3.3%**

Structure of sales volume of the ORLEN Group in the retail segment on the Polish market





Number of CODO stations

The number of CODO stations was 1,361 and during 2019 year increased by 19 locations. As a result of an investment programme, 24 new CODO stations were added to our retail chain (including one MSA facility at the S5 expressway). At the same time, five CODO stations were closed down in 2019.

As part of our efforts to expand the ORLEN retail chain in Poland, a number of sites were secured for the construction of new service stations in the coming years, including seven in Motorway Service Areas.

During 2019, more than 120 stations underwent technical upgrades. The rebranding of the Bliska chain to ORLEN is nearing completion. In 2019, the number of both CODO and DOFO Bliska stations was reduced from 54 to 38.

DOFO stations

As at the end of 2019, PKN ORLEN had 439 DOFO stations, a decrease by six locations year on year. In 2019, 19 new sites were added to PKN ORLEN's DOFO chain, and more than 180 annexes (both short- and long-term ones) were signed to extend the existing agreements. The efficiency of the ORLEN Group's DOFO service stations was also steadily on the rise.

In 2019, PKN ORLEN's fleet sales volume rose 2.4% year on year, reaching their highest level on record (of almost 2.4 billion litres). CRT sales (to transport companies) remained broadly unchanged from the previous year, while other segments recorded higher sales year on year.

Year 2019 also saw strong non-fuel sales, with combined store and food & drink service sales going up by 10% year on year. PKN ORLEN continued its product development projects for proprietary brands (VERVA, Stop.Cafe, „O!"), with eight new items added to the proprietary brand product mix. The 'Loteria z Kubicą' advertising campaign encouraged many customers to buy products sold under our proprietary brands (Verva, O! and Stop.Cafe), appreciating their quality and reasonable prices.

The Stop Cafe 2.0 food & drink service concept was rolled out at a further 186 locations, which brought the number of PKN ORLEN stations featuring this format to 558 (including 63 DOFO stations) at the end of 2019. In total, PKN ORLEN had 1,699 stations offering food services across all formats (Stop Cafe, Stop Cafe Bistro and Stop Cafe 2.0).

In 2019, nine new car wash facilities were built. In a survey carried out by Polski Instytut Badań Jakości, the car wash service offered at ORLEN stations was recognised as the best one on the Polish market.

In 2019, the largest Retail Sales project was to change the existing distribution model, i.e. to replace distributors by a logistics operator and establish direct business relationships with suppliers of store and food & drink service products.

PKN ORLEN also took a range of measures to improve its customer service. Further stations made available the 'Mobile Cashier' service, enabling payments in the driveway when traffic is at its heaviest. Some service stations (including those at MSAs) rolled out the 'Fast Lane' service, which consists in directing fuel customers to selected pumps supported by 'Mobile Cashier'. Most of the stations were covered by the filling queue system, whereby another filling can be made before the previous one is paid for, which reduces customer waiting times. More than 460 service stations offer the possibility of refuelling a car on both sides, regardless of the fuel tank flap location, thanks to appropriately designed infrastructure. The roll-out of ORLEN Mobile, an application dedicated to mobile payments to enable customers to pay at the pump, was continued. Currently, all service stations are prepared to support mobile payments.

By 2019, 39 charging stations had been launched at PKN ORLEN's urban, motorway and trunk road service stations, with further ones undergoing commissioning procedures. They can charge up to two vehicles at a time through 50 kW or 100 kW DC points, and one vehicle with up to 43 kW through the AC point. This essentially means that our charging stations are equipped with connectors supporting all electric vehicles now available on the European market. By 2021, PKN ORLEN intends to have 150 fast EV chargers deployed within its service station chain.

In 2019 an IT system was implemented to support the management of PKN ORLEN's charging station network, Ultimately, its full implementation will enable motorists to make payments through the mobile application. In 2019, ORLEN continued its partnership with Nextbike Polska, whereby 36 PKN ORLEN service stations launched a bike rental service, with a total of 360 (both standard and electric) bicycles available.

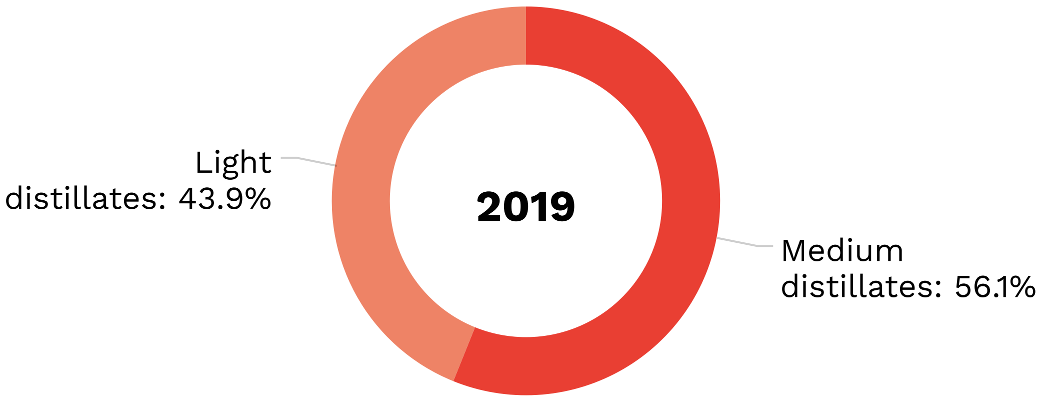
German market

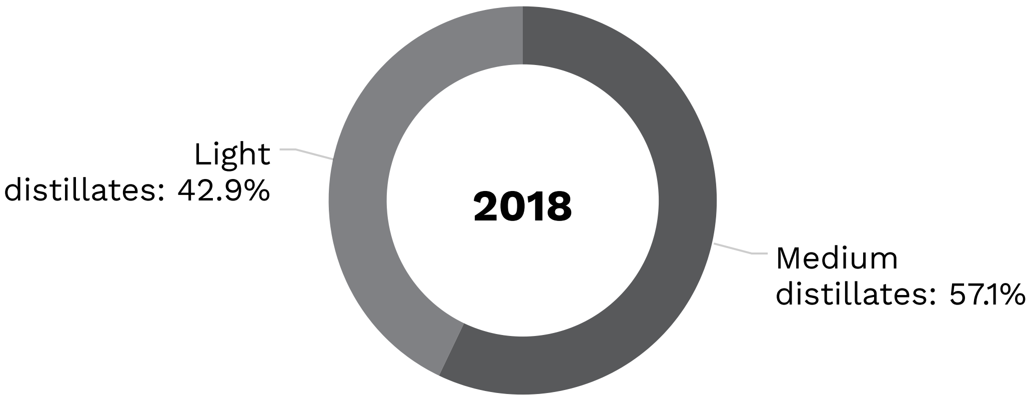
In 2019, the ORLEN Group recorded a 4.3% year-on-year increase in its fuel sales volume on the German market. The average annual flow per station rose to 5.0 million litres.

Sales volume of the ORLEN Group in the retail segment on the German market [thousands tonnes]

Sales	2019	2018	change	change %
	2	3	4=(2-3)	5=(2-3)/3
Light distillates	1,299.5	1,216.2	83.3	6.8%
Medium distillates	1,661.2	1,621.3	39.9	2.5%
Total	**2,960.7**	**2,837.5**	**123.2**	**4.3%**

Structure of sales volume of the ORLEN Group in the retail segment on the German market





The number of service stations managed by ORLEN Deutschland was 585 (568 in the Star economy segment and 16 Famila stations), having expanded by 3 locations year on year. Almost 85% of them were CODO stations, with the remaining outlets owned by private individuals (DODO). In 2019, the chain launched 4 CODO stations and took over 2 DODO outlets. One service station was removed from the Star chain following the contract expiry. The Star connect food & drink service was launched at another 45 locations, as a result of which at the end of 2019 the format was already available at 117 ORLEN Deutschland stations. Taking all formats into account (both Star connect and Star cafe), food & drink service was available at 385 stations within the chain.

In 2019, ORLEN Deutschland recorded a 1.5% improvement in its non-fuel margin. The range of Polish products offered at Star stations was also significantly broadened.

The Star network has the highest number of car washes among all retail chains managed by the ORLEN Group (including 412 portal facilities and 54 self-service facilities). In 2019, 34 portal and three self-service washes were upgraded. Work was also commenced to test solutions designed to improve customer service. At three stations, a mobile application was launched on a pilot basis to support mobile payments for car wash services.

An important step in expanding the retail network in southern Germany was the opening of the first Star station in Bavaria (Munich) in October. As a result, since 2019 the Star network has been present in all German states.

In 2019, ORLEN Deutschland continued its partnership with ADAC, one of Europe's largest automotive clubs with more than a dozen million members in Germany. Star is one of the three German station chains (and the first one in the economy segment) working with ADAC.

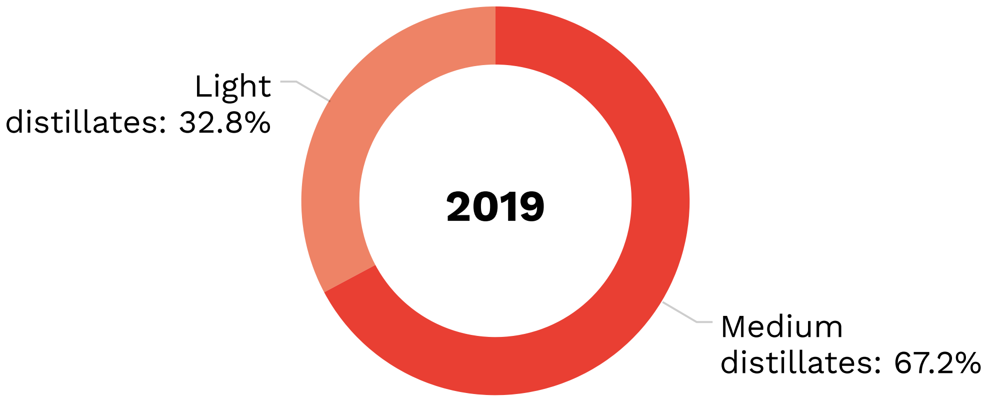
Czech and Slovak markets

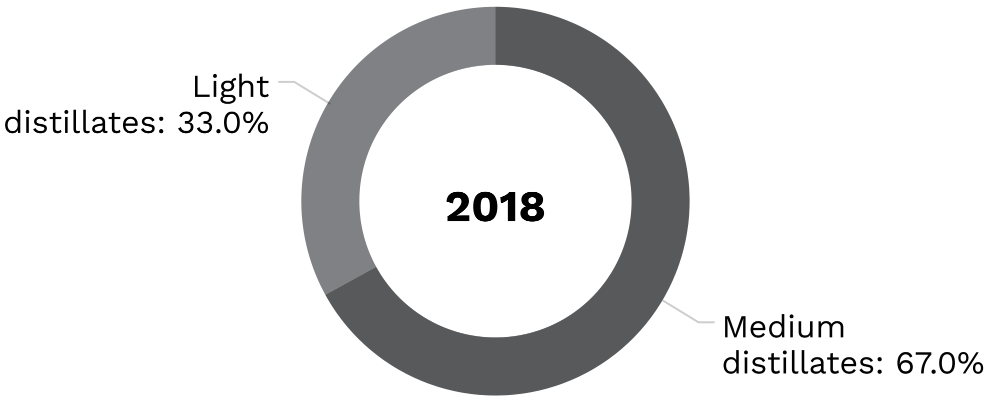
The ORLEN Group's fuel sales on the Czech market grew again, by 6.6% year on year, and its average annual sales per station reached 2.6 million litres.

Sales volume of the ORLEN Group in the retail segment on the Czech market [thousands tonnes]

Sales	2019	2018	change	change %
	2	3	4=(2-3)	5=(2-3)/3
Light distillates	292,5	276.4	16.1	5.8%
Medium distillates	600,5	561.0	39.5	7.0%
Total	**893,0**	**837.4**	**55.6**	**6.6%**

Structure of sales volume of the ORLEN Group in the retail segment on the Czech market





Its retail stations on the Czech market operated under the Benzina brand, but there was also one ORLEN-branded station. During the year, seven new service stations were added to the chain.

As at the end of 2019, the number of Benzina-branded stations on the Slovak market was ten, all of them operated under the CODO model.

In 2019, the volume of fleet sales grew on the back of a steady increase in the number of stations, new schemes and relationship models for fleet customers, and development of a pre-paid fleet card scheme for private individuals. The share of fleet sales in the total sales volume topped 37%.

Benzina continued to invest in upgrading and expanding the service station chain in the Czech Republic. The Stop Cafe 2.0 format was rolled out into another 60 outlets, so at the end of 2019 it was already available at 160 stations within the Benzina chain. In total, 306 Benzina stations offered food & drink services across all formats (Stop Cafe, Stop Cafe Bistro and Stop Cafe 2.0). In addition, automatic car washes were upgraded at 27 locations.

Thanks to the extensive investment programme and a host of replacement projects, the Benzina chain delivered improved non-fuel performance, with store sales up 11% and food & drink service sales (up 27% year on year).

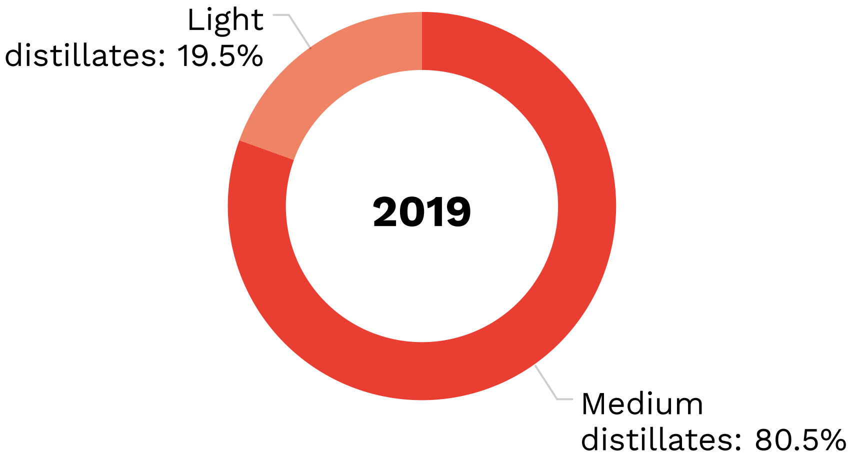
Lithuanian market

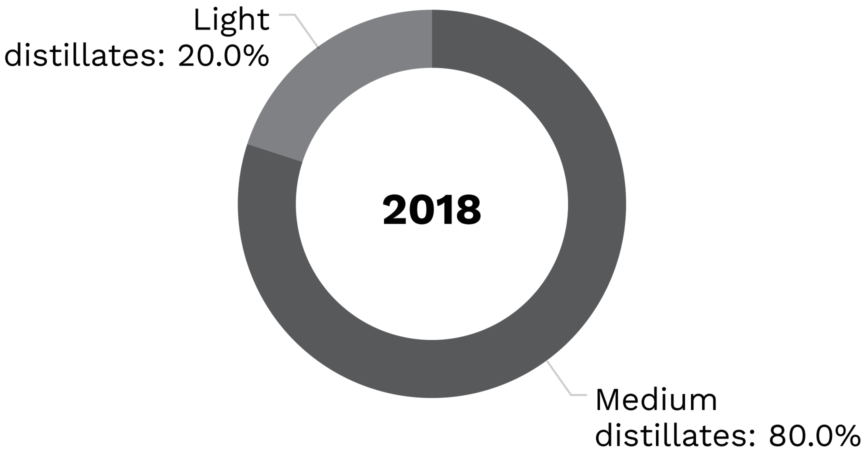
In 2019, ORLEN Baltics Retail posted a 2.6% year-on-year increase in fuel sales on the Lithuanian market, as the average annual flow per station rose to 3.9 million litres.

Sales volume of the ORLEN Group in the retail segment on the Lithuanian market [thousands tonnes]

Sales	2019	2018	change	change %
	2	3	4=(2-3)	5=(2-3)/3
Light distillates	15.2	15.2	–	–
Medium distillates	62.7	60.8	1.9	3.1%
Total	**77.9**	**75.9**	**1.9**	**2.6%**

Structure of sales volume of the ORLEN Group in the retail segment on the Lithuanian market





The number of stations did not change relative to the previous year, standing at 25 COCO locations at the end of 2019. In 2019, work to construct four new service stations and one 'Demolish and Build' project were commenced. At the same time, upgrade work was completed at eight retail sites. As at the end of 2019, 32% of the network was operated to the Stop Cafe 2.0 standard. Extension of the offering at the upgraded stations translated into a 15% year-on-year increase in non-fuel revenue.

An increase in Lithuanian fleet sales was the main driver of the recorded increase in diesel oil sales. During 2019, the share of fleet sales grew by 1.6 pp, to nearly 48% of total sales.

Sources of supply

In 2019, the ORLEN Group's refining assets were the main source of fuel supplies for the Polish, Czech and Lithuanian service station chains. The Group does not operate its own production plants in Germany. Unlike in the case of other local markets, ORLEN Deutschland works with suppliers operating on the German wholesale market, including Deutsche BP AG, Shell Deutschland Oil GmbH, Total Deutschland GmbH, and Esso Deutschland GmbH. A considerable volume of fuels sold by ORLEN Deutschland comes from the Litvínov refinery run by Unipetrol RPA s.r.o., part of the ORLEN Group. In 2019, the volume of supplies from the Czech Republic did not change year on year, meeting almost 20% of ORLEN Deutschland's fuel demand.

UPSTREAM

GRI indicators: 103-1, 103-2

Capitals:

GRI: 103-1, 103-2

Output and production in 2019

	units	Canada	Poland
Oil and natural gas reserves (2P)	million boe	186.3	11.0
Output	million boe/year	6.3	0.4
Average production	thousand boe/day	17.2	1.0
Output structure (liquid/gas)	%	49/51	-/100
Drillings (net)[1]	number	1.6	3.0
Licences	number	-	20

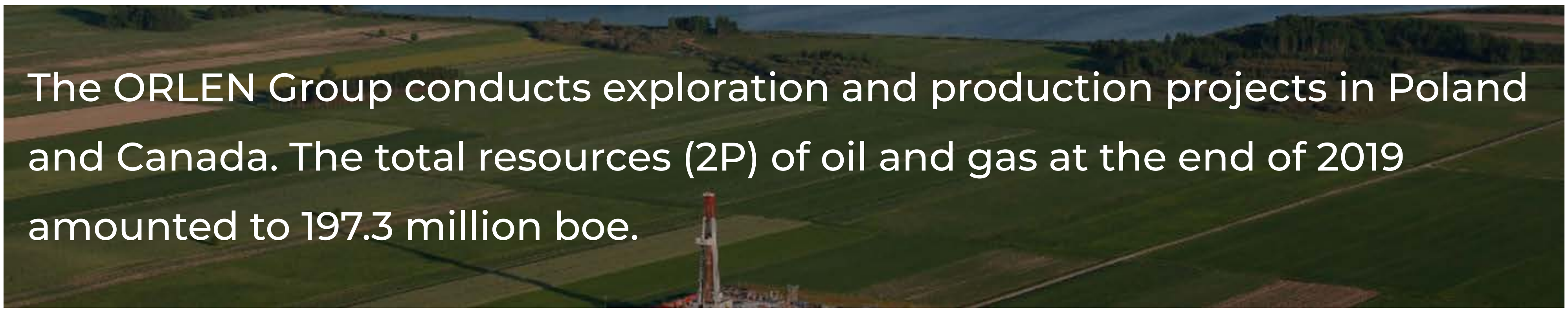
[1] The number corrected with the share of other partners.

In line with its strategy, the ORLEN Group intends to **continue its exploration and production efforts to increase output and secure wider access to its own oil and gas resources under a prudent continuation scenario**, which enables flexible response and adaptation of upstream capex to price changes on the hydrocarbon market.

The international team of experts from Poland and Canada has the necessary competence and experience to carry out PKN ORLEN's mission and vision of exploration for and production of crude oil and natural gas through efficient management of a diversified portfolio of assets.

At the end of 2019, the ORLEN Group held on its own or with a partner (PGNiG) **20 exploration and appraisal licences in Poland, covering a total area of almost 13,500 km^2 and spread over six provinces**, with 2P reserves of 11.0 million boe. The ORLEN Group holds 100% interests in nine licences, 49% interests in nine licences and 49% interests in parts of two licences within a separate area covered by the Sieraków Joint Operations Agreement.

In Alberta, Canada, the ORLEN Group is a recognised operator and holds exploration and production assets covering a total area of **274.4 thousand acres** (1,100 km^2), with total 2P reserves of **186.3 million boe.**



The ORLEN Group conducts exploration and production projects in Poland and Canada. The total resources (2P) of oil and gas at the end of 2019 amounted to 197.3 million boe.

Operations in Poland

The Group's operations in Poland comprised hydrocarbon exploration and production. Currently, in Poland gas is produced in cooperation with PGNiG S.A. The share of production attributable to the ORLEN Group reached the annual average level of 1.0 thousand boe/d. Basic exploration work in Poland was conducted in four oil provinces.

In the **Kraków Oil Province**, work was performed under three Projects. Under the **Karpaty Project**, 3D seismic data acquired in 2018 was processed and interpreted. In addition, geophysical profiles were digitised, and data collected from old boreholes within the area was interpreted to determine its lithological and reservoir characteristics. Under the **Miocene Project**, 3D seismic data was acquired, processed and interpreted to map further prospects within the region. Two exploration wells were drilled on the Bystrowice deposit, and the well drilled in 2018 which had discovered the deposit was completed to start production. Conceptual, design and documentation work was also carried out with a view to further drilling and development of the Bystrowice field. The general contractor was selected to execute Stage 1 of the Bystrowice field development.

In 2020, work will be continued to develop the field and further analyses will be carried out prior to drilling another well within the area.

Under the **Bieszczady Project**, implemented together with a partner (PGNiG S.A.), the drilling of a well, commenced in late 2018/early 2019, was finished. In addition, the processing and interpretation of 2D seismic data acquired in the previous year were completed. As part of further exploration work, another well was spudded within the area.

In the **Poznań Oil Province** work was being performed on two projects implemented under a Joint Operations Agreement with PGNiG S.A. Under the **Sieraków Project**, work was under way to complete the relevant legal formalities and design a horizontal well as part of the field development. Conceptual work was also being continued to develop the crude oil field.

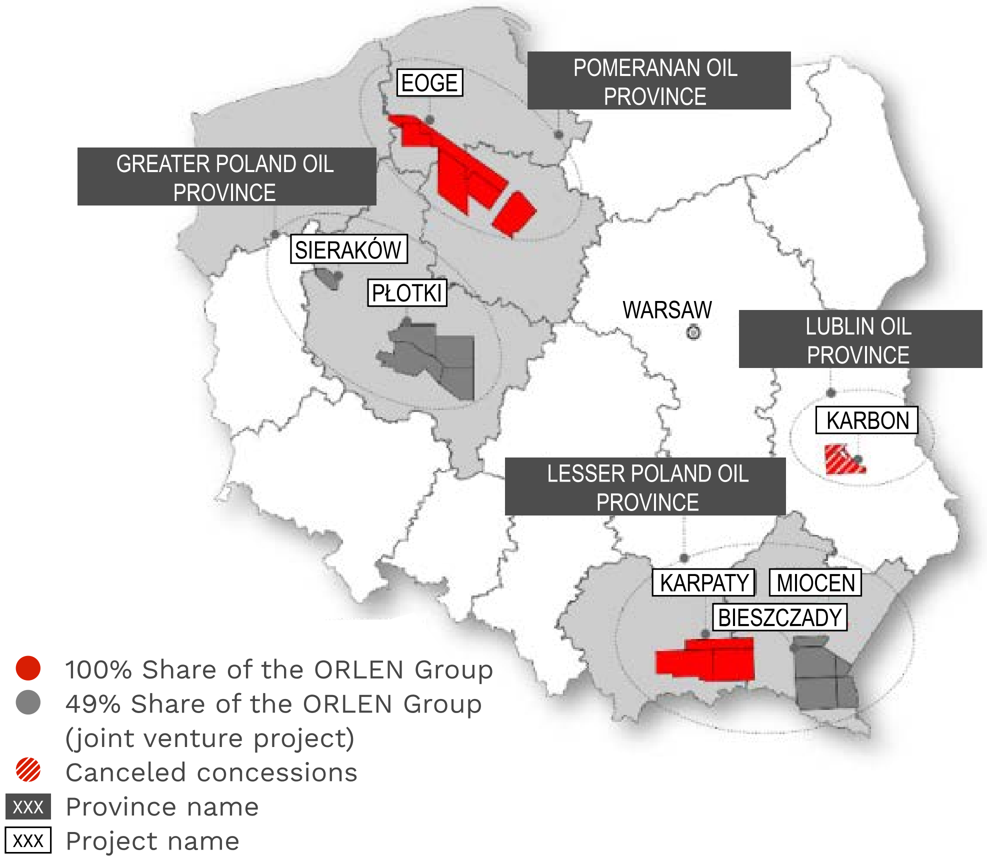
Under the **Płotki Project**, construction and assembly work was being carried out to develop the Miłosław-5H well (on the Miłosław field), with production from the well launched in early August. Planning and preparatory work was also going on to develop the Chwalęcin discovery made in 2018. 3D seismic was acquired, processed and interpreted; and an old 3D dataset was reprocessed and interpreted.

In the fourth quarter, another exploration well was spudded within the area, and 3D seismic data was acquired over its south-western part.

In the **Gdańsk Oil Province**, work was being carried out within five licence areas under the **Edge Project**. In 2019, 3D seismic data acquired in the previous year was processed and interpreted. Also, more 3D seismic was acquired over the north-western part of the area. A feasibility study was completed for development of the Bajerze and Tuchola natural gas fields, based on a power generation project. Preparatory work was being carried out prior to development of the fields and a contractor was selected to prepare design and legal documentation.

In the course of the operations in **the Lublin Oil Province** under **the Karbon Project**, based on analyses made with a view to optimising the project portfolio, a decision was made to relinquish the Lublin licence – the last one held under the Karbon Project.

Exploration and production projects of the ORLEN Group in Poland



Source: Own preparation.

Operations in Canada

The ORLEN Group is engaged in upstream operations in Canada through its subsidiary – ORLEN Upstream Canada Ltd. ("OUC"). Its 2019 capex programme focused primarily on the key areas of Ferrier and Kakwa in the Province of Alberta.

Within **the Ferrier** area, drilling of 12 wells (9.6 net) began. Additionally, hydraulic fracturing was performed on 12 wells (9.2 net), which were subsequently brought on stream. By the end of the year, two of the new wells were ranked as the top producers on the Cardium formation in the Province of Alberta.

Within the **Kakwa** area, drilling of seven wells (6.0 net) began.In addition, hydraulic fracturing was performed on eight wells (6.8 net), which were later brought on stream. The Kakwa area was recognised in Scotiabank's reputable ranking as the best oil basin in Canada and the second best in North America in terms of PIR (the profit to investment ratio).

Within the **Lochend** area, drilling of two wells (1.0 net) commenced, followed by fracturing operations.

Production and transmission infrastructure was being constructed and upgraded within the key areas of operations to enable cost synergies and improve the project economics.

In 2019, the average output was 17,200 boe/d, of which 49% were liquid hydrocarbons (crude oil and NGL, including condensate).

Good reservoir properties of the assets and their location in a well-surveyed area minimise the operational risks of the projects. The Canadian OFS (oilfield services) market offers good access to comprehensive drilling and well services. The stable tax regime and measures aimed at reducing the overall tax burden combined with a friendly regulatory environment support efficient operations. On the other hand though, the oversupplied local market is facing infrastructure constraints, which at times adversely affect the Canadian hydrocarbon prices. Gradual elimination of pipeline capacity constraints and step-by-step expansion into new sales markets are expected within the next few years.

Seeking to achieve operational synergies and focus on the most profitable areas, ORLEN Upstream Canada is keeping a watchful eye on the local market. On January 3rd 2019, it closed the sale of its Pouce Coupe asset. The area producing mainly natural gas, being of secondary importance to ORLEN Upstream Canada, was sold with the proceeds used to partly finance the 2019 capex on much more profitable areas. Moreover, in December 2019, OUC successfully closed an asset exchange transaction within its key Ferrier area, with a view to strategic asset consolidation and addition of new drilling sites.

ORLEN Upstream Canada also holds minor exploration and production assets in New Brunswick, and a 2.3% interest in Pieridae Energy – an integrated company developing an LNG export terminal in Nova Scotia. To date, the process of obtaining administrative, legal, environmental and construction permits has been completed. In 2019, Pieridae Energy acquired upstream and midstream assets which will secure future production and transmission of natural gas volumes from Western Canada, necessary for the launch of the first terminal module. Should the final investment decision be made, the operational start of the project is currently expected in late 2024 or early 2025.

Assets in Canada

Source: Own preparation.

Sales volume of the Upstream segment

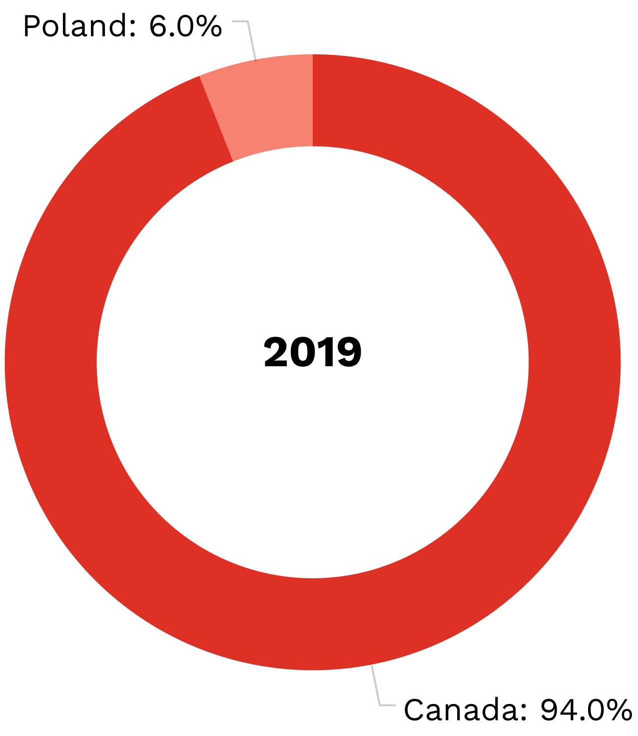
The ORLEN Group sales volume in the Upstream segment [thousand tonnes]

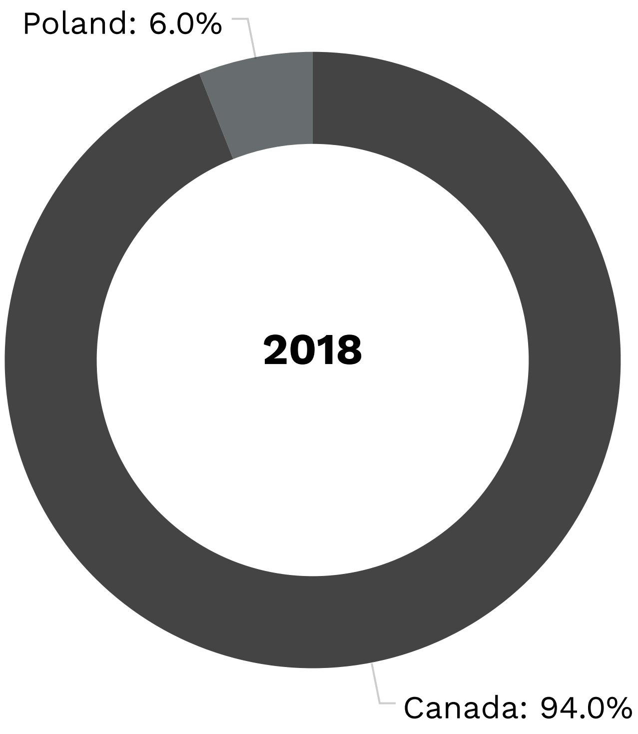
Sale	2019		2018		change %	
	Value	Volumen	Value	Volumen		
1	2	3	4	5	6=(2-4)/4	7=(3-5)/5
Crude oil	126	96	95	77	33%	25%
Natural gas	163	441	168	456	(3%)	(3%)
Other1)	319	199	342	195	(7%)	2%
Total	**608**	**736**	**605**	**728**	**0%**	**1%**

[1] *Other: in volume terms consists mainly of NGL (Natural Gas Liquids), in value terms includes sale of NGL and revenues from sales of services of the segment.*

Production and sale of hydrocarbons in Canada were conducted through ORLEN Upstream Canada Ltd., and in Poland – through FX Energy Poland, a subsidiary. In 2019, the combined volume of sales on the two markets was 736,000 tonnes, having gone up 1% year on year, mainly on higher hydrocarbon production in Canada.

Sales volume structure in the Upstream segment of the ORLEN Group





CORPORATE FUNCTIONS

GRI indicators: 103-1, 103-2

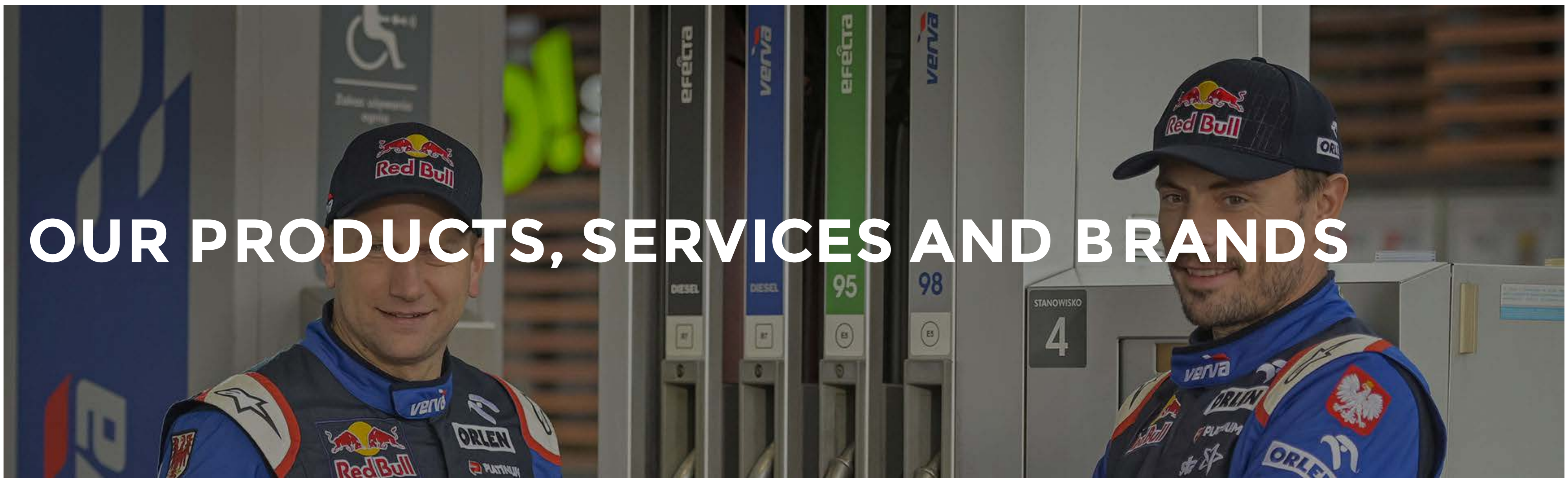
Capitals:

GRI: 103-1, 103-2

Corporate functions comprise activities involving management, administration and other auxiliary functions performed by certain ORLEN Group companies for the operating segments.

The companies performing corporate functions engage in a wide range of activities, including:

- Personal and property security services and technical security solutions.
- Comprehensive accounting, HR, payroll and inventory-taking support.
- Laboratory services, including analyses of petroleum products, water, sewage, soil and air.
- Design and building supervision services for the refining, petrochemical and energy industries.
- Financing and insurance services.
- Real estate management and office administration.



OUR PRODUCTS, SERVICES AND BRANDS

GRI indicators: 102-2

Capitals:

Our products and services are highly valued by both retail and institutional customers. For years, ORLEN has been the leader of the 'Most Valuable Polish Brands' ranking compiled by the Rzeczpospolita daily.

GRI: 102-2

Our products

Fuel products

Motor gasolines, diesel oils, fuel oil, light heating oil, liquefied gas, biofuels, bunker fuels, aviation fuels

Bitumens

Read, industrial, modified and multigrade bitumens

Oils

Base, motor, gea, hydraulic and industrial oils, oils for agriculture, car lubricants, lubricants

Refining products

Solvents, slack waxes, waxes, sulfur, kerosene, industrial grade glycerine, paraffins, alkylate, reformate, isomerate

Olefins

Ethylene, propylene

Polyolefins

Polyethylene, polypropylene

Artificial fertilizers

Nitrogen fertilizers, liquid ammonia, CANWIL, ammonium nitrate, ammonium sulfate, soda lye, caustic soda, sodium hypochlorite

Petrochemical products

Petrochemicals (acetone, process butadiene, ethyl tertiary-butyl ether-ETBE, polymerisation ethylene, process phenol, glycols, terephthalic acid PTA, petrollent, ethylene polyglycols, polymerisation propylene. liquid ethylene oxide), aromatic hydrocarbons (raffinate, paraxylene, benzene, benzene-toluene fraction), polyvinyl chloride (PVC), PVC granulates, PVC-based mixes, PVC sheets, brake and other fluids, toluene

Salt-based products

Lodised salt, pickling salt, salt pellets, salt briquettes, industrial-grade sodium chloride, animal feed salt, waste salt, industrial-grade brine, table salt, salt dust, salt separated

Power generation

Electricity, heat

Other

Fuel cards, LPG and Ad-Blue flow meters, service station control and metering systems, car care cosmetics and chemicals

TOP10 products by share of revenue [PLN] in 2019

50,831 PLNm	DIESEL OIL
24,512 PLNm	GASOLINE
3,756 PLNm	HEAVY FUEL OIL
4,135 PLNm	JET A
2,245 PLNm	LPG
2,176 PLNm	BITUMENS
1,834 PLNm	ETHYLENE
1,893 PLNm	PTA
1,751 PLNm	PROPYLENE
1,355 PLNm	EKOTERM FUEL OIL
1,303 PLNm	POLYPROPYLENE
1,087 PLNm	POLYETHYLENE
1,080 PLNm	BENZENE
992,0 PLNm	POLYVINYL CHLORIDE

Our brands

Service stations

ORLEN
BLISKA
BENZINA
star

Fuels and services available at service stations

efecta ORLEN
verva
Paliwa BAQ MONITOROWANA JAKOŚĆ
O! SHOP ORLEN
ORLEN DRIVE
stop. cafe

Loyalty schemes enabling non-cash purchases at ORLEN service stations

FLOTA
Pay
MIKROFLOTA
BIZNESTANK
OPEN DRIVE

Other commercial brands

petrygo
ekoterm ORLEN
Platinum ORLEN OIL
CANWIL
QGAZ NOWA JAKOŚĆ LPG
orbiton

Vitay loyalty scheme

CLUB VITAY

Our services

- Wholesale and retail sale of motor fuels, fuel storage and logistics.
- End-to-end waste management, ground and water environment monitoring, environmental protection (documentation, etc.), cleaning of industrial units, full range of occupational health and safety and fire safety services.
- End-to-end construction and maintenance of fuel and LPG stations; manufacture and assembly of steel structures.
- Comprehensive real estate management, lease of office, training and conference space.
- Personal and property protection, cash-in-transit services, installation and maintenance of technical security systems, monitoring of alarm systems, fuel transport control, safety audits, facility cleaning services.
- Railway transport, lease of rail cars and end-to-end management of rolling stock.
- Sale of gas pumps, tank monitoring systems, management systems, automation controls; maintenance and repair of equipment associated with service stations and fuel terminals.
- Road transport of fuels and other flammable liquid products.
- Bunkering of ships with marine fuels, port services for ships.
- Power Service – specialist oil service.
- Designing of industrial facilities and solutions.
- Mechanical, electric system and automation services.
- Accounting and HR services.
- Laboratory services.
- Training services, language schools, postgraduate courses, HR consultancy services.
- Catering services.

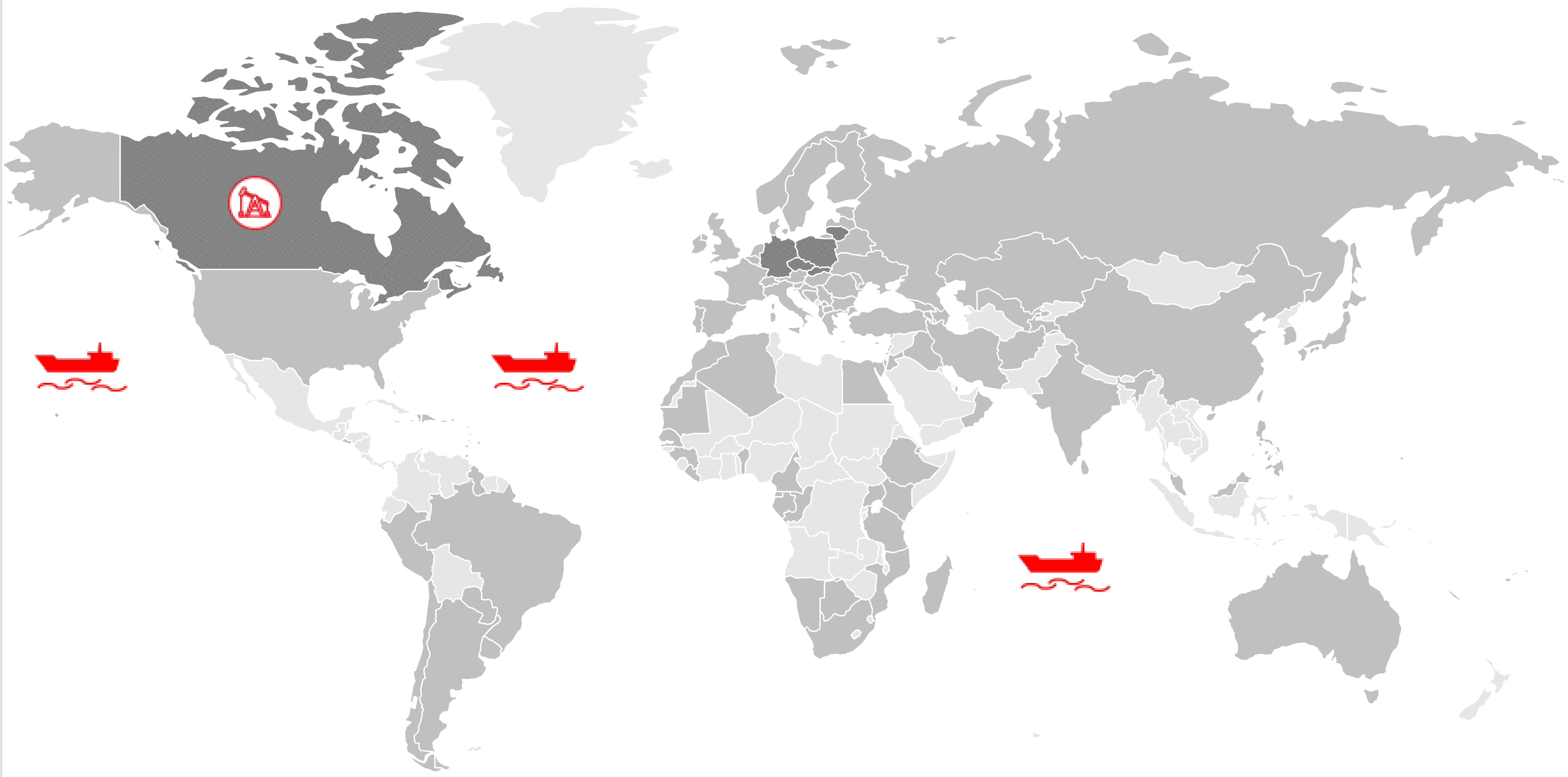
MARKETS

GRI indicators: 102-6

Capitals:

GRI: 102-6

The ORLEN Group has operations in six home markets: Poland, the Czech Republic, Germany, Lithuania, Slovakia, and Canada. Our products are sold in more than 110 countries across 6 continents.



6 continents

over 110 countries

Companies:

Gas stations Mining assets Refinery assets Petrochemical assets Energy assets

The ORLEN Group customer base includes both private customers (such as motorists) and institutional clients representing the chemical, automotive, aviation, power, construction, agricultural, packaging and food production sectors.

Other markets of the Group's operations not included in the map

Market	Product	Companies
Afghanistan	Aviation fuel (Jet A-1)	ORLEN Lietuva
Albania	Unprocessed PVC	Spolana
Albania	Oils	ORLEN Oil, Paramo
Algeria	PVC foam sheets	Anwil
Argentina	Chezacarb	Unipetrol RPA
Argentina	Carbon black	Unipetrol RPA
Armenia	Oils	ORLEN Oil
Aruba	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika
Australia	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika
Austria	Acetone	PKN ORLEN
Austria	Ammonia	Unipetrol RPA
Austria	Anti-caking agents	ORLEN Południe
Austria	Bitumen	ORLEN Asfalt
Austria	Gasoline 95	Unipetrol RPA
Austria	Naphtha	ORLEN Południe
Austria	Bitumen	Unipetrol RPA
Austria	Rigid PVC compounds	Anwil
Austria	Heavy fuel oil	Unipetrol RPA
Austria	Flaked caprolactam	Spolana
Austria	Sulfuric acid	Spolana
Austria	LPG	Unipetrol RPA
Austria	Soda lye	Anwil
Austria	Oils	ORLEN Oil, Paramo
Austria	Diesel oil	Unipetrol RPA
Austria	Bitumen products	Paramo
Austria	PTA	PKN ORLEN
Austria	Ammonium sulfate	Spolana
Austria	Sulfur	Unipetrol RPA
Austria	Polypropylene	Unipetrol RPA
Austria	Polyethylene	Unipetrol RPA
Austria	Ammonia water	Unipetrol RPA
Azerbaijan	Oils	ORLEN Oil
Bahamas	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika

Market	Product	Companies
Belgium	Anti-caking agents	ORLEN Południe
Belgium	Benzene	PKN ORLEN
Belgium	Naphtha	ORLEN Południe
Belgium	Chezacarb	Unipetrol RPA
Belgium	Ethylene	Unipetrol RPA
Belgium	Liquid caprolactam	Spolana
Belgium	Oils	ORLEN Oil, Paramo
Belgium	Paraffins	ORLEN Południe
Belgium	Unprocessed PVC	Anwil, Spolana
Belgium	PTA	PKN ORLEN
Belgium	Carbon black	Unipetrol RPA
Belgium	Polypropylene	Unipetrol RPA
Belgium	Polyethylene	Unipetrol RPA
Benin	Bitumen	ORLEN Asfalt Česka republika
Belarus	LPG	ORLEN Lietuva
Belarus	Oils	ORLEN Oil
Belarus	Unprocessed PVC	Anwil
Belarus	Hard PVC sheets	Anwil
Belarus	PVC foam sheets	Anwil
Belarus	PTA	PKN ORLEN
Belarus	Polypropylene	Unipetrol RPA
Bostwana	Bitumen	ORLEN Asfalt Sp. z o.o.
Bosnia and Herzegovina	Acetone	PKN ORLEN
Bosnia and Herzegovina	Bitumen	Unipetrol RPA
Bosnia and Herzegovina	Heavy fuel oil	Unipetrol RPA
Bosnia and Herzegovina	LPG	Unipetrol RPA
Bosnia and Herzegovina	Oils	Paramo
Bosnia and Herzegovina	Unprocessed PVC	Anwil
Bosnia and Herzegovina	Polypropylene	Unipetrol RPA
Bosnia and Herzegovina	Polyethylene	Unipetrol RPA
Bosnia and Herzegovina	Raffinate	Unipetrol RPA
Brazil	Chezacarb	Unipetrol RPA
Brazil	Carbon black	Unipetrol RPA
Brazil	Polyethylene	Unipetrol RPA
Bulgaria	Acetone	PKN ORLEN
Bulgaria	Anti-caking agents	ORLEN Południe

Market	Product	Companies
Bulgaria	Bitumen	ORLEN Asfalt
Bulgaria	Butane	Unipetrol RPA
Bulgaria	LPG	Unipetrol RPA
Bulgaria	Oils	ORLEN Oil
Bulgaria	Oils	Paramo
Bulgaria	Unprocessed PVC	Spolana
Bulgaria	Polypropylene	Unipetrol RPA
Bulgaria	Polyethylene	Unipetrol RPA
Bulgaria	Raffinate	Unipetrol RPA
Chile	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika
China	Chezacarb	Unipetrol RPA
China	Oils	ORLEN Oil
China	Carbon black	Unipetrol RPA
Croatia	Acetone	PKN ORLEN
Croatia	Bitumen	ORLEN Asfalt
Croatia	Bitumen	Unipetrol RPA
Croatia	Distilled glycerin	ORLEN Południe
Croatia	Industrial grade glycerine	ORLEN Południe
Croatia	Heavy fuel oil	Unipetrol RPA
Croatia	Mixtures	ORLEN Południe
Croatia	Oils	ORLEN Oil, Paramo
Croatia	Unprocessed PVC	Anwil
Croatia	Polypropylene	Unipetrol RPA
Croatia	Polyethylene	Unipetrol RPA
Cyprus	Oils	ORLEN Oil
Cyprus	Polypropylene	Unipetrol RPA
Czech Republic	Acetone	PKN ORLEN
Czech Republic	Ammonia	Unipetrol RPA, Anwil
Czech Republic	Anti-caking agents	ORLEN Południe
Czech Republic	Antiozonants	ORLEN Południe
Czech Republic	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika
Czech Republic	Benzene	PKN ORLEN, Unipetrol RPA
Czech Republic	Gasoline 95	Unipetrol RPA
Czech Republic	Gasoline 98	Unipetrol RPA
Czech Republic	Naphtha	ORLEN Południe

Market	Product	Companies
Czech Republic	Chezacarb	Unipetrol RPA
Czech Republic	Light petroleum distillates	ORLEN Południe
Czech Republic	Middle petroleum distillate	ORLEN Południe
Czech Republic	Vacuum distillates	Unipetrol RPA
Czech Republic	Ethylene	Unipetrol RPA
Czech Republic	C-4 fraction	PKN ORLEN, Unipetrol RPA
Czech Republic	NEV fraction	ORLEN Południe
Czech Republic	Distilled glycerin	ORLEN Południe
Czech Republic	Diethylene glycol	PKN ORLEN
Czech Republic	Monoethylene glycol	PKN ORLEN
Czech Republic	Plasticised PVC compounds	Anwil
Czech Republic	Heavy fuel oil	Unipetrol RPA
Czech Republic	Oil hydroxylates	Unipetrol RPA
Czech Republic	Flaked caprolactam	Spolana
Czech Republic	Naphthalene concentrate	Unipetrol RPA
Czech Republic	Sulfuric acid	Spolana
Czech Republic	Light fuel oil	Unipetrol RPA
Czech Republic	LPG	Unipetrol RPA
Czech Republic	Hydrochloric acid	Spolana
Czech Republic	Soda lye	Anwil, Spolana
Czech Republic	Mixtures	ORLEN Południe
Czech Republic	MTBE	Unipetrol RPA
Czech Republic	Naphthalene	Unipetrol RPA
Czech Republic	Oils	ORLEN Oil
Czech Republic	Diesel oil	Unipetrol RPA
Czech Republic	Arctic diesel oil	Unipetrol RPA
Czech Republic	Oleum	Spolana
Czech Republic	Orlesol	ORLEN Południe
Czech Republic	Unprocessed PVC	Anwil, Spolana
Czech Republic	Propylene	PKN ORLEN, Unipetrol RPA
Czech Republic	Carbon black	Unipetrol RPA
Czech Republic	Calcium ammonium nitrate	Anwil
Czech Republic	Ammonium sulfate	Spolana
Czech Republic	Liquid sulfur	PKN ORLEN, Unipetrol RPA
Czech Republic	Ammonia water	Unipetrol RPA

Market	Product	Companies
Czech Republic	Waxes	ORLEN Południe

Market	Product	Companies
Czech Republic	Aviation fuel (Jet A-1)	Unipetrol RPA
Czech Republic	Polypropylene	Unipetrol RPA
Czech Republic	Polyethylene	Unipetrol RPA
Denmark	Acetone	PKN ORLEN
Denmark	Plasticised PVC compounds	Anwil
Denmark	Soda lye	Anwil
Denmark	Oils	ORLEN Oil, Paramo
Denmark	Calcium ammonium nitrate	Anwil
Denmark	Industrial-grade sodium chloride	IKS Solino
Denmark	Polyethylene	Unipetrol RPA
Denmark	Salt pellets	IKS Solino
Dominican Republic	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika
Djibouti	Bitumen	ORLEN Asfalt Česka republika
Egypt	Unprocessed PVC	Spolana
Egypt	PTA	PKN ORLEN
Estonia	Acetone	PKN ORLEN
Estonia	Bitumen	ORLEN Asfalt
Estonia	Gasoline 95	ORLEN Lietuva
Estonia	Gasoline 98	ORLEN Lietuva
Estonia	Bitumen	ORLEN Lietuva
Estonia	Rigid PVC compounds	Anwil
Estonia	LPG	ORLEN Lietuva
Estonia	Soda lye	Anwil
Estonia	Oils	ORLEN Oil, Paramo
Estonia	Diesel oil	ORLEN Lietuva
Estonia	Arctic diesel oil	ORLEN Lietuva
Estonia	Paraffins	ORLEN Południe
Estonia	Aviation fuel (Jet A-1)	ORLEN Lietuva
Estonia	Polypropylene	Unipetrol RPA
Estonia	Polyethylene	Unipetrol RPA
Estonia	Bitumen products	Paramo
Estonia	Salt pellets	IKS Solino
Ethiopia	Bitumen	ORLEN Asfalt
Philippines	Bitumen	ORLEN Asfalt Česka republika

Market	Product	Companies
Finland	Chezacarb	Unipetrol RPA
Finland	Soda lye	Anwil
Finland	Oils	ORLEN Oil, Paramo
Finland	Unprocessed PVC	Anwil, Spolana
Finland	Carbon black	Unipetrol RPA
Finland	Polypropylene	Unipetrol RPA
Finland	Polyethylene	Unipetrol RPA
Finland	Bitumen products	Paramo
Finland	Salt pellets	IKS Solino
Fiji	Bitumen	ORLEN Asfalt Sp. z o.o.
France	Anti-caking agents	ORLEN Południe
France	Bitumen	ORLEN Asfalt
France	Ethylene	Unipetrol RPA
France	Plasticised PVC compounds	Anwil
France	Soda lye	Anwil
France	Oils	ORLEN Oil, Paramo
France	Unprocessed PVC	Spolana
France	PTA	PKN ORLEN
France	Calcium ammonium nitrate	Anwil
France	Ammonium sulfate	Spolana
France	Potassium sulfate	ORLEN Południe
France	Polypropylene	Unipetrol RPA
France	Oils	ORLEN Oil
France	Polyethylene	Unipetrol RPA
Gabon	Bitumen	ORLEN Asfalt
Greece	Oils	ORLEN Oil
Greece	Unprocessed PVC	Spolana
Greece	Polyethylene	Unipetrol RPA
Grenada	Bitumen	ORLEN Asfalt Česka republika
Georgia	Oils	ORLEN Oil
Guinea	Bitumen	ORLEN Asfalt Česka republika
Equatorial Guinea	Bitumen	ORLEN Asfalt Česka republika
Guyana	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika
Haiti	Bitumen	ORLEN Asfalt Česka republika
Spain	Chezacarb	Unipetrol RPA

Market	Product	Companies
Spain	Flaked caprolactam	Spolana
Spain	Oils	ORLEN Oil, Paramo
Spain	Unprocessed PVC	Spolana
Spain	Carbon black	Unipetrol RPA
Spain	Polypropylene	Unipetrol RPA
Spain	Polyethylene	Unipetrol RPA
Netherlands	Acetone	PKN ORLEN
Netherlands	Anti-caking agents	ORLEN Południe
Netherlands	Benzene	PKN ORLEN
Netherlands	Naphtha	ORLEN Południe
Netherlands	Ethylene	Unipetrol RPA
Netherlands	Heavy fuel oil	Unipetrol RPA
Netherlands	Liquid caprolactam	Spolana
Netherlands	Mixtures	ORLEN Południe
Netherlands	Oils	ORLEN Oil, Paramo
Netherlands	Paraffins	ORLEN Południe
Netherlands	Unprocessed PVC	Anwil, Spolana
Netherlands	PTA	PKN ORLEN
Netherlands	Polypropylene	Unipetrol RPA
Netherlands	Polyethylene	Unipetrol RPA
Netherlands	Low-sulfur heavy fuel oil	Unipetrol RPA
India	Oils	Paramo
India	PTA	PKN ORLEN
India	Unprocessed PVC	Anwil
Iraq	Oils	ORLEN Oil, Paramo
Iran	Flaked caprolactam	Spolana
Ireland	Oils	ORLEN Oil
Ireland	Hard PVC sheets	Anwil
Ireland	Polypropylene	Unipetrol RPA
Ireland	Polyethylene	Unipetrol RPA
Israel	Oils	ORLEN Oil
Japan	Chezacarb	Unipetrol RPA
Japan	Carbon black	Unipetrol RPA
Jordan	Oils	ORLEN Oil
Cameroon	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika

Market	Product	Companies
Canada	Hydrocarbons	ORLEN Upstream
Qatar	Bitumen	ORLEN Asfalt
Kazakhstan	Oils	ORLEN Oil
Kenya	Bitumen	ORLEN Asfalt Česka republika
Congo	Bitumen	ORLEN Asfalt Česka republika
South Korea	Chezacarb	Unipetrol RPA
South Korea	Carbon black	Unipetrol RPA
Kosovo	Oils	Paramo
Lebanon	Oils	ORLEN Oil
Liberia	Oils	ORLEN Oil
Lithuania	Acetone	PKN ORLEN
Lithuania	Anti-caking agents	ORLEN Południe
Lithuania	Bitumen	ORLEN Asfalt
Lithuania	Gasoline 93.5	ORLEN Lietuva
Lithuania	Gasoline 95	ORLEN Lietuva
Lithuania	Gasoline 98	ORLEN Lietuva
Lithuania	Bitumen	ORLEN Lietuva
Lithuania	Polymer modified bitumen (PMB)	ORLEN Lietuva
Lithuania	Distilled glycerin	ORLEN Południe
Lithuania	Industrial grade glycerine	ORLEN Południe
Lithuania	Diethylene glycol	PKN ORLEN
Lithuania	Monoethylene glycol	PKN ORLEN
Lithuania	Plasticised PVC compounds	Anwil
Lithuania	Rigid PVC compounds	Anwil
Lithuania	LPG	ORLEN Lietuva
Lithuania	Soda lye	Anwil
Lithuania	Marine diesel oil (0.1%S)	ORLEN Lietuva
Lithuania	Kerosene	Unipetrol RPA
Lithuania	Oils	ORLEN Oil, Paramo
Lithuania	Diesel oil	ORLEN Lietuva
Lithuania	Arctic diesel oil	ORLEN Lietuva
Lithuania	Orlesol	ORLEN Południe
Lithuania	Unprocessed PVC	Anwil, Spolana
Lithuania	PVC foam sheets	Anwil
Lithuania	PTA	PKN ORLEN
Lithuania	Prilled sulfur	ORLEN Lietuva

Market	Product	Companies
Lithuania	Salt pellets	IKS Solino
Lithuania	Aviation fuel (Jet A-1)	ORLEN Lietuva
Lithuania	Polypropylene	Unipetrol RPA
Lithuania	Polyethylene	Unipetrol RPA
Lithuania	Sulfur	ORLEN Lietuva
Luxembourg	Polypropylene	Unipetrol RPA
Latvia	Gasoline 93.5	ORLEN Lietuva
Latvia	Gasoline 95	ORLEN Lietuva
Latvia	Gasoline 98	ORLEN Lietuva
Latvia	Bitumen	ORLEN Lietuva
Latvia	Polymer modified bitumen (PMB)	ORLEN Lietuva
Latvia	Distilled glycerin	ORLEN Południe
Latvia	Oils	ORLEN Oil, Paramo
Latvia	Diesel oil	ORLEN Lietuva
Latvia	Arctic diesel oil	ORLEN Lietuva
Latvia	Aviation fuel (Jet A-1)	ORLEN Lietuva
Latvia	Acetone	PKN ORLEN
Latvia	Bitumen	ORLEN Asfalt
Latvia	Rigid PVC compounds	Anwil
Latvia	LPG	ORLEN Lietuva
Latvia	Orlesol	ORLEN Południe
Latvia	Polyethylene	Unipetrol RPA
Madagascar	Anti-caking agents	ORLEN Południe
Malaysia	Oils	ORLEN Oil
Macedonia	Polyethylene	Unipetrol RPA
Macedonia	Unprocessed PVC	Anwil
Morocco	Bitumen	ORLEN Asfalt
Martinique	Bitumen	ORLEN Asfalt Česka republika
Macedonia	Heavy fuel oil	Unipetrol RPA
Macedonia	Polyethylene	Unipetrol RPA
Mauritania	Bitumen	ORLEN Asfalt Česka republika
Moldova	Gasoline 95	ORLEN Lietuva
Moldova	Gasoline 98	ORLEN Lietuva
Moldova	Oils	ORLEN Oil
Moldova	Diesel oil	ORLEN Lietuva
Moldova	Unprocessed PVC	Anwil

Market	Product	Companies
Moldova	Polyethylene	Unipetrol RPA
Mozambique	Bitumen	ORLEN Asfalt
Namibia	Bitumen	ORLEN Asfalt
Germany	Acetone	PKN ORLEN
Germany	Ammonia	Anwil, Unipetrol RPA
Germany	Antiozonants	ORLEN Południe
Germany	Anti-caking agents	ORLEN Południe
Germany	Bitumen	ORLEN Asfalt
Germany	Benzene	PKN ORLEN, Unipetrol RPA
Germany	Gasoline 95	ORLEN Deutschland, Unipetrol RPA
Germany	Gasoline 98	ORLEN Deutschland
Germany	Bitumen	Unipetrol RPA
Germany	Butane	Unipetrol RPA
Germany	Chezacarb	Unipetrol RPA
Germany	Vacuum distillates	Unipetrol RPA
Germany	Ethylene	Unipetrol RPA
Germany	BTX fraction	Unipetrol RPA
Germany	C10 fraction	Unipetrol RPA
Germany	Distilled glycerin	ORLEN Południe
Germany	Industrial grade glycerine	ORLEN Południe
Germany	Diethylene glycol	PKN ORLEN
Germany	Monoethylene glycol	PKN ORLEN
Germany	Triethylene glycol	PKN ORLEN
Germany	Plasticised PVC compounds	Anwil
Germany	Granulated salt	IKS Solino
Germany	Rigid PVC compounds	Anwil
Germany	HCVD	Unipetrol RPA
Germany	Heavy fuel oil	Unipetrol RPA
Germany	Liquid caprolactam	Spolana
Germany	Flaked caprolactam	Spolana
Germany	Sulfuric acid	Spolana
Germany	Hydrochloric acid	Anwil
Germany	Light fuel oil	ORLEN Deutschland, Unipetrol RPA
Germany	LPG	Unipetrol RPA
Germany	Soda lye	Anwil

Market	Product	Companies
Germany	Kerosene	Unipetrol RPA
Germany	Oils	ORLEN Oil, Paramo
Germany	Diesel oil	ORLEN Deutschland, Unipetrol RPA
Germany	Pyrolytic oil	Unipetrol RPA
Germany	Oleum	Spolana
Germany	Unprocessed PVC	Anwil, Spolana
Germany	Bitumen products	Paramo
Germany	Propylene	PKN ORLEN, Unipetrol RPA
Germany	PTA	PKN ORLEN
Germany	Reformate	Unipetrol RPA
Germany	Carbon black	Unipetrol RPA
Germany	Calcium ammonium nitrate	Anwil
Germany	Ammonium sulfate	Spolana
Germany	Sulfur	Unipetrol RPA
Germany	Ammonia water	Unipetrol RPA
Germany	Paraffins	ORLEN Południe
Germany	Polypropylene	Unipetrol RPA
Germany	Polyethylene	Unipetrol RPA
Germany	Industrial-grade sodium chloride	IKS Solino
Germany	Table salt	IKS Solino
Germany	Salt pellets	IKS Solino
Norway	Soda lye	Anwil
Norway	Oils	ORLEN Oil
Norway	Unprocessed PVC	Anwil
Norway	Polyethylene	Unipetrol RPA
Norway	Table salt	IKS Solino
Norway	Salt pellets	IKS Solino
New Caledonia	Bitumen	ORLEN Asfalt
Oman	Oils	ORLEN Oil
Paraguay	Bitumen	ORLEN Asfalt Sp. z o.o., ORLEN Asfalt Česka republika
Peru	Flaked caprolactam	Spolana
Peru	Oils	ORLEN Oil
French Polynesia	Bitumen	ORLEN Asfalt Česka republika
Poland	Acetone	PKN ORLEN

Market	Product	Companies
Poland	Antiozonants	ORLEN Południe
Poland	Liquid argon	Anwil
Poland	Bitumen	ORLEN Asfalt Sp. z o.o.
Poland	Liquid nitrogen	PKN ORLEN, Anwil
Poland	Gaseous nitrogen	PKN ORLEN, Anwil
Poland	Ammonium nitrate	Anwil
Poland	Benzene	PKN ORLEN
Poland	Gasoline 95	PKN ORLEN, ORLEN Lietuva, Unipetrol RPA
Poland	Gasoline 98	PKN ORLEN
Poland	Naphtha	ORLEN Lietuva
Poland	FCC gasoline	ORLEN Lietuva
Poland	Aviation gasoline (Avgas)	PKN ORLEN
Poland	Naphtha	ORLEN Południe
Poland	BIO100	PKN ORLEN
Poland	Bitumen	PKN ORLEN, ORLEN Lietuva, Unipetrol RPA
Poland	Polymer modified bitumen (PMB)	PKN ORLEN
Poland	Butadiene	PKN ORLEN
Poland	Butane	Unipetrol RPA
Poland	Chezacarb	Unipetrol RPA
Poland	Sodium chloride	Anwil
Poland	Heavy fuel oil	PKN ORLEN, Unipetrol RPA
Poland	Glycerin distillate	ORLEN Południe
Poland	Light petroleum distillates	ORLEN Południe
Poland	Middle petroleum distillate	ORLEN Południe
Poland	Vacuum distillates	Unipetrol RPA
Poland	Elasticol TDAE	PKN ORLEN
Poland	Ethylene	PKN ORLEN
Poland	Phenol	PKN ORLEN
Poland	NEV fraction	ORLEN Południe
Poland	Gas	ORLEN Upstream
Poland	Distilled glycerin	ORLEN Południe
Poland	Industrial grade glycerine	ORLEN Południe
Poland	Diethylene glycol	PKN ORLEN
Poland	Monoethylene glycol	PKN ORLEN

Market	Product	Companies
Poland	Plasticised PVC compounds	Anwil
Poland	Granulated salt	IKS Solino
Poland	Rigid PVC compounds	Anwil
Poland	Hexane	PKN ORLEN
Poland	Liquid caprolactam	Spolana
Poland	Heating oil component	ORLEN Lietuva
Poland	Technical-grade nitric acid	Anwil
Poland	Hydrochloric acid	Anwil
Poland	LPG	PKN ORLEN, ORLEN Lietuva, Unipetrol RPA
Poland	Soda lye	Anwil
Poland	Unleaded rigid dry blends	Anwil
Poland	Unleaded foam dry blends	Anwil
Poland	Mixtures	ORLEN Południe
Poland	Kerosene	Unipetrol RPA
Poland	Diesel oil	PKN ORLEN, ORLEN Lietuva, Unipetrol RPA
Poland	Arctic diesel oil	PKN ORLEN
Poland	Ekoterm fuel oil	PKN ORLEN, ORLEN Południe
Poland	Heavy fuel oil	ORLEN Południe
Poland	Eko-A fuel oil	ORLEN Południe
Poland	Paraffin oil	ORLEN Południe
Poland	Pyrolytic oil	ORLEN Południe
Poland	Oleum	Spolana
Poland	Oils	Paramo
Poland	Oligomerate	ORLEN Lietuva
Poland	Orlesol	ORLEN Południe
Poland	Aviation fuel (Jet A-1)	PKN ORLEN, ORLEN Lietuva, Unipetrol RPA
Poland	Aviation turbine fuel NATO F-34	PKN ORLEN
Poland	F-75 marine fuel	ORLEN Południe
Poland	Paraffins	ORLEN Południe
Poland	Unprocessed PVC	Anwil, Spolana
Poland	Hard PVC sheets	Anwil
Poland	PVC foam sheets	Anwil
Poland	Sodium hypochlorite	Anwil

Market	Product	Companies
Poland	Instrument air	PKN ORLEN, Anwil
Poland	Industrial air	PKN ORLEN, Anwil
Poland	Vacuum residue	ORLEN Południe
Poland	Bitumen products	Paramo
Poland	Propylene	PKN ORLEN, Unipetrol RPA, ORLEN Lietuva
Poland	PTA	PKN ORLEN
Poland	Aromatics extraction raffinate	PKN ORLEN
Poland	Reformate	Unipetrol RPA
Poland	Carbon black	Unipetrol RPA
Poland	Ammonium nitrate	Anwil
Poland	Calcium ammonium nitrate	Anwil
Poland	Ammonium sulfate	Spolana
Poland	Potassium sulfate	ORLEN Południe
Poland	Liquid sulfur	PKN ORLEN
Poland	Sopastock	ORLEN Południe
Poland	Brine	IKS Solino
Poland	Pickling salt	IKS Solino
Poland	Animal feed salt	IKS Solino
Poland	Industrial-grade sodium chloride	IKS Solino
Poland	Table salt	IKS Solino
Poland	SRGO	Unipetrol RPA
Poland	Salt pellets	IKS Solino
Poland	Telogen	PKN ORLEN
Poland	Liquid oxygen	PKN ORLEN, Anwil
Poland	Gaseous oxygen	PKN ORLEN
Poland	Ethylene oxide	PKN ORLEN
Poland	Ammonia water	Anwil, Unipetrol RPA
Poland	Waxes	ORLEN Południe
Poland	Polypropylene	Unipetrol RPA
Poland	Polyethylene	Unipetrol RPA
Puerto Rico	Bitumen	ORLEN Asfalt Česka republika
Portugal	Oils	ORLEN Oil, Paramo
Portugal	Unprocessed PVC	Anwil
Portugal	PVC foam sheets	Anwil
Russia	Anti-caking agents	ORLEN Południe

Market	Product	Companies
Russia	Industrial grade glycerine	ORLEN Południe
Russia	Soda lye	Anwil
Russia	Oils	Paramo
Russia	Unprocessed PVC	Anwil
Russia	Polyethylene	Unipetrol RPA
Russia	PTA	PKN ORLEN
Romania	Distilled glycerin	ORLEN Południe
South Africa	Polyethylene	Unipetrol RPA
Romania	Acetone	PKN ORLEN
Romania	Anti-caking agents	ORLEN Południe
Romania	Bitumen	ORLEN Asfalt
Romania	Diethylene glycol	PKN ORLEN
Romania	Monoethylene glycol	PKN ORLEN
Romania	Sulfuric acid	Spolana
Romania	Oils	ORLEN Oil, Paramo
Romania	Unprocessed PVC	Anwil, Spolana
Romania	PVC foam sheets	Anwil
Romania	PTA	PKN ORLEN
Romania	Polypropylene	Unipetrol RPA
Romania	Polyethylene	Unipetrol RPA
Saint Lucia	Bitumen	ORLEN Asfalt Česka republika
El Salvador	Bitumen	ORLEN Asfalt Česka republika
Samoa	Bitumen	ORLEN Asfalt
Senegal	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika
Serbia	Acetone	PKN ORLEN
Serbia	Anti-caking agents	ORLEN Południe
Serbia	Butane	Unipetrol RPA
Serbia	Plasticised PVC compounds	Anwil
Serbia	LPG	Unipetrol RPA
Serbia	Oils	ORLEN Oil, Paramo
Serbia	Unprocessed PVC	Spolana
Serbia	PVC foam sheets	Anwil
Serbia	Polypropylene	Unipetrol RPA
Serbia	Polyethylene	Unipetrol RPA
Serbia	Raffinate	Unipetrol RPA

Market	Product	Companies
Slovakia	Acetone	PKN ORLEN
Slovakia	Antiozonants	ORLEN Południe
Slovakia	Ammonia	Anwil, Unipetrol
Slovakia	Anti-caking agents	ORLEN Południe
Slovakia	Bitumen	ORLEN Asfalt
Slovakia	Gasoline 95	Unipetrol RPA
Slovakia	Gasoline 98	Unipetrol RPA
Slovakia	Bitumen	Unipetrol RPA
Slovakia	Chezacarb	Unipetrol RPA
Slovakia	Ethylene	Unipetrol RPA
Slovakia	Distilled glycerin	ORLEN Południe
Slovakia	Diethylene glycol	PKN ORLEN
Slovakia	Monoethylene glycol	PKN ORLEN
Slovakia	Plasticised PVC compounds	Anwil
Slovakia	Flaked caprolactam	Spolana
Slovakia	Sulfuric acid	Spolana
Slovakia	Light fuel oil	Unipetrol RPA
Slovakia	LPG	Unipetrol RPA
Slovakia	Soda lye	Anwil
Slovakia	Mixtures	ORLEN Południe
Slovakia	Oils	ORLEN Oil, Paramo
Slovakia	Diesel oil	Unipetrol RPA
Slovakia	Arctic diesel oil	Unipetrol RPA
Slovakia	Orlesol	ORLEN Południe
Slovakia	Unprocessed PVC	Spolana
Slovakia	Propylene	Unipetrol RPA
Slovakia	Raffinate	Unipetrol RPA
Slovakia	Carbon black	Unipetrol RPA
Slovakia	Ammonium sulfate	Spolana
Slovakia	Ammonia water	Unipetrol RPA
Slovakia	Polypropylene	Unipetrol RPA
Slovakia	Polyethylene	Unipetrol RPA
Slovakia	Bitumen products	Paramo
Slovenia	Acetone	PKN ORLEN
Slovenia	Ammonia	Unipetrol RPA
Slovenia	Bitumen	ORLEN Asfalt

Market	Product	Companies
Slovenia	Bitumen	Unipetrol RPA
Slovenia	Liquid caprolactam	Spolana
Slovenia	Mixtures	ORLEN Południe
Slovenia	Oils	ORLEN Oil, Paramo
Slovenia	Unprocessed PVC	Spolana
Slovenia	PTA	PKN ORLEN
Slovenia	Polypropylene	Unipetrol RPA
Slovenia	Polyethylene	Unipetrol RPA
Slovenia	Ammonia water	Unipetrol RPA
Saint Kitts and Nevis	Bitumen	ORLEN Asfalt
Saint Lucia	Bitumen	ORLEN Asfalt
Sri Lanka	Chezacarb	Unipetrol RPA
Sri Lanka	Carbon black	Unipetrol RPA
Switzerland	Bitumen	ORLEN Asfalt
Switzerland	Bitumen	Unipetrol RPA
Switzerland	Chezacarb	Unipetrol RPA
Switzerland	Liquid caprolactam	Spolana
Switzerland	Flaked caprolactam	Spolana
Switzerland	Oils	ORLEN Oil, Paramo
Switzerland	PVC foam sheets	Anwil
Switzerland	PTA	PKN ORLEN
Switzerland	Carbon black	Unipetrol RPA
Switzerland	Polypropylene	Unipetrol RPA
Switzerland	Polyethylene	Unipetrol RPA
Sweden	Bitumen	ORLEN Lietuva
Sweden	Ethylene	Unipetrol RPA
Sweden	Plasticised PVC compounds	Anwil
Sweden	Soda lye	Anwil
Sweden	Oils	ORLEN Oil
Sweden	Unprocessed PVC	Anwil
Sweden	Calcium ammonium nitrate	Anwil
Sweden	Salt pellets	IKS Solino
Sweden	Polypropylene	Unipetrol RPA
Sweden	Polyethylene	Unipetrol RPA
Tajikistan	Oils	ORLEN Oil
Taiwan	Oils	ORLEN Oil

Market	Product	Companies
Tanzania	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika
Trinidad and Tobago	Bitumen	ORLEN Asfalt
Turkey	Antiozonants	ORLEN Południe
Turkey	Flaked caprolactam	Spolana
Turkey	Oils	ORLEN Oil
Turkey	Unprocessed PVC	Anwil, Spolana
Turkey	PTA	PKN ORLEN
Turkey	Carbon black	Unipetrol RPA
Turkey	Polypropylene	Unipetrol RPA
Turkey	Polyethylene	Unipetrol RPA
Uganda	Bitumen	ORLEN Asfalt
Ukraine	Acetone	PKN ORLEN
Ukraine	Bitumen	ORLEN Asfalt
Ukraine	Gasoline 95	ORLEN Lietuva
Ukraine	Gasoline 98	ORLEN Lietuva
Ukraine	Industrial grade glycerine	ORLEN Lietuva
Ukraine	Diethylene glycol	PKN ORLEN
Ukraine	Rigid PVC compounds	Anwil
Ukraine	Chezacarb	Unipetrol RPA
Ukraine	LPG	ORLEN Lietuva
Ukraine	Oils	ORLEN Oil, Paramo
Ukraine	Diesel oil	ORLEN Oil, ORLEN Lietuva
Ukraine	Arctic diesel oil	ORLEN Lietuva
Ukraine	Orlesol	ORLEN Południe
Ukraine	Aviation fuel (Jet A-1)	ORLEN Lietuva
Ukraine	Unprocessed PVC	Anwil
Ukraine	Hard PVC sheets	Anwil
Ukraine	PVC foam sheets	Anwil
Ukraine	PTA	PKN ORLEN
Ukraine	Carbon black	Unipetrol RPA
Ukraine	Ammonium nitrate	Anwil
Ukraine	Prilled sulfur	ORLEN Lietuva
Ukraine	Polypropylene	Unipetrol RPA
Ukraine	Polyethylene	Unipetrol RPA
Ukraine	Salt pellets	IKS Solino
Uruguay	Unprocessed PVC	Spolana

Market	Product	Companies
US	Bitumen	ORLEN Asfalt
US	Chezacarb	Unipetrol RPA
US	Carbon black	Unipetrol RPA
US	Polypropylene	Unipetrol RPA
Uzbekistan	Oils	ORLEN Oil
Vatican	Bitumen	ORLEN Asfalt
Hungary	Acetone	PKN ORLEN
Hungary	Anti-caking agents	ORLEN Południe
Hungary	Bitumen	ORLEN Asfalt
Hungary	Gasoline 95	Unipetrol RPA
Hungary	Gasoline 98	Unipetrol RPA
Hungary	Naphtha	ORLEN Południe
Hungary	Butane	Unipetrol RPA
Hungary	Monoethylene glycol	PKN ORLEN
Hungary	Heavy fuel oil	Unipetrol RPA
Hungary	Sulfuric acid	Spolana
Hungary	LPG	Unipetrol RPA
Hungary	Soda lye	Anwil
Hungary	Mixtures	ORLEN Południe
Hungary	Oils	ORLEN Oil, Paramo
Hungary	Diesel oil	Unipetrol RPA
Hungary	Pyrolytic oil	Unipetrol RPA
Hungary	Paraffins	ORLEN Południe
Hungary	Unprocessed PVC	Anwil, Spolana
Hungary	Ammonium sulfate	Spolana
Hungary	Polypropylene	Unipetrol RPA
Hungary	Polyethylene	Unipetrol RPA
Hungary	Bitumen products	Paramo
UK	Ethylene	Unipetrol RPA
UK	Soda lye	Anwil
UK	Mixtures	ORLEN Południe
UK	Oils	ORLEN Oil, Paramo
UK	Polypropylene	Unipetrol RPA
UK	Polyethylene	Unipetrol RPA
Italy	Acetone	PKN ORLEN
Italy	Ammonia	Unipetrol RPA

Market	Product	Companies
Italy	Ethylene	Unipetrol RPA
Italy	Distilled glycerin	ORLEN Południe
Italy	Industrial grade glycerine	ORLEN Południe
Italy	Liquid caprolactam	Spolana
Italy	Flaked caprolactam	Spolana
Italy	Mixtures	ORLEN Południe
Italy	Oils	ORLEN Oil, Paramo
Italy	Unprocessed PVC	Anwil, Spolana
Italy	PTA	PKN ORLEN
Italy	Potassium sulfate	ORLEN Południe
Italy	Ammonia water	Unipetrol RPA
Italy	Polypropylene	Unipetrol RPA
Italy	Polyethylene	Unipetrol RPA
US Virgin Islands	Bitumen	ORLEN Asfalt, ORLEN Asfalt Česka republika
Marshall Islands	Bitumen	ORLEN Asfalt Česka republika
Seaborne trade	Heavy fuel oil, VGO, kerosene	PKN ORLEN
	Gasoline 92 (US), Diesel oil, bitumen, LPG, heavy fuel oil, isomerate, Sulfur, propylene, aviation Fuel JET A-1, MGO, MTBE	ORLEN Lietuva

FINANCIAL CAPITAL

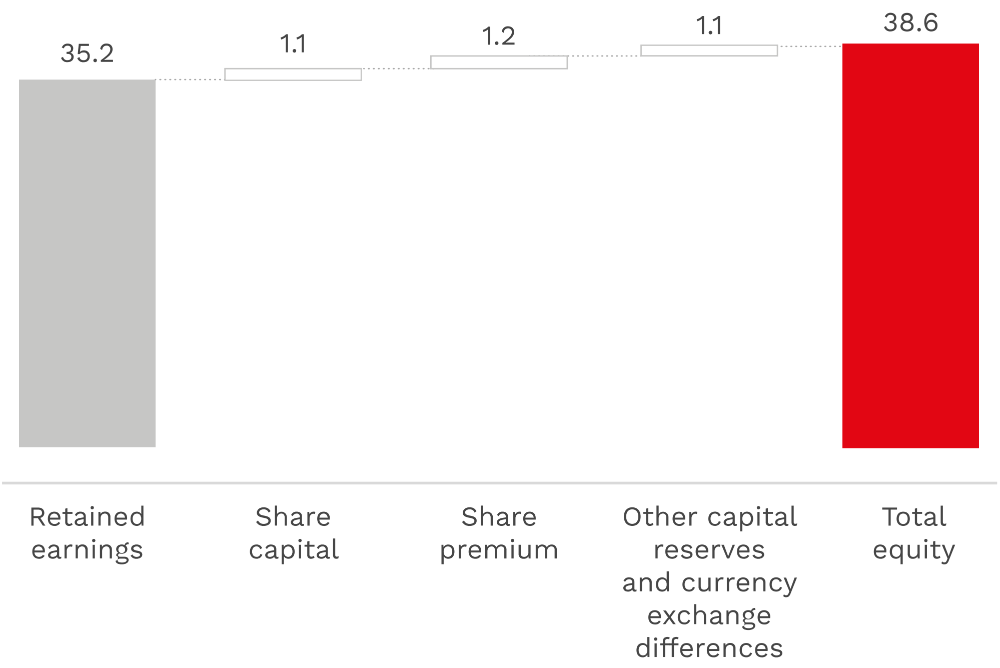
Capitals:

Financial capital represents the available financial resources held currently by the ORLEN Group, obtained from internal or external sources and generated as part of our business.

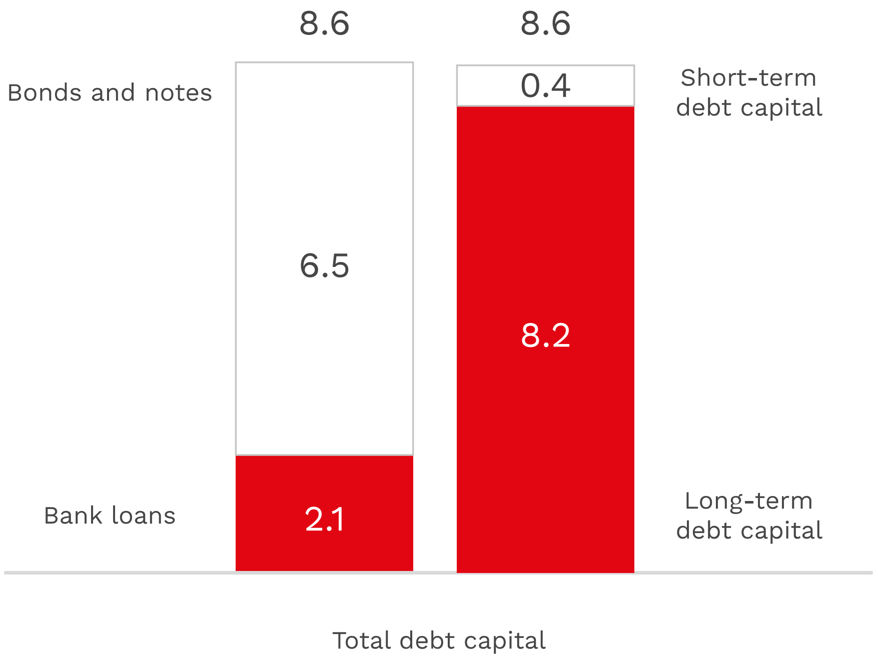
Key facts about the capital

Our financial capital includes equity and debt capital, mainly in the form of borrowings.

ORLEN Group's equity
[PLN bn]



ORLEN Group's debt capital
[PLN bn]



39,277

PLNm

Non-current assets

32,363

PLNm

Property, plant and equipment (power generation assets)

5,457

PLNm

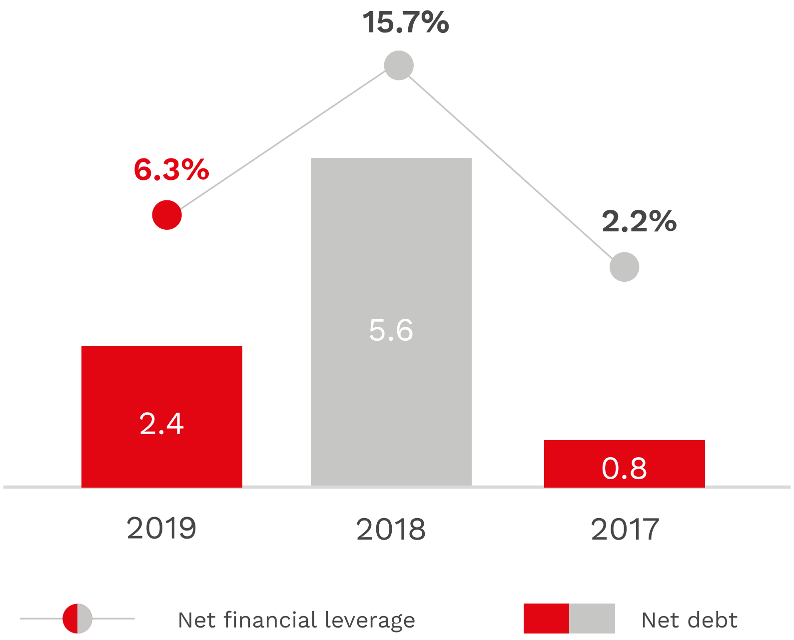
CAPEX (increase in non-current assets)

The capital management

- Financial stability maintained through measures optimising expenditure and asset structure
- Financial ratios, especially leverage, maintained at safe target levels
- Steps taken to strengthen the ORLEN Group's long-term competitive edge both in Poland and abroad
- Strong focus on developing existing assets and advancing innovation, which is to help the ORLEN Group preserve a strong competitive advantage in the extremely dynamic environment
- Financial stability underpins the ORLEN Group's ambitious acquisitions drive, including planned acquisition of Grupa LOTOS and successful tender offer for ENERGA Group shares.

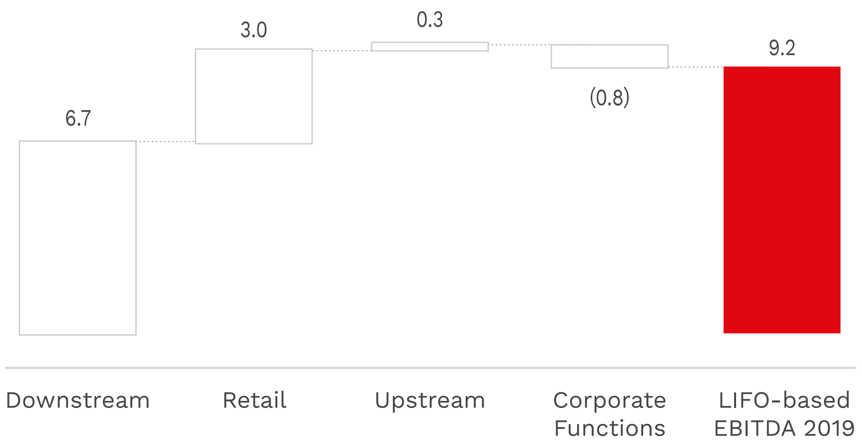
Outcomes

Net debt in 2019 was reduced by nearly PLN 3.2bn, to PLN 2.4bn, with the financial leverage of 6.3%, confirming the ORLEN Group's stable financial footing.



- In 2019, **LIFO-based EBITDA**[1] before net reversals of impairment losses on assets, delivered by the ORLEN Group operating segments reached **PLN 9.2bn**.

LIFO-based EBITDA, by operating segment [PLN bn]

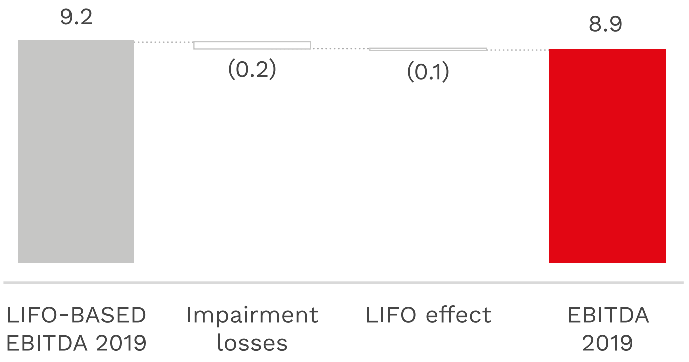


[1] *Earnings before depreciation and amortisation net of the effect of crude price movements on the value of inventories.*

After net effect of reversal of impairment losses on assets, of PLN (0.2)bn, LIFO-based EBITDA was PLN 9.0bn.

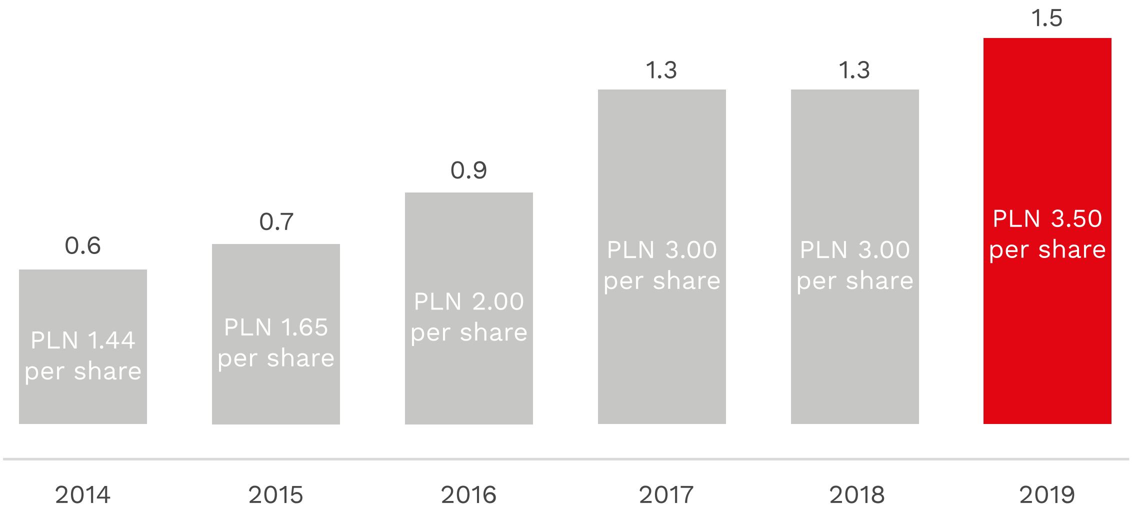
With the negative effect of changes in crude oil prices on the valuation of inventories included (PLN (0.1)bn), the ORLEN Group's EBITDA for 2019 came in at PLN 8.9bn.

Effect of impairment losses and inventory write-downs on EBITDA [PLNbn]



The high EBITDA translated into operating cash flows of PLN 9.3bn, enabling ORLEN to allocate PLN (4.4)bn **to investment projects** and **pay dividend** of PLN 1.5bn (PLN 3.5 per share), in line with PKN ORLEN's dividend policy.

Dividend distribution (PLNbn)



How financial capital interacts with other capitals?

The link between financial and production capitals follows directly from the updated strategy for 2019–2022, which provides for expanding and enhancing petrochemical production, entering the low-carbon energy sector in Downstream, consistently growing retail sales, and sustainably developing hydrocarbon E&P operations. The Company's CAPEX budget for 2019–2020 will average PLN 6.8bn annually, an increase of PLN 2.2bn over 2017–2018. Of that amount, PLN 4.9bn has been allocated to Downstream, PLN 0.7bn will be invested in Retail and PLN 0.7bn will be spent on Upstream projects. The target full-year LIFO-based EBITDA for the period will average PLN 10.3bn, up by PLN 1.1bn from 2017– 2018.

Financial capital is a driver of natural capital, enabling ambitious investments and acquisitions in the low-carbon energy sector. In the short term, the construction of offshore wind farms will be completed and green capacities of the Energa Group will be integrated into the Group's asset base. The planned acquisition of Grupa LOTOS is expected to significantly expand the ORLEN Group's new mobility capacities, representing a strategic growth opportunity. A letter of intent was also signed with PESA Bydgoszcz in 2019 on the development of hydrogen powered rail transport.

As at December 31st 2019, the largest item of the ORLEN Group's assets was property, plant and equipment, which increased by PLN 1.0bn, to PLN 32.4bn. In 2019, the ORLEN Group's capital expenditure on property, plant and equipment was PLN 4.1bn, down by PLN (0.1)bn year on year.

For more information on financial capital, see the 'Financial results' section.

PRODUCTION CAPITAL

Capitals:

Our goal is to build a strong multi-utility group capable of successfully competing on global markets and maximising financial stability. Value creation is among the pillars of ORLEN Group's strategy, which in the case of production capital means increased utilisation of petrochemical production capacities, continued integration of refining assets, development of low-emission energy sources, and expansion of the sales network and stronger customer relationships in Retail.The ORLEN Group's property, plant and equipment and intangible assets were valued at more than PLN 32bn as at the end of 2019.

Key facts about the capital

Our Downstream, Retail and E&P assets:

- Six refineries located in Poland, Lithuania and the Czech Republic; total annual oil throughput capacity of more than 35.2m tonnes
- Access to feedstock and product pipelines and sea terminals: 3,700 km-long pipeline network and 39 storage depots and terminals
- Integrated petrochemical and refining assets : Olefins (Płock, Unipetrol), BOP (Płock), metathesis (Płock), PX/PTA (Włocławek), chemicals (Włocławek)
- Power generating units in three countries, including the CHP plant in Płock (415 MWe, 2,150 MWt) – the largest industrial power generating unit in Poland, and state-of-the-art CCGT units in Włocławek and Płock; total capacity of over 1,000 MWe
- Development of low-emission power generation: PKN ORLEN holds a licence to construct a wind farm in the Baltic Sea, with a maximum capacity of 1,200 MWe
- Central Europe's largest retail chain of over 2,800 service stations
- Over 2,000 Stop Cafes and Stop Cafe Bistros at service stations
- Over 60 EV chargers
- Exploration and appraisal assets in Poland and Canada, with 2P oil and gas reserves totalling 197.3 mboe

The capital management

- **We continue efforts to build a multi-utility group and further grow our power generation business.**
  The acquisition of the Energa Group and the planned acquisition of Grupa LOTOS are important steps in this direction. Diversified revenue streams make a company more resilient to market fluctuations and macroeconomic volatility. The creation of such a strong entity would also increase its ability to finance large projects, including offshore wind farms.

- **We invest in petrochemical assets to strengthen the ORLEN Group's position on European markets.**
  A metathesis unit (Płock) and a PPF splitter (Mažeikiai) were placed in commercial operation in 2019. Also, work was continued on the ORLEN Group's strategic Petrochemical Development Programme, under which a Research and Development Centre will be built in 2020. ANWIL started a project to increase fertilizer production capacities.

- **PKN ORLEN is expanding its production assets to enable more efficient use of feedstocks.**
  In 2020, we commenced the construction of a visbreaking unit in Płock with a view to maximising crude conversion. The new unit will increase the yield of light products: gasoline and diesel oil. The plant in Płock is also upgrading its hydrocracker, which will increase diesel output, and modernising a diesel hydrotreater.

- **We invest in low- and zero-carbon energy sources.**
  The Group has commenced a project to build a hydrogen purification unit, which will enable its marketing as a fuel for motor vehicles. PKN ORLEN is also developing technologies to store, transport and distribute hydrogen fuel. A letter of intent was signed with PESA Bydgoszcz in 2019 on the development of hydrogen powered rail transport. The Group works with municipalities (Metropolitan Association of Upper Silesia and Dąbrowa Basin, City of Płock) on the development of zero-emission hydrogen powered public transport service. Its hydrogen capabilities are being expanded – the Group owns hydrogen refuelling infrastructure in Germany and it is set to deploy hydrogen fuelling stations in the Czech Republic this year. The proposed offshore wind project is a response to global trends towards advancing renewable energy and a major contribution to Poland's transition to a low-carbon economy.ORLEN Południe is being transformed into a bio-refinery. At the Trzebinia-based plant, Poland's first unit for the production of eco-friendly propylene glycol has commenced. ORLEN Południe has also signed a contract for the purchase of a licence and front-end engineering design for a 2G bioethanol production unit in Jedlicze.

- **We diversify oil supply sources and secure natural gas supplies.**
  2019 saw a cut in Russian oil supplies delivered over the Druzhba pipeline that lasted 46 days and was the longest such interruption to date. The ORLEN Group was well prepared for that development having consistently implemented its strategy of diversifying crude supply sources. In 2019, the Group built and strengthened relationships with new and existing partners, including in Africa, the US and the Persian Gulf.

- **We consistently leverage our retain potential.**
  We rapidly roll-out the food and store format across the markets, including Poland, where 164 new O!SHOP convenience stores opened, and Germany, where the number of star Connect locations more than doubled. PKN ORLEN's retail network expanded into Slovakia, with ten service stations operating on that market at the end of 2019. A co-branding process began in the second half of 2019, resulting in all service stations bearing the ORLEN brand.

- In the Upstream segment, we consistently pursue our strategy of **focusing on the most promising assets**.

Outcomes

	2019	2018
Downstream		
Crude oil throughput	33.9m tonnes /96% capacity utilisation	33.4m tonnes /95% capacity utilisation
Installed electrical capacity	1,808 Mwe	1,871 Mwe
Installed thermal capacity	6,181 MWt	5,464 MWt
Electricity generation	1.8 Gwe (including over 1GWe from CCGT units in Włocławek and Płock)	1.9 GWe
Retail		
Number of service stations	2,836	2,803
Food stores at services stations	2,421	2,748
Share of fuel sales in home markets[1]	16.50%	16.2%
Upstream		
Total 2P oil and gas reserves	197.3 mboe	210.6 mboe
Average production	18,200 boe/d	18,000 boe/d

1) Closing balance

	2019	2018
Capital expenditure	PLN 5.5bn	PLN 4.3bn
Amortisation	PLN 3.5bn	PLN 2.7bn

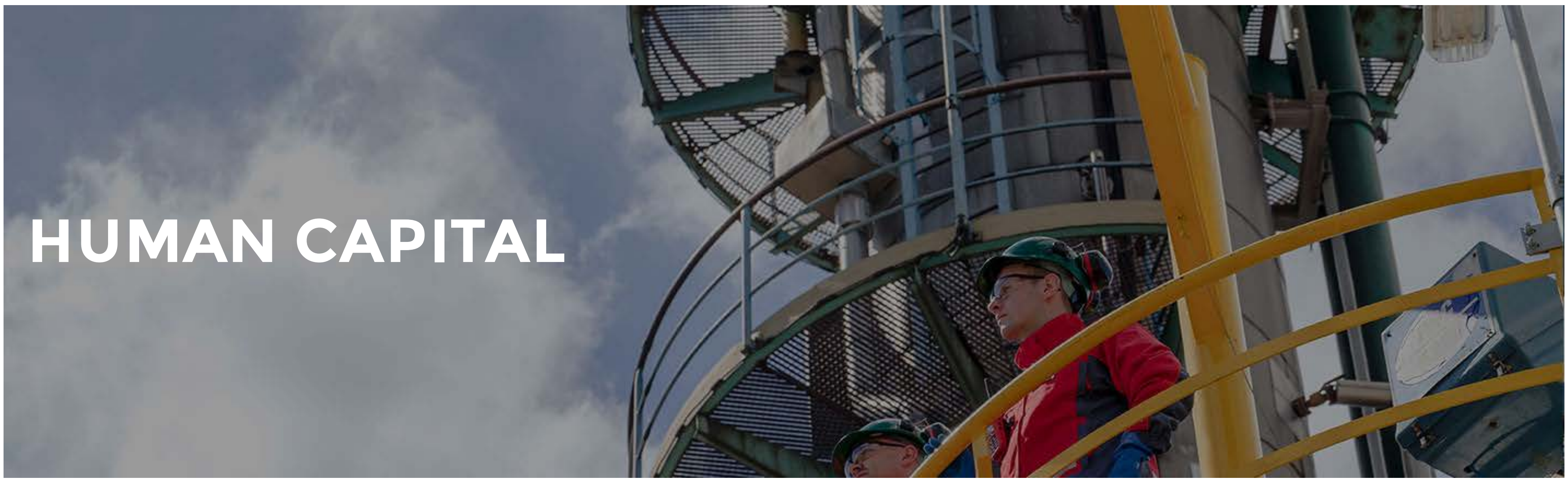
How production capital interacts with other capitals

Capex projects and acquisitions in the pipeline will require large capital outlays. The ORLEN Group spent PLN 5.5bn in capital expenditure in 2019.

The acquisition of the Energa Group and LOTOS Group will bring tangible benefits for employees at these companies. Energa's power and refining staff, who are in extremely short supply on the labour market, will be a valuable addition to the ORLEN Group's team and its human and intellectual capital.By joining a strong and diversified group with an established international presence, they will gain new opportunities for professional development. The construction of our Research and Development Centre in Płock will facilitate development of proprietary innovative technologies and patents in petrochemical, biofuel, bitumen and oil production. The facility will also serve as a modern platform for cooperation between PKN ORLEN and the worlds of science and business.

A strong group of companies will be able to deepen its engagement in social, cultural and sports initiatives in the regions where it operates. Its coordinated CSR policy will deliver greater and more thorough support for local communities. This also means reinforcement of social capital.

By investing in zero- and low-emission energy sources, we reduce our environmental footprint, which, in addition to boosting natural capital, will provide a response to changes in the EU legal environment.



HUMAN CAPITAL

Capitals:

People are one of the key pillars of the ORLEN Group's strategy. We provide fair and friendly working conditions for our employees. Relations with internal Stakeholders and the external business environment are based on integrity, respect and on dialogue, cooperation and involvement of each staff member in building a culture consistent with the Company's core values . Our key goals are to increase employees' skills and qualifications and align their training needs with the implementation of the business strategy and future challenges, ensure the highest standards of workplace safety and zero tolerance for accidents, and to secure future staffing needs, particularly in the context of the global skills mismatch trend.

Key facts about capital

- Over 22,000 employees involved in corporate strategy implementation
- Multinational team in Poland, Czech Republic, Germany, Lithuania and Canada
- Several dozen professions
- Multigenerational workforce
- Former employees with long years of service to ORLEN Group
- Potential employees – professionals and students of technical schools and universities who are at the point of choosing their field of study or future career

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The capital management

- **The business strategy implementation efforts are supported by employee training programmes. Career Development Sessions** introduced in 2019 are based on the assessment of an employee's development needs and business requirements in a given business area.
- We run **programmes** to **support skills identified as important for the development of our business functions in the context of future challenges**, including: a programme to develop advanced analytical skills and a comprehensive programme to develop project management skills.
- We have implemented a **comprehensive management staff development programme** centred on fostering engaging leadership, value-based management, performance improvement and building multifaceted collaboration and innovation on a team.
- **We regularly conduct employee engagement and satisfaction surveys** covering various areas of the working environment to get a better insight into employees' needs and expectations and to make changes and improvements aimed at increasing employee engagement.
- We have put **age management** solutions in place to counteract adverse consequences of demographic shifts on the labour market.
- We believe in **social dialogue** based on independence of the parties, legal compliance, as well as trust, mutual willingness to compromise, and observance of the rules.
- We care to help employees **achieve work-life balance**, including through our 'Family Friendly Employer' programme.

- We provide **extensive medical care** going beyond the scope of occupational medicine, and we support employees' **mental wellbeing** as an integral part of the organisational culture (Occupational Psychology Centre).
- We work consistently to satisfy our **talent acquisition and retention needs**, focusing of specific target groups relevant to our business areas – current and prospective employees, as well as students and graduates of vocational schools and universities.
- **We maintain the highest workplace safety standards, building the awareness of safe work procedures and creating proactive attitudes among our employees and contractors**. In practice, this means that the Group does everything it can to prevent accidents, industrial failures, fires and other unwanted incidents.
- We offer employment opportunities to **people with disabilities**. In 2019, together with several other Group companies, we joined the 'Work – Integration' programme of the State Fund for the Rehabilitation of the Disabled (PFRON), aimed at recruiting people with disabilities from the open labour market.

Outcomes

	UoM	2019	2018
Employment at the ORLEN Group	[persons]	22,337	21,282
Employee turnover	[%]	8.9	9.9
Accident rate (Total Recordable Rate)	[number]	0.90	1.03
Average training hours per employee, including:		**2019**	**2018**
Women	[number]	23.4	18.3
Men	[number]	25.2	20.7
Managers	[number]	38.5	24.5
Non-managers	[number]	23.7	19.6
Employee engagement and satisfaction survey	**UoM**	**2019**	**2017**
Number of ORLEN Group companies surveyed	**[x]**	**22**	**16**
Number of respondents – PKN ORLEN	**[x]**	**4,192**	**4,005**
Employee engagement rate	[%]	64	65
Job satisfaction rate	[%]	77	73
Average rates in Poland in 2016[1] and 2018[2]			
Employee engagement rate	[%]	50	51
Job satisfaction rate	[%]	64	66

1) Based on Aon Hewitt.

2) Based on Kincentric.

- **Development activities** – in 2019 they focused on shaping attitudes and skills in diversity management, management ethics, innovation, cooperation, reviewing lessons learnt, project work, work planning and organisation, and negotiation skills.Another important training programme covers the policy for counteracting corruption practises, and was provided in 2019 to employees of various levels and business areas, supporting the implementation of the ORLEN Group Anti-Corruption Policy.

- The **Career Development Session** programme launched in 2019, involving meetings of employees and their line managers held as a conversation of equal partners. Apart from being a tool used to identify development needs, the session supports the building of a culture of openness and dialogue.
- Improvement a **new e-learning platform**, containing training courses in anti-money laundering regulations and other mandatory training courses, disclosure obligations of listed companies, counteracting the adverse effects of shift work, everyday innovation and diversity.
- Projects seeking to **maximise safety standards**, with the key initiatives in this area including the '**Safety Plus**' project, as part of which 15 standards are being implemented, representing the highest safety standards identified in the fuel and energy industry; work carried out to improve the **Process Safety Management System based on OSHA 1910.119**.
- Offering **employee benefits**, which include co-financing of employee holidays or sanatorium treatment, childcare, holidays for children and teenagers, and school starter kits; **'Family-Friendly Employer'** programme; organising medical check-ups and health campaigns in the workplace ('Health At Your Fingertips', 'Health Zone' and the Occupational Psychology Centre).
- In 2019, over 100 people took advantage of internships at PKN ORLEN under the '**Headed for ORLEN'** and **'#Energy for the Future**' programmes, holiday internship programmes, workshop and mentoring opportunities within the framework of the **'Go4Poland – Choose Poland**!' programme. 135 individuals completed **student internships**, most of them in the production segment, but some also in other business areas.
- Participation in **Job Fairs** at universities of technology, and implementation of educational and information initiatives, for instance **ORLEN Knowledge Day** and **Industry Seminars**.

For more information on employee matters, see „Responsible employer”.

How human capital interacts with other capitals

In 2019, the ORLEN Group's hiring policy was focused on recruiting top quality specialists for both day-to-day tasks and strategic projects. The reason was expansion of the ORLEN Group's power generation, petrochemicals, maintenance services, IT and trade activities. Attracting skilled labour is key to maintaining and growing the components of production capital.

Investment in growing human capital has a positive impact on the intellectual and social capitals, and thus also drives the financial capital. In order to attract top talent, ORLEN Group offers terms of employment that are unique both in terms of pay, and non-financial benefits.

INTELLECTUAL CAPITAL

Capitals:

A vital vision of the ORLEN Group is to ensure its long-term competitive advantage by strengthening innovation both within and outside the organisation. The strategic areas of investment in innovation, new technologies and business models that are key to improving the Group's competitive position in the 2030+ horizon are defined in the Strategic Research Agenda of 2019. A vital element of the efforts to expand intellectual capital is dialogue and collaboration with universities, research and development centres, inventors and innovators, accelerators and technology start-ups, and manufacturers and suppliers of innovative technologies.

Key facts about the capital

- **Knowledge and unique experience – over 22,000 committed and highly qualified employees, including** staff with extensive experience in the refining, petrochemical, power generation and upstream sectors.
- **Management systems** – unwavering focus on strong operational standards and operational excellence achieved through the **Integrated Management System**.
- **Due diligence policies and procedures** for individual areas of our operations, ensuring the highest management standards.
- **Research and development** – projects seeking to improve oil refining efficiency, ensure compliance with environmental protection requirements and increase petrochemical capacity utilisation.
- **In-house R&D units: establishment of the Research and Development Centre in Płock (scheduled to open in late 2020) and operation of the Czech-based – Unipetrol Research and Education Centre and Polymer Institute Brno**.
- **A culture of innovation:**
    - Motivating staff to develop innovative technical and technological solutions, for instance by implementing internal projects and intranet platforms to promote innovative processes and knowledge management.
    - Motivating staff to implement innovations originating outside the Group, including by active participation in the Group's initiatives to source innovative solutions, for instance those developed by start-ups.

The capital management

- **Building an innovation ecosystem around PKN ORLEN.** The strategic areas of investment in innovation, new technologies and business models that are key to strengthening PKN ORLEN's competitive position by 2030 and in subsequent years are defined in the **Strategic Research Agenda** of 2019. The Strategic Research Agenda is a long-term strategy for promoting innovation, which translates strategic business goals into specific R&D and innovation activities.
- **Efforts to build dialogue and collaboration with universities, research and development centres, inventors and innovators, accelerators and technology start-ups, and manufacturers and suppliers of innovative technologies.**
- **Deploying innovation acquisition tools: accelerator and CVC fund.**
- **Fostering collaboration with start-ups.**

- **In-house research and testing to improve processes, products and inputs.**
- **Developing proprietary technologies.**

Outcomes

- More than **50 R&D projects** were in the pre-implementation or implementation phase in 2019, of which five were co-financed out of national public funds (the INNOCHEM sectoral programme) and under EU programmes (Horizon 2020). Some of the projects carried out by PKN ORLEN in 2019 are presented in „Research and technological development".
- The following activities were completed by the end of 2019 under the **Research and Development Centre project** design work for the main facilities, construction work on the office building, and major works related to external networks and utilities. The Centre is scheduled to open at the end of 2020.
- **Implementation of key capex projects**: one of them being the start-up of a PPF splitter at PKN Lietuva in Mažeikiai, enabling production of polymer grade propylene from sub-standard gas feedstocks; start of a fertilizer production capacity expansion project comprising the construction of three key units (nitric acid, neutralisation and granulation units) at ANWIL; a contract signed by ORLEN Południe for the construction of Poland's first unit for the production of bio propylene glycol and for the purchase of front-end engineering design and licence for a next generation bioethanol production unit.
- **Projects supporting the culture of innovation:**
  - Fourth edition of the **Creator programme** rewarding employees for ideas and initiatives in the field of technology innovations that can be applied in and outside the PKN ORLEN Group. 106 initiatives have been submitted since 2015, 16 of them (including five inventions) received the awards.
  - **President of the Management Board's awards programme recognising the best research work** for PKN ORLEN; the awards are presented to representatives of the scientific community.
  - **Promoting employee initiatives** – the 'Innovative Project of the Year' competition; the winner of the 2019 edition was 'Implementation of a virtual reality (VR) model for key operations in production units – Phase 1: Olefins'.
  - **Engagement of employees in acceleration programmes,** including 'Electro Scale Up' and 'Scale Up', designed to estimate the need to search for innovative solutions and to carry out their pilot implementations.

Cooperation with scientific and research institutions

- **Several dozen research studies, concepts and projects** are carried out by PKN ORLEN every year in partnership with research centres and universities.
- Under the **Implementation-based PhD Programme Project**, PKN ORLEN has already completed ten implementation-based doctoral programmes in collaboration with universities in Poland.
- Organisation of **profiled internships/work placements** and **recruitment** of the best students and graduates.
- **Competitions for the best research papers and student theses.**
- **ORLEN Knowledge Day** – an educational project in the form of a series of workshops and lectures presenting how theoretical knowledge gained at school or university is put into practice. The schools and universities covered by the programme include Warsaw University of Technology – Płock Branch, Education Centre Schools in Płock, Warsaw University of Technology, AGH University of Science and Technology in Kraków, University of Technology and Life Sciences in Bydgoszcz.
- **Industry seminars** – a series of sessions held at the Faculty of Chemicals of the Warsaw University of Technology seeking to equip students with practical knowledge based on actual business cases and to inspire them to choose specific development paths with a view to getting a job with a given company.
- **Business Networking Day** organised by the Career Office of the Warsaw University of Technology and the **Industry Open Days** (Refining Industry Open Days), run in partnership with the Warsaw University of Technology – Płock Branch, in the form of an open technical presentation of business and production projects combined with a tour around the Płock plant.
- **Innovation Day** (workshops with scientific organisations and universities devoted to the presentation of R&D and technological challenges faced by PKN ORLEN, and projects run by universities/scientific institutes) and seminars. It is important to note that those events cover both our core business themes and new fields.
- Joint **R&D projects** geared towards technology advancement and implementation.
- Ordering of **research, conceptual work, analyses and expert studies.**

Collaborative partnerships with Polish startups

- Participation in the **'GovTech Poland – Activate Your Ideas!' programme**, a government-sponsored initiative supporting the collaboration of state-owned companies and public administration bodies with small and medium-sized enterprises in the IT sector. PKN ORLEN announced a competition to develop a technology enhancing mobile payments at service stations.
- Participation in the **Pilot Maker Electro ScaleUp' acceleration programme,**encouraging startups to develop innovative solutions for technology users in the field of electromobility. In 2019, PKN ORLEN completed, in partnership with a business accelerator operating under the 'Electro ScaleUp' programme, the first innovative project proposed by the Enelion start-up. It involved three AC charging stations with an innovative system of dynamically alternating current voltages, and was successfully implemented in the underground car park of a Warsaw office building.
- Participation in the **Space3ac ScaleUp II' acceleration programme,** involving partnership with selected start-ups to implement innovative solutions in retail sales, production, logistics and environmental protection.
- Strategic partnership and participation in Europe's largest stationary hackathon – **HackYeah.**

How intellectual capital interacts with other capitals

Intellectual capital requires large outlays to develop but it has immense impact on human, social and production capitals. An example is the in-house Research and Development Centre, to be established in Płock. The facility will employ specialists with extensive R&D knowledge and skills, providing a cutting-edge platform for collaboration with the scientific community. The project will enable PKN ORLEN to develop and implement its own technologies.

Key development projects pursued by the ORLEN Group are aimed at improving the efficiency of crude oil processing at its production plants, ensuring environmental compliance and intensifying petrochemical production, with concurrent process and energy efficiency gains, through the implementation of the Petrochemicals Development Programme. Improved efficiency of production assets and expansion into new business lines is expected to boost financial capital indicators in the short term.

SOCIAL CAPITAL

Capitals:

At the ORLEN Group, social capital stands for shared standards, values and behaviours, and relationships with internal and external Stakeholders, including employees, the public, customers and trading partners, that are based on trust and commitment.

Key facts about the capital

- In our activities we follow the **Core Values and Standards of Conduct of PKN ORLEN S.A.** that apply across the ORLEN Group and the **ORLEN Group CSR Strategy until 2022**
- **The Supplier Code of Conduct** is a mandatory criterion in the process of trading partner selection at ORLEN Group companies
- We support the development of local communities
- We counteract social exclusion and engage in initiatives designed to ensure equal opportunities
- Health and safety are our top priorities
- We protect national heritage and support sports
- We act to reduce our environmental impacts
- We take steps to protect biodiversity and raise environmental awareness
- In our relations with employees, we offer a safe working environment, provide decent working conditions and eliminate inequalities, ensure employee development, and support employees in balancing their personal, professional and social goals
- In our relations with customers, we are guided by our commitment to their health and safety; we respond to their expectations, work to improve accessibility of our facilities, and inspire the customers to act responsibly
- We seek to instil responsibility in our trading partners

The capital management

- In 2019, we ran our first ever **public awareness campaign under the hashtag '#DobryKierowca' ('#GoodDriver')** as part of PKN ORLEN's CSR activities.
- **We implement countrywide initiatives designed to reach local communities, such as the ‚My Place on Earth'** and **'ORLEN for Firefighters' grant programmes, and a loyalty scheme for volunteer firefighters.** The ORLEN Foundation runs scholarship programmes, including **'For Eagles'** dedicated to children of the employees of PKN ORLEN and ORLEN Group companies and the residents of Płock and the County of Płock as well as **'BONA FIDE'** for students.
- We actively engage with local communities, mainly in Płock under the **'ORLEN for Płock'** programme, and in locations where we conduct business. We have also implemented the **free ORLEN Info system** for Płock residents.
- As part of our efforts to promote health and active lifestyles, we have set up a 'Health City' in Płock. We have also signed an agreement with the National Institute of Oncology for a **'Comprehensive programme for the prevention, diagnostics and treatment of cancers and respiratory system diseases for residents of the city and county of Płock',** which is a pioneering initiative in Poland.

- We engage in projects protecting the national heritage, working with the **Chopin National Institute** and other institutions, and we take part in events promoting the 18th Chopin Competition. We are also a sponsor of **Teatr Wielki – Polish National Opera in Warsaw.**
- We support **professional and amateur sports** (Alfa Romeo Racing Team, ORLEN Team, ORLEN Sports Group, ORLEN Warsaw Marathon, Verva Street Racing, support for the youth training system, etc.).
- We **pursue projects aimed at raising environmental awareness among our Stakeholders**. These include peregrine falcon conservation, bee keeping, and environmental volunteering programmes, as well as publication of environmental brochures.
- At PKN ORLEN, we have a policy defining the terms and conditions of employment for people with disabilities, we run the ‘Family Friendly Employer’ programme, we help promote health, and we have opened the Occupational Psychology Centre. For more information on our CSR activities, see ‘Responsible employer’.
- Under the **employee volunteering programme,**ORLEN Group employees take part in activities prepared by the ORLEN Foundation or submit their own volunteering ideas to receive a grant for their implementation. A novelty is the ‘Volunteering Project of the Year’ competition, ending with an Employee Volunteering Gala.
- In line with our Charitable Giving Policy, **the ORLEN Foundation** pursues **charitable projects**, with a particular focus on helping foster family group homes, and numerous social outreach initiatives. Two other foundations operating within the ORLEN Group are **ANWIL for Włocławek** and the **Unipetrol Foundation**. We are a sponsor of the **Grant Fund for Płock Foundation**,which has been recognised as one of the 30 best CSR projects in Poland.
- Our Stakeholders looking to enhance their knowledge of the capital market and of how to stay on the safe side while investing on the stock exchange are welcome to participate in the **Investment Academy** programme launched in 2019.
- **Participants in the VITAY loyalty scheme and users of the YANOSIK app** may choose to donate their points to social causes, including support for foster family group homes or environmental projects.

Outcomes

	UoM	2019	2018
Scholarship programmes of the ORLEN Foundation – grant holders[1]	[number]	537	398
Grant programmes of the ORLEN Foundation			
‘My Place on Earth’[2] – applications submitted	[number]	2,132	1,135
‘My Place on Earth’ – grant-winning applications	[number]	276	293
‘My Place on Earth’– estimated number of beneficiaries	[number]	700,000	*
‘ORLEN for Firefighters’[3] – applications submitted	[number]	2,248	approx. 4,000
‘ORLEN for Firefighters’– grant-winning applications	[number]	249	360
Health promotion projects for employees			
Additional preventive check-ups[4]	[number]	1,050	1,000
Health Zone[5] – participants	[number]	350	634
Health promotion projects for local communities			
Comprehensive Programme for the Prevention, Diagnostics and Treatment of Cancers and Respiratory System Diseases for Residents of the City and County of Płock[6], including:			
‘Health City’[7] – medical consultations and examinations	[number]	over 10,000	
Series of educational meetings for local communities[8] – participants	[number]	210	–
ORLEN Warsaw Marathon – participants	[number]	20,000	20,000
VERVA STREET RACING – participants	[number]	250,000	80,000
Information projects			
Free Information System for residents of Płock and the Płock region – users[9]	[number]	approx. 1,000	–

	UoM	2019	2018
Employee volunteering programme			
Volunteer campaigns	[number]	40	*
Employees engaged in volunteering	[number]	800	*
Sponsoring projects for Płock residents	[number]	**59**	**98**
Customer engagement in social projects[10]			
Vitay programme and Yanosik application points donated by customers for social causes	[number]	45,670,769	40,730,211
PKN ORLEN suppliers obliged to know and accept the 'PKN ORLEN Supplier Code of Conduct', the 'Anti-Corruption Policy of the ORLEN Group' and the 'PKN ORLEN Rules for Accepting and Offering Gifts'	**[%]**	**100**	**100**

**The indicator was not measured in 2018.*

***1) Scholarship programmes of the ORLEN Foundation** 'For Eagles' – a programme for children of the employees of PKN ORLEN and ORLEN Group companies, a programme for schoolchildren from Płock and neighbouring areas; 'BONA FIDE' – a programme for university students, a programme for people of Polish origin living beyond Poland's Eastern border, a programme for charges of foster family group homes, the 'Life to the Full' programme, the 'Masters of Chemistry' programme.*

***2) 'My Place on Earth'** – a nationwide grant programme to support the development of local communities, including by reaching small towns and encouraging activity of rural communities. Projects covered by grant applications could benefit such areas as sports, safety, education, history, culture or environmental protection.*

***3) 'ORLEN for Firefighters'** – a countrywide programme run since 2000, designed to support firefighters from state and voluntary fire-fighting units, while fostering the development of local communities. Fire-fighting units may apply for grants to help them pay for fire-fighting equipment, as well as equipment used in water, flood, road, technical, medical, chemical, environmental and technical rope rescue operations.*

4) Additional preventive check-ups – As part of 'Prevention at Your Fingertips', preventive health check-ups are provided at the workplace. In 2019, employees had an opportunity to have densitometric tests, HCV tests (detecting the hepatitis C virus) and hearing tests done. Parents of children aged from nine months to six years could have their children ultrasound scanned with a view to early detection of cancer.

***5) Health Zone** – in May 2019, PKN ORLEN employees in Płock, Warsaw and Włocławek were offered the health zone where they could consult a physiotherapist, have a massage or undergo a podoscopic examination of their feet.*

***6) 'Comprehensive Programme for the Prevention, Diagnostics and Treatment of Cancers and Respiratory System Diseases for Residents of the City and County of Płock'** – initiated by PKN ORLEN, the programme is run by the National Institute of Oncology, in partnership with the National Tuberculosis and Lung Diseases Research Institute. Its focus is on early diagnosis, promotion of recognised treatment standards, as well as education and outreach activities motivating people to change their lifestyles.*

***7) Health City** – an event organised with partners, including the Ministry of Health, the National Health Fund and the National Institute of Oncology, including free medical examinations and consultations in various fields of medicine. The aim of the project is to promote preventative healthcare, as well as active and healthy lifestyles. In 2019 two editions of the 'Health City' were held, available freely for residents of Płock and the neighbouring areas, and for ORLEN employees. The honorary partner of the project was the Polish Minister of Health. During the first edition, approximately 4,000 medical examinations and consultations were provided, and the number was up to approximately 6,000 during the second edition.*

***8) Series of educational meetings for local communities** – special workshops organised for local communities from the County of Płock, including Farmers' Wives Associations, to promote preventative healthcare, as well as active and healthy lifestyles.*

***9) Free Information System for residents of Płock and the Płock region** – the system was established to provide information about social, cultural, sports and other projects initiated by PKN ORLEN and the ORLEN Foundation. It also warns of possible environmental nuisance and impediments to residents' everyday lives caused by the operations of PKN ORLEN's Production Plant in Płock.*

***10) Engaging customers in CSR projects** – customers may donate points collected in the VITAY customer loyalty scheme and YANOSIK app to social causes.*

How social capital interacts with other capitals

Our health promotion programmes, the 'Family Friendly Employer' programme and a wide selection of fringe benefits offered by the employer are aimed at strengthening human capital. Their purpose is to help employees maintain a work-life balance and encourage them to keep fit and take care of their health. A healthy employee who is satisfied with their job is more likely to take on new challenges, works more efficiently and is dedicated to their work.

The broad range of initiatives benefiting local communities (grant programmes, scholarships, involvement in cultural and sports initiatives) contributes to building an environment conductive to company growth and more investment in production capital.

NATURAL CAPITAL

Capitals:

The ORLEN Group uses renewable and non-renewable natural resources in its operations. All our business activities are carried out in a responsible manner, with due consideration to the effects of current and future environmental impacts.

Key facts about the capital

- In production processes we use **renewable resources** (air, water, esters, bioethanol) and **non-renewable** ones (crude oil, natural gas and auxiliary chemicals)
- In 2019, the ORLEN Group used:

33.9

m tonnes of crude oil

>850,000

tonnes of esters

>94m

m^3 of water

>260,000

tonnes of bioethanol

- The ORLEN Group is **potentially the largest gas consumer in Poland and one of the largest in the Czech Republic and Lithuania**; natural gas is used by the Group in the production of heat, electricity, fuels and fertilizers; in Poland, the ORLEN Group's combined potential for natural gas consumption exceeds 3bn Nm^3 per year, accounting for approximately 20% of total domestic consumption
- The ORLEN Group has **2P crude oil and natural gas reserves in Poland and Canada, amounting to 197.3 mboe at the end of 2019**
- **ORLEN Group's upstream assets:** at the end of 2019, the ORLEN Group was the sole owner or a joint owner (with PGNiG) **of 20 exploration and appraisal licences with a total area of more than 13,500 square kilometres in Poland**, spread over six provinces, and held **exploration and production assets spanning 1,100 square kilometres in Alberta, Canada**
- **ORLEN Group's production plants and fuel terminals in Poland, Czech Republic and Lithuania cover an area of over 3,900 hectares**

The capital managment

- We take care to ensure that our production processes are environmentally friendly: our environmental projects involved adaptation of plant and process units to new environmental requirements and standards defined in the EU regulations and BAT Conclusions. Those efforts include also administrative work to have the terms of the integrated permits for the Group's plants amended, as well as capex projects related to the production plant and equipment.

- We identify the environmental aspects of our technological processes, and we seek to minimise their impacts on the natural environment and human life and health.
- We comply with the requirements stipulated under integrated permits secured for our installations.
- We effectively manage carbon emission allowances.
- We implement investment projects to adapt process units to new environmental requirements and standards.
- We ensure effective water and wastewater management.
- We effectively manage soil remediation.
- We invest in low- and zero-emission technologies and RES.
- We engage in initiatives that promote environmental awareness and social responsibility.
- We provide access to information on the environmental impact of our operations and on efforts taken to improve workplace health and safety standards and implement best practices of the Responsible Care Programme.

For more information on natural capital management, see ‘Environment and climate’.

Outcomes

	UoM	ORLEN Group	
		2019	2018
Total withdrawal of surface water, groundwater and mains water	**[million m^3]**	**94.1**	**90.3**
Surface water	[million m^3]	89.1	85.7
Groundwater	[million m^3]	1.6	1.5
Mains water	[million m^3]	3.4	3.0
Effluents discharged to the environment, including:	**[million m^3]**	**50.9**	**50,7**
Industrial wastewater	[million m^3]	44.4	44.0
Summary of selected substances:	**[tonnes]**	**15,971,785**	**15,061,640**
Sulfur dioxide	[tonnes]	17,250	18,290
NOx	[tonnes]	9,824	10,664
Carbon monoxide	[tonnes]	5,400	4,559
Particulate matter	[tonnes]	888	1,088
Carbon dioxide (including EU ETS)	[tonnes]	15,919,204	15,010,150
Other substances	[tonnes]	19,218	16,889
Waste	**['000 tonnes]**	**220.5**	**169**

- The total spending on environmental projects by all ORLEN Group companies in 2019 amounted to **EUR 40.5m**, of which almost EUR 36.9m was spent on projects involving pollution control measures and environmental protection management, while the costs of reducing emissions into the air and in wastewater totalled EUR 3.6m.
- **Key projects in 2019:**

In 2019, PKN ORLEN’s key projects included preparations for the utilisation of used lye from the Płock production plant in the context of environmental regulations, construction of Claus and SCOT units for gaseous hydrogen sulfide treatment, adaptation of fuel gas metering systems for monitoring of CO_2 emissions, air-tight sealing and elimination of malodorous and hydrocarbon substances from the averaging device and wastewater inflow and outflow channels.

For more information on environmental projects implemented at PKN ORLEN’s distribution facilities and other ORLEN Group companies, ‘Capital expenditure on environmental protection’ .

How natural capital interacts with other capitals

Production activities, which entail the use of non-renewable energy sources, emissions, waste and wastewater generation, exert an impact on natural capital. Reducing its environmental footprint and climate impact is one of the ORLEN Group's top priorities. Activities undertaken by the ORLEN Group in this domain contribute to the development of other capitals, including the intellectual and production capitals.

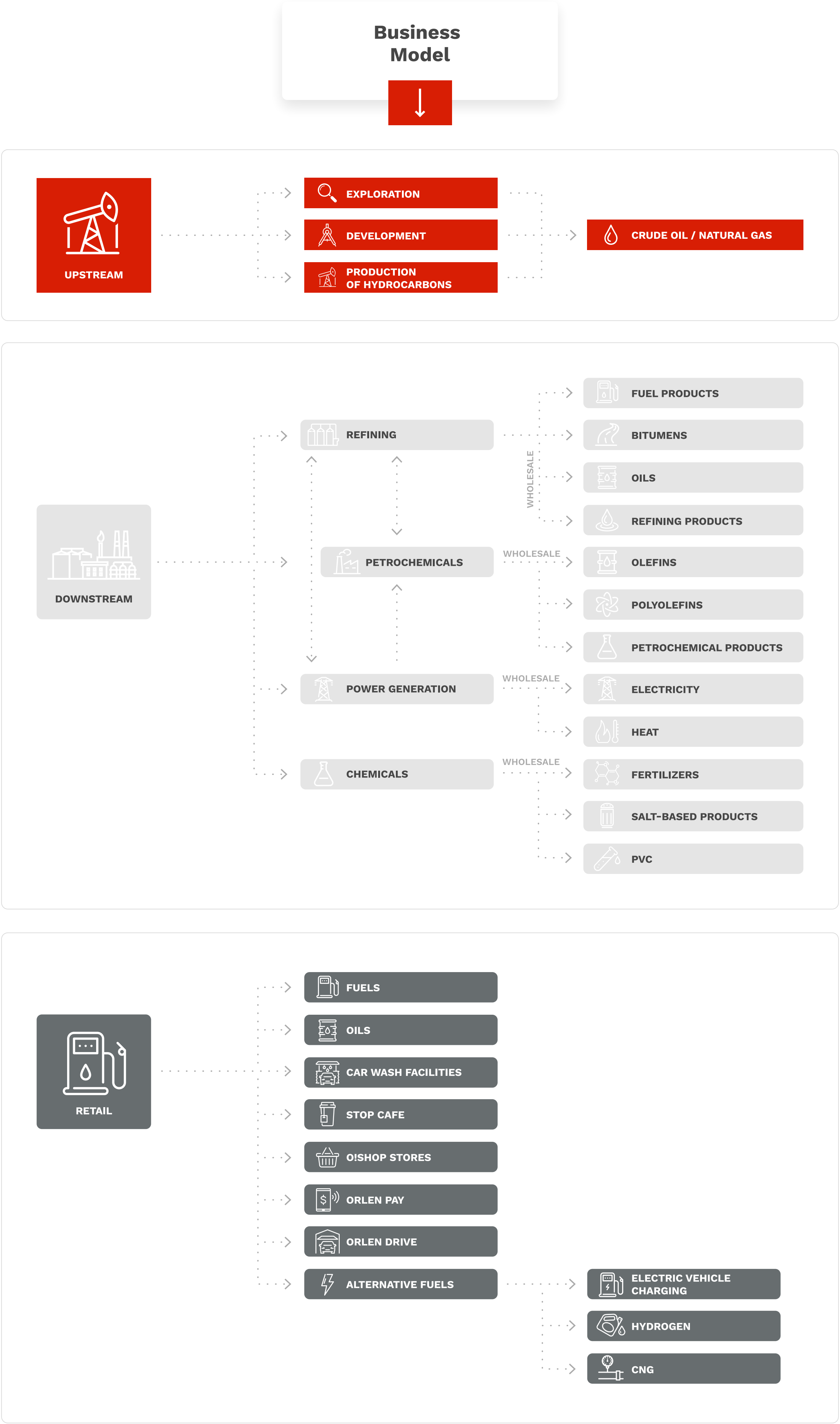
We install EV chargers at Motorway Service Areas, adapt Motorway Service Areas to new e-mobility needs, invest in bio-refineries, test innovative biofuel production technologies and prepare our organisation to become a strategic player in hydrogen production and use for transport and power generation. Because refining and petrochemical production are energy-intensive, decarbonisation of electricity and heat consumed is an important measure in reducing carbon dioxide emissions. PKN ORLEN already uses electricity and heat generated by two CCGT units (the CCGT plant in Włocławek was the first commercial power unit in Poland fuelled with natural gas), and cogeneration is among the most efficient forms of energy production. Additionally, the Company plans to build offshore wind farms in the Baltic Sea and further expand its presence in the green energy sector.

In 2019, the Warsaw Stock Exchange launched a new index – WIG-ESG, with environmental impact as a key criterion in company assessment.

BUSINESS MODEL

We are Central and Eastern Europe's largest business, operating on six home markets. Our products are sold in more than 110 countries across six continents.

Our business is run within three segments: Downstream, Retail and Upstream, as well as the supporting Corporate Functions area.



Downstream

Our principal operations are in the Downstream segment. The ORLEN Group manages refining assets and remains the leading fuel producer in Poland, Lithuania and the Czech Republic. It is also the leading producer of petrochemicals.

The combined processing capacities of the ORLEN Group's refineries exceed 35m tonnes per year.

Efficient logistics infrastructure, consisting of surface and underground storage depots and pipeline networks, is a key element of value creation on the fuel market.

Our plants produce fuels, refining products and petrochemicals, bitumens, oils, olefins, polyolefins, fertilizers, salt-based chemicals and other products of key importance for many sectors of the economy.

The ORLEN Group is also a producer of heat and electricity.

The main generation assets of the Downstream segment are the CHP plant in Płock (being Poland's largest commercial power generating unit, used to supply utilities to the refinery), the CHP plants of the Unipetrol Group and ORLEN Lietuva, as well as the CCGT units in Włocławek and Płock. The ORLEN Group is Poland's largest industrial electricity producer.

The Group has also embarked on renewable energy projects. PKN ORLEN is well advanced with the process to build offshore wind farms in the Baltic Sea, with a maximum capacity of up to 1,200 MW. In 2020, PKN ORLEN acquired the Energa Group. The acquisition was the largest transaction of its kind on the Polish fuels and energy market. The ENERGA Group owns more than 50 RES generation assets (i.e. more than 30% of the total generation volumes). The acquisition of Grupa LOTOS will mark another step towards building a multi-utility group.

Retail

Another segment of the ORLEN Group's business is RETAIL. We are a regional leader in retail fuel sales. We manage a network of more than 2.8 thousand service stations across Poland, the Czech Republic, Germany and Lithuania. In 2019, we also established a foothold on the Slovak market.

In addition to fuel products highly valued by the market, customers of our service stations can buy refreshments at our Stop. Cafe outlets or choose from a range of goods sold at our O! SHOP convenience stores. Our service offering is rounded off with car wash services, fleet solutions and the continually expanded range of alternative fuels. We install EV charges at Motorway Service Areas, and our service stations in the Czech Republic and Germany sell hydrogen and CNG. We build recognition of the ORLEN brand both in Poland and abroad.

We have completed a cobranding project to make the ORLEN Group logo visible on Germany's star stations and on Benzina stations across the Czech Republic and Slovakia.

Upstream

Activities of the Upstream segment, carried out by ORLEN Upstream, are focused on the exploration, appraisal and production of natural gas and crude oil deposits in Poland and in the Canadian province of Alberta.

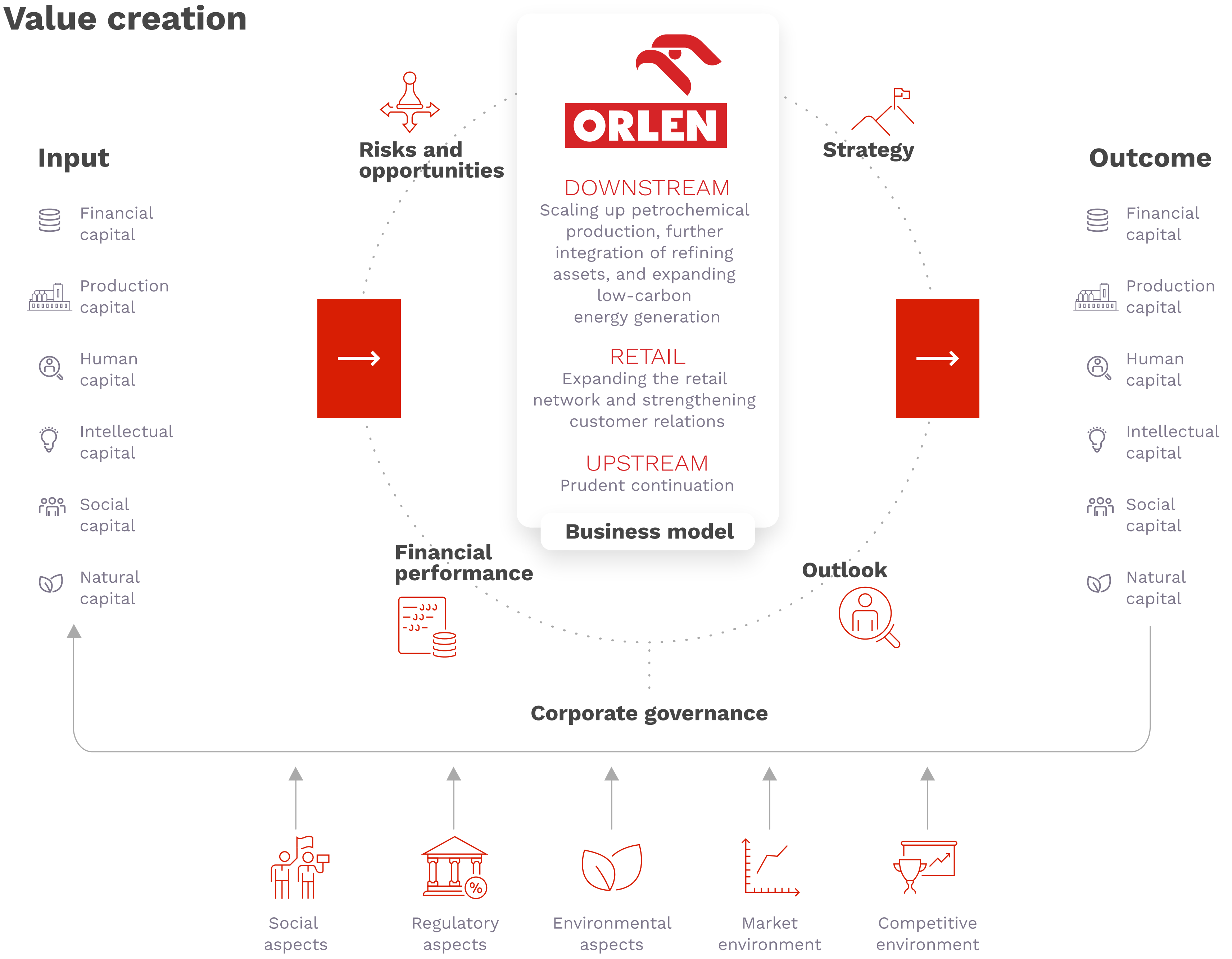
At the end of 2019, proved and probable reserves of crude oil and natural gas amounted to approximately 197.3 mboe, while total production volume in 2019 reached 18,200 boe/d.

The ORLEN Group is evolving along with transformation of the market, competitive landscape and regulatory environment, in response to the expectations of our customers, business partners and social stakeholders. Its future development will be driven by acquisitions of fuel and energy businesses and investments in low-carbon energy sources, geared towards creating a strong multi-utility group.

VALUE CREATION

Having integrated all links of its value chain, the ORLEN Group is able to effectively coordinate them, which helps it achieve a lasting competitive advantage, especially in changing market conditions.

Value creation



In the ORLEN Group's Strategy as updated in December 2018, Value Creation, People, and Financial Strength are the pillars of growth until 2022. A new addition is the **Culture of Innovation**, which supports the ORLEN Group in responding to future challenges.

Key development directions for the ORLEN Group in 2019-2022 include expanding and enhancing petrochemical production, entering the low-carbon energy sector in Downstream, consistently growing retail sales, and sustainably developing hydrocarbon E&P operations.

The ORLEN Group is taking efforts to build a multi-utility group with a strong international position. As a strong single entity, we will be able to better compete in global markets and strengthen our financial stability.

Key running projects to boost future business growth include the acquisition of Grupa LOTOS and the Energa Group, programme to expand petrochemical operations, preparations for offshore wind farm construction, and fast-tracking of the process to adapt the retail network to the distribution of alternative fuels.

However, given the rapidly changing market environment, we need to be prepared to revise and adjust our business ambitions. As the energy sector is facing enormous challenges across the globe, the ORLEN Group's strategy takes account of long-term trends in raw materials, social changes and environmental regimes. We place a strong focus on developing existing assets and advancing innovation, which is to help us preserve a strong competitive advantage in the extremely dynamic environment.

For more information on the ORLEN Group's Strategy for 2019–2022, see the corporate website.

OUR ENVIRONMENT

OUR STAKEHOLDERS

GRI indicators: 102-42, 102-40, 102-43

Capitals:

Responsibility and dialogue are the underlying principles of our Stakeholder relations. We seek to build them on integrity, transparency, mutual respect and professionalism.

To ensure the highest quality of Stakeholder relations, the frequency and methods of communication are tailored to the characteristics and current expectations of each Stakeholder group. A number of such activities are described below in this Statement.

GRI: 102-42

Attendees of the Stakeholder panel held in December 2017, that is representatives of the ORLEN Group and its Stakeholders, reviewed the Stakeholder Map. In late 2019, following internal consultations, the document was updated by identifying 'Society' as a separate Stakeholder group.

GRI: 102-40

ORLEN Group Stakeholder Map

GRI: 102-43

The table below presents the frequency of Stakeholder engagement by type and group.

Employees

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
The headcount at the ORLEN Group exceeds 22 thousand. Employees are provided with fair and friendly working conditions. Relations with internal Stakeholders are based on integrity, respect in everyday relationships and on dialogue, cooperation and involvement of each staff member in building a culture consistent with the Company's core values. For more information, see 'Responsible employer'.	🟥 Development and training 🟥 Employee benefits 🟥 'Family-Friendly Employer' programme 🟥 Fostering a sense of community and identification with the ORLEN Group family (e.g. the ORLEN Olympics, the Employee Volunteering Programme) 🟥 Knowledge sharing and communicating ideas by employees (e.g. the IDEA portal, ORLEN Insight, 'Creator' programme) 🟥 Providing ORLEN Group employees with information on projects implemented by the Group (the Intranet, in-house bulletin, the ORLEN Group's Studio)	🟥 Ongoing contact 🟥 Biennial satisfaction survey

Public administration

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
Central and local government administration in the countries where the Group operates, that is in Poland, the Czech Republic, Lithuania, Germany and Canada.For more information, see 'Regulatory environment'.	PKN ORLEN and the other ORLEN Group companies engage in a fully transparent and open dialogue based on applicable laws, which involves reviewing drafts of legislative solutions at the national and EU legislation level.	🟥 Ongoing contact

Capital market

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
This group comprises existing and prospective holders of financial instruments issued by an ORLEN Group company and institutions that operate and supervise the market on which such instruments are traded. It also includes entities which influence opinions and produce research reports showing PKN ORLEN as an attractive investment for potential investors and shareholders. At present, the State Treasury is PKN ORLEN's largest shareholder and its major investor. The 'capital market' group also includes: the shareholders, investors, market analysts, the Warsaw Stock Exchange, the Polish Financial Supervision Authority, rating agencies and economic journalists. For more information, see 'Communication with the capital market'.	ORLEN maintains ongoing contact with capital market institutions, which follows from the requirement to comply with legal regulations and other rules applicable to this market. In addition, the Company is actively involved in initiatives and consultations concerning the organisation of trading and legislative changes. Stakeholders are usually personally engaged through: - Conferences, meetings or teleconferences, - Webcasts, - Websites, - Capital letters, - Road shows. An essential element of engaging a very broad group of Stakeholders is the annual General Meeting.	During its long-standing presence on the capital market, PKN ORLEN has developed the practice of keeping almost continuous contact with its participants, and thus of engaging Stakeholders operating on this market. This holds particularly true for market analysts and investors, who have access to the Company's consultants and specialists virtually at all times. Representatives of the Company, including members of its governing bodies, hold regular meetings with Stakeholders, for instance during: - Quarterly earnings conferences, - Other corporate events. The Annual General Meeting is held once a year within six months of the end of each financial year

Customers

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
The ORLEN Group sells its products and services to customers across six continents. The customer base includes both private customers (such as motorists) and institutional accounts representing the chemical, automotive, aviation, power, construction, agricultural, packaging and food production sectors. For more information, see 'Responsibility towards customers'.	- Direct communication - Website and social media - Surveys to gauge the level of customer satisfaction, behaviours and attitudes as well as their expectations as to customer experience at the service stations	- In most cases, our relations with customers are long-term, and take the form of direct communication - Dialogue with customers, regular (bimonthly, annual and ad-hoc) customer surveys

Subcontractors and suppliers

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
Subcontractors and suppliers provide raw materials and services necessary for the ORLEN Group to run its operations. Our purchases are related to investments, production and maintenance projects; we buy electricity, biocomponents, production chemicals, logistics services, supplies for service stations, and general-purpose supplies (administration, IT, professional services).For more information, see 'Responsibility towards suppliers'.	🟥 Connect Procurement Platform 🟥 Corporate websites 🟥 Industry conferences, fairs, workshops with suppliers 🟥 Dialogue and building long-term relationships with suppliers, audits 🟥 Assessment by the ORLEN Group of relationships with key suppliers aimed at developing solutions to improve cooperation	🟥 In most cases, our relations with suppliers and subcontractors are long-term, and take the form of direct communication 🟥 Meetings held when required during procurement processes and managing day-to-day cooperation with suppliers 🟥 Annual assessment by the ORLEN Group of relationships with key suppliers

Local communities

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
Local communities comprise people living close to our production plants, storage infrastructure and locations where the ORLEN Group carries out its exploration and production activities. It is our closest environment, often including our employees, trading partners and their families. For more information, see 'Responsibility towards society'	🟥 Social, educational, cultural and sports projects for local communities, implemented directly by ORLEN Group companies 🟥 Activities organised by the corporate foundations: the ORLEN – GIFT FROM THE HEART Foundation and the ANWIL for Włocławek Foundation Grant Fund for Płock 🟥 Employee volunteering campaigns 🟥 Investing in infrastructure 🟥 Consultation meetings with residents 🟥 Free Information System for the inhabitants of the Płock region	🟥 Ongoing contact

ORLEN Group foundations

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
The ORLEN Group has established three corporate foundations: the ORLEN Foundation, the ANWIL for Włocławek Foundation, and the Unipetrol Foundation. For more information, see 'Responsibility towards society'.	The foundations, as public benefit organisations, operate within the scopes defined in their respective Articles of Association, which are available on their websites.	🟥 Ongoing contact

Innovators and startups

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
Leveraging the potential of startups and unlocking the resources of large corporations creates opportunities for: - Pilot testing of innovative solutions developed by small companies prior to potential commercialisation of modern technologies and solutions, - Unlocking the potential of PKN ORLEN employees to promote implementing innovation culture. For more information, sees 'Intellectual capital' and 'Research and technological development'.	- The innowacje@orlen.pl platform, through which third parties can submit innovative solutions, e.g. relating to fuels and petrochemicals, power generation or sales areas - Acceleration programmes as part of which PKN ORLEN gains access to innovative solutions developed by startups	- The platform: regular contact - Acceleration programmes: participation depends, among other things, on the schedules for acceptance of applications for the starting projects

Financial institutions

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
Banks and insurance companies are important market participants as they determine the market's shape, dynamics and directions of development.	Winning and maintaining the confidence of financial institutions is one of the key factors for market success. Therefore, the ORLEN Group builds its relations with those institutions based on full transparency and long-term partnership.	- Regular contact

Regulators

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
The ORLEN Group operates on regulated markets, engaging in a fully transparent and open dialogue with the regulators based on applicable laws.For more information, see 'Regulatory environment'.	- Reviewing drafts of legislative solutions at the national and EU legislation level - Ongoing coordination of the Group's relations with the regulators, control and supervisory authorities, and a process for obtaining and managing permits and authorisations	- Regular contact

Certification bodies

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
Institutions supporting businesses in standardising and optimising their operations. Through close cooperation with those institutions and thanks to their recommendations, the ORLEN Group obtains external confirmation of the standards it applies in various areas of its business, while our customers and trading partners may be certain that they deal with a proven and reliable organisation. For more detailed information, see 'Integrated Management System'.	- Reviews by certified third parties, confirmed by certificates of compliance of the Group's activities with international standards	- Periodically

Dealers and franchisees

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
Dealers and franchisees contribute to the steady strengthening of the ORLEN Group's leading position in the retail fuel market. This Stakeholder group is also very important to customer perception of our brand. Our dealers and franchisees are highly diversified in terms of the scale and scope of their operations and business models.	The cooperation is underpinned by partnership and highest business standards. Dealers and franchisees can benefit from the more favourable terms of business with non-fuel suppliers negotiated by the Group. ORLEN-branded service stations operate under a range of business models, based on different business arrangements (COCO, CODO, DOFO, DODO). CODO stations are owned by a Group company (PKN Orlen, Unipetrol, Orlen Deutschland) and operated by a dealer who agrees to run the station on behalf of the network. All service station staff are employed by the dealer operating a given site. In Lithuania, all service station staff are employees of the network owner VENTUS; in the COCO model, staff are hired under employment contracts. In the DODO and DOFO models, a service station is owned by the company's trading partner, who is granted the right to use our brand and receives operational support under a dealership or franchise agreement. In most models, employees are not obliged to implement specific solutions, standards and procedures, however, based on partnership cooperation it is possible to provide business support and assistance in managing sales, purchases, shops and employees.	🟥 Regular contact

Industry and consumer organisations

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
We partner with organisations and associations, including industry, expert and business organisations. We maintain contacts with specialists involved in similar matters, which allows us to share our experience with other companies and take part in seminars and conferences. For more information, see section 'Responsibility towards society'.	🟥 Participation in the work of committees 🟥 Expert participation in academic seminars, discussion panels and conferences	🟥 Day-to-day contacts

Media

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
The media are the main channel used by the ORLEN Group to communicate with the Stakeholders, disseminate information on our achievements, plans and performance, and respond to any business-related enquiries and doubts. The media represent all Stakeholder groups	🟥 Virtual press office 🟥 Corporate websites and ORLEN Group companies' profiles in social media 🟥 Briefings, press meetings, field trips 🟥 The ORLEN Group online Integrated Report	🟥 Quarterly earnings conferences 🟥 Press meetings (as required) 🟥 Day-to-day contacts with media representatives

Competitors

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
Market participants, entities against which the ORLEN Group's market position in individual operating segments is benchmarked. Given the international scale and fundamentals of the ORLEN Group's business, our key competitors include primarily companies operating in the refining, petrochemical, and power sectors as well as fuel retail chains in Central and Eastern Europe. For more information, see 'Competitive environment'.	🟥 Joint participation in the work of committees of trade organisations and associations 🟥 Expert participation in academic seminars, discussion panels and conferences	🟥 Regular contact

Scientific and research institutions and universities

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
These include scientific and R&D organisations, in particular higher education institutions with science faculties. ORLEN Group companies have teamed up with Polish institutions, including the Industrial Chemistry Research Institute, Warsaw University of Technology, University of Warsaw, Oil and Gas Institute, and Gdańsk University of Technology, and have also established educational centres abroad, including a modern R&D centre in Litvínov, the Czech Republic. For more information, see 'Research and technological development'.	🟥 Joint R&D projects 🟥 Research and conceptual work, analyses 🟥 Internships/work placements and recruitment of the best students and graduates 🟥 Cooperation with respect to research studies and student theses 🟥 Innovation Day – workshops with scientific organisations 🟥 ORLEN Knowledge Day, Case Week	🟥 Regular contract

NGOs

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
Organisations playing an increasingly important role in social and economic development of any country as an essential complement to state institutions. Strengthening their position through the transfer of knowledge and financial support is in the public's best interest. For more information, see 'Responsibility towards society'.	The ORLEN Group is active in that sector, both by supporting individual NGOs and by running its own corporate foundations: the ORLEN Foundation , the ANWIL for Włocławek Foundation, and the Unipetrol Foundation	🟥 Ongoing contact

Society

Characteristics	Type of Stakeholder engagement	Frequency of Stakeholder engagement
All Stakeholders, meaning the general public, affected by the ORLEN Group's activities. For more information, see 'Responsibility towards society'.	The main Stakeholder engagement methods are described above	🟥 Ongoing contact

MACROECONOMIC ENVIRONMENT

GRI indicators: 103-2

Capitals:

The ORLEN Group operates in a changing macro environment.

GRI: 103-2

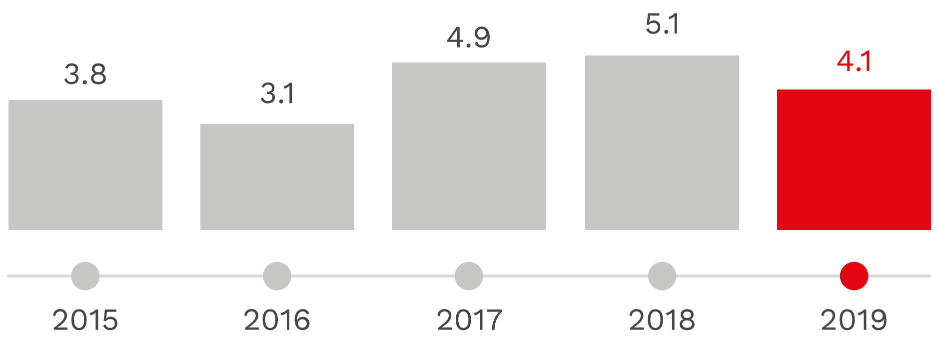
The economic conditions in the ORLEN Group’s operating markets and global fuel prices are a major factor influencing the level of consumption of fuels and petrochemical products and their selling prices.

The primary indicator used to gauge the health of an economy is **GDP**, which, driven by consumption, investment and exports, helps to assess the state of the economy. Changes in GDP are typically correlated with fluctuations in **fuel consumption** and unemployment rates.

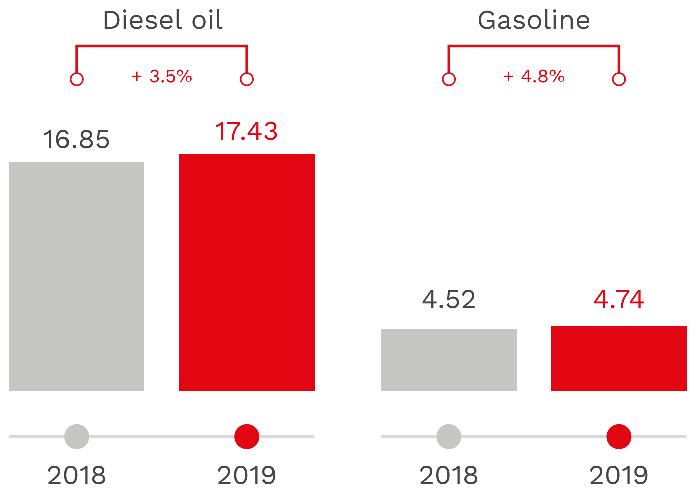
GDP and fuel consumption

Poland

GDP growth
% year-on-year change

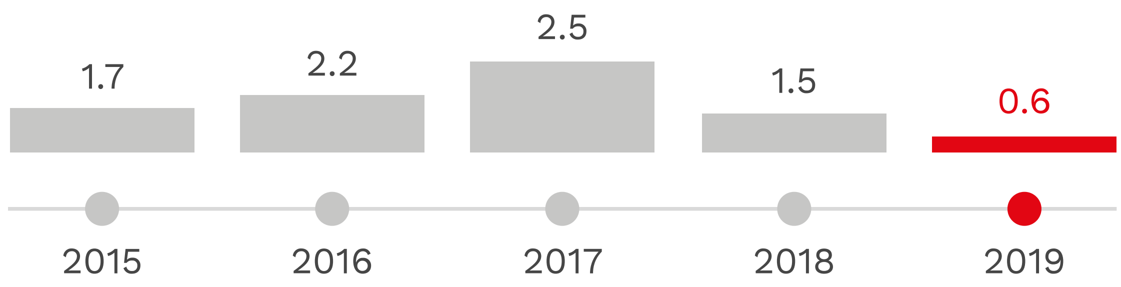


Fuel consumption
(million tonnes)

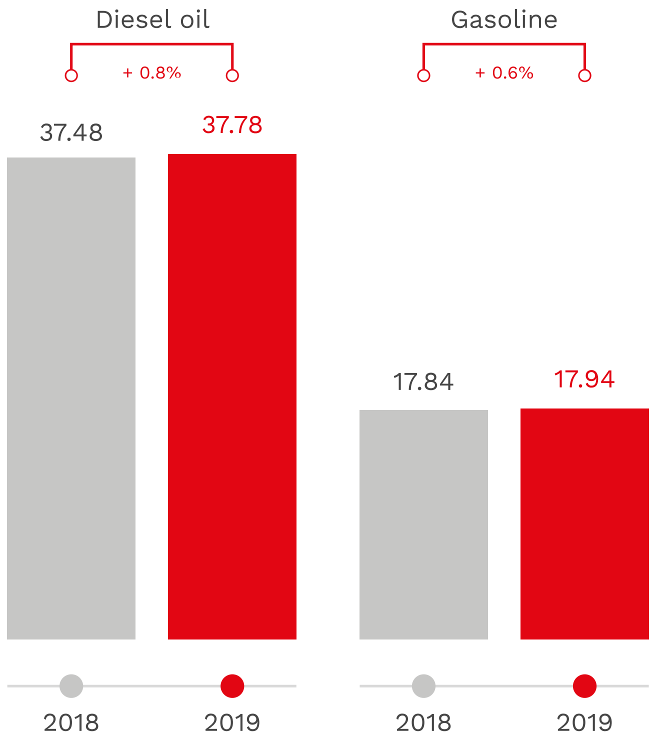


Germany

GDP growth
% year-on-year change

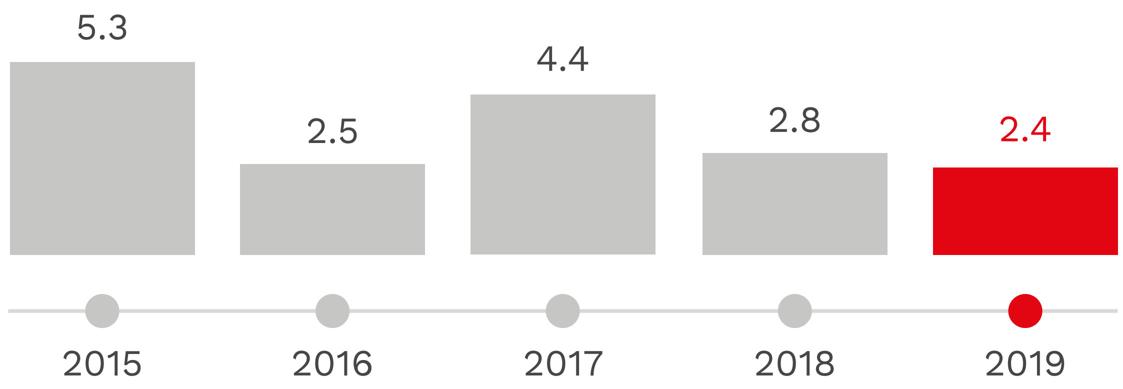


Fuel consumption
(million tonnes)

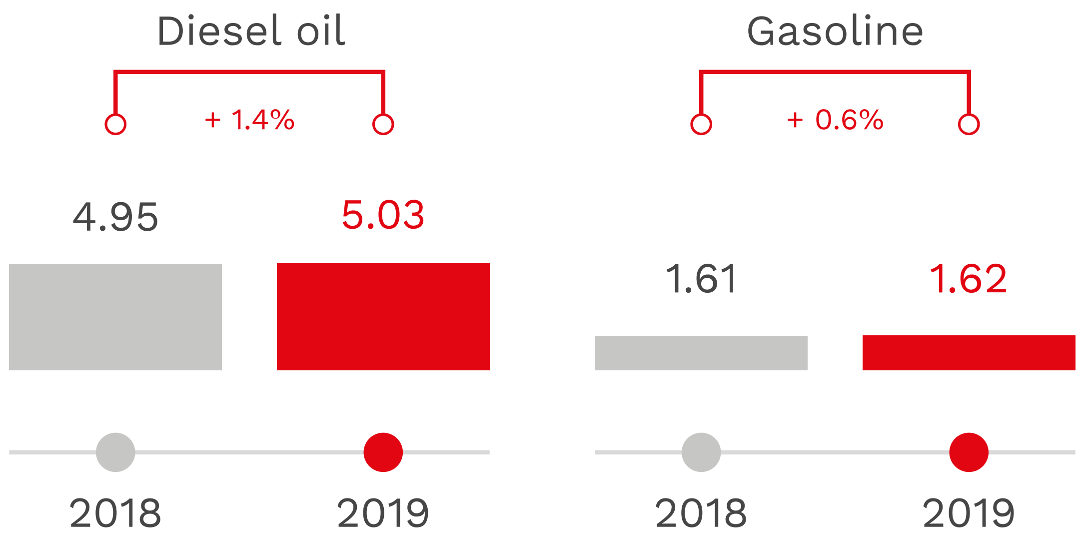


Czech Republic

GDP growth
% year-on-year change

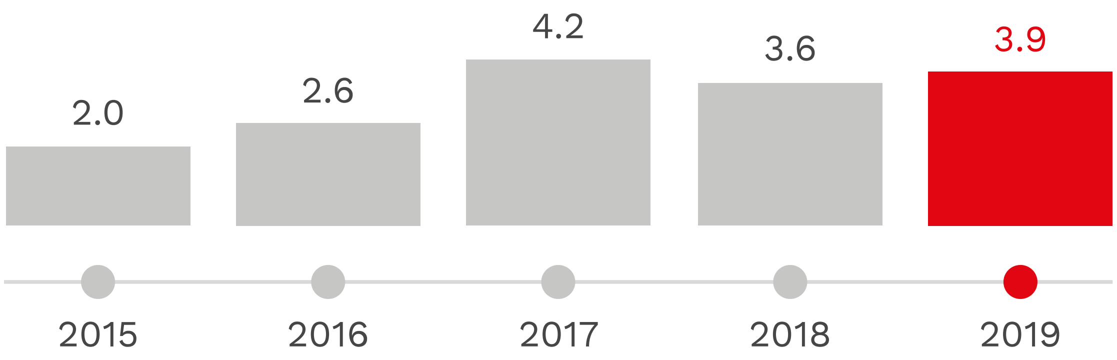


**Fuel consumption
(million tonnes)**

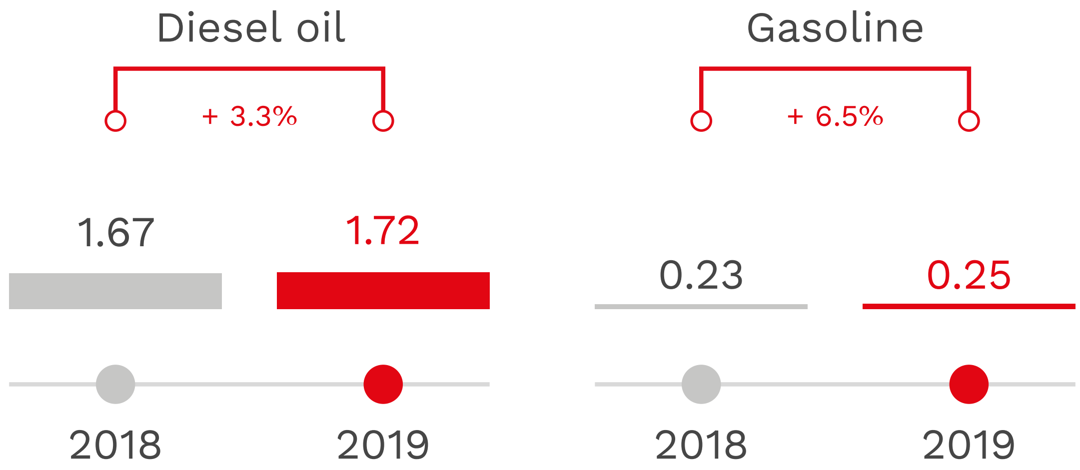


Lithuania

**GDP growth
% year-on-year change**



**Fuel consumption
(million tonnes)**



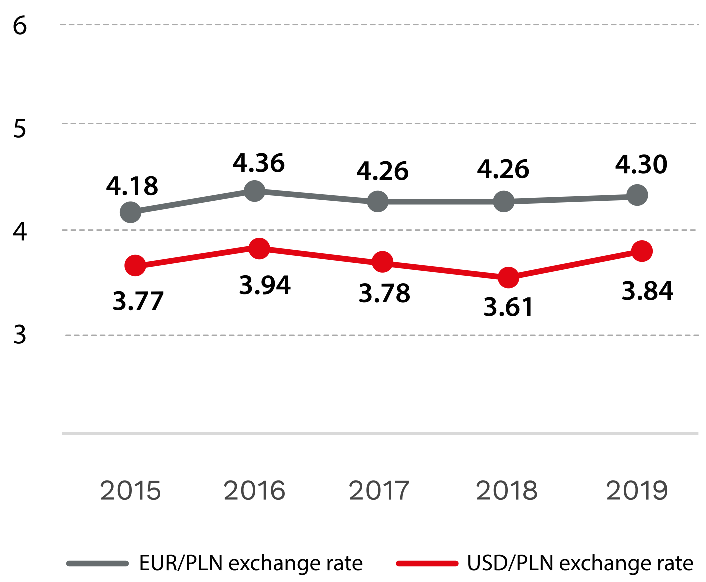
Source: GDP based on EUROSTAT.
Consumption – prepared on the basis of in-house estimates, and data of Agencja Rynku Energii S.A., Lithuanian Statistical Office, Czech Statistical Office and German Petroleum Industry Association.

The prices of refinery and petrochemical products offered by the ORLEN Group are determined mainly by reference to commodity market prices expressed in foreign currencies.

The costs of key feedstocks, including crude oil, and debt servicing are also mostly expressed in foreign currencies, including USD and EUR.

Therefore, any **fluctuations in the exchange rates** of these currencies against the Polish złoty are a major driver of the ORLEN Group's financial results.

Average exchange rates

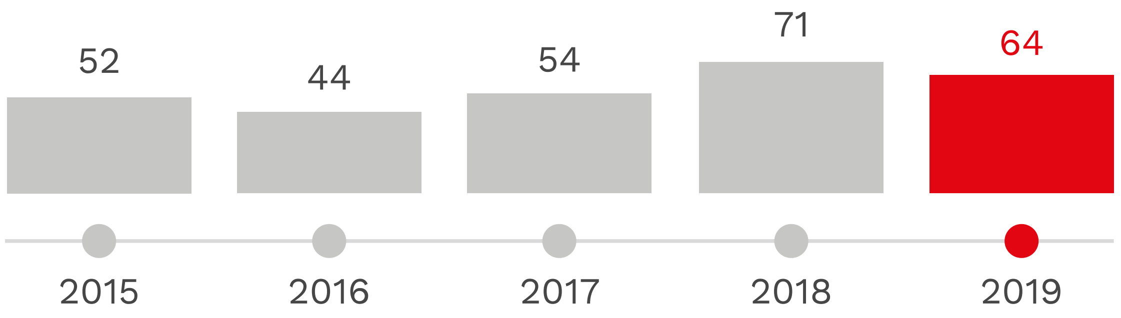


Source: Based on the exchange rates set by the National Bank of Poland (NBP).

Among external factors typically bearing on the refinery and petrochemical industry, the following macroeconomic parameters are of key importance: oil price, Urals-Brent differential and spreads for refinery and petrochemical products offered by the ORLEN Group.

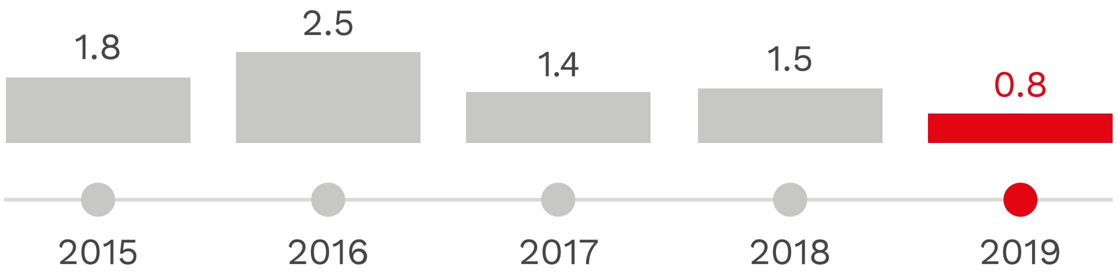
The primary feedstock used by the ORLEN Group is crude oil, prices of which fluctuate reflecting changes in global demand and supply as well as changing geopolitical factors. As the sour Urals crude accounts for some 76% of the ORLEN Group's crude slate, the Urals-Brent differential has a significant impact on its operating results.

Brent price



Source: In-house analysis.

Urals-Brent differential



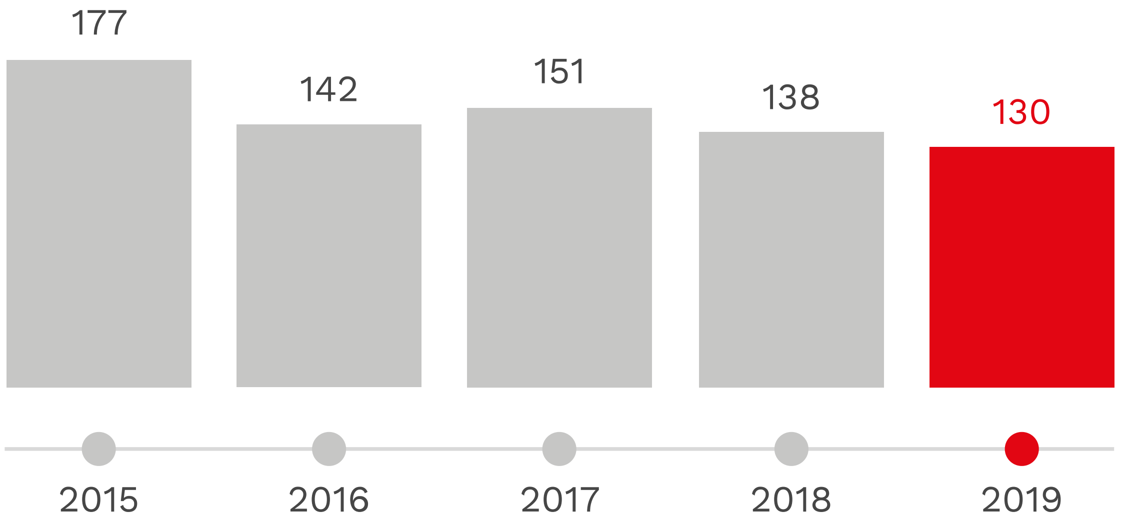
Source: In-house analysis.

The ORLEN Group's operating performance strongly depends on differences between the market prices of petroleum products and the prices of oil and other necessary feedstocks (called crack spreads). The cost of feedstock and the selling prices of refined products for the ORLEN Group are dictated by many factors outside its control. These include:

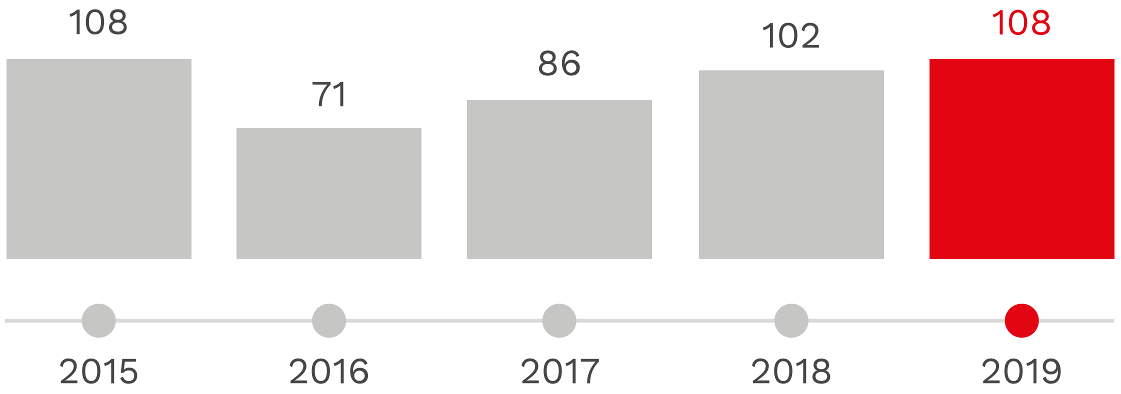
- movements in the supply of and demand for refined and petrochemical products,
- expansion of global refining capacities,
- changes in operating costs (energy, utilities, repairs),
- changes in environmental and other legislation that could require the ORLEN Group to incur significant expenditure.

Crack spreads for refinery products (USD/t) and petrochemical products (EUR/t)

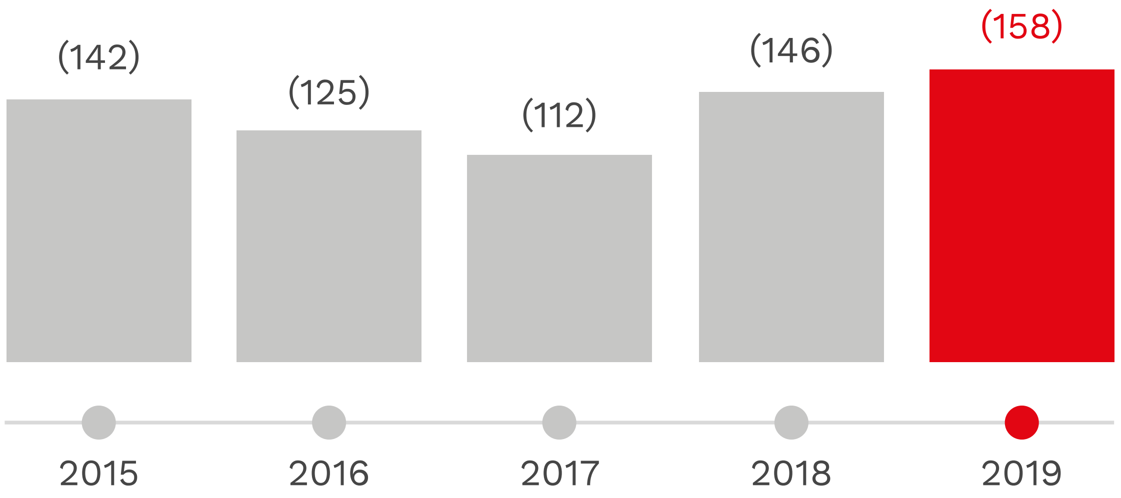
Gasoline



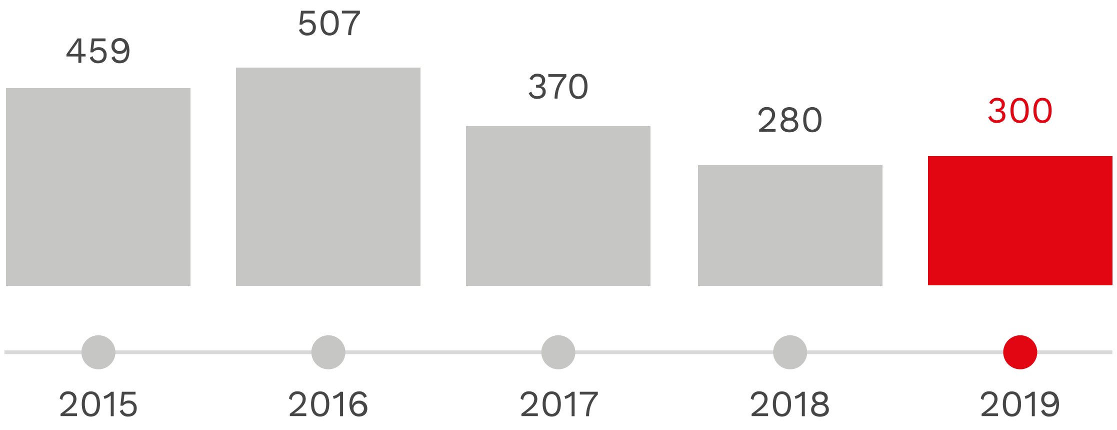
Diesel oil



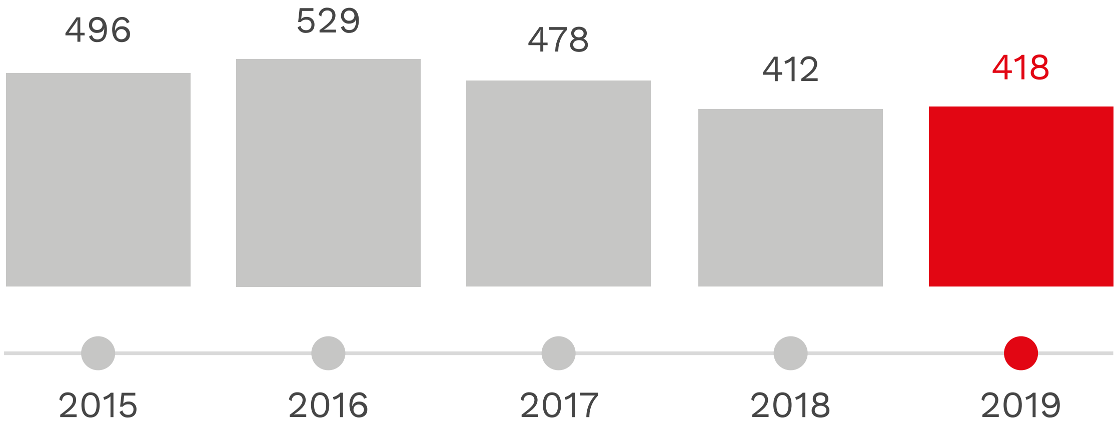
Heavy fuel oil



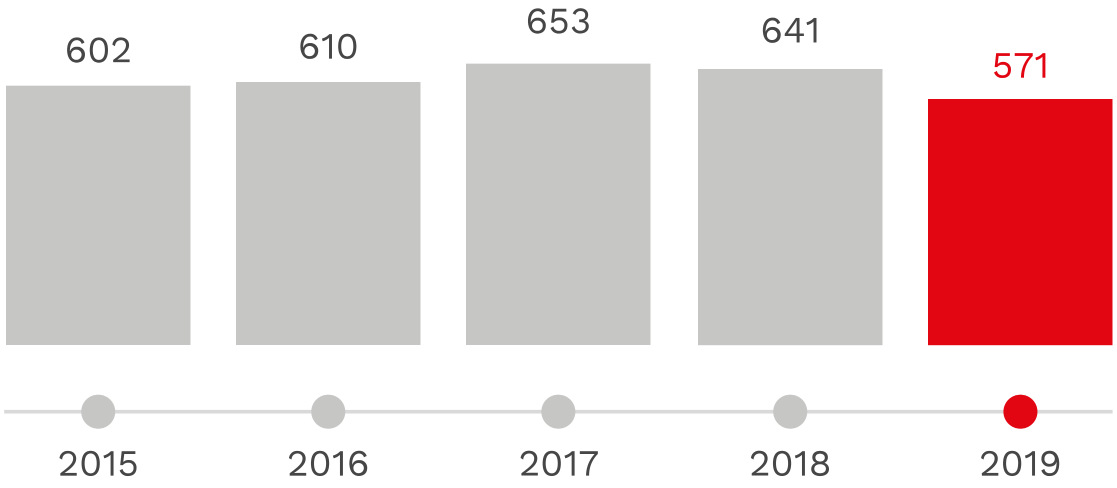
Polyethylene



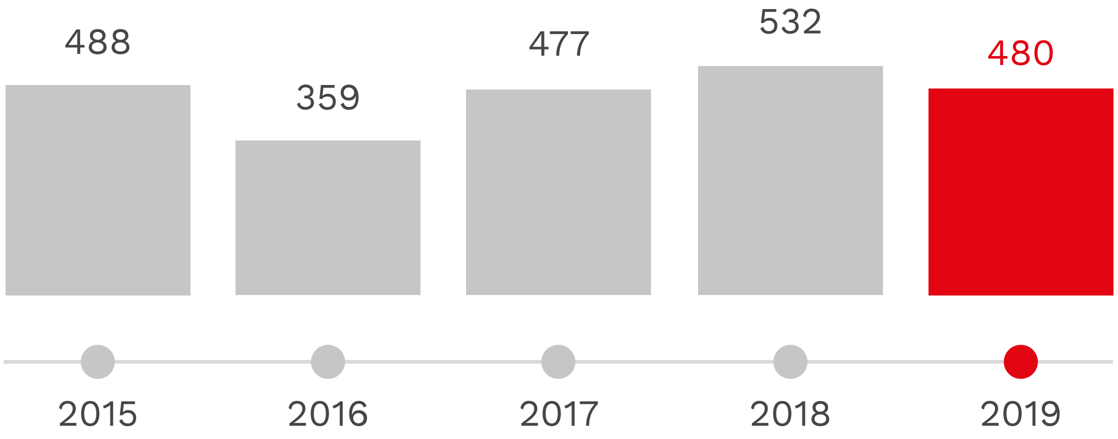
Polypropylene



Ethylene



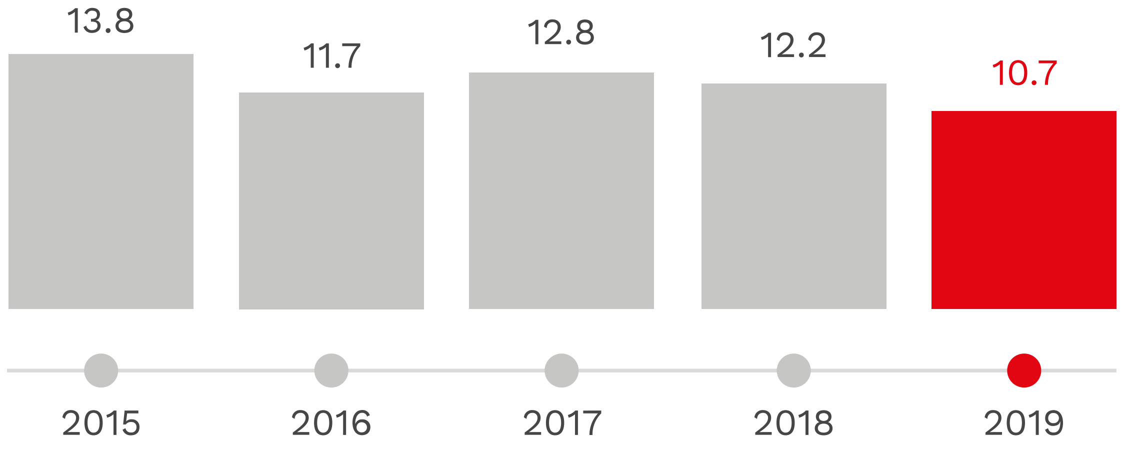
Propylene



Source: In-house analysis based on Platts and ICIS.

For general estimation of the impact of macro factors on the Group's performance, the Model Downstream Margin is used, reflecting the structure of key inputs and key refinery and petrochemical products obtained from the inputs, calculated by reference to market prices.

Model downstream margin [USD/bbl]

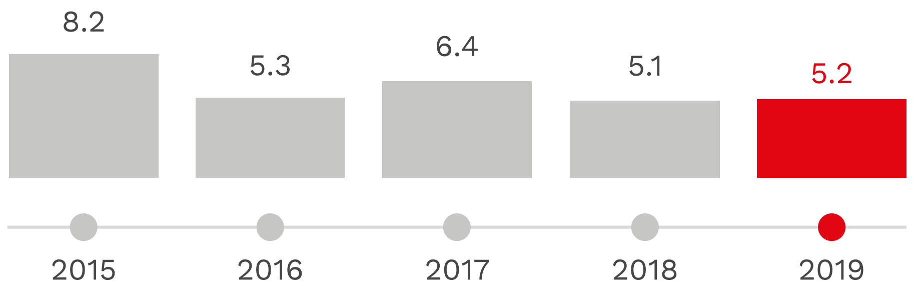


Downstream margin product slate – crack margins for key products

Product	2019	2018	2017	2016	2015
Refinery products (USD/t)					
Gasoline	130	138	151	142	177
Diesel oil	108	102	86	71	108
Heavy fuel oil	(158)	(146)	(112)	(125)	(142)
SN 150	102	191	295	139	177
Petrochemical products (EUR/t)					
Ethylene	571	641	653	610	602
Propylene	480	532	477	359	488
Benzene	184	261	398	296	278
Paraxylene	431	448	418	431	416

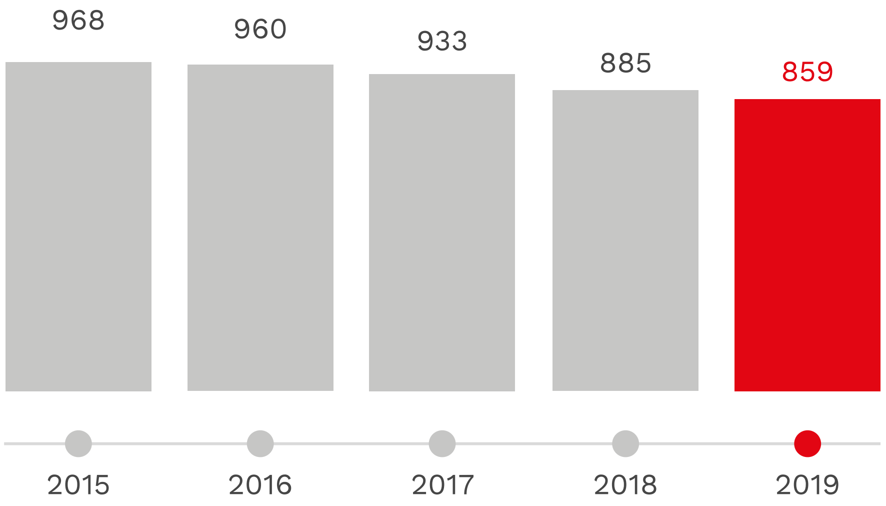
A Model Refining Margin **and** a Model Petrochemical Margin are also calculated for the Downstream segment.

Model refining margin [USD/bbl]



Source: In-house analysis based on Platts and ICIS.

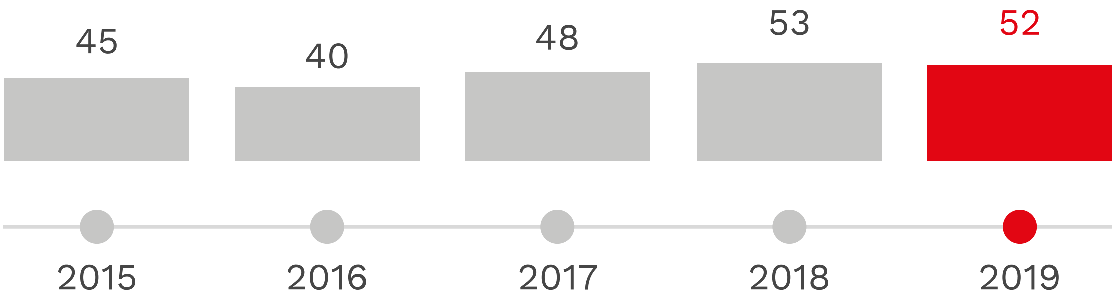
Model petrochemical margin [EUR/t]



Source: In-house analysis based on Platts and ICIS.

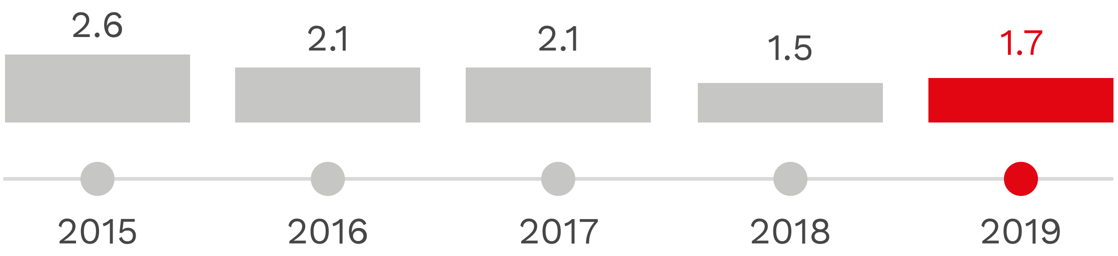
Performance in the Upstream segment is largely driven by the current Canadian Light Sweet (CLS) crude and AECO gas prices.

CLS price (USD/bbl)



Source: In-house analysis based on Platts and ICIS.

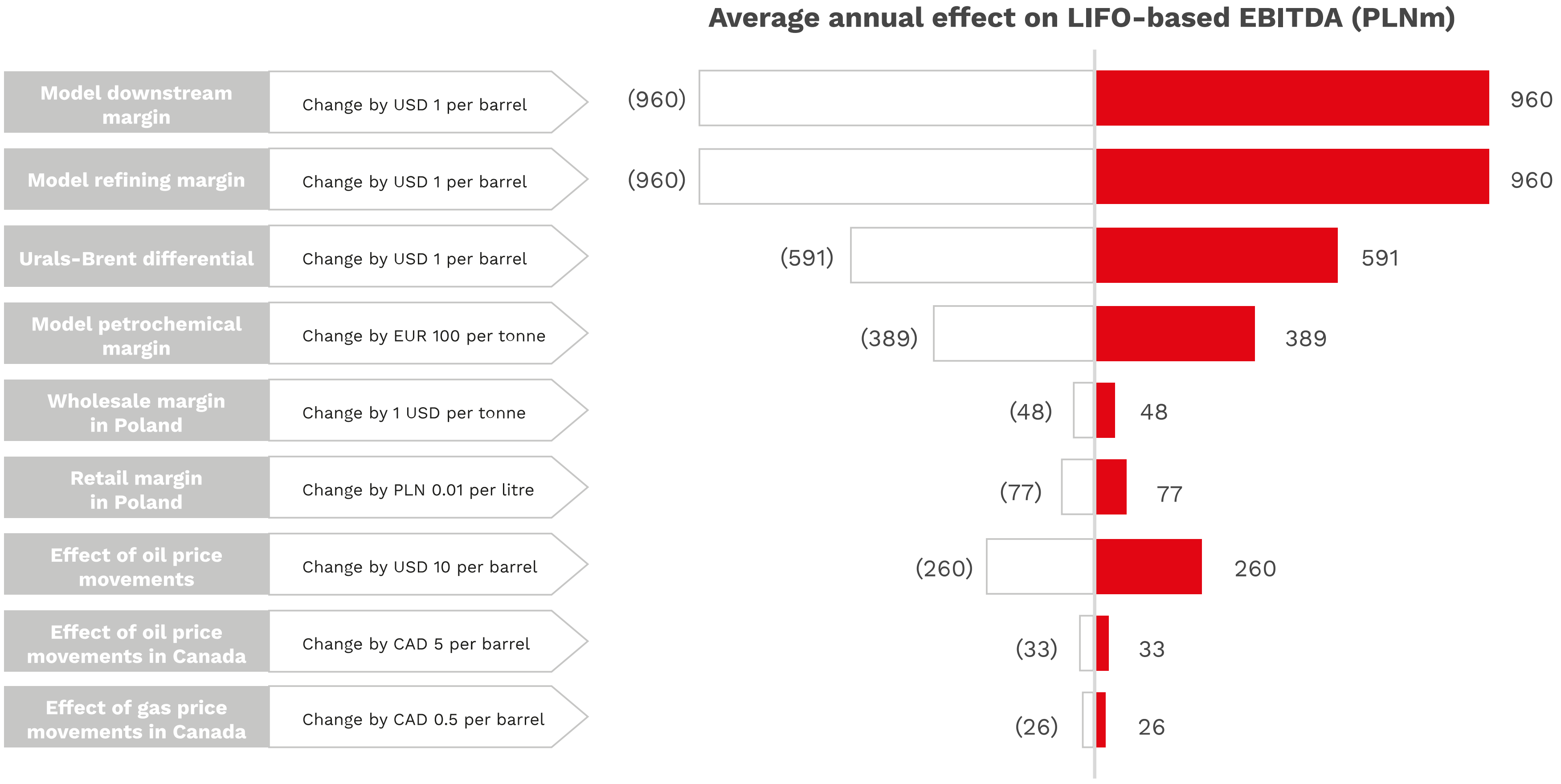
AECO natural gas prices (CAD/GJ)



Source: In-house analysis based on Platts and ICIS.

Sensitivity analysis

Analysis of sensitivity to changes in key macroeconomic parameters[1] (PLNm)



[1] *The effect of changes in the above factors has been estimated on the assumption the no correlation exists between them and the other factors which have bearing on the ORLEN Group's performance. Changes in macroeconomic factors may also have an additional impact on, for instance, optimisation of the product portfolio, sales markets or degree of processing capacity utilisation, which may additionally affect the results of PKN ORLEN's operations.*

- Estimated effect of changes in the model downstream margin **and model refining margin**, with the ORLEN Group's processing capacity utilisation assumed at approximately **250** million barrels.
- Estimated effect of changes in the **Urals-Brent differential**, with the ORLEN Group's Urals crude processing capacity utilisation assumed at approximately **154** million barrels.
- Estimated effect of changes in the model petrochemical margin, with the ORLEN Group's sales of polymers assumed at **905** thousand tonnes (Unipetrol/519 thousand tonnes and BOP (50%)/386 thousand tonnes).
- Estimated effect of changes in the **wholesale margin**, with the sales volumes of gasoline and diesel oil in Poland assumed at approximately **5** million tonnes, and effect of changes in **retail margin**, with fuel sales in Poland estimated at around **7.7** billion litres.
- Estimated effect of oil price movements is calculated based on the product and feedstock portfolio using the model downstream margin and mainly includes the effect of higher costs of consumption of raw materials for own energy needs.
- Estimated effect of changes in hydrocarbon prices in Canada assuming hydrocarbon production of approximately **6.3** million boe per annum.

MARKET ENVIRONMENT

GRI indicators: 103-2, 103-3

Market trends – Downstream segment

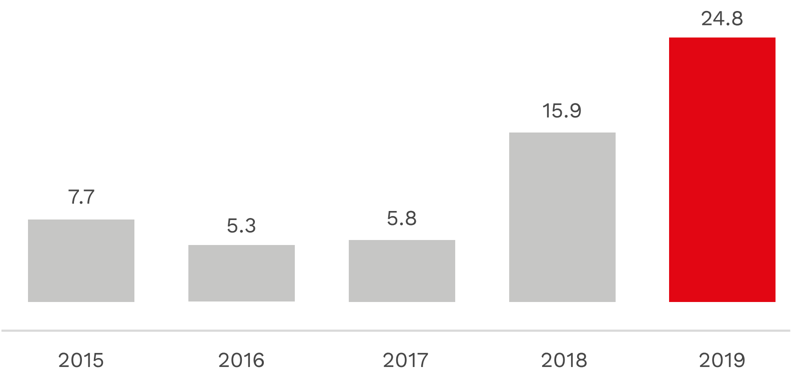
GRI: 103-2, 103-3

The ORLEN Group's operations include the production of crude oil, production and sale of refinery, petrochemical and chemical products, production of heat and electricity in a cogeneration process, and sale of electricity. Given the location of the ORLEN Group's leading assets in the commodity sector (comprising fungible products made by many companies in Poland, in the region, and globally), the Company is a 'price-taker' and so its financial performance is susceptible to price fluctuations on global markets. Over a year, prices on global markets change as a consequence of both one-off, unexpected factors, such as geopolitical events triggering price fluctuations around long-term trends, as well as recurring long-term factors affecting price relationships between, and demand for, primary energy sources.

The COVID-19 pandemic is an unexpected, one-off factor that is affecting prices by disrupting the supply-demand relationship. The biological nature of the factor and the depth of economic losses, including those recognised by the middle of the second quarter and those estimated until the end of 2020 (a 3.5% contraction in global GDP) , are causing the global economy to shrink relative to forecasts from the end of 2019. Its ramifications will include profound structural changes on the demand side (as the pandemic will change people's habits and behaviours) and the supply side (as excess supply will induce restructuring and consolidation processes across many industries). The biological factor behind these shifts, combined with the effects of social distancing, have probably made people realise that the relationship between the state of the environment and climate and their health and social relations is strong. This may lead to an increase in public support for companies applying ESG (Environmental, Social, Governance) principles in practice. Responsible investors abiding by ESG principles and taking account of long-term factors in their decision making, will also find it easier to raise funding. Read more on this topic in the '2020+ Outlook' section.

Long-term factors include global megatrends, demographic, social and technological ones, and the resultant regulations which, together, drive **decarbonisation and sustainable development processes**. One indicator reflecting the intensity of these processes in the European Union is **the market price of emission allowances (EUETS)**, which between January 2017 and December 2019 increased by 340% (from EUR 5.4 /tonne in January 2017 to EUR 23.8/tonne in December 2019).

EUETS market price



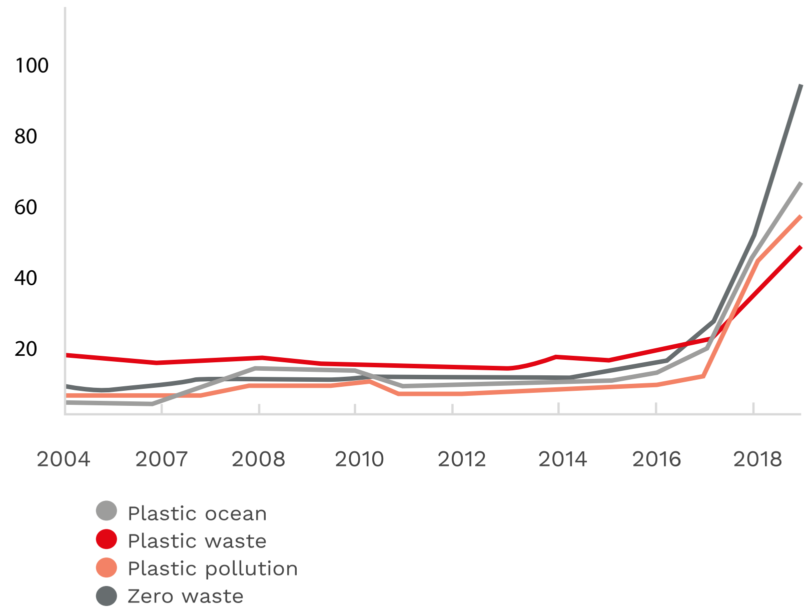
Source: In-house analysis.

A clear global megatrend, accelerated by the ongoing decarbonisation of transport, is the falling demand for crude oil and liquid fuels in OECD countries observed since 2005. Initially, it had been a structural trend (caused by the ageing population and the economy's saturation with vehicles), but was then compounded by an increase in oil prices in 2000–2016. A slump in crude oil prices around the middle of 2016 halted the drop in demand for a short time. However, gradual improvement in the energy efficiency of internal combustion engines, introduction of alternative liquid fuels containing bio-components, and increasing uptake of hybrid and electric drives and new mobility models (Car as a Service, car-sharing, autonomous vehicles) have dampened demand for oil and liquid fuels in other parts of the world. At the end of 2019, **the peak in global demand for crude oil and liquid fuels** was estimated to occur **between 2030 and 2040**. Now the countdown to peak oil is likely to shorten.

The ORLEN Group addresses these challenges by preparing a **comprehensive decarbonisation strategy**. The strategy will comprehensively cover emissions from refinery and petrochemical production facilities and related energy consumption. ORLEN is also taking a number of measures to address the direct emission footprint resulting from fuel consumption. These include installing EV chargers in motorway service areas, adapting motorway service areas to new e-mobility needs, investing in bio-refineries, testing innovative biofuel production technologies, and using hydrogen in transport and power production.

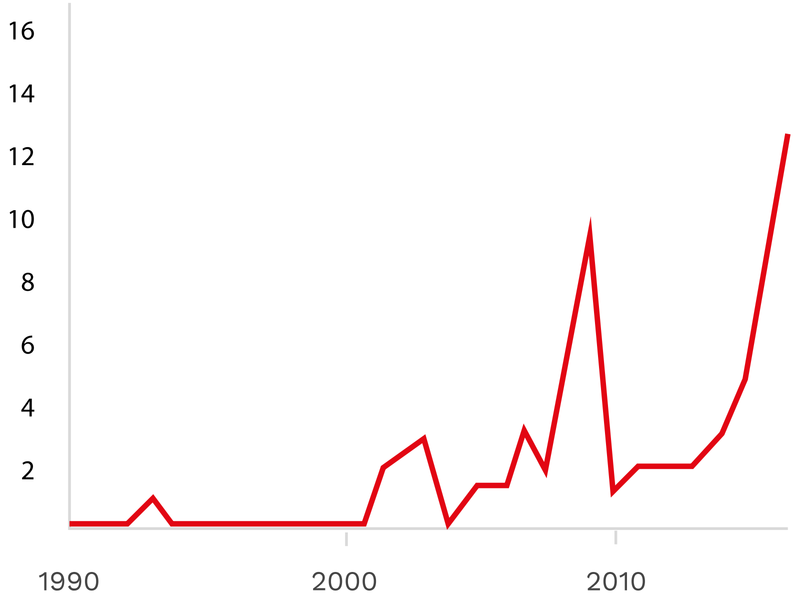
A significant strategic challenge for the Company is posed by its petrochemical and chemical production which, due to the accumulation of plastic waste in the environment, raises social concerns and spurs regulators to take specific measures restricting the use of many petrochemical products. Recognising the growing demand for using secondary materials in primary chemical products, ORLEN is taking action to address that.

Google searches for plastic waste-related terms



Source: In-house analysis based on Google Trends data.

Number of new regulations on single-use plastics at the national level



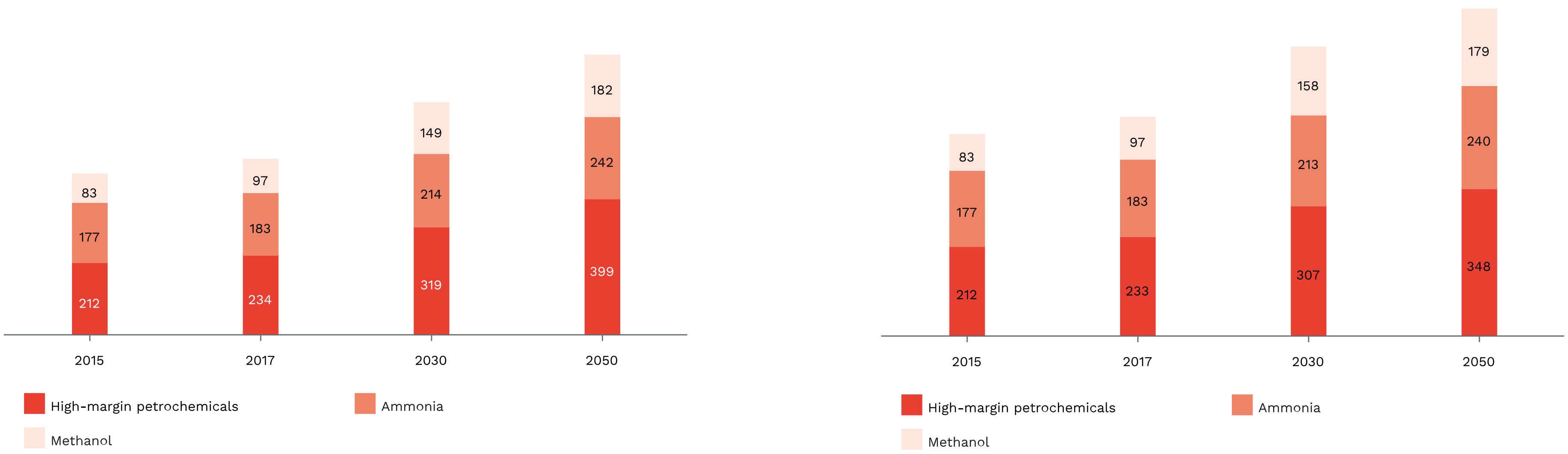
Source: In-house analysis based on United Nations Environment.

Although research on the climate and environmental footprint of various materials throughout their life cycle shows that petrochemical materials are more benign, cheaper and more durable than their alternatives, the ORLEN Group gives due weight to public opinion. For the most part, the Group's petrochemical and chemical products are not finished goods, which **limits the negative impact of its production on the environment and climate.** It also upgrades its production processes and gradually increases the use of bio-component inputs.

In a longer term, the petrochemical industry may support demand for crude refining products, thus building refining margins given the growing application of modern plastics in the global economy. Central and Eastern Europe is among the fastest-growing markets in terms of demand for petrochemical products of the kind produced by the Company.

Such products, particularly speciality products tailored to the needs of particular customers, offer a high growth rate. The role of plastics in manufacturing processes is expected to grow considering their new applications in advanced insulation systems, the automotive industry and 3D printers, to name a few examples. Manufacturers are able to compete with one another based on the technologies they use, specialist units they operate or speciality products they sell rather than by offering the lowest price.

Chemical production [million tonnes]



Baseline scenario

Alternative scenario

Source: in-house analysis based on IEA.

Source: in-house analysis based on IEA.

In Europe, there is room not only for conventional petrochemicals, but also for their bio-based counterparts. Leading petrochemical producers invest in research and development of both petroleum derivatives and bio-based chemicals. The amount of their R&D expenditure is correlated with financial performance, as each Polish złoty spent on R&D activities translates into a PLN 2.3 increase in EBITDA. Some companies within the sector boast an even higher return on their R&D investments.

As refining and petrochemical production are energy-intensive processes, **decarbonisation of electricity and heat consumed** is an important measure in reducing carbon dioxide emissions. The ORLEN Group already uses electricity and heat generated by two CCGT units, and the one in Włocławek was the first commercial power unit in Poland fuelled by natural gas. **Cogeneration is among the most efficient forms of energy production**. The opening price scissors between the price of coal-based energy and the cost of energy generation (from natural gas, cogenerated with heat) support the profitability of the Company's operations in this segment. There are also plans to construct **offshore wind farms** in the Baltic Sea (where environmental and wind surveys are currently in progress) and to further expand the ORLEN Group's presence in the green energy sector.

In April 2020, PKN ORLEN closed the acquisition of the **Energa Group**. The transaction is in line with PKN ORLEN's strategy to develop into a strong multi-utility player. As for the Energa Group, it owns more than 50 RES generation assets, mainly across the hydro, onshore wind and solar PV segments, as well as an extensive 188 thousand km distribution network, covering almost a quarter of Poland's territory.

PKN ORLEN concentrates on developing its energy assets towards low- and zero-emission sources. It has declared preliminary intent to get involved in a project to build the Ostrołęka power plant, provided a gas-fired technology is used.

An increasing share of green energy in the overall mix is not only conducive to the achievement of NIT, but, most importantly, offers a number of decarbonisation opportunities with respect to fuels and petrochemical products. It includes both green hydrogen produced by hydrolysis and its use as an alternative transport fuel, and synthetic gasoline enabling industrial use of captured carbon dioxide. The fully depreciated CCGT units will be an efficient power base for renewable energy support.

Further information on steps taken to decarbonise its production and products, and to reduce its negative environmental footprint (through the implementation of circular economy models) will be provided by the Company's long-term development strategy, which is now being prepared.

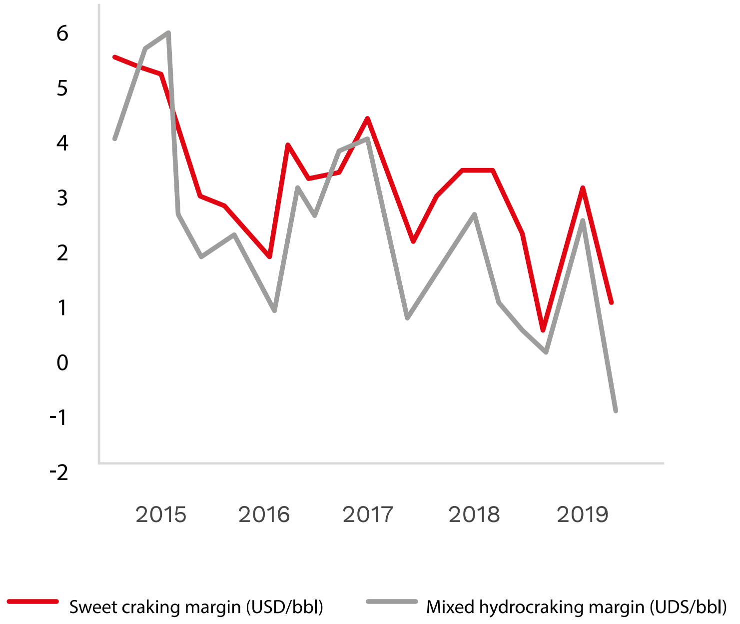
Macroeconomic factors affecting financial performance in 2019

The model downstream margin as well as the refining and petrochemical margins are synthetic indicators of the impact of changing macroeconomic factors on financial performance.

Model margins are a market category, their levels depending on the market prices of leading products and their respective shares in the production and sales mix. Given its limited ability to change the structure of products within a yearly cycle, the model margins are virtually beyond the ORLEN Group's control.

Changes in the prices of crude oil, fuels and petrochemical products are of the global nature. Due to arbitrage opportunities, a positive or negative impulse emerging on one market (whether regional or product market) spills over to affect all other markets. In the case of crude oil, an example of a regional impulse affecting the prices of various types of crude oil worldwide is a production cut in the Persian Gulf region, after the OPEC's intervention. In the case of fuels produced simultaneously in certain proportions that are not substitutable, a demand impulse on the market for one fuel triggers an increase of the crack spread on that fuel and spurs refineries to increase processing. This leads to an oversupply of remaining fuels and lower crack spreads. The decline in gasoline prices relative to oil prices at the beginning of 2019 sparked by an increase in demand for diesel oil and its production in the wake of the IMO regulations is a case in point.

Refining margins in Europe [USD/bbl].



Source: IHS Markit

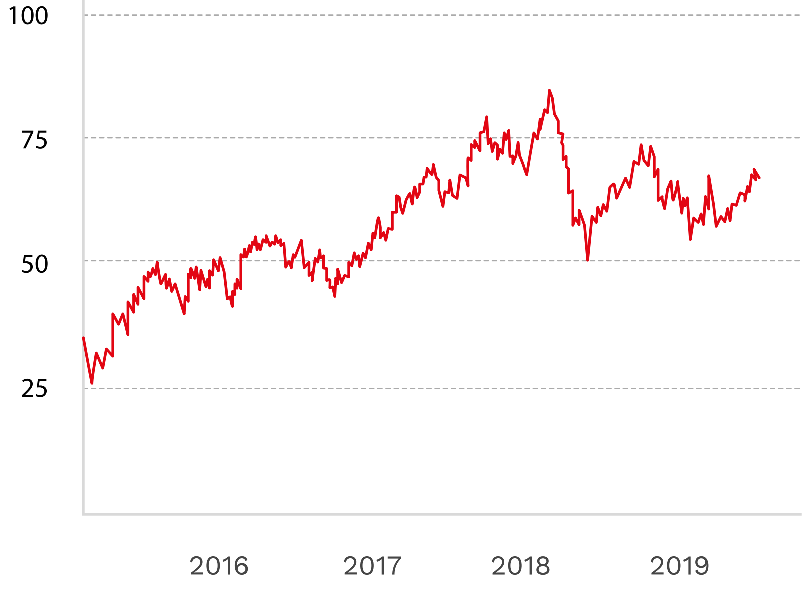
Sales volumes of the Companiesompany's products largely depend on demand on home markets, which grow faster than other EU markets. They are also dependent on other measures designed to improve competitiveness and build customer loyalty towards the ORLEN brand, such as environmentally and socially responsible investments, methods of management and communication with stakeholders (building the ORLEN brand in the region and globally, educating investors, developing non-financial reporting, and publishing expert reports).

Crude oil price

Crude oil is only seemingly a homogeneous product. More than 300 oil grades are traded on global markets, varying in densities and sulfur contents. Their prices are set relative to the prices of several benchmark oil grades quoted on regional commodity exchanges (Brent on ICE, WTI on NYMEX, or Dubai on DME). Due to arbitrage between markets and oil supply diversification strategies applied by refineries, the prices of various types of crude oil respond quite similarly to economic fluctuations and one-off geopolitical factors, provided that the structure of global demand for liquid fuels is not distorted. How the prices of different types of crude oil react to regulatory events, especially ones triggering a change in the structure of demand, depends on the properties of the crude grade concerned. An expected effect of the IMO regulations, which will cause nearly 4% of global demand for liquid fuels to shift from heavy fuel oil (HSFO) to low-sulfur fuels (with a sulfur content below 0.5%), is a structural change in demand for crude oil. Light sweet crude oils are preferred, while demand for heavy, high-sulfur types is on a downward trend. Consequently, as in the case of fuels, the prices of light sweet crudes, which can yield more middle distillates, are growing in relation to heavy, high-sulfur varieties.

In the area of the ORLEN Group's operations, prices of refining and petrochemical products are set by reference to Brent crude prices, with Urals being the leading alternative; however, due to its high

Changes in crude oil price [USD/bbl]



Source: IHS Markit

sulfur content, its value is likely to fall relative to the Brent benchmark.

In 2019, the daily price of Brent crude varied within a range of USD 50-75/bbl. The average price was USD 64.2/bbl. The lowest price in 2019, recorded at the beginning of the year, was USD 53.2/bbl. On December 31st 2019, the price was USD 66.8/bb (up 24%). The highest daily prices were recorded on April 25th (USD 74.3/bbl) and again on May 16th (USD 74.7/bbl).

Key factors triggering the oil price changes in 2019 included:

- Economic sanctions imposed by the US on Venezuela and Iran, reducing the oversupply of oil,
- OPEC+ production cuts,
- Geopolitical events in the Persian Gulf region (terrorist attacks on oil facilities and tankers),
- US-China customs war, causing a decline in global trade flows,
- Higher demand for light low-sulfur crude oils, due to the IMO regulations,
- Decline in demand for crude oil, due to deteriorated outlook for global economic growth,
- Steadily growing oil production in the US.

In Q1 2019, oversupply continued on the oil market, but the overall market situation changed relative to Q4 2018. As a result of production cuts in Saudi Arabia, the US sanctions on Venezuela and Iran and the approaching effective date of the revised IMO specifications for bunker fuels, the oversupply of crude oil declined by nearly 1m bbl/d, causing a virtually uninterrupted wave of price increases. The daily price of Brent crude increased by 34% (more than USD 17/bbl) during Q1 2019. In Q2 2019, the situation on the oil market took an unexpected turn. After a spell of continuous growth from the beginning of the year, in the middle of Q2 2019 the oil price was suddenly on a downward slide, despite a continued decline in production volumes and heightened geopolitical risk.

The upward trend was reversed on May 16th, with the daily Brent crude price at USD 75/bbl. Within the next 20 days, the price dropped by USD 13. The bulk of the slump happened in the space of three trading days. Between Thursday May 30th and Monday June 3rd, the current Brent crude price plummeted by as much as 12%. It should be stressed that the price drop occurred at the time when Iranian oil production was at its lowest since 1981, production in Venezuela was lower than in 1945, and Saudi Arabia's output was 1.4m bbl/d lower than in October 2018. According to IHS Markit's estimates, the overall global oil production at the end of Q2 2019 was 2.6m bbl/d lower than at the end of 2018.

Geopolitical risk also remained elevated, as six tanker ships were attacked in the Strait of Hormuz, the world's major oil shipping route (with daily flows accounting for 20% of oil traded worldwide). Yet, geopolitical developments were not the main factor behind the oil price drop. The most plausible explanation is that global demand is growing at a rate much slower than expected. In Q3 2019, the situation on the oil market continued to be affected by geopolitical factors. On the one hand, the prolonged US-China customs war fuelled concerns over the condition of the global economy, and a series of downward revisions of the oil demand forecast dragged the prices down.

On the other hand, armed conflicts in the Gulf region involving Iran, the US and Saudi Arabia, aggravated the risk of oil supply disruptions, creating an upward pressure on the prices. On September 14th 2019, the Saudi Aramco oil facilities were attacked by drones, which immediately sent up the prices of oil futures. On September 16th 2019, the daily prices of crude oil surged by 12%, the steepest increase since Iraq's attack on Kuwait in 1991. The attack took place when global oil production was reduced, due both to political factors and the producers' deal. At the beginning of July 2019, the OPEC and other oil producers, including Russia, signed a 'long-term cooperation' charter within the OPEC+ framework, which Saudi Arabia named a historical agreement. Thus, the ten non-OPEC oil producing countries, led by Russia, and OPEC formalised their alliance started in 2016 with the aim of preventing dramatic price declines. OPEC+ also announced that their agreement of December 2018 to reduce oil production by 1.2m bbl/d would be extended for another nine months (resulting in an aggregate reduction of 2.5m bbl/d vs Q4 2018).

The negotiated output cuts were implemented amid an expected slowdown in the global economy, to which the customs wars between the US and China had vastly contributed. For a third time in the year, the main analytical centres revised lower their oil demand projections, to less than 1m bbl/d in 2019, compared with 1.6m bbl/d in 2018.

Such downward revisions were made by EIA, IHS Markit, Morgan Stanley, Barclays and Goldman Sachs. The expectations were further dampened by poor PMI readings, especially for the eurozone, but also for the US industry, which, after ten years of expansion, began to falter. In Q4 2019, it was already clear that geopolitical factors, mainly the US-China trade wars, drove up global trade costs, while markedly reducing global exports and increasing production costs. This brought about a stronger-than-expected slowdown in global economic growth (from 3.2% in 2018 to 2.6% in 2019). The economic downturn, which probably could have been avoided, affected the largest consumers of petroleum products, i.e. China, Asian countries, as well as the US and the EU. According to estimates, the increase in demand for crude oil was only 0.8m bbl/d in 2019, a half of the level expected at the year's beginning. The increase in demand for crude oil and liquid fuels is partly driven by the need to comply with the IMO regulations, although that effect has proved significantly weaker than expected. As shown by numerous analyses, the global oil industry has been adjusting at a cost lower than originally assumed.

Crack spreads and differentials

Anticipated adjustments by the global oil industry and maritime transport to the new IMO regulations were expected to improve model refining margins in 2019. Due to a cap (below 0.5%) on the sulfur content in bunker fuels, it was widely expected that demand would shift to fuels of a quality similar to that of diesel oil, used in land transport. A resulting excess of heavy fractions (HSFO) was expected to lead to a decrease in their price relative to the price of crude oil, i.e. in the crack spread. On the other hand, the emergence of a new consumer on the diesel market should lead to an increase in the price of that fuel relative to crude oil. As maritime transport generates approximately 4% of global demand for crude oil and liquid fuels, the higher demand for diesel oil would require refineries to increase crude processing volumes, as it would not be sufficient to merely increase the conversion rates. It was the prospect of higher refining margins that was expected to prompt global refineries to invest in increasing crude processing volumes and conversion rates, with a view to increasing the share of high-margin fuels (mainly diesel oil and gasoline) in their product mix. The shift in demand towards light products was expected to bring about a corresponding shift in the structure of demand for light and heavy crude types and widening of the Brent/Urals differential.

These expectations proved wrong as in December 2019 refining margins shrank to their lowest in seven years, owing to extremely tight margins on diesel oil, which fell short of any expectations. On the other hand, HSFO outperformed the expectations.

Why has the impact of the IMO regulations proved so different from what was predicted?

- The global economy has slowed down, partly on account of the customs wars, which have had a strong impact on international trade flows. Consequently, demand for crude oil and liquid fuels has been growing at a pace significantly slower than expected. In 2019, it increased by 0.8m bbl/d, while in the summer of 2019 it was expected to grow by 1.6m bbl/d.
- At the end of 2019, increased refining capacities were placed in service with a view to increasing the output of diesel oil (thanks to both increased throughput volumes and conversion rates) to accommodate the demand growth of 1.6m bbl/d.
- The additional volumes of HSFO and gasolines, resulting from increased crude processing, have been marketed as a new bunker fuel – a very low-sulfur fuel oil (VLSFO), a blend of HSFO and naphtha (VGO).
- Ships have been successfully testing the new, cheaper bunker fuel, which has been gradually denting demand for diesel from maritime transport.
- As a result, the effects on the light sweet and heavy sour crude differentials are weaker than expected.

The effects of the IMO regulations differ from expectations owing to the combination of the following factors: the increase in refining output to accommodate the expected strong demand and the currently weak demand, as well as the emergence of a new bunker fuel (VLSFO) ousting diesel oil.

Petrochemical margins are driven by the prices of petrochemical products and crude oil. The prices of petrochemical products are strongly correlated with the level of economic activity, which in 2019 fell globally and on the ORLEN Group's core markets. For more information, see the '2020+ Outlook' section.

Market trends – Retail segment

2019 saw a year-on-year increase in unit margins on fuel sales in both Poland and the Czech Republic. By contrast, unit margins on fuel sales in Lithuania declined on account of fuel prices kept low by the market. In Germany, margins fell mainly as a result of a very high 2018 base effect reflecting difficulties in fuel logistics. Operating expenses rose across all markets, driven mainly by growing labour costs as a result of an increase in minimum wage rates coupled with competitive and market pressures on pay rises. The higher labour costs and low unemployment rates also had an effect of pushing up other operating expenses, in particular the prices of utilities and services, as well as the costs of plant maintenance.

In 2019, most fuel retail chains upgraded their facilities and expanded their food and beverage offerings. As all the leading chains are modernising their service stations, the premium and economy segments are slowly converging. The only factors that set one segment apart from the other is the price, availability of premium fuels, and loyalty schemes for customers.

As there were no acquisitions or ownership changes involving the main players on the retail fuel market, the leading chains retained their respective market positions in the ORLEN Group's operating markets. In 2019, the ORLEN Group established a foothold on the Slovak market, by opening its first ten service stations. Slovakia has thus become the fifth country after Poland, the Czech Republic, Germany and Lithuania where the Group has established retail operations. In 2019, PKN ORLEN commenced a project to co-brand its foreign service stations by combining the logotypes of the local Benzina and Star brands with the ORLEN Group's logotype.

COMPETITIVE ENVIRONMENT

Capitals:

The ORLEN Group is the largest company in Central and Eastern Europe.

Downstream

The ORLEN Group is the largest refiner in the CEE region. For information on its production assets, see the section 'ORLEN Group in 2019'.

ORLEN Group production assets and key competitors in CEE / processing capacity [million tonnes].

Source: In-house analysis.

The largest **competitors of the ORLEN Group** are:

- Grupa LOTOS of Gdańsk – Poland's second largest refinery
- Mitteldeutschland Refinery in Leuna/Spergau, located in south-eastern Germany, about 150 km from the Polish-German border, the country's most advanced refinery
- PCK Refinery in Schwedt, located north-east of Berlin, about 20 km from the Polish-German border
- Slovnaft refinery, an integrated refining and petrochemical group, with a leading position in the Slovak Republic, located near Bratislava
- Mozyr refinery, a leading refinery in Belarus, located close to the Ukrainian border.

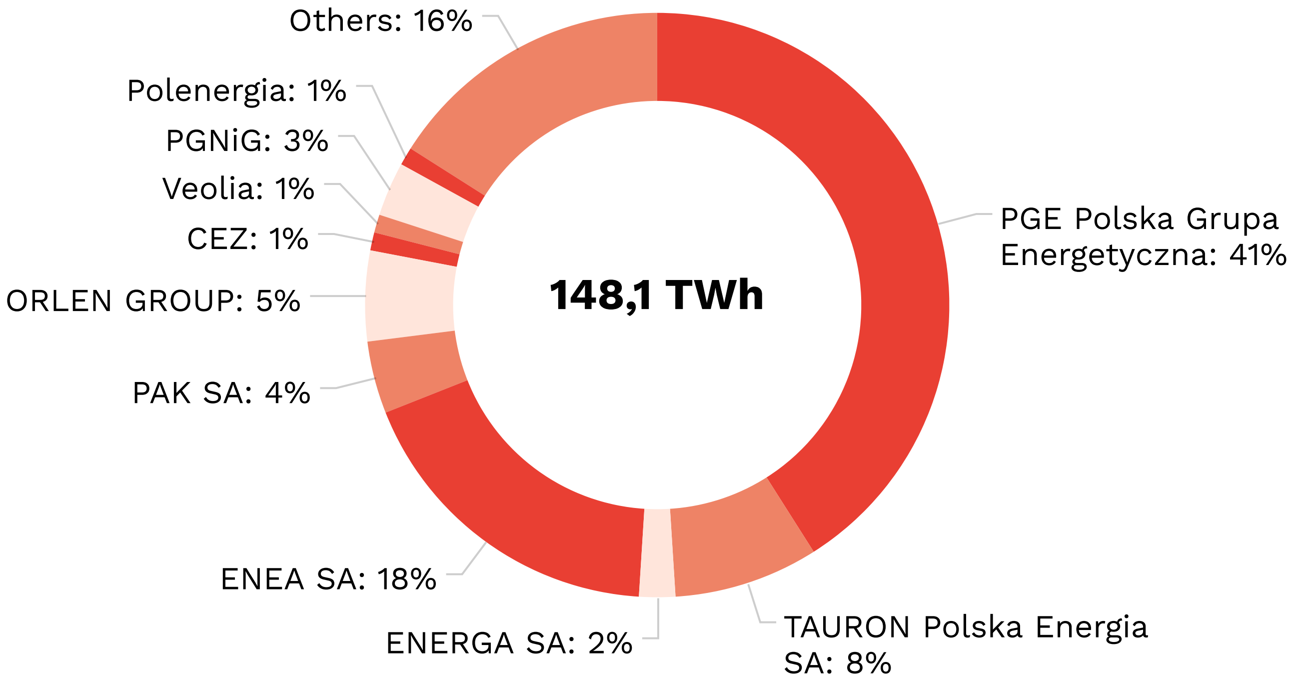
Information on competition in wholesale of petrochemical and refinery products, see the section 'ORLEN Group in 2019'.

The ORLEN Group is **the fourth largest electricity producer** in Poland.

As at December 31st 2019, the Group owned power generating assets with a capacity of 1.8 GWe. Its market share was 5%, and the ENERGA Group, acquired in April 2020, held 2% of the market.

Two new generating assets were put into operation by PKN ORLEN in 2018 – one in Włocławek (463 MW) and one in Płock (608 MW), and 2019 was the first full year of both units operating at full capacity.

Energy groups' shares of total volume of electricity fed into the grid in 2019



(source: URE)

For more information on the energy sector in Poland, including information pertaining to the ENERGA Group acquisition, see the presentation posted on the website and the 'Energy Management'.

Retail

The ORLEN Group is the undisputed leader of retail fuel sales in Central Europe. At the end of 2019, it operated a total of 2,836 service stations, including 10 sites in Slovakia, the Group's new home market.

The number of service stations and ORLEN Group's market shares at the end of 2019

	Poland	Czech Republic	Germany	Lithuania	Slovakia
Market presence since	1999	1953	2003	2009	2019
Market share	34.1% +0.3 p.p. (r/r)	24.6% +1.3 p.p. (r/r)	6.6% +0.2 p.p. (r/r)	4.7% 0.0 p.p. (r/r)	-
stations	1,800	416	585	25	10

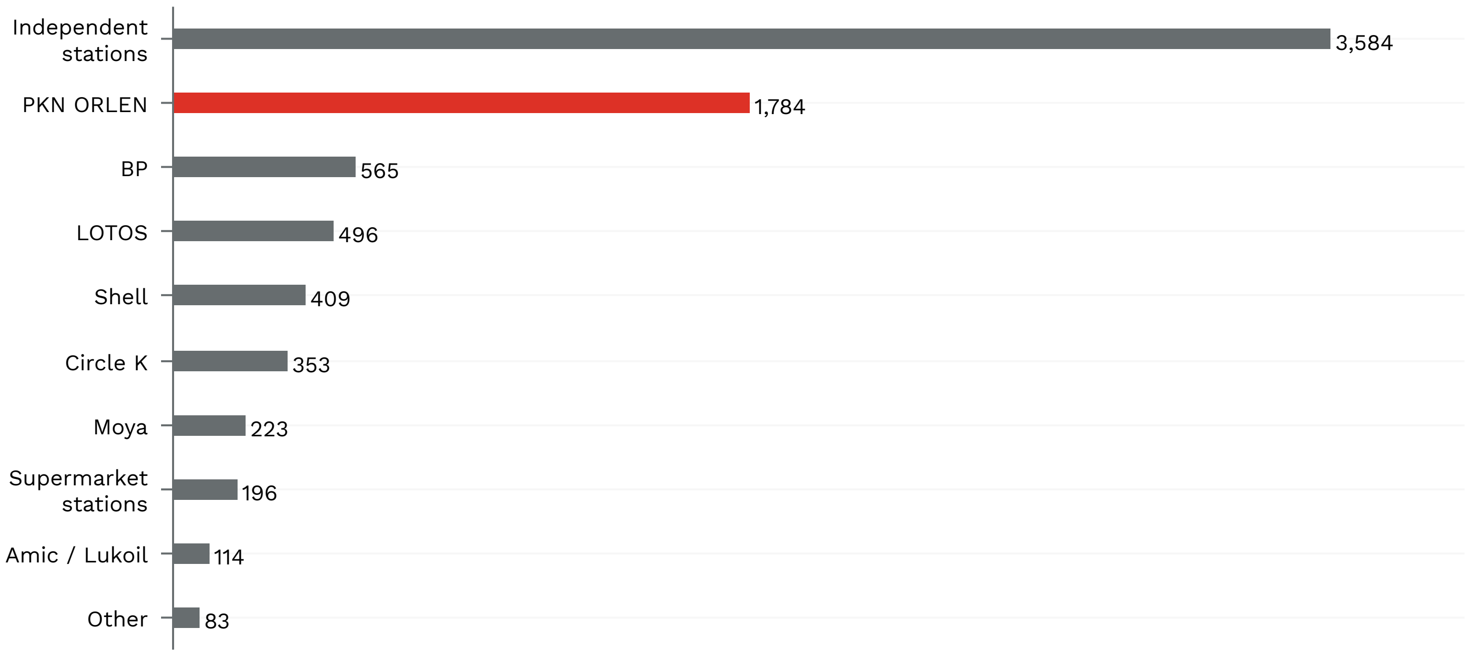
Source: In-house analysis.

Polish market

According to the Polish Organisation of Oil Industry and Trade (POPiHN), there were more than 7,800 service stations in Poland at the end of September 2019, an increase of 40 or so compared with the end of 2018. In 2019, the POPiHN was joined by Anwim (as an associate member), the operator of 223 MOYA service stations.

As at the end of 2019, the ORLEN Group had a network of 1,800 service stations on the Polish market (approximately 24% of all stations in the country), while the stations operated by international chains (BP, Shell, Circle-K, Amic, and Total) represented approximately 20% of the total. Independent operator stations (including smaller chains operating under a single brand) accounted for about 50% of all service stations in Poland. Among the chains of independently-operated stations, MOYA continued to grow at a vigorous pace. The number of supermarket service stations remained roughly unchanged (196 locations, representing around 2.5% of the total). The number of AS 24 and IDS self-service stations, also managed by foreign operators, was 46.

Service station networks in Poland



Source: In-house study based on POPiHN data as at September 30th 2019

With the completion of certain growth projects and successful adaptation to the changing competitive landscape in Poland, PKN ORLEN was able to maintain its share in the Polish market at 34.3%.

In 2019, as in previous years, one driver of the service stations market was the road network extension programme pursued in Poland. Following the opening of new expressway and motorway sections, more tenders to lease Motorway Service Areas (MSA) were called and new large service stations were opened at these locations. As at the end of 2019, there were 85 MSA service stations at Polish expressways or motorways, of which 33 (38.8%) were owned by PKN ORLEN. Currently, the Company is engaged in work on a further 11 projects to build MSA facilities.

Czech market

The ORLEN Group maintained its leading position on the market, both in terms of the volume of sales and the size of the service station chain. In 2019, the Benzina chain comprised 416 sites, its market share having gone up to 24.5%.

In terms of the number of service stations, Hungary's MOL is the second largest chain in the Czech Republic (with 304 locations). In terms of the market share, Tank Ono, a privately-owned discount chain, is the runner-up, with 41 stations and an approximately 15% share in the market. Other major players on the Czech market are the premium stations run by the two multinationals Shell and OMV, with a combined market share of just under 23%.

German market

The number of service stations on the German market was about 14.5 thousand, with ORLEN Deutschland's main competitors including international networks such as: Aral (BP Group), Shell, ESSO, Total (accounting for a nearly 60% share in the market and 44% of all stations) and the economy chains JET and HEM (almost 9% of all stations). In 2019, the number of service stations within each chain changed only slightly year on year. In terms of the number of service stations, Star is the eighth largest fuel retailer in Germany (and second to Jet in the economy segment).

The ORLEN Group has been present on the German market, the largest fuel consumer in Europe, since 2003. At the end of 2019, ORLEN Deutschland's service station chain comprised 585 sites and, despite stiff competition, managed to grow its market share by 0.2pp, to 6.6%.

Lithuanian market

Viada, with 126 locations and a 22% market share, is the leader in terms of the size of the service station chain on the Lithuanian market. Together with Baltic Petroleum, Lithuania's third largest chain, with which it has equity links, Viada controls 203 service stations and more than 32% of the market. Another retail chain is Circle K, the operator of 89 service stations (including 12 automated, self-service locations) with an almost 20% market share. Neste, operating 72 service stations, is another major player present on that market. At the end of 2019, the ORLEN Group's retail chain in Lithuania, operated by the subsidiary ORLEN Baltics Retail, comprised 25 sites, which gave the Group an unchanged 4.7% share in the Lithuanian retail market.

Slovak market

As at the end of 2019, the number of service stations in Slovakia totalled 910. The main player and leader on the Slovak market is MOL, enjoying a 28% market share and operating 253 service stations under the Slovnaft brand. The source of supplies for the Slovnaft chain is MOL's own refinery in Bratislava. Other multinationals (Shell, OMV, Lukoil) are also present in Slovakia, where they hold a combined market share of 21%, whereas local independent service stations account for the remaining 51% of the market. In 2019, the ORLEN Group also established a foothold on the Slovak retail market through its subsidiary Unipetrol a.s., and at the year's end it already operated there 10 CODO service stations under the Benzina brand.

REGULATORY ENVIRONMENT

GRI indicators: 103-1, 103-2, 103-3

Capitals:

The ORLEN Group operates on regulated markets, so compliance of the Group's activities with legal regulations is a key aspect of its business.

GRI: 103-1, 103-2, 103-3

Under their regulatory risk management policies, PKN ORLEN and the other ORLEN Group companies engage in a fully transparent and open dialogue based on applicable laws, which involves reviewing drafts of legislative solutions at the national and EU legislation level. In addition, the Group's relations with the regulators, control and supervisory authorities are coordinated on an ongoing basis, and the Group operates a process of obtaining and managing permits and authorisations.

Below are presented key opportunities and risks arising from the regulatory environment in Poland in connection with the ORLEN Group's business.

Risk associated with the obligation to maintain stocks of crude oil

The Group is subject to numerous obligations involving maintenance of emergency stocks of crude oil and fuels, imposed by the Act on Stocks of Crude Oil, Petroleum Products and Natural Gas, and on the Rules to Be Followed in the Event of Threat to National Fuel Security or Disruptions on the Petroleum Market of February 16th 2007 (the "Act on Emergency Stocks").

Under new regulations in this area, since January 1st 2015 producers and traders have been under the obligation to pay a stocks charge in exchange for a gradual reduction of the level of physical stocks required to be maintained for the Material Reserves Agency.

As a manufacturer and importer of liquid fuels, since December 31st 2017 the Group has been obliged to maintain minimum stocks equal to the equivalent of 53 days of the average daily production or imports in the previous calendar year. Furthermore, to comply with statutory requirements on emergency stocks of crude oil and liquid fuels, it pays a stocks charge to the Emergency Stocks Fund, managed by the President of the Material Reserves Agency.

Failure to maintain the required stock levels or breach of other obligations under the Act on Emergency Stocks entails the risk of high penalties being imposed.

Risk related to the obligation to achieve the National Indicative Target (NIT) for biocomponents

The Act on Biocomponents and Liquid Biofuels imposes the requirement to achieve the National Indicative Target ("NIT"), i.e. to ensure the required minimum share of biocomponents in the total volume of liquid fuels and biofuels, both sold on the market and used for own needs. Provisions of the Act define the legal transactions which trigger the obligaton to achieve the NIT as well as the entities subject to that obligation. Starting from 2015, only those biocomponents which meet the criteria of sustainable development set out in the EU and Polish laws may be used to fulfil the NIT obligation.

If NIT is not met, a penalty may be imposed on the Group, calculated on the basis of the formula defined in the Act on Biocomponents and Liquid Biofuels.

Risk related to the impact of regulations on trading in greenhouse gas emission allowances

The ORLEN Group companies are subject to the EU regulation establishing the greenhouse gas emission allowance trading scheme (the "EU ETS Directive") that forms part of the EU climate and energy package. The purpose of the EU ETS Directive is to promote an annual reduction of GHG/CO_2 equivalent emissions until 2030.

Three Polish production complexes owned by the ORLEN Group, i.e. the refinery, the CHP plant, the olefins unit in Płock (PKN ORLEN) as well as the ammonia unit in Włocławek (ANWIL) are the ORLEN Group's largest carbon dioxide emitters. All those and other installations participating in the EU Emissions Trading Scheme are included in the list of installations prepared by Poland and submitted to the European Commission for the purpose of free allocation of emission allowances in the third trading period (covering the years 2013-2020). The list of installations and the indicated amounts of free allocations have been approved by the European Commission. The total number of emission allowances allocated to the ORLEN Group companies free of charge is insufficient for their needs and, in consequence, they purchase additional emission allowances, which generates additional costs.

In 2018, the European Parliament and the Council of the European Union adopted Directive (EU) 2018/410 of the European Parliament and of the Council of March 14th 2018 amending Directive 2003/87/EC, which implements changes as part of Phase 4 of the EU ETS (2021-2030). The amended CO_2 emissions trading system provides for a more ambitious reduction of emission volumes in the energy and industrial sectors in the European Economic Area. The new regulations introduce a higher linear emissions reduction factor (2.2% annually, up from 1.74%) and a revision of benchmarks based on which free allocation levels are set in the sectors exposed to a risk of carbon leakage. Starting from 2019, some of the allowances from the market are placed in the market stability reserve, which reduces the volume of traded allowances and is likely to increase the demand and their price. At present, legislative and regulatory efforts are being taken to fully prepare and implement the new phase of the EU ETS system, in which the Group companies covered by the system play an active role.

Combating grey market

In 2019, PKN ORLEN was actively involved in public consultations of amendments to tax and administrative regulations aimed at combating the grey market in liquid fuels, which for years has been a problem facing the fuel sector.

The Group engaged chiefly in activities designed to improve the system for monitoring the road transport of tax-sensitive goods, i.e. the SENT system, or the transport package including monitoring of railway transport, as well as in work on the 'heating fuels package', providing for the use of the SENT system to tighten regulation of the Polish market of heating fuels, which are sensitive considering the rules of excise taxation on such fuels. In 2019, the SENT system was extended to monitor the supplies of LPG for transport purposes in order to improve the efficiency of control over the transport fuel market segment in Poland. The Company engaged in work on the adoption of an amendment to the 'fuel package' adopted in mid-2019, which assumes addition of new items to the catalogue of fuels that are subject to VAT quick fixes when they are purchased for the Polish market in intra-Community transactions, as well as extension of licensing and monitoring of imports to Poland of new types of liquid fuels. Additionally, in 2019 PKN ORLEN implemented and applied on a day-to-day basis all new legal requirements dedicated to tightening regulation of the liquid fuels market. PKN ORLEN's efforts took the form of a public dialogue with the authorities regulating the liquid fuels market in Poland, in particular with the President of the Energy Regulatory Office, President of the Material Reserves Agency, and the National Revenue Administration, as well as close cooperation with the Group's customers and trading partners.

Participation in the capacity market

The Act on Capacity Market of December 8th 2017 defines the organisation of the capacity market and the rules governing provision, against consideration, of standby services to supply electricity to the power system and the supply of that electricity to the system in periods of emergency. Bids for expected service rates will be selected through an auction. As a rule, the winning bids will be those which offer the lowest price while giving maximum effect to the principle of technological neutrality expected by the European Commission. The same rules will apply when selecting bids placed by Polish electricity producers, including operators producing electricity through high-efficiency industrial cogeneration, and a limited number of bids from foreign producers, as well as Demand Side Response service bids, that is proposals to reduce electricity consumption and use of capacity on demand.

In 2019–2025, one main auction will be held every year for delivery periods falling in 2024−2030. PKN ORLEN's cogeneration units in Płock and Włocławek will be included in the support system provided for in the Act.

Monitoring of the transport of certain goods (the SENT system)

In 2018, the Act on the System for Monitoring the Road Transport of Goods, i.e. the SENT system, was extended to include the monitoring of the rail transport of tax-sensitive goods. In addition, the Act was amended to enable the tracking of shipments by road (with the use of locators installed in vehicles). The above changes, combined with the previous solutions introduced by the fuels package and energy package, are aimed at consolidating the positive effect of curbing the grey market by increasing the effectiveness of supervision.

In 2019, those regulations were amended by including the 'heating fuels package', which provides for the use of the SENT system to enhance the effectiveness of monitoring of fuel deliveries to consumers, the range of fuels subject to monitoring was expanded to include LPG. The purpose of the regulations is to counteract excise tax fraud committed while marketing those fuels, for instance by replacing paper excise declarations issued by buyers of fuel oils to confirm the receipt of fuel delivery with electronic delivery confirmations combined with monitoring under the SENT system, and to eliminate illegal use of liquefied gas intended for heating purposes as transport fuel.

PKN ORLEN actively participated in the entire process of drafting the regulations. The Company also worked to develop effective solutions provided for in the Act by designing the system for automatic registration of fuel transport from terminals in the SENT system, and testing the system's subsequent modifications.

Management of hydrocarbon exploration, appraisal and production activities

These activities are managed by the Company based on the appropriate integrated management system developed and implemented by ORLEN Upstream. The main legislative act governing business activities of the ORLEN Group's Upstream segment in Poland is the Geological and Mining Law. In 2018, the Law was amended by introducing the second (in addition to a tender) procedure for granting hydrocarbon licences, i.e. an open door procedure, under which a tender may be organised at the request from an entrepreneur. The amendments also clarified the rules related to the entrepreneur's right of first refusal. Now, the entrepreneur may apply within a statutorily defined timeframe for the establishment of mining usufruct for its benefit with priority over other parties. In addition, the structure of joint operations agreements, which have long been commonly used in other countries, has been modified. The provision requiring that the operator's share in costs and profits from joint operations exceeds 50% has been deleted. This provision allows more freedom to conclude such agreements and does not jeopardise their proper performance as the operator will continue to be responsible for discharging its licence and statutory obligations.

It should also be noted that the initiation and conduct of geological and mining activities requires compliance with certain requirements other than those provided for in the geological and mining law. These include such aspects as the environmental impact of such projects, spatial planning and development, waste management, water management and taxation.

ORGANISATIONS AND ASSOCIATIONS

GRI indicators: 102-13

Capitals:

PKN ORLEN's representatives participate in a number of various organisations and associations. Membership of these bodies is a vital component of PKN ORLEN's presence on the Polish and European economic and social arena.

GRI: 102-13

Being part of these organisations and associations, PKN ORLEN has access to knowledge and information about draft regulations for the fuel and power sectors in Poland and Europe, can easily learn about technical solutions and findings of research carried out in other countries, and has an opportunity to share its knowledge and gain new experience. Through its active participation in these organisations, in particular those that bring together employers or promote CSR ideas, PKN ORLEN builds stable relations with its environment.

Organisations and associations of strategic relevance to the ORLEN Group are those which bring together and represent the entire refining, petrochemical and energy industry in Poland and Europe. They represent the industry before public administration and international bodies. One of the key organisations in Poland is the Polish Chamber of Chemical Industry (PIPC), of which PKN ORLEN, ANWIL and ORLEN Eko are active members. Representatives of the ORLEN Group sit on a number of PIPC committees, including: the International Trade Policy Committee, the Transport and Distribution Committee, the Tax Committee, the Sustainable Development Committee, the Technical Committee, the Polymer Materials Committee, the Innovation Committee, the Energy and Climate Committee, the Environmental Protection Committee, the OHS Committee and the Fire Safety Committee. PKN ORLEN has also joined some European organisations of high importance to the industry, including the European Petroleum Refiners Association, in which the Company is among the seven largest members and is thus entitled to a permanent place on its Management Board.

Organisations and associations of which PKN ORLEN was a member in 2019

Polish organisations

Federacja Przedsiębiorców Polskich (Polish Entrepreneurs Federation)

Forum Odpowiedzialnego Biznesu (Responsible Business Forum)

Izba Energetyki Przemysłowej i Odbiorców Energii (Polish Chamber of Industrial Power and Energy Consumers)

Klub Polskich Laboratoriów Badawczych POLLAB (POLLAB Club of Polish Research Laboratories)

Komisja Compliance przy Giełdzie Papierów Wartościowych S.A. (Compliance Committee at the Warsaw Stock Exchange)

PIPC/Chemeko – Program Odpowiedzialność i Troska (Responsibility and Care Programme)

Polska Izba Przemysłu Chemicznego (Polish Chamber of Chemical Industry)

Polska Organizacja Przemysłu i Handlu Naftowego (Polish Organisation of Oil Industry and Trade)

Polska Platforma Technologiczna Wodoru i Ogniw Paliwowych (Polish Hydrogen and Fuel Cell Technology Platform)

Polski Komitet Narodowy Międzynarodowej Izby Handlowej (ICC Poland) (Polish National Committee of the International Chamber of Commerce, ICC Poland)

Polski Komitet Normalizacyjny (Polish Committee for Standardization)

Polski Narodowy Komitet Światowej Rady Naftowej (Polish National Committee of the World Petroleum Council)

Polskie Forum ISO 9000 (Polish ISO 9000 Forum)

Polskie Stowarzyszenie Energetyki Wiatrowej (the Polish Wind Energy Association)

Polskie Stowarzyszenie Paliw Alternatywnych (the Polish Alternative Fuels Association)

Polskie Towarzystwo Badaczy Rynku i Opinii (Polish Association of Public Opinion and Marketing Research Firms)

Pracodawcy Rzeczypospolitej Polskiej (Employers of Poland)

Responsible Business Forum

Stowarzyszenie Emitentów Giełdowych (Polish Association of Listed Companies)

Stowarzyszenie Inżynierów i Techników Przemysłu Chemicznego (Polish Association of Chemical Engineers)

Stowarzyszenie Naukowo-Techniczne Inżynierów i Techników Przemysłu Naftowego i Gazowniczego (Polish Association of Oil and Gas Industry Engineers and Technicians)

Stowarzyszenie Płockich Naftowców (Association of Oil Industry Workers in Płock)

Stowarzyszenie Współpracy Przemysłu Naftowego i Samochodowego CEC Polska (Oil and Automotive Industry Association CEC Poland)

Towarzystwo Obrotu Energią (Association for Energy Trading)

Związek Przedsiębiorców i Pracodawców (Union of Entrepreneurs and Employers)

International organisations

European Energy Forum

European Petroleum Refiners Association

Institute of Professional Representatives before the European Patent Office

International Air Transport Association

International Controller Verein

Joint Inspection Group

NACS The Association for Convenience & Fuel Retailing

Polski Komitet Światowej Rady Energetycznej (Polish Member Committee of the World Energy Council)

TechBrainers R&D Club

The Conference Board

The European Petrochemical Association

Selected organisations and associations of which other ORLEN Group companies were members in 2019

Polish organisations

- All-Polish Economic Chamber of Road-Building
- Chamber of Commerce for Gas Industry
- Fundacja Polska Sól
- Izba Gospodarcza Transportu Lądowego
- National Chamber of Biofuels
- Polish Economic Chamber of Electrotechnics
- Polish Road Congress

International organisations

- Association European Candle Makers
- Association of Chemical Industry of the Czech Republic
- Czech Association of Petroleum Industry and Trade
- Czech Chamber of Commerce
- Confederation of Industry and Transport in the Chech Republic
- European Wax Federation
- Eurochlor
- International Fertilizer Association
- Large Energy Consumers Association
- Lithuanian Business Confederation
- Lithuanian Customs Brokerage Association
- Polish and Lithuania Chamber of Commerce
- Solution Mining Research Institute
- The Lithuanian Confederation of Industrialists

GOVERNANCE PRINCIPLES

LETTER FROM THE CHAIRMAN OF THE SUPERVISORY BOARD

Ladies and Gentlemen,

Throughout the past year PKN ORLEN was consistently pursuing its adopted strategy, which was a source of value creation and competitive advantages. The Group was developing and growing its petrochemical production, further integrating its refinery assets and getting involved in low-carbon power generation projects. Strong focus was also placed on expanding the retail business and continued engagement in upstream projects. Importantly, the pace of R&D and implementation work, supporting all areas of the Group's business, was accelerated. Pursuing these ambitious tasks, PKN ORLEN managed to keep all its financial ratios at safe levels.

Attesting to the Group's robust financial condition were the performance figures it posted in 2019. LIFO-based EBITDA came in at PLN 9.4bn, an increase of PLN 1.1bn year on year. The result was achieved on record-high crude oil throughput of 33.9m tonnes and record-high sales at 43.2m tonnes. LIFO-based EBITDA delivered by the retail and power generation segments was at an all-time high in 2019, at over PLN 3bn and PLN 1.6bn, respectively. The Group's net profit reached PLN 4.5bn, while its net debt was reduced by PLN 3.2bn, to PLN 2.4bn at the year's end. Leverage remained safe at 6.3%. Resting firmly on a sound financial footing, PKN ORLEN was not only able to run a number of important projects, but also to attract more retail shareholders and develop the ORLEN IN YOUR PORTFOLIO scheme.

Crucial business decisions and investments made last year are set to drive PKN ORLEN's vigorous growth over the coming decades. The primary goal is to turn the Group into a strong multi-utility player with an established international position, resilient to changing macroeconomic factors. This will benefit both PKN ORLEN's Shareholders and Customers, providing a significant boost to the Polish economy. This is why it was so important to embark on a process to acquire control of the LOTOS Group and announce a tender offer for 100% of shares in the ENERGA Group, the latter transaction having been successfully completed in April 2020.

Another equally important initiative was a series of key investment projects spanning the Group's strategic business areas, such as petrochemicals, oil refining and power generation, including from low-carbon sources. Within the next several years, PKN ORLEN wants to become a leading producer of clean energy, which is increasingly in demand. To this end, last year the Group was engaged in a project to build offshore wind farms with a maximum capacity of up to 1.2 GWe, as well as a photovoltaic farm located in Włocławek.

Also, another milestone was reached in its strategic Petrochemical Development Programme, designed to bring a capacity addition of at least 30 per cent. Under the prevailing macroeconomic conditions, EBITDA is expected to grow by some PLN 1.5bn annually after the project is completed.

Aware of the future role of hydrogen as a major transport fuel, PKN ORLEN is stepping up work on alternative fuels, solidifying its leading position on this demanding market. In the second half of 2019, the Company signed a letter of intent with the Metropolitan Association of Upper Silesia and Dąbrowa Basin for cooperation in the development of a zero-emission hydrogen-powered public transport service. Moreover, an agreement for cooperation in the development of zero-emission freight transport was concluded with Pesa Bydgoszcz. This year, PKN ORLEN is continuing such activities, having signed a letter of intent for cooperation with the Municipality of Płock, as well as with the public utility Krakowski Holding Komunalny and Miejskie Przedsiębiorstwo Komunikacyjne of Kraków. In these two cities, the Group will be developing hydrogen-powered zero-emission public transport. In addition, a hydrogen hub is to be built in Włocławek, followed by a similar project in Płock. At the same time, a hydrogen purification unit is being built at the ORLEN Group's biorefinery in Trzebinia.

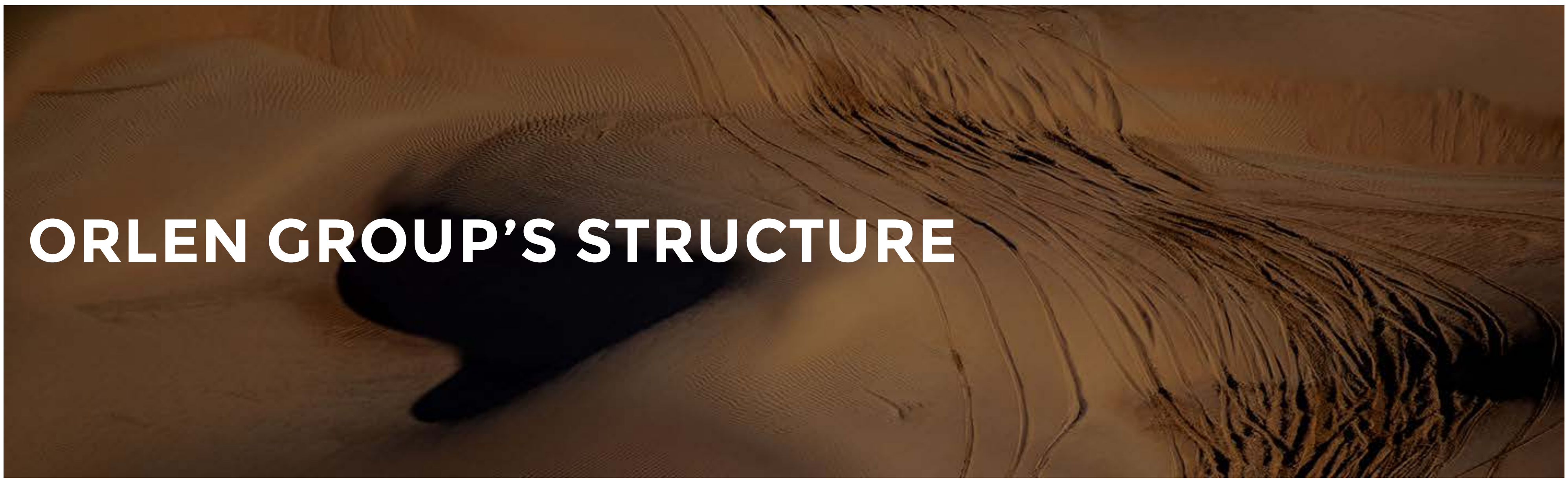
In 2019, PKN ORLEN's efforts were additionally focused on diversification of crude oil supplies, which helped significantly enhance Poland's overall energy security. Further diversification of crude supply sources for the Płock refinery was an effect of business relationships forged with oil producers from outside Europe, including Africa and the Persian Gulf.

One of the priorities was also to strengthen the ORLEN Group companies. For example, ORLEN Południe is being transformed into an advanced biorefinery. As part of these efforts, a project to build Poland's first unit for the production of propylene glycol was launched last year at the Trzebinia-based plant. ORLEN Południe also signed an agreement to purchase a licence and front-end engineering design for a 2G bioethanol production unit in Jedlicze. Another Group company ANWIL commenced the construction of two out of three nitrogen fertilizer units in 2019.

The Company also took up initiatives designed to further strengthen the position and recognition of the ORLEN brand abroad. To this end, a cobranding strategy was implemented to standardise the service station chain image on foreign markets by adding the ORLEN Group logotype to the local brands (Star in Germany and Benzina in the Czech Republic and in Slovakia). In addition, a project was commenced to build a pilot station near Berlin under a single brand name of ORLEN, which was opened in 2020. The cobranding process was supported by the Company's involvement in Formula 1 and sponsorship of Robert Kubica. The racing driver's participation in its promotional campaign contributed to the retail segment's record performance in 2019.

This year, PKN ORLEN is making further progress on its major growth projects, crucial for the Group's future. I am confident the coming months will see further initiatives, translating into even better results of the ORLEN Group and benefits for the Shareholders.

Wojciech Jasiński
Chairman of the Supervisory Board
PKN ORLEN S.A.



ORLEN GROUP’S STRUCTURE

GRI indicators: 102-3, 102-4, 102-6, 102-5, 102-45

As at December 31, 2019, the ORLEN Group consisted of 68 companies, including 58 subsidiaries.

GRI: 102-3, 102-4, 102-6

The ORLEN Group comprises PKN ORLEN, the Group’s Parent and entities operating in Poland, Germany, the Czech Republic, Lithuania, Malta, Sweden, the Netherlands, Slovakia, Hungary, Estonia, Latvia, the US and Canada.

GRI: 102-5

As at 31 December 2019 the State Treasury owned 27.52% of the ORLEN Group Parent Company’s shares – PKN ORLEN and has ability to exert a significant influence on it. For the shareholding structure in PKN ORLEN see section ‘Shares and Shareholding Structure’.

The ORLEN Group companies are engaged in the following types of activity:

production

in refinery and petrochemical segments including crude oil processing and production of refining, petrochemical and chemical products and semi-products and in energy segment – production of electricity and utilities

trade

wholesale and retail sale of fuels and other products

services

crude oil and fuels storage, transport, maintenance and repair services, laboratory, security, design, administrative, insurance and finance services

exploration for and extraction

of hydrocarbons, production, transmission and distribution of and trade in electrical and heat energy

- For management purposes, the ORLEN Group’s business is divided into three operating segments of Downstream, Retail, Upstream, as well as Corporate Functions.
- For description of these segments, see section ‘ORLEN Group in 2019’, and for the segments’ financial results section ‘Financial Results’.
- For description of the organisational and cross-equity links between the Parent and the ORLEN Group companies, and the applied consolidation methods, see section 7.1 of the Consolidated Financial Statements for 2019.

GRI: 102-45

Allocation of the Parent Company and the ORLEN Group companies to the operating segments and corporate functions as at 31 December 2019

Downstream Segment

Production and sales

- PKN ORLEN S.A.
- UNIPETROL Group
  - UNIPETROL RPA s.r.o.
  - UNIPETROL Slovensko s.r.o.
  - UNIPETROL Deutschland GmbH
  - UNIPETROL RPA Hungary Kft.
  - Spolana s.r.o.
  - Butadien Kralupy a.s.
  - Paramo a.s.
- ORLEN Lietuva Group
  - AB ORLEN Lietuva
  - OU ORLEN Eesti
  - SIA ORLEN Latvija
- ORLEN Asfalt Group
  - ORLEN Asfalt Sp. z o.o.
  - ORLEN Asfalt Ceska Republika s.r.o.
- ORLEN Południe Group
  - ORLEN Południe S.A.
- ORLEN Oil Sp. z o.o.
- Anwil S.A.
- IKS Solino S.A.
- ORLEN Paliwa Sp. z o.o.
- Ship-Service S.A.
- Kopalnia Soli Lubień Sp. z o.o.
- Baltic Power Sp z o.o.
- ▨ Basell ORLEN Polyolefins Group
  - Basell ORLEN Polyolefins Sp. z o.o.
  - Basell ORLEN Polyolefins Sprzedaż Sp. z o.o.

Service companies

- UNIPETROL Group
  - UNIPETROL DOPRAVA s.r.o.
  - PETROTRANS s.r.o.
- ORLEN Południe Group
  - Energomedia Sp. z o.o.
  - Konsorcjum Olejów Przepracowanych - Organizacja Odzysku S.A.
- ORLEN KolTrans Sp. z o.o.
- ORLEN Eko Sp. z o.o.
- ORLEN Aviation Sp. z o.o.
- ORLEN Serwis Group
  - ORLEN Serwis S.A.
  - UAB Emas
  - ORLEN Service Ceska Republika s.r.o.

▨ Entities accounted for equity method

Retail Segment

Sales and service companies

- PKN ORLEN S.A.
- UNIPETROL Group
  - UNIPETROL RPA s.r.o.
- AB ORLEN Baltics Retail
- ORLEN Deutschland Group
  - ORLEN Deutschland GmbH
  - ORLEN Deutschland Betriebsgesellschaft mbH
- ORLEN Centrum Serwisowe Sp. z o.o.
- ORLEN Budonaft Sp. z o.o.

Upstream

Search and upstream

- ORLEN Upstream Group
  - ORLEN Upstream Sp. z o.o.
  - ORLEN Upstream Canada Ltd.
  - 1426628 Alberta Ltd.
  - OneEx Operations Partnership
  - Pierdae Production GP Ltd.
  - 671519 NB Ltd.
  - KCK Atlantic Holdings Ltd.
  - Pierdae Production LP
  - FX Energy, Inc.
  - Frontier Exploration, Inc
  - FX Energy Netherlands Partnership C.V.
  - FX Energy Netherlands B.V.
  - FX Energy Poland Sp. z o.o.

Corporate Functions

Service and other activity

- PKN ORLEN S.A.
- UNIPETROL Group
  - Unipetrol a.s.
  - UNIPETROL RPA s.r.o.
  - Unipetrol výzkumně vzdělávací centrum, a.s.
  - HC Verva Litvinov a.s.
- ORLEN Lietuva Group
  - AB ORLEN Lietuva
- ORLEN Administracja Sp. z o.o.
- ORLEN Ochrona Group
  - ORLEN Ochrona Sp. z o.o.
  - UAB Apsauga
- ORLEN Laboratorium S.A.
- ORLEN Projekt S.A.
- Grupa ORLEN Holding Malta
  - ORLEN Holding Malta Ltd.
  - ORLEN Insurance Ltd.
- ORLEN Capital AB
- ORLEN Centrum Usług Korporacyjnych Sp. z o.o.
- Grupa Płocki Park Przemysłowo-Technologiczny
  - Płocki Park Przemysłowo-Technologiczny S.A.
  - Centrum Edukacji Sp. z o.o.
- ORLEN Usługi Finansowe Sp. z o.o.
- Sigma BIS S.A.

The Parent's policy with respect to the ORLEN Group focuses on reinforcing the position of the core-business companies, developing power generation and the Upstream segment, as well as improving management, consolidating assets, and divesting of non-core assets.

The purpose of the measures undertaken by the Group is to increase its market value, to strengthen its position on home markets, and to expand its product offering and geographical reach. The Group's key development investments are aimed at further expanding the product portfolio, deeper conversion, construction of new electricity generating capacities, and continuation of the hydrocarbon exploration and production projects. To ensure effective management, holding management policies have been implemented and comprise solutions designed to achieve Parent-defined shared goals across the ORLEN Group.

The policies are based on the ORLEN Group Constitution which stipulates three key regulations: the Cooperation Agreement, the Group Rules, and provisions of respective articles of association of the ORLEN Group companies.

The Constitution provides for uniform information exchange standards and effective monitoring of key business decisions. It also defines the legal basis for establishing a coherent strategy for the ORLEN Group. PKN ORLEN's effective corporate supervision relies on formal and legal supervision as well as on supervision of the companies' operating and finance activities.

Changes in the Parent's and the ORLEN Group's principles of organisation and management

The key changes in PKN ORLEN's organisational structure and management policies in 2019 included:

- inclusion of Planning and Reporting into the Finance Management area,
- inclusion of the Investor Relations Office into the Strategy area,
- allocation of responsibility for the supervised area's compliance with applicable laws, internal regulations, adopted standards of conduct and ethical standards in place at the Group to the Head of the Financial Control, Risk and Compliance Management Office and to other unit heads reporting directly to the Management Board Members,
- allocation of responsibility for the execution of property investment projects (excluding API projects) with a view to increasing their value and the Company's capital to the Executive Director for Investment,
- taking over by Mr Armen Artwich (Member of the Management Board, Corporate Affairs) of supervision over the Finance division, following removal of Mr Wiesław Protasewicz from the Management Board of PKN ORLEN S.A.,
- transfer of the Occupational Health and Safety Office from the Development division to the Operations division, transfer of the Infrastructure and Information.

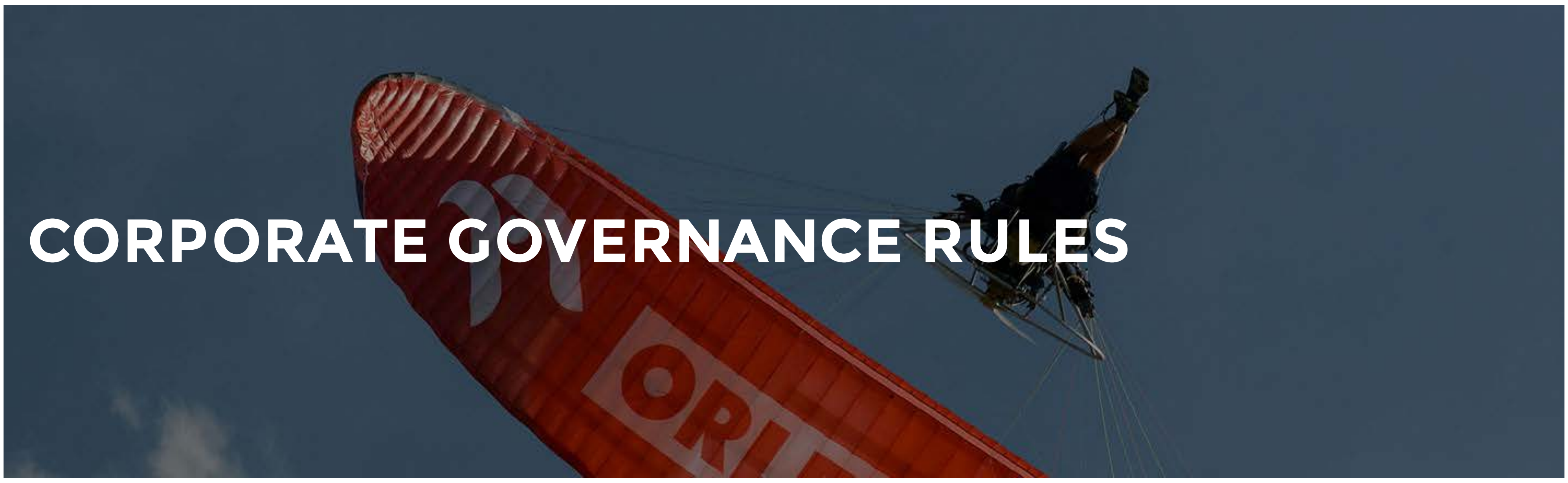
Responsibility areas of Members of the PKN ORLEN Management Board as at 31 December 2019

President of the management board, chief executive officer Daniel Obajtek	Member of the management board, corporate affairs Armen Artwich	Finanse division supervision by the board memberfor corporate affair Armen Artwich	Member of the management board, development Zbigniew Leszczyński	Member of the management board, operations Józef Węgrecki	Member of the management board, retail sales Patrycja Klarecka	Member of the management board, wholesale and international trade Michał Róg
Strategy and Investor Relations	Administration	Business Controlling	Procurement	Refinery Production	IT	Wholesale of Refinery Products
Human Resources	Environmental Protection	Finanse Management, Planning and Reporting	Implementation of Investments	Petrochemical Production	Retail Sale	Sale of Petrochemical Products
Trade of Crude Oil and Gas	Capital Group	Taxes	Development and Technology	Power Engineering	Marketing	Logistics
Corporate Communication	Financial Controlling, Risk Management and Compliance*		Technichs	Production Efficiency and Optimisation	Innovation	Supply Chain Management
Management Board Office				Health and Safety	Security of Infrastructure and Data Supervision Offise, Critical Infrastructure Protection Officer	
Control and Security				Water and Wastewater Management		
Audit						
Legal Office						
External Relations						
Sports Marketing, Sponsorship and Events						

**Direct supervision over financial control is exercised by the President of the Management Board, General Director on the basis of the Management Board's resolution on establishing the internal division of powers and responsibilies among the Management Board members* *and substitution of Management Board Members,*

For a description of changes in the composition of the Management and Supervisory Boards in 2019 and by the issue date of this Report, see section 'Corporate Governance'. There were no material changes in the organisation and management policies of the other ORLEN Group companies in 2019. For information on the existing organisational structure of the ORLEN Group companies and their governing bodies, go to the website.

For a description of changes in cross-equity links in 2019, see section 7.2 of the Consolidated Financial Statements for 2019.



CORPORATE GOVERNANCE RULES

GRI indicators: 103-1, 103-2, 103-3, 102-43

Capitals:

In 2019, PKN ORLEN applied all the principles included in the code ‘Best Practice for GPW Listed Companies 2016’ (‘Code of Best Practice’) applicable on the Warsaw Stock Exchange.

GRI: 103-1, 103-2, 103-3

As a company listed on the Warsaw Stock Exchange (“WSE”), PKN ORLEN is required to comply with the corporate governance principles set forth in the Code of Best Practice for WSE Listed Companies 2016 (“Code of Best Practice”) adopted by the WSE Supervisory Board (Resolution No. 26/1413/2015 of the WSE Supervisory Board of October 13th 2015) effective as of January 1st 2016. The Code of Best Practice is available on the WSE website and on the PKN ORLEN corporate website www.orlen.pl in the section dedicated to the Company’s shareholders. In line with the WSE guidelines, compliance with the individual recommendations contained in the Code of Best Practice is discussed in the relevant section of the Integrated Report.

GRI: 102-43

Communication with the capital market

Meetings

- One-on-one meetings
- Group meetings
- Roadshows
- Site visits
- Conferences

- In Poland
- Abroad

Teleconferences

Webcasts

Broadcast events

- Quarterly earnings briefings
- Strategy announcement
- General Meetings
- Other

Websites

Corporate website www.orlen.pl

Interactive tools

- charts and tables for comparing financial indicators
- charts and tables showing share prices, and a return on investment calculator
- newsletters
- event calendar alerts

Materials relating to Annual General Meetings

- a web contact form
- a guide for shareholders: 'How to participate in the General Meeting of PKN ORLEN'
- draft resolutions and a full set of documents

Corporate Governance

- the Company's annual reports on compliance with best practices
- Code of Best Practice of Listed Companies
- information on best practices observed by PKN ORLEN
- rules and criteria for appointing the auditor
- diversity policy

Other

- Chief Economist's Blog
- Corporate Twitter
- Press Officer's Twitter
- Corporate Facebook
- LinkedIn
- YouTube
- Instagram

PKN ORLEN seeks to ensure easy and equal access to published information using various communication tools, including the following:

- The Investor Relations section of its corporate website, which provides financial and operating data relating to the Company's business as well as information about the Company's macro environment.
- The website of the 'ORLEN in Your Wallet' programme containing details of the loyalty scheme for shareholders and a broad knowledge base of the capital market and investing.
- Expert's blog written by PKN ORLEN's Chief Economist containing commentary on current market developments, expert publications, and coverage of industry conferences.
- Social media:
    - Corporate Twitter account,
    - President of the Management Board's Twitter account,
    - Press Officer's Twitter account,
    - Corporate Facebook page,
    - President of the Management Board's Facebook account,
    - LinkedIn,
    - YouTube, and
    - Instagram.
- Closed one-on-one or group meetings, held both in Poland and abroad, also as teleconferences.
- Press conferences open to the general public, streamed live over the Internet, with simultaneous interpretation into English. The conferences follow all major corporate events such as the release of quarterly results or strategy announcement.
- Series of meetings with investors, held both in Poland and abroad (roadshows).
- Meetings of capital market participants with the Company's key managers in the headquarters and places where PKN ORLEN conducts its operations (site visits).
- The Investor and Analyst Days organised from time to time – workshops concerning various areas of the Company's activity, run by representatives of the Management Board, executive directors and selected managers.

PKN ORLEN is ready and willing to provide any clarifications to its shareholders, investors, analysts and other capital market participants during group or one-on-one meetings, teleconferences, roadshows or site visits referred to above. Special presentation materials are prepared for these meetings, giving insight into the large and complex refining and petrochemical industry in which the Company operates.

Moreover, PKN ORLEN makes every effort to provide investors and analysts with financial information on its operations as soon as practicable. PKN ORLEN is among the companies that are the quickest to publish their financial results after the end of the reporting period. In 2019, the Company published its figures as soon as approximately 23 days after the closing of the reporting periods.

> PKN ORLEN is also a dividend paying company. In 2019, for the seventh consecutive year it distributed its profits to shareholders by paying out its highest ever dividend of PLN 3.50 per share.

The Company is also developing the 'ORLEN IN YOUR WALLET' programme, including the Investment Academy. The programme, launched in 2018, is dedicated to retail investors. In 2019, three brokerage houses joined the programme, so it is already supported by five professional institutions. At the end of the year, there were more than 3,000 investors registered in the programme. Materials containing the educational part of the programme were published, first examinations in the Investment Academy were held, and another educational module, 'Investing in Practice', was launched. More than 60,000 people used the educational materials made available on the website.

Company's response to publicly voiced opinions and information injuring its reputation

PKN ORLEN actively prevents any untrue publications and comments which might have an adverse effect on the Company's image. The ORLEN Group has in place internal guidelines that streamline the rules of external communication, covering contacts with the media, participation of the Company's representatives in debates, conferences and discussion panels, as well as activities in the social media. These guidelines require a multi-stage, while also highly intuitive and consistent, verification of any information about the Company and its representatives before it is made public. In the case of communication activities relating to the Company's image, a strong focus is placed on quick response to potentially negative publications. The rules relating to the response are strictly defined in the guidelines, which guarantees that the Company's activities in this area are highly effective.

Any such response is coordinated by the Executive Director for Corporate Communication.

Corporate social responsibility activities of PKN ORLEN

PKN ORLEN's priority in each area of its operations is sustainable development, which we understand as care for future generations. This means that in building the ORLEN Group's position, social objectives are for us as important as business ones. We respect people and their rights. We use natural resources so as not to disturb environmental balance. We feel responsible for other members of the community in which we operate. Therefore, we engage in dialogue with them and support them in various fields of activity. This broad approach to responsibility requires the implementation of CSR activities across all business areas. CSR activities involve educating stakeholders and inspiring in them a sense of social responsibility, protecting health and safety of employees, commitment to employee development, optimisation of environmental impacts, promoting ethical values, anti-corruption measures, respect for human rights, customer focus and responsiveness to customer needs, and building partnership-based relations with business partners. We focus our initiatives in this area on the city of Płock and the Płock region. The Company is engaged there in a number of social, educational, environmental and other projects, including, in particular, the OrlenInfo system, an innovative tool for communicating with the local community. OrlenInfo allows the Company to promptly report any events that occur at the Production Plant and announce projects undertaken for the inhabitants of Płock.

Directions of our CSR activities are defined in the CSR strategy, consistent with the ORLEN business strategy. Since 2019, the 'ORLEN Group's CSR Strategy until 2022' has been implemented, with the following areas of responsibility: Society, Environment, Employees, Customers, Trading Partners. The strategic priorities are to build PKN ORLEN's image as a leader of CSR and sustainable development, seek to achieve consistency between PKN ORLEN's business and CSR objectives, generate CSR synergies across the Group, commit to the United Nations' Sustainable Development Goals, and support the 'Accessibility Plus' programme. Moreover, in 2019 the following three priorities were defined for social initiatives: environmental protection (e.g. educational projects), promotion of safety (e.g. the 'ORLEN for Firefighters' programme), health protection and promotion (e.g. the 'Health City' campaign). The body that plays crucial role in pursuing the Company's CSR objectives is the ORLEN Foundation, established in 2001 to fulfil the social responsibility mission of its founder, PKN ORLEN. In 2019, its name was changed from 'ORLEN – DAR SERCA Foundation' to 'ORLEN Foundation' to achieve greater communication and image consistency.

PKN ORLEN's sponsorship focus is on selected themes including professional and amateur sports, culture and art, promotion of the Polish economy, international promotion of Poland, education and knowledge advancement, social projects, and initiatives in the areas of national history, memory and tradition. PKN ORLEN is engaged in the life of local communities, especially in Płock. An important category of activities are social sponsorship events, aimed to improve the quality of local residents' lives, chiefly in small communities, and to build strong relations with all stakeholders. A total of 277 projects of this type were run by the Company.

PKN ORLEN communicates its CSR initiatives via the Responsible Business section of its corporate website and its annual integrated report available online. The website's content includes the Company's Sponsorship Policy and Charitable Giving Policy

CONTROL, RISK MANAGEMENT AND COMPLIANCE SYSTEM

Capitals:

The Company's system of internal control and risk management in the preparation of financial statements is implemented through:

- verification whether uniform accounting policies are applied by the ORLEN Group companies as regards recognition, measurement and disclosures in accordance with the International Financial Reporting Standards (IFRSs) as endorsed by the European Union,
- following the procedures for registering economic events in the financial and accounting system and monitoring compliance with the procedures,
- internal controls, including separation of duties, multi-stage data verification, accuracy reviews of data received and independent checks,
- applying uniform templates of separate and consolidated accounts and periodic verification whether they are properly applied by the ORLEN Group companies,
- verification of the consistency of the ORLEN Group companies' financial statements with data entered into the integrated IT system used to prepare the ORLEN Group's consolidated financial statements,
- auditor's review of Q1, H1 and Q3 financial statements and audit of full-year financial statements of PKN ORLEN and the ORLEN Group,
- procedures to authorise, approve and issue opinions on financial statements before they are issued,
- independent and objective evaluation of the risk management and internal control systems.

Economic events at PKN ORLEN are recorded in an integrated financial and accounting system. Security and availability of information contained in the financial and accounting system are controlled at all levels of the database, applications and presentations, as well as at the operating system level. System integration is ensured by data entry control systems (validation, authorisation, a list of values) and logs of changes. PKN ORLEN keeps its IT system up to date with the changing accounting policies and other legal requirements. PKN ORLEN's solutions are implemented into systems of the ORLEN Group companies.

In order to ensure that uniform accounting policies are applied, the ORLEN Group companies have to follow, for the purpose of preparing consolidated financial statements, the accounting policy adopted by PKN ORLEN and approved by the ORLEN Group companies.

The accounting policy is periodically updated to ensure compliance with any new legislation. Consolidated financial statements are prepared based on the integrated IT system where the process of consolidating data sourced from reporting packages provided by each ORLEN Group company is performed. Designed for financial management and reporting purposes, the system enables the unification of financial information. Performance and budget-related data, forecasts and statistics are gathered in one place, which ensures direct control and data compatibility.

> The data is reviewed for cohesion, completeness and consistency, which is achieved thanks to embedded controls checking the compatibility of data entered by the respective companies.

In order to keep mitigating risks associated with the preparation of financial statements, they are reviewed by an auditor quarterly, i.e. more often than required by applicable laws. Q1, H1 and Q3 financial statements are reviewed by the auditor, whereas full-year financial statements are subject to an audit.

As per the relevant procedure in place at PKN ORLEN (meeting all applicable requirements), the auditor of the Company's financial statements is appointed by the Supervisory Board based on a recommendation from the Audit Committee and a report on the tender process held by the Audit Committee. Deloitte Audyt Spółka z ograniczoną odpowiedzialnością, Spółka komandytowa has been appointed as a qualified auditor of PKN ORLEN's financial statements for 2019–2021. During audit work, the auditor makes an independent assessment of the reliability and accuracy of separate and consolidated financial statements and confirms that the internal control and risk management system is effective. The auditor presents the audit and review findings to the Management Board and the Audit Committee of the Supervisory Board.

The Audit Committee, appointed by the Supervisory Board in the exercise of its powers, is a supervisory body with some of its powers and responsibilities defined in the Act on Statutory Auditors, Audit Firms, and Public Oversight of May 11th 2017, including the following:

- monitoring the preparation of the ORLEN Group's financial statements to ensure compliance with the Group's Accounting Policy and applicable laws,
- monitoring the independence of the qualified auditor and the auditing firm,
- monitoring the effectiveness of the internal control, internal audit and risk management systems.

The Company has in place certain procedures to authorise financial statements, under which periodic reports are submitted to the Management Board and then to the Supervisory Board's Audit Committee for its opinion. Once the Audit Committee's opinion is received and the auditor completes its review or audit of the financial statements, they are authorised for issue by the PKN ORLEN Management Board by means of a qualified electronic signature and then released to the public by the Investor Relations Office.

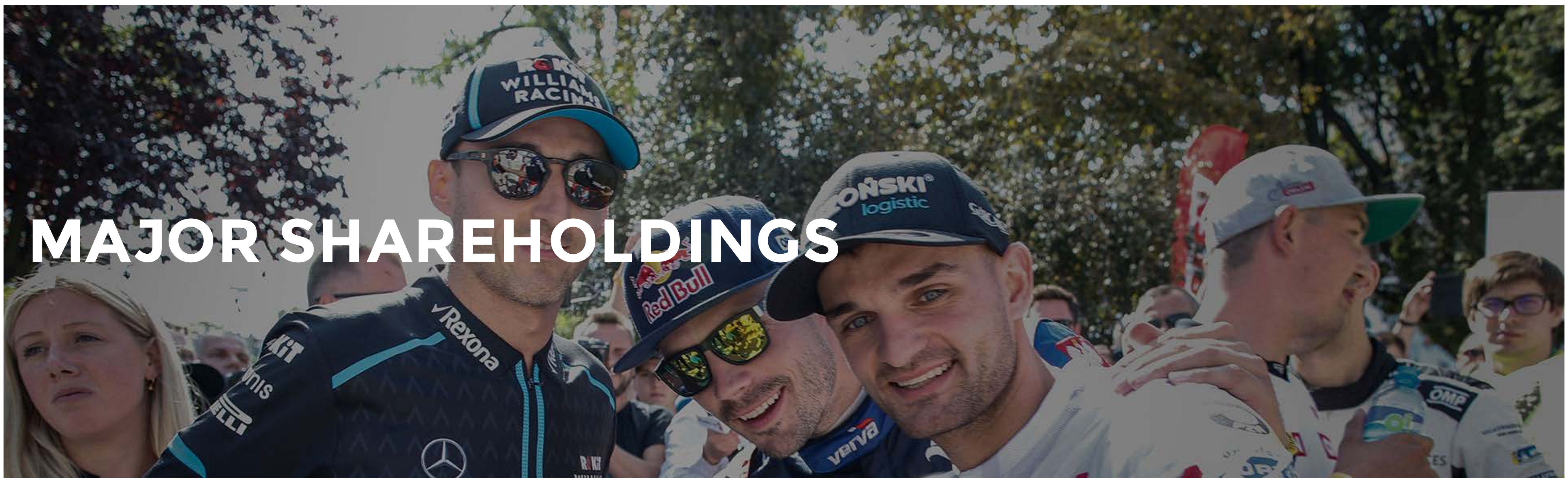
Full-year financial statements are also presented to the Supervisory Board for final assessment and control of the financial reporting process. The Supervisory Board is an independent body ensuring the reliability and accuracy of information disclosed in the financial statements of PKN ORLEN and the ORLEN Group.

The Financial Control, Risk and Compliance Management Office operates within the Management Board Member for Corporate Affairs function, with a primary responsibility for the implementation of financial control, risk and compliance management processes. The performance of financial control tasks is supervised by the Chief Executive Officer, President of the Management Board. The Office is divided into:

- Financial Control Department, responsible for detecting any irregularities and business misconduct, verifying compliance of conduct of PKN ORLEN and ORLEN Group employees with applicable laws, internal organisational rules and professional standards, estimating the impact of any potential irregularities or misconduct, defining corrective measures and designating responsible persons, as well as assessing internal organisational documents. An area subject to review is assessed primarily in terms of legal compliance, relevance, good management, reliability, organisational efficiency and correct operation. Such assessments are made with due regard for the interests of PKN ORLEN and the ORLEN Group companies. The Department's staff carry out inspections in accordance with an annual inspection schedule (scheduled financial inspections) as well as ad hoc and preliminary inspections. Reports on scheduled and ad hoc inspections provide post-inspection orders/recommendations designed to mitigate the identified irregularities and misconduct, whereas preliminary inspections lead to the issuance of proposals of recommended actions based on the inspection findings to the extent necessary to identify any irregularities. Twice a year the Financial Control, Risk and Compliance Management Office prepares a report for the Company's Management Board on the completed financial inspections and progress in the implementation of post-inspection orders/recommendations,
- The Management Systems and Enterprise Risk Department in which the Enterprise Risk Management Team and the Management Systems Team operate. The employees of the Enterprise Risk Management Team coordinate, in line with the applicable policy and procedure, the enterprise risk management process by providing tools and methodological support to participants of the risk self-assessment process and testing of controls deployed at PKN ORLEN. and the ORLEN Group companies. Their tasks are to support business areas in risk management during the implementation of project objectives by carrying out regular training sessions in risk identification, description and assessment, as well as workshops and consultations for project managers and persons involved in project work, thus helping minimise the amount of work and optimise the project value. As part of corporate risk management, the Company regularly defines and measures risks related to the achievement of strategic objectives. The Enterprise Risk Management Team prepares regular reports on risk management at PKN ORLEN and the ORLEN Group companies, which are then presented to the relevant Management Boards. Members of the Management Systems Team ensure maintenance and improvement of the Integrated Management System – compliance with ISO 9001, AQAP 2110, ISO 14001, PN-N-18001, ISO/IEC 27001, ZKP, ISCC, KZR INiG, ISO 50001 and HACCP. The systemic activities include supervision of documentation (documented information), supervision of equipment, supervision of products (process outputs), and development of a process approach based on risk and opportunity analysis. As part of the Integrated Management System, management reviews are conducted and reported to the PKN ORLEN Management Board, which take into account compliance assessment, among other factors. An internal audit system is in place to verify the correctness of operation of the Group's organisational units, suppliers, contractors, etc.
- The Regulatory Risk Management Department is responsible for monitoring legal regulations that may have an impact on the ORLEN Group and for undertaking lawful lobbying activities. It is also responsible for dialogue with market regulators and managing fuel licences issued by the President of the Energy Regulatory Office under the Energy Law. The Department also participates in the implementation of measures aimed at ensuring compliance with regulatory requirements (legal and regulatory advice) at the ORLEN Group.

- Compliance Management Department, which supervises compliance by the ORLEN Group companies with applicable laws, internal regulations, voluntary standards of conduct and ethical standards. The key objective of the ORLEN Group's compliance system is to proactively monitor the regulatory environment of all corporate business processes and to ensure a uniform approach to implementing and reporting compliance requirements across the Group. At PKN ORLEN, the compliance system is a dispersed function, where compliance risk is managed by Directors reporting directly to a Management Board Member under the supervision of the Head of the Financial Control, Risk and Compliance Management Office. The compliance management process is regularly reported to the Company's Management and Supervisory Boards.

MAJOR SHAREHOLDINGS



Capitals:

In 2019 and until the date of authorisation of the 'Management Board Report on the Operations of ORLEN Group and OKN ORLEN S.A. for the year 2019 (March 18th 2020)', there were no changes in the structure of shareholders holding more than 5% of the PKN ORLEN share capital.

The number of shares held by shareholders is presented based on the most recent official data acquired by the Company. The Company's Articles of Association do not impose any restrictions on the transferability of PKN ORLEN shares. However, such restrictions may be stipulated by generally applicable laws including, without limitation, the Act on State Property Management and the Act on Control of Certain Investments.

PKN ORLEN's shareholding structure as at January 1st 2019, December 31st 2019 and the date of authorisation of the Management Board Report on the Operations of ORLEN Group and OKN ORLEN S.A. for the year 2019 as at March 18th 2020

Shareholder	Number of shares and voting rights at the General Meeting (as at Jan 1 2019*)	Percentage of share capital and total voting rights at the General Meeting (as at Jan 1 2019*)	Number of shares and voting rights at the General Meeting (as at Dec 31 2019**)	Percentage of share capital and total voting rights at the General Meeting (as at Dec 31 2019**)	Number of shares and voting rights at the General Meeting (as at the report authorisation date***)	Percentage of share capital and total voting rights at the General Meeting (as at the report authorisation date***)
State Treasury	117,710,196	27.52%	117,710,196	27.52%	117,710,196	27.52%
Nationale-Nederlanden OFE	30,000,000	7.01%	32,544,000	7.61%	30,000,000	7.01%
Aviva OFE Aviva Santander	28,240,000	6.60%	25,000,000	5.85%	26,000,000	6.08%
Others	251,758,865	58.87%	252,454,865	59.02%	253,998,865	59.39%
Total	**427,709,061**	**100.00%**	**427,709,061**	**100.00%**	**427,709,061**	**100.00%**

** According to information from the PKN ORLEN AGM convened for June 26th 2018 and adjourned to July 17th 2018.*
*** According to information from the PKN ORLEN AGM convened for June 14th 2019.*
**** According to information from the PKN ORLEN AGM convened for March 5th 2020.*

The shareholding structure and key data regarding PKN ORLEN shares are described in the 'Shares and shareholding structure' section.

SPECIAL CONTROL POWERS AND VOTING RIGHTS

Capitals:

Detailed rules for the exercise of special control powers and voting rights are laid down in PKN ORLEN's Articles of Association. According to the provisions of the Articles of Association, one PKN ORLEN share confers one voting right at the Company's General Meeting. The voting rights of shareholders have been capped in the Articles of Association so that none of them may exercise more than 10% of total voting rights existing at the Company as at the date when the General Meeting is held. The cap on voting rights does not apply to the State Treasury and the depositary bank which has issued, on the basis of an agreement with the Company, depositary receipts in respect of Company shares (if this entity exercises voting rights conferred by Company shares). Shareholders whose voting rights are aggregated or reduced are jointly referred to as a "Shareholder Grouping". Detailed rules of such aggregation and reduction are specified in the Articles of Association. Shareholders forming a Shareholder Grouping may not exercise more than 10% of total voting rights existing at the Company as at the date when the General Meeting is held.

If the aggregated number of shares registered at the General Meeting by shareholders forming a Shareholder Grouping exceeds 10% of total voting rights at the Company, the voting rights resulting from the number of shares held are subject to reduction, the rules of which have been specified in detail in the Articles of Association.

The cap on voting rights described above does not apply to subsidiaries of the State Treasury.

The State Treasury is entitled to appoint and remove one Member of the Supervisory Board. In addition, one member of the PKN ORLEN Management Board is appointed and removed by the entity authorised to exercise the rights attached to the shares held by the State Treasury as long as the State Treasury holds at least one share in the Company.

Additionally, in accordance with the Articles of Association, as long as the State Treasury is entitled to appoint a Member of the Supervisory Board, a resolution granting consent for transactions involving any sale or encumbrance of shares in the following companies: Naftoport Sp. z o.o., Inowrocławskie Kopalnie Soli S.A. as well as the company to be established to operate the pipeline transport of liquid fuels, will require a vote in favour of its adoption by the Supervisory Board Member appointed by the State Treasury Special rights vested in the State Treasury as the Company's shareholder may also result from generally applicable provisions of law, i.e.:

- the Act on Special Rights Vested in the Minister Competent for Energy and their Exercise in Certain Capital Companies or Groups Conducting Business Activities in the Electricity, Crude Oil and Gas Fuel Sectors, dated March 18th 2010,
- the Act on Control of Certain Investments, dated of July 24th 2015,
- the Act on State Property Management, dated December 16th 2016.

AMENDMENTS TO ARTICLE OF ASSOCIATION

Capitals:

Any amendment to PKN ORLEN's Articles of Association requires a resolution of the General Meeting and has to be entered in the business register. A resolution of the General Meeting to amend the Company's Articles of Association is passed by three-quarters of votes. The General Meeting may authorise the Supervisory Board to formulate the consolidated text of the Articles of Association or make other editorial changes as set out in a resolution passed by the General Meeting.

Once the amendments to the Articles of Association are entered in the business register, PKN ORLEN publishes a relevant current report.

On June 14th 2019, the Annual General Meeting approved amendments to the Company's Articles of Association. The amendments were entered in the National Court Register and information about the entry was published by the Company in a current report.

GENERAL MEETING

Capitals:

Out in the Articles of Association and the Rules of Procedure for the General Meeting, available on PKN ORLEN's website.

The Company sets the venue and date of a General Meeting so as to enable participation by the largest possible number of shareholders. General Meetings of PKN ORLEN are held at the Company's registered office in Płock, but may also be held in Warsaw. General Meetings may be attended by members of the media.

PKN ORLEN takes relevant measures to ensure that drafts of General Meeting resolutions contain a justification helping shareholders cast an informed vote. All materials presented at a General Meeting are available to shareholders at the Company's headquarters in Płock and office in Warsaw, as well as on the corporate website at www.orlen.pl starting from the date of a notice convening the General Meeting.

Convening and cancelling the General Meeting

The General Meeting is convened by way of a notice published on the Company's website and a current report.

The Annual General Meeting should be held no later than within six months from the end of every financial year. An Extraordinary General Meeting is convened by the Management Board on its own initiative, upon the Supervisory Board's motion or upon the motion of a shareholder or shareholders representing no less than one-twentieth of the Company's share capital, within two weeks of submitting the motion. The Supervisory Board may convene an Extraordinary General Meeting if it sees fit to do so. In addition, the Supervisory Board may convene an Extraordinary General Meeting if the Management Board fails to do so within two weeks of the Supervisory Board's submitting the relevant request. An Extraordinary General Meeting may also be convened by shareholders representing at least one half of the share capital or at least one half of total voting rights at the Company.

The Company arranges for an internet broadcast of the General Meeting and offers simultaneous interpretation into English. The Company does not provide for shareholders' participation in a General Meeting using means of electronic communication through real-time bilateral communication where shareholders could take the floor during the General Meeting from a location other than the venue of the General Meeting.

Shareholders may exercise their voting rights at the General Meeting in person or by proxy.

In accordance with the Rules of Procedure for the General Meeting, a General Meeting may be cancelled if there are extraordinary impediments to its holding or its holding would be obviously groundless. The cancellation or rescheduling of a General Meeting should be effected forthwith once the circumstances requiring its cancellation or rescheduling have occurred, but no later than seven days prior to the day when the General Meeting was to be held. If the cancellation or rescheduling of a General Meeting cannot be effected within the deadline specified above, the General Meeting should be held as originally scheduled. If it is impossible or excessively difficult to hold that General Meeting due to existing circumstances, the cancellation or rescheduling of the General Meeting may be effected at any time prior to the day when the General Meeting was to be held. The cancellation or rescheduling of a General Meeting is effected by way of a notice posted on the Company's website together with reasons and in compliance with other legal requirements. Only the body or person who has convened a General Meeting is entitled to cancel it. A General Meeting with the agenda containing specific issues put thereon at the request of eligible entities, or which has been convened at such request, may only be cancelled with the consent of such requesting entities.

Powers and responsibilities of the General Meeting

The General Meeting is authorised in particular to:

- review and approve the Company's full-year financial statements; annual Directors' report on the Company's operations; consolidated financial statements of the ORLEN Group and Directors' report on the ORLEN Group's operations for the previous financial year,

- acknowledge the fulfilment of duties by the Supervisory Board and Management Board Members,
- decide on the allocation of profit and coverage of loss, and on the application of funds set aside from earnings,
- appoint the Supervisory Board Members, subject to the provisions of Art. 8.2 of the Articles of Association, and establish policies for their remuneration,
- increase and reduce the share capital unless the Commercial Companies Code or the Company's Articles of Association stipulate otherwise,
- decide on any claims for redress of damage caused upon the Company's formation or when managing or supervising the Company,
- grant consent to any sale or lease of the business or its organised part, and creation of limited property rights in the business or its organised part,
- grant consent to any sale of real property, perpetual usufruct or interest in real property with a net carrying value exceeding one-twentieth of the Company's share capital,
- amend the Company's Articles of Association,
- set up and dissolve reserve capitals and other capitals and funds of the Company,
- resolve to cancel shares and buy shares to be cancelled, and establish the terms of such cancellation,
- issue convertible bonds or bonds with pre-emptive rights and issue warrants,
- dissolve, liquidate and restructure the Company or merge it with another company,
- conclude group contracts within the meaning of Art. 7 of the Commercial Companies Code.

Participation in the General Meeting

In accordance with the Commercial Companies Code, the right to participate in the Company's General Meeting is vested only in persons that are the Company's shareholders sixteen days before the date of the General Meeting (record date).

In accordance with the Commercial Companies Code, the right to participate in the Company's General Meeting is vested only in persons that are the Company's shareholders sixteen days before the date of the General Meeting (record date). Shareholders may communicate with the Company via the corporate website, using the contact form available at website or through email (at: walne.zgromadzenie@orlen.pl). They may send a notification of granting power of proxy in electronic form and the power of proxy document (or a power of proxy cancellation document), and they may send requests and documents to the Company, for instance requests to place a matter on the agenda of the General Meeting, draft resolutions for the General Meeting, etc. A section dedicated to the Company's General Meetings contains some useful materials for shareholders, including a guideline entitled "How to participate in the General Meeting", information about upcoming General Meetings along with relevant materials, materials pertaining to General Meetings held in the past, including texts of resolutions passed and video files with internet broadcasts of General Meetings.

The General Meeting may be attended by Members of the Management Board and the Supervisory Board, who can participate and speak, even if they are not shareholders, without any invitation. The Annual General Meeting may be attended by Members of the Management Board and the Supervisory Board whose mandates expired before the date of the General Meeting but who still performed their functions during the financial year for which the Directors' report and the financial statements are to be approved by the Annual General Meeting.

General Meetings may also be attended by other persons invited by the body convening the General Meeting or allowed to enter the meeting room by the Chair, especially qualified auditors, legal and financial advisers and the Company's employees. Subject to the applicable law and with due consideration of the Company's interests, PKN ORLEN may allow its General Meetings to be attended by members of the media. The Management Board ensures that each General Meeting is attended by an independent expert in commercial law.

Voting at the General Meeting

Unless stated otherwise in the Commercial Companies Code or the Articles of Association, resolutions of the General Meeting are passed by an absolute majority of the votes cast. One PKN ORLEN share confers one voting right at the Company's General Meeting. Limitations on the shareholders' voting rights are described in the section on special control powers and voting rights.

General Meeting in 2019

In 2019, one General Meeting was held. It was the Annual General Meeting and it was held on June 14th 2019..

The Annual General Meeting:

- approved of the Directors' reports on the operations of the Company and the ORLEN Group as well as the financial statements for 2018,
- acknowledged the fulfilment of duties by all the Supervisory and Management Board Members,

- allocated the net profit for the 2018 financial year in the following manner:

  1) PLN 1,496,981,713.50 was allocated to be paid as dividend (PLN 3.5 per share),
  2) the balance of PLN 3,937,168,128.67 was allocated to the Company's statutory reserve funds,

- the previous term of office having expired, the General Meeting appointed nine persons to the Supervisory Board for a new term of office: Izabela Felczak-Poturnicka as Chair of the Supervisory Board and Barbara Jarzembowska, Andrzej Kapała, Michał Klimaszewski, Jadwiga Lesisz, Małgorzata Niezgoda, Anna Sakowicz-Kacz, Andrzej Szumański and Anna Wójcik;
- made further amendments to Resolution No. 4 of the Extraordinary General Meeting of January 24th 2017 on the rules of remuneration for members of the Management Board, and decided to adopt a consolidated text of the resolution incorporating all previous amendments;
- amended Resolution No. 5 of the Extraordinary General Meeting of the Company of January 24th 2017 determining the rules of remunerating members of the Supervisory Board.

The Annual General Meeting also passed resolutions to amend the Company's Articles of Association. The purpose of these amendments was to:

- enable the Supervisory Board members, in compliance with the Commercial Companies Code, to vote on resolutions of the Supervisory Board by casting their votes in writing through another member of the Supervisory Board;
- redact the provisions of Art. 8.2 of the Articles of Association by specifying that the right to appoint and remove one member of the Supervisory Board rests with the State Treasury, represented by the entity authorised to exercise the rights attached to the shares held by the State Treasury;
- change the powers of the Supervisory Board specified in Art. 8.11 and Art. 8.12 of the Articles of Association. The changes were required to implement the provisions of the Act on State Property Management in the Company's Articles of Association;
- specify that the Company's Management Board comprises five to nine members, who are appointed and removed by the Supervisory Board following a recruitment process, with the proviso that one member of the PKN ORLEN Management Board is appointed and removed by the entity authorised to exercise the rights attached to the shares held by the State Treasury as long as the State Treasury holds at least one share in the Company. It was also determined what requirements candidates for members of the Company's Management Board should meet;
- specify that the Management Board must prepare and submit to the General Meeting and the Supervisory Board a report on entertainment expenses, legal costs, marketing costs, public relations and communication expenses, and management consultancy fees, as well as a report on application of best practices referred to in Art. 7.3 of the Act on State Property Management of December 16th 2016 to the extent they are applicable to the Company;
- define the rules for disposal of non-current assets in the Company's Articles of Association;
- require the Company's Management Board to take steps with a view to introducing into the Articles of Association of companies with respect to which the Company is the parent within the meaning of Art. 4.3 of the Act on Competition and Consumer Protection of February 16th 2007 the principles set out in Art. 17.1-4, Art. 17.6 and Art. 17.6a, taking into consideration the provisions of Art. 17.5, Art. 18.1, Art. 19.1-3, Art. 19.5 and Art. 22, of the Act on State Property Management of December 16th 2016 as well as the obligation to immediately remove any member of such company's supervisory body who does not meet the requirements set out in the Articles of Association.
- increase the maximum number of Supervisory Board members to ten persons, including the Chair.

The Annual General Meeting also resolved to repeal the General Meeting resolutions which implemented the provisions of the Act on State Property Management adopted as the amendments to the Company's Articles of Association listed above.

General Meeting in 2020

On March 5th 2020, an Extraordinary General Meeting of PKN ORLEN S.A. was held. It changed the composition of the Company's Supervisory Board and set the number of its members at ten. The Extraordinary General Meeting also removed Ms Małgorzata Niezgoda from the Supervisory Board and appointed Mr Wojciech Jasiński and Mr Dominik Kaczmarski to the Board. Mr Wojciech Jasiński was appointed Chair of the Supervisory Board.

MANAGEMENT AND SUPERVISORY BODIES

GRI indicators: 102-18, 102-22

Capitals:

GRI: 102-18

Apart from generally applicable laws, the operating procedures of PKN ORLEN's Supervisory Board, its Committees and Management Board are set out in PKN ORLEN's Articles of Association and the Rules of Procedure for the Supervisory Board or the Management Board, as appropriate. In their operations PKN ORLEN's management and supervisory bodies also comply with the corporate governance principles set out by the Warsaw Stock Exchange.

In order to achieve the highest standards in the performance of the Management Board's and Supervisory Board's duties defined in the generally applicable laws and internal regulations, as well as to ensure that these duties are discharged effectively, the Management Board and Supervisory Board Members must possess extensive qualifications and experience. The current composition of the Management and Supervisory Boards ensures a good balance and diversity in terms of gender, educational background, age and professional experience.

Any outside employment of the Management Board Members is assessed by the Supervisory Board, which – pursuant to the Company's Articles of Association – grants permission to Management Board Members to serve on the supervisory or management bodies of any other entities and to receive remuneration for such service.

Management Board

Composition of PKN ORLEN Management Board and division of remits

Composition of PKN ORLEN Management Board as at January 1st 2019

Name and surname	Position held on PKN ORLEN Management Board
Daniel Obajtek	CEO, President of the Management Board
Armen Konrad Artwich	Member of the Management Board, Corporate Affairs
Zbigniew Leszczyński	Member of the Management Board, Development
Patrycja Klarecka	Member of the Management Board, Retail Sales
Wiesław Protasewicz	Member of the Management Board, Finance
Michał Róg	Member of the Management Board, Wholesale and International Trade
Józef Węgrecki	Member of the Management Board, Operations

Changes on the Management Board during the previous financial year

At its meeting on November 28th 2019, the PKN ORLEN Supervisory Board removed Wiesław Protasewicz from the Management Board, with effect from November 28th 2019.

Composition of PKN ORLEN Management Board as at December 31st 2019

Name and surname	Position held on PKN ORLEN Management Board	Remit
Daniel Obajtek	President of the Management Board, Chief Executive Officer	strategy and investor relations, human resources, sports marketing, sponsorship and events, corporate communication, management office, control and security, audit, financial control, legal, relations with external stakeholders, trade in crude oil and natural gas;
Armen Konrad Artwich	Member of the Management Board, Corporate Affairs	administration, environmental protection, corporate group, risk and compliance management, and supervision of the financial division: business controlling, financial management, planning and reporting, taxes;
Patrycja Klarecka	Member of the Management Board, Retail Sales	IT, marketing, retail, innovation, infrastructure and information security supervision;
Zbigniew Leszczyński	Member of the Management Board, Development	procurement, capital investments, development and technology, technical matters;
Michał Róg	Member of the Management Board, Wholesale and International Trade	wholesale of refining products, trade in petrochemical products, logistics, supply chain management;
Józef Węgrecki	Member of the Management Board, Operations	refining production, petrochemical production, power generation, production efficiency and optimisation, water and wastewater management, occupational health and safety.

Changes on the Management Board as at March 18th 2020

At its meeting on January 30th 2020, the Supervisory Board of PKN ORLEN appointed Jan Szewczak as Member of the Management Board for Finance and Adam Burak as Member of the Management Board for Communications and Marketing, with effect from February 3rd 2020.

Composition of PKN ORLEN Management Board as at March 18th 2020

Name and surname	Position held on PKN ORLEN Management Board	Remit
Daniel Obajtek	CEO, President of the Management Board	strategy and investor relations, human resources, management board office, control and security, audit, financial control, legal, oil and gas trade;
Armen Konrad Artwich	Member of the Management Board, Corporate Affairs	administration, environmental protection, corporate group, risk management and compliance management;
Adam Burak	Member of the Management Board for Communications and Marketing	corporate communication, marketing, sports marketing, sponsorship and events;
Patrycja Klarecka	Member of the Management Board, Retail Sales	IT, retail, innovation, relations with external stakeholders, infrastructure and information security supervision;
Zbigniew Leszczyński	Member of the Management Board, Development	procurement, capital investments, development and technology, technical matters;
Michał Róg	Member of the Management Board, Wholesale and International Trade	wholesale of refining products, trade in petrochemical products, logistics, supply chain management;
Jan Szewczak	Member of the Management Board, Finance	finance management, financial risk management, business controlling, taxes;
Józef Węgrecki	Member of the Management Board, Operations	refining production, petrochemical production, power generation, production efficiency and optimisation, water and wastewater management, occupational health and safety.

The current division of remits between Members of the PKN ORLEN Management Board is also available on the Company's website.

Appointment and removal of the Management Board

The Management Board of PKN ORLEN consists of five to nine members, including the President, Vice Presidents and other Members of the Management Board. Members of the Management Board are appointed and removed by the Supervisory Board. One member of the PKN ORLEN Management Board is appointed and removed by the entity authorised to exercise the rights attached to the shares held by the State Treasury as long as the State Treasury holds at least one share in the Company.

The term of office of the Management Board Members is a joint term, ending on the date of the Annual General Meeting approving the financial statements for the full second financial year of such term of office.

The Supervisory Board may suspend the President, Vice Presidents, individual Members of the Management Board and the Management Board as a whole from their duties for valid reasons. Should the Management Board President be removed or suspended from duties or should his/her mandate expire before the end of the term of office, all his/her powers, except for the casting vote referred to in Art. 9.5.2 of the Articles of Association, are to be exercised by the person appointed by a resolution of the Supervisory Board as acting President of the Management Board until a new Management Board President is appointed or the current one is restored to his/her position.

The current term of office of the Management Board began on June 30th 2017 and ends on the date of the General Meeting of PKN ORLEN approving the Company's financial statements for the financial year 2019.

Organisation of the Management Board activity

Detailed rules for the convening of Management Board meetings are set out in the Rules of Procedure for the Management Board, available on the Company's website.

Meetings of the Management Board are held at least once every two weeks. For Management Board resolutions to be valid, a scheduled meeting has to be notified to all Members of the Management Board and at least half of the Management Board Members have to be present at the meeting. Management Board resolutions are passed by a simple majority of votes (in the event of a voting tie, the President of the Management Board has the casting vote) provided that for resolutions to grant a commercial power of proxy, unanimity of all Members of the Management Board is required. A Management Board Member who voted against a resolution that was carried may communicate his/her dissenting opinion, which, however, needs to be justified.

Resolutions are voted on by open ballot. A secret ballot may be ordered at a request of each Member of the Management Board. Resolutions are signed by all Members of the Management Board who were present at the Management Board meeting on which a given resolution was passed. A resolution is also signed by the Member of the Management Board who filed a dissenting opinion, with a note: "dissenting opinion" or "votum separatum".

The Rules of Procedure for the Management Board also provide for the possibility of Management Board resolutions being adopted using means of remote communication. Resolutions voted on under such procedure are only valid if all Management Board Members have been notified of the contents of the draft resolutions, with the proviso that such notification may also be made using means of remote communication.

According to the Rules of Procedure for the Management Board, the Management Board Members must notify the Supervisory Board of any actual or potential conflict of interest which has arisen or may arise in connection with the positions held by them. Should the Company's interest be in conflict with the personal interests of a Management Board Member, the Management Board Member in question should abstain from deciding on such matter and request that a relevant note be made in the minutes of the meeting. In the case of doubt as to whether a conflict of interest exists, the matter is resolved by the Management Board by way of a resolution. According to the Rules of Procedure for the Management Board, a conflict of interest is understood as a circumstance in which a decision made by a Member of the Management Board may be influenced by a personal interest of the Management Board Member or his/her close person, i.e. their spouse, children, persons related to them through blood or marriage in the first or second degree, or any persons to whom the Member is personally related.

Powers and responsibilities of the Management Board

All Members of the Management Board are obliged and authorised to manage PKN ORLEN's affairs.

All matters going beyond the ordinary course of business are subject to resolutions of the Management Board. Matters falling within the scope of ordinary business are those related to trading in fuels within the meaning of the Company's Articles of Association (i.e. crude oil, petroleum products, biocomponents, biofuels and other fuels including natural gas, industrial gas and fuel gas) or energy, and any other matters not expressly specified in the Rules of Procedure for the Management Board. In addition, the Management Board's consent is not required to perform an action which is an integral part of any other action for which the Management Board already gave its consent, unless the Management Board's resolution states otherwise.

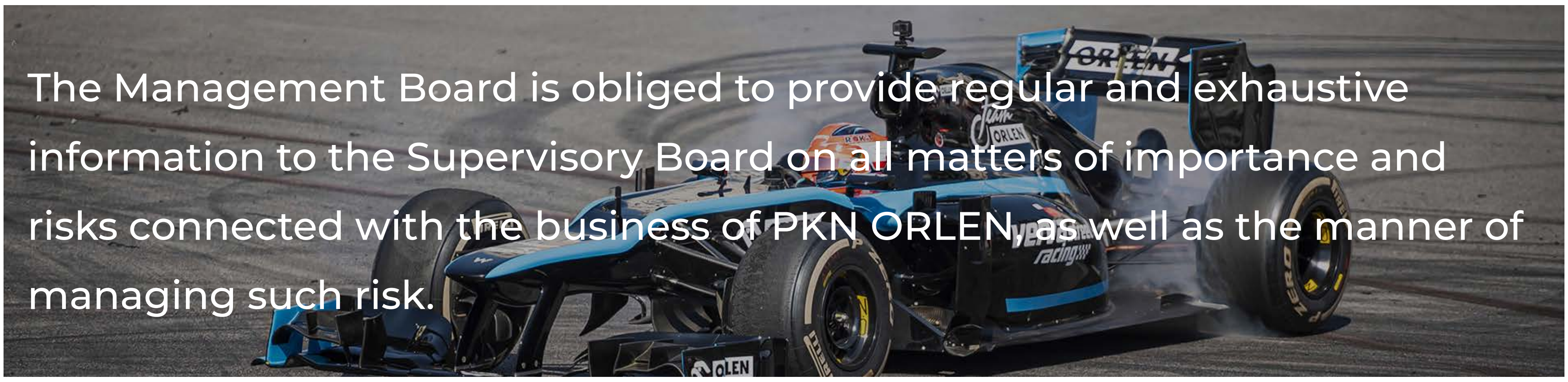
A resolution of the Management Board is required, among other things to:

- adopt and amend the Rules of Procedure for the Management Board,
- adopt and amend the Organisational Rules and Regulations of PKN ORLEN,
- adopt motions to be submitted to the Supervisory Board and/or to the General Meeting,
- convene the General Meetings and adopt their proposed agendas,

- adopt annual and long-term financial plans as well as the Company's development strategy,
- approve investment projects and corresponding liabilities if the resulting expenditures or charges exceed PLN 10,000,000,
- incur liabilities, dispose of property rights and encumber in any way the Company's assets with a value exceeding PLN 20,000,000 (subject to certain exceptions),
- sell and purchase real property, perpetual usufruct or an interest in real property, and create limited property rights,
- dispose of, purchase and encumber shares or other equity instruments of other entities, including shares admitted to public trading,
- issue the Company's securities,
- authorise the Company's and the ORLEN Group's financial statements,
- adopt and change the employee remuneration scheme, and make decisions regarding the introduction and design of incentive schemes,
- conclude, amend and terminate a collective bargaining agreement applicable at the Company, and other agreements with trade unions,
- establish the principles of granting and revoking powers of attorney,
- formulate the so-called donation policy of the Company,
- grant a commercial power of proxy,
- establish the internal division of remits between the Members of the Management Board,
- set up establishments/offices abroad,
- resolve other matters which at least one Member of the Management Board requests to be resolved by way of a resolution,
- take decisions on payment of interim dividends.

The following activities undertaken in the ordinary course of management also require resolutions of the Management Board:

- incurring liabilities in legal transactions involving trade in crude oil or hydrocarbon raw materials used to produce fuels in a refinery, excluding biocomponents and fuel additives if the transaction volume exceeds 165,000 tonnes of crude oil or 165,000 tonnes of hydrocarbon raw materials used to produce fuels in a refinery, excluding biocomponents and fuel additives;
- incurring liabilities in legal transactions involving natural gas trading, trading capacity in natural gas transmission, distribution and storage grids/networks in Poland or abroad, and trading in natural gas storage capacities in Poland and abroad if the transaction volume exceeds 100m Nm^3;
- incurring liabilities in legal transactions involving the acquisition of biocomponents and biofuels, including raw materials for the production of biocomponents and biofuels, if the transaction value exceeds PLN 200,000,000 (two hundred million złoty);
- incurring liabilities in legal transactions involving trade in fuels, within the meaning of the Company's Articles of Association, other than those referred to in paragraph 6 Section 1),Section 2) and Section 3) if the transaction value exceeds PLN 200,000,000 (two hundred million złoty);
- incurring liabilities in legal transactions involving sale or purchase of refining products in international trade if the transaction volume exceeds 90,000 tonnes, excluding heavy fuel oil;
- incurring liabilities in legal transactions involving participation in a public procurement/tender procedure for contract award (including participation in negotiations concerning the subject matter of the contract) in the area of wholesale trade in refining products and fleet cards if the transaction value exceeds PLN 200,000,000 (two hundred million złoty);
- incurring liabilities in legal transactions involving trade in energy, property rights under energy origin certificates and energy efficiency certificates, guarantees of origin and documents confirming their issue, the related system services and energy ranges, as well as all activities related to switching electricity suppliers if the transaction volume exceeds 300 GWh;
- incurring liabilities in legal transactions involving participation in tender procedures (including those subject to the Public Procurement Law) relating to trading in (separately or jointly) energy, energy-related services or products (including participation in negotiations and other factual and legal acts related to the subject matter of the contract) and any activities related to switching electricity suppliers if the transaction volume exceeds 300 GWh.



The Management Board is obliged to provide regular and exhaustive information to the Supervisory Board on all matters of importance and risks connected with the business of PKN ORLEN, as well as the manner of managing such risk.

Supervisory Board

GRI: 102-22

Composition of PKN ORLEN Supervisory Board as at January 1st 2019

Name and surname	Position held on PKN ORLEN Supervisory Board
Izabela Felczak-Poturnicka	Chair of the Supervisory Board
Radosław L. Kwaśnicki	Deputy Chair of the Supervisory Board (Independent Member of the Supervisory Board from March 14th 2018)
Mateusz Henryk Bochacik	Secretary of the Supervisory Board (Independent Member of the Supervisory Board from February 26th 2018)
Wojciech Kryński	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Małgorzata Niezgoda	Member of the Supervisory Board
Jadwiga Lesisz	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Agnieszka Biernat-Wiatrak	Member of the Supervisory Board
Andrzej Kapała	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Anna Wójcik	Member of the Supervisory Board

On February 15th 2019, Mateusz Henryk Bochacik resigned as Member of the Supervisory Board of PKN ORLEN.

On March 20th 2019, the Supervisory Board appointed Ms Anna Wójcik, Member of the Supervisory Board, as Secretary of the Supervisory Board.

On June 14th 2019, Mr Radosław L. Kwaśnicki, Deputy Chairman of the Supervisory Board, resigned as Member of the Supervisory Board of PKN ORLEN S.A.

On June 14th 2019, the Annual General Meeting of PKN ORLEN appointed the following persons to the Supervisory Board for a new term of office: Izabela Felczak-Poturnicka, Chair of the Supervisory Board; Supervisory Board members: Małgorzata Niezgoda, Andrzej Kapała, Jadwiga Lesisz, Anna Wójcik, Andrzej Szumański, Barbara Jarzembowska, Anna Sakowicz-Kacz, and Michał Klimaszewski.

On June 27th 2019, the Supervisory Board appointed its members Mr Andrzej Szumański and Ms Anna Wójcik as, respectively, Deputy Chair and Secretary of the Supervisory Board.

On October 29th 2019, acting on behalf of the State Treasury and pursuant to Art. 8.2.1 of the Company's Articles of Association, the Head of the State Treasury Department at the Chancellery of the Prime Minister appointed Roman Kusz to the PKN ORLEN Supervisory Board.

In 2019, the PKN ORLEN Supervisory Board held 15 minuted meetings and passed 193 resolutions. The attendance of PKN ORLEN Supervisory Board Members at Supervisory Board meetings was 99%. In the case of absence of a Supervisory Board Member from a meeting, the Supervisory Board passed a resolution to authorise the absence.

As at December 31st 2019, the Supervisory Board consisted of six woman and four men. The age structure of Supervisory Board members: 40–49 years: 6 members, 50–60 years: 1 member, over 60 years: 3 members.

The General Meeting of the Company appointed the Supervisory Board for a new term of office on June 14th 2019. The current term of office of the Supervisory Board ends on the date of the PKN ORLEN General Meeting approving the Company's financial statements for the financial year 2021.

The Supervisory Board of the current term is composed of Members with educational background in law, economics and finance (including a law professor) and diverse professional experience, who completed specialist courses and training programmes.

The qualifications of individual Members of the Supervisory Board are described in the first section of the Directors' report on the operations of the ORLEN Group in 2019 and on the corporate website. In 2019, there were six independent Members on the Supervisory Board.

Composition of PKN ORLEN Supervisory Board as at December 31st 2019

Name and surname	Position held on PKN ORLEN Supervisory Board
Izabela Felczak-Poturnicka	Chair of the Supervisory Board
Andrzej Szumański	Deputy Chair of the Supervisory Board (Independent Member of the Supervisory Board)
Anna Wójcik	Secretary of the Supervisory Board
Barbara Jarzembowska	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Andrzej Kapała	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Michał Klimaszewski	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Małgorzata Niezgoda	Member of the Supervisory Board
Jadwiga Lesisz	Member of the Supervisory Board
Roman Kusz	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Anna Sakowicz-Kacz	Member of the Supervisory Board (Independent Member of the Supervisory Board)

Ms Izabela Felczak-Poturnicka resigned from her position as Chair of the Supervisory Board with effect from January 16th 2020.

On March 5th 2020, an Extraordinary General Meeting of PKN ORLEN S.A. removed Ms Małgorzata Niezgoda from the Supervisory Board and appointed Mr Wojciech Jasiński and Mr Dominik Kaczmarski to the Board. Mr Wojciech Jasiński was also appointed Chair of the Supervisory Board.

Composition of PKN ORLEN Supervisory Board as at March 18th 2020

Name and surname	Position held on PKN ORLEN Supervisory Board
Wojciech Jasiński	Chair of the Supervisory Board
Andrzej Szumański	Deputy Chair of the Supervisory Board (Independent Member of the Supervisory Board)
Anna Wójcik	Secretary of the Supervisory Board
Barbara Jarzembowska	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Andrzej Kapała	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Dominik Kaczmarski	Member of the Supervisory Board
Michał Klimaszewski	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Jadwiga Lesisz	Member of the Supervisory Board
Roman Kusz	Member of the Supervisory Board (Independent Member of the Supervisory Board)
Anna Sakowicz-Kacz	Member of the Supervisory Board (Independent Member of the Supervisory Board)

Operating procedures of the Supervisory Board

PKN ORLEN's Supervisory Board is composed of six to ten Members. The State Treasury as a shareholder is authorised to appoint and remove one Member of the Supervisory Board, while other Members of the Supervisory Board are appointed and removed by the General Meeting.

Members of PKN ORLEN's Supervisory Board are appointed for a joint term of office, ending on the date of the Annual General Meeting approving the financial statements for the full second financial year of such term of office. Individual Members of the Supervisory Board and the entire Supervisory Board may be removed at any time before the end of their term of office. The General Meeting of PKN ORLEN appoints the Chair of the Supervisory Board, whereas the Deputy Chair and the Secretary are appointed by the Supervisory Board from among the other Members of the Board.

At least two Supervisory Board Members must meet the independence criteria specified in PKN ORLEN's Articles of Association. In accordance with the Code of Best Practice, independent Supervisory Board Members are not employees of the Company, its subsidiary or associate, do not have a similar contractual relationship with any of these entities, and have no ties to a shareholder that would preclude their independence.

Before being appointed to the Supervisory Board, independent Members of the Supervisory Board should submit to the Company a written statement to the effect that they meet the criteria set out in the Articles of Association and in the Code of Best Practice. Moreover, candidates to the Supervisory Board should submit statements based on which it would be possible to determine whether they meet the requirements for members of the Audit Committee of the Supervisory Board, as set out in the Act on Statutory Auditors, Audit Firms, and Public Oversight of May 11th 2017, including the requirements concerning independence of the Audit Committee Members. Statements on meeting the independence criteria are submitted to the other Supervisory Board Members and to the Management Board.

If the independence criteria are not met, a Member of the Supervisory Board is obliged to immediately notify the Company of the same. The Company then informs the shareholders of the current number of independent Members of the Supervisory Board.

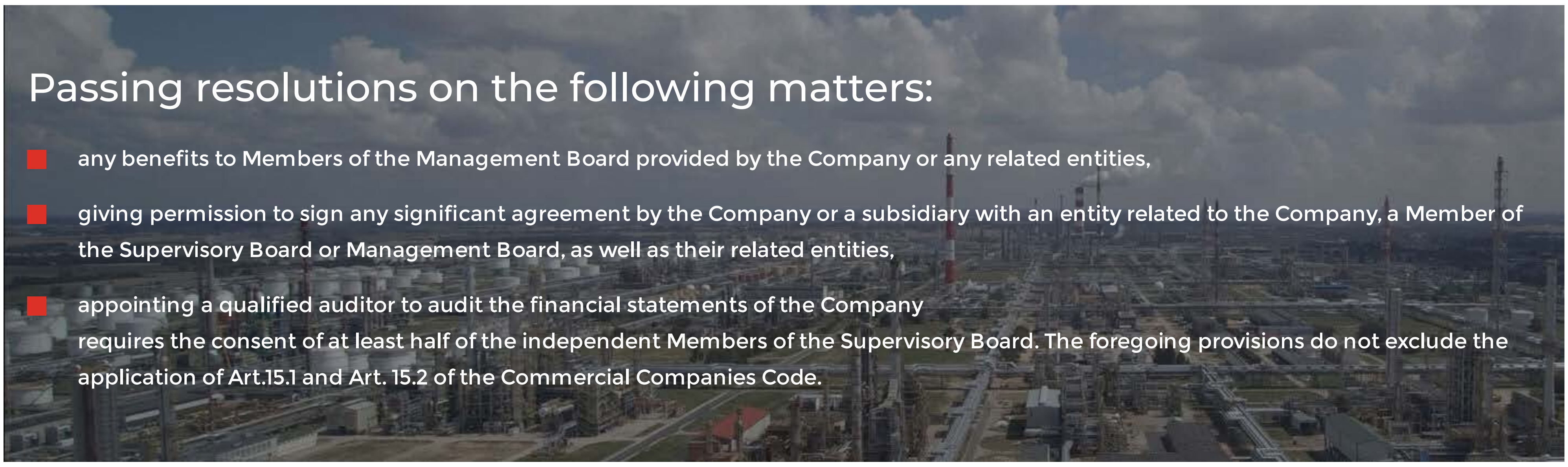
If the number of independent Members of the Supervisory Board is less than two, the Company's Management Board is obliged to immediately convene a General Meeting and put an item concerning changes in the composition of the Supervisory Board on the agenda of the General Meeting. The Supervisory Board will continue to operate as then composed until changes in the composition of the Supervisory Board are made, i.e. the number of independent Members is adjusted to the requirements set forth in the Articles of Association, and the provisions of Art. 8.9 of the Articles of Association (containing a list of resolutions which must be passed with the consent of at least half of independent Supervisory Board Members) will not apply.

In accordance with the Rules of Procedure for the Supervisory Board, a Supervisory Board Member should not resign mid-term if this could prevent the Supervisory Board from performing its duties, and in particular from timely passing a resolution on any matter material to the Company. If a Supervisory Board Member has resigned or is unable to perform his/her duties, the Company should immediately take appropriate steps to fill the vacancy or change the composition of the Supervisory Board.

Organisation of the Supervisory Board, in accordance with the principles outlined in PKN ORLEN's Articles of Association and the Rules of Procedure for the Supervisory Board, is described on the corporate website.

Meetings of the Supervisory Board are held when necessary, but at least once every two months.

The Supervisory Board may pass resolutions if at least half of its Members participate in the meeting. Subject to the provisions of the Commercial Companies Code, a resolution of the Supervisory Board may be passed in writing or with the use of direct means of remote communication. Resolutions of the Supervisory Board are passed by an absolute majority of the votes cast in the presence of at least half of the Members of the Supervisory Board. This does not apply to resolutions to remove or suspend from duties any Members of the Management Board or the entire Management Board during the term of their office, in which case at least two-thirds of all the Supervisory Board Members must vote in favour of a given resolution.



Passing resolutions on the following matters:

- any benefits to Members of the Management Board provided by the Company or any related entities,
- giving permission to sign any significant agreement by the Company or a subsidiary with an entity related to the Company, a Member of the Supervisory Board or Management Board, as well as their related entities,
- appointing a qualified auditor to audit the financial statements of the Company
requires the consent of at least half of the independent Members of the Supervisory Board. The foregoing provisions do not exclude the application of Art.15.1 and Art. 15.2 of the Commercial Companies Code.

Powers and responsibilities of the Supervisory Board

The Supervisory Board of PKN ORLEN exercises ongoing supervision over the Company's operations, in all fields of its activity, specifically, the Supervisory Board is authorised to act as set out in the Commercial Companies Code and the Company's Articles of Association, in conformity with the Rules of Procedure for the Supervisory Board and – where generally applicable laws so stipulate – resolutions of the General Meeting and the Supervisory Board as well as internal organisational documents in place at the Company.

To ensure the highest standards of corporate governance and in order to enable shareholders to form a true and fair view of the Company, the Supervisory Board of PKN ORLEN has the additional obligation to submit to the General Meeting:

- assessment of PKN ORLEN's standing, including the internal control, risk management, compliance and internal audit function,
- an annual report on its work,
- assessment of how the Company's corporate governance disclosure obligations are fulfilled,
- assessment of the soundness of the Company's sponsorship, charity and similar activities,
- review and assessment of the operations of the Group companies in the assessment of the Group's consolidated financial statements,
- assessment of the use of non-current assets by the Company.

Pursuant to Sections 8.1 and 8.2 of the Rules of Procedure for the Supervisory Board, in order to discharge its duties, the Supervisory Board may inspect all the Company's documents, request the Management Board and employees to provide reports and clarifications, and review the Company's assets. To enable the Supervisory Board to perform its duties, the Management Board gives it access to information on matters concerning the Company. In order to guarantee the proper discharge of its duties, the Supervisory Board may request that the Management Board prepare, at the expense of the Company, expert and other opinions for the Supervisory Board, or employ an adviser.

Pursuant to Sections 27.1 and 27.2 of the Rules of Procedure for the PKN ORLEN Supervisory Board, a Supervisory Board Member should inform the other Members of the Supervisory Board of any conflicts of interest which have arisen or may arise, as well as abstain from taking the floor when the matter which has given rise to the conflict is being discussed, abstain from voting on the relevant resolution and request that the fact be recorded in the minutes. No breach of the provisions of the preceding sentence may render the Supervisory Board's resolution invalid. In the case of doubt as to whether a conflict of interest exists, the matter is resolved by the Supervisory Board by way of a resolution.

Committees of the Supervisory Board

The Supervisory Board of PKN ORLEN may appoint standing or ad hoc committees, which act as its collective advisory and opinion making bodies.

The following standing committees operate within the Supervisory Board of PKN ORLEN:

- Audit Committee,
- Strategy and Development Committee,
- Nomination and Remuneration Committee,
- Corporate Governance Committee,
- Corporate Social Responsibility Committee (CSR Committee).

Composition of PKN ORLEN Supervisory Board Committees in 2019

Composition of PKN ORLEN Supervisory Board Committees as at January 1st 2019

Name and surname	Position held on PKN ORLEN Supervisory Board Committee
Audit Committee	
Wojciech Kryński	Committee Chair, Independent Member of the Supervisory Board
Radosław L. Kwaśnicki	Committee Member, Independent Member of the Supervisory Board
Izabela Felczak-Poturnicka	Committee Member
Jadwiga Lesisz	Committee Member, Independent Member of the Supervisory Board
Andrzej Kapała	Committee Member, Independent Member of the Supervisory Board
Strategy and Development Committee	
Radosław L. Kwaśnicki	Committee Chair, Independent Member of the Supervisory Board
Izabela Felczak-Poturnicka	Committee Member
Małgorzata Niezgoda	Committee Member

Name and surname	Position held on PKN ORLEN Supervisory Board Committee
Agnieszka Biernat-Wiatrak	Committee Member, Independent Member of the Supervisory Board
Andrzej Kapała	Committee Member, Independent Member of the Supervisory Board
Nomination and Remuneration Committee	
Małgorzata Niezgoda	Committee Chair
Mateusz Bochacik	Committee Member, Independent Member of the Supervisory Board
Wojciech Kryński	Committee Member, Independent Member of the Supervisory Board
Jadwiga Lesisz	Committee Member, Independent Member of the Supervisory Board
Anna Wójcik	Committee Member
Corporate Governance Committee	
Agnieszka Biernat-Wiatrak	Committee Chair
Mateusz Bochacik	Committee Member, Independent Member of the Supervisory Board
Radosław L. Kwaśnicki	Committee Member, Independent Member of the Supervisory Board
Corporate Social Responsibility Committee	
Jadwiga Lesisz	Committee Chair, Independent Member of the Supervisory Board
Radosław L. Kwaśnicki	Committee Member, Independent Member of the Supervisory Board
Izabela Felczak-Poturnicka	Committee Member
Anna Wójcik	Committee Member

Composition of PKN ORLEN Supervisory Board Committees as at December 31st 2019

Name and surname	Position held on PKN ORLEN Supervisory Board Committee
Audit Committee	
Andrzej Kapała	Committee Chair from June 27th 2019, Independent Member of the Supervisory Board
Barbara Jarzembowska	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Izabela Felczak-Poturnicka	Committee Member
Jadwiga Lesisz	Committee Member
Michał Klimaszewski	Committee Member from July 18th 2019, Independent Member of the Supervisory Board
Strategy and Development Committee	
Michał Klimaszewski	Committee Chair from June 27th 2019, Independent Member of the Supervisory Board
Izabela Felczak-Poturnicka	Committee Member
Małgorzata Niezgoda	Committee Member
Andrzej Kapała	Committee Member, Independent Member of the Supervisory Board
Anna Sakowicz-Kacz	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Nomination and Remuneration Committee	
Małgorzata Niezgoda	Committee Chair
Andrzej Szumański	Committee Member from July 18th 2019, Independent Member of the Supervisory Board
Anna Sakowicz-Kacz	Committee Member from June 27th 2019, Independent Member of the Supervisory Board

Name and surname	Position held on PKN ORLEN Supervisory Board Committee
Michał Klimaszewski	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Anna Wójcik	Committee Member
Corporate Governance Committee	
Andrzej Szumański	Committee Chair from June 27th 2019, Independent Member of the Supervisory Board
Izabela Felczak-Poturnicka	Committee Member
Andrzej Kapała	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Barbara Jarzembowska	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Roman Kusz	Committee Member from November 28th 2019, Independent Member of the Supervisory Board
Corporate Social Responsibility Committee	
Jadwiga Lesisz	Committee Chair
Izabela Felczak-Poturnicka	Committee Member
Anna Wójcik	Committee Member from July 19th 2018
Michał Klimaszewski	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Roman Kusz	Committee Member from November 28th 2019, Independent Member of the Supervisory Board

Composition of PKN ORLEN Supervisory Board Committees as at March 18th 2020

Name and Surname	Position held on PKN ORLEN Supervisory Board Committee
Audit Committee	
Andrzej Kapała	Committee Chair from June 27th 2019, Independent Member of the Supervisory Board
Barbara Jarzembowska	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Jadwiga Lesisz	Committee Member
Michał Klimaszewski	Committee Member from July 18th 2019, Independent Member of the Supervisory Board
Strategy and Development Committee	
Michał Klimaszewski	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Andrzej Kapała	Committee Member, Independent Member of the Supervisory Board
Anna Sakowicz-Kacz	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Nomination and Remuneration Committee	
Andrzej Szumański	Committee Member from July 18th 2019, Independent Member of the Supervisory Board
Anna Sakowicz-Kacz	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Michał Klimaszewski	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Anna Wójcik	Committee Member
Corporate Governance Committee	
Andrzej Szumański	Committee Chair from June 27th 2019, Independent Member of the Supervisory Board
Andrzej Kapała	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Barbara Jarzembowska	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Roman Kusz	Committee Member from November 28th 2019, Independent Member of the Supervisory Board

Name and Surname	Position held on PKN ORLEN Supervisory Board Committee
Corporate Social Responsibility Committee	
Jadwiga Lesisz	Committee Chair
Anna Wójcik	Committee Member from July 19th 2018
Michał Klimaszewski	Committee Member from June 27th 2019, Independent Member of the Supervisory Board
Roman Kusz	Committee Member from November 28th 2019, Independent Member of the Supervisory Board

Audit Committee

Tasks of the Audit Committee are to advise the Supervisory Board of PKN ORLEN on matters related to the proper implementation of budget and financial reporting rules and internal control within the Company and the ORLEN Group, as well as cooperation with the Company's qualified auditors. The Audit Committee meetings are held at least once per quarter, prior to each publication of the Company's financial statements. Pursuant to the Rules of Procedure for the PKN ORLEN Supervisory Board, the majority of the Audit Committee Members, including its Chair, should satisfy the independence criteria defined in the Company's Articles of Association, the Code of Best Practice and the Act on Statutory Auditors, Audit Firms, and Public Oversight. At least one Member of the Audit Committee should have the expertise and competence in accounting or financial auditing. At least one Member of the Audit Committee or individual Members of the Committee should have the expertise and competence specific to the industry in which the Company operates. The qualifications of individual Members of the Audit Committee are described in the first section of the Directors' report on the operations of the ORLEN Group in 2019 and on the corporate website.

PKN ORLEN's Audit Committee performs all duties required under the Act on Statutory Auditors, Audit Firms, and Public Oversight of May 11th 2017.

In 2019, the Audit Committee held 10 minuted meetings.

In 2018, the Audit Committee formulated a recommendation with respect to the appointment of an auditing firm in accordance with the Supervisory Board-approved updated auditor selection and appointment policy and procedure, non-audit services policy, and auditor independence monitoring and oversight procedure. Key provisions of the document are as follows:

- the auditor is selected in advance in accordance with the auditor rotation rules, by way of requests for proposals issued by the Supervisory Board based on the Audit Committee's recommendation,
- the auditor is selected based on clear and non-discriminatory criteria, in a manner ensuring that the audit services provided to the Company are of the highest quality and that all criteria and standards of the auditor's and the auditing firm's independence and impartiality are met,
- the first audit engagement letter is signed with an auditing firm for at least two years, subject to the rules on rotation of the auditing firm and lead auditor stipulated under applicable laws,
- the principle of objectivity is met by analysing any non-audit services provided by the auditor that extend beyond the scope of the audit engagement letter in order to avoid any conflicts of interest.

Also, permitted non-audit assurance services were provided to PKN ORLEN and selected Group companies in 2019 that had been contracted in compliance with the applicable procedure, i.e. each non-audit service had been preceded by an independence assessment and approved by the Audit Committee, including:

- assurance service – confirmation of calculation of the electricity use intensity (EUI) indicator for PKN ORLEN,
- assurance service – confirmation of calculation of the electricity use intensity (EUI) indicator for Anwil S.A. and IKS Solino S.A.,
- assurance service – review of a report on solvency and financial condition of ORLEN Insurance Limited.

Corporate Governance Committee

The Corporate Governance Committee is responsible for assessing the implementation of corporate governance standards, providing the Supervisory Board with recommendations on the adoption of corporate governance standards, giving opinions on corporate governance documents, assessing reports on compliance with corporate governance standards drafted by the Warsaw Stock Exchange and statements of compliance with the best practices referred to in Art. 7.3 of the Act on State Property Management, giving opinions on proposed amendments to the Company's corporate documents and drafting such amendments for the Supervisory Board's own documents, monitoring Company management procedures in terms of their compliance with legal and regulatory requirements, including disclosure requirements of the capital market as well as compliance with the Core Values and Standards of Conduct of PKN ORLEN and corporate governance principles.

In 2019, the Corporate Governance Committee held five minuted meetings.

Strategy and Development Committee

Tasks of the Strategy and Development Committee are to provide opinions and submit recommendations to the Supervisory Board on proposed investments and divestments which may have a material impact on the Company's assets.

In 2019, the Strategy and Development Committee held ten minuted meetings.

Nomination and Remuneration Committee

Tasks of the Nomination and Remuneration Committee are to help attain the Company's strategic goals by providing the Supervisory Board with opinions and proposals on how to shape the management structure, with regard to organisational solutions, remuneration schemes and selection of staff with the skills required to ensure the Company's success.

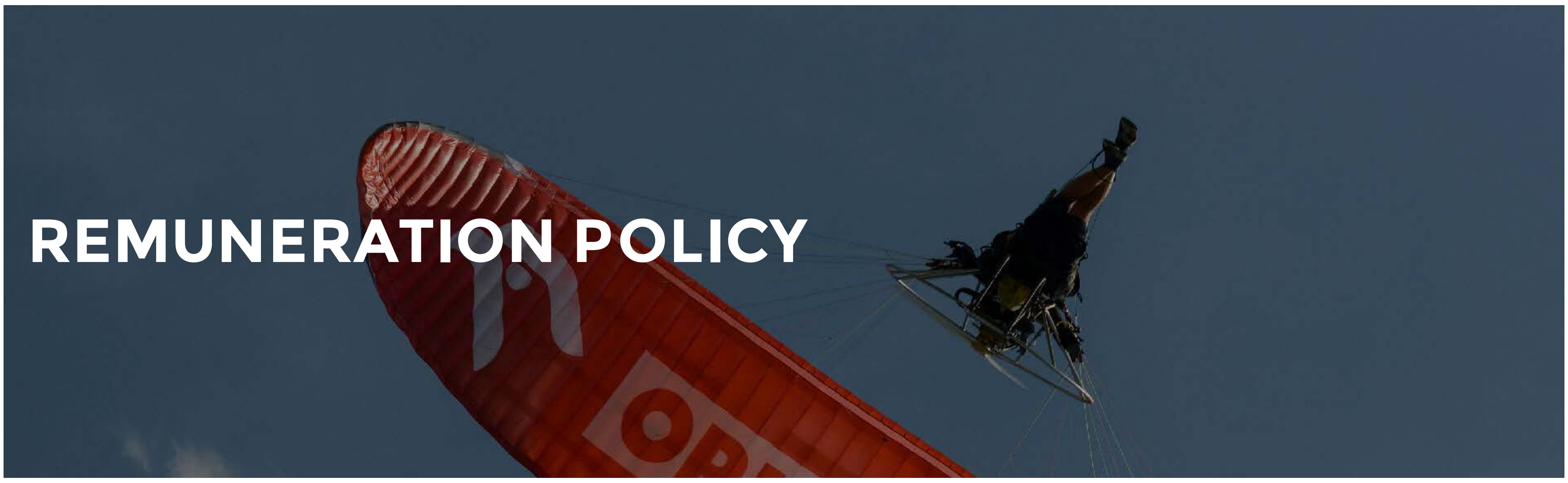
The majority of the Nomination and Remuneration Committee Members should be independent. Where the Nomination and Remuneration Committee is not composed of the majority of independent Members of the Supervisory Board, the Committee is chaired by the Chair of the Supervisory Board. At least one member of the Nomination and Remuneration Committee should have knowledge of and experience in remuneration policy.

In 2019, the Nomination and Remuneration Committee held eight minuted meetings.

Corporate Social Responsibility Committee

Tasks of the CSR Committee are to support the Company's strategic objectives by taking due account of social, ethical and environmental aspects in the Company's operations and its interaction with stakeholders (including employees, customers, shareholders, and local communities).

In 2019, the Corporate Social Responsibility Committee held four minuted meetings.



REMUNERATION POLICY

GRI indicators: 102-35

Capitals:

The remuneration policy functioning at PKN ORLEN supports the achievement of the Company's objectives, in particular the long-term increase in value for Shareholders and the stability of the company's operation.

GRI: 102-35

Remuneration for Members of the Management Board at PKN ORLEN is determined by the Supervisory Board taking into account the relevant resolution of the General Meeting, in connection with the Act on the Rules of Remunerating Persons Who Direct Certain Companies, and recommendations of its Nomination and Remuneration Committee. The main components of the Management Board Members' remuneration system include:

- fixed monthly base pay,
- annual bonus (variable pay) depending on their performance against certain quantitative and qualitative targets and achievement of identifiable separate objectives,
- severance pay for contract termination by the Company,
- non-compete compensation.

All components of the remuneration are governed by a contract between a Member of the Management Board and the Company.

Additional benefits for directors reporting to the PKN ORLEN Management Board may include, in particular, a company car, variable universal life insurance, additional medical cover for the director and their closest family, including the right to preventive healthcare, sports programmes and rehabilitation, partial coverage of rented accommodation costs, coverage of relocation costs if the relocation takes place during the director's employment, benefits defined in the Rules of Participation in the Company Social Benefits Fund, the right to participate in the Employee Pension Plan on the terms applicable at the Company, and the right to participate in the Employee Capital Plan subject to generally applicable laws.

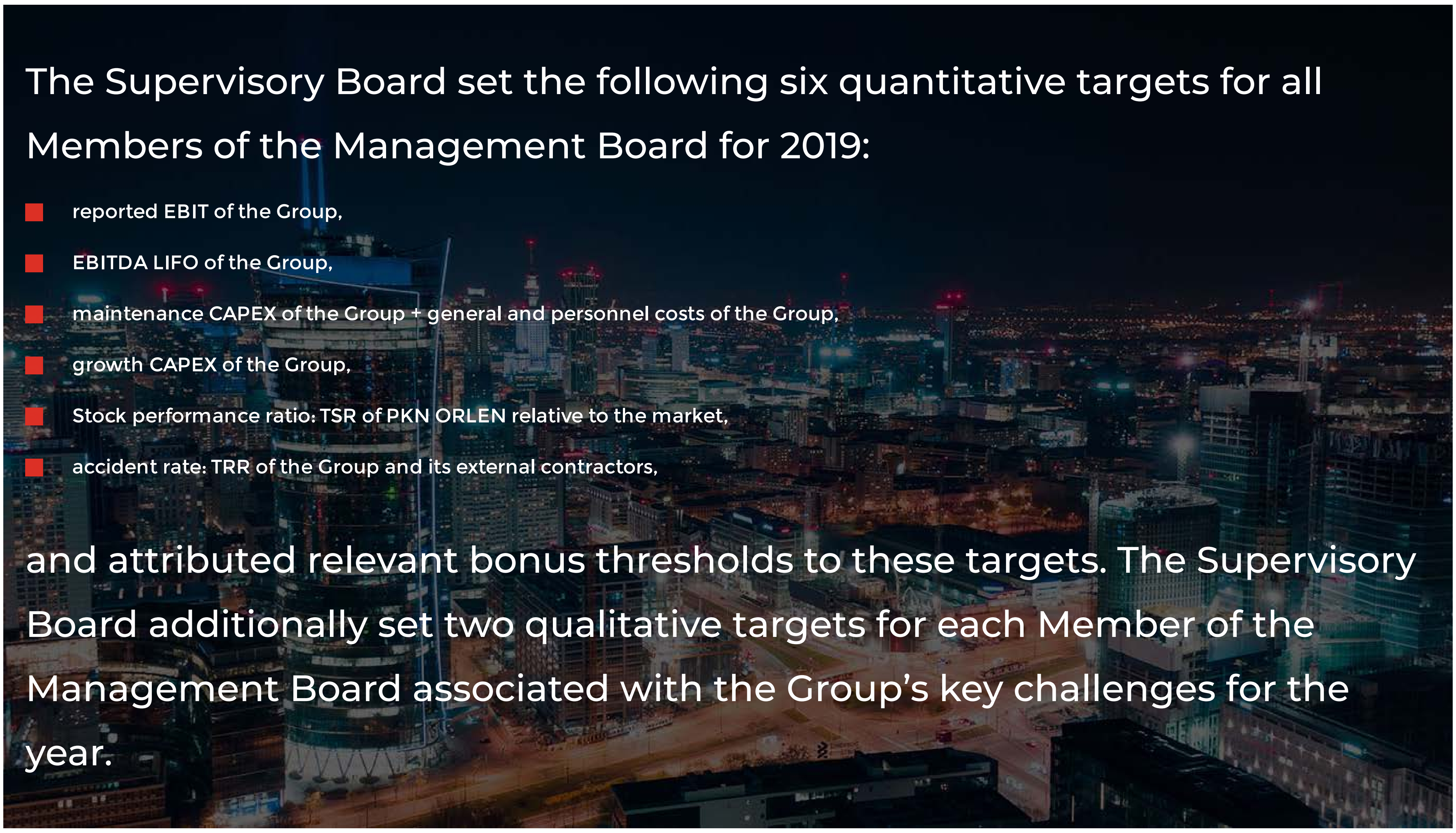
The remuneration policy in place at PKN ORLEN supports the achievement of the Company's goals, including in particular a long-term increase of its shareholder value and stability of operations.

General terms and conditions of the annual bonuses

Members of PKN ORLEN's Management Board are entitled to an annual bonus (variable pay) on the terms set out in their respective contracts, which include the Rules of the Incentive Scheme for the Management Board as an appendix. The level of annual bonus depends on the performance against individual targets (both qualitative and quantitative), set by the Supervisory Board for individual Members of the Management Board. Based on the general set of Management Objectives established by the PKN ORLEN General Meeting, the Supervisory Board sets from four to ten individual bonus targets per year, which are recorded in a Member's MBO Sheet. The Supervisory Board may also set a separate objective or objectives for a particular year, which must be met as a precondition to bonus payment for that year.

Assessment of a Management Board Member's performance against individual bonus targets (both quantitative and qualitative) and achievement of separate objectives is made on an annual basis by the Supervisory Board, on the President of the Management Board's recommendation which contains an assessment of individually performed bonus targets for all Members of the Management Board, the Management Board's recommendation regarding achievement of the separate objective/objectives, reports on the performance against individual bonus targets by Members of the Management Board, PKN ORLEN's financial statements and other documents which the Supervisory Board considers appropriate to examine.

The Supervisory Board passes a resolution to grant a Management Board Member an annual bonus (variable pay) for a given financial year, specifying the amount of the bonus, or a resolution not to grant the annual bonus. Such resolution is the basis for payment of the annual bonus provided that the Company's consolidated financial statements for the financial year have been approved by the General Meeting and provided that the Management Board Member has been granted discharge in respect of his duties.



The Supervisory Board set the following six quantitative targets for all Members of the Management Board for 2019:

- reported EBIT of the Group,
- EBITDA LIFO of the Group,
- maintenance CAPEX of the Group + general and personnel costs of the Group,
- growth CAPEX of the Group,
- Stock performance ratio: TSR of PKN ORLEN relative to the market,
- accident rate: TRR of the Group and its external contractors,

and attributed relevant bonus thresholds to these targets. The Supervisory Board additionally set two qualitative targets for each Member of the Management Board associated with the Group's key challenges for the year.

Additionally, in accordance with the resolutions of the PKN ORLEN General Meeting, the Supervisory Board set the following separate objectives, which must be met as a precondition to receipt of an annual bonus for 2019:

- compliance with the principles of remuneration for members of management and supervisory bodies in line with the Act across all Group companies,
- discharge of the obligations referred to in Art. 17-20, Art. 22 and Art. 23 of the Act on State Property Management of December 16th 2016 (Dz.U. of 2018, item 1182, as amended) within the Company's subsidiaries within the meaning of Art. 4.3 of the Act on Competition and Consumer Protection of February 16th 2007 (Dz.U. of 2017, item 229, as amended).

Rules for awarding bonuses to key management personnel (including Members of the Management Board)

The regulations on bonuses applicable to the PKN ORLEN Management Board, directors reporting directly to the Management Board, and other key positions within the Group have certain common features. Persons covered by these schemes are remunerated for their performance against individual targets set at the beginning of a bonus period by the Supervisory Board for the Management Board Members and by the Management Board for key executive personnel. The bonus systems are consistent with the Company's Values, promote cooperation between particular employees, and motivate them to achieve the best possible results for the ORLEN Group. The targets are both qualitative and quantitative, and their achievement is assessed after the end of the year for which they were assigned.

Remuneration of Members of the Management Board and the Supervisory Board for serving on the Management or Supervisory Boards of subsidiaries, jointly controlled entities and associates

Members of the PKN ORLEN Management Board who in 2019 served on the Management or Supervisory Boards of subsidiaries, jointly controlled entities and associates of the ORLEN Group did not receive any remuneration for such service.

Provisions of contracts with Members of the Management Board regarding non-competition and termination

In accordance with the contracts, Members of PKN ORLEN's Management Board are required to refrain from any activities that are in competition with the Company's business for a period of six months after the contract termination. During that period, they are entitled to receive a compensation equal to six times their monthly base pay, payable in six equal monthly instalments. Provisions of the contracts regarding non-competition after termination as a Management Board Member come into force only after a Management Board Member has held their position for at least three months.

In addition, the contracts provide for a severance payment in the case of termination by the Company for reasons other than a breach of primary, essential obligations under the contract, provided that the position of Management Board Member is held for a period of at least 12 months. Such severance benefit amounts to three times the monthly base pay.

In accordance with the contracts, Members of the Management Boards of ORLEN Group companies are typically required to refrain from any activities that are in competition with the respective company's business for a period of six months after the contract termination. During that period, they are entitled to receive a compensation equal to 50% or 100% of six times their monthly base pay, payable in six equal monthly instalments. The non-compete clauses come into force only after a Management Board Member had held their position for at least three or six months. Severance payments for Members of the Management Boards of ORLEN Group companies are typically governed by the same rules as those applicable to Members of the PKN ORLEN Management Board.

Directors reporting directly to the PKN ORLEN Management Board are, as a general rule, bound by non-compete clauses for a period of six months after the contract termination. During this period they receive a salary equal to 50% of six-month base pay, payable in six equal monthly instalments. The severance pay for termination of contract by the Company is typically equal to six-fold monthly base pay.

Remuneration of management and supervisory bodies

Remuneration paid to the Company's Management Board Members fulfilling their function in 2019 and 2018 [PLN thousand]

Item	2019	2018
Daniel Obajtek 1)	1,206	867
Wojciech Jasiński 2)	–	83
Mirosław Kochalski 3)	–	83
Armen Artwich 4)	925	284
Patrycja Klarecka 5)	921	448
Zbigniew Leszczyński	929	859
Krystian Pater 6)	–	194
Wiesław Protasewicz 7)	834	854
Michał Róg 4)	975	304
Maria Sosnowska 8)	–	83
Józef Węgrecki 9)	952	686
Total:	**6,742**	**4,745**

1) Remuneration for the period of holding the position of President of the Management Board since 6 February 2018
2) Remuneration for the period of holding the position of President of the Management Board to 5 February 2018
3) Remuneration for the period of holding the position of Vice-President of the Management Board to 5 February 2018
4) Remuneration for the period of holding the position of Member of the Management Board since 1 September 2018
5) Remuneration for the period of holding the position of Member of the Management Board since 24 June 2018
6) Remuneration for the period of holding the position of Member of the Management Board to 22 March 2018
7) Remuneration for the period of holding the position of Member of the Management Board to 28 November 2019
8) Remuneration for the period of holding the position of Member of the Management Board to 5 February 2018
9) Remuneration for the period of holding the position of Member of the Management Board since 23 March 2018

Bonuses potentially due to Management Board Members in function in the given year to be paid in the following year [PLN thousand]

Item	2019	2018
Daniel Obajtek [1)]	913	766
Armen Artwich [2)]	913	284
Patrycja Klarecka [3)]	913	443
Zbigniew Leszczyński	913	853
Wiesław Protasewicz [4)]	831	853
Michał Róg [2)]	913	284
Józef Węgrecki [5)]	913	661
Total:	**6,309**	**4,144**

1) Bonus potentially due for holding position for the period since 6 February 2018
2) Bonus potentially due for holding position for the period since 1 September 2018
3) Bonus potentially due for holding position for the period since 24 June 2018
4) Bonus potentially due for the period of holding the office until November 28th 2019
5) Bonus potentially due for the period of holding the office until March 23rd 2018

Remuneration and other benefits paid and due to former Management Board Members [PLN thousand]

Item	2019	2018
Wiesław Protasewicz [1)]	228	–
Wojciech Jasiński [2)]	–	320
Mirosław Kochalski [2)]	–	427
Krystian Pater [2)]	–	427
Total:	**228**	**1,174**

1) In 2019 severance paid.
2) In 2018 severance and non-competition compensation paid.

Remuneration of the Company's Management and Supervisory Board Members for holding functions in the Management or Supervisory Boards of subsidiaries, companies under joint control or associated companies (PLN thousand)

Members of PKN ORLEN Management Board who in 2019 and 2018 were acting as the Management or the Supervisory Boards of the subsidiaries, jointly controlled entities belonging and associate of the ORLEN Group did not receive any remuneration.

Remuneration of the Members of the Supervisory Board of PKN ORLEN [PLN thousand]

Item	2019	2018
Izabela Felczak-Poturnicka	133	124
Angelina Sarota [1)]	–	11
Agnieszka Biernat-Wiatrak [2)]	60	105
Mateusz Bochacik [3)]	15	117
Adrian Dworzyński [1)]	–	10

Item	2019	2018
Barbara Jarzembowska 4)	67	–
Andrzej Kapała 5)	123	59
Michał Klimaszewski 4)	67	59
Wojciech Kryński 6)	55	114
Roman Kusz 7)	21	10
Agnieszka Krzętowska 1)	–	10
Radosław Kwaśnicki 6)	55	114
Jadwiga Lesisz 8)	122	277
Małgorzata Niezgoda 9)	122	277
Anna Sakowicz-Kacz 4)	67	113
Andrzej Szumański 4)	67	–
Józef Węgrecki 10)	–	101
Anna Wójcik 5)	122	59
Total:	**1,096**	**1,214**

1) For the period of holding position to 2 February 2018
2) For the period of holding position since 2 February 2018 to 14 June 2019
3) For the period of holding position to 15 February 2019
4) For the period of holding position since 14 June 2019
5) For the period of holding position since 26 June 2018
6) For the period of holding position to 14 June 2019
7) For the period of holding position since 29 October 2019
8) For the period of holding position since 2 February 2018 since 23 March 2018 to 23 June 2018 delegated to temporarily perform duties of the Member of Management Board
9) For the period of holding position since 5 January 2018
10) For the period of holding position since 5 February 2018 to 22 March 2018 delegated to temporarily perform duties of the Member of Management Board

Remuneration of key executive personnel of the ORLEN Group [PLN thousand]

Item	2019	2018
Remuneration and other benefits of members of key executive personnel:		
– other key executive personnel of the Company	30,585	39,479
– key executive personnel of the subsidiaries of the ORLEN Group	155,118	139,128
Total:	**185,703**	**178,607**

DIVERSITY POLICY

GRI indicators: 405-1

Capitals:

At PKN ORLEN, matters related to diversity management are governed by the following documents applicable at the Company:

- PKN ORLEN Work Rules,
- Core Values, and Standards of Conduct of PKN ORLEN
- Collective Bargaining Agreement of PKN ORLEN,
- ORLEN Group's Human Resources Management Policy,
- CSR Strategy for PKN ORLEN (where it pertains to development and diversity management),
- PKN ORLEN's Disability Employment Policy,
- Policy for Supporting Employees in Difficult Personal Circumstances;
- Separate internal organisational document on the Family Friendly Employer project.

Objectives of the diversity management include:

- equal treatment in employment and non-discrimination,
- respect for diversity,
- management of cultural differences,
- readiness to employ people facing social exclusion or threatened with marginalisation on the labour market, facilitating their employment in ORLEN Group Companies and thus increasing the employment rate of the disabled,
- supporting employee initiatives related to labour equality practices,
- remuneration and bonus policy,
- standards of employment and remuneration of seconded workers, i.e. expats and inpats,
- adapting the workplace to the needs of employees (e.g. people with disabilities, breastfeeding mothers),
- supporting people in a difficult life situation,
- work-life balance programmes.

In addition, the diversity policy of PKN ORLEN is also implemented through:

- provision of training in diversity management, awareness raising campaign about disability in the workplace, including information and consultation meetings for employees of PKN ORLEN and other Group companies, and an expert consultation service,
- employee volunteering,
- considering diversity aspects in HR processes and tools (e.g. recruitment, training and development, remuneration) and in shaping the organisational culture,
- workshops for expats in cultural differences management,
- regularly surveying employees on job commitment and satisfaction,

- appointment of a team tasked with coordinating efforts to counteract workplace harassment and bullying (Anti-Harassment Committee appointed by the employer to consider grievances related to workplace harassment and bullying),
- appointment of the Ethics Officer for reporting breaches of the 'Core Values and Standards of Conduct of PKN ORLEN' (also regarding discrimination, harassment and bullying),
- appointment of the Human Capital Committee to give opinions, approve/submit for approval by the PKN ORLEN Management Board and monitor the observance of the 'Core Values and Standards of Conduct of PKN ORLEN', and in particular to examine material breaches, take corrective actions, issue guidelines and consider important ethics-related issues.
- signing a declaration of cooperation between the State Fund for Rehabilitation of Persons with Disabilities and PKN ORLEN, which initiated activities aimed at employing people with disabilities in the Group. As a result of these activities, PKN ORLEN joined the 'Work and Integration Programme'. In addition to PKN ORLEN S.A., seven Group companies joined the Programme: ANWIL S.A., ORLEN CUK Sp. z o.o., ORLEN Eko Sp. z o.o., ORLEN KolTrans S.A., ORLEN Ochrona Sp. z o.o., ORLEN Paliwa Sp. z o.o. Gas Primary Logistics Branch, and ORLEN Południe S.A.

The Management Board and the Supervisory Board of PKN ORLEN include Members with educational background in law, economics and chemistry, and with diverse professional experience. As at December 31st 2019, the Management Board consisted of one woman and five men, while the Supervisory Board consisted of six women and four men. The age structure of Management Board Members was as follows: 30–39 years: one person, 40–50 years: four persons, 60–70 years: one person. The age structure of Supervisory Board Members was as follows: 40−49 years: 6 members, 50−60 years: 1 member, over 60 years: 3 members.

GRI: 405-1

Composition of governance bodies and breakdown of employees per employee category according to gender, age group

Composition of governance bodies and breakdown of employees	UOM	Grupa ORLEN		PKN ORLEN	
		2019	2018	2019	2018
Members of the Management Boards of ORLEN Group companies by gender, including:					
Woman	[%]	13	9	17	14
Man	[%]	87	91	83	86
Supervisory Boards of ORLEN Group companies by gender:					
Woman	[%]	31	32	60	56
Man	[%]	69	68	40	44
Management Board – age structure, including:					
< 30 years	[%]	1	0	0	0
30-50	[%]	72	72	83	71
>50	[%]	27	28	17	29
Supervisory Board – age structure, including:					
< 30 years	[%]	1	3	0	0
30-50	[%]	79	82	60	100
>50	[%]	20	15	40	0
Employees – employment structure by age, including:					
< 30 years					
Managers	[%]	1	1	1	1
Non-managers	[%]	99	99	99	99
30-50					

Composition of governance bodies and breakdown of employees	UOM	Grupa ORLEN		PKN ORLEN	
Managers	[%]	12	11	14	11
Non-managers	[%]	88	89	86	89
>50					
Managers	[%]	10	9	14	7
Non-managers	[%]	90	91	86	93
Employees – employment structure by gender, including:					
Woman					
Managers	[%]	9	8	11	11
Non-managers	[%]	91	92	89	89
Man					
Managers	[%]	11	9	13	8
Non-managers	[%]	89	91	87	92

INTEGRATED MANAGEMENT SYSTEM

GRI indicators: **102-11, 103-3**

Capitals:

GRI: **102-11, 103-3**

The ORLEN Group supplies highest-quality products to its customers, while striving to make its operations as neutral to the natural environment as possible, to achieve superior energy efficiency, and to maintain high OHS and information security standards.

Integrated Management System

To deliver on that promise, the Group has the Integrated Management System (IMS) in place. The IMS comprises:

- Quality Management System based on the PN-EN ISO 9001 and AQAP 2110 standards,
- Environmental Management System based on the PN-EN ISO 14001 standard,
- Occupational Health and Safety Management System based on the PN-N-18001 standard,
- Information Security Management System based on the PN-ISO/IEC 27001 standard,
- International Sustainability & Carbon Certification System (ISCC EU),
- Sustainability Certification System for Biomass and Biofuels (KZRINiG),
- Factory Production Control System (ZKP),
- HACCP System compliant with Codex Alimentarius standard,
- Quality Management System based on the PN EN ISO/IEC 17025 standard (in place at all the organisational units which conduct research or tests using methods that require approval by the Office of Technical Inspection (UDT)),
- Risk Based Inspection Management System (RBI),
- Energy Management System (SZEn) based on ISO 50001.

The scope and rules governing the operation of the Integrated Management System are specified in:

- Management Systems Book along with the appendices (IMS, HACCP, ZKP, Quality, RBI, SZEn), which define and describe the individual system processes,
- System procedures approved by the President of the Management Board – Chief Executive Officer/Members of the Management Board,
- Maps, charts and metrics for the identified processes,
- Operating procedures/manuals approved by Directors/Managers for their respective processes/areas.

PKN ORLEN applies a process-based approach involving identification and mapping, based on an analysis of the context of the entire organisation's operations, of the processes which are necessary to ensure compliance of its products and services offered to customers with relevant requirements, while maintaining pro-environmental production methods and pro-environmental approach, and minimising the environmental impacts, continuously improving the safety of working conditions, and meeting requirements in all areas relevant to the security of information processed by the Company. The process sequence has been defined, as well as the relationships between the processes, which constitute a multi-layered mechanism that facilitates recognising and satisfying customer expectations. Individual processes are monitored and the achievement of their objectives is evaluated by checking process metrics and comparing them against adopted benchmarks. This approach allows us to manage and improve processes relying on real, measurable data. In line with the risk-based approach, process owners are responsible for identifying threats (risks) and opportunities that can potentially affect the operation and efficiency of the processes – meeting customers' requirements and taking appropriate and 'adequate' measures.

A process-based system of internal audits is used, which operates in accordance with a dedicated procedure and checks compliance of individual areas with the adopted standards. The improvement measures we take cover internal and external factors and identify opportunities as they open to the organisation. Any improvements to the Integrated Management System are decided on by the Company's senior management, in line with the IMS supervision procedure. The procedures in place specify how particular activities are to be carried out in each area.

The **precautionary principle**, environmental damage prevention and effective workplace safety and information security management are ensured through standardisation and implementation of systemic mechanisms, which also include preventive measures. The precautionary principle is supported by systemic mechanisms that pre-emptively address potential irregularities and are based on process analysis and elements of risk and opportunity assessment. In accordance with the precautionary principle, business activities involve taking measures to prevent environmental degradation.

In 2019, the following key projects were completed with respect to the Integrated Management System:

- Improvements were made to PKN ORLEN's certified „Integrated Management System",
- Cooperation with certification bodies with respect to Management Systems supervision was continued,
- Tools supporting the oversight of documented information were refined,
- Implementation of ICAO guidelines was continued to ensure appropriate quality of the JET A-1 fuel in the logistics chain,
- Activities aimed at covering subsequent installations of the RBI Management System and obtaining a positive audit result for the entire scope of its operation were continued,
- The Food Safety Management System was maintained and improved,
- Energy Management System based on the requirements of the ISO 50001 standard was implemented and certified,
- Sustainability Certification System for Biomass and Biofuels (KZRINiG) was implemented and certified.

Detailed information on **the results of the activities carried out based on the Integrated Management System** in 2019 is available in other parts of this Integrated Report, for example:

- Description of the capital expenditure on environmental protection and the key environmental impact indicators can be found in the section 'Environment and climate';
- Statistics demonstrating compliance with the highest safety standards are shown in 'Safety of employees and contractors';
- Data on the effects of customer health and safety activities is presented in 'Responsibility towards customers';
- The results of energy management are described in 'Energy management';
- Data on the use of biocomponents meeting the sustainability criteria is contained in'Feedstocks and production processes'.

Audits – external and internal verification of the Integrated Management System

In 2019, PKN ORLEN was subject to a periodic external audit. As a result, the Company obtained certificates of compliance with international standards for its activities.

The Company's activities are assessed by certified external bodies, which audit the areas covered by the management systems in place on an annual basis. In 2019, these included:

- IMS recertification audit – Bureau Veritas Polska, Płock, Gdańsk, Świnoujście, Ostrów Wielkopolski, Szczecin, May 6th–May 10th 2019. The audit confirmed correctness of the system operation and a recommendation was given to issue new certificates confirming its compliance with the requirements of the PN-EN ISO 9001:2015, PN-EN ISO 14001:2015, PN-N-18001:2004 and PN-EN ISO/IEC 27001:20014 standards. The audit did not reveal any instances of non-compliance.
- ISCC recertification audit by Bureau Veritas Polska: Płock, Ostrów Wielkopolski, on May 15th–16th 2019. The audit did not reveal any non-compliance and the system was recertified as compliant with Renewable Energy Directive /ISCC EU Certification System.
- AQAP 2110 recertification audit by CCJ WAT: Płock, on May 28th–30th 2019. The audit did not reveal any irregularities and new certificates of the Quality Management System compliance with the AQAP 2110 and ISO 9001:2015 standards were obtained.
- Factory Production Control System audit by Polskie Centrum Badań i Certyfikacji: Płock, May 31st 2019. The audit did not reveal any non-compliance and validity of the certificates held was maintained.

The external audits revealed no instances of non-compliance and confirmed correctness of the existing systems operation. Also, recommendations were received for new certifications.

In 2019, there were **513 internal audits, 15 audits of compliance of the CO_2 emissions monitoring system, 8 audits at product vendors and service providers, and 7 ISCC audits.**

Certificates issued to PKN ORLEN :

BUREAU VERITAS
Certification

Certificate

POLSKI KONCERN NAFTOWY ORLEN S.A.

STANDARD

PN-EN ISO 9001:2015

PRODUCTION, STORAGE AND SALE OF REFINERY AND PETROCHEMICAL PRODUCTS. PRODUCTION AND SALE OF ELECTRIC ENERGY. FUNCTIONS OF VALUE ADDED. RETAIL SALE OF PRODUCTS AND SERVICES PROVIDED BY COMPANY-OWNED PETROL STATIONS.

20 June 2019

BUREAU VERITAS
Certification

Certificate

POLSKI KONCERN NAFTOWY ORLEN S.A.

PN-EN ISO 14001:2015

PRODUCTION, STORAGE AND SALE OF REFINERY AND PETROCHEMICAL PRODUCTS. PRODUCTION AND SALE OF ELECTRIC ENERGY. FUNCTIONS OF VALUE ADDED.

20 June 2019

BUREAU VERITAS
Certification

Certificate
Awarded to

POLSKI KONCERN NAFTOWY ORLEN S.A.
ul. Chemików 7, 09- 411 PŁOCK
including Locations listed in Appendix No. 1

Bureau Veritas Certification certify that the Integrated Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

STANDARD

PN-N-18001:2004

SCOPE OF SUPPLY

PRODUCTION, STORAGE AND SALE OF REFINERY AND PETROCHEMICAL PRODUCTS.
PRODUCTION AND SALE OF ELECTRIC ENERGY.
FUNCTIONS OF VALUE ADDED.

Certification Cycle Start Date: 20 June 2019

Subject to the continued satisfactory operation of the organisation's Management System, the certificate is valid until: 11 March 2021

To check this certificate validity please call: +48 22 549 04 00
Further clarification regarding the scope of this certificate and the applicability of the management system requirement may be obtained by consulting the organisation.

Issue Date: 18 June 2019

Certificate Number: PL010344/P

Piotr Popławski
Local Technical Manager

AC 081
BHP

BUREAU VERITAS
Certification

Certificate

POLSKI KONCERN NAFTOWY ORLEN S.A.

STANDARD

PN-EN ISO/IEC 27001:2017-06

PRODUCTION, STORAGE AND SALE OF REFINERY AND PETROCHEMICAL PRODUCTS. PRODUCTION AND SALE OF ELECTRIC ENERGY. FUNCTIONS OF VALUE ADDED.

20 June 2019

BUREAU VERITAS
Certification

Certificate

according to the
Renewable Energy Directive (RED)

Certificate Number: EU-ISCC-Cert-PL214-28010519

Polski Koncern Naftowy Orlen S.A.

ISCC EU

ETBE plant
Trader with storage
Logistic center

Place and date of issue

Stamp, Signature of issuing party

BUREAU VERITAS
Certification

Certificate
Awarded to

POLSKI KONCERN NAFTOWY ORLEN S.A.
ul. Chemików 7, 09- 411 PŁOCK
including Locations listed in Appendix No. 1

Bureau Veritas Certification certify that the Integrated Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

STANDARD

PN-EN ISO 9001:2015
PN-EN ISO 14001:2015
PN-N-18001:2004
PN-EN ISO/IEC 27001:2017-06
Declaration of implementation – Version of 1.03.2019r.

SCOPE OF SUPPLY

PN-EN ISO 9001:2015
PRODUCTION, STORAGE AND SALE OF REFINERY AND PETROCHEMICAL PRODUCTS.
PRODUCTION AND SALE OF ELECTRIC ENERGY. FUNCTIONS OF VALUE ADDED.
RETAIL SALE OF PRODUCTS AND SERVICES PROVIDED
BY COMPANY-OWNED PETROL STATIONS.

PN-EN ISO 14001:2015, PN-N-18001:2004, PN-EN ISO/IEC 27001:2017-06
PRODUCTION, STORAGE AND SALE OF REFINERY
AND PETROCHEMICAL PRODUCTS. PRODUCTION AND SALE OF ELECTRIC ENERGY.
FUNCTIONS OF VALUE ADDED.

Certification Cycle Start Date: 20 June 2019

Subject to the continued satisfactory operation of the organisation's Management System, this certificate PN-EN ISO 9001:2015, PN-EN ISO 14001:2015 and PN-EN ISO/IEC 27001:2017-06 is valid until: 19 June 2022
the certificate PN-N-18001:2004 and is valid until: 11 March 2021

To check this certificate validity please call: +48 22 549 04 00
Further clarification regarding the scope of this certificate and the applicability of the management system requirement may be obtained by consulting the organisation.

Issue Date: 18 June 2019

Certificate Number: PL010343/ZSZ/P

Piotr Popławski
Local Technical Manager

AC 081
QMS,EMS,
BHP, ISMS

BUREAU VERITAS
Certification

CERTYFIKAT
Numer: BVC/KZR/069/19

Przyznany firmie:

Polski Koncern Naftowy ORLEN S.A.

ul. Chemików 7, 09-411 Płock
Numer rejestracji KZR INiG: 875/7999/DD/19

Bureau Veritas Certification Polska – jednostka certyfikacyjna
Bureau Veritas Polska Sp. z o. o.,

zaświadcza, na podstawie wyników przeprowadzonego auditu, że wyżej wymieniona organizacja spełnia wymagania systemu:

KZR INiG

Zatwierdzonego przez Komisję Europejską decyzją nr 2018/1984 z dnia 13 grudnia 2018 w odniesieniu do wykazania zgodności z kryteriami zrównoważonego rozwoju zgodnie z dyrektywami Parlamentu Europejskiego i Rady 98/70/WE oraz 2009/28/WE*

Zakres certyfikacji:

Produkcja biokomponentu: biowęglowodory ciekłe w procesie współuwodornienia.

Certyfikat ważny od: 19.08.2019 do 18.08.2020

KIEROWNIK DS. TECHNICZNYCH
Piotr Popławski

Nazwa, adres i nr rejestracji wydającego certyfikat:
Bureau Veritas Polska Sp. z o.o.
ul. Migdałowa 4, 02-796 Warszawa
NR REJESTRACJI KZR INIG: DD-710-3-14
* Administratorem systemu KZR – INiG jest Instytut Nafty i Gazu–Państwowy Instytut Badawczy

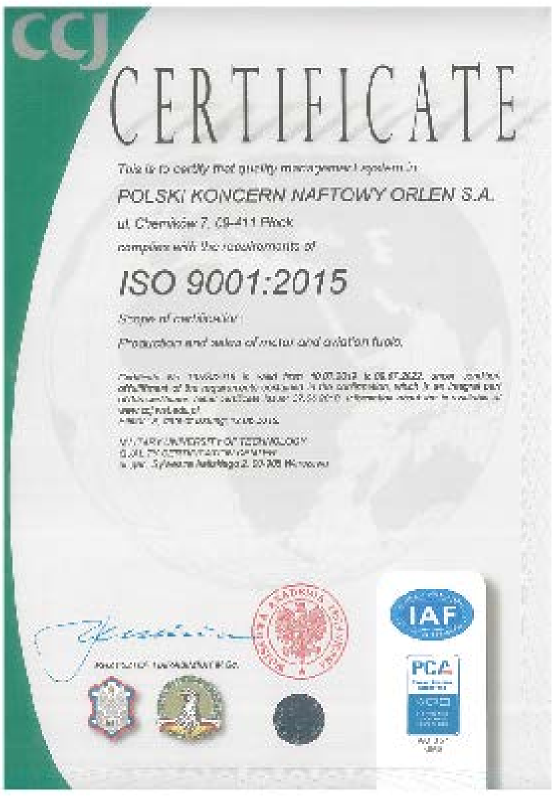
KZR INIG CERTIFICATE revision 02, 09/2014. BUREAU VERITAS CERTIFICATION POLSKA

1/1

CCJ

CERTIFICATE

AQAP 2110:2016



CCJ

CERTIFICATE

POLSKI KONCERN NAFTOWY ORLEN S.A.

ISO 9001:2015

POLSKIE CENTRUM BADAŃ I CERTYFIKACJI S.A.

CERTYFIKAT ZGODNOŚCI
ZAKŁADOWEJ KONTROLI PRODUKCJI
1434-CPR-0183

Asfalty drogowe

produkowane przez:

Polski Koncern Naftowy ORLEN S.A.
ul. Chemików 7, 09-411 Płock

w zakładzie produkcyjnym:

Polski Koncern Naftowy ORLEN S.A.
Zakład Rafineryjny w Płocku
ul. Chemików 7, 09-411 Płock

EN 12591:2009
(PN-EN 12591:2010)

POLSKIE CENTRUM BADAŃ I CERTYFIKACJI S.A.

CERTYFIKAT ZGODNOŚCI
ZAKŁADOWEJ KONTROLI PRODUKCJI
1434-CPR-0184

Asfalty modyfikowane polimerami

produkowane przez:

Polski Koncern Naftowy ORLEN S.A.
ul. Chemików 7, 09-411 Płock

w zakładzie produkcyjnym:

Polski Koncern Naftowy ORLEN S.A.
Zakład Rafineryjny w Płocku
ul. Chemików 7, 09-411 Płock

EN 14023:2010
(PN-EN 14023:2011)

URZĄD DOZORU TECHNICZNEGO
UDT - CERT

CERTIFICATE

No. CSE/1138/2019

Management Systems Certification Body UDT-CERT
certifies that

POLSKI KONCERN NAFTOWY ORLEN S.A.

ul. Chemików 7, 09-411 Płock
with the localization:

PKN ORLEN S.A. we Włocławku

ul. Krzywa Góra 13/15/17 oraz ul. Wiklinowa 22, 87-800 Włocławek

has implemented and maintains energy management system
in compliance with:

PN-EN ISO 50001:2012

Scope of certification:

Production and processing of refined petroleum products
and the production and sale of electricity.

Date of granting certification: 06.12.2019
Date of issue: 06.12.2019
Certificate is valid until: 31.08.2021

Director of the
Certification and Conformity
Assessment Department

Jacek Nemczyk

UDT-CERT, 02-353 WARSZAWA, UL. SZCZĘŚLIWICKA 34

The certified Management Systems in place support:

- The organisation's ability to meet customer needs and expectations (having a certificate is often a key formal condition for establishing a business relationship; access to domestic and international markets),
- Building the competitive advantage,
- Stronger reputation of the company and its products and services both among existing and prospective customers,
- Better organisation of internal documentation (a process-based approach helps to manage the organisation and eliminate inefficiencies),
- Confidentiality (access to information is limited to authorised personnel),
- Integrity (ensuring accuracy and completeness of information and methods used),
- Availability (authorised users given access to information and resources when needed),
- Improved quality (lower number of customer complaints),
- Earnings growth (because of lower internal costs achieved through improved quality that meets customer expectations),
- Enhancing environmental measures and contributing to environmental protection,
- Cost reductions achieved through lower energy consumption and lower waste volumes,
- Reduced risk of crisis (avoiding industrial accidents),
- Ensuring compliance with applicable requirements (avoiding penalties),
- Promoting pro-environmental thinking,
- Identification of threats to employees' safety and prompt implementation of preventive measures,
- Engaging all employees in creating a safe workplace (cost reductions due to lower accident rates),
- Employees' trust in the organisation and a sense of responsibility for its activities.

Management Systems at ORLEN Group companies

In 2019, work continued to integrate the Management Systems across the ORLEN Group with a view to harmonising the management model with PKN ORLEN's growth strategy, in which Value Creation, People, and Financial Strength remain the pillars of growth until 2021. The Group companies engaged in the activities in line with the concept for the optimisation of the IMS functioning. IMS policies were implemented at the following key companies of the ORLEN Group: PKN ORLEN, ORLEN Administracja, Anwil, Basell ORLEN Polyolefins, ORLEN Laboratorium, ORLEN EKO, ORLEN Asfalt, ORLEN Serwis, ORLEN Upstream, IKS Solino, ORLEN KolTrans, ORLEN OIL, ORLEN Administracja, ORLEN Aviation, ORLEN Paliwa, ORLEN Projekt, ORLEN Budonaft, ORLEN Lietuva, Unipetrol Group, ORLEN Centrum Usług Korporacyjnych, ORLEN Południe, ORLEN Centrum Serwisowe, and ORLEN Ochrona.

The Integrated Management Systems were built based on the following standards:

- Quality Management Systems compliant with ISO 9001:2015,
- Environmental Management Systems compliant with ISO 14001:2015,
- OHS Management Systems compliant with PN-N 18001 /OHSAS 18001, currently being adapted to ISO 45001:2015,
- Information Security Managements System based on ISO/IEC 27001.

Depending on their business needs, the companies obtained selected certificates from among those mentioned above.

Some companies had the following systems at their organisations certified: AQAP 2110 Management System, Factory Production Control, Rail Transport Safety Management System (SMS), Rail Transport Maintenance Management System (MMS), Quality Management System for Welding Processes, HACCP Food Safety Management System, ISO 50001 Energy Management System, ISCC EU System, KZR INiG System, ISO 17025 Laboratory Quality Management System.

OUR STRATEGY

ORLEN GROUP STRATEGY

GRI indicators: 103-2

2019 was the first full year of implementing the Strategy for 2019–2022, announced on December 20th 2018.

GRI: 103-2

The vision for PKN ORLEN's growth set out in the new strategy fits well with global trends in the use of primary energy sources, technological progress and social processes, which are bound to create new consumer behaviours and expectations. PKN ORLEN aims to focus on solidifying its market position, becoming more customer-oriented, exploiting the integrated value chain, with a growing role of the petrochemical business and prudent continuation of projects in the Upstream segment.

The focus on value-creating innovations is an important element of the strategy, which will be implemented through:

- promoting internal and external innovation within the organisation,
- creating an optimum environment for innovation at the ORLEN Group,
- developing the PKN ORLEN Strategic Research Agenda,
- deploying innovation acquisition tools: accelerator and CVC fund,
- fostering collaboration with start-ups,
- building the Research and Development Centre as a platform for collaboration between PKN ORLEN and the scientific and business communities,
- in-house research and testing to improve processes, products and inputs,
- developing proprietary technologies.

Pillars and update of PKN ORLEN's startegy for 2019-2022

Value creation	**Downstream:** intensification of petrochemical production, further integration of refinery assets and expanding low-emission energy generation	▪ Feedstock security ▪ Strengthening market position ▪ Operational excellence
	Reatil: expanding the reatail network and strengthening customer relations	▪ Modern service stations network ▪ Unique customer experience ▪ Operational excellence
	Upstream: cautious continuation	▪ Further production increase in Poland and Canada ▪ Cautious continuation ▪ Operational excellence and financial strength
Financial strength	**Solid fundamentals**	▪ Investment grade rating ▪ Financial gearing below 30% by 2022 ▪ Net debt/EBITDA covenant below 1.5 by 2022
	Secured financing	▪ Diversified financing ▪ The possibility of inorganic development
	Dividend payments	▪ Regular dividend payments reflecting current financial situation
People	**Safety:** commitment to the highest standards	▪ Zero tolerance policy towards accident hazards ▪ No accidents at work ▪ Further improvement of process safety
	Responsibility: caring for employees, external stakeholders and the environment	▪ Caring for local communities ▪ Support for local producers and business partners ▪ Aligning with new environmental requirements ▪ Reducing environmental impacts ▪ Stepping up environmental protection efforts

The dynamics of the market environment force the Group to adjust its planning perspective. Therefore, the manner of presentation of the Group's goals and aspirations in the new strategy follows the previously established pattern. The strategic directions have been set for the next four years, while the specific financial and operational goals were presented for the years 2019-2020, due to the significant volatility of macroeconomic parameters.

Key PKN ORLEN's strategic objectives for years 2019-2020:

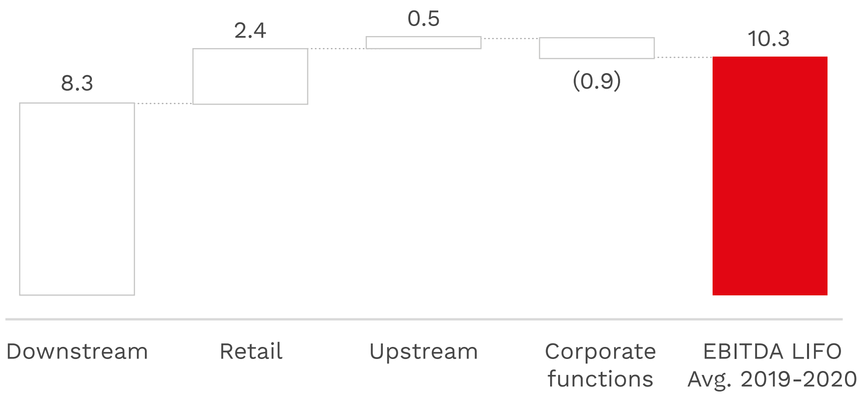
annual average EBITDA LIFO of PLN 10.3 billion

realisation of annual average CAPEX of PLN 6.8 billion

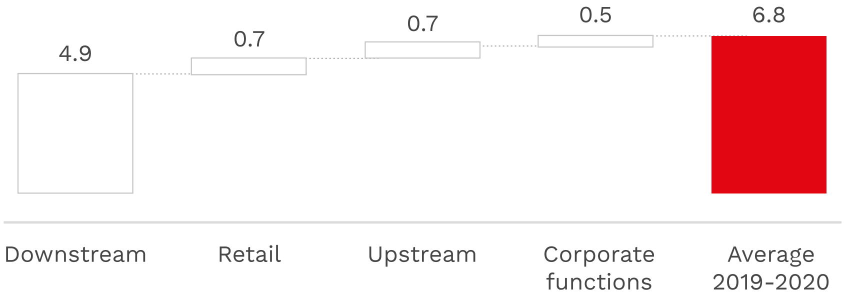
financial gearing below 30%

regular dividend payments reflecting current financial situation

EBITDA LIFO before impairment [PLN billion]



CAPEX [PLN billion]



STRATEGY IMPLEMENTATION IN 2019

GRI indicators: 103-3

Capitals:

In 2019, PKN ORLEN consistently worked towards the majority of its strategic goals.

GRI: 103-3

The LIFO-based EBITDA[1] came in at PLN 9.2bn, which was PLN 1.1bn less than the annual average planned for 2019–2020. PKN ORLEN was once again awarded the titles of the ‘World’s Most Ethical Company 2019’ and ‘Top Employer Polska 2019’.

1) Before impairment of non-current assets: PLN 0.2bn in 2019.

The lower than assumed LIFO-based EBITDA in 2019 was due mainly to significantly smaller positive effects of the IMO regulations (limiting the content of sulfur in bunker fuel to less than 0.5%) relative to the projections used for the budget. This was caused by the marked slowdown in the global economy in 2019. It turned out much more severe than expected as a result of such factors as costly customs wars, the conflict between the US and Iran, and the meagre growth in the eurozone, all of which fuelled risk aversion that undermined the development prospects for the emerging economies.

The worldwide economic slowdown reduced by half global demand for oil and liquid fuels compared with the projected levels, while oil prices were supported by the conflict between the US and Iran. As a result, model downstream margin fell by USD 2.8 per barrel relative to the budget, driving down LIFO-based EBITDA, which came in nearly PLN 2.7bn short of the target.

Stable financial position allowed the ORLEN Group to carry out growth projects and progressively increase dividend payouts, with the dividend for 2018 totalling some PLN 1.5bn. At the same time, the financial ratios were kept at safe levels.

PKN ORLEN is very well positioned for further growth. It owns state-of-the-art integrated infrastructure capable of processing more than 35 million tonnes of various crude grades per annum, and 2P oil and gas reserves of some 200 mboe at the end of 2019.

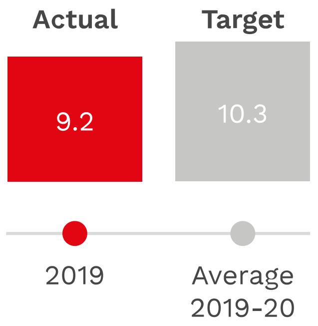
Strategy pillars

Pillars | Objectives | Perfomance

Value creation

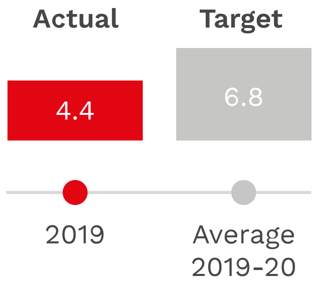
Profit earned

LIFO-based EBITDA before impairment losses[1] [PLNbn]



Growth programme

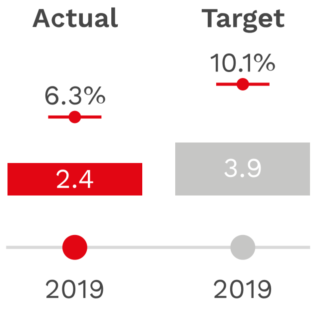
Capital expenditure [PLNbn]



Financial strength

Further strengthening of financial fundations

Net debt [PLNbn]
financial leverage [%]



Dividend growth

Dividend per share [PLN]

People

Modern management culture

top EMPLOYER POLSKA 2019 CERTIFIED EXCELLENCE IN EMPLOYEE CONDITIONS

PO PIERWSZE BEZPIECZEŃSTWO

2019 WORLD'S MOST ETHICAL COMPANIES® WWW.ETHISPHERE.COM

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1) Before impairment of non-current assets: PLN 0.2bn in 2019.

Operating segments

Downstream

Value levers in 2019:

Feedstock security

- Diversifying oil supply sources
- Securing natural gas supplies
- Building a competitive advantage based on low-carbon energy

Operational excellence

- Further improvements in the efficiency of refinery assets
- Leveraging synergies offered by integrated production assets
- Readiness for market and regulatory challenges

Strengthening market position

- Investments in extending the petrochemical value chain
- Implementation of an operational programme for biofuels: construction of production facilities, operational adjustments and R&D work
- Maintaining leading position in home markets by extending the product range

Actual performance in 2019:

Sales and logistics

- Maintaining the leading position in wholesale fuel sales in Poland (with a slight decrease in the market share as a result of optimisation of the supply sources and logistics and maximisation of the share of own products in the sales structure)
- Rebuilding of a 19 km section of the rail track from Mažeikiai to Renge by the Lithuanian Railways under an agreement with ORLEN Lietuva, and thus restoring the shortest rail route from the Mažeikiai refinery to Latvia
- Increase of 5.85% in the unit cost of logistics

Refining Projects

- Concentration application filed with the European Commission for the planned acquisition of the LOTOS Group by PKN ORLEN
- Announcement of a tender offer for all shares in Grupa ENERGA of Gdańsk
- Completion of the metathesis unit project in Płock
- An agreement to construct the Research and Development Centre in Płock
- PKN ORLEN Supervisory Board's approval for the construction of a visbreaking unit at the production plant in Płock
- Contracts signed by ANWIL to build a nitric acid and neutralisation unit, a granulation plant and ancillary infrastructure as part of the project to expand fertiliser production capacities

- Mechanical completion and a permit secured to start up the PE3 production unit at Unipetrol
- Improvement of key indicators:
  - Record-high volumes of crude processed, at 33.9 million tonnes, up 0.5 million tonnes on 2018
  - Increase in light and medium distillate yields

Retail

Value levers in 2019:

Modern service stations network

- Driving growth of in-store and food sales
- Continued efforts to enhance the technical quality of the service station infrastructure
- Adapting service stations to sell alternative fuels
- Organic growth of the retail chain

Unique customer experience

- Launch of new services and customer service channels
- Flexible and personalised products based on big data analytics
- Improving customer satisfaction and expanding the customer loyalty programme towards e-commerce

Operational excellence

- Leading position maintained in home markets
- Optimal product range, food offering and service management
- Cost efficiency improvement
- Refining customer service and service station management processes

Actual performance in 2019:

Modern service stations network

- 33 new stations added to the Group's retail network
- Increase in the market shares in all countries where ORLEN is present except for Lithuania (position maintained)
- Fuel sales at around 10 million tonnes across all operating markets
- Entry into the Slovak market with 10 service stations
- Growth of the number of EV charging stations in Poland to 37

Unique customer experience

- Beginning of the process to acquire 100% of shares in Ruch S.A.
- Beginning of a project to co-brand PKN ORLEN's foreign service stations by combining the logotypes of the local Benzina and Star brands with the ORLEN Group's logotype
- Stop Cafe 2.0 (Star Connect) food concept at further service stations: 186 in Poland, 60 in the Czech Republic, 1 in Slovakia and 45 in Germany; at the end of 2019 PKN ORLEN already had 558 service stations operating in this format in Poland, 160 in the Czech Republic, 1 in Slovakia, 117 in Germany and 8 in Lithuania

- Non-fuel margin growth by 13%
- Implementation and development of new products and services:
    - Roll-out of the ‘Mobile Cashier’ service at the service stations, enabling payments in the forecourt when traffic is at its heaviest
    - More than 460 service stations with the possibility of refuelling a car on both sides
    - Further development of mobile payment services (ORLEN Mobile application) – currently all stations are ready to offer mobile payments
    - Continued partnership with Nextbike Polska whereby 36 PKN ORLEN service stations launched a bike rental service, with a total of 360 (both conventional and electric) bicycles available
    - Development of the food and beverage offering for vegans and vegetarians at ORLEN service stations
- Tailored offering based on big data
- Customer satisfaction improvement and further development of the loyalty programme

Operational excellence

- Improvement of unit margins on fuels in Poland and the Czech Republic; a decrease in the margins in Lithuania (low prices maintained by the market) and in Germany (very high margin levels in 2018, achieved due to logistics problems)

Upstream

Value levers in 2019:

Further increase in production

- Focus on quality assets and the most profitable and promising projects in Poland and Canada

Cautious continuation

- Responding flexibly to changes in the oil and gas market
- Adjusting capital expenditure plans to the macro situation
- Generating positive cash flows

Operational excellence

- Continuous improvement of key performance indicators
- Leveraging segment synergies in Poland and Canada

Actual performance in 2019:

Further growth of production and cautious continuation

- 1% year-on-year growth of average production, to 18,200 boe/d:
    - Poland: 1,000 boe/d
    - Canada: 17,200 boe/d
- Revision of 2P reserves to 197.3 million boe, caused, inter alia, by a review of the asset portfolio:

  - Poland: 11.0 mboe
  - Canada: 186.3 mboe
- Increase in the number of wells on a net basis by 0.3; data at the end of 2019:
  - Poland: 3.0 wells, net (no change)
  - Canada: 16.6 wells, net (up by 0.3 well)

Operational excellence

- Focus on the most prospective and profitable areas, ongoing monitoring of the Upstream project portfolio
- Production enhancement as part of the projects related to the development of reserves held by the Group
- Responding flexibly to changes in the market prices of hydrocarbons (adjusting investment expenditure in line with the macroeconomic situation)
- Initiatives related to continuous improvement of the key operational and financial indicators

---

Key success factors for the strategy

☐ Chart categories   Search

Choose	Actual 2017	Actual 2018	Actual 2019
	☑	☑	☑
Financial KPIs			
☑ LIFO-based EBITDA (before impairment losses) (PLNbn)	10.4	8.3	9.2
☐ Downstream (PLNbn)	8.7	6.0	6.7
☐ Retail (PLNbn)	2.0	2.8	3.0
☐ Upstream (PLNbn)	0.3	0.3	0.3
☐ Financial leverage (%)	2.2	15.7	6.3
☐ Net debt/LIFO-based EBITDA (before impairment losses)	0.07	0.67	0.28
KPIs – Downstream			
☐ Share of Polish fuel market* (%)	54.2	57.4	56.0
☐ Refining capacity utilisation (%)	94	95	96
☐ Olefins production capacity utilisation (%)	78.0	74.0	79.0
☐ Crude throughput at the ORLEN Group (million tonnes)	33.2	33.4	33.9
☐ Fuel yield at PKN ORLEN (%)	80.0	81.0	84.0
KPIs – Retail			
☐ Share of fuel sales in home markets* (%)	15.2	16.2	16.5

☐ Sales per service station (million litres)	4.1	4.3	4.4
☐ Number of service stations effectively in operation*	2,742	2,748	2,780
KPIs – Upstream			
☐ Hydrocarbon production (mboe/year)	5.7	6.6	6.7
☐ Hydrocarbon reserves (mboe)	152.6	210.6	197.3
☐ Number of new wells (net)	17.5	19.4	19.6

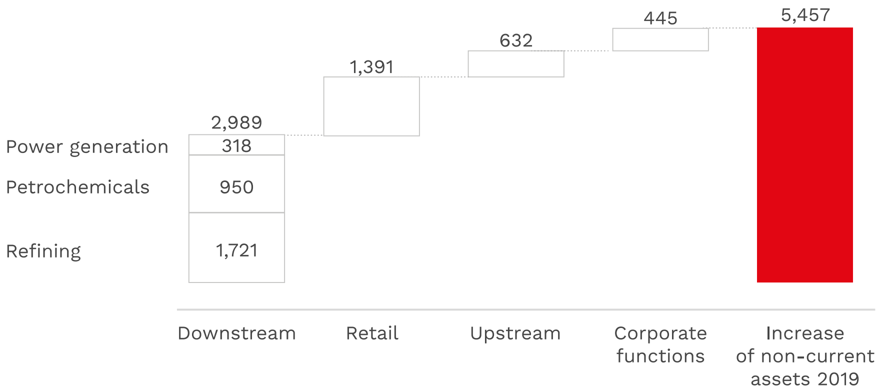
[1] End of year data.

REALISATION OF INVESTMENT PLANS

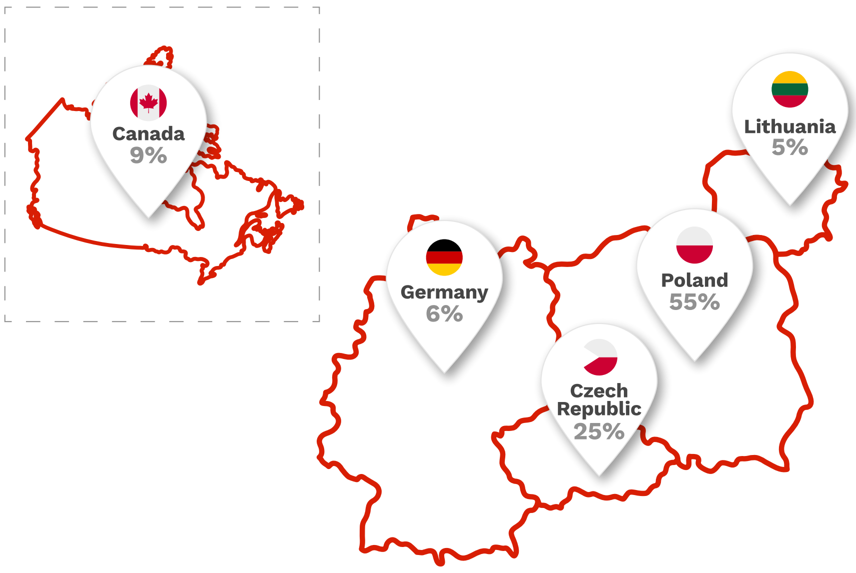
Capitals:

The ORLEN Group manages the structure of its capital expenditure in response to market situation, and focuses on the most effective investment projects.

Increase in non-current assets [PLN million]



Capital expenditures by operating markets [%]



Major investments projects carried out in 2019 included:

Downstream

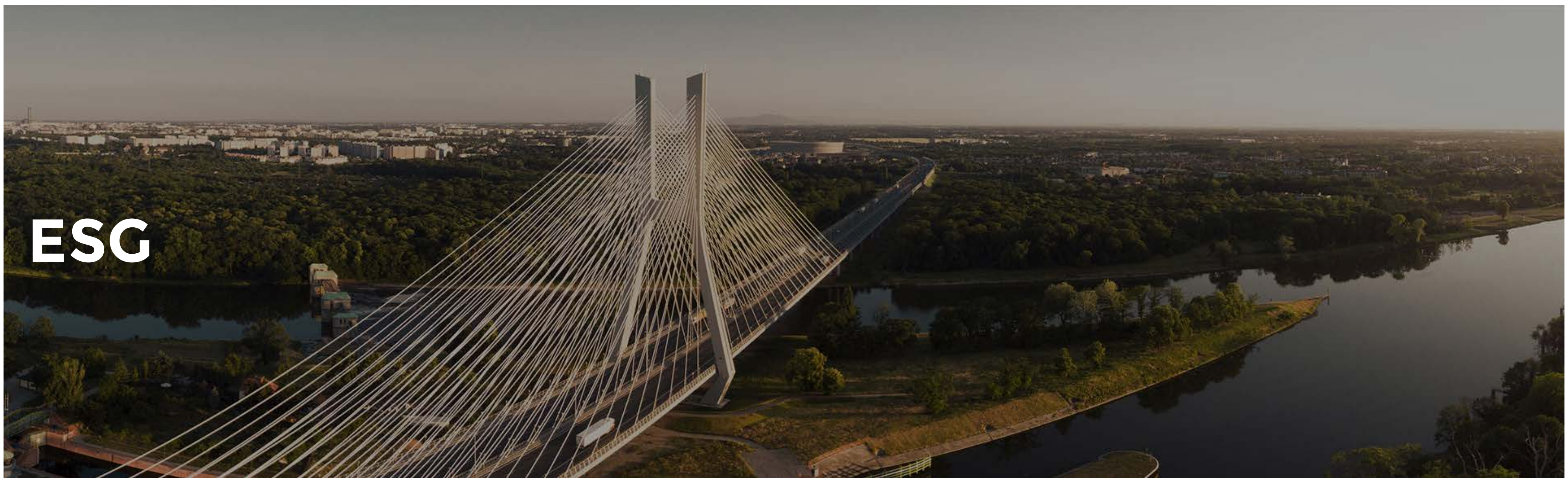
- Construction of Polyethylene Unit in the Czech Republic
- Costruction of Metathesis Unit in Płock
- Construction of PPF Splitter in Lithuania
- Projects under the Cavern Strategy in Poland
- Expansion of fertilizer production capacity at Anwil
- Purchase of a licence and front-end-engineering design for the second generation Bioethanol unit in ORLEN Południe
- Construction of the Glycol unit at ORLEN Południe
- Construction of the Research and Development Centre at Płock
- Construction of a boiler house for the Steam Cracker in the Czech Republic
- Construction of a unit for separation of paraffins from reforming feedstock MaxEne at PKN ORLEN

Retail

- 64 new fuel stations opened (43 in Poland, 6 in Germany, 7 in the Czech Republic and 8 in Slovakia),
- 132 fuel stations upgraded and rebranded (127 in Poland and 5 in the Czech Republic),
- 297 new Stop Cafe/Star Connect (including O!SHOP outlets)

Upstream

- Canada – PLN 476 million /Poland – PLN 158 million



ESG

GRI indicators: 103-3

Capitals:

Implementation of best practices in sustainable development is an integral part of the ORLEN Group's business strategy.

GRI: 103-3

We are committed to providing our Stakeholders with highest-quality products and services while striving to achieve maximum environmental neutrality, energy efficiency and superior security standards.

The ORLEN Group's ESG (Environmental, Social, and Governance) performance is presented in regular publications such:

- **Non-Financial Report of the ORLEN Group and PKN ORLEN S.A.** – the most recent report, for 2019, was published on the corporate website in March and is available at www.orlen.pl.
- **ORLEN Group Integrated Report** – the most recent and previous reports are available online at raportyroczne.orlen.pl.

Information on the ESG performance is reported based on the Global Reporting Initiative (GRI) Standards and is externally assured. An interactive list of GRI indicators described in the ORLEN Group Integrated Report for 2019 is available in the 'Our report' section. The Report takes into account the Sustainalytics' ESG risk rating. Our activities are also consistent with the Sustainable Development Goals. PKN ORLEN is taking measures to increasingly meet the Task Force on Climate-related Financial Disclosures (TCFD) guidelineson disclosure of information on climate.

At present, PKN ORLEN is working on a comprehensive strategy addressing challenges related to the climate impact of its operations. The strategy is to be presented in late 2020.

Environment

Aware of the environmental impact of our operations, we consistently align our process planning and methods with the requirements of long-term sustainable development.

With this in mind, we treat environmental protection and pollution control as integrated elements.

Implementation of the **Environmental Management System** confirms that the overriding objective of PKN ORLEN's strategy is to achieve, as far as practicable, a neutral impact on our immediate environment.

PKN ORLEN addresses the challenges related to the climate footprint of its operations by developing its business based on **innovative low-emission technologies and products, in accordance with the principles of a circular economy.** The ORLEN Group invests in **best available techniques (BAT) in environmental protection**, minimising the environmental impacts of its production, product storage and distribution processes.

For more information on the above issues, see 'Environmental responsibility and compliance'.

This document also describes **policies, initiatives and metrics for key environmental and climate impact aspects**, such as water, wastewater, atmospheric emissions (including GHG emissions – CO_2), waste, capital expenditure on environmental protection, environmental charges , number and weight of significant spills. This Report presents the Group's approach to energy management, information on raw materials and production processes, environmental and climate impact risks and the mitigation measures.

With regard to the foregoing, PKN ORLEN has in place a dedicated procedure to be followed in emergency situations and respects the obligations to notify the relevant services. The **Emergency Manual** defines the procedure for appointment and operation of Technical Teams and Emergency Teams, as well as the method of calculating losses resulting from an emergency event.

The ORLEN Group initiates educational projects aimed at **raising the environmental awareness of its Stakeholders.** ORLEN Group companies take part in initiatives such as protecting peregrine falcons, fish stocking of rivers, cleaning of waterfront areas, and beekeeping around production plants. For more information, see 'Environmental protection efforts and biodiversity'.

Water

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
WATER							
Water withdrawn by the ORLEN Group, including:	m^3	94,087,784	90,278,813	86,406,615	82,679,160	84,087,615	GRI 303-1
Surface water	m^3	89,090,471	85,722,181	84,269,186	79,233,690	80,848,285	
Groundwater	m^3	1,555,827	1,536,927	1,325,125	2,489,807	2,404,451	
Mains water	m^3	3,441,486	3,019,705	812,304	955,663	834,879	
WATER RECIRCULATION							
Water reused at the ORLEN Group	m^3	2,018,056,814	reported since 2019				GRI 303-3

Emissions

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
EMISSIONS							
Emissions at the ORLEN Group, including:	Mg	15,971,785	15,061,640	14,464,114	13,046,051	13,741,258	GRI 305-7
Sulfur dioxide	Mg	17,250	18,290	20,473	24,019	34,265	
NOx	Mg	9,824	10,664	10,649	12,169	13,063	
Carbon monoxide	Mg	5,400	4,559	4,794	3,603	4,210	
Particulate matter	Mg	888	1,088	1,235	1,452	1,551	
Carbon dioxide (including EU ETS)	Mg	15,919,204	15,010,150	14,409,406	12,985,850	13,675,842	
Other substances	Mg	19,218	16,889	17,557	18,958	12,327	
CO_2 emissions within the EU ETS:	**Mg**	**15,895,512**	**14,978,720**	**14,377,643**	**12,956,790**	**13,670,799**	GRI 305-1
PKN ORLEN	Mg	8,792,971	7,789,688	6,905,728	6,364,908	6,554,333	

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
ORLEN Asfalt	Mg	2,392	2,073	3,678	2,972	3,975	
ANWIL	Mg	978,882	1 000,819	1 069,563	1 151,673	1 185,319	
Basell Orlen Polyolefins	Mg	41,308	46,283	36,060	40,707	36,482	
ORLEN Południe	Mg	119,601	122,640	124,888	0 (until 2017 reported as Rafineria Nafty Jedlicze and Rafineria Trzebinia)	0 (until 2017 reported as Rafineria Nafty Jedlicze and Rafineria Trzebinia)	
Rafineria Nafty Jedlicze	Mg	0 (reported as part of ORLEN Południe)	0 (reported as part of ORLEN Południe)	0 (reported as part of ORLEN Południe)	35,182	40,196	
Rafineria Trzebinia	Mg	0 (reported as part of ORLEN Południe)	0 (reported as part of ORLEN Południe)	0 (reported as part of ORLEN Południe)	91,667	88,470	
ORLEN Lietuva	Mg	1,599,384	1,680,865	1,709,530	1,830,717	1,755,789	
UNIPETROL	Mg	4,162,201	4,089,807	4,278,192	2,491,235	2 841,185	
Česká rafinérská	Mg	0 (reported as part of UNIPERTOL)	0 (reported as part of UNIPERTOL)	0 (reported as part of UNIPERTOL)	677,662	889,418	
PARAMO	Mg	39,899	42,927	41,668	36,622	36,064	
SPOLANA	Mg	158,874	203,618	208,336	233,445	239,568	
OZONE-DEPLETING SUBSTANCE (ODS)							
ODS emissions at the ORLEN Group	Mg	**40.92****	**39**	**43**	**36**	**34**	GRI 305-6

** Reported in the total for other substances.*
*** 5.44 Mg of CFC11 equivalent.*

Waste

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
WASTE							
Waste generated by the ORLEN Group*, including:	Mg	**220,524**	**169,084**	**212,969**	**175,244**	**160,353**	GRI 306-2
Hazardous waste	Mg	112,745	72,009	100,128	75,305	73,276	
Non-hazardous waste	Mg	107,779	97,075	112,841	99,939	87,077	
** Does not include municipal waste.*							
TRANSFER OF WASTE							
Cross-border transport of hazardous waste from the ORLEN Group	Mg	**6,370**	**6,604**	**5,178**	**6,406**	**5,636**	GRI 306-4

Effluents

Description	UoM	2019	2018	2017	2016	2015	GRI indicator

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
EFFLUENTS							
Effluents discharged to the environment, including:	m^3	**50,914,539**	**50,691,326**	**51,788,570**	**45,466,441**	**53,117,602**	GRI 306-1
Industrial wastewater	m^3	44,397,037	44,039,987	45,381,655	38,587,398	43,460,856	
Other wastewater	m^3	6,517,502	6,651,339	6,406,915	6,879,043	9,656,746	

Environmental fees and charges

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
ENVIRONMENTAL FEES AND CHARGES							
Environmental fees and charges paid by the ORLEN Group, including:	EUR	**14,151,928**	**14,500,844**	**17,261,816**	**15,736,217**	**12,052,867**	
Total air emissions	EUR	4,871 093	4,807,520	5,458,151	5,147,891	6,700,440	
Water withdrawal	EUR	8,643,000	8,757,538	11,234,274	9,911,412	4,659,403	
Discharge of wastewater	EUR	620,635	906,563	529,371	612,629	599,937	
Landfilling of waste	EUR	17,200	29,223	40,020	64,285	93,087	

CAPITAL Expenditure on environmental protection

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
CAPITAL EXPENDITURE ON ENVIRONMENTAL PROTECTION							
Expenditure on environmental investments at the ORLEN Group	mln EUR	40.5	123.4	24.8	22	76.9	

Penalties and complaints

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
CAPITAL EXPENDITURE ON ENVIRONMENTAL PROTECTION							
Penalties for non-compliance with environmental regulations	EUR '000	18.8	5.5	42.4	36.3	58.7	GRI 307-1
Number of complaints filed and handled by the ORLEN Group	number	42	54	42	162	72	GRI 103-2

Significant spills

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
SIGNIFICANT SPILLS							
Number of spills	number	10	6	13	Calculated since 2017		GRI 306-3
Volume of spills	Mg	140	211	24			

Use of biocomponents meeting sustainability criteria

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
USE OF BIOCOMPONENTS MEETING SUSTAINABILITY CRITERIA							
Esters	tonne	852,758	816,984	810,369	699,084	640,709	OG-14
Bioethanol	tonne	264,175	259,780	229,643	225,092	234,368	

Energy

Description	UoM	2019	2018	2017	2016	2015	GRI indicator
REDUCTION OF ENERGY CONSUMPTION**							
Electricity	MWh	1027	16,632	1278.79	16,242	6,132	GRI 302-4
Heat in steam	GJ	415,395	215,711	77,772	102,753	73,297	
**** The figures are for the Power Generation area only, i.e. CHP and CCGT units.*							
ENERGY CONSUMPTION WITHIN THE ORGANISATION******							
	2019		2018		2017		
	Value [GJ]	Value [MWh]	Value [GJ]	Value [MWh]	Value [GJ]	Value [MWh]	
Energy consumption in fuels	98,769,007	27,435,835	84,187,991	23,385,553	83,280,501	23,133,472	GRI 302-1
Electricity consumption	2,304,094	640,026	2,211,043	614,179	2,187,400	607,611	
Heat consumption	5,579,603	1,549,890	6,825,492	1,895,970	6 252 290	1 736 747	
Electricity sold	33,938,256	9,427,293	24,984,321	6,940,089	24,786,031	6,885,009	
Heat sold	36,321,662	10,089,351	34,012,153	9,447,820	35,262,356	9,795,099	
Total consumption*****	28,509,089	7,919,191	25,191,517	6,997,644	23,232,114	6,453,365	
***** Total consumption is calculated as the difference between each unit's consumption of energy in fuel and energy sold to external and internal customers.* ***** Indicator reported since 2017.*							

Society

We form part of society, which is why we build our relations and cooperation model based on the highest value – People. Society, Employees, Customers, Business Partners and the Environment are the key areas of responsibility in the **ORLEN Group CSR Strategy until 2022**, implemented since 2019.

Community engagement

The ORLEN Group operates **programmes with a nationwide reach, enabling us to bring support to local communities**, for instance the 'My Place on Earth' or 'ORLEN for Firefighters' grant programmes run by the ORLEN Foundation. ORLEN Group companies are actively involved with local communities, especially in Płock and other places where they operate. The 'ORLEN for Płock' programme has been in place for four years now, with 59 projects completed within its framework in 2019. In 2018, we created an innovative tool for communicating with local communities – the Free Information System for residents of the Płock region. In 2019, we organised regular workshops for representatives of local and public administration and institutions responsible for security in Płock. Last year we also started consultations with the local government authorities as part of the project to extend the olefins complex in Płock. PKN ORLEN is a sponsor of the Grant Fund for Płock Foundation, which has been recognised as one of the 30 best CSR projects in Poland.

Our corporate foundations, i.e. the ORLEN Foundation , the ANWIL for Włocławek Foundation, and the Unipetrol Foundation, run **scholarship programmes** for students. In line with our Charitable Giving Policy, the ORLEN Foundation executes **charitable projects**, with a particular focus on helping foster family group homes, and numerous social outreach initiatives.

Both ORLEN Group employees and third parties participate in various social initiatives as part of the **employee volunteering programme**. In the past year, employees of the ORLEN Group could submit bottom-up volunteer initiatives and benefit from the financial support of the ORLEN Foundation in their implementation. 400 employees took up the challenge. The best initiatives have been awarded in the Volunteering of the Year Competition. In addition, employees participating in employee volunteering are entitled to a day off with the right to remuneration.

PKN ORLEN supports professional and amateur sports. We also engage in **projects protecting the national heritage.**

In a significant step towards ensuring a responsible supply chain, PKN ORLEN incorporated responsible business and OHS criteria into its procurement management standard. Compliance with the **Supplier Code of Conduct** is a mandatory criterion in the process of trading partner selection at ORLEN Group companies.

As a key player in the fuel and power market in the CEE region, PKN ORLEN runs the proprietary project FFbK. **'Fuelling the Future'** The initiative is aimed at inspiring debate on key economic, business and social issues as well as sharing of ORLEN's business knowledge. One of the activities undertaken as part of the project is the publication of original reports. In 2019, we prepared and released a report entitled 'Petrochemicals – Challenges, Solutions and the Future'.

This Integrated Report includes information on the approach to management and key projects and metrics related to the ORLEN Group's social involvement..

The ORLEN Group's **key social policies and procedures** are described in the Non-Financial Report of the ORLEN Group and PKN ORLEN S.A. for 2019.

For more information, see 'CSR Strategy', 'Responsibility towards society', 'Responsibility towards suppliers' and 'Responsibility towards customers'.

Human capital management

The ORLEN Group's hiring policy focuses on engaging top quality specialists to perform day-to-day operations as well as to execute strategic projects.

The ORLEN Group employees are offered a **wide range of diversified professional advancement activities**. The **Career Development Session** was introduced in 2019 to help plan individual career paths based on the assessment of an employee's needs and business requirements in a given area. The ORLEN Group also provides its employees with an extensive package of **social benefits**, including employee benefits and the 'Family-Friendly Employer' programme. An **employee satisfaction and engagement survey** is conducted on a regular basis (every two years).

PKN ORLEN takes steps to **recruit and retain human resources** that are relevant to the Company's business areas – current and prospective employees, as well as students and graduates of vocational schools and universities. Being aware of the need for synergies between business and academia, the ORLEN Group actively collaborates with the academic community. For more information, see 'Responsible employer' and 'Our capitals'.

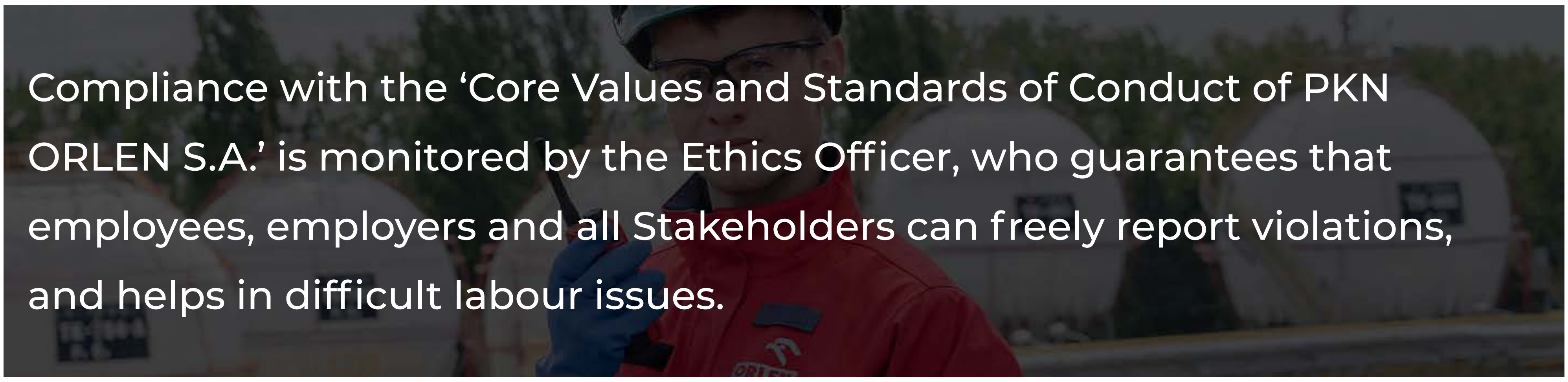
Projects are under way to **develop a knowledge-based organisation, unlock the internal potential and share feedback.** 2019 saw the continuation of the in-house programme to support innovation among employees, intended to encourage our staff to put forward their ideas and to enable identification of highly-innovative solutions, such as ORLEN Insight – a knowledge-sharing platform, Opportunities Market – a project platform, an in-house platform ORLEN Idea, and a competition for the most innovative project of the year.

PKN ORLEN **ensures freedom of trade union activity**. It recognises trade unions active at the Company as representatives of all employees in matters concerning their collective rights and interests, within the scope defined by laws of general application. It undertakes to respect the freedom of activity and equality of trade unions and does not discriminate against employees on the grounds of trade union membership or non-membership.

The ORLEN Group's **key HR policies and procedures** are described in the Non-Financial Report of the ORLEN Group and PKN ORLEN S.A. for 2019 . For more information on employment and HR programmes, see 'Responsible employer'.

Respecting human rights

The ORLEN Group has adopted the **Core Values and Standards of Conduct of PKN ORLEN S.A.**, addressing relationships within the company and interactions with the external environment. The document presents the values which the ORLEN Group employees respect:
Responsibility, Development, People, Energy, Reliability



Compliance with the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' is monitored by the Ethics Officer, who guarantees that employees, employers and all Stakeholders can freely report violations, and helps in difficult labour issues.

PKN ORLEN has in place **internal and external mechanisms to obtain advice on how to report a violation or suspected violation.** The Company's employees and external Stakeholders may report a breach or suspected breach of the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' in connection with workplace incidents or employee behaviours. A variant path is defined for reporting and analysing information on actual or suspected breaches, depending on the severity and complexity of the problem and on the confidence of the parties involved.

The ORLEN Group has also adopted the **Workplace Bullying Policy**, setting out the rules to be followed when a case of harassment is reported, as well as the rights and obligations of employees in such situations. The Policy is complemented by the **Rules to Prevent Workplace Bullying, Discrimination, and any Forms of Harassment at PKN ORLEN**, which go beyond legal requirements and also include measures designed to prevent any behaviour that could amount to bullying, discrimination, or other forms of harassment.

The ORLEN Group's **key policies and procedures governing human rights** are described in the Non-Financial Report of the ORLEN Group and PKN ORLEN S.A. for 2019. For more information about human rights initiatives pursued in 2019, see 'Respecting human rights' .

Safety of employees and contractors

Care for the health and personal safety of employees and other stakeholders is an integral part of our organisational culture and business.In practice, this means that the Group does everything it can to prevent accidents, industrial failures, fires and other unwanted incidents.

We are currently implementing the **ORLEN Group's OHS Strategy** for 2017–2021. In 2019, the target values provided for in the Strategy for the combined TRR and T1 PSER were achieved.

All our OHS efforts were aimed at ensuring the highest safety standards. In 2019, the ORLEN Group continued the implementation of **uniform safety standards under the 'Safety Plus+' project**, further promotion of a work safety culture at the ORLEN Group companies by **raising the awareness of safe work procedures and inspiring proactive attitudes in employees and contractors**, as well as **initiatives carried out on multiple fronts to further enhance the ORLEN Group's Process Safety Management System.**

For information on the projects and initiatives undertaken in 2019 with regard to occupational health and safety and process safety, see 'Safety of employees and contractors' .

The ORLEN Group's **key OHS policies and procedures** are described in the Non-Financial Report of the ORLEN Group and PKN ORLEN S.A. for 2019 .

Social engagementHuman capital managementOccupational health and safety

Social engagement

Description	UoM	2019	2018	2017	2016	2015	GRI indicators
I. SOCIAL ENGAGEMENT							

Description	UoM	2019	2018	2017	2016	2015	GRI indicators
I. SOCIAL ENGAGEMENT							
EMPLOYEE VOLUNTEERING PROJECTS							
Number of employees involved in Employee Volunteering Programme	number	800	in 2018, work was underway on a new volunteering programme formula	2,571	2,098	2,500	GRI 203-1
SOCIAL PROJECTS							
'ORLEN for Firefighters' programme – amount of funds transferred	PLNm	2	over 2	over 1	1	approx. 1	GRI 203-1
'ORLEN for Firefighters' programme – number of applications submitted	number	2,248	3,934	1,391	1,198	451	
'ORLEN for Firefighters' programme – number of beneficiaries	number	249	360	169	over 160	nearly 150	
'My Place on Earth' programme – amount of funds transferred to local communities	PLNm	2.1	2	project implemented since 2018			
'My Place on Earth' programme – applications submitted	number	2,132	1,135				
'My Place on Earth' programme – estimated number of beneficiaries	number	700,000	project not implemented				
SCHOLARSHIP PROGRAMMES							
Scholarship programmes of the ORLEN Foundation – grant holders	number	537	398	414	421	374	GRI 203-1
Scholarship programmes of the Unipetrol Foundation – grant holders	number	51	48	40	the Unipetrol Foundation has operated since 2017		GRI 203-1
Scholarship programmes of the ANWIL for Włocławek Foundation – grant holders	number	41	45	40	40	30	GRI 203-1
SPORTS EVENTS							
ORLEN Warsaw Marathon – participants	number	20,000	20,000	36,000	30,000	40,000	GRI 203-1
VERVA Street Racing – participants	number	250,000	80,000	32,000	110,000	55,000	GRI 203-1
PROJECTS FOR LOCAL COMMUNITIES							
Comprehensive Programme for the Prevention, Diagnostics and Treatment of Cancers and Respiratory System Diseases for Residents of the City and County of Płock, including:							
'Health City' – medical consultations and examinations	number	over 10,000	project implemented since 2019				GRI 203-1
Series of educational meetings for local communities – participants	number	210	project implemented since 2019				GRI 203-1
Free Information System for residents of Płock and the Płock region – users	number	approx. 1,000	system in operation since 2019				GRI 203-1
ENGAGING CUSTOMERS IN SOCIAL PROJECTS							
Vitay programme and Yanosik application points donated by customers for social causes	number	45,670,769	40,730,211	53,518,524	project implemented since 2017		GRI 203-1
SUPPLIERS							
PKN ORLEN's suppliers required to read and accept the PKN ORLEN Supplier Code of Conduct*	%	100	100	100	100	100	GRI 308-1, GRI 414-1

Description	UoM	2019	2018	2017	2016	2015	GRI indicators
I. SOCIAL ENGAGEMENT							
Share of products and services sourced from local Płock-based suppliers in PKN ORLEN's expenses	%	7.6	6.7	3	4	4	GRI 204-1
Share of products and services sourced from local Litvinov-based suppliers in Unipetrol's expenses (Czech Republic)	%	1	7.92	3	11	9	GRI 204-1
Share of products and sourced from local Mažeikiai-based suppliers in ORLEN Lietuva's expenses (Lithuania)	%	1.06	nearly 1	nearly 1	1	7	GRI 204-1
** Since 2019, PKN ORLEN suppliers have been required to read and accept the 'Anti-Corruption Policy of the ORLEN Group' and the 'PKN ORLEN Rules for Accepting and Offering Gifts'.*							
LOCAL TAXES AT KEY LOCATIONS PAID BY ORLEN GROUP COMPANIES							
Płock	PLNm	over 274	over 246	233**	166**	159**	GRI 203-2
Włocławek	PLNm	over 101	70.4	Local taxes presented only for selected ORLEN Group companies			GRI 203-2
Inowrocław	PLNm	over 8	2.1				GRI 203-2
Trzebinia	PLNm	over 6	4.2				GRI 203-2
Jedlicze	PLNm	over 6	5.4				GRI 203-2
Mažeikiai (Lithuania)	PLNm	over 5	0.2				GRI 203-2
Ústecký kraj in the Czech Republic	PLNm	over 4	4.6				GRI 203-2
Středočeský kraj (Kralupy, Neratovice, Kolín) in the Czech Republic	PLNm	over 3	3.8				GRI 203-2
Pardubický kraj in the Czech Republic	PLNm	nearly 0.7	0.6				GRI 203-2
*** Data for PKN ORLEN only.*							

Governance

Corporate governance

PKN ORLEN ensures easy and equal access to published information using various communication tools.

As a company listed on the Warsaw Stock Exchange, it **applies all the principles included in the Code of Best Practice for WSE Listed Companies 2016.**

In 2019, PKN ORLEN launched its **Investment Academy** project, which anyone who wants to broaden their knowledge about the capital market and safe investing on the stock exchange is welcome to join. It is run as part of '**ORLEN in Your Portfolio**' – Poland's first long-term programme for retail investors.

Corporate governance-related issues are discussed in the 'Corporate governance' section of the Integrated Report. The section contains the following information:

- Corporate governance rules
- Control, Risk Management and Compliance System
- Major shareholdings
- Special control powers and voting rights
- Amendments to Articles of Association
- General Meeting
- Management and supervisory bodies
- Remuneration policy
- Diversity policy

Integrated Management System

We operate on the basis of our **Integrated Management System**, which comprises the following systems: Quality Management System compliant with ISO 9001, Quality Management System compliant with AQAP 2110, Environmental Management System compliant with ISO 14001, Occupational Health and Safety Management System compliant with PN-N-18001, Information Security Management System compliant with PN-ISO/IEC 27001, HACCP Food Safety Management System, ISCC EU certification system and Factory Production Control (ZKP).

These systems meet the highest international management standards and are applied by the Company in its day-to-day efforts to ensure professional customer service and maintain top health protection and environmental standards.

In May 2019, the Integrated Management System underwent a certification audit. As a result, the Group was certified for compliance with the requirements of the respective standards.

For information on the Integrated Management System, see 'Integrated Management System'.

Counteracting corruption and bribery

The ORLEN Group has in place effective functional control, risk management and compliance supervision systems, as well as an internal audit and control function. The simultaneous operation of all those systems and functions allows the Group to exercise ongoing and effective supervision to prevent corruption, illegal bonuses or conflicts of interests.

In 2018, the ORLEN Group adopted an **Anti-Corruption Policy** and appointed an **Anti-Corruption Compliance Officer**. Our trading partners, when entering into business relationships with PKN ORLEN, are required to become familiar with the policy and rules for counteracting corruption.

The ORLEN Group's **key policies and procedures governing this area** are described in the Non-Financial Report of the ORLEN Group and PKN ORLEN S.A. for 2019 .

For information on policies and procedures governing the counteracting of corruption and bribery and the related key initiatives, see 'Counteracting corruption and bribery' .

Diversity inficators

Description	UoM	2019	2018	2017	2016	2015	GRI indicators
Composition of governance bodies and breakdown of employees per employee category according to gender, age group and other indicators of diversity							
Management Boards of ORLEN Group companies by gender, including:							
Women	%	13	9	11	11	reported since 2016	GRI 405-1
Men	%	87	91	89	89		
Supervisory Boards of ORLEN Group companies by gender:							
Women	%	31	32	21	16	reported since 2016	GRI 102-22
Men	%	69	68	79	84		
Management Board – age structure, including:							
< 30 years	%	1	0	indicator presented for different age brackets			GRI 405-1
30-50	%	72	72				
>50	%	27	28				
Supervisory Board – age structure, including:							
< 30 years	%	1	3	indicator presented for different age brackets			GRI 405-1
30-50	%	79	82				

Description	UoM	2019	2018	2017	2016	2015	GRI indicators
>50	%	20	15				
Employees – employment structure by age, including:							
< 30 years	%			reported since 2018			GRI 405-1
Managers	%	1	1				
Non-managers	%	99	99				
30-50	%						
Managers	%	12	11				
Non-managers	%	88	89				
>50	%						
Managers	%	10	9				
Non-managers	%	90	91				
Employees – employment structure by gender, including:							
Women	%			reported since 2018			GRI 405-1
Managers	%	9	8				
Non-managers	%	91	92				
Men	%						
Managers	%	11	9				
Non-managers	%	89	91				

Integrated management system

Description	UoM	2019	2018	2017	2016	2015	GRI indicators
External and internal audits of Integrated Management System at PKN ORLEN							GRI 102-11
Internal audits	number	513	537	572	496	584	
Audits of correct monitoring of CO_2 emissions	number	15	14	14	15	15	
Audits at product vendors and service providers	number	8	19	13	15	15	
ISCC audits	number	7	7	10	6	5	

Risk management

Description	UoM	2019	2018	2017	2016	2015	GRI indicators
Enterprise Risk Management System (ERM)							
Risks assessed at PKN ORLEN and other ORLEN Group companies covered by ERM	number	**1,185**	**1,129**	**1,557**	**527***	**675***	GRI 102-15
Areas assessed:							
control mechanisms	number	2,806	2,921	4,001	1,251*	1,280*	
business processes	number	345	301	298	83*	85*	
** PKN ORLEN only.*							

Counteracting corruption and bribery

Description	Description	2019	2018	2017	2016	2015	GRI indicators
Training on anti-corruption and bribery issues – number of persons trained (Management Boards and employees of the ORLEN Group)	number	4,057	reported since 2019				GRI 205-2
Anti-Corruption Policy training – Management Boards of ORLEN Group companies	%	100	reported since 2019				

MONITORING OF THE STRATEGY

Capitals:

Monitoring of the strategy is ensured through a uniform system of regular tracking of the progress in its implementation.

After the strategy was approved, the process of its monitoring was initiated. It comprises reporting on projects, initiatives, activities and specific quantitative metrics as detailed targets for individual segments and business areas. The approved detailed targets for each KPI are of key importance to attaining the objectives outlined in the strategy and ensure effective monitoring of the goals and our strategic initiatives.

The strategy monitoring is of particular importance because it ensures:

- Clear communication of the Management Board's expectations – facilitating implementation of the strategy at all levels of the organisation, in all segments and areas of the Group,
- Involvement of all management staff in work towards achievement of the goals, in line with the strategy and the adopted corporate values.

The strategy monitoring methods and persons/units responsible for this task are listed in the table below.

	Monitoring measures	Forum
Review of the strategy	Review of strategic objectives and goals	Strategy and Investor Relations area/Management Board/Supervisory Board
	Review of implementation of strategic goals (KPIs and projects)	
	Review of the Company's activities and the macro environment	
Sub-strategies/strategic projects and initiatives	Review of implementation of strategic projects	Corporate Strategy Committee
Day-to-day business	Reporting on the main KPIs of key importance to the strategy's success	Key management staff in each area and segment

OUR RESPONSIBILITY

OUR COMMITMENTS

GRI indicators: 103-3

Capitals:

We report on our performance against the commitments for 2019, and make commitments for the forthcoming year.

GRI: 103-3

Delivery on our commitments in 2019

In 2019, we undertook to continue our social projects.

We build our relations and cooperation model based on the highest value – People. We are aware that we form part of society and thus we do not operate in a vacuum. We are responsible for the local communities around us and pay heed to their needs.

The list of projects we completed includes:

Support for the development of local communities

- **My Place on Earth** – In 2019, a gala was held in Katowice to celebrate the 2nd edition of the nationwide grant programme encouraging local communities to make positive changes in their immediate environment. A total of PLN 2.1m was transferred in this edition to 276 selected winning projects aimed at developing local communities.
- **Free Information System for the inhabitants of the Płock region** – We have implemented an innovative tool for communication with local communities via SMS and e-mail.
- **Cross-sectoral partnership – 'Grant Fund for Płock' Foundation**– Thanks to the support from and consistent engagement of the sponsors, the 'Grant Fund for Płock' Foundation finances and settles grants transferred to Płock non-governmental organisations, and initiates its own projects targeted at social niches. Projects carried out in 2019 included **'Live History Lessons', with elements of impromptu scenes in interaction with the audience, and the 'Happy Holidays in Płock' project for over 620 young local residents who participated in free-of-charge classes and day camps.**
- **ORLEN for Płock** – A programme for the inhabitants of Płock, under which the following projects were carried out in 2019: free theatre shows for children and the elderly, free swimming lessons, providing equipment for classrooms in Płock schools, and the 'Płock Gardens of Light', held at Christmas.

Prevention of social exclusion and promotion of equal opportunities

for instance through initiatives for accessibility such as ensuring easier access to facilities, including service stations, to customers with different needs and mobility.

- **Comprehensive support for foster family group homes and family-like childcare facilities** – In 2019, more than 300 such facilities benefited from various forms of support provided by the ORLEN Foundation.
- **Scholarship programmes of the ORLEN Foundation** – In 2019, scholarships were awarded to 537 students from across Poland, taking part in seven scholarship programmes.
- **Facilities for the disabled at PKN ORLEN service stations** – All service station staff receive relevant training; architectural barriers are removed, space between the shelving racks and counters is adapted, toilets for the disabled feature call bells; service stations in Motorway Service Areas provide comfortable baby care rooms.

Fostering the national heritage

including by engaging in and supporting activities for the conservation of culture and national heritage as well as promotion of film, theatre, music, and literature.

- **PKN ORLEN as a sponsor of the International Chopin Piano Competition 2020.**
- **Christmas concert for seniors at The Teatr Wielki – Polish National Opera**– the Opera Academy artists performed pieces by Stanisław Moniuszko and the most beautiful Polish Christmas carols. In 2019, PKN ORLEN took The Teatr Wielki – Polish National Opera under its patronage.
- **We keep watch! We remember!** – The ORLEN Foundation's programme under which 16 grants were given in 2019 to organisations which look after places of remembrance to local war heroes, and which can make other local residents interested in the history of their small homelands.
- '**Proud of the past, brave about the future'** – The exhibition of Polish hussar (winged cavalry) armour purchased by the ORLEN Foundation for the Polish History Museum. In 2019, two vernissage events were held in Warsaw and Płock, accompanied by a temporary exhibition.

For more information, see 'Responsibility towards society'.

We also made a commitment to take initiatives in the following three areas: safety, health, and environmental protection.

These three areas were the most prominent in 2019 in our numerous projects addressed to local communities, employees, customers and trading partners. Since the range of our activities is very broad, each year we want to present the initiatives we undertake under different priorities.

The list of projects we completed includes:

Undertaking and supporting initiatives for safety, including road safety

- **'#GoodDriver' campaign** – 2019 saw the launch of this large-format social campaign sponsored by PKN ORLEN. Environmental protection, safety, health and support for local communities are the areas of particular importance to the Company.
- **'ORLEN for Firefighters' programme** – In 2019, the ORLEN Foundation awarded **249** grants totalling PLN 2m to volunteer and **professional** fire **brigades from 15 provincec in Poland.**
- **Occupational Safety and Healthcare Days at the ORLEN Group** – The fifth edition of the project was held in 2019 to consolidate and promote further development of personal safety, safety culture, health and awareness of employees and external contractors.
- **VERVA Street Racing – Safe Driving Zone** – In 2019, the participants of Poland's largest motorsports event, held in Gdynia, had an opportunity to visit the Safe Driving Zone. They could have a go at rollover and collision simulators, and the experienced educators explained the dos and don'ts of staying safe as drivers and pedestrians.

Undertaking and supporting initiatives to promote healthy and active lifestyles

- **‘Comprehensive programme for the prevention, diagnostics and treatment of cancers and respiratory system diseases for residents of the city and county of Płock** – In 2019, an agreement was signed under which a PLN 10m health programme will be implemented in partnership with the National Institute for Oncology (formerly the Maria Skłodowska-Curie Institute – Oncology Centre) in cooperation with the Tuberculosis and Lung Diseases Research Institute. The project’s focus is on early diagnosis, promotion of recognised treatment standards, as well as education and outreach activities motivating people to change their lifestyles.
- **Health City** – Two editions were held in 2019 in Płock. During a two-day event, participants had more than 10,000 examinations and consultations. The event aims at promoting a healthy and active lifestyle as well as disease prevention, and is addressed to PKN ORLEN’s employees and residents of Płock and the surrounding areas.
- **ORLEN Olympics** – The ORLEN Group’s sporting celebration promoting physical activity and healthy lifestyles among employees.

Supporting professional and voluntary rescue service staff and their families

- **ORLEN for Firefighters** – The ORLEN Foundation’s safety improvement programme. The funds provided by the Foundation were used to purchase equipment which increased the fire-fighting units’ operational readiness and improved the safety of local communities.
- **Loyalty scheme for volunteer firefighters registered in the National Firefighting and Rescue System**– VFB firefighters who participate in the scheme, launched in 2019, can buy fuel at ORLEN and BLISKA service stations at discounted prices.
- **Dedicated programme launched by the ORLEN Foundation to provide free training** on fund raising and project management to Voluntary Fire Brigades from all over Poland . More than 400 people from nearly 270 different organisations across Poland received the training.
- As part of cooperation with the ‘Grow Up with Us’ Foundation, **PKN ORLEN also provides support for families of firefighters who lost their lives while on duty**. In addition, the ORLEN Foundation donated funds for a social campaign designed to foster solidarity with children whose parents lost their health or lives on duty, and to build respect for public service officers.

Optimising environmental impacts

- **Peregrine falcon restoration project** – Since 1999, PKN ORLEN has been actively involved in efforts to restore the peregrine falcon population in Poland, in partnership with the ‘SOKÓŁ’ (‘FALCON’) Wildlife Protection Association. The peregrine falcon is listed on the Polish Red List of Animals as a CR (critically endangered) species. From 2002 (the first hatch of peregrine falcon chicks) to 2019, the falcon couple hatched 48 chicks and fostered four (in 2019, it produced a clutch of four eggs and hatched two chicks).
- **Waste sorting labels on packaging of products sold under the O! and VERVA brands**

For more information, see ‘Environment and climate’ and ‘Environmental and protection efforts and biodiversity’ .

Developing environmental conscience

through such initiatives as undertaking and supporting educational projects for the protection of the natural environment, including biodiversity.

- **Free nature watching cruises on the Vistula River**– Four such cruises were organised for the inhabitants of Płock in 2019. Together with the guide/naturalist, the participants discovered and admired plant and animal species living in the middle section of the river.
- **Protection of the honey bee** – A number of environmental education projects were carried out in 2019 aimed at protecting bees, such as a conference entitled ‘Bees in Human Life. Biodiversity and Protection’,or beekeeping workshops.

Our third commitment involved inspiring the Company's Stakeholders, including employees, customers and trading partners, to undertake social responsibility.

We create a positive image of the Company based on our actual actions and conduct. As the largest company in Central and Eastern Europe and a CSR leader, we feel obliged to set a good example and support others, all the more so because that is what our Stakeholders expect of us.

The list of projects we completed includes:

Implementing, supporting and promoting employee volunteering initiatives

- **A day off for employee volunteering projects** – In 2019, PKN ORLEN employees were given the option to take an additional (fully paid) day off to take part in employee volunteering activities.
- **The 1st ORLEN Employee Volunteering Gala** –A novelty in 2019 was the 'Volunteering Project of the Year' competition, ending with an Employee Volunteering Gala combined with the Volunteer Day celebrations. In 2019, a total of 800 employees were involved in all volunteering projects, whose beneficiaries included persons under the care of NGOs, students, and the natural environment.

Inspiring to undertake responsibility, promoting business ethics, educating on CSR and sustainable development

- PKN ORLEN, together with the Ministry of Entrepreneurship and Technology (currently: the Ministry of Development) and the Ministry of Family, Labour and Social Policy, co-hosted **the Polish workshop session at the High-Level Political Forum on Sustainable Development in New York**.
- **European Sustainable Development Week**– The ORLEN Group and the ORLEN Foundation participated in the European Sustainable Development Week.
- **Safe External Contractor** – 2019 saw a third edition of the competition organised by PKN ORLEN to disseminate and promote best practices in occupational health and safety, and to reward contractors who conform to H&S standards.

Promoting responsible attitudes

including by supporting local suppliers and domestic businesses, educating retail investors on the capital market, and engaging customers in social initiatives.

- **I choose 590 – Saturday for Poland** – PKN ORLEN became a partner in a social campaign encouraging Poles to choose Polish products and services while doing their daily
- **PKN ORLEN's Investment Academy** – the Academy, launched in partnership with CFA Society Poland, focuses on the operation of the capital market.

Commitments for 2020

In 2020, activities for the benefit of the general public, employees, customers and trading partners will primarily feature initiatives undertaken in three areas: **health, safety and environmental protection.**

- **Health**
  - Implement the 'Comprehensive Programme for the prevention, diagnostics and treatment of cancers and respiratory system diseases for residents of the city and county of Płock'
  - Take various measures to prevent the spread of the SARS-CoV-2 epidemic
  - Respond to current needs and developments by providing ongoing support to healthcare facilities, patients, medical and uniformed services
  - Undertake and support initiatives to promote healthy and active lifestyles
- **Safety**
  - Undertake and support initiatives for safety, including road safety
  - Improve safety by providing healthcare facilities with specialist equipment and ambulances
  - Support professional and voluntary rescue service staff and their families
  - Continue activities aimed at reinforcing and enhancing the personal safety and the culture of safety, as well as awareness among employees and external contractors
- **Environmental protection**
  - Optimise environmental impacts
  - Develop environmental conscience through such initiatives as undertaking and supporting educational projects for the protection of the natural environment, including biodiversity

Commitments for 2020 also include **implementing social projects** and **inspiring the Company's Stakeholders to undertake social responsibility**:

- Implement projects to reduce inequalities and support development of local communities
- Inspire a sense of responsibility through the Company's activities/involvement
- Implement, support and promote employee volunteering initiatives

CSR STRATEGY

GRI indicators: 102-12

Capitals:

Implementation of the ORLEN Group CSR Strategy until 2022 commenced in 2019. The Strategy builds on the Company's business strategy, the Core Values and Standards of Conduct of PKN ORLEN – our internal code of ethics, and Agenda 2030 – the UN resolution on sustainable development at the global and local level.

Besides seeking to align business with social objectives, other priorities of the CSR Strategy are to build PKN ORLEN's image as a leader in CSR and sustainability, generate CSR synergies across the Group, and support the pursuit of Sustainable Development Goals oraz and the 'Accessibility Plus' programme.

GRI: 102-12

In keeping with the principles of social responsibility, PKN ORLEN has also signed up to and been engaged in **external initiatives intended to promote sustainable development**:

- In 2018, PKN ORLEN signed a declaration of **Partnership for Accessibility,** affirming its commitment to cooperate in the implementation of the government's 'Accessibility Plus' programme.
- Since 2017, PKN ORLEN has been involved in the initiative of the Ministry of Development (formerly the Ministry of Entrepreneurship and Technology) entitled – **Partnership for the Implementation of Sustainable Development Goals in Poland**.PKN ORLEN has joined the partnership for implementation of the UN 2030 Agenda, seeking to ensure that its efforts support the achievement of all 17 Sustainable Development Goals, which include: sustainable cities and communities, affordable and clean energy, responsible production and consumption, quality education, decent work and economic growth.
- Since 2017, PKN ORLEN has been involved in activities of the **Polish Economic Security Consortium**.
- Since 2015, PKN ORLEN has been an active member of the **Sustainable Development Committee** at the Polish Chamber of Chemical Industry . During the 2015 Polish Chemical Industry Congress, PKN ORLEN signed the **Declaration of Support to the Sustainable Development Concept in Chemical Industry.**
- In 2014 , PKN ORLEN signed the **Declaration of Polish Businesses for Sustainable Development**. By doing so, we joined the group of companies supporting the **Vision of Sustainable Development of Polish Businesses until 2050.** The document draws on the international initiative of *the World Business Council for Sustainable Development.*
- In 2010, PKN ORLEN was among those energy companies that decided to sign the **Declaration on Sustainable Development in the Energy Sector**.
- PKN ORLEN is also a member of the global **Fair Trade** movement. Since 2008, Stop Cafes and Stop Cafe Bistros have been selling Fair Trade coffee only.
- PKN ORLEN has participated in Responsible Care since 1997, when the programme was adopted by the Company's legal predecessor. This global project brings together chemical manufacturing companies to improve their health, safety and environmental performance (the so called HSE triad), as well as to share information about their activities.

The CSR strategy is implemented within five key areas of responsibility: **Society, Environment, Employees, Customers, and Trading Partners.** The identification of these areas facilitated the allocation of tasks corresponding to the needs of specific Stakeholder groups. Our ambition is to best fulfil the role of a responsible corporate citizen and employer, a member of the community and a good neighbour. We declare our openness to the world around us, sensitivity to people's needs and willingness to help. We would like our activities to effectively address the needs of local communities, bringing about real change in the lives of their target beneficiaries. We would also like them to be wide-ranging so that our charitable efforts reach all places where they are needed.

Society

We are aware that we do not operate in a vacuum. We form part of society and that is why we build our relations and cooperation model based on the highest value – people. We feel responsible for the neighbouring local communities. Płock, the home of PKN ORLEN, is particularly close to our heart. Our priority is given to developing social conscience, sharing best practices and knowledge. We are also a sponsor of culture and arts, as well as Polish professional and amateur sports. We want our activities to effectively address the needs of local communities and make a real difference.

The main goals pursued in the Society area are to support the development of local communities, prevent social exclusion and promote equal opportunities, ensure safety and health protection, and preserve the national heritage.

For more information, see 'Responsibility towards society'.

Environment

The ORLEN Group operates on six home markets – in Poland, the Czech Republic, Germany, Lithuania, Slovakia and Canada. Our products reach over 110 countries located on 6 continents. PKN ORLEN itself is the largest company in Central and Eastern Europe. We are aware of our 'greatness' and we take into account its long-term impact on its surroundings and the natural environment. We feel obliged to be responsible for what we do. Over the years, we have reduced our environmental footprint by conducting our business in keeping with sustainable development principles. We manage the available resources so as not to limit future growth opportunities or upset the gentle balance in nature. Environmental protection is a key element of our CSR strategy.

The main objectives pursued in the Environment area include the optimisation of our environmental impacts, protection of biodiversity, and raising of environmental awareness.

For more information, see 'Environment and climate'.

Employees

We are a trustworthy employer and we want to address the needs of all our Stakeholders. We feel particularly responsible for our employees. The combination of skills and passion with which they perform their daily work is what makes the Company successful. We highly value their activity as part of the employee volunteering programme. They feel that social involvement makes their work more meaningful, and we appreciate that. That is why we present them with opportunities to take initiative and turn their ideas into reality. We also see other needs. Therefore, we broaden the range of perquisites, including training, as well as strengthen and develop a culture of safety and undertake health protection and promotion initiatives. Employees are the foundation of our business, which is why they are our particular focus.

The main objectives pursued in the Employees area are to create a safe work environment, ensure fair working conditions, tackle inequalities, foster employee development, and help employees to successfully balance their personal, career and social goals.

For more information, see 'Responsible employer'.

Customers

The ORLEN Group means, first and foremost, people – not only employees, but also customers. They are the ones for whom we develop products and services of premium quality. It is with them that we establish relations, which become lasting ones with time. Therefore, as a people-friendly company, we engage in safety, health and environmental protection projects. We make our facilities more easily accessible to individuals with different needs and disabilities. We also involve customers in our CSR initiatives, encouraging their responsibility.

The main objectives pursued within the Customers area are to ensure health and safety, respond to customer expectations, improve accessibility and inspire responsibility.

For more information, see 'Responsibility towards customers'.

Trading Partners

A positive image of PKN ORLEN is created through genuine actions and conduct. Our responsibility towards trading partners is unchanging but flexible – we respond to new economic trends, business environment, technologies and communication tools. We know that by consolidating our position as a CSR leader, we attract valuable trading partners and instil in them our sense of responsibility.

The main objectives pursued in the Trading Partners area are to inspire responsibility, engage in and foster successful business partnerships, and promote responsible attitudes.

For more information, see 'Responsibility towards suppliers'.

HOW WE PURSUE THE SUSTAINABLE DEVELOPMENT GOALS

Capitals:

With future generations in mind, PKN ORLEN engages in a wide range of CSR projects under internal documents adopted by the Company, including ‘CSR Strategy until 2022’ and ‘Core Values and Standards of Conduct of PKN ORLEN S.A.’, and under international sustainable development initiatives we have signed.

Our projects are consistent with the Sustainable Development Goals **announced by the United Nations and adopted by almost 200 countries, including Poland. Presented below** are projects initiated or implemented by the Company in 2019, which are assigned to strategic Sustainable Development Goals for the fuel and energy industry in Poland*. The projects have been assigned to the specific SDGs by approximation, as the Sustainable Development Goals are intertwined and complement each other. This means our projects, given their subject matter, contribute to the achievement of more than one objective at the same time. It is also worth noting that in the case of companies the level of activity – in terms of scope and capabilities – is different than that of governments of countries around the world who are signatories to the UN declaration.

SDGs key to the fuel and energy industry*:

7 AFFORDABLE AND CLEAN ENERGY

- PGE and PKN ORLEN join forces to promote the development of offshore wind power generation in Poland
- PKN ORLEN is considering a project to produce innovative biofuel components
- EV chargers at the ORLEN Group service stations in Germany
- Strategic cooperation between PKN ORLEN and Pesa Bydgoszcz in the development of hydrogen technology
- PKN ORLEN and the Metropolitan Association of Upper Silesia and Dąbrowa Basin sign a letter of intent on cooperation for the development of zero-emission hydrogen-powered public transport services
- ORLEN Południe invests in green energy sources

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11 SUSTAINABLE CITIES AND COMMUNITIES

- Launch of the Free Information System infodlaplocka.orlen.pl
- Grant Fund for Płock among the best projects of the past 30 years in Poland
- ‘Learn New Road Traffic Regulations’ campaign under PKN ORLEN’s ‘#Gooddriver’ public awareness campaig
- ‘Slow Down Near Schools’ campaign
- Chemists’ Day and ORLEN Olympics
- Meeting with population experts in Płock

- PKN ORLEN buys equipment for 10 primary schools in Płock
- Winners selected in the ‘For Płock’, ‘For Płock County’ and ‘For Eagles’ scholarship programmes
- Second edition of ‘My Place on Earth’ programme designed with local communities in mind
- ORLEN Paliwa provides support during the wastewater pumping effort after failure of a wastewater treatment plant in Warsaw

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Additional SDGs for the fuel and energy industry*:

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

- Strategic Research Agenda
- Construction of PKN ORLEN’s Research and Development Centre in Płock
- Announcement of the ‘Best Research Project for Polski Koncern Naftowy ORLEN S.A.’ competition
- Retail Investors’ Day at PKN ORLEN
- Official opening of PKN ORLEN’s Investment Academy
- PKN ORLEN rolls out its ORLEN IN YOUR PORTFOLIO programme
- PKN ORLEN joins the ‘GovTech’ government programme
- PKN ORLEN joins the ‘Space3ac’ acceleration programme
- Participation in the ‘Pilot Maker Electro ScaleUp’ acceleration programme
- ‘Together We Fuel Polish Agriculture’ project
- The ORLEN Group supports Polish agriculture
- ANWIL signs a contract for the construction of auxiliary infrastructure for fertilizer units
- Contract signed for the construction of Poland’s first bio propylene glycol plant in Trzebinia

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

- PKN ORLEN participates in an awareness campaign promoting responsible consumption and UN Sustainable Development Goals
- Publication of PKN ORLEN’s proprietary ‘Petrochemicals – Challenges, Solutions and the Future’ report
- PKN ORLEN as a partner of the ‘I Choose 590. Saturday for Poland’ campaign
- PKN ORLEN supports Polish businesses
- PKN ORLEN partners with over 170 Polish manufacturers
- PKN ORLEN is the largest distributor of fair trade products in Poland
- PKN ORLEN supports the government in combating informal trade in fuels
- Publication of the ORLEN Group 2018 Integrated Report
- PKN ORLEN’s best practices in the FOB Report

13 CLIMATE ACTION

- Publication of PKN ORLEN's environmental brochure
- Almost one million bees found home in an apiary located at the border of the PKN ORLEN production plant and the Mazowiecki Agricultural Advisory Centre in Płock
- 'Bees in Human Life. Biodiversity and Protection' conference
- A falco cherrug's eggs from the refinery to a museum
- '#GoodDriver' (#DobryKierowca) CSR campaign
- PKN ORLEN volunteers' initiative in the Płock Forestry Agency
- 'Tree for a Bottle' campaign
- Pro-environmental projects at ORLEN Południe

**Source: 'SDGs in practice. A guidebook for business' Part 1 and Part 2 published by CSR Consulting. The SDGs of strategic importance to the fuel and energy industry were selected during workshops and research analyses exploring their impact and feasibility.*

Apart from initiatives consistent with the strategic SDGs most closely related to our core business, we also pursue a host of other CSR projects focused on effective health care, promoting healthy lifestyles, combating poverty, raising awareness and reducing inequalities.

3 GOOD HEALTH AND WELL-BEING

- Health promotion project for residents of Płock and Płock county
- Health City in Płock
- Donation of specialist equipment to a hospital in Lipno
- Fifth edition of Occupational Safety and Health Protection Days at the ORLEN Group
- Anniversary 'Race for New Life' event
- ORLEN Foundation's support for Polish transplantology
- Patients' Day in Anin
- PKN ORLEN supports the government-sponsored School Sports Clubs programme
- 'Firefighters' Day the Sporty Way' in Rypin
- Free swimming lessons in Płock
- Meeting with World Champion Paweł Korzeniowski in Płock
- ORLEN WARSAW MARATHON
- Verva Street Racing

1 NO POVERTY

- PKN ORLEN as a co-host of the Polish workshop session at the High-Level Political Forum on Sustainable Development in New York.
- Winners selected in the 'Volunteering Project of the Year' competition
- Employee volunteering project with Robert Kubica
- Volunteering campaign in a pre-school run by the Centre for Blind Children in Laski
- Organisation of a visit to the cinema for children from Foster Family Group Homes and the Centre for Blind Children in Laski
- Music concert at the Centre for Blind Children in Laski
- Second edition of the 'BONA FIDE' scholarship programme opens for applications

10 REDUCED INEQUALITIES

4 QUALITY EDUCATION

- Winners selected in the ‘For Płock’, ‘For Płock County’ and ‘For Eagles’ scholarship programmes
- PKN ORLEN supports students from Polish families living in the countries east of Poland – the ‘Scholarship for a Fellow Countryman’ programme
- PKN ORLEN as a new partner of the State Fund for Rehabilitation of the Disabled (PFRON)
- Happy Holidays in Płock
- Fairy Tale Children’s Day with PKN ORLEN
- Special film screening for seniors
- Organisation of a project for children living in Foster Family Group Homes
- PKN ORLEN ranked among the world’s most ethical companies

RESPECTING HUMAN RIGHTS

GRI indicators: 103-1, 103-2, 102-17, 103-3

Capitals:

Respect for human rights is a primary value underlying relations within the ORLEN Group and with our Stakeholders. Guidance on appropriate attitudes and conduct has been compiled in the form of a document entitled 'Core Values and Standards of Conduct of PKN ORLEN S.A.'. It is our priority to offer fair treatment to all employees and third parties regardless of their age, sex, job, denomination, nationality or beliefs .

GRI: 103-1, 103-2

The 'Core Values and Standards of Conduct of PKN ORLEN S.A.' set out the values that PKN ORLEN has committed to respect: **Responsibility, Development, People, Energy, Reliability.** They are manifested in the everyday behaviours and attitudes described in the document and practised both inside and outside the organisation. All ORLEN Group companies (in Poland and abroad) share the same ORLEN values and every company has adopted the 'Core Values and Standards of Conduct' as a binding code of ethics. For more information on the document, see 'Core Values and Standards of Conduct of PKN ORLEN S.A.' .

Ethics Officer

Compliance with the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' is monitored by the **Ethics Officer**, who guarantees that employees, employers and all Stakeholders can freely report violations, helps in difficult labour issues, and builds the employees' awareness of the importance of their own role in transforming the corporate culture. The Ethics Officer is elected by PKN ORLEN employees and performs his or her duties without remuneration. The Ethics Officer takes steps to investigate and eliminate behaviours which conflict with the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' , in particular:

- Receives, selects and evaluates complaints for legitimacy and materiality; in the case of minor complaints, the Ethics Officer undertakes remedial action on his or her own, while more complex and serious cases are referred to the Secretary of the Human Capital Committee
- Informs the parties concerned about the measures taken, with due regard to confidentiality requirements
- Prepares, based on the complaints and comments received, an annual report and proposes solutions to improve the corporate culture;
- Carries out educational activities to promote the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' within the Company, which include 'Management by Values' lectures for the management staff and training to promote the core values and standards of conduct across the Company's functions, in accordance with reported needs

Some of the ORLEN Group companies have appointed ethics committees or ethics officers.

Most of the **reports received by the Ethics Officer in 2019** related to cooperation issues, inappropriate communication or poor interpersonal relations. No incidents involving theft of company assets, a conflict of interest or alcohol abuse were reported. Most reports concerned specific violations of the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' Most of the reported issues were investigated, with corrective measures implemented.

As part of educational activities promoting the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' , the Ethics Officer delivers **'Management by Values' lectures** to the **management staff** as well as **business ethics awareness training** (themed, in particular, around communication based on ethics and respect) and promoting the core values and standards of conduct across several functions. 140 people were trained in total in 2019.

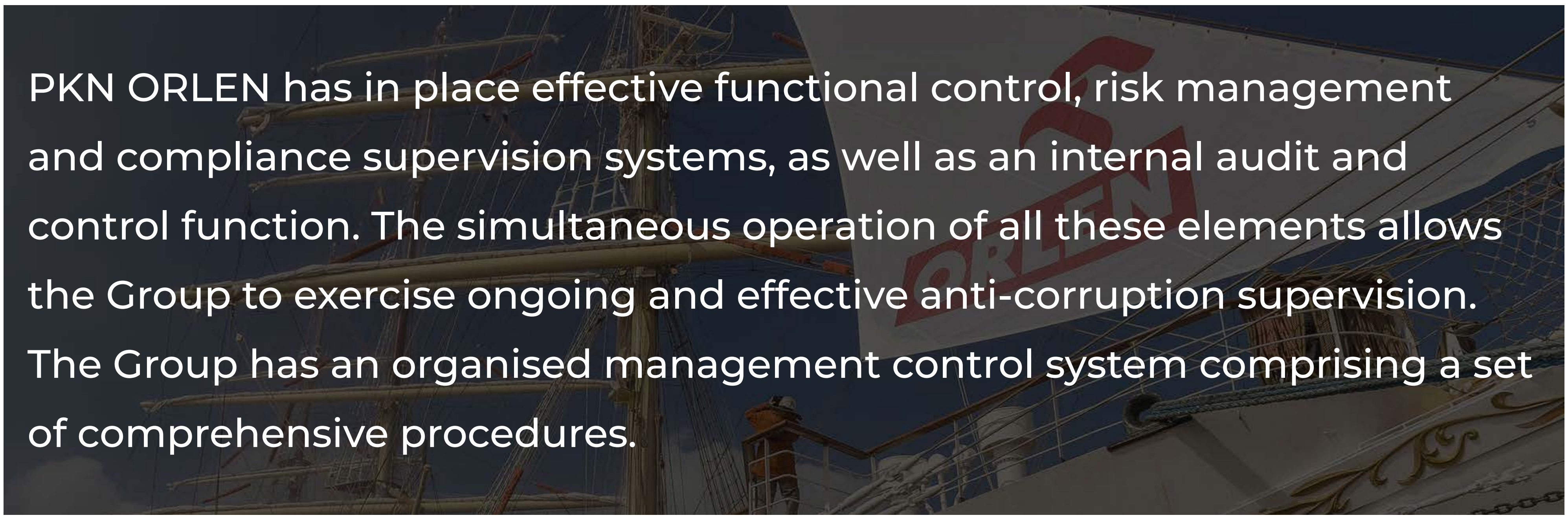
Since June 2019, the Ethics Officer has run **his own training block as part of the Onboarding Programme** to present an overview of corporate values to new hires and discuss the importance of each principle of conduct owned by individual functions/offices.

GRI: 102-17

Internal and external mechanisms to obtain advice on how to report a violation or suspected violation

The Company's employees and external Stakeholders may report a breach or suspected breach of the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' in connection with workplace incidents or employee behaviours. A variant path is defined for reporting and analysing information on actual or suspected breaches, depending on the severity and complexity of the problem and on the confidence of the parties involved. A suspected breach of the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' or any ethical dilemmas may be reported to:

- Line manager,
- Senior managers,
- Ethics Officer,
- Human Capital Committee.



PKN ORLEN has in place effective functional control, risk management and compliance supervision systems, as well as an internal audit and control function. The simultaneous operation of all these elements allows the Group to exercise ongoing and effective anti-corruption supervision. The Group has an organised management control system comprising a set of comprehensive procedures.

GRI: 103-3

The **ORLEN Group Anti-Corruption Policy** and an internal order on **Anti-Money Laundering and Terrorist Financing** were adopted in 2018. The **Workplace Bullying Policy** is also in place, setting out the rules to be followed when a case of harassment is reported, as well as the rights and obligations of employees in such situations. The Workplace Bullying Policy has been implemented to ensure high standards in developing a supportive work environment based on mutual respect and trust. Every employee across the organisation is responsible for active promotion of the right behaviours, fostering healthy relationships between employees and upholding the team spirit. In view of the importance of continual efforts to bring behaviours in line with the 'Core Values and Standards of Conduct of PKN ORLEN S.A.' and ensuring that managers stay alert, the **Rules to Prevent Workplace Bullying, Discrimination, and any Forms of Harassment at PKN ORLEN** were drawn up in 2019. They are intended to support the implementation of PKN ORLEN's Workplace Bullying Policy, which also includes measures designed to prevent any behaviour that could amount to bullying, discrimination, or other forms of harassment. The key human rights policies and internal regulations also include: **Collective Bargaining Agreements**, setting out the conditions that should be met by the substance of an employment relationship, and the rules of remunerating and granting other benefits to employees. **Supplier Code of Conduct** , being an integral part of the business relationships with suppliers, including supplier qualification and assessment procedures. **The ORLEN Group CSR Strategy until 2022**, setting out the directions of social responsibility initiatives, and the **Integrated Management System Policy**.

For more information on the ORLEN Group's regulations governing human rights issues, see 'Non-financial statement of PKN ORLEN and the ORLEN Group for 2019'.

RESPONSIBILITY TOWARDS SOCIETY

GRI indicators: 103-2, 203-2, 203-1

Capitals:

GRI: 103-2

The ORLEN operates on six home markets – in Poland, the Czech Republic, Germany, Lithuania, Slovakia and Canada.

The ORLEN Group has more than 22,000 employees. With their families included, this gives in total more than 100,000 people whose lives are directly affected by PKN ORLEN operations. Furthermore, investment projects, current repairs and maintenance work performed by third party contractors for the ORLEN Group add up to more than ten thousand jobs. ORLEN Group service stations in Poland, Germany, the Czech Republic, Lithuania and Slovakia employ more than 27,000 staff.

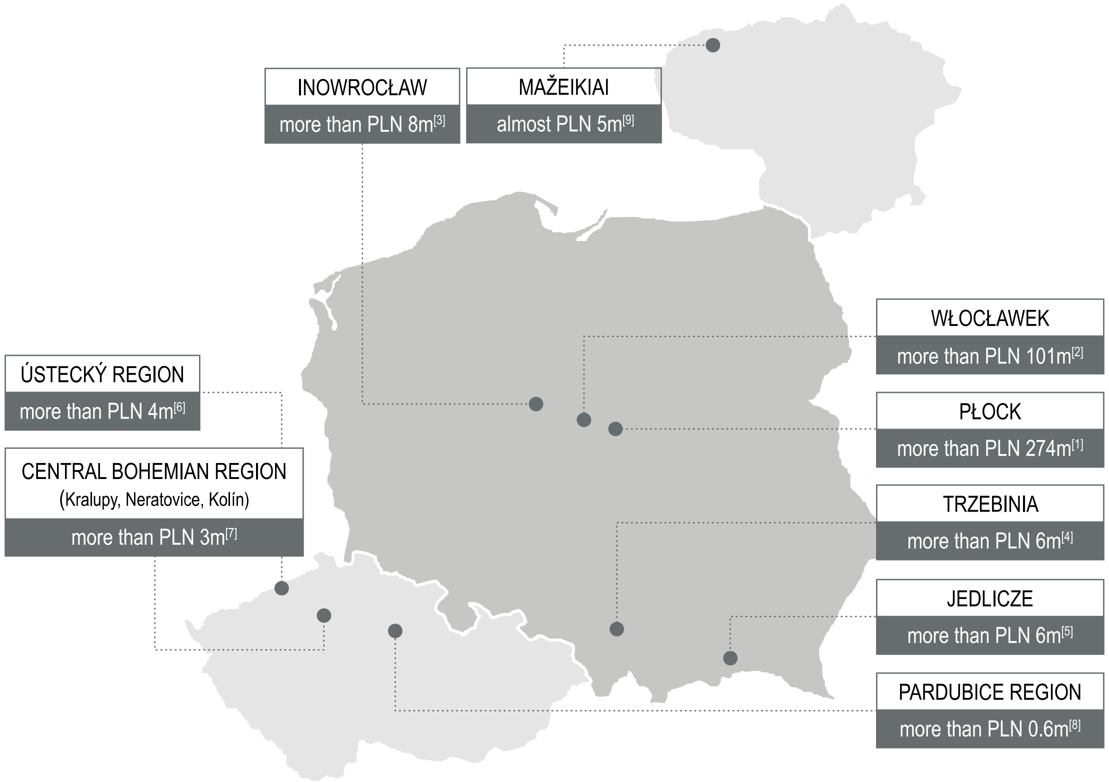
PKN ORLEN and other ORLEN Group companies put special focus on their role as socially responsible members of their respective communities. The Group considers both direct and indirect effects of its activities on the environment it operates in. It is an employer, a tax payer, sponsor, charity provider, and partner for numerous suppliers, institutions, and organisations.

GRI: 203-2

Local taxes

The ORLEN Group companies are key local tax payers at their respective locations. For example, in 2019 the total revenue of the city of Płock related to the operations of PKN ORLEN and the ORLEN Group companies located in the city amounted to more than PLN 274m.

Local taxes paid by the ORLEN Group companies in key locations in 2019



[1] *Includes: property taxes, vehicle taxes, corporate income tax, personal income tax, environmental charges, charges for perpetual usufruct of land. Applies to the following companies: PKN ORLEN, ORLEN Asfalt, ORLEN Koltrans, ORLEN Paliwa, ORLEN Serwis, ORLEN Eko, ORLEN Laboratorium, ORLEN Administracja, Centrum Usług Korporacyjnych.*

[2] *Includes: property taxes, corporate income tax, personal income tax, charges for perpetual usufruct of land. Applies to the following companies: ANWIL and ORLEN Laboratorium.*

3) Includes: property taxes, agricultural tax, vehicle taxes. Applies to the following companies: IKS Solino and ORLEN Paliwa.

4) Includes: property taxes, vehicle taxes, perpetual usufruct charges, personal income tax. Applies to the following companies: ORLEN Południe, ORLEN Oil, ORLEN Asfalt.

5) Includes: property taxes, charges for perpetual usufruct of land, personal income tax. Applies to the following companies: ORLEN Południe, ORLEN Oil, ORLEN Południe.

6) Includes property tax, the Unipetrol Group.

7) Includes property tax, the Unipetrol Group.

8) Includes property tax, the Unipetrol Group.

9) Includes property tax, charges for perpetual usufruct of land, ORLEN Lietuva

GRI: 203-1

CSR initiatives

more than
pln 100 million
to help prevent the spread of the coronavirus

‘My Place on Earth’
pln 7 million
for local community projects in 2018-2020

Employee Volunteering Programme
800
employees involved

‘ORLEN for Firefighters’
pln 18 million
of support in 2000-2020

Health cities
more than
10,000
consultations and examinations

Verva Street Racing
250,000
participants

2019 saw the continued implementation of countrywide projects designed to reach local communities, such as the **‘My Place on Earth’** and **‘ORLEN for Firefighters’ grant programmes** and a **loyalty scheme for volunteer firefighters** registered in the National Firefighting and Rescue System. The ORLEN Foundation delivered successive editions of its scholarship programmes, including ‘**For Eagles**’ dedicated to children of the employees of PKN ORLEN and ORLEN Group companies and the residents of Płock and the County of Płock, as well as ‘**BONA FIDE**’ for university and college students.

In 2019, the Company increased its involvement in health promotion. A novelty during the Chemists’ Days in Płock was the ‘**Health City**’, a two-day event aimed at promoting disease prevention and a healthy and active lifestyle. The event’s partners included: the Ministry of Health, the National Health Fund and the National Institute of Oncology. Its participants were offered free medical examinations and consultations: more than 4,000 during the first edition in June, and more than 6,000 during the second edition in October. Responding to the needs of Płock residents, in 2019 PKN ORLEN signed an agreement with the National Institute of Oncology for a ‘**Comprehensive programme for the prevention, diagnostics and treatment of cancers and respiratory system diseases for residents of the city and county of Płock**’, which is a pioneering initiative in Poland. The project is run by the National Institute of Oncology, in partnership with the National Tuberculosis and Lung Diseases Research Institute. Its focus is on early diagnosis, promotion of recognised treatment standards, as well as education and outreach activities motivating people to change their lifestyles. As part of the programme, a series of **health-related meetings** for members of farmers’ wives associations from municipalities of the Płock county, entitled **‘Say YES to Your Healthy Future’**, were launched in late 2019, including educational lectures on how to live a healthy lifestyle. Facilities offering basic medical examinations and consultations were also available. In 2019, PKN ORLEN was also involved in community projects aimed at reducing inequalities. Their intended beneficiaries were young children under the care of foster family group homes and the Róża Czacka Centre for Blind Children in Laski, as well as senior citizens. The ‘**Cinema with ORLEN**’ project consisted in admission-free film screenings accompanied by safety lectures delivered by special guests, and concerts featuring theatre actors or Opera Academy artists. Volunteers of the ORLEN Foundation were engaged in the events.

Corporate foundations

In accordance with its Charitable Giving Policy, in 2019 PKN ORLEN implemented and supported initiatives aligned with the four priorities outlined in the document ‘ORLEN for the environment, ORLEN for society, ORLEN for safety and health, ORLEN for sports, education and culture’. The Charitable Giving Policy is an important part of corporate social responsibility, as a tool supporting the Company in its role as a responsible corporate citizen and employer, member of the local community, and good neighbour. The ORLEN Group not only initiates and carries out charity activities, but also participates in such initiatives as a partner.

The **ORLEN Foundation** , established in 2001 to fulfil the social responsibility mission of its founder, PKN ORLEN, has an important part in pursuing these objectives. At the end of 2019, its name was changed from ‘ORLEN – GIFT FROM THE HEART’ to ‘ORLEN Foundation’. Since its inception, the Foundation has provided comprehensive **assistance to foster family group homes** by funding scholarships, trips during summer and winter holidays, additional tuition and rehabilitation care for children, or financing fuel cards. At the moment, the Foundation’s assistance covers children from close to 300 such homes. The Foundation runs numerous **scholarship programmes** , both **for children of ORLEN Group employees** and **for students from Płock and the surrounding area**. The aim of such programmes is to help young people in their education and pursuit of their passions, improve their motivation, and also encourage their social involvement, e.g., through volunteer work. In 2019, the Foundation continued its ‘**BONA FIDE’ scholarship programme** together with partners: The Lotto Foundation, the J.K. Steczkowski BGK Foundation and the Energa Foundation. Under the programme, the Foundation supports second- and third-degree students at a foreign university ranked among the world’s top 50 academic institutions (the Shanghai List). The Foundation’s mission is to support world-class development and education of people who have the potential of becoming future leaders in various sectors of the economy or public administration. In 2019, as in the year before, the ORLEN Foundation ran three grant programmes. In addition to the two decades-old ‘**ORLEN for Firefighters**’, there were two programmes launched in 2018: ‘**My Place on Earth**’, which encourages local communities to make a difference for the better in their immediate surroundings, and ‘**We keep watch! We remember!**’, in which foundations, associations or local institutions commemorate national heroes, restoring memorial sites dedicated to often forgotten heroes of local fights for Poland’s independence. The application round for ‘My Place on Earth’ was accompanied by 50 meetings at ORLEN service stations throughout Poland. During five summer holiday weeks, the ‘My Place on Earth’ zone was visited by as many as 18 thousand travellers. The ORLEN Foundation received a record-high number of applications: more than 2,100. Grants to fund the proposed projects, ranging from PLN 4,000 to PLN 15,000, went to various common interest societies, farmers’ wives associations, schools, libraries, sports clubs, parishes and other beneficiaries. The initiatives for the benefit of local communities were evaluated by independent experts. In 2019, the Foundation co-financed 276 projects. For 20 years, PKN ORLEN and the ORLEN Foundation have supported the State Fire Service and voluntary fire brigades. In 2019, 249 fire-fighting units received grants totalling more than PLN 2m, which they used to purchase necessary equipment. Thanks to regular support from the ORLEN Foundation, over the last two decades fire brigades have been equipped with the necessary equipment to fight fires and respond to natural disasters, as well as equipment used in road, technical, medical, chemical, environmental and rope rescue operations. In April 2019, the Foundation launched a **special free training programme for Volunteer Fire Brigades,** under which 372 firefighters from nearly 200 different organisations across 13 provinces were trained.

In 2019, the Foundation was developing a new format for its **employee volunteer service programme**, which has been in place at the ORLEN Group for 15 years. Currently, ORLEN Group employees who want to volunteer have two options: take part in activities prepared by the ORLEN Foundation or submit their own volunteer initiative projects and apply for a grant from the Foundation. Another novelty is the ‘Volunteering Project of the Year’ competition, ending with an Employee Volunteering Gala.

Furthermore, the ORLEN Foundation pursues its statutory objectives by granting **donations** to other entities. Under its donations programme in 2019, the Foundation provided funds for projects spanning a range of areas: social welfare; protection and promotion of health; preservation of national traditions; culture; local communities; science, education, upbringing; sports; rescue and civil protection.

The CSR initiatives of PKN ORLEN and the ORLEN Foundation also engage **members of the VITAY loyalty scheme and users of the YANOSIK application**. Many of them choose to donate their points to social causes, including assistance to foster family group homes or environmental projects.

The ORLEN Group has also established other corporate foundations – the ANWIL for Włocławek and the Unipetrol Foundation. The **ANWIL for Włocławek Foundation** supports projects aimed at raising the level of education of the Włocławek residents, counteracting social and economic exclusion, improving the condition of the natural environment, preserving the historical heritage, as well as protecting and promoting health. The key programmes implemented by the Foundation include: ‘I Learn with ANWIL’, ‘ANWIL Helps’, ‘Primi Inter Pares’, ‘Youth with ANWIL”, ‘Streetworking in Włocławek’, ‘Save from Oblivion’, ‘Holidays with the Foundation’, ‘I Choose Sports and Say Goodbye to Boredom’.

Objectives of the **Unipetrol Foundation** include providing support to students of natural sciences- and technology-oriented faculties through internships and work placements as well as grant programmes dedicated to secondary school students. In 2019, 51 students received scholarships of CZK 1.67m. For 18 years, Unipetrol has been a partner of the **University of Chemistry and Technology of Prague.** In 2019, Unipetrol allocated CZK 1.3m to selected school projects, including the ‘Summer School’ and ‘Autumn School’, addressed to primary and secondary school teachers, or the ‘Lesson of Modern Chemistry’ project in the Ústí region. The company is also a partner of the national round of the Chemistry Olympics. It offers internships to young talents to give them the opportunity to gain the required experience and knowledge. A branch of the University of Chemistry and Technology of Prague is located within the Záluží industrial park in Litvinov, which gives the students an opportunity to cooperate with the unique **UniCRE research centre** operated by the Unipetrol Group, a one-of-a-kind project in the Czech Republic. At the research centre, students can complete an internship and gain industry experience. What is more, Unipetrol actively supports the ‘**Zlatý Amos**’ project, which seeks to recognise the best chemistry teachers in the Czech Republic.

In 2019, PKN ORLEN actively supported the **foundations it had established, contributed to or participated in**, including the Grant Fund for Płock Foundation, the Foundation of the Ignacy Łukasiewicz Oil and Gas Industry Museum in Bóbrka, the Polish National Foundation, the Grow Up with Us Foundation and the Polish Economic Security Consortium through the Polish Economic Security Foundation – Legal and Economic Dialogue and Analysis Institute.

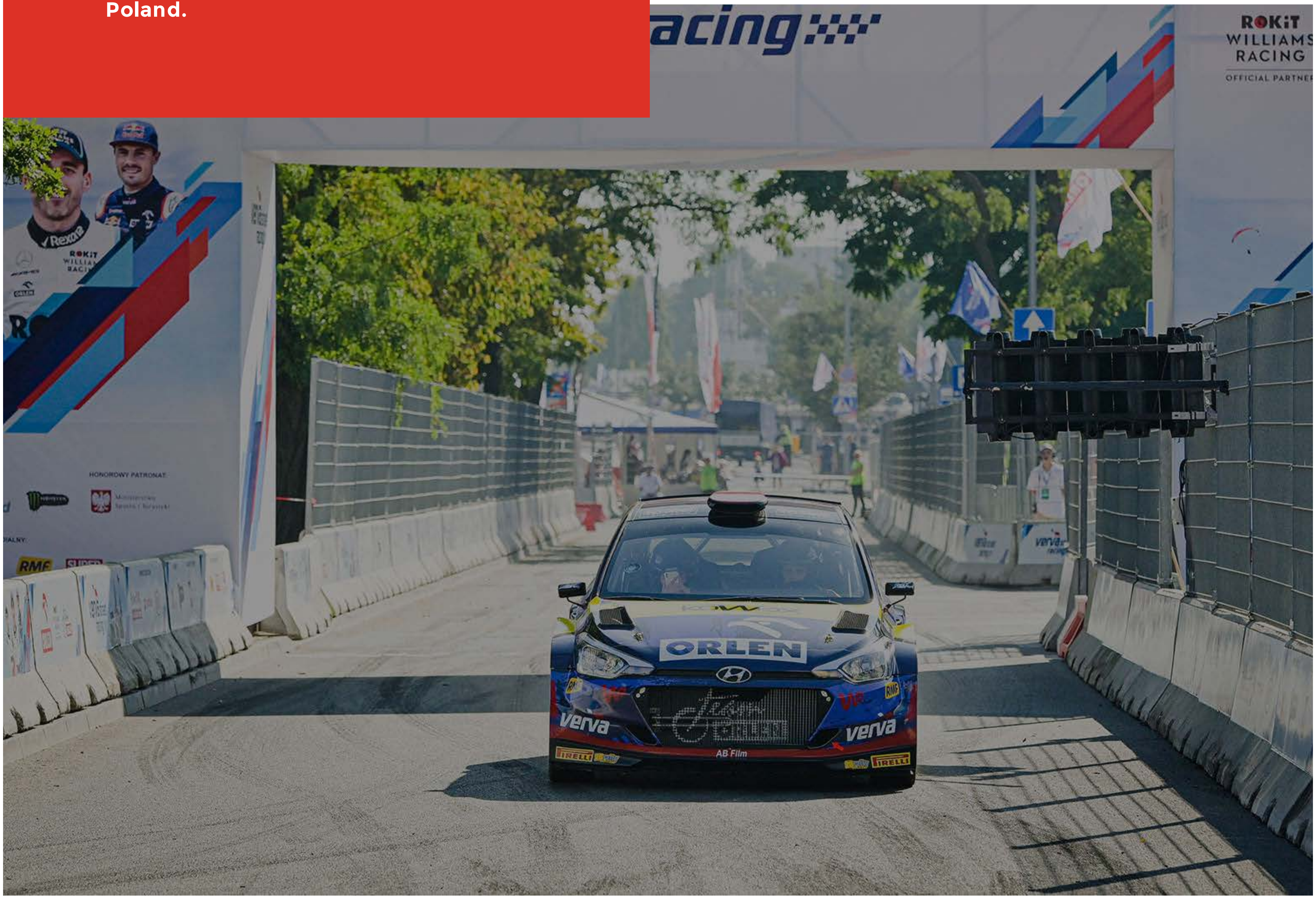
#GoodDriver (#DobryKierowca) public awareness campaign

In 2019, the Company ran the first edition of a public awareness campaign under the hashtag ‘#DobryKierowca’ (‘#GoodDriver’) as part of PKN ORLEN’s CSR activities. The key points of focus in the campaign included environmental protection, safety, health and support for local communities. The aim was to demonstrate that even small changes can make a big difference for many people around us. Through the campaign, PKN ORLEN attempted to make its customers aware that together we can create a better future. By buying fuel and other products at ORLEN service stations, they can support not only Polish producers, but also projects focused on environmental protection, health or safety. The nationwide campaign was publicised in the press, on television, online and on roadside billboards. In addition, PKN OLREN organised special communication platforms for the inhabitants of Płock to present its pro-environmental projects. Local residents had the opportunity to learn, for instance, of various animal species living in the immediate surroundings of the production plant, including bees making honey that meets all the quality standards. Every customer who visited an ORLEN service station during the campaign and purchased any product received a unique sticker to show other motorists that they supported ORLEN's charitable activities.

Support to sports and culture

PKN ORLEN is an undisputed Patron of Polish Sports, **supporting professional and amateur athletes and other sportsmen**. In 2019, PKN ORLEN entered the most exclusive motor sport discipline – **Formula 1**, becoming a sponsor of the Rokit Williams Racing team. The car was driven by Robert Kubica, the only Polish driver in this highest class of auto racing. The Company's decision to sponsor this sports discipline was prompted by its strong foreign expansion, the need to support international recognition of the ORLEN brand and the ongoing co-branding of its service stations in the Czech Republic and Germany. In 2020, the Company signed a new sponsorship agreement with the Alfa Romeo Racing ORLEN team, becoming its title sponsor, with Robert Kubica as the test driver and team ambassador. The Group is also present in many other motor sport disciplines. The colours of the two decades old **ORLEN Team** are worn by cross country, enduro, kart racing, Formula 1, car rally, WRC, speedway and powered paragliding competitors. The Company supports Poland's only professional cross country rally team, whose members take part in the most challenging rallies. Their greatest success was the 4th place taken by Jakub Przygoński in the Dakar Rally, the world's toughest off-road event. In 2019, the team consisting of Przygoński and motorcyclists Maciej Giemza and Adam Tomiczek was joined by Kamil Wiśniewski, who competes in off-road ATV rallies, and Kacper Wróblewski, a road rally driver. Bartosz Zmarzlik – member of the Polish speedway team sponsored by PKN ORLEN and ANWIL – became the Individual World Champion, while Wojciech Bógdał – a powered paragliding pilot supported by PKN ORLEN, came second in the PL1 class at the European Slalom Paramotor Championships in Spain and won the title of Polish Slalom Champion in the same class. At the beginning of 2020, the ORLEN Team expanded considerably, having admitted representatives of new disciplines: Bartłomiej Marszałek competing in F1 Powerboat Racing and the Żelazny Aerobatics Team. PKN ORLEN was also the organiser of the largest running event in Poland: '**ORLEN Warsaw Marathon**'.

PKN ORLEN was also the organiser of the largest running event in Poland: ‘ORLEN Warsaw Marathon’. Since 2010, PKN ORLEN has organised ‘VERVA Street Racing’, the largest motoring festival in Poland.



The **ORLEN Sports Group**, a group of individual competitors who receive financial support from PKN ORLEN, already comprises almost 40 successful athletes, including champions and medal winners of the most prominent events: the Olympic Games, and the indoor or outdoor World and European Championships. The group members include athletes, track cyclists and a female judoka. The Group’s top stars are: Anita Włodarczyk – winner of two Olympic gold medals, four-time world champion and holder of multiple world, European and Polish records in hammer throw, Piotr Małachowski – Poland’s best discus thrower, winner of two Olympic silver medals, and Paweł Fajdek – four-time world champion in hammer throw. The ORLEN Sports Group’s biggest successes in 2019 included the achievements of our competitors during the World Championships in Doha: a gold medal won by Paweł Fajdek, a silver medal won by women’s 4x400m relay (Justyna Święty-Ersetic, Iga Baumgart-Witan, Małgorzata Hołub-Kowalik, Patrycja Wyciszkiewicz) and a bronze medal won by Piotr Lisek in pole jump.

In 2019, the Polish national team won the European Athletics Team Championships in Bydgoszcz.

For nearly a decade, PKN ORLEN has been committed to supporting **Polish volleyball**. It sponsors the Polish indoor and beach volleyball national teams across all age categories, helping them succeed. In 2019, the men's team won the bronze medal of the European Championships, ranked third in the Volleyball Men's Nations League and qualified for the Olympic Games in Tokyo. In 2019, the Group company ORLEN Paliwa became the title sponsor of the Warsaw-based VERVA Warszawa ORLEN Paliwa volleyball club.

PKN ORLEN also supports **sports clubs from Płock,** as the general sponsor of the SPR Wisła Płock handball team and the Wisła Płock football club. The sponsorship of these teams is not merely a business decision – it is a CSR project created together with the Płock community.

An important part of the PKN ORLEN sports sponsorship strategy is an **effective youth training system,** aimed at developing a pipeline of future champions. Together with the Polish Athletic Association, the Company implements the 'Athletics for Everyone' programme. It has also partnered with the Polish Volleyball Federation in the development of School Volleyball Centres. PKN ORLEN is actively engaged in a training system set up by Football Academies across Poland. In 2019, training and development opportunities were provided to 9,000 children and young people, as the Company sponsored tournaments and football schools. Seeking to nurture potential successors of Robert Kubica, PKN ORLEN supports young kart racing enthusiasts in the ORLEN Team Academy: 30 young competitors aged 6 to 18. In addition, the Company is involved in the School Sports Club (SKS) programme initiated by the Ministry of Sport and Tourism, re-established in Polish schools after years of absence. The figures for 2019 are impressive: nearly 10,000 participating schools, more than 15,000 teachers in charge of SKS classes, and 320,000 students in 100% of Polish counties and 93% of municipalities covered by the programme.

nearly 10,000 participating schools

2019 was also marked by the 100th anniversary of the Polish Olympic Committee. As the Strategic Sponsor of the organisation, PKN ORLEN actively supported the anniversary celebrations. Furthermore, the Company continued to partner with the Polish Paralympic Committee, supporting disabled athletes competing at the national and international level.

PKN ORLEN builds its brand recognition through sports not only in Poland, but also abroad: it supports a hockey club in the Czech Republic, handball in Germany, and a basketball club in Lithuania.

As a national giant, PKN ORLEN also supports **initiatives designed to protect Polish national heritage**. The Company is engaged in a wide variety of activities promoting Polish culture. One of the most important events in 2019 was the commencement of a sponsorship arrangement with Europe's largest opera house: Teatr Wielki – Polish National Opera in Warsaw. PKN ORLEN remained a sponsor of the Fryderyk Chopin Institute, supporting concerts organised by the Institute in the world's most prominent concert venues to promote the Chopin Competition scheduled for autumn 2020 in Warsaw, which is also sponsored by the Company. Additionally, PKN ORLEN provided support for the organisation of the 24th Ludwig van Beethoven Easter Festival and the International Music Festival of Central-Eastern Europe EUFONIE. An exhibition of Polish hussar (winged cavalry) armour purchased by the ORLEN Foundation for the Polish History Museum was held in 2019. Two vernissage events titled 'Proud of the past, brave about the future' for history lovers and fans were held in Warsaw and Płock.

PKN ORLEN presented its good CSR practices at the High-Level Political Forum on Sustainable Development in New York. The Company co-hosted the Polish workshop session with Goal 10 'Less Inequality' as its main theme.

10 new practices

PKN ORLEN for the sustainable development
in the Responsible Business Forum's Report

- **Occupational Psychology Centre**
- Comprehensive support program for **foster family group homes**
- **Free Information System** for the inhabitants of Płock and the Płock region
- **Childhood with a Smile Culture with Passion**
- **Health City**
- **We support the protection of the honeybee!**
- **Information campaign** on disabilities in the workplace
- **Investment Academy**
- **PKN ORLEN training center**
- **ORLEN for Firefighters**

For more information on implementing the CSR Strategy in individual areas, see 'Non-Financial Statement of the ORLEN Group and PKN ORLEN S.A.'.

Involvement with local communities

In 2019, the Company actively **collaborated with local communities**, particularly in Płock and other places where it operates. The '**ORLEN for Płock**' **programme** has been in place for four years now. The 59 projects delivered as part of the initiative in 2019 included funding for ten primary schools in Płock to help them purchase teaching aids for school laboratories; sponsoring of the 'Light Backpack' project in Primary School No. 17, where heavy backpacks were replaced with tablets for use by children in class; active support for the Płock voluntary water rescue service (WOPR), which included funding for a lifeguarded bathing spot on Lake Górskie near Płock, frequented by approximately 50,000 visitors in July and August 2019, and sponsoring (for the fourth time) of free swimming lessons for children and adults; as well as support for the ORLEN Wisła Płock handball team and the Wisła Płock football team.

In 2018, we created an innovative tool for communicating with the local communities – the **Free Information System for the inhabitants of the Płock region**, which, following internal pilot deployment, was made available in 2019 to residents of Płock and its surroundings. All those who register at www.infodlaplocka.orlen.pl will be receiving text messages or emails with highlights from the life of the PKN ORLEN Group.

Two major events were also held – the Płock Gardens of Light, which attracted more than 30,000 people to the Tumskie Hill in Płock between December 7th 2019 and January 6th 2020, as well as the Chemists' Day (attended by approximately 35,000 ORLEN Group employees and Płock residents) and the ORLEN Olympics (2,000 employees and Płock residents competing in 11 sports disciplines).

In 2019, PKN ORLEN organised **nature watching cruises on the Vistula River**for almost five hundred inhabitants of Płock and the region, mainly families with children and senior citizens. The participants had the opportunity to look closely at the multitude of flora and fauna species living in the Vistula River's middle section. They also learned what species, including protected ones, live on the site of PKN ORLEN's Płock production plant and in neighbouring areas. In order to raise environmental awareness, PKN ORLEN organised a two-day **conference entitled 'Bees in Human Life. Biodiversity and Protection'.**

With primary focus on its neighbours – the local community of Płock, in 2019 PKN ORLEN published an **environmental leaflet**, accessible and attractive for every reader. It focuses mainly on the presentation of results of the wildlife survey carried out on and around the premises of PKN ORLEN's production plant in Płock. The leaflet presents statistics on many plant and animal species, including common and protected ones, as well as numerous photos showing the most interesting and valuable specimens. It also provides important information on the Company's environmental impact.

In 2019, the Company organised **regular workshops for representatives of local and public administration and institutions responsible for security in Płock**. During the meetings, Company experts discussed measures taken to improve process safety and protect the environment, as well as solutions and procedures in place. The meetings also serve as the opportunity to conduct open dialogue and learn about Stakeholders' expectations.

Unipetrol provides direct financial assistance to selected villages and towns in the Ústecký and Central Bohemian regions, where the company has the bulk of its operations. In 2019, Unipetrol provided financial support of CZK 2.45m to 16 towns and villages located in the vicinity of the production plants in Záluží near Litvínov and Kralupy nad Vltavou. The funds were allocated for the development of social, cultural and sports life, as well as modernisation and development of municipalities. The municipalities use the funds from Unipetrol to repair roads and bicycle paths, upgrade public lighting systems and care facility equipment or extend school buildings.

ORLEN Lietuva, with its registered office in Mažeikiai, Lithuania, implements social-, cultural-, educational-, sports-, and charity-oriented initiatives for the benefit of the local community. The company collaborates with junior high schools in Mažeikiai, donating funds for purchasing laboratory equipment, and with the University of the Third Age in Mažeikiai. It supports religious communities in Mažeikiai, such as the parish of the Sacred Heart of Jesus, an Eastern Orthodox parish, and the parish of the Holy Trinity in Pikeliai. ORLEN Lietuva also engaged in the construction of a new children's ward at the **Blessed Father Michael Sopocko hospice in Vilnius**.

As a business engaging in appraisal, exploration and production operations, the **ORLEN Upstream Group** strives to build friendly and lasting relations with local communities, i.e. residents, local governments and entrepreneurs.

While carrying out its projects, the ORLEN Upstream Group cooperates with local suppliers and subcontractors, including municipal utilities, grocery stores, catering outlets and hotels, as well as companies renting construction equipment. In 2019, the ORLEN Upstream Group used services provided by about 20 businesses located within its licence areas. As it conducts highly specialised exploration and production operations, it has limited ability to employ local residents since they lack the education and professional experience relevant to the industry in which it operates. However, the company employs local residents to perform basic geophysical surveys on a drilling site or to guard the facility. Thus, it builds awareness and understanding of the work it conducts in a given area.

Combating the spread of coronavirus in 2020

PKN ORLEN immediately joined the efforts to prevent the spread of the coronavirus epidemic.

PLN 100m for the battle against the coronavirus. Material and financial support is provided mainly to healthcare establishments, as well as to uniformed services.

Financial and in-kind support is provided mainly to healthcare establishments, as well as uniformed services.

It took only ten days for ORLEN Oil, an ORLEN Group company, to switch from windshield washer fluid production to the production of a **liquid hand sanitiser**, whose distribution started already in early March. In March, the hand sanitiser was sent to the Material Reserves Agency, other institutions and retail customers. Early April saw the launch of **production of a biocidal hard surface disinfectant** at the Trzebinia plant. The product is sold through wholesale channels and is supplied to public utility institutions.

Thanks to our support, **healthcare establishments have better equipment to save lives and health of patients with the coronavirus.** PKN ORLEN purchased personal protective equipment, including protective masks and gloves, coveralls and medical goggles, mainly for medical personnel and uniformed services. The equipment was provided to the Ministry of Internal Affairs and Administration and to the Material Reserves Agency. Furthermore, the Company gave ventilators to the Provincial Hospital Complex in Płock and to the Central Clinical Hospital of the Ministry of Internal Affairs and Administration in Warsaw. Protective equipment to fight the coronavirus pandemic was also donated to the Vatican and The Office of Papal Charities.

The ORLEN Foundation joined in helping those in need as well by offering PLN 10m to aid hospitals across Poland which diagnose and treat coronavirus patients. The hospitals used the funds to purchase additional laboratory equipment, ambulances, medical equipment, as well as protective coveralls, goggles, face shields, masks, gloves and disinfectants.

The ORLEN Group also supplies **residential care homes** with hygiene products and protective equipment to fight the epidemic. They are sent to the most affected 21 residential care homes from all over Poland in order to protect their residents and the medical personnel from contracting the coronavirus.

Other ORLEN Group companies are also actively involved in combating the epidemic.

ANWIL purchased medical equipment and hygiene products to increase safety of the inhabitants of the Province of Bydgoszcz.

ORLEN Deutchland, operating the 'star–ORLEN Group' service station chain in Germany, became involved in an **initiative designed to help motorists waiting to cross the German-Polish border.** They were offered sandwiches, bars, water, juices and energy drinks delivered from Poland in collaboration with the Border Guard. The project was joined by the Polish Ministry of Internal Affairs and Administration and the Ministry of Foreign Affairs. The Czech subsidiary Unipetrol was involved in a similar initiative at the Czech-Polish border.

PKN ORLEN decided to **cut fuel prices at PKN ORLEN CODO stations in Poland** to encourage all those who have no other option but to travel in this difficult time to choose the car rather than public transport. The army, police, fire service and medical service personnel who are directly involved in fighting the spread of the coronavirus epidemic in Poland can refuel their vehicles at discounted prices.

At ORLEN service stations, ambulance service staff, police officers, fire fighters, municipal police officers, soldiers, Border Guard officers, as well as employees of the National Revenue Administration and Inspectorate of Road Transport are served out of turn and can get a free hot beverage.

RESPONSIBLE EMPLOYER

GRI indicators: 103-1, 103-2, 103-3, 102-8, 102-41, 401-1, 404-2, 404-1, 401-2, 403-4

Capitals:

We provide fair and friendly working conditions for our employees.

GRI: 103-1, 103-2, 103-3

Relations with internal Stakeholders and the external business environment are based on integrity, respect in everyday relationships and on dialogue, cooperation and involvement of each staff member in building a culture consistent with the Company's core values.

The key policies and internal regulations governing employee matters include: **'Core Values and Standards of Conduct of PKN ORLEN S.A.'** – providing for such issues as occupational health and safety, fair and friendly working conditions, communication and cooperation, as well as equal employment, promotion, development and in-service training opportunities; **Collective Bargaining Agreements and Work Rules** of ORLEN Group companies – prepared in accordance with the applicable regulations and the relevant standard adopted at PKN ORLEN; **ORLEN Group's Human Resources Management Policy; ORLEN Group's Age Management Policy; Corporate Social Benefit Activity Rules; Employee Pension Plan.** For information on those and other key documents, see the 'Non-financial statement of the ORLEN Group and PKN ORLEN for 2019'.

Employment

In 2019, the ORLEN Group's hiring policy was focused on recruiting top quality specialists for both day-to-day tasks and strategic projects. Expansion of the ORLEN Group's power generation, petrochemicals, maintenance services, IT and trade activities led to a 1,055 year-on-year increase in total workforce, to 22,337 employees. In 2019, the average annualised workforce at the ORLEN Group was 21,826, an increase by 950 employees year on year.

GRI: 102-8

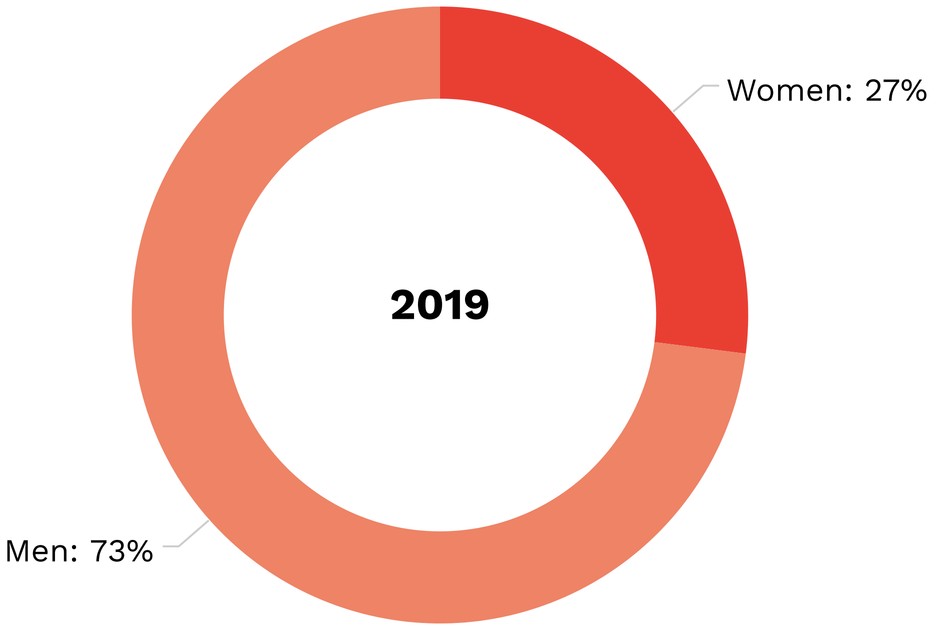
Basic data on employment in the ORLEN Group

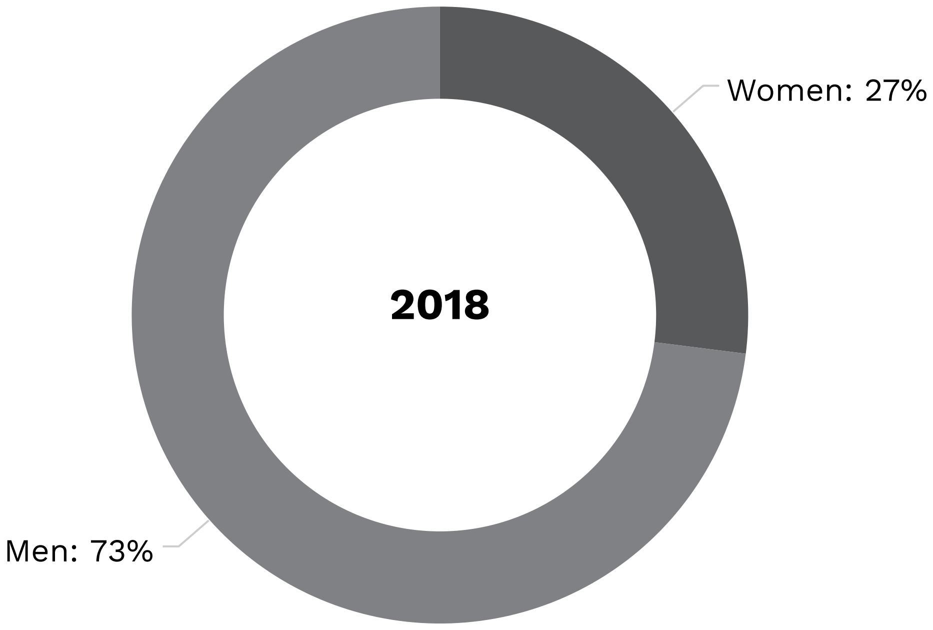
	UoM	2019	2018
Employee relations KPIs including:	**[persons]**	**22,337**	**21,282**
PKN ORLEN	[persons]	5,447	5,250
Unipetrol Group	[persons]	4,913	4,835
ORLEN Serwis Group	[persons]	2,216	1,775
Grupa ORLEN Lietuva	[persons]	1,429	1,631
ANWIL	[persons]	1,364	1,323
ORLEN Ochrona Group	[persons]	1,382	1,182
Other	[persons]	5,586	5,286

Employment in the ORLEN Group by region

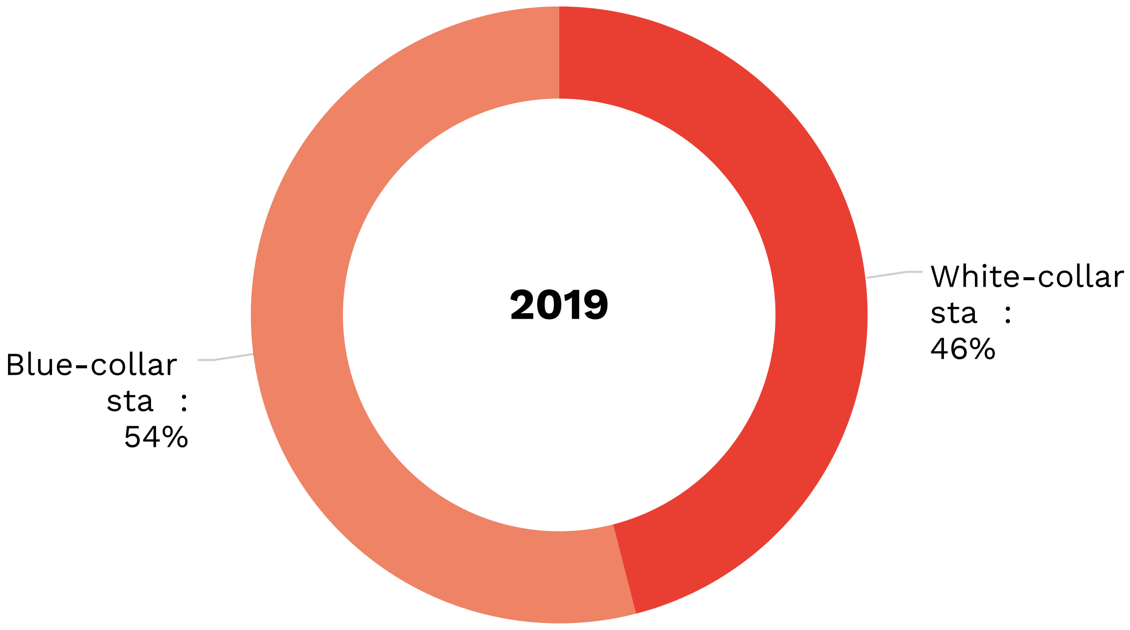
	UoM	2019	2018
Poland	[persons]	14,676	13,824
Czech Republic	[persons]	5,311	5,210
Lithuania	[persons]	2,119	2,018
Germany	[persons]	185	178
Canada	[persons]	46	52

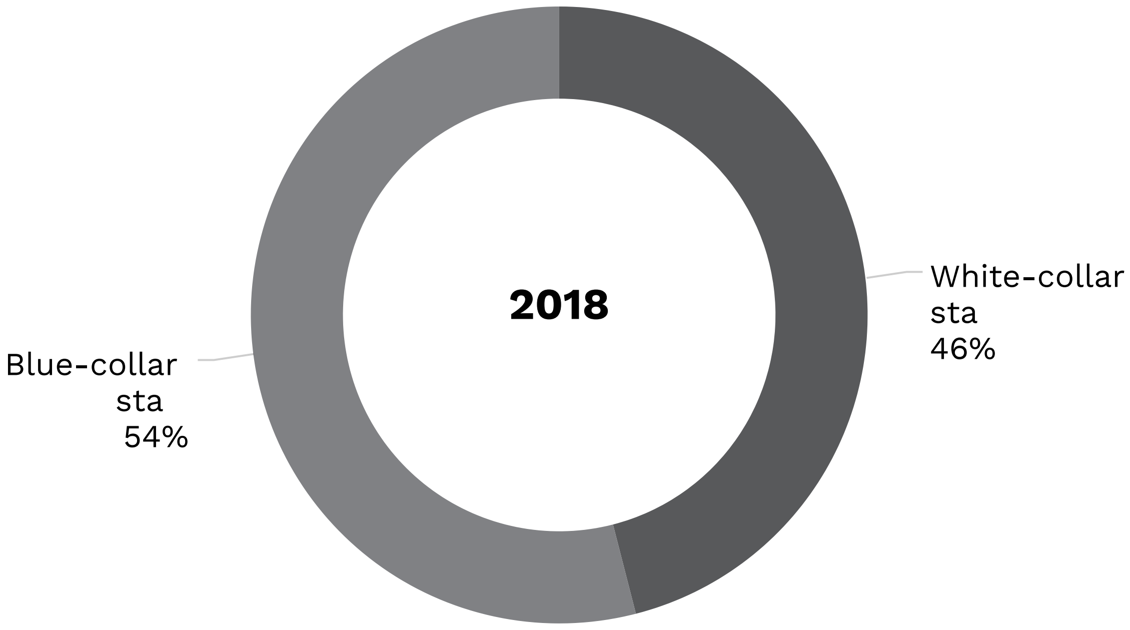
Employment by gender



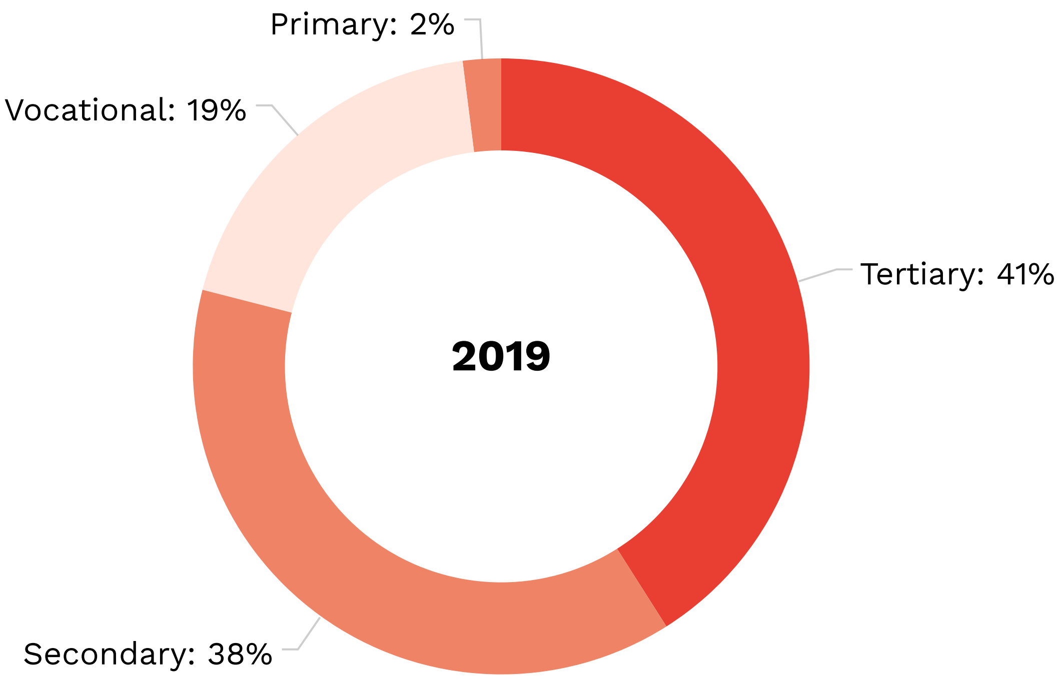


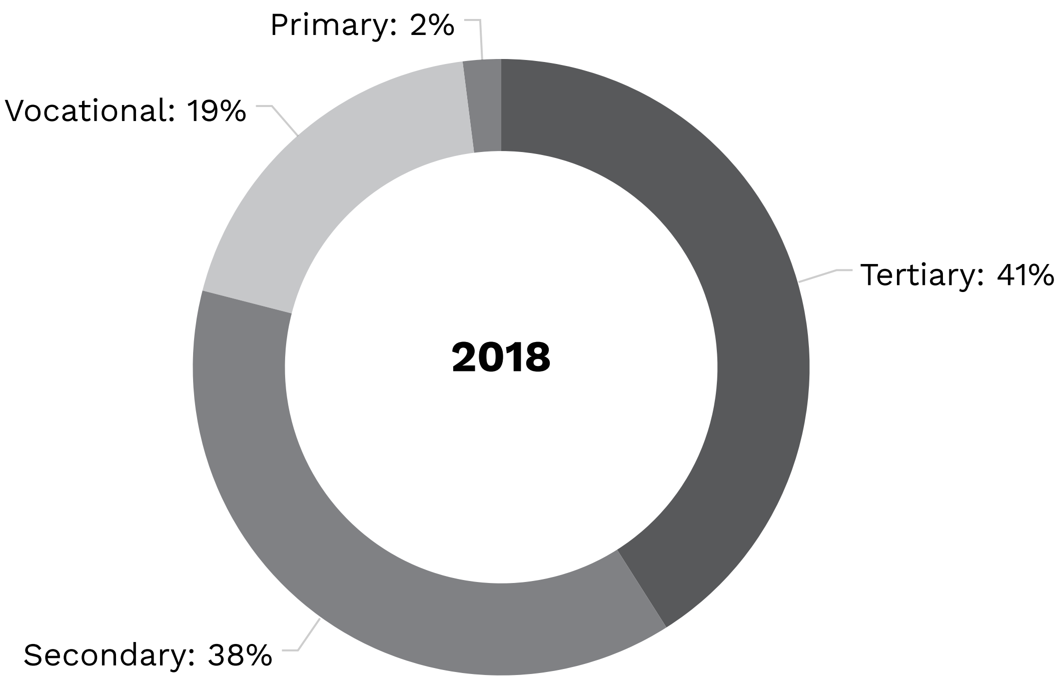
Workforce by type of job





Workforce by education*





** Adjustment of the 2018 data to account for a change in the assignment to educational attainment levels at PKN ORLEN*

GRI: 102-41

Employees covered by collective bargaining agreements

Employees covered by collective bargaining agreements, including:		2019	2018
Polish companies	[%]	73	39
Foreign companies	[%]	92	94

Trade unions – trade union membership	**[%]**	**39**	**40**

Company Social Benefits Fund, including:	[persons]	28,333	28,317
Employees	[persons]	12,654	11,825
Former employees	[persons]	6,750	6,692
Family members	[persons]	8,929	9,800

Other employee data

Employee relations KPIs including:

Type of contract and gender

	UoM	2019	2018
Employees by type of contract and gender:			
Open-ended contract			
Woman	[number]	5,014	4,787
Man	[number]	14,159	13,577
Fixed-term contract			
Woman	[number]	744	681
Man	[number]	1,833	1,671
Probationary period contract			
Woman	[number]	114	127
Man	[number]	326	317
Temporary substitution			
Woman	[number]	106	89
Man	[number]	41	33

Type of contract and region

	UoM	2019	2018
Employees by type of contract and region:			
Open-ended contract			
Czech Republic	[number]	4,576	4,484
Canada	[number]	43	49
Germany	[number]	169	160
Lithuania	[number]	2,073	1,977
Poland	[number]	12,312	11,694
Fixed-term contract			
Czech Republic	[number]	593	584
Canada	[number]	3	3
Germany	[number]	4	5
Lithuania	[number]	20	18
Poland	[number]	1,957	1,742
Probationary period contract			

	UoM	2019	2018
Czech Republic	[number]	141	140
Canada	[number]	0	0
Germany	[number]	12	11
Lithuania	[number]	19	16
Poland	[number]	268	277
Temporary substitution			
Czech Republic	[number]	1	2
Canada	[number]	0	0
Germany	[number]	0	2
Lithuania	[number]	7	7
Poland	[number]	139	111

Employment type and gender

	UoM	2019	2018
Employees by employment type and gender:			
Full-time			
Women	[number]	5,875	5,598
Man	[number]	16,286	15,515
Part-time			
Woman	[number]	103	86
Man	[number]	73	83

GRI: 401-1

	UoM	2019	2018
New hires by age, gender and region:		**3,158**	**2,977**
Age			
< 30	[number]	1,046	1,080
30 – 50	[number]	1,642	1,562
> 50	[number]	470	335
Gender			
Woman	[number]	936	939
Man	[number]	2,222	2,038
Region			
Czech Republic	[number]	732	704
Canada	[number]	4	8

	UoM	2019	2018
Germany	[number]	33	23
Lithuania	[number]	354	315
Poland	[number]	2,035	1,927

	UoM	2019	2018
Hires rate*	**[%]**	**14.1**	**14**
Employee turnover [%]**	**[%]**	**8.9**	**9.9**
Age			
< 30	[%]	15.2	15.7
30 – 50	[%]	7	8.5
> 50	[%]	10	10
Gender			
Woman	[%]	10.2	11.3
Man	[%]	8.4	9.4
Region	[%]		
Czech Republic	[%]	11.9	12
Canada	[%]]	21.7	5.8
Germany	[%]	17.3	11.2
Litwa	[%]	11.8	13.7
Poland	[%]	7.2	8.5

**Hires rate – the number of new hires as a percentage of total employment.*

***Employee turnover – the number of employees leaving a group over a given year /total number of employees in the group.*

The proportion of temporary work contracts at the ORLEN Group is negligible and they are used on an as needed basis.

New hires and turnover rates for ORLEN Group employees are similar to those recorded in 2018.

Employee satisfaction and engagement KPIs at PKN ORLEN and ORLEN Group

Employee engagement and satisfaction surveys are conducted every two years. In the 2019 edition, the employee engagement rate for PKN ORLEN was 64%, on a par with the 2017 level. The overall employee satisfaction rate was 77%, having gone up 4 percentage points.

Employee engagement and satisfaction survey	UOM	2019	2017
Number of ORLEN Group companies surveyed	**[number]**	**22**	**16**
Number of respondents – PKN ORLEN	**[number]**	**4,192**	**4,005**
Employee engagement rate	[%]	64	65
Job satisfaction rate	[%]	77	73
Average rates in Poland in 2016[1] and 2018[2]			

Employee engagement and satisfaction survey	UOM	2019	2017
Employee engagement rate	[%]	50	51
Job satisfaction rate	[%]	64	66

1) Based on Aon Hewitt.

2) Based on Kincentric

Remuneration policy

The rules of remuneration in place at PKN ORLEN are laid down in the Collective Bargaining Agreement. The main components of remuneration are base pay (determined according to the Pay Grade Table and Base Pay Table) and a bonus. Employees are covered by monthly, quarterly, quarterly/annual or annual bonus schemes, depending on positions held. Employees are also entitled to receive an extra annual bonus for achievement of solidarity targets, and a number of allowances, including shift-work allowance, chemical emergency service allowance, or expat allowance. For particularly outstanding achievements, an employee may be awarded a prize, financed from the Employer Prize Fund.

On April 1st 2019, amendments to the PKN ORLEN Collective Bargaining Agreement came into effect, relating in particular to the Pay Grade Table and Base Pay Table. In 2019, Collective Bargaining Agreements/Pay Rules were also agreed upon or amended at the following ORLEN Group companies: ORLEN Laboratorium, ORLEN Serwis, ORLEN Administracja, ORLEN Projekt, ORLEN Południe, ORLEN Centrum Usług Korporacyjnych, Basell Orlen Polyolefins, Energomedia, Sigma BIS and Ship-Service.

In 2019, PKN ORLEN entered into a pay agreement for 2019, which provided for obligatory base pay rises of PLN 250 for employees graded 1 to 6 and one-off bonuses of PLN 2,100 for employees graded 7 and 8. In addition, Christmas bonuses totalling PLN 3,500 and an additional bonus on account of PKN ORLEN's anniversary ranging from PLN 1,000 to PLN 2,000 were agreed upon, depending on the length of service. Pay agreements were signed at all ORLEN Group companies. They were adapted to each company's financial capabilities and additionally depended on its position on the pay market.

In 2019, the average gross monthly remuneration (including base pay, bonuses, awards, allowances and overtime) at the ORLEN Group was PLN 8,316.

HR programs

Development of the Human Resources Functions and standardisation of processes across the ORLEN Group

HR and payroll solutions at the ORLEN Group evolve continually so as to effectively support its business processes. Based on the HR policy for the ORLEN Group, HR and payroll processes at the Transaction Centre are optimised on an ongoing basis. IT systems are developed to streamline staff administration activities and improve the efficiency of HR processes across the Group. A project team comprising representatives of various functions and companies was set up in 2019, tasked with standardising HR processes across the ORLEN Group. In 2019, most Group companies implemented a new system for bonus processes. Moreover, the application supporting the onboarding process was expanded and the tool can now be used at other ORLEN Group companies. The MyBenefit platform introduced by PKN ORLEN, providing employees with better access to attractive employee benefits, was deployed at some Group companies and will be rolled out further. Additionally, in 2019 PKN ORLEN implemented KCP – a work time planning and reporting tool which will be implemented at all ORLEN Group companies in order to standardise the work time management process throughout the Group. The continuous development of HR functions combined with process digitalisation improve the HR processes, guaranteeing their high quality and transparency.

Human resources management policy

People are invariably one of the key pillars of the ORLEN Group's strategy. Activities carried out in 2019 focused on consistent implementation of the HR policy to help build an experienced team of professionals and develop leadership skills among the management staff. In addition, an employee satisfaction and commitment survey was undertaken, a Career Development Session was conducted, and the Employer's Brand Ambassador programme was launched. Priority initiatives for the Group in 2019 were to promote its image as an attractive employer, on board new employees, support managers in the recruitment processes, work with trade unions in implementing the Collective Bargaining Agreements and encourage employees to partner with ORLEN in the pursuit of its business objectives (business awareness). Moreover, non-financial incentives for employees were being developed by expanding the benefits scheme (launch of the MyBenefit platform) and employee health initiatives were run.

Diversity policy

It is our priority to build a value-driven organisational culture which takes into account diversity aspects. For information on the implementation of the diversity policy, see 'Corporate governance'.

GRI: 404-2

Development and training

Development activities in 2019 focused on shaping attitudes and skills in diversity management, management ethics, innovation, cooperation, reviewing lessons learnt, project work, work planning and organisation, and negotiation skills. These and other dedicated training programmes supported the delivery of business strategies. The so-called '**Career Development Session**' was introduced to help plan individual career paths, based on the assessment of an employee's development needs and business requirements in a given business area. The session involves a friendly talk between an employee and their line manager, and hence its important component is the bottom-up feedback. Apart from being a tool used to identify development needs, the session supports the development of a culture of openness and dialogue. Its implementation was preceded by dedicated workshops for the management staff and employees.

Programmes were also run to **support skills identified as important for the development of business functions in the context of future challenges**, including: a programme to develop advanced analytical skills (with respect to 'big data') and a comprehensive programme to develop project management skills. Under these programmes, employees were developing unique skills related to Data Analytics trends and learned how to employ them for business and project management, spanning a range of topics from budget management, project team management and project lifecycle analysis, to project risk and quality management.

A **comprehensive management staff development programme** was continued, its themes centred in particular on fostering engaging leadership, value-based management, performance improvement and building multifaceted collaboration and innovation on a team. Moreover, the management staff were working to develop their mentoring and feedback giving/receiving skills. Further programmes were also delivered to train the management staff in preventing workplace bullying, in labour laws, and in management and business ethics. Those projects demonstrate the Company's particular concern for management based on ethics and respect for corporate values.

In 2019, we implemented new technological functionalities of the e-learning platform, including mandatory training on such topics as AML regulations, disclosure obligations of listed companies, counteracting the adverse effects of shift work, everyday innovation and diversity. The platform content can be created and posted by individual business areas, in different formats, which makes it a handy tool for internal knowledge transfer.

The Group employees benefited from a **wide range of diversified development activities**. They attended tailored training events (both open and closed), designed specifically to address the needs of a given area or employee, postgraduate courses, or MBA programmes. In addition, they were offered opportunities to broaden and share their knowledge of the market through participation in trade conferences and events.

As in previous years, we continued initiatives fostering a **culture of work safety**, including educational projects, mandatory training and post-graduate courses dedicated specifically to PKN ORLEN, such as those focused on skills necessary to operate power generation units. The 'Safe Driving Academy' was also continued with a view to helping its participants master safe driving techniques and learn how to react in difficult situations on the road.

Employees also **improved their foreign languages skills** as part of the PKN ORLEN Language Academy and summer English courses. Training and development activities were carried out not only on a classroom basis, but also as e-learning courses.

GRI: 404-1

Average training hours per employee, including:	UOM	2019	2018
Women	[number]	23.4	18.3
Man	[number]	25.2	20.7
Managers	[number]	38.5	24.5
Non-managers	[number]	23.7	19.6

Age Management Policy

Age management solutions were implemented across the ORLEN Group in 2019, to address the negative effects of demographic shifts on the labour market. Activities in this area focus, among other things, on raising the management staff's awareness of age management, promoting intergenerational diversity and communication, facilitating knowledge and skill transfers, Employer Branding efforts in relations with the outside world, especially with the local labour market, universities and schools, building successor competencies within the company, implementing dedicated staff development and mentoring programmes, and undertaking preventive healthcare measures.

GRI: 401-2

Social dialogue and employee benefits

The ORLEN Group believes in social dialogue based on independence of the parties, legal compliance, as well as trust, mutual willingness to compromise, and observance of the rules. The rules of **social dialogue** are founded on internal regulations and generally applicable laws, which facilitates development of constructive and lasting solutions in partnership with employee representatives.

The ORLEN Group offers **employee benefits**, which include co-financing of employee holidays or sanatorium treatment, childcare, holidays for children and teenagers, and school starter kits. Christmas gifts for employees' children have already become a tradition across the Group. The employer provides financial support for families with low incomes. Our employees may also apply for partial financing of sports and recreational activities, cultural and educational activities, or physical therapy treatments, as well as non-repayable allowances and repayable housing loans.

PKN ORLEN offers a uniform employee benefits package to employees of all ORLEN Group companies participating in the joint social benefits programme. Group companies covered by the programme as at December 31st 2019 included: Basell ORLEN Polyolefins, CENTRUM Edukacji, ORLEN Administracja, ORLEN Asfalt, ORLEN Centrum Serwisowe, ORLEN Eko, ORLEN KolTrans, ORLEN Centrum Usług Korporacyjnych, ORLEN Laboratorium, ORLEN Ochrona, ORLEN Paliwa, ORLEN Projekt, ORLEN Upstream, ORLEN Serwis, Płocki Park Przemysłowo-Technologiczny (the Płock Industry and Technology Park), and Fundacja ORLEN (ORLEN Foundation). The additional benefits policy applies equally to all employees, regardless of the type of their employment contract (for a fixed or indefinite period), their working time (full-time or part-time) or location. All personnel employed under employment contracts, whether full-time or part-time, are entitled to benefits from the PKN ORLEN Social Benefits Funds.

PKN ORLEN's employees participate in the Employee Pension Plan (EPP) (also known as the third pillar of the pension system). In addition, PKN ORLEN partly covers the cost of insurance premiums under the EPP for its employees working under employment contracts who have been with the Company for at least three months, regardless of the type of contract. Benefits from the Social Benefits Fund guaranteed to former employees of PKN ORLEN and other Group companies covered by the joint social benefits programme (old age pensioners, disability pensioners, persons who opted for voluntary redundancy) include: co-financing of employee holidays or sanatorium treatment, holidays for children and teenagers, school starter kits, Christmas gifts for children, non-repayable financial support, repayable housing loans and, additionally: cash allowance for low-income employees, birthday cash benefits for former employees aged 70+ (paid every five years) and 95+ (paid every year), meetings with former employees in Senior Citizens Clubs across Poland. All ORLEN Group employees receive the same benefits regardless of their location or type of employment contract. Certain benefits, e.g. insurance, may differ depending on the employer. At PKN ORLEN, group insurance is provided to all employees who have declared their intention to participate. Employees have several options to choose from. Group insurance is also available at other Group companies, but decisions in this respect are made by each company on a discretionary basis.

In addition to the programmes described above, PKN ORLEN also supports the continuity of employment of persons whose contracts are terminated as a result of restructuring processes by offering them training packages. As part of a package, PKN ORLEN provides financing for training which a given person has indicated as useful in their further career.

As a company implementing modern-day solutions aimed at keeping the balance between work and family life, PKN ORLEN carries out the '**Family-Friendly Employer**' programme, offering such benefits as additional two days off to care for a child under three years of age, two days off to care for a disabled child under 24 years of age, a nursery school for children of ORLEN Group employees, one additional hour for breastfeeding, medical care during pregnancy, baby feeding rooms, gifts for newborn babies, and providing employees on parental/childcare leaves with up-to-date information on developments across the Group. Many of the components of this programme have also been implemented by other ORLEN Group companies as part of best practice sharing.

PKN ORLEN also provides **extensive medical care** going beyond the scope of occupational medicine. Medical plans and preventive healthcare programmes are run in cooperation with Centrum Medyczne Medica Sp. z o.o. of Płock and the Military Institute of Medicine of Warsaw as part of a project to investigate health impacts of the work environment. In 2019, a uniform standard for medical plans was implemented across the ORLEN Group.

We also carried out preventive check-ups and delivered health promotion campaigns in the workplace, such as: medical examinations of employees' children aged from nine months to six years under the programme called 'Say NO to Cancer in Children'; densitometric tests, HCV tests and hearing tests, health zones and preventive check-ups in Płock, Włocławek and Ostrów Wielkopolski under the nationwide 'Health First' programme; open meetings for employees devoted to disability issues; Occupational Safety and Healthcare Day at the ORLEN Group.

In addition, PKN ORLEN cares about **the mental health of its employees,** seeing this activity as an inherent part of its corporate culture. The tasks of our Occupational Psychology Centre include provision of support and psychological assistance to employees and their families who are going through personal or professional issues. Commitment to well-being in the workplace is very important to the employees, building a sense of togetherness and mutual accountability.

Education and talent acquisition policy

PKN ORLEN works consistently to satisfy its talent acquisition and retention needs, focusing of specific target groups relevant to the Company's business areas – current and prospective employees, as well as students and graduates of vocational schools and universities. Being aware of the need for synergies between business and academia, the ORLEN Group collaborates with the academic community.

PKN ORLEN is also committed to offering employment opportunities to the disabled. In 2019, together with several other Group companies, it joined the **Work – Integration programme** of the State Fund for the Rehabilitation of the Disabled (PFRON), aimed at recruiting people with disabilities from the open labour market.

Realising the need to build an HR pipeline in professions that are crucial to the industry, given especially the specific business profiles of the Group companies, PKN ORLEN engages in active partnerships with vocational schools – as a result students obtain expert support during hands-on activities and have the opportunity to take part in study visits and trainee placements offered by the Group companies. PKN ORLEN cares for the professional development of young people − students, university graduates and school leavers, by providing them with an opportunity to acquire their first professional experience on internship and work placement programmes, which are attended by dozens of university graduates and school leavers each year. In 2019, there were over 100 interns under the '**Headed for ORLEN**' and the '**#Energy for the Future**' programmes run in association with the Polish Ministry of Energy, and in a programme carried out jointly with the **Faculty of Power and Aeronautical Engineering of the Warsaw University of Technology.** PKN ORLEN also offers development opportunities to Polish students studying abroad. This year, we were a strategic partner of the **'Go4Poland- Choose Poland!'** programme, aimed at encouraging young talented Poles studying abroad to plan their career paths at Polish or multinational companies, public institutions operating in Poland, or foreign branches of Polish companies. As part of the programme, we provided holiday internship, workshop and mentoring opportunities. 135 individuals completed student internships, most of them in the production segment, but some also in other business areas.

PKN ORLEN also participated in various **job fair events** (the Activity and Entrepreneurship Fair in Płock, the JOBICON in Warsaw, the Engineering Job Fair at the Warsaw University of Technology, the London Job Fair) at technical universities, and provided students and graduates with opportunities to gain professional experience. Additionally, it was involved in a number of education and awareness projects, including the **ORLEN Knowledge Day**. PKN ORLEN employees delivered a Communication Workshop for students of the Pawel Wlodkowic University College in Płock, and participated in Employers Panel held with the objective of assessing the needs of employers and institutions cooperating with the Warsaw University of Technology in the field of chemical engineering.

For another year running, PKN ORLEN, ORLEN Laboratorium and ANWIL actively participated in **Industry Seminars** – a series of meetings at the Faculty of Chemistry of the Warsaw University of Technology. The participants are the Faculty students and leading chemical industry companies. The purpose of the meetings is to equip students with practical knowledge based on actual business cases and to inspire them to choose specific development paths with a view to getting a job with a given company. In addition, PKN ORLEN attended the Science-Industry Seminar at the Faculty of Materials Science and Engineering of the Warsaw University of Technology, and students' meetings with employers at the Business Networking Day held at the Warsaw University of Technology, Faculty of Production Engineering and Faculty of Chemistry. Students of the Płock branch of the Warsaw University of Technology regularly visited the Płock Production Plant and were invited to the Refining Industry Open Days held as part of the European Industry Week.

GRI: 403-4

Health and safety topics covered in formal agreements with trade unions

We take care to maintain a transparent social dialogue within the ORLEN Group.

Health and safety issues are mutually agreed on and covered in formal agreements with unions, effective at those ORLEN Group companies which have their respective registered offices in Poland in:

- The PKN ORLEN's collective bargaining agreement, drafted and registered by the Regional Inspector of the National Labour Inspectorate in Warsaw, in accordance with the provisions of Part XI of the Polish Labour Code and the Minister of Labour and Social Policy's Regulation on the procedure to be followed in the case of registration of collective bargaining agreements, keeping the register of collective bargaining agreements and registration files, as well as forms of registration clauses and registration cards, and/or
- Work Rules established in accordance with the provisions of Section IV of the Polish Labour Law.

Those documents provide for ensuring working conditions hygiene standards, including personal protection equipment against agents that are hazardous and harmful to human health, as well as working clothes and footwear. Occupational health and safety issues are covered by collective bargaining agreements also at the Unipetrol Group in the Czech Republic and the ORLEN Lietuva Group in Lithuania, the ORLEN Group's foreign subsidiaries. Employees of ORLEN Deutschland, where there are no active trade unions, are not parties to any formal or collective agreements. The same holds true for ORLEN Upstream Canada, whose entire workforce is subject to occupational health and safety regulations applicable in Alberta.

SAFETY OF EMPLOYEES AND CONTRACTORS

GRI indicators: 103-1, 103-2, 103-3, 403-2, 403-3, OG-13, 306-3

Capitals:

Care for the health and personal safety of employees and other Stakeholders is a natural and integral part of our organisational culture and business. In practice, this means that the Group does everything it can to prevent accidents, industrial failures, fires and other unwanted incidents.

GRI: 103-1, 103-2, 103-3

OHS Strategy

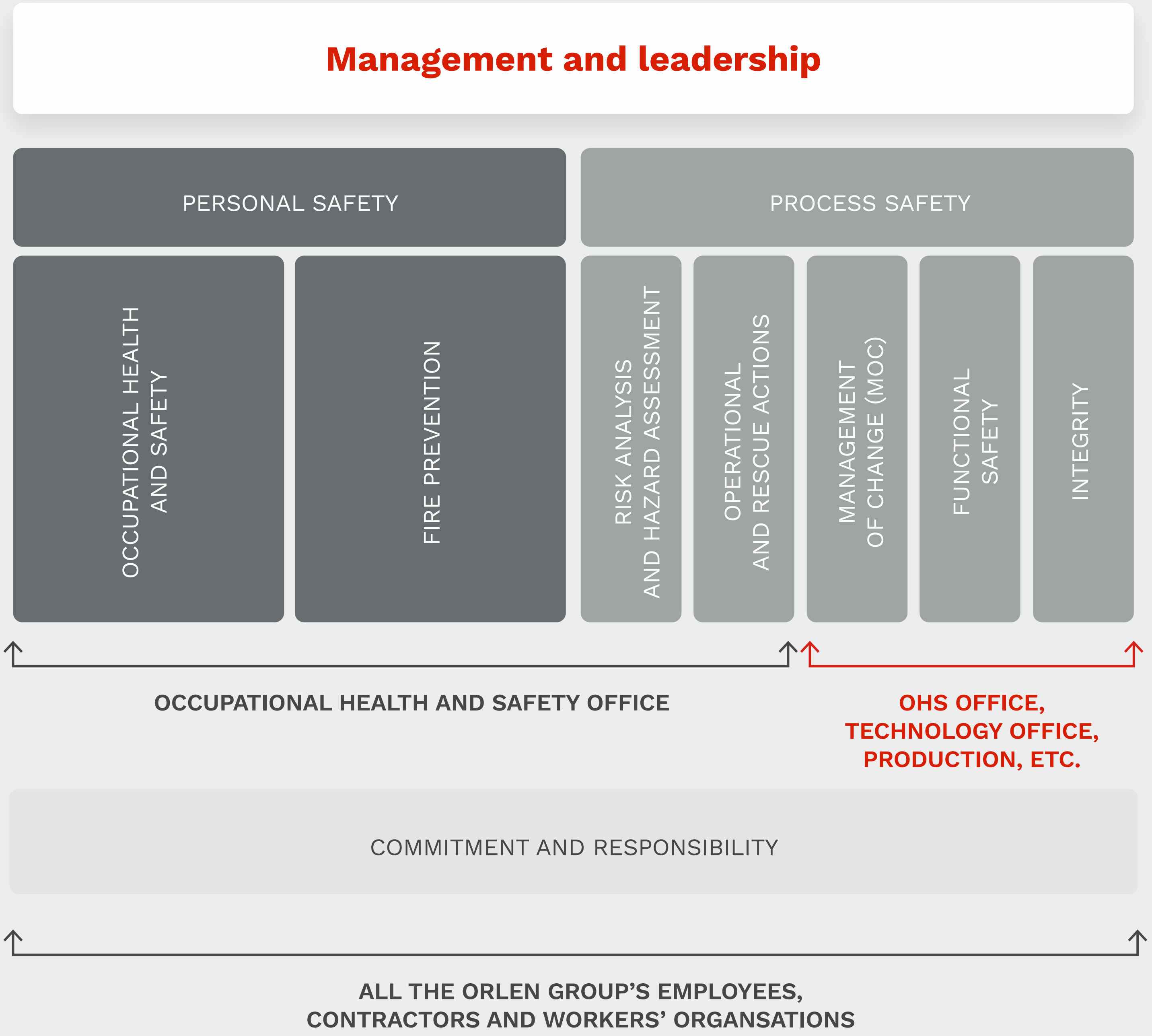
The personal and process safety objectives and tasks are defined in the **OHS Strategy** and cover the following key areas:

Management and leadership – building a workplace safety culture within the Group in line with its values; a combination of individual and group values, attitudes, perceptions, competences and behaviours.

Personal safety – building a safe and healthy working environment for the Group's employees, including a contractor supervision system; taking preventive measures designed to ensure fire safety at the Group, and setting standards and relevant organisational projects.

Process safety – activities involving definition of methods and measures to protect people and the environment against the consequences of failures and industrial accidents, determination of existing needs before technological, process or organisational changes, organisational and technical measures undertaken at every stage of a process to guarantee safe process management, safety of the process personnel, and thus process reliability.

OHS Strategy structure



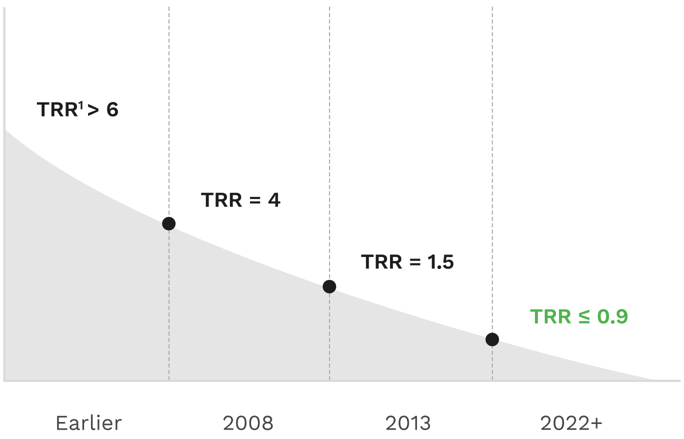
The updated ORLEN Group Strategy for 2019–2022 sets out the following objectives in personal and process safety:

SAFETY FIRST

Zero tolerance policy towards accident hazards

No accidents at work

Further improvement of process safety



[1] TRR - Total Recordable Rate, an internationally recognised metric of a company's rate of workplace accidents calculated as follows as the number of workplace accidents with sick leave in a period of time x 1,000,000 /number of man-hours worked in the period .

Occupational safety at the ORLEN Group is governed by national regulations applicable to a given area, European Union regulations, harmonised national standards and principles resulting from best practices for safe operations. At the ORLEN Group companies level, this area is regulated by uniform internal standards, internal regulations/directives and operating instructions.

The key OHS elements include: Occupational Health and Safety Management System based on PN-N-18001, ORLEN Group's OHS Strategy until 2021, Comprehensive Prevention System, and ORLEN Group Safety Standards, Technical Standards and Guidelines. For more information, see 'Non-Financial Statement of the ORLEN Group and PKN ORLEN S.A. for 2019'.

Ensuring highest safety standards

All our OHS efforts are aimed at ensuring the highest safety standards at the ORLEN Group. In 2019, the implementation of a uniform safety framework was continued at the ORLEN Group as part of the '**Safety Plus**' project, comprising 15 standards representing the highest safety benchmarks in the fuel and energy industry. The project will be completed in 2021.

15 safety standards of the 'Safety Plus' project

S1	Authorisations for hazardous work
S2	Isolating energy sources
S3	Work in enclosed spaces
S4	Work at heights
S5	Safe earthwork
S6	Post-accident procedures
S7	Ensuring safe operation of machinery and tools in work environment
S8	Training to improve rescue skills
S9	Measurement of hazardous substances
P1	Leakage prevention
P2	In-depth analysis of industrial accidents
P3	Emergency plans: their formulation /structuring
M1	Leadership and role of management staff in developing a safety system
M2	Subcontractor management
M3	Vehicle management

Works were carried out to improve the process safety management of **the Process Safety Management System based on the OSHA 1910.119 standard**. The system allows for effective implementation of activities in the area of operational excellence by improving the technical safety of process, storage and auxiliary installations, thus preventing the occurrence of any undesirable events that could potentially affect the safety of employees and /or conducted production processes. The Process Safety Management System (SZBP) as part of the general management and organization system of PKN ORLEN was introduced to ensure the highest safety standards in the workplace and to meet the national requirements of art. 252 of the Environmental Protection Act of April 27, 2001 in the field of systemic process safety management and further increasing the effectiveness and efficiency of measures to prevent major industrial accidents.

As part of maintenance and improvement of the Process Safety Management System, the following actions are required in accordance with the Deming cycle:

1. verification of status quo;
2. checking the existing regulations /internal policies for completeness and implementing new regulations /policies;
3. confirming that each system component has been fully implemented;
4. satisfying the system requirements based on regulations /policies and making the necessary improvements.

The verification covers the Company's compliance with the requirements for 14 components of the Process Safety Management System under existing regulations by which a given component has been implemented. Individual elements of the Process Safety Management System have been described in the 'Report on Non-Financial Information of the ORLEN Group and PKN ORLEN S.A. for 2019'.

Process safety is becoming a specific field related to resilience engineering, which defines safety as the ability to maintain plant success under normal and emergency conditions. Another noteworthy aspect is organisational systems capable of an immediate response to maintain business continuity.

Key projects in the area of occupational health and safety

Further development of the work safety culture

As regards promotion of work safety culture at the ORLEN Group companies, our key task was to raise the awareness of safe work procedures and to inspire proactive attitudes in our employees and contractors. The **Employee Support System** put in place at PKN ORLEN is one of the programmes aimed at strengthening personal security culture. It is based on the Behavior-Based Safety (BBS) approach used at production companies, which has been adapted to the Company's needs. The method consists in reinforcing the employees' safe behaviours during work and promoting best OHS practices.

Moreover, 2019 saw the third edition of Technical Safety lectures, delivered as part of full-time and extramural curricula of the Chemical Technology studies. It was a continuation of the project carried out in 2017–2018 by the Occupational Health and Safety Office and Technology Office of PKN ORLEN, and by the Warsaw University of Technology, Branch in Płock. The initiative was to deliver a series of expert lectures, conducted in accordance with PKN ORLEN's concept for educating its future engineering staff in areas relevant to the oil processing and energy industries, under the adopted strategy of engagement with universities.

Mandatory safety training programmes for employees and contractors

The ORLEN Group organises **mandatory training programmes on safety** for its employees and contractors to familiarise them with the safety standards applicable at the Group companies. The programme focuses on raising the employees' and contractors' awareness of the importance of correct assessment of the situation, knowledge of potential risks and risk mitigation methods, adherence to OHS rules and procedures, proper use of protective systems and equipment, and the need to report potentially dangerous incidents. The programme includes tools for checking the employees' and contractors' knowledge.

The ORLEN Group has in place incentive, information and education schemes dedicated to contractors' personnel. Within this framework, in 2019 PKN ORLEN set up a Training Centre, as a concept of training employees of external contractors involved in any work at the Company's production facilities, as well as its own new hires staffing the production area. It involves detailed checking of the staff's theoretical and practical knowledge within three thematic blocks: OHS, technologies, and local hazards at production facilities. Knowledge of and skills in mechanical engineering are checked through practical tasks. Special equipment is used to verify whether employees are prepared to perform their job.

Control and audit system

Internal audits of the companies are held regularly at the ORLEN Group. In 2019, four consultancy visits (audits) and six re-audits were carried out. They included an important component called 'Safety Walks', consisting in safety reviews at the visited facilities. Results of the assessments and observations made during such visits serve as the basis for formulating and implementing correction and refinement plans and workplace health and safety improvement plans. Audits carried out at the Group companies include internal audits, audits by certification bodies, and audits by risk management consultancies. In accordance with an approved methodology, regular safety audits are conducted at the contractors performing work for the ORLEN Group.

Incentive programmes and information campaigns focusing on knowledge of occupational safety and promoting healthy lifestyles and work-life balance.

The ORLEN Group engages in activities aimed at promoting safe working behaviours among its employees and contractors, such as the '**Safe Maintenance**' or '**Safe Contractor**' competitions, or the '**OHS Incentives**' programme. In addition, the Group companies conduct various **information campaigns** devoted to occupational safety, healthy lifestyle and work-life balance. One of such initiatives is the **Occupational Health and Safety Days** held across the entire ORLEN Group. In 2019, OHS Villages were organised, with VR simulators (of urban driving, motorcycle riding, etc.) and stands of OHS vendors showcasing innovative solutions in personal safety. A competition zone was provided with many competitions and OHS games where everyone could check their knowledge and win prizes. Medical zones were set up, offering health check-ups for employees, first-aid exercises, as well as advice from physiotherapists. In the food zone, dieticians discussed the properties of products used. Employees were given dietary tips and nutritional information to encourage them to choose better food options and try their hand at cooking.

The ORLEN Group runs a 'Good OHS Practice' competition, dedicated to the Group companies. The aim is to spread good practices in safety that promote a pragmatic and modern approach to that area, including any technical, qualitative, efficiency enhancing, communication, organisational and infrastructural solutions, thus helping to improve and streamline the components of OHS management as well as to boost employee motivation. Participation in the competition is an opportunity to share knowledge and experience in shaping a safety culture between the ORLEN Group companies.

There is also another competition dedicated to the Group companies, called 'Millions of accident-free man-hours of ORLEN Group employees and contractors'. The aim of the competition is to promote accident-free work. In 2019, the 7th edition of the 'Good OHS Practice' and the 5th edition of the 'Millions of accident-free man-hours of ORLEN Group employees and contractors'.

Identification and implementation of innovations and best practices

Best practices are identified on an ongoing basis through experience sharing across the ORLEN Group companies and drawing on the lessons learned by other oil and gas companies with global footprint. Among the implemented projects are the LOTO System and the Employee Support System.

The Employee Support System is a behavioural programme aimed at encouraging safe and eliminating unsafe behaviours. Its implementation is one of the multi-directional measures to improve the Company's safety culture.

The Lockout – Tagout (LOTO) system is a scheduled activity which consists in cutting off power supply to industrial equipment and machinery whenever maintenance or repair work is performed. Lockout prevents employees from switching on the machine until it is disabled. Tagout refers to a tag which informs and warns that a given machine is locked out while maintenance work is being performed, and may not be switched on until the tag is taken off. The system has been implemented to eliminate accidental and uncontrolled switching on of machines or hazardous energy releases during operation, development, repair and maintenance works, and thus prevent accidents and incidents resulting from inadvertent start-up or re-energising of machines, devices or installations.

Event analysis and risk assessment system

Any accidents or emergencies that occur at the ORLEN Group are analysed and assessed in terms of the likelihood of their recurrence. Communication of near misses and emergencies is based on **Safety Alerts**. In the case of emergencies, '**Lesson Learned**' actions are organised based on checklists designed to identify preventive measures in different ORLEN Group locations. Special tools have been implemented for analysing the potential risk of accidents at work and emergencies, and the findings of such analyses serve as the basis for taking preventive measures.

Process hazards are reviewed at the ORLEN Group using a range of methods, including HAZOP, which is used to establish the probability of hazards in industrial facilities. HAZOP consists in a systematic review of design assumptions and processes for potential deviations from predetermined parameters.

Safety Meeting

A continually improved element which requires wider development across the ORLEN Group are interdisciplinary Safety Meetings of representatives of the personal, process and fire safety functions, the Technology Office, and other areas of the organisation. They are held to analyse emergency incidents that occurred at the ORLEN Group by identifying their causes and collecting information about their consequences. On the basis of collected information and available source materials, such as Reports from Emergency/Technical and Reliability Teams (investigation reports), various measures are formulated, which are then addressed to relevant areas of the ORLEN Group companies. The aim of this exercise is to capture lessons learnt and minimise the risk of similar incidents in the future. All information analysed during the meetings is entered into an internal database available on the Occupational Health and Safety Office website.

Company Fire Brigade

The core responsibility of the Company Fire Brigade is to carry out rescue and fire-fighting activities on the premises of PKN ORLEN, as well as in the entire territory of Poland as part of the National Rescue and Firefighting System and the Assistance System for the Transport of Hazardous Materials (SPOT), and to supervise the readiness of the Company's facilities for rescue and fire-fighting activities. Furthermore, the Company Fire Brigade provide chemical and technical rescue, seal leaks, man safety stations under plant emergency conditions, provide protection during hot works on the premises of the Production Plant in Płock, and perform fire prevention functions. Firefighters specialise in firefighting in the refining and petrochemical industry, chemical rescue activities, as well as water rescue, technical rescue, medical care at first responder level and rope rescue activities. For several years, they have been actively cooperating with fire brigades operating across the ORLEN Group by taking operational and preventive measures for safety improvement. Firefighters are equipped with more than 20 specialist firefighting and rescue vehicles, high volume pumps and water cannons, a rescue boat and specialist protective equipment for staff. In 2019, measures were undertaken to improve and develop fire safety at the ORLEN Group. Members of the PKN ORLEN Fire Brigade participated in dedicated courses and training, covering prevention, rope rescue, water rescue operations and rescue diving, as well as operation of unmanned aircraft (drones).

Emergency drills involving employees and rescue and firefighting services

Regular emergency drills are conducted at the ORLEN Group companies, building employees' knowledge of how to behave in an emergency. The drills are also an opportunity to improve cooperation with national rescue services a view to minimising the potential consequences of an industrial accident.

Development of the Fire Safety function at the ORLEN Group.

In 2019, work to implement segment-based fire safety management at the ORLEN Group was commenced. Reference visits were made to the ORLEN Group Fire Brigades. During these visits, the organisation and technical equipment of each brigade were reviewed. Meetings of fire prevention specialists performing tasks at the ORLEN Group companies were held, at which they developed common rules for carrying out preventive inspections and agreed on uniform follow-up document forms.

Production assets integrity monitoring and plant maintenance programme

Timely inspection and supervision activities are key to maintaining the integrity of fixed assets. They are carried out during planned maintenance and process shutdowns organised according to long-term schedules. A dedicated programme is also employed for automatic control and security systems, providing, among other things, the timeframes for tests and functionality checks. In parallel, the **Risk Based Inspection (RBI)** programme is being implemented for the Płock facilities in partnership with and under the supervision of the Polish Office of Technical Inspection. The programme offers the added value of continuous improvement of availability and safety of process units with the integrity of production assets maintained. In addition, an **Autonomous Plant Maintenance programme** is in place, making it possible to achieve a higher level of reliability and safety of production units.

Third Party Contractor Safety Management

A model for a third party contractor management system has been developed and implemented with a view to meeting the following main objectives: ***ZERO ACCIDENTS, ZERO FIRES, ZERO TOLERANCE FOR UNACCEPTABLE RISK.***

The following specific objectives were achieved in 2019:

- ensuring that the professionally prepared assignments for contractors
- establishing clear rules
- raising awareness of the Company's employees, third party contractors and their employees
- ensuring that work is carried out safely and correctly
- confirming completion of training for some specific locations
- communicating of and fast response to threats.

Safety management during the SARS-CoV-2 pandemic

PKN ORLEN has implemented certain preventive measures to minimise the risk of spread of the SARS-CoV-2 virus. They are multidirectional efforts of organisational, informative and educational nature, including:

- implementation of a procedure in case employees show symptoms of illness;
- development and dissemination of graphic educational materials on safe behaviour, including the need to cover the mouth and nose and avoid mass gatherings;
- ensuring personal safety of employees and contractors, including through regular disinfection of rooms and equipment, mandatory temperature screening of employees and visitors, disinfecting hand wash liquids and protective masks provided to employees along with instructions on their proper and safe use, changes to the method of delivering periodic OHS training, antiviral barriers at workstations requiring contact with other employees or visitors, and the ‘Recommendations for Contractors on the prevention of SARS-CoV-2 coronavirus infection’;
- free and anonymous emotional support consultations provided by the Occupational Psychology Centre, a hotline and email designed for employees to obtain advice on the safety rules applied during the pandemic.

Similar measures have been implemented by other ORLEN Group companies.

Cooperation with public administration bodies and other fuel and energy companies to improve personal and process safety

In 2019, various forms of cooperation were undertaken to improve the PKN ORLEN safety management system. Expert workshops were held under the slogan ‘Let’s like each other’ with the following public administration bodies: the Warsaw Province Inspectorate for Environmental Protection in Warsaw, Provincial Inspectorate for Environmental Protection (Branch in Płock), Municipal Crisis Management Centre in Płock, County Crisis Management Centre in Płock, Municipal Headquarters of State Fire Service in Płock, Municipal Police Headquarters in Płock, City Guard Service in Płock, the Provincial Ambulance Service and Medical Transport Station in Płock and the Head of the Stara Biała village, on ensuring safety at the PKN ORLEN Production Plant in Płock and mutual cooperation, including communication in the event of an emergency.

Moreover, PKN ORLEN signed an agreement with PERN on effective cooperation and active integration of both companies’ initiatives in preventing safety emergencies (accidents, breakdowns, disasters, fires).


FORUM LIDERÓW BEZPIECZNEJ PRACY

Polski Koncern Naftowy ORLEN S.A.

ZŁOTĄ KARTĘ
LIDERA BEZPIECZNEJ PRACY
2020-2021

CIOP PIB

The effects of safety measures undertaken at the ORLEN Group were appreciated by independent expert bodies. PKN ORLEN and ORLEN Upstream were among the winners of the ‘Employer – Provider of Safe Work’ competition run by the National Labour Inspectorate. Safe Work Leader Cards were awarded by the Safe Work Leaders Forum to PKN ORLEN, ORLEN Laboratorium and ORLEN Upstream. PKN ORLEN was again awarded the ‘Gold Card of Safe Work Leader’.

ORLEN Upstream also won the first prize in the ‘Employer – Provider of Safe Work’ competition of the Chief Labour Inspector.

GRI: 403-2

Key information and indicators regarding safety at the ORLEN Group

Accidents at work involving ORLEN Group employees and contractors

GENDER	2019		2018	
	Women	Men	Women	Men
Total number of accidents at work involving ORLEN Group employees[1)]	7	41	4	38
Total number of accidents at work involving ORLEN Group contractors[2)]	16	17	18	32
Total number of accidents at work involving ORLEN Group employees and contractors	23	58	22	70

REGIONS[3]	2019					2018				
	Poland	Czech Republic	Lithuania	Germany	Canada	Poland	Czech Republic	Lithuania	Germany	Canada
Total number of accidents at work involving ORLEN Group employees[1]	33	13	0	2	0	27	13	2	0	0
Total number of accidents at work involving ORLEN Group contractors[2]	28	4	0	1	0	29	17	3	0	1
Total number of accidents at work involving ORLEN Group employees and contractors	61	17	0	3	0	56	30	5	0	1

1) Number of accidents at work involving ORLEN Group employees which were acknowledged by the employer and were the direct cause of the injured employee's taking sick leave.
2) Number of acknowledged accidents at work involving employees of the ORLEN Group's contractors who performed work for a Group company on premises owned or leased by a Group company, which accidents were the direct cause of the injured employee's taking sick leave. The definition of 'contractor' covers also employees of the PKN ORLEN service stations.
3) Regions – markets in which the ORLEN Group has assets.

GENDER	2019		2018	
	Women	Men	Women	Men
Number of fatal accidents at work involving employees of the ORLEN Group	0	0	0	0
Number of minor accidents at work involving employees of the ORLEN Group	7	41	4	37
Total number of accidents at work involving ORLEN Group employees	7	41	4	38

REGIONS[3]	2019					2018				
	Poland	Czech Republic	Lithuania	Germany	Canada	Poland	Czech Republic	Lithuania	Germany	Canada
Number of fatal accidents at work involving employees of the ORLEN Group	0	0	0	0	0	0	0	0	0	0
Number of minor accidents at work involving employees of the ORLEN Group	33	13	0	2	0	27	12	2	0	0
Total number of accidents at work involving ORLEN Group employees	33	13	0	2	0	27	13	2	0	0

In 2019, all accidents at work involving ORLEN Group employees were minor accidents.

GENDER	2019	2018

GENDER	2019		2018	
	Women	Men	Women	Men
Number of fatal accidents at work involving ORLEN Group contractors	0	0	0	6
Number of minor accidents at work involving ORLEN Group contractors	16	17	18	18
Total number of accidents at work involving ORLEN Group contractors	16	17	18	32

REGIONS[3]	2019					2018				
	Poland	Czech Republic	Lithuania	Germany	Canada	Poland	Czech Republic	Lithuania	Germany	Canada
Number of fatal accidents at work involving ORLEN Group contractors	0	0	0	0	0	0	6	0	0	0
Number of minor accidents at work involving ORLEN Group contractors	28	4	0	1	0	29	6	0	0	1
Total number of accidents at work involving ORLEN Group contractors	28	4	0	1	0	29	17	3	0	1

In 2019, all accidents at work involving ORLEN Group contractors were minor accidents.

Combined Total Recordable Rate (TRR) for employees and contractors[4]

In accordance with the adopted principle that '*Contractor safety is as important as the safety of the ORLEN Group's own employees'*, since 2015 the Group has used the Combined Total Recordable Rate covering also its contractors.

	2019	2018
Combined Total Recordable Rate (TRR) for employees and contractors[4]	0.90	1.03

4) Calculated as the total number of accidents at work involving employees and contractors of ORLEN Group companies and resulting in the injured person taking sick leave in a given period x 1,000,000 /number of man-hours worked by the employees and contractors in this period.

In 2019, the Combined Total Recordable Rate (for employees and contractors) fell year on year, which is attributable to a significant decrease in the number of accidents at work involving the ORLEN Group contractors in 2019 relative to 2018.

TRR for ORLEN Group employees[5]

2019		
Total	Women	Men
1.29	0.70	1.51

2018		
Total	Women	Men

2018		
1.17	0.41	1.44

5) Total number of accidents at work involving employees of ORLEN Group companies and resulting in the injured person taking sick leave in a given period x 1,000,000 / number of man-hours worked by the employees in this period.

REGIONS3)	Total	Poland	Czech Republic	Lithuania	Germany	Canada
2019	1.29	1.35	1.47	0	6.48	0
2018	1.17	1.08	1.71	0.68	0	0

The TRR for the ORLEN Group employees has remained relatively unchanged for the last few years, reflecting the process of stabilisation of the Group's accident rate, which has continued since 2014 following a series of strong decreases in TRR values for the ORLEN Group employees.

Severity rates and number of days lost due to post-accident absenteeism at the ORLEN Group in 2019

Severity rates for accidents at work involving ORLEN Group employees6)		
Total	Women	Men
56.27	21.43	62.22

Severity rates for accidents at work involving ORLEN Group employees6)					
Total	Poland	Czech Republic	Lithuania	Germany	Canada
56.27	51.42	73.38	0	25.00	0

6) Quotient of the number of days lost due to post-accident absenteeism of ORLEN Group employees and the number of accidents at work involving ORLEN Group employees, acknowledged by the employer and resulting in the employee's taking sick leave.

Number of days lost due to post-accident absenteeism at the ORLEN Group7)		
Total	Women	Men
2701	150	2551

Number of days lost due to post-accident absenteeism at the ORLEN Group7)					
Total	Poland	Czech Republic	Lithuania	Germany	Canada
2701	1697	954	0	50	0

7) Number of days on which ORLEN Group companies' employees were on sick leaves in a given period as a result of an accident at work acknowledged by the employer.

Ensuring work safety and health protection for employees of external contractors performing work on the ORLEN Group premises is one of the Group's priorities. In order to continuously enhance their safety we have taken a consistent, long-term approach to raising their awareness of the importance of proper risk assessment, potential hazards, risk mitigation methods, OHS rules and procedures, proper use of protective systems and equipment, and the need to report potentially dangerous situations.

Besides analysing work accidents suffered by contractors, the ORLEN Group also studies data on sick leaves resulting from the accidents occurring in connection with work carried out by contractors on the premises of Group companies.

However, the Group is not legally authorised to publish such data.

Number of occupational disease cases in each employee Group[8]

	2019	2018
Office and administrative staff	0	0
Higher-rank and mid-level technical staff	0	0
Operators of process units and equipment	2	1
Repair and maintenance employees	2	1
Transport and storage employees	1	1
Total *ORLEN Lietuva ** ORLEN Lietuva (2) i UNIPETROL RPA (1)	5*	3**

8) Number of acknowledged occupational disease cases is the number of decisions issued by the State Sanitary Inspector to confirm recognition of an occupational disease of a current or former employee of an ORLEN Group company.

GRI: 403-3

Workers with high incidence or high risk of occupational diseases

The ORLEN Group constantly monitors and identifies factors that may cause occupational diseases among its employees. Work environment surveys are performed on a regular basis and their results are analysed to assess the risk of potential impact on the health of the Group's employees. With respect to all factors identified for jobs with a high risk of occupational disease, systemic preventive measures have been implemented in the form of technical and organisational solutions offering personal and collective protection. The use of such solutions eliminates the risk of employees developing occupational diseases as a result of harmful factors in their work environment.

In consequence, the number of occupational disease cases involving the ORLEN Group employees in 2018–2019 was stable and remained very low.

Process safety

In 2019, work was carried out to maintain the **Process Safety Management System based on OSHA 1910.119**. It provides a more effective framework for achieving operational excellence, as it guarantees technical safety of the process, storage and auxiliary units, and thus prevents undesirable events that could affect the safety of staff or processes.

Process safety is becoming a specific field related to resilience engineering, which defines safety as the ability to maintain plant success under normal and emergency conditions. Another noteworthy aspect is organisational systems capable of an immediate response to maintain business continuity.

Twenty nine establishments at the ORLEN Group are classified as upper-tier, and a number almost half of that are lower-tier establishments, as per the classification framework under the Seveso III Directive applicable across Europe and implemented into national law by all EU member states in

2015. In Poland, the relevant regulations are laid down in the Environmental Protection Law. The establishments of both types have in place modern and constantly improved process safety management systems as an organised method for managing safety, encompassing all the vital safety components referred to above.

ORLEN Group facilities with a high and increased risk of a major accident (upper-tier and lower-tier establishments)

POLAND	Number of a upper-tier establishments	Number of a lower-tier establishments
PKN ORLEN	7 upper-tier establishment	10 lower-tier establishments
ORLEN PALIWA	6 upper-tier establishment	1 lower-tier establishments
BOP	1 upper-tier establishment	–
ANWIL	1 upper-tier establishment	–
ORLEN Południe	2 upper-tier establishments	–
ORLEN Aviation	–	1 lower-tier establishments
IKS SOLINO	1 upper-tier establishment	–
CZECH REPUBLIC	**Number of a high upper-tier establishments**	**Number of a high upper-tier establishments**
UNIPETROL RPA	3 upper-tier establishment	–
UNIPETROL DOPRAVA	5 upper-tier establishment	–
PARAMO	1 upper-tier establishment	–
SPOLANA	1 upper-tier establishment	–
LITHUANIA	**Number of a high upper-tier establishments**	**Number of a high upper-tier establishments**
ORLEN Lietuva	2 upper-tier establishments	–

To describe the current status of process safety at the ORLEN Group production companies, the Group uses various process safety indicators, including leading and lagging ones, in accordance with the API754 standards. Those indicators are monitored and measured using the Company's internal application to help achieve the overarching objective of process safety management, which means preventing and minimising the risk of major accidents. These indicators also serve as the basis for benchmarking against the best companies in the industry and thus contribute to achieving process excellence.

GRI: OG-13

Number of process safety events, by business activity

In 2019, there were two fires that required intervention by external fire-fighting units. In 2019, the number of fires reported at the ORLEN Group fell compared with 2018.

Number of fires at the ORLEN Group

Number of fires at the ORLEN Group[9]:	2019	2018
Total	34	41
Of which: relating to technological processes	29	37
Of which: requiring intervention by external firefighting units	2	0

9) Number of process-related fires at the ORLEN Group companies, affecting only premises owned or leased by the companies, with the exception of service station areas.

TIER 1, TIER 2 and TIER 3 events

TIER 1 events

These are events with a significant impact related to a sudden and unexpected substance release due to ineffective protection layers. Such events include a sudden and unexpected release of hazardous substances or non-toxic and non-flammable substances (steam, condensate, hot water, nitrogen, compressed air, CO_2) during ongoing industrial processes, having one or more of the following consequences:

- Injury to an employee of the ORLEN Group or of a contractor or subcontractor, resulting in a sick leave or death
- Hospital admission and/or death of any other person
- Officially announced evacuation of local residents or recommendation for them not to leave their homes
- Fire or explosion resulting in losses in the form of direct costs of at least USD 100 thousand (USD 100,000 x ~3 PLN/USD = ~PLN 300,000)
- Release of excessive pressure into the atmosphere with the use of pressure relief devices in an amount equal to or higher than the threshold amount in any one hour period
- Release of a substance in an amount equal to or higher than the threshold amount in any one-hour period

TIER 2 events

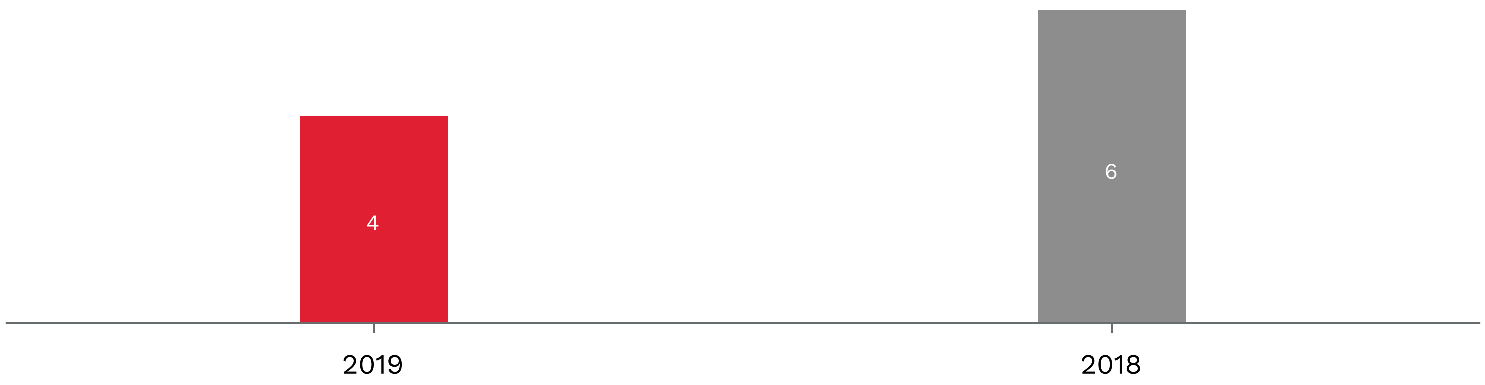
These are events of lesser consequence related to a sudden and unexpected substance release due to ineffective protection layers. Such events include a sudden and unexpected release of hazardous substances or non-toxic and non-flammable substances (steam, condensate, hot water, nitrogen, compressed air, CO_2) during ongoing industrial processes, having one or more consequences not classified as TIER1, including:

- Injury to an employee of the ORLEN Group or of a contractor or subcontractor
- Fire or explosion resulting in losses in the form of direct costs of at least USD 2,500 (USD 2,500 x ~3 PLN/USD = ~PLN 7,500)
- Release of excessive pressure into the atmosphere in an amount equal to or higher than the threshold TIER2 amount in any one-hour period
- Release of a substance in an amount equal to or higher than the threshold TIER2 amount in any one-hour period

Number of TIER1, TIER2 and TIER3 events

Number of TIER 1 events at the ORLEN Group

Number of TIER 2 events at the ORLEN Group

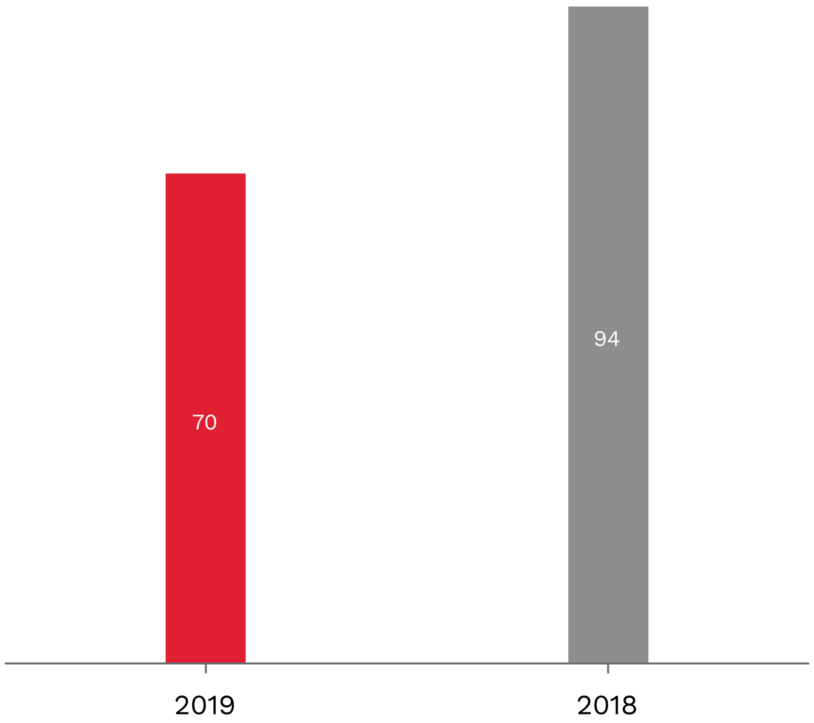


In 2019, the ORLEN Group continued reporting the T3 (TIER 3[1]) process safety indicator referring to near-miss events.

*[1] It has been assumed that **TIER3 events** are events shutdowns of installations or process nodes triggered by active or passive protections (automatic or mechanical). TIER3 ratio is calculated as follows:*

- *TIER3 production events – number of events shutdowns of installations or process nodes triggered by active or passive protections (automatic or mechanical);*
- *TIER3 logistics events – ratio of the number of events shutdowns of product loading to rail tank cars and road tankers triggered by active or passive protections (automatic or mechanical) to the total number of loading operations performed at a given time.*

Number of TIER 3 production events at the ORLEN Group

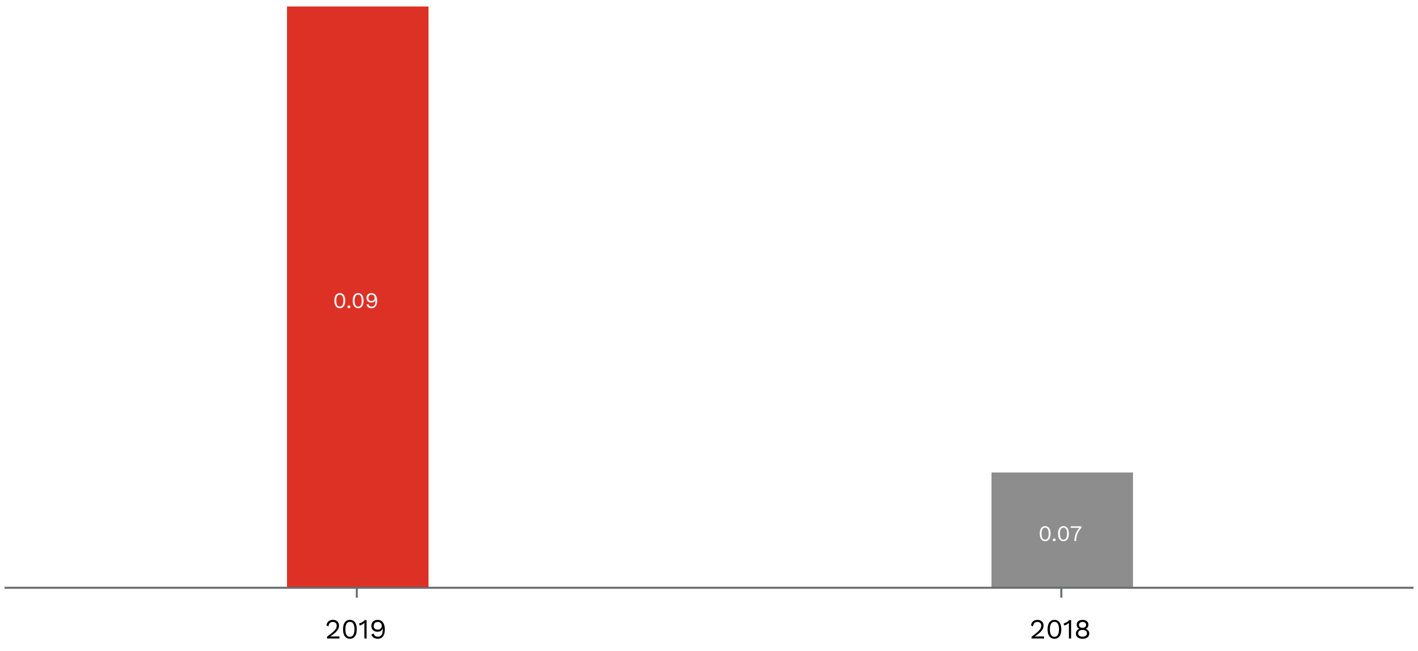


Number of events at the ORLEN Group	**2019**		
	Poland	**Czech Republic**	**Lithuania**
TIER1	0	7	1
TIER2	2	2	0
TIER3 – Production	59	1	10

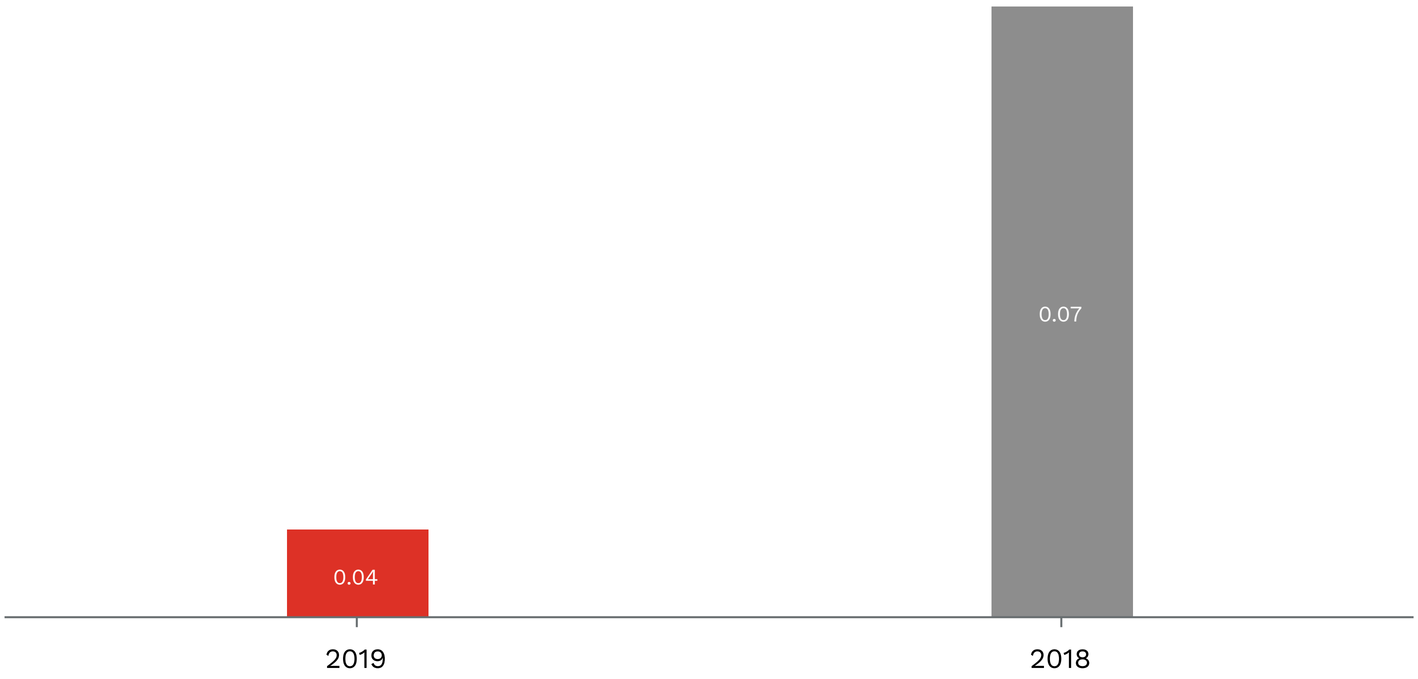
Number of events at the ORLEN Group	**2018**		
	Poland	**Czech Republic**	**Lithuania**
TIER1	2	4	0
TIER2	3	2	1
TIER3 – Production	80	0	14

T1 PSER[2] and T2 PSER[3]

T1 PSER ORLEN Group



T2 PSER ORLEN Group



TIER1 and TIER2 events reported for 2019 involved only emissions into the environment caused by fires and leaks. There were no events causing serious damage to the natural environment. Liquid leaks were collected and properly disposed of.

GRI: 306-3

Total number and weight of significant spills

Total number and weight of significant spills in 2019 is as follows:

- **Number of spills in 2019 – 10**
- **Weight of spills in 2019 – ca. 140 Mg**

Information on each spill reported by ORLEN Group companies is presented in the table below.

Location	Weight [Mg]	Type of substance	Comment
UNIPETROL RPA, s.r.o. Kralupy production plant, FDU	80	Oil spill (crude oil)	On the unit's site; no impact on soil or water surface

Location	Weight [Mg]	Type of substance	Comment
UNIPETROL RPA, s.r.o. Litvínov production plant, isomerisation unit	approx. 4	Spill of chemicals (6% NaOH solution)	On the unit's site; no impact on soil or water surface
SPOLANA, s.r.o. Neratowice production plant, PVC	11.5	Spill of chemicals (30% HCl solution)	On the unit's site; no impact on soil or water surface
UNIPETROL RPA, s.r.o. Litvínov production plant, visbreaking unit	2.1	Oil spill (wash oil)	On the unit's site; no impact on soil or water surface
SPOLANA, s.r.o. Neratowice production plant, PVC	0.4	Spill of chemicals (mixture of dichloroethane and vinyl chloride)	On the unit's site; no impact on soil or water surface
UNIPETROL RPA, s.r.o. Litvínov production plant, railway track 238	16	Spill of chemicals (BTX fraction)	On the unit's site; no impact on soil or water surface
ORLEN Lietuva Mažeikiai production plant	approx. 26	Other spill (road bitumen)	On the unit's site; no impact on soil or water surface
ANWIL S.A. Włocławek production plant, hydrogen chloride recovery unit	approx. 0.0025	Spill of chemicals (gaseous HCl)	Into the air
SPOLANA, s.r.o. Neratowice production plant, caprolactam	approx. 0.1	Spill of chemicals (ammonia)	On the unit's site; no impact on soil or water surface
ANWIL S.A. Włocławek production plant	approx. 0.021	Spill of chemicals (gaseous HCl)	Into the air

Most of those spills involved contamination of equipment and the unit sites, without any impact on soil or water surface. In addition, most of those incidents required covering the costs of rescue operations by Company Fire Brigades as well as repair or replacement of damaged equipment. Two cases of release of gaseous substances into the air were reported. No employees or contractors of the ORLEN Group suffered any injuries as a result of those incidents.

COUNTERACTING CORRUPTION AND BRIBERY

GRI indicators: 103-1, 103-2, 103-3, 205-2, 205-1

Capitals:

We are committed to ensuring a fair and transparent business model for the ORLEN Group which guarantees trust, safety, free competition and value for all Stakeholders.

GRI: 103-1, 103-2

Anti-corruption and anti-bribery activities are carried out by the **Control and Security Office** in cooperation with the **Financial Control, Risk Management and Compliance Office** as well as the **Audit Office**. The scope of responsibility of individual offices has been described in the 'Report on Non-Financial Information of the ORLEN Group and PKN ORLEN S.A. for 2019'.

The anti-corruption and anti-bribery policies and internal regulations include:

- **ORLEN Group Anti-Corruption Policy** – a declaration that our business objectives are to be pursued in a transparent, fair and ethical manner. The policy is designed to raise employee awareness, encourage positive attitudes and behaviours, and streamline procedures and business process oversight. The document underscores the importance of training and awareness-raising among employees and the responsibility of company managements for creating conditions that help to prevent and counteract corruption at the ORLEN Group.
- **Enterprise Risk Management Policy and Procedure** – laying down the principles of Enterprise Risk Management for PKN ORLEN and the roles and responsibilities of each individual involved in the process.
- **Rules of control and verification procedures carried out at PKN ORLEN** – a document prepared on the basis of the applicable Organisational Rules of PKN ORLEN in order to lay down the principles of control and verification procedures conducted by the Control and Security Office.
- **ORLEN Group anti-money laundering and terrorist financing rules and instructions** – laying down detailed procedures to be followed in counteracting money laundering and terrorist financing at the ORLEN Group. The rules are addressed to all companies' employees in customer-facing positions, have direct access to financial documents or participate in the execution of transactions.
- **ORLEN Group Regulatory Risk Management Policy** – governs regulatory risk management processes resulting from existing or proposed legal acts, excluding tax risks.
- **Anonymous Misconduct Reporting System** – the system provides a framework for identifying potential irregularities and instances of misconduct, which can be reported via indicated information channels.
- **PKN ORLEN Rules for Accepting and Offering Gifts** – define how PKN ORLEN employees must behave when accepting or giving gifts.

Other policies and internal acts are described in the 'Report on Non-Financial Information of the ORLEN Group and PKN ORLEN S.A. for 2019'.

In accordance with the Code of Best Practice for WSE Listed Companies, PKN ORLEN has in place effective functional control, risk management and compliance supervision systems, as well as an internal audit and control function. The simultaneous operation of all those systems and functions allows the Group to exercise ongoing and effective anti-corruption supervision.

PKN ORLEN has implemented a structured management control system, comprising a set of comprehensive procedures. The procedures are managed through a dedicated IT system which ensures their consistency through multifaceted agreements as well as approvals at each level in the organisation.

Key roles in the Risk Management System have been presented in the section ‘Risk Management’.

In order to minimise the risk of misconduct and corruption, PKN ORLEN has adopted the popular **Three Lines of Defence Model**. The first line of defence involves risk management by employees and business units, and controls related to the operational processes. The second line is compliance functions, and the third – internal audit and control, supporting the correct functioning of the specified prevention measures.

First line of defence/prevention – the Integrated Enterprise Risk Management System

Risk management is a continuous process, however it is revised in response to the ever-changing economic environment.

Second line of defence/prevention – the Compliance function

PKN ORLEN’s compliance function is based on the following four elements:

- the ERM system, which supports the process of assessment of financial and operational risk compliance with regard to the effectiveness of controls and the ERM Policy and Procedure
- the internal audit and control function – with respect to compliance of the processes with internal regulations
- assessment of compliance with integrated management systems (ISO)
- managing the risk of non-compliance with legal regulations, standards and ethical norms based on the requirements of the PKN ORLEN Compliance System documentation, with a particular focus on risks related to the Company’s business sector.

The Company’s Integrated Management System takes into account the findings of audits and reviews as well as complaints and grievances. Additionally, preventive/corrective measures are taken to address any irregularities identified in the above processes. All these activities are designed to ensure compliance with the adopted reference standards: ISO 9001 (quality management system), ISO 14001 (environmental management system), PN-N-18001 (occupational health and safety management system), and ISO 27001 (information security management system), ISCC system (a certification system for biomass and biofuels), Factory Production Control System, and Food Safety Management System.

Once a year, based on the reviews, a comprehensive report about the organisation’s Integrated Management System is prepared, submitted to the Company’s Management Board and posted on the intranet.

PKN ORLEN’s compliance with or preparedness (alignment level) for applicable laws or draft legislation is monitored on an ongoing basis and reported to the PKN ORLEN Management Board. Where necessary, appropriate steps are taken to ensure that the Company meets the requirements of Polish and EU laws and regulations.

Financial Control

The **Financial Control Department** carries out financial audits aimed at identifying any economic irregularities and fraud, verifying if PKN ORLEN and ORLEN Group employees respect the applicable laws, internal policies and professional standards, estimating the impact of any potential irregularities or misconduct, defining corrective measures and designating responsible persons, as well as assessing internal policies. The audited area is scrutinised mainly against legal compliance, relevance, cost efficiency, reliability, efficiency and legitimacy criteria, with the interests of PKN ORLEN and ORLEN Group companies taken into consideration.

Independence of the Financial Control Department is assured through appropriate functional reporting lines within the Company’s organisational structure.

Financial audit activities are performed on the basis of annual plans approved by the President of the PKN ORLEN Management Board. Regardless of the audit plan in place, the Financial Control Department can also perform *ad hoc* and investigative audits upon requests submitted to the Head of the Financial Control, Risk and Compliance Management Office by Members of the PKN ORLEN Management Board and individual business functions.

On the basis of findings presented in the Financial Audit Reports, follow-up instructions are issued which specify and prioritise measures to be taken to eliminate any irregularities or improve the performance of the audited area. The implementation of follow-up instructions is monitored continuously until it is confirmed that the corrective measures have been implemented.

Reports summarising the financial audits and the monitoring of implementation of follow-up instructions are drawn up for the PKN ORLEN Management Board twice a year.

Third line of defence / prevention – internal audit and control function

The audit function is performed by the Audit Office. Its purposes include independent, impartial and objective evaluation of functional control systems and analysis of business processes in accordance with the generally applicable laws and internal policies.

The activities of the Audit Office conform to the International Standards for the Professional Practice of Internal Auditing (IIA).

Independence of the Audit Office is assured through appropriate functional and administrative reporting lines within the Company's organisational structure.

The Audit Office performs its functions (audits, consultancy projects and business analyses) on the basis of an annual audit plan approved by the Company's Management Board. The annual plan is presented to the Audit Committee of the Company's Supervisory Board in order to obtain its opinion, and then is submitted directly to the Supervisory Board for approval.

As part of their activities, the Audit Office and the Control and Security Office verify on an ongoing basis if processes are executed in line with the applicable internal regulations. *Ad hoc* audits may also be conducted by the Audit Office when and as requested by the Company's Supervisory or Management Board.

The Audit Office continuously monitors its recommendations, based on which it prepares a report twice a year, stating to what extent they have been implemented. All monitoring reports are submitted to the Company's Management Board and the Audit Committee of the Company's Supervisory Board, which is in charge of ongoing assessment of the entire organisation's functioning.

The **Control and Security Office,** on the basis of the ongoing monitoring of recommendations and follow-up orders, prepares a report on the status and scope of implementation of the recommendations. Its activities have either a preventive or detective nature. They are complemented by activities performed by ORLEN Ochrona, which has due authorisations and appropriate tools, including the ability to use the services of business intelligence agencies and detectives. If any instance of corruption is suspected, relevant steps are taken in close cooperation with law enforcement agencies, including the police and Central Anti-Corruption Bureau (CBA). The simultaneous operation of all the systems and functions described above allows the Group to exercise ongoing and effective anti-corruption supervision.

In 2019, the Control and Security Office launched systemic training delivered on an annual basis across business functions with the highest risk of misconduct, in the form of classroom or e-learning training provided to ORLEN Group employees and new hires. The topics covered included criminal liability and disciplinary sanctions for corruption offences, identification of such offences, procedures to be followed in the case of suspected corruption by employees, whistleblowing options and channels, accepting and giving of gifts and building safe relationships with business partners. In 2019, a total of **4,057 people were trained** across the ORLEN Group, including the companies' management boards.

GRI: 103-3

The Anti-Corruption Policy has been in force in the ORLEN Group since 2018 and there is a **Anti-Corruption Compliance Officer**. The Officer cooperates directly with the Management Boards of the ORLEN Group companies which have no separate security departments. In 2020, the Rules of Anonymous Misconduct Reporting are to be updated with solutions introduced, *inter alia*, by Directive of the European Parliament and of the Council on the protection of persons reporting on breaches of Union law COM/2018/218. This ensures compliance with the EU legal requirements, the duty of care and the Warsaw Stock Exchange anti-corruption standards.

GRI: 205-2

The ORLEN Group's Anti-Corruption Policy is available at www.orlen.pl and on the intranet. Our trading partners and representatives are notified about the policy and rules for counteracting corruption at the time of establishment of the business relationship. In addition, when registering on the Connect procurement platform, suppliers also receive information on the anti-corruption policies and rules. In 2019, all members of the Management Board (100%) were made familiar with the ORLEN Group's Anti-Corruption Policy.

In accordance with the procedure for educating the Group's workforce on the internal regulations, the policy was made known to all (100%) employees. In 2019, training in this area was provided to all members of the Management Board (100%) and 279 employees, while nearly 200 employees completed an e-learning course.

GRI: 205-1

At PKN ORLEN and the ORLEN Group companies covered by the Enterprise Risk Management (ERM) System, the following **risks in the anti-corruption and bribery area** have been identified and assessed, depending on each company's specific characteristics:

- **Fraud and other misconduct** – the risk of employees acting unethically and committing fraud or other misconduct. The risk of fraud and other misconduct has been identified in 34 processes in the areas of retail, wholesale, procurement, marketing, safety, and finance.
- **Misconduct by customers, employees or agents involved in the sales process** – the risk of an inappropriate sales process or system or inappropriate sales system safeguards enabling customers or employees to commit financial fraud. The risk of misconduct by customers, employees or agents in the sales process has been identified in three processes in the areas of retail, wholesale, and marketing.
- **Violation or improper implementation of ethical standards** – the risk of ORLEN Group employees violating corporate ethical standards or of ethical standards being ineffectively established, implemented and enforced and inconsistent with corporate objectives. The risk has been identified in the Value System and Rules of Conduct process.

The risks related to anti-corruption and bribery were assessed in a controls effectiveness review conducted by the relevant business areas in respect of 38 processes and in an independent review performed by the Internal Control Department based on the irregularities identified during inspections.

In 2019, the ERM System covered: PKN ORLEN, ANWIL, ORLEN Lietuva Group, Unipetrol Group, ORLEN Deutschland GmbH, ORLEN Paliwa and ORLEN Centrum Usług Korporacyjnych, which represent close to 10% of all the ORLEN Group companies.

In 2019, as part of an annual risk self-assessment process and risk controls tests at PKN ORLEN, **552** risks were assessed based on tests of **999** controls in **176** business processes. The ORLEN Group companies assessed **633** risks and **1,807** controls in **169** processes.[1]

[1] *The data does not include: ORLEN Lietuva Group and ORLEN Deutschland GmbH, where a self-assessment process is being carried out in 2020.*

RESPONSIBILITY TOWARDS SUPPLIERS

GRI indicators: 102-9, 308-1, 414-1, 204-1

Capitals:

As one of the key groups of our Stakeholders, suppliers are required to accept specific criteria relating to ORLEN values and social responsibility. The Procurement area cooperates closely with the Stakeholders, analyses their needs, puts forward common priorities, plans, KPIs and improvements.

GRI: 102-9

To achieve strategic objectives in the Procurement area, we mainly focus on implementing a method of comprehensive management of procurement categories, a supplier management model (its elements include segmentation, classification, management rules) and global procurement standards. Also, rules of cooperation within the Group were defined and have been consistently implemented. This process is supported by the **Procurement Policy** put in place at the ORLEN Group as an umbrella document setting out the procurement management standards applicable across the Group and covering procedures, processes, tools, systems and procurement structures.

In most cases, our trading relations with suppliers are long-term to ensure that the ORLEN Group's requirements are satisfied in a reliable manner. The suppliers provide raw materials and services necessary for the ORLEN Group to run its operations. Our purchases are related to investments, production and maintenance projects; we buy electricity, production chemicals, biocomponents, supplies for service stations, and general-purpose supplies (administration, IT, professional services, logistics). In 2019, the ORLEN Group cooperated with **nearly 25 thousand suppliers**.

The procurement categories in the **Central Category Tree** form an extensive and orderly procurement directory used at PKN ORLEN and the key companies of the ORLEN Group. The Central Category Tree has three levels of detail. The first level comprises 13 main categories. The second and third level are detailed category levels, corresponding to various product and service groups for a wide range of business needs.

Main procurement categories

GRI: 308-1, 414-1

In a significant step towards ensuring a responsible supply chain, PKN ORLEN incorporated responsible business and sustainability criteria into its procurement management standard. The Company promotes social responsibility among its suppliers and seeks to cooperate with trade partners that respect human rights and operate in compliance with the law, ensure safe and fair working conditions, follow the best standards of ethical conduct and care for the environment. CSR criteria have been defined and compiled into a single document entitled **'Supplier Code of Conduct'**. Compliance with the Code is a mandatory criterion in the process of trade partner selection at ORLEN Group companies. The suppliers are selected based on the ORLEN Group's standardised and uniform social, environmental, legal, and ethical criteria. All existing and potential suppliers of the ORLEN Group are obliged to know and accept the requirements concerning human rights, compliance with the law, safe and decent working conditions, the highest ethical standards, and care for the natural environment. Acceptance of the 'Supplier Code of Conduct' by tenderers and suppliers is a formal precondition for participation in procurement procedures. If a tenderer fails to accept the Code, its bid will not be considered in the procurement process because the formal criteria are not satisfied. The purpose of the Code is to promote responsibility among the ORLEN Group's Stakeholders and encourage responsible practices among the suppliers. Moreover, every tenderer taking part in procurement procedures must read, understand and accept the ORLEN Group Anti-Corruption Policy and the PKN ORLEN Rules for Accepting and Offering Gifts.

In an effort to continuously improve procurement processes, the Group works to enhance and ensure greater consistency of vendor selection procedures. We developed a model for vendor selection in procurement category management strategies, and the key suppliers are evaluated on a regular basis as part of the supplier relationship assessment process. The selection and assessment criteria are based, among other things, on best market practices. They make it possible to mitigate reputation, financial and process risks, and ensure high quality of the supplier relationships.

The ongoing implementation of uniform procurement standards and systems across the ORLEN Group, a critical component of the Group's procurement centralisation project, will be key in ensuring a responsible supply chain. It will contribute substantially to the uniformity and consistency of procurement processes across the Group, their transparency, knowledge sharing and improved communication with suppliers. The Procurement Improvement Programme launched in 2019, covering a number of recommended solutions to improve the efficiency of procurement, is also a pivotal initiative in terms of supplier relations. Among its key recommendations that have already been implemented are procurement planning and wider dissemination of tender notices, e.g. via business portals.

GRI: 204-1

We attach particular importance to engaging with local businesses, based in the County of Płock and the Province of Warsaw. By using their services the ORLEN Group contributes to the development of the market and business in its close neighbourhood. Such suppliers know the local market and are often well aware of the needs and expectations of the ORLEN Group companies. Their close proximity also reduces costs, e.g. of transport and accommodation. **In 2019, goods and services sourced from Płock-based companies accounted for some 7.6%* of PKN ORLEN's spending (*excluding purchases from suppliers of crude oil and natural gas)**. By cooperating with suppliers from its close neighbourhood the Company supports growth of the local market and implements the objectives of its CSR strategy within the supply chain.

At key foreign companies of the ORLEN Group: Unipetrol (Litvínov) and ORLEN Lietuva (Mažeikiai), spending on services provided by local suppliers was 1% and 1.06%, respectively, of their total expenditure in 2019.

RESPONSIBILITY TOWARDS CUSTOMERS

GRI indicators: 103-1, 103-2, 103-3, 416-2, 102-43, 418-1

Capitals:

One of the principal aspects of the ORLEN Group's operations is a steady improvement in the quality of its products, services and customer service standards. Customers are a key Stakeholder for the ORLEN Group.

GRI: 103-1, 103-2, 103-3

An area of particular importance to image building and developing relations with customers and the general public is our service stations and the way they are managed. A necessary condition for achieving a steady improvement of quality standards and relations with each Stakeholder group is the knowledge of where and what changes are required. Our clients' feedback, comments and opinions as well as the results of customer satisfaction surveys are an invaluable source of information in this respect. They are complemented by reports issued after inspections and visits by public authorities, held to assess the solutions we employ to ensure health protection, adequate level of security, and compliance of our business with applicable laws and regulations.

It is our key goal to make a connection with our existing and potential customers by developing modern solutions, inspiring positive emotions and emphasising the national character of our brand and company. The **ORLEN brand** is now widely recognised and respected by Poles, and this success has been achieved with indirect contribution from other trade names: VERVA, EFECTA, Stop Cafe, and O!Shop. Customers' attachment to the brand is supported by the VITAY loyalty scheme and the FLOTA programme targeted at the B2B segment. In 2019, we launched a **co-branding process** at our sites outside Poland, which has already given visibility to the ORLEN brand at all stations of the network abroad. The co-branding project assumes the presence of local brands: Benzina (in the Czech Republic and Slovakia) and Star (in Germany) in combination with the ORLEN Group logo. To raise awareness of the ORLEN brand, the combined logotypes have been displayed on fuel pumps, price totems, and screens inside the service stations.

Intensive efforts were ongoing throughout 2019 to prepare PKN ORLEN to grow the share of non-conventional sources in the car fuel mix. The retail network is being developed to improve the availability of **alternative fuels**. These activities were undertaken in all countries where ORLEN Group service stations are present. The Group's range of 39 fast charging stations for electric vehicles (as at the end of 2019) across Poland and chargers at 18 Benzina stations in the Czech Republic was expanded in October 2019 to include our German service stations in Berlin, Hamburg and Lübeck. The Star network in Germany includes two hydrogen refuelling stations, and motorists in the Czech Republic will also be able to fill up their hydrogen-powered vehicles. In 2020, Unipetrol (an ORLEN Group company) will commence the construction of three hydrogen stations in Prague, Litvínov and Brno. In addition, 43 service stations located in the Czech Republic sell CNG.

In 2019, we worked to further **develop our food and beverage services** – a new format was introduced, combining a convenience store with a modern food and beverage section. It is branded as Stop Cafe 2.0, O!Shop and ORLEN Drive in Poland and the Czech Republic, and Star Connect in Germany. The new model was introduced at new CODO stations, while the existing Stop Cafes and Stop Cafe Bistros were upgraded to the Stop Cafe 2.0 standard. In Poland, the number of stations operating in the new format grew by 169, and the number of sites based on the simplified format increased by 15.

We seek **to improve the service quality on a regular basis.** Having employed special coaches at our service stations, who are responsible for training the employees and ensuring top quality service from all team members, and with the **development of the VITAY and FLOTA loyalty schemes**, we can boast a growing base of loyal customers year by year. To meet their expectations and constantly improve service levels, in 2018 PKN ORLEN launched **an innovative mobile payments system** at its Polish retail chain, called **OrlenPay**. The mobile application enables payment for fuel directly at the pump and is the first solution of this kind for individual and B2B customers on the fuel market in Poland. It makes fuel purchases much faster and simpler – the customers refuel their cars, pay at the pump, and are free to depart. As the pump quickly becomes available for the next car, other customers have time to do more shopping and buy beverages and food.

As a result of work on new options for trading partners, the ORLEN Group's fleet and external customers are now also offered electricity supplies. The main benefits to the customer are better terms of sale and the possibility of simplifying and reducing the number of settlements with external suppliers.

Products and services

In 2019, a product range enjoying strong popularity with customers was standard **Efecta fuels** with specific cleaning properties, which protect both the engine and the fuel system as a whole. They contain the most sophisticated and selected enhancing components, which improve the performance and prolong the engine life. In response to customer expectations, we invested in the infrastructure at our service stations. The number of fuel refuelling sites was steadily increased and breaks in the service caused by LPG deliveries were shortened.

In the case of LPG, since December 1st 2019 all fuel market participants have been subject to new regulations on registering and confirming the product deliveries **in the SENT system.** The purpose of the new requirements is to further curb grey economy in the fuel sector. PKN ORLEN has complied with the new obligations since they entered into force and is actively involved in the common activities of fuel companies on the market.

The **range of goods offered at our service station stores** reflects customer expectations and market trends. It includes car care and maintenance products (accessories and car cosmetics, engine fluids) as well as food products (beverages, snacks, foodstuffs). When adding new items to our food product range, we pay particular attention to their ingredients and choose healthy options, i.e. healthy sweets and clean label salty snacks. When supplies are taken in, the expiry dates of all products are checked, and the condition of packaging is verified. This is also done on an ongoing basis at the stores, during resupply of products on display. Our storage standards require that food products be kept separately from chemical products.

PKN ORLEN is developing the food and beverage offering at its service stations by adding items for vegans and vegetarians. New products are prepared based on Polish, local products by Polish manufacturers. Product recipes have been developed exclusively for PKN ORLEN and are not available in other competing networks. In response to signals from Stop Cafe customers, we now also offer a meal for people on gluten-free diet.

The snacks and hot drinks offered at the stations are prepared with a high level of food safety maintained. The stop.cafe coffee, which has already achieved an iconic status, bears the Fairtrade mark as a guarantee that it conforms to the fair trade standards.

In accordance with Directive 2019/904 of the European Parliament and of the Council of June 5th 2019 on reduction of the impact of certain plastic products on the environment (SUP, or single-use plastics), we optimised the amounts of packaging and catering accessories we use and started to replace them with environmentally-friendly single-material versions. Efforts are being made to identify recycled substitutes and prepare appropriate labels to build customer awareness of how the packaging should be handled in order to smoothly enter the recycling process.

Through our service stations, customers can also access a range of various services. These include in particular food services, car wash facilities, and the parcel collection service (‘Station with a Parcel’) provided in cooperation with the Polish Post.

The popularity of our car washes is growing. The automatic washing machines at the ORLEN Group sites have a closed water flow system, which contributes to reduced water consumption and industrial wastewater volumes. Our car wash service standards guarantee high quality of cleaning while limiting the consumption of chemicals. We make every effort to ensure that our equipment provides very good washing quality with the least possible environmental impact. In 2019, 34 car washes were upgraded.

All customers inquiring about the health and safety impacts of non-fuel products and services offered at our service stations are provided with reliable information by the service station personnel. In addition, detailed safety data sheets are available at all stations for the chemical products. Apart from the product composition, they include information on the potential threats and hazards and the procedures to be followed if they should materialise. Disclosure requirements concerning the threats and hazards posed by the chemicals manufactured and used by a company are regulated under Polish and EU laws. MSDS documents are the key tool used under the REACH regulation to ensure information flow along the supply chain. Pursuant to Art. 31 of REACH, the supplier of a substance or mixture is required to deliver to the customer an MSDS document in the official language of the member state in whose territory a given substance or mixture is marketed. The provisions of the Polish Labour Code are equally important. Its Art. 221.2 stipulates that ‘Any user of hazardous substances or hazardous chemical preparations shall have an up-to-date listing of such substances and preparations, as well as relevant MSDS documents. The substances and preparations shall be handled in packagings protecting against noxious action of such substances and preparations, fires and explosions’.

Our **MOP Michałowice** is the undisputed leader among all service stations in Poland. It received top scores in the five categories of the 'Service Station of the Year 2019' competition: innovation at a service station, new facility, service station operating in a motorway service area, catering concept at a service station, and service station of the year 2019. ORLEN DRIVE Michałowice is the first drive through service station in Poland. Motorists can refuel their vehicles, order food or drink and pay without having to get out of the car. Through this project, PKN ORLEN seeks to develop the Quick Service Restaurants model at the service stations. The solutions we have implemented help reduce the time needed to order and receive the products from the Stop Cafe food range.

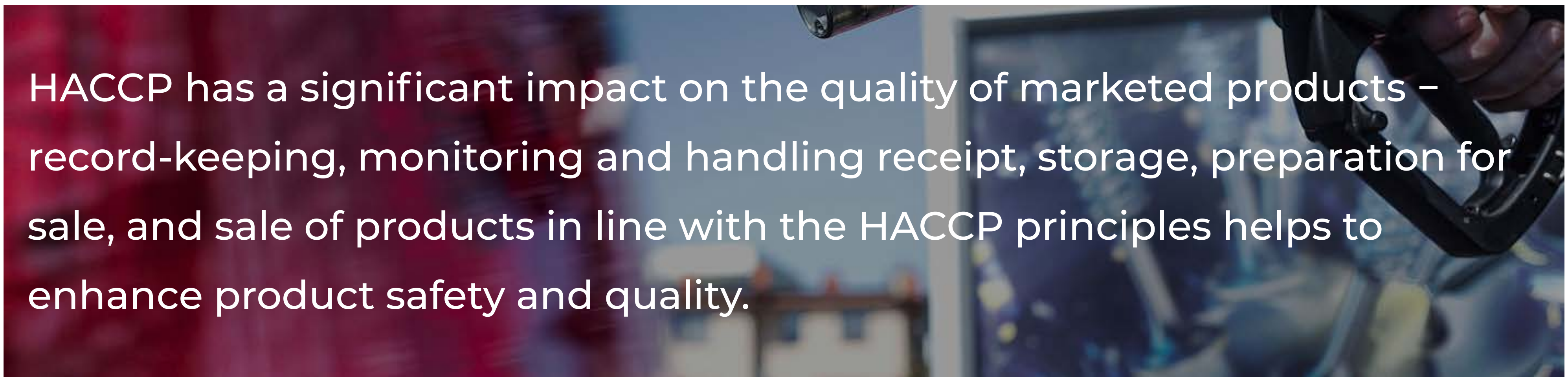
In response to new consumer trends, including those related to mobility in urban areas and economy of sharing, a car sharing (pay-by-the-minute car hire) service is available at selected ORLEN stations. It is operated in cooperation with Traficar. The Group also partnered with Nextbike Polska in a pilot project to offer bike rental, including both conventional and electric bikes, at selected PKN ORLEN stations in large Polish cities.

Health and safety

Our service stations are a **safe place for both customers and employees.** All sites are equipped with burglary and robbery alarm systems. Contracts with professional security providers guarantee quick arrival of a patrol if needed. All of our service stations have CCTV systems that record events inside and outside the facilities. The stations also have their own rules for vehicle and human traffic on their premises which, combined with luminescent markings, increase the overall safety level.

The stations with LPG pumps are adapted to enable safe refuelling of gas-powered vehicles. Service station attendants are always ready to assist customers and help them refuel their cars. At most stations, we have doubled the number of LPG refuelling facilities for customers convenience.

All PKN ORLEN service stations apply the HCCP Food Safety Management System, implemented in 2005 based on the requirements of Codex Alimentarius. The service stations have access to the Technical Documentation of HACCP, which is available via the Station Portal. Its purpose is to guarantee that food products sold at the stations satisfy all the sanitary requirements, are safe, and their quality meets the relevant standards, Both in the case of individually packaged products and all products prepared in accordance with the food offering of the Stop Cafe, Stop Cafe Bistro, and Stop Cafe 2.0 outlets and in the restaurants.



HACCP has a significant impact on the quality of marketed products – record-keeping, monitoring and handling receipt, storage, preparation for sale, and sale of products in line with the HACCP principles helps to enhance product safety and quality.

HACCP, standing for Hazard Analysis and Critical Control Points, is a system used to identify health threats and the risk of their occurrence at various stages of food production and distribution. It helps control and mitigate all hazards to consumer safety and health. Basically a preventive system, HACCP aims to minimise hazards related to food sale, protecting consumers by guaranteeing safety and high quality of purchased foodstuffs. It also protects food manufacturers, who are able to prove that their products are safe if their production processes are run correctly and are properly documented. The HACCP system is regularly audited.

GRI: 416-2

In 2019, there were no incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes.

The station personnel are instructed to strictly obey the **ban on selling alcoholic beverages and tobacco products to minors.** Appropriate notices are put up at every site, and awareness training is organised for the staff. Another practice is to make service station personnel sign declarations in which they undertake to observe the Upbringing in Sobriety and Alcoholism Prevention Act, verify the age of potential customers, and refuse a sale if they suspect it could be in breach of the Act. Compliance with this requirement was verified both openly and in a covert manner.

PKN ORLEN consistently takes action to prevent the spread of the coronavirus pandemic. The hand sanitizer produced by the ORLEN Group's Jedlicze plant and protective masks, mainly from domestic producers, are available for sale at all ORLEN service stations. Ambulance service staff, police officers, fire fighters, municipal police officers, soldiers, Border Guard officers, as well as employees of the National Revenue Administration and Inspectorate of Road Transport are served out of turn and get a free hot beverage. In connection with the coronavirus epidemic, emergency procedures have been implemented at the stations to ensure the safety of customers and employees.

Facilities for the disabled and children

At most stations there are special parking spaces for the disabled and the forecourts are adjusted to their needs. The ORLEN Group is actively modernising its service station network to better meet the needs of people with various dysfunctions. It has implemented standards of planning communication infrastructure in newly built facilities to make them more accessible for the disabled.

1,373 service stations have toilets adapted to the needs of the disables, and at more than 1,000 stations there are special parking spaces for the disabled. At all ORLEN service stations, customers can pay for fuel at the pump via the ORLEN Pay mobile application, using a special QR code displayed on each pump within the network. In 2019, to achive further service improvements, the 'Mobile Cashier' pilot programme and the 'Fast Lane' were launched. In recent years, over 30 thousand employees of the ORLEN service stations have recived training in services to people with disabilities. The training system was developed in cooperation with the INTEGRATION Foundation.

As far as our youngest travellers are concerned, their comfort is our priority. Many service stations in Poland and in the Czech Republic offer changing tables for babies. We started cooperation with Pampers and opened six new rooms where a carer can heat up food and feed and change a baby in comfortable conditions. Children's needs are also addressed in our food service (mini menu) and store offer (toys, books and fairy tales). Many stations (mainly located along main transit routes) have playgrounds for kids.

PKN ORLEN is also continuing the **Large Family Card programme**, which offers discounts for purchases of goods and services as well as fast-track institutional service to families with many children. As a result, the programme beneficiaries can now use a wide range of discounts when buying fuels, Stop Cafe products, or car wash services.

Customer service standards

GRI: 102-43

The ORLEN Group regularly **monitors customer satisfaction and loyalty**. Polish fuel market is rather unstable due to volatile fuel prices, development of the service stations network, and introduction of new products to food service, fuel and store portfolios. Customers are offered promotions and attractive products, building their loyalty towards the service station they use most frequently. The quality of service is regularly verified based on internal assessments carried out by micromarket managers by means of surveys completed on mobile devices, and using a 'mystery shopper' at all CODO and DOFO stations on a quarterly basis.

It is also vital to monitor customer satisfaction with various aspects of service station activities. One of the elements enhancing customer relations is the Company's approach to customers' feedback and **reaction to complaints.** The customers have several options to contact us and express their opinion about a service station or the services: over the Internet, by phone, or personally at service stations. In each case, the contact is registered in the complaints management system, which also records positive opinions and thanks from customers.

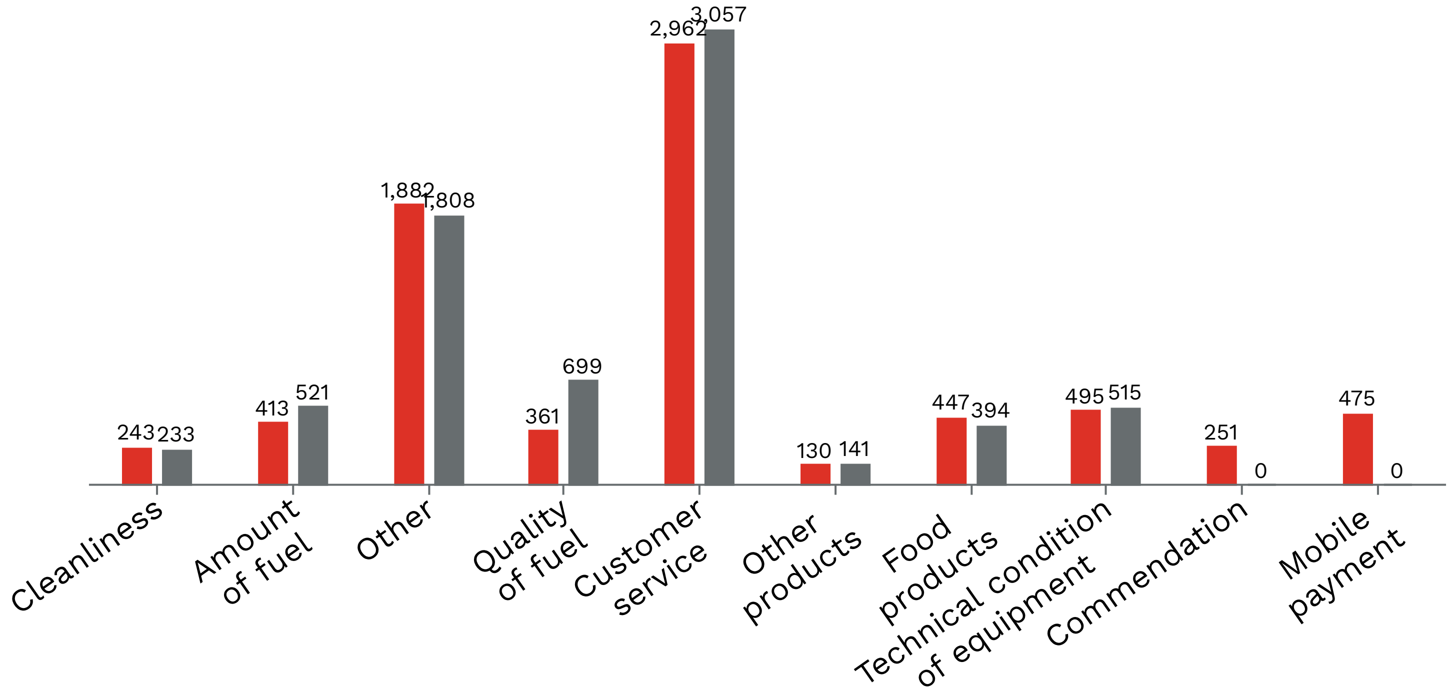
In 2019, customers at of the ORLEN Group service stations completed over **467 million transactions**.

Over that period, more than 7,659 complaints were received, of which 5,778 were to be handled in accordance with the requirements of the Integrated Management System, and 1,881 were submitted anonymously. 4% of the complaints were recognised as valid. The average waiting time to receive response to a registered complaint is 5.7 days.

The contact form was supplemented with additional problem categories in 2019:

- **Praise** – customers thank us for the high standard of service;
- **Mobile payment** – a customer report verification channel for customers using the mobile application enabling them to pay for fuel at the pump.

Main issues reported by our customers in 2019



Every customer complaint is analysed individually, in accordance with the adopted procedures.

Care for the natural environment

The ORLEN Group is particularly committed to environmental protection and this commitment also extends to its service stations.

This is particularly important in the case of oils, operating fluids and automotive chemicals. All packaging is checked on delivery and if any damage is discovered the product is returned. Appropriate storage and display policies help mitigate the risk of damage to a product or its packaging and quality deterioration. Our service stations provide containers for used oil and other liquids packaging that may be harmful to the environment. They also provide primary waste collection containers.

> All automotive products (oils, fluids, car cosmetics) come with safety data sheets specifying how the product should be stored and what to do in the case of contamination or poisoning.

In the case of fuels, the focus on environmental protection is our priority. Some solutions employed with this objective in mind are double-walled tanks to mitigate the risk of fuels leaking into the ground, fuel leak detection systems, station forecourt surface preventing fuels from seeping into the ground, hydrocarbon separators in forecourt rainwater drainage systems to prevent fuel penetration into the ground or ground water, containment integrity tools during fuel unloading (to significantly reduce vapour emissions), nozzles with the VRS system enabling recirculation of vapour from the car tank directly to a service station tank, and neutralising agents to remove spills or leaks that may occur during refuelling or unloading.

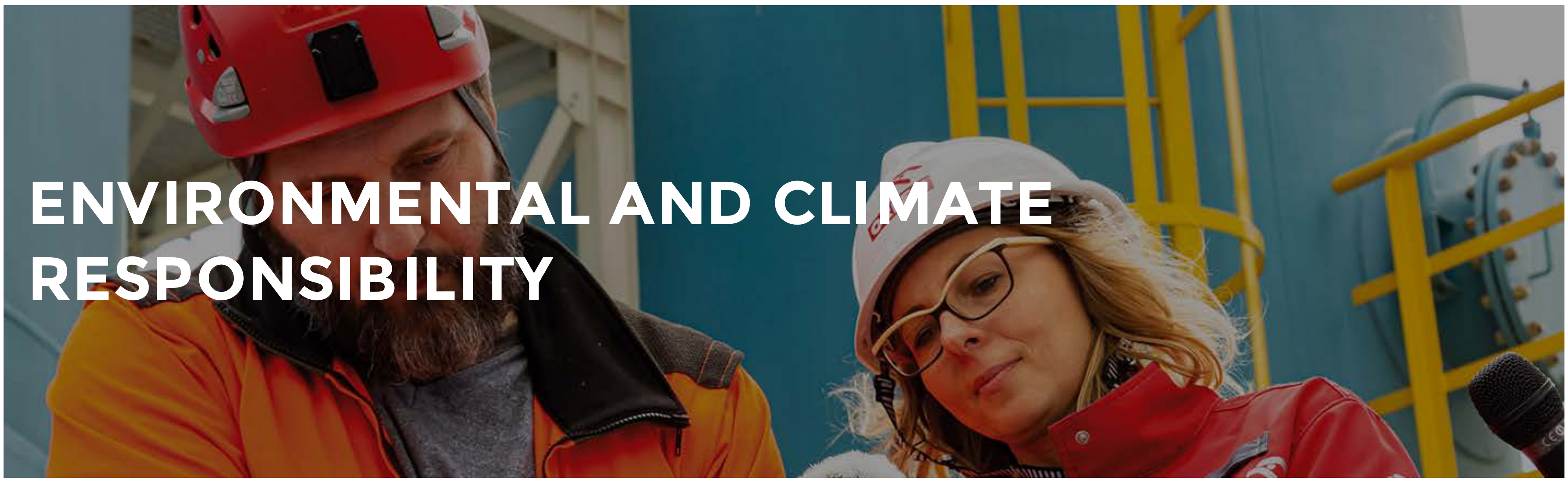
Customer privacy

GRI: 418-1

PKN ORLEN processes personal data in accordance with the applicable personal data protection laws, including in particular Regulation (EU) 2016/679 of the European Parliament and of the Council of April 27th 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), and Decision No. 18/2018/DG of the President of the PKN ORLEN Management Board of May 23rd 2018 on the principles of personal data protection at PKN ORLEN.

The PKN ORLEN Management Board appointed a data protection officer (Resolution No. 6066/18 of May 29th 2018). In 2019, PKN ORLEN recorded two complaints concerning breaches of customer privacy, and no data loss was identified. There were no legitimate complaints at the ORLEN Group companies concerning breaches of personal data protection.

ENVIRONMENT AND CLIMATE



ENVIRONMENTAL AND CLIMATE RESPONSIBILITY

GRI indicators: 103-1, 103-2, 103-3, 307-1

Capitals:

Reducing its environmental footprint and climate impact has long been one of the ORLEN Group's top priorities.

GRI: 103-1, 103-2, 103-3

The climate change risk is viewed by the ORLEN Group as a significant challenge for its companies. At the same time, it is an opportunity for growth, provided that we are able to develop the right business models. The ORLEN Group seeks to address those challenges by creating a comprehensive strategy, which is planned to be communicated at the end of 2020. The change in the functioning of energy systems as a result of new technologies and climate developments is an integral part of our strategic thinking and business risk assessment. The climate change risk is managed on a systematic basis by complementary and highly empowered units, taking into account the market, regulatory, technological and reputational dimensions. The PKN ORLEN Strategy Office has the Department of Sustainable Business Development within its structure, while the division overseen by the Member of the Management Board for Corporate Affairs includes the Environmental Protection Office, as well as the Regulatory Risk Management Department and the Representative Office in Brussels.

The ORLEN Group is responding to the climate and new energy model risks by installing EV chargers at Motorway Service Areas, adapting Motorway Service Areas to new e-mobility needs, investing in bio-refineries, testing innovative biofuel production technologies and preparing our organisation to become a strategic player in hydrogen production and use for transport and power generation.

The key areas of the Group's environmental activities are:

- Reducing greenhouse gas emissions (decarbonisation),
- Expanding its portfolio to include RES power plants, also through M&A activity,
- Developing the distribution infrastructure for alternative fuels, including electricity, biofuels and hydrogen,
- Increasing activity in the area of circular economy,
- Engaging in research and development activities, e.g. in the field of biofuels, CCU, and pyrolysis technology,
- Operating in accordance with the Integrated Management System, which includes the Environmental Management System (ISO 14001) ,
- Monitoring of and regular reporting on PKN ORLEN's environmental performance, including the use of natural resources, emission and waste levels,
- Striving for maximum environmental neutrality, including with regard to water consumption.

As refining and petrochemical production are energy-intensive processes, **decarbonisation of electricity and heat consumed** is an important measure in reducing carbon dioxide emissions. The ORLEN Group already uses electricity and heat generated by two CCGT units. The unit in Włocławek was the first commercial power unit in Poland fuelled with natural gas. **Cogeneration is among the most efficient forms of energy production.** The opening price scissors between the price of coal-based energy and the cost of energy generation (from natural gas, cogenerated with heat) support the profitability of the Company's operations in this segment. There are also plans to construct **offshore wind farms** in the Baltic Sea (where environmental and wind surveys are currently in progress) and to further expand the ORLEN Group's presence in the green energy sector. **Increasing the share of green energy in the overall mix offers a number of decarbonisation opportunities with respect to fuels and petrochemical products.** These include both green hydrogen produced by hydrolysis and its use as an alternative transport fuel, synthetic bio-hydrocarbons produced in the co-hydrogenation process, and synthetic gasoline. An important element of the decarbonisation efforts is optimised use of waste heat at the production plants. The installation of flue gas waste heat recovery equipment at the DRW VI unit at the PKN ORLEN production plant in Płock is one example of solutions implemented towards this objective. The purpose of the project is to recover 17 GJ of heat that was formerly irretrievably dissipated and to use it for heating up combustion air. The resulting reduction in fuel consumption will cut down annual CO_2 emissions by nearly 8,000 tonnes. Another initiative was the construction of steam generators on the hydrocracking unit and the use of waste heat to produce low pressure steam, for which the Company was awarded white certificates and reduced the amount of fuel used in the process.

The fully depreciated CCGT units will be an efficient power base for renewable energy support. Further information on the steps we intend to take to decarbonise PKN ORLEN's production and products, and to reduce its environmental footprint (through the implementation of circular economy models) will be provided in our long-term development strategy, which is now being developed.

In April 2020 PKN ORLEN finalised **acquisition of the ENERGA Group**, which owns more than 50 RES generation assets, mainly across the hydro, onshore wind and solar PV segments. Renewable sources account for over 30% of the ENERGA Group's electricity output – a share unmatched by any of its major competitors. In addition, the company has an extensive distribution network with a total length of 188,000 km, covering almost a quarter of Poland's territory.

The long-term development strategy of PKN ORLEN involves, among other things, increased production of alternative fuels. The ORLEN Group seeks to grow the share of non-conventional ways of powering cars by developing its service station network to sell alternative fuels. These activities were undertaken in all countries where ORLEN Group service stations are present. The Group's range of 39 fast electric vehicle charging stations across Poland and chargers at 18 Benzina stations in the Czech Republic was expanded in 2019 to include two of our German service stations (numbers as at the end of 2019). In addition, 42 service stations located in the Czech Republic sell CNG. In Germany, there are two hydrogen filling stations, and motorists in the Czech Republic will soon be able to fill up their hydrogen-powered vehicles as well.

39

fast electric vehicle

charging stations across Poland

18

chargers at Benzina stations

in the Czech Republic

42

service stations

located in the Czech Republic sell CNG

2

hydrogen filling stations

in Germany

An important development area for ORLEN is biofuel and biocomponent production capacities.

PKN ORLEN purchased the licence and front-end engineering design for a HVO production unit and continues work on the construction of the second generation bioethanol unit in Jedlicze. The operational programme for biofuels also includes a number of major infrastructure and R&D projects designed to increase the renewable energy content in the fuels sold.

Under new regulations, local governments will be required to consistently increase the share of zero-emission vehicles in public transport fleets. Once the necessary technical and legislative solutions are in place, **hydrogen fuels**, which are still mostly in the testing phase in Poland, will be a significant addition to the range of fuels used in heavy transport vehicles, including municipal buses. PKN ORLEN has already signed relevant letters of intent with the Metropolitan Association of Upper Silesia and Dąbrowa Basin, PESA Bydgoszcz and the City of Płock, with similar agreements with local governments soon to follow. By partnering with municipalities to develop zero-emission hydrogen-powered public transport services, the ORLEN Group will ultimately be able to develop effective hydrogen refuelling infrastructure to meet the needs of municipal transport systems and vehicles. Currently, the ORLEN Group's hydrogen output is close to 45 tonnes per hour, and most of it is used in production processes. The Group has already commenced a project to build a hydrogen purification unit, which will enable its marketing as a fuel for motor vehicles starting from 2021. Therefore, PKN ORLEN is also developing technologies to store, transport and distribute hydrogen fuel.

Transition towards a **circular economy** is among key priorities of the EU's policy, which assumes that products, raw and other materials should remain in circulation as long as possible, thus reducing the amount of generated waste. Worth noting here is the partial water recirculation at the Płock production plant, which reduces water abstraction from the environment and the amount of industrial sewage produced. This solution made it possible to cut water withdrawal from almost 50 million m^3 in the 1980s to 24 million m^3 in 2016, and bring down the amount of effluents discharged from 40 million m^3 to 14 million m^3, while the refining volumes increased from about 8 million to more than 16 million tonnes. The flue gas desulfurisation unit launched in Płock not only helps reduce NOx, SOx and particulate matter emissions, but also delivers high quality synthetic gypsum, which has been recognised as a product in its own right. This method of producing gypsum helps protect its natural resources. Now that gypsum has been recognised as a by-product, it is no longer classified as waste. ORLEN Południe is Poland's only company that operates a specialist hydrogenation line, enabling safe regeneration of waste oils into base oils used to make lubricating oils. The process is a model example of a circular economy solution.

The construction of our Research and Development Centre in Płock will facilitate development of proprietary innovative technologies and patents in petrochemical, biofuel, bitumen and oil production. As regards circular economy, ORLEN is interested in hydrogenation, pyrolysis, gasification and depolymerisation technologies.

In 2019, activities were continued to calculate the **carbon footprint** of our organisation and its products, using tools developed in previous years. Determination of the carbon footprint is voluntary. An organisation's carbon footprint includes direct emissions, energy indirect emissions and other indirect emissions from use of the marketed products.

Key policies

Our activities are carried out based on the **Integrated Management System**, which includes the Quality Management System (ISO 9001: 2015, AQAP 2110), Environmental Management System (ISO 14001:2015), Occupational Health And Safety Management System (PN-N-18001), Information Security Management System (ISO/IEC 27001), Certification System for Biomass and Biofuels ISCC, KZR INiG certification system for the HVO process, Factory Production Control System (ZKP) – for bitumen production, and Food Safety Management System (HACCP) according to Codex Alimentarius. The Company holds certificates of compliance with ISO 9001: 2015, AQAP 2110, ISO 14001:2015, PN-N-18001, ISO/IEC 27001, ISCC and ZKP. Additionally, an **Energy Management System** based on the requirements of the ISO 50001 standard was implemented and certified in 2019. These systems meet the highest international management standards and support the Company's day-to-day efforts to ensure professional customer service and maintain top quality, safety, health protection and environmental standards.

The key ORLEN Group companies have Integrated Management Systems in place, which include an **Environmental Management System implemented and maintained in accordance with the ISO 14001 standard** as their integral part. The Group companies also follow **Environmental Management System Policies**, providing for an obligation to protect the environment, which includes pollution prevention, and other specific obligations relevant to the operations of individual companies. These policies also include a requirement to comply with the law and other external and internal requirements.

Environmental Management Systems

ISO 14001 certificate

ORLEN Group companies :

- PKN ORLEN
- Grupa ORLEN Lietuva
- Grupa Unipetrol
- ANWIL
- Basell Orlen Polyolefins
- Grupa ORLEN Południe
- ORLEN Oil
- ORLEN Paliwa
- ORLEN Asfalt
- ORLEN Serwis
- ORLEN Upstream
- ORLEN Laboratorium
- ORLEN Eko
- IKS Solino
- ORLEN KolTrans
- ORLEN Administracja
- ORLEN Centrum Serwisowe
- ORLEN Projekt

Elements of the environmental management system implemented as part of the JIG industry standards requirements

ORLEN Group companies :

- ORLEN Aviation

Implemented environmental protection principles, including on waste management control

ORLEN Group companies :

- ORLEN Centrum Usług Korporacyjnych
- ORLEN Ochrona

When establishing their procedural frameworks, the companies relied on a risk-based approach and focused on prevention, in the broad sense of the word. The procedures, designed to ensure uniformity of the processes across the ORLEN Group with respect to environmental management and reduction of negative environmental and climate impacts, provide rules to be followed during both normal operations and maintenance shutdowns, as well as in the case of environmental accidents. Each of the ORLEN Group companies has implemented procedures for internal audits of the Environmental Management System. The objective of such audits is to determine the status of compliance with the requirements of ISO 14001 and with any other adopted requirements. If any discrepancies are found, remedial and corrective actions are taken to remove the causes of non-compliance. The management boards of the ORLEN Group companies conduct a periodic assessment, in line with the adopted procedures, of the operation of the Environmental Management System. The assessments are usually undertaken once a year.

All ORLEN Group companies hold the necessary permits required by law to conduct their business. Operations of the Płock production plant are regulated under integrated permits, which cover all units, i.e. the refinery, petrochemical plant, central wastewater treatment facility, CHP plant and CCGT unit. The permits define emission limits which are safe for the environment and human health, and which are subject to monitoring. Emission volumes from 14 of the plant's emitters are measured on an ongoing basis; measurements from the other emitters are taken periodically. In addition, PKN ORLEN has a modern automated air quality monitoring station, fitted with state-of-the-art instruments. Measurements are automatically uploaded to a database maintained by the Provincial Inspectorate of Environmental Protection (WIOŚ) and published on the Inspectorate's website.

Integrated permits and sector permits need to be updated on an ongoing basis in order to keep up with the evolving legal environment and business needs. In 2019, in view of amendments to the Waste Act, an application to amend the waste collection permit was prepared. In accordance with the Act on the Trading System for Greenhouse Gas Emission Allowances, documents were submitted to the National Centre for Emissions Balancing and Management with respect to the installations covered by the EU ETS in connection with the free allocation of allowances for the first phase of the fourth trading period, i.e. 2021–2025, and the monitoring methodology plans covering the monitoring of activity levels, to be effective from January 1st 2021, were filed with Marshal's Office in order to obtain a decision.

In addition, in accordance with the legal requirements, in 2019 applications for amendment of integrated permits for installations covered by BAT Conclusions (the CCGT unit in Płock and the petrochemical installations) were prepared and submitted to the competent authority. The relevant proceedings are still pending.

One hundred and sixty-seven water-law permits were obtained altogether for PKN ORLEN service stations and fuel terminals.

For description of our environmental policies, see the Non-Financial Statement of the ORLEN Group and PKN ORLEN S.A. for 2019.

Environmental compliance

In 2019, compliance of PKN ORLEN's production units' operations with environmental laws was verified by the Płock and Włocławek Branches of the Provincial Inspectorate of Environmental Protection, which performed eight inspections. The inspections did not reveal any non-conformity. Only in one case a minor exceedance of the permitted particulate emissions limit was recorded, at catalytic cracking unit II.

A total of 34 inspections were carried out within the regional structures of PKN ORLEN (fuel terminals and service stations, standalone assets) by the state water management authority (PGW Wody Polskie) and Provincial Inspectorates of Environmental Protection. After one of these inspections, an instruction was issued requiring that the notification of liquid fuel storage and handling facilities be updated in compliance with applicable laws. The requirement was fulfilled. As a result of another inspection, a decision was issued to suspend the commissioning of a newly built service station in Warsaw. The decision was appealed against to a higher-level authority and reversed in its entirety, whereupon the procedure to suspend the commissioning of the station was discontinued. No fines were imposed following the inspections.

Other companies of the ORLEN Group were also inspected by external bodies for environmental protection, mainly the Environmental Protection Inspection Authority. The inspections focused on compliance with the environmental requirements imposed by regulations and administrative decisions. **In 2019, 65 inspections were carried out at subsidiaries, with 18 follow-up recommendations issued.**

GRI: 307-1

Fines imposed on Group companies for identified cases of non-compliance totalled EUR 18,800 and concerned delayed completion of the project to mount an electrostatic precipitator on the FCC (ORLEN Lietuva), excess intake of groundwater at ORLEN Baltics Retail service stations, and emissions of fluorinated greenhouse gases at Basell Orlen Polyolefins.

Most of the environmental projects carried out in 2019 involved **adaptation of plant and process units to new environmental requirements**

and standards defined in the EU regulations (LVOC BAT Conclusions). Those efforts included both administrative work to have the terms of the integrated permits for the Group's plants amended, as well as preparation of capex projects related to the production plant and equipment. Key initiatives carried out in 2019 included the start of deployment of the LDAR system for petrochemical facilities and analyses to develop an odour monitoring and management plan. With respect to refining facilities, the first verification measurements were carried out as part of the LDAR system maintenance, confirming high leak tightness of the facilities. Further BAT Conclusions for waste incineration plants were published in late 2019. As the ORLEN Group operates such plants, the BAT requirements will be analysed and adaptive measures will be taken if needed.

The Act on Biofuel Components and Liquid Biofuels imposes the requirement to achieve the **National Indicative Target (NIT)**, i.e. to ensure the required minimum share of biocomponents in the total volume of liquid fuels and biofuels, both sold on the market and used for own needs. The Group meets the National Indicative Target by introducing appropriate amounts of biocomponents into fuels or liquid biofuels derived from biodegradable liquid materials – fossil fuel substitutes. Only biofuels certified for compliance with the sustainability criteria may be used for the implementation of the NIT. The purpose of the NIT is to promote the use of energy from renewable sources in the transport sector and thus to reduce its greenhouse gas emissions. PKN ORLEN has met the required quota ever since 2008. In 2019, biocomponents accounted for 5.6% of the energy content of fuels marketed by PKN ORLEN in Poland, which means that the share of renewable energy represented 5.6% of the total energy content of transport fuels sold by PKN ORLEN. The Company has in place a precise internal order regarding the NIT.

In addition, PKN ORLEN and other ORLEN Group companies are subject to the EU regulation establishing the **greenhouse gas emission allowance trading scheme** (the EU ETS Directive) that forms part of the EU climate and energy package. Directive 2003/87/EC of the European Parliament and of the Council established a scheme for greenhouse gas emission allowance trading within the Community to promote reductions of greenhouse gas emissions in a cost-effective and economically efficient manner. In October 2014, the European Council made a commitment to reduce the European Union's overall greenhouse gas emissions by at least 40% below the 1990 levels by 2030. It was agreed that all sectors of the economy should contribute to achieving the emissions reduction target and that it should be met in the most cost-effective manner through the EU ETS.

The changes to regulations agreed on in recent years, designed to address the issue of oversupply of CO_2 emission allowances on the market, are having an impact on the ORLEN Group's installations. Since the publication of the MSR surplus indicator and the revision of the EU ETS regulations, auction volumes have been significantly reduced. Following an increase in the prices of CO_2 emission allowances in Europe, proceeds from auction sales of greenhouse gas emission allowances purchased by Member States rose and can be used for specific projects related to climate protection and the energy sector.

For information on the environmental risks and relevant mitigation measures, see 'Risk management' and 'Regulatory environment'.

Environmental fees and charges

Under the EU law, an entity using the natural environment and discharging substances to the environment is required to pay relevant fees pro rata to the type and scale of its environmental impact.

In Poland, the obligation to pay environmental fees is imposed by the Environmental Protection Law, which requires plant operators to pay for air emissions of gases and particulate matter and for waste storage. Payment of fees for discharging effluents to water and soil and for water abstraction is governed by the Water Law.

In 2019, ORLEN Group companies paid environmental fees for air emissions, water withdrawal, discharge of effluents to water and soil, and storage of waste in own landfills in a timely manner. Therefore, there were no additional payments resulting from failure to correctly calculate the fees or to meet the payment deadline. The amounts to be paid were calculated based on the type and quantity of water abstracted from the environment and the type and quantity of air emissions and effluents discharged to water. It is those environmental impacts that had the largest share in the fee amounts paid by ORLEN Group companies. Fees for the storage of waste in own landfills represented a small fraction of the total.

An over 2% year-on-year decrease in the total amount of environmental fees was reported in 2019, driven chiefly by lower fees for the discharge of effluents by the Czech company Spolana, which in 2019 did not incur any fees for the discharge of inorganic nitrogen in wastewater. As required by the Czech water law, the nitrogen load did not exceed the limit specified in the statute.

Moreover, ANWIL reduced storage of waste in its own landfills.

In 2019, the aggregate amount of environmental fees was in excess of EUR 14m.

Environmental fees at ORLEN Group companies

Type of fee	Amount [EUR]		change %
	2019	2018	
Total air emissions	4,871,093	4,807,520	1.32
Water withdrawal	8,643,000	8,757,538	-1.31
Discharge of effluents	620,635	906,563	-31.54
Landfilling of waste	17,200	29,223	-41.14
Total	**14,151,928**	**14,500,844**	**-2.41**

WATER

GRI indicators: 303-1, 303-3

Capitals:

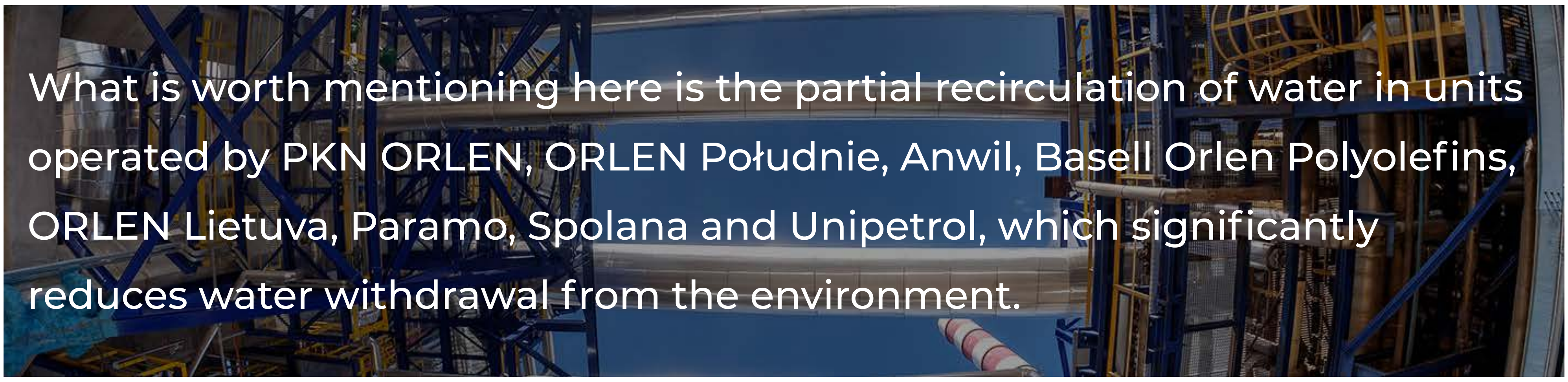
Surface waters are the main water source for the Group companies. They are abstracted by the ORLEN Group's largest companies: ANWIL, IKS Solino, PKN ORLEN, ORLEN Południe, ORLEN Lietuva, Unipetrol, Paramo and Spolana, and then distributed through water mains to their own production facilities and to other companies' units.

GRI: 303-1

The ORLEN Group consumed over 94 million m^3 of surface water, groundwater and mains water in 2019 . Most of the water was used by PKN ORLEN, which abstracted 437,389 m^3 of groundwater and 27,771,220 m^3 of surface water for the purposes of its production units and distribution infrastructure. This means that its total consumption grew by more than 51,000 m^3 vs 2018 following an increase in production volumes and the commissioning of new units. Moreover, due to the progressing climate change (higher temperatures in summer), the demand for water at ANWIL and its third party customers also rose considerably, by 1.8 million m^3. There has also been a marked increase in the amounts of mains water abstracted by the service stations operated by the Czech subsidiary Benzina.

Water consumption at ORLEN Group companies

Water intake	Water withdrawal [m^3]		Increase/decrease [%]
	2019	2018	
Surface water	89,090,471	85,722,181	3.93
Groundwater	1,555,827	1,536,927	1.23
Mains water	3,441,486	3,019,705	13.97
Total	**94,087,784**	**90,278,813**	**4.22**



What is worth mentioning here is the partial recirculation of water in units operated by PKN ORLEN, ORLEN Południe, Anwil, Basell Orlen Polyolefins, ORLEN Lietuva, Paramo, Spolana and Unipetrol, which significantly reduces water withdrawal from the environment.

Reuse of recovered water

GRI: 303-3

In recent years, the ORLEN Group has made a number of investments that result in a more efficient use of water and increase the safety of water and sewage systems.

ORLEN Group companies recover water from treated effluents and use steam condensate circulation systems and closed water systems for cooling in production processes.

In 2019, 2.03 billion m^3 of water circulated in their cooling systems with a total capacity of 268,930 m^3. More than 24 million m^3 had to be refilled as a result of losses and evaporation. This means that 2 billion m^3 of water remained in constant use. Moreover, the companies recovered nearly 9.5 million m^3 of steam condensate; after its proper pressure was restored at the companies' CHP plants, the condensate was returned to the units. Production of utility water from treated effluents is carried out at PKN ORLEN and ORLEN Lietuva. In this way the companies were able to obtain more than 7 million m^3 of water for fire protection and other purposes.

In total, more than 2 billion m3 of water was reused at Group companies in 2019, accounting for 2,145% of the water consumption, i.e. more than 21 times more than the withdrawn water volumes.

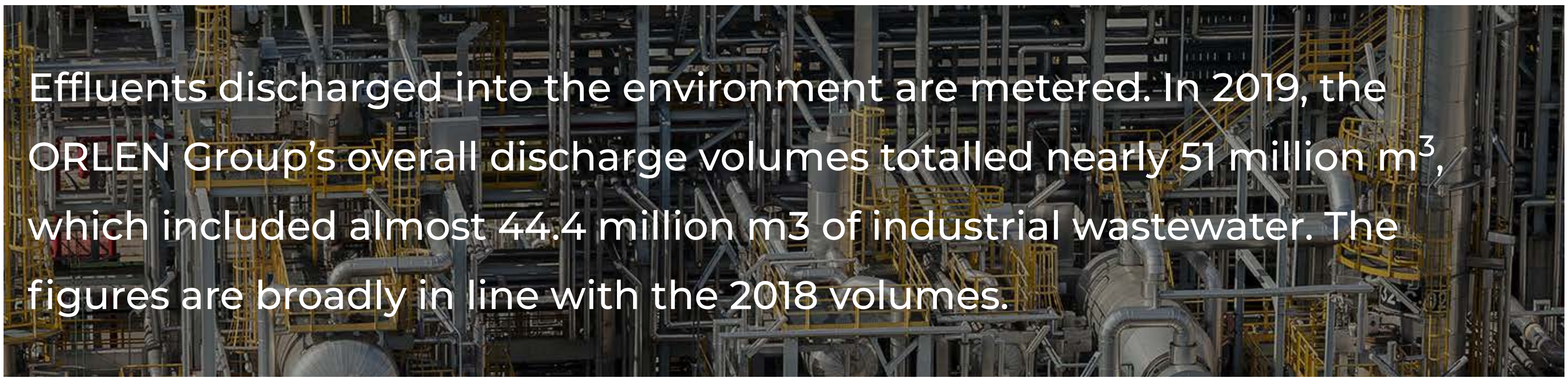
EFFLUENTS

GRI indicators: 306-1

Capitals:

Effluents from all ORLEN Group refining companies are directed to industrial and rainwater sewage systems and then undergo treatment.

GRI: 306-1



Effluents discharged into the environment are metered. In 2019, the ORLEN Group's overall discharge volumes totalled nearly 51 million m^3, which included almost 44.4 million m3 of industrial wastewater. The figures are broadly in line with the 2018 volumes.

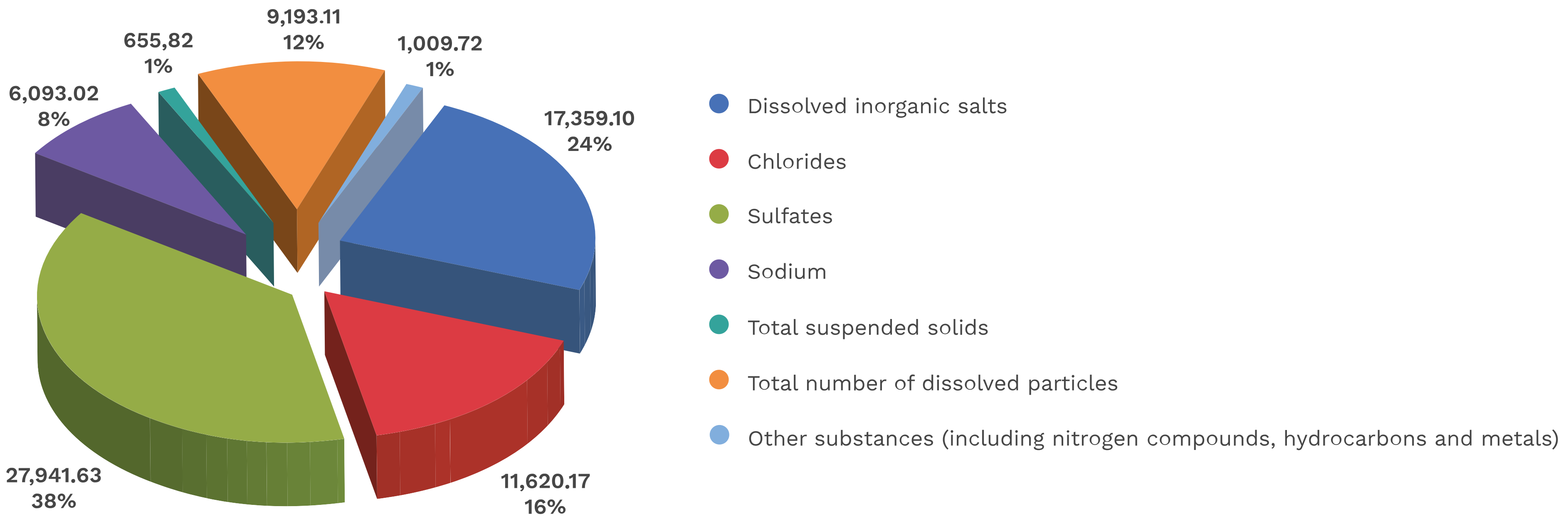
In addition to PKN ORLEN, the following companies operate their own wastewater treatment facilities: ANWIL, Ship-Service, Spolana, Paramo, Unipetrol, ORLEN Lietuva and ORLEN Południe. All wastewater reaching the wastewater treatment plants undergoes a multi-stage treatment process which includes mechanical, physical, chemical and biological treatments. Once wastewater is treated in accordance with the Company's integrated permits, it is discharged into rivers: Vistula, Elbe, Oder, Vltava, Jasiołka, Bílina, Dubulis, and to the Baltic Sea.

The other companies divert their wastewater streams to sewage systems of other Group companies or third parties. The volume of effluents treated by third-party operators was 1,080,662 m^3. The ORLEN Group does not use rainwater collected directly or treated wastewater generated by entities from outside the Group.

Volumes of treated effluents discharged into the environment by ORLEN Group companies

Effluent type	Volume of treated effluents discharged to the environment [m^3]		
	2019	2018	Increase/decrease [%]
Industrial wastewater	44,397,037	44,039,987	0.81
Other	6,517,502	6,651,339	(2.01)
Total	**50,914,539**	**50,691,326**	**0.44**

Share of particular substance loads in effluents discharged into the environment [Mg]



The substance load in effluents discharged into the environment totalled nearly 74,000 Mg.

Production of utility water from treated effluents is carried out at PKN ORLEN and ORLEN Lietuva. In this way the companies were able to obtain more than 7 million m^3 of water for technical and fire protection purposes.

AIR EMISSIONS

GRI indicators: 305-7, 305-1, 305-6

Emissions

Air emissions are monitored through periodic or continuous measurements, so actual emissions of particular substances are controlled on an ongoing basis.

Substances accounting for the largest percentage of total air emissions from the ORLEN Group's installations include: sulfur dioxide, nitrogen oxides, carbon monoxide and dioxide, as well as particulate matter. They are generated mainly from the combustion of fuels to produce electricity and heat, as well as in the refining and chemical processes. There are also volatile organic compound emissions and other process-specific emissions.

Total ORLEN Group's air emissions, including of carbon dioxide, reached 15,971,785 Mg in 2019.

GRI: 305-7

Air emissions of all ORLEN Group companies, by type of substance

Substance	Emissions [Mg]		
	2019	2018	change %
Sulfur dioxide	17,250	18,290	(5.68)
NOx	9,824	10,664	(7.88)
Carbon monoxide	5,400	4,559	18.46
Particulate matter	888	1,088	(18.40)
Total	**33,363**	**34,601**	**(3.58)**
Carbon dioxide	15,919,204	15,010,150	6.06
Other substances	19,218	16,889	13.79
Total emissions	**15,971,785**	**15,061,640**	**6.04**

The increase in oxygen monoxide and dioxide emissions was partly due to emissions from ANWIL's ammonia production unit that occurred under non-standard conditions, as well as the full-year operation of the CCGT unit in Płock. The higher emission levels of other substances were attributable to methane emissions from the shut-down and start-up of the ammonia production unit.

CO_2 emissions of ORLEN Group companies by source – Scope 1 emissions

Emission source	CO_2 emissions [Mg]	CO_2 emissions [Mg]
	2019	2018
Technological processes	10,632,781	10,574,540
Power generation	5,283,822	4,433,655
Other processes	2,601	1,955

Other emission sources include fugitive emissions other than from process units, including air emissions from combustion of fuel in combustion engines.

An example of solutions limiting the impact on the environment is the construction of flue gas waste heat recovery equipment at the DRW VI unit at the PKN ORLEN production plant in Płock. The purpose of the project is to recover 17 GJ of heat that was formerly irretrievably dissipated and to use it for heating up combustion air. The resulting reduction in fuel consumption will cut down annual CO_2 emissions by nearly 8,000 tonnes. Another initiative was the construction of steam generators on the hydrocracking unit and the use of waste heat to produce low pressure steam.

The ORLEN Group commissioned two new gas-fired power generating units, replaced old burners with low-emission ones, and installed flue gas dedusting and desulphurisation equipment.

Management of greenhouse gas emissions

GRI: 305-1

Direct greenhouse gas (GHG) emissions at the ORLEN Group comprise CO2 emissions reported under the EU Emissions Trading Scheme (EU ETS). No biogenic CO2 emissions were identified. There are also CO2 emissions not covered by the EU ETS, which totalled 23,692 Mg in 2019.

Greenhouse gas emissions were balanced monthly for the Group's units which participate in the Emissions Trading Scheme (ETS). The utilisation of the CO2 emission allowance allocations was monitored on an ongoing basis for each unit.

Verified CO_2 emissions from ORLEN Group's EU ETS installations in 2018–2019 [Mg]

Company	Actual emissions [Mg]	Actual emissions [Mg]
	2019	2018
PKN ORLEN S.A.	8,792,971	7,789,688
ANWIL S.A.	978,882	1,000,819
Basell Orlen Polyolefins Sp. z o.o.	41,308	46,283
ORLEN Południe S.A.	121,993	124,713
Public Company ORLEN Lietuva	1,599,384	1,680,865
UNIPETROL RPA s.r.o.	4,162,201	4,089,807
PARAMO a.s.	39,899	42,927
SPOLANA a.s.	158,874	203,618
TOTAL FOR THE GROUP	**15,895,512**	**14,978,720**

The results of independent carbon emissions verification were positive for all units of the ORLEN Group.

The Group monitors actual CO_2 emissions against its allowances on an ongoing basis, seeking to ensure that it has the required allowance amounts.

Emissions of ozone-depleting substances

GRI: 305-6

In 2019, ORLEN Group companies emitted 40.92 Mg of the substances referred to in Regulation No. 1005/2009 of the European Parliament and of the Council of September 16th 2009 on substances that deplete the ozone layer.

Types and quantities of ozone-depleting substances

Substance	Emissions [Mg]	
	2019	2018
Chlorofluorocarbons (CFCs)	0.00	2.20
Hydrofluorocarbons (HFCs)	5.36	0.42
Tetrachloromethane (carbon tetrachloride)	0.04	0.03
1,1,1-trichloroethane	32.45	33.87
Bromomethane (methyl bromide)	3.07	2.58
TOTAL	**40.92**	**39.10**

The substances are used in laboratory and analytical testing, in refrigerating and air conditioning equipment, and as process reagents in the production of chlorine and caustic soda. The CFC11 equivalent of the emissions was 5.44 Mg.

WASTE

GRI indicators: 306-2, 306-4

Capitals:

The flue gas desulfurisation unit launched in Płock not only helps reduce NOx, SOx and particulate matter emissions, but also delivers high quality synthetic gypsum, which has been recognised as a product in its own right. This method of producing gypsum helps protect its natural resources. Now that gypsum has been recognised as a by-product, it is no longer classified as waste. ORLEN Południe is Poland's only company that operates a specialist hydrogenation line, enabling safe regeneration of waste oils into base oils used to make lubricating oils. The process is a model example of a circular economy solution.

Waste generated by the ORLEN Group includes primarily waste from processing of crude oil, production of organic chemicals and fuel combustion, as well as sludge from treatment of industrial wastewater, waste oils and post-repair waste.

In total, ORLEN Group companies generated more than 220,500 Mg of non-municipal waste in 2019.

Data on the amounts of generated hazardous and non-hazardous waste is presented below.

Waste volumes generated at ORLEN Group companies

Quantity of generated waste [Mg]	2019	2018	change %
Hazardous waste	112,745	72,009	56.57
Non-hazardous waste	107,779	97,075	11.03
Total	**220,524**	**169,084**	**30.42**

The increase in the hazardous waste volumes was due mainly to the generation of over 41,000 tonnes of contaminated soil, including stones, in connection with the construction of a glycol production unit at ORLEN Południe's production plant in Trzebinia.

Waste management

GRI: 306-2

The waste managed by the ORLEN Group in 2019 was subjected to recovery and disposal processes at the companies' own units or recovered otherwise. Some of the waste was stored and the remaining volumes were transferred to licensed third-party operators.

Waste management		Hazardous waste [Mg]	Non-hazardous waste [Mg]
Waste recovered	at own units	46,526	10,676
	other than at own units	0	7,815

	Total	**46,526**	**18,491**
Waste disposed of	at own units	13,850	3,357
	thermally treated at own units	25,456	12,891
	landfilled in own landfills	2,441	22
	Total	**41,747**	**16,269**
Waste landfilled		46,473	16,988
Waste transferred to third parties		39,251	87,079
Total		**173,997**	**138,828**

The largest volumes of the recovered waste were waste oils recovered using the waste oil regeneration unit at ORLEN Południe. Additionally, Ship-Service operates recovery and disposal processes in its liquid petroleum waste recovery and disposal unit.

Waste recovery without the use of the companies' units was carried out by ORLEN Eko in connection with the reclamation of a hazardous waste landfill site.

Thermal processing of waste takes place in the hazardous waste thermal treatment unit operated by ORLEN Eko. All of the abovementioned units are also used to process waste received from third parties.

Furthermore, internally-generated waste is recovered and disposed of at the ORLEN Group's own production units, including the terephthalic acid production unit at PKN ORLEN, the unit for hydrogen chloride recovery from organic chloride waste at ANWIL, bioremediation units and wastewater treatment plants.

Nearly 2,500 of waste was transferred to ORLEN Eko's and ANWIL's landfills.

Cross-border transport of waste

GRI: 306-4

The Group complies with the Basel Convention, which means that it operates in accordance with the Convention as well as the EU legislation on cross-border transport of waste. Such transport involves designated border crossing points and designated customs offices. For waste to be exported, the ORLEN Group makes the required notifications or obtains the necessary decisions. In 2019, 9,068 Mg of waste, including 6,370 Mg of hazardous waste (spent catalysts), was transported to other countries. This represents 4.1% of total waste generated by the ORLEN Group.

CAPITAL EXPENDITURE ON ENVIRONMENTAL PROTECTION

GRI indicators: 103-1, 103-2

Capitals:

GRI: 103-1, 103-2

The total spending on environmental projects by all ORLEN Group companies in 2019 amounted to EUR 40.5m, of which almost EUR 36.9m was spent on projects involving anti-pollution measures and environmental protection management, while the costs of reducing emissions into the air and in wastewater totalled EUR 3.6m.

PKN ORLEN's key initiatives in 2019 included preparatory work for the utilisation of used lye from the Płock production plant in the context of environmental regulations, construction of Claus and SCOT units for gaseous hydrogen sulfide treatment, adaptation of fuel gas metering systems for monitoring of CO_2 emissions, air-tight sealing and elimination of malodorous and hydrocarbon substances from the averaging device and wastewater inflow and outflow channels.

The projects will help improve the quality of discharged wastewater, reduce substance emissions into the air and optimise emission charges. Capital expenditure incurred by PKN ORLEN on environmental projects on the premises of the Płock production plant totalled EUR 1.46m.

A number of environmental protection projects were also carried out at PKN ORLEN's distribution facilities, including line drains, water supply/sewage system connections and car wash separators at service stations. Total spending on environmental protection projects at ORLEN service stations amounted to nearly EUR 1.1m. Work was completed on two fuel terminals to upgrade their wastewater management – connection of the TP 111 sanitary wastewater system in Wrocław to the municipal network and air-tightening of handling facilities at TP 94 in Świnoujście. Expenditure on environmental projects at fuel terminals exceeded EUR 1m in 2019.

Environmental projects were carried out at 15 ORLEN Group companies. The most important ones were:

- Installation of VRU at Paramo in Pardubice, installation of low NOx emission burners at the boiler room and RDH at Paramo in Kolín;
- Installation of new burners on K-2 boiler of the CHP Plant at ORLEN Lietuva, installation of an electrostatic precipitator on the FCC unit, monitoring of VOC emissions;
- Construction of a wastewater treatment plant, upgrade of a sewage sludge dewatering node within the central separator, and measurement of the amount of flare gas at ORLEN Południe;
- Construction of a new boiler house at the steam cracker unit, redevelopment and modification of the existing flue gas desulfurisation technology at the T-700 CHP plant at Unipetrol;
- Replacement of old burners with low NOx emission burners in the B1301 A reforming furnace at ANWIL;
- Replacement of worn sewage system (TT7/P) and central heating (PP5) components at ORLEN Laboratorium;
- Protection of spill containment trays at ORLEN OIL's tank farm;
- Repair of the spill containment tray of the aviation fuel filling station at ORLEN Aviation;
- Replacement of gas detection sensors on the production units and the construction of a new central power generating unit at Spolana.

ENVIRONMENTAL PROTECTION EFFORTS AND BIODIVERSITY

GRI indicators: 103-2, 304-3, 304-4

Capitals:

Environmental protection efforts

GRI: 103-2

The ORLEN Group's flagship nature protection initiative consists in supporting the **peregrine falcon**, a critically endangered species. For a dozen or so years, PKN ORLEN, ANWIL and Unipetrol have been successfully running the falcon restoration programmes. In 2019, Spolana joined the group of companies on whose premises falcon chicks hatched for the first time.

PKN ORLEN has participated in the Peregrine Falcon Restitution Programme since 1999. The first peregrine falcon chicks hatched on the premises of the Płock production plant in May 2002. In 2019, two chicks hatched on the plant site. The nest in Płock has been home to 48 birds to date. Peregrine falcons also nest on the site of the Czech company Spolana in Neratovice. In 2019, they had their first two chicks. In total, 25 young falcons have hatched on the premises of the ORLEN Group's Czech companies since 2011, including 23 at Unipetrol in Litvínov. At ANWIL, falcons have had a nest on the CHP stack since 1999. In 2019, three chicks hatched on the premises of the plant in Włocławek, and over the past 10 years this breeding site saw 45 young falcons altogether. Thus, the Group companies contributed to restoring the peregrine falcon population with 118 birds.

Another species requiring special protection and action is the **bee**. Seeing a worrying trend of these insects dying out, the Group companies have become involved in both their active protection and educational efforts. For example, ORLEN Deutschland turned the area around its headquarters into an 8,000 m^2 meadow, on which it erected two bee hives. PKN ORLEN, in partnership with the Warsaw Province Agricultural Advisory Centre (MODR), placed 16 hives near its production plant, currently inhabited by over one million bees. Good quality of their honey was confirmed by an accredited laboratory. There is also an apiary with five bee hives on the premises of the Czech company Spolana, and its honey yield was awarded the gold medal of quality in the Czech Honey competition.

In total, the Group companies take care of 23 bee families, i.e. over 1.5 million bees.

In terms of education, ORLEN Eko carried out an environmental project for pupils and students, called 'Be nice to bee', with the aim of disseminating knowledge about bees and other pollinators. As part of the project, a bee garden was created on the premises of a high school in Płock. In association with MODR, PKN ORLEN held a conference entitled 'Bees in Human Life. Biodiversity and Protection', during which available methods of protecting and supporting the species were discussed. PKN ORLEN employees also ran a series of beekeeping workshops for children from Płock educational centres, during which they could handmake beeswax candles. These initiatives show that the Company understands the need to protect nature and is aware of the key role of bees in maintaining the global ecosystem.

In 2019, PKN ORLEN published an **environmental leaflet** with important information on a number of plant and animal species living in the vicinity of the plant, including protected ones. The leaflet makes for interesting reading not only for adults but also children, for whom it features a jigsaw puzzle and a game.

During **birdwatching ship excursions along the Vistula River** organised by PKN ORLEN, interested inhabitants of Płock and its surroundings could admire the beauty of the surrounding nature, landscapes of the Vistula River's middle section and a multitude of flora and fauna species. The Vistula hosts some unique habitats (including islands, sandbanks and riparian forests), which provide a refuge for rare species of plants and animals. During the excursions, ORLEN also provided attractions for the youngest by organising nature competitions with prizes. In total, about half a thousand local residents took part in the cruises.

As every year, ORLEN Group companies were involved in activities for the benefit of the environment as part of global initiatives such as 'Clean Up the World', 'Days of the Earth' and 'European Sustainable Development Week'. Last year, ANWIL, PKN ORLEN and ORLEN Projekt participated in waste collection campaigns. ANWIL, as the organiser of the 'Tree for a Bottle' campaign with the participation of 6,500 children from Włocławek educational institutions, collected over 800,000 thousand PET bottles, which it transferred for recycling. As for PKN ORLEN – its employees cleaned up the surroundings of the hydroelectric power plant and the location of treated water discharge from the plant to the Vistula river, as well as the beaches of Łuba and Górskie Lakes, while ORLEN Projekt employees collected household waste dumped in forests near Płock. These initiatives were undertaken in connection with the Responsible Care Programme, and their outcome was the collection of over 13,000 litres of waste as well as tyres and other large items.

ORLEN Group companies participate in the Responsible Care Programme, which is based on the same guiding principles all over the world but the Polish edition is Europe's largest in terms of the scope and number of implemented projects. The projects are coordinated by the Secretariat of the Responsible Care Programme managed by ORLEN Eco under the supervision of the Polish Chamber of Chemical Industry and the Governing Board of the Responsible Care Programme.

ORLEN Group companies participating in the Responsible Care Programme include ANWIL (since 1995), Unipetrol (since 1996), PKN ORLEN (since 1997), Paramo (since 2001), IKS Solino (since 2002), Basell Orlen Polyolefins (since 2003), Unipetrol Doprava (since 2011) and ORLEN Południe (since 2016).

Besides activities that are mandatory under the Programme, ORLEN Group companies also run their own projects, including: 'Tree for a Bottle', the 'Catch a Hare' and 'Catch a Hare – Junior Edition' photo contest, the 'Nature Watchers' competition, the Chemical Sector Environmental Forum, and the 'Mr Carp Restocks the Vistula' campaign.

In 2019, ORLEN Group companies continued their activities under the Programme, and met all the related reporting obligations. The information is used to assess the condition of the environment and the progress of the Responsible Care Programme implementation by chemical industry companies.

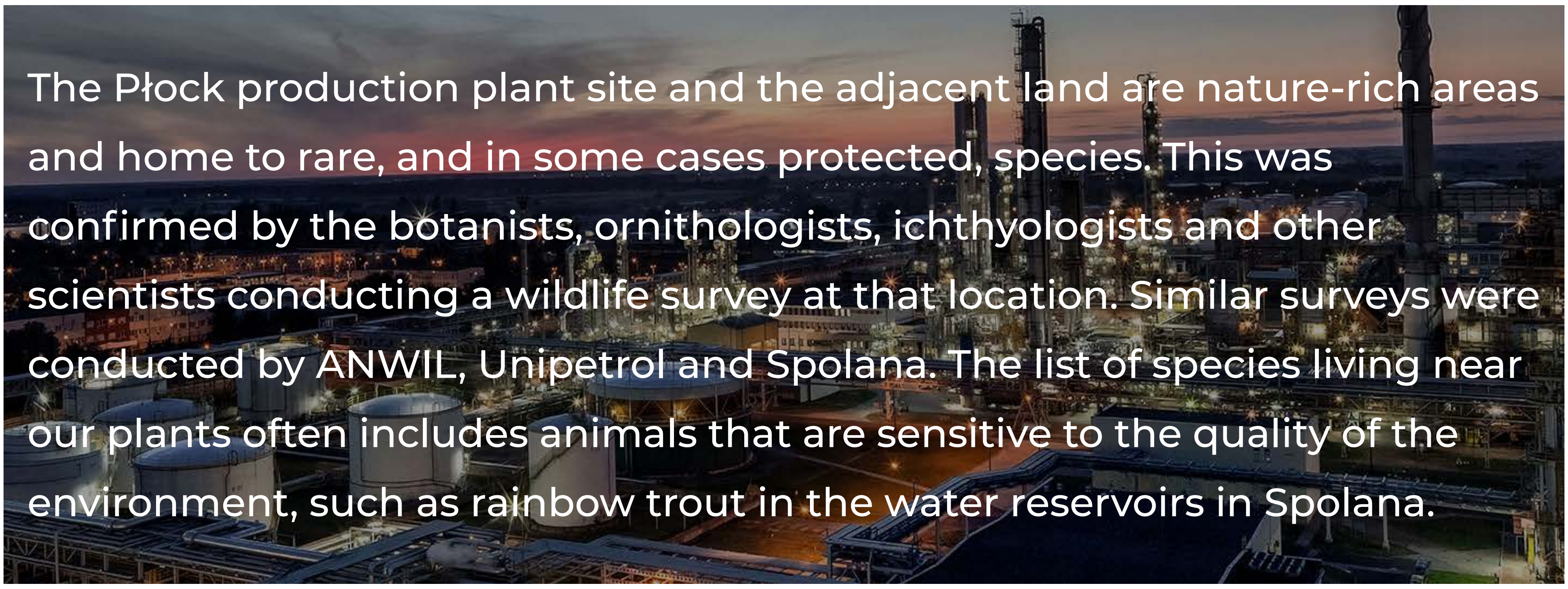
Important initiatives benefiting the environment, but also shaping pro-environmental attitudes among employees, are green employee volunteering campaigns. In 2019, PKN ORLEN employees, together with foresters, planted a forest, made other plantings to form an educational trail for Płock primary school pupils and created an EcoCity for the time of holiday stay of children from foster family group homes. Joint projects with local communities, especially those involving children and youth in pro-environmental campaigns, are an important element of the Group companies' activities. In spring and autumn 2019, ORLEN volunteers planted a total of nearly 2,500 trees and shrubs.

At the beginning of May 2019, primary school pupils from Neratovice released 425 kg of fish into the Elbe. The campaign was organised and financed by our Czech company Spolana, which also organised competitions accompanying the event, designed to broaden the knowledge about the natural environment. Spolana's cooperation with the local unit of the Czech Fishing Association dates back to 2013. The partners have already released 2,500 kg of fry into the river. Since 2010, the Unipetrol Group has partnered with the local fishing organisations in taking care of the fish population in the Usti region. To date, they have stocked the Bilina river with more than 7,000 kg of fish. Last year, as part of the 'Mr Carp Restocks the Vistula' campaign, ANWIL, together with primary school pupils, introduced 147 kg of eel fry to the Vistula, and since 2015 the river has been stocked with 620 kg of fish. To date, the efforts of our companies have led to the release of nearly 8,000 kilograms of fry into the rivers in the vicinity of our plants.

Unipetrol cooperates with and provides financial support to the Environmental Protection Centre in Kralupy. In the past year, they jointly carried out a project in which the residents indicated the following initiatives as the most desirable ones: tree planting in Most and revitalising the Pilařský Pond area in Litvínov.

Biodiversity and active protection

GRI: 304-3, 304-4



The Płock production plant site and the adjacent land are nature-rich areas and home to rare, and in some cases protected, species. This was confirmed by the botanists, ornithologists, ichthyologists and other scientists conducting a wildlife survey at that location. Similar surveys were conducted by ANWIL, Unipetrol and Spolana. The list of species living near our plants often includes animals that are sensitive to the quality of the environment, such as rainbow trout in the water reservoirs in Spolana.

On the site of the Płock production plant and the adjacent areas there are nearly 290 species of fauna and flora (based on the wildlife survey made in 2017). The local residents know roe deer, rabbits, beavers and peregrine falcons to be regulars of the nearest surroundings of the plant. The surprising thing unveiled by the survey is the presence of protected bird species such as black woodpecker, kingfisher, red-backed western marsh harrier, as well as amphibians and reptiles: European tree frogs, newts, toads, lizards and grass snakes. Nearly 160 species identified in the survey are ones included in the IUCN Red List of Threatened Species, compiled by the International Union for Conservation of Nature. A vast majority of them (more than 95%) have been classified as the least concern (LC) species. Five species require particular attention – three vulnerable (VU) species, i.e. the common kingfisher *(Alcedo atthis)*, the northern lapwing *(Vanellus vanellus)*, the common carp *(Cyprinus carpio)*, and two species classified by the IUCN as near threatened (NT), i.e. the European rabbit *(Oryctolagus cuniculus)* and the Eurasian otter *(Lutra lutra)*.

The wildlife survey on the premises of ANWIL in 2018 identified more than 220 plant and animal species, the vast majority (more than 90%) of which are included in the IUCN Red List of Threatened Species as the least concern (LC) species. ANWIL's site was found to be home to three lichen species featuring in the Red List of extinct and threatened lichens in Poland (VU category – vulnerable species, and NT – near threatened species)'; none of them was identified on the Płock site.

On the premises of both production plants, there are protected habitats listed in the Habitats Directive. These include in the case of PKN ORLEN's site: in its eastern and southern parts, i.e. on the Brzeźnica river valley side and near the Moczary retention reservoirs – alder and ash floodplain forests and riparian forests (Alno-Ulmion) (91E0), broadleaved forests (Carpinion) (9170), lowland ranunculus rivers (3260) – a part of a tributary of the Brzeźnica, and riverain herbaceous area (6430) – in the Brzeźnica tributary valley. On the site of the ANWIL plant there are: 35 areas of four types of protected natural habitats (including one in three subtypes) covering almost 130 ha – inland dunes with open Corynephorus and Agrostis grasslands (2330), xeric sand calcareous grasslands (6120), lowland hay meadows (6510), Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) (91E0-1), (91E0-2), and (91E0-3).

Among the birds nesting on both plants' sites, there are several species listed in the Birds Directive, which are also under strict protection in Poland: the red-backed shrike *(Lanius collurio)*, the barred warbler *(Sylvia nisoria)*, the western marsh harrier *(Circus aeruginosus)* , the peregrine falcon *(Falco peregrinus)*, the corn crake *(Crex crex)*, the common tern *(Sterna hirundo)*, the black woodpecker *(Dryocopus martius)*, the common kingfisher *(Alcedo atthis)*, the common crane *(Grus grus)* (only on ANWIL S.A.'s premises), and the woodlark *(Lullula arborea)* (only on ANWIL's premises).

The species under strict protection that inhabit the sites of the two production plants include four species of bats: the serotine bat *(Eptesicus serotinus)*, the common noctule *(Nyctalus noctula)*, the brown long-eared bat *(Plecotus sp.)*, and the common pipistrelle *(Pipistrellus pipistrellus)*.

The great number od species present on the site and in the surroundings of the Płock production plant is undoubtedly related to the proximity of protected areas: the Brzeźnica River Ravine nature and landscape complex, and two Natura 2000 sites, namely Włocławska Dolina Wisły (Włocławek Vistula River Valley, PLH040039) and Dolina Dolnej Wisły (Lower Vistula River Valley, PLB040003). The survey results will make it possible to plan the steps to take to protect and increase biodiversity, and make development plans for the two plants that specifically account for the neighbouring protected areas.

ENVIRONMENTAL GRIEVANCE MECHANISMS

GRI indicators: 103-2

Capitals:

GRI: 103-2

In 2019, 20 complaints regarding environmental impacts were filed with PKN ORLEN's Environmental Inspection System.

Nineteen concerned odour nuisance and were resolved in accordance with systematic internal procedures, and the filing persons received relevant feedback. Most of the complaints were registered when production units were shut down for maintenance work and preparation for process start-ups, which involved emptying and blowing apparatuses, as well as steam cleaning of individual systems containing mixtures of hydrocarbons for flaring. One complaint concerned wastewater foaming at the point of discharge to the Vistula river. In order to resolve the issue, the company cleared the outlet to the river by removing reed.

Thirteen complaints were registered at the the ORLEN Group Czech companies, including nine at Unipetrol, three at Spolana and one at Paramo. All concerned nuisance odours. In each case the companies carried out relevant inspections and promptly took measures to reduce the nuisance.
ORLEN Lietuva reported nine complaints related to nuisance odours.

Each complaint was considered on a case-by-case basis and with utmost care. In the areas where odour nuisance was identified, substance concentrations were measured, and ongoing monitoring of weather conditions and substance concentrations in automatic air monitoring stations was undertaken. The technical services took steps to check whether the production, repair and maintenance processes were run correctly, and to minimise the nuisance.

All 42 grievances filed with the companies by telephone or in writing were resolved by the end of the reporting year.

FEEDSTOCKS AND PRODUCTION PROCESSES

GRI indicators: 301-1, OG-14, OG-8, 417-1

Capitals:

In its refining and petrochemical operations, the Group processes various raw materials and semi-finished products. Crude oil is the principal raw material used in production, and other feedstocks include biocomponents and chemicals.

Raw and other materials used in production

GRI: 301-1

Consumption of raw and other materials

Non-renewable raw materials [t]

	PKN ORLEN		ORLEN Lietuva		Unipetrol	
	2019	2018	2019	2018	2019	2018
Crude oil	16,207,406	15,855,298	9,515,218	9,689,602	7,853,987	7,555,118
Other	2,059,879	1,974,529	374,864	217,027	2,282,514	2,512,813

Renewable raw materials [t]

	PKN ORLEN		ORLEN Lietuva		Unipetrol	
	2019	2018	2019	2018	2019	2018
Biocomponents	828,661	804,212	92,127	86,989	293,720	281,230

Crude oil consumption

	Crude oil consumption [t]		Share of crude in total feedstocks [%]	
	2019	2018	2019	2018
PKN ORLEN	16,207,406	15,855,298	83	83
ORLEN Lietuva	9,515,218	9,689,602	97	97
Unipetrol	7,853,987	7,555,118	79	77

Crude oil, a non-renewable resource, is purchased for all ORLEN Group refineries as part of an integrated procurement process handled by PKN ORLEN, which buys oil from external suppliers.

Other materials used in our plants include natural gas, biocomponents and semi-finished products, exchanged mainly between the refinery and the petrochemical plants (they are not primary feedstock).

GRI: OG-14

Consumption of biofuels meeting the sustainability criteria

In order to protect the environment and in view of the national requirements to ensure the mandatory minimum share of biofuels in transport, in 2019 the ORLEN Group used over 850,000 tonnes of methyl esters and around 260,000 tonnes of bioethanol.

All the biofuels used by the ORLEN Group in its markets met the sustainability criteria specified in the RES Directive and Fuel Quality Directive.

Volumes of biofuels used by the ORLEN Group – biofuels meeting the sustainability criteria on the Polish, Czech and Lithuanian markets

	2019	2018	2019	2018	2019	2018	2019	2018
	Poland*		Czech Republic**		Lithuania***		TOTAL	
Esters [t]	642,684	635,516	141,205	111,261	68,869	70,207	852,758	816,984
of which: produced by ORLEN Południe [t]	256,043	248,896	–	–	–	–	256,043	248,896
Bioethanol [t]	191,832	177,583	50,773	65,414	21,570	16,783	264,175	259,780
Synthetic hydrocarbons for diesel oil [t]	997	–	–	–	1,688	–	2,685	–
Synthetic hydrocarbons for gasoline [t]	233	–	–	–	–	–	233	–

	2019	2018	2019	2018	2019	2018	2019	2018
	Poland*		Czech Republic**		Lithuania***		TOTAL	
Esters [m^3]	720,498	712,548	159,915	126,003	77,994	79,510	958,407	918,061
of which: produced by ORLEN Południe [m^3]	287,044	281,876	–	–	–	–	287,044	281,876
Bioethanol [m^3]	246,571	228,321	64,188	82,698	27,269	21,217	338,029	332,236
Synthetic hydrocarbons for diesel oil [m^3]	1,291	–	–	–	2,167	–	3,458	–
Synthetic hydrocarbons for gasoline [m^3]	302	–	–	–	–	–	302	–

Note: Biocomponents not produced by ORLEN Południe were purchased from third-party suppliers.
** To maintain consistency with the NIT report to the Energy Regulatory Office, the conversion of tonnes into thousand of litres for PKN ORLEN S.A. was based on densities calculated in accordance with the MINISTER OF ECONOMY'S REGULATION on heating values of biocomponents and liquid fuels of October 21st 2014. For the Czech Republic and Lithuania, standard densities were used.*
*** Biocomponents used for blending fuels for the Czech market.*
**** Biocomponents marketed on the Lithuanian, Latvian and Estonian markets.*

Benzene, lead and sulfur content in fuels

GRI: OG-8

The key objective of the ORLEN Group refineries is to make liquid fuels that meet relevant standards and regulatory requirements. All processes along the production chain are geared towards producing quality components for fuels that comply with those standards and requirements.

PKN ORLEN – production plant in Płock

Crude oil is separated into fractions (distillates) in fractional distillation units.

At subsequent stages, the distillates are further processed in the following units:

- Cracking unit.
- Alkylation unit.
- Reforming unit.
- Isomerisation unit.
- Diesel fuel hydrodesulfurisation unit.
- Hydrocracking unit.
- Petroleum tar hydrodesulfurisation unit.

where the following processes occur: hydrogenation, conversion of nitrogen and oxygen compounds, cracking of paraffin, olefinic and aromatic hydrocarbons with side chains into hydrocarbons with lower molecular mass, conversion of low-octane C_5-C_6 aliphatic hydrocarbons into higher-octane isomers, dearomatisation, and demetallisation.

Also, sulfur and benzene are removed to achieve concentration levels ensuring the components meet the required quality standards. The fuel components do not contain lead.

Liquid fuels are made by blending selected components (also biocomponents in the case of some fuel types) and adding boosters and additives according to the blending formula.

ORLEN POŁUDNIE

The main purpose of the plant is to produce biodiesel (fatty acid methyl esters).

The key steps in FAME production include:

- Chemical degumming.
- Continuous refining.
- Esterification of fatty acids.
- Transesterification of rapeseed oil.
- Washing and drying of biodiesel.

during which the following processes occur: removal of phosphorus compounds and free fatty acids from rapeseed oil, reduction of acidity, reacting oil with methanol to form methyl esters, biodiesel washing and drying. There is no need to use desulfurisation or benzene and lead removal processes.

ORLEN Lietuva

Crude oil is separated into fractions (distillates) in fractional distillation units.

At subsequent stages, the distillates are further processed in the following units:

- Cracking unit.
- Reforming unit.
- Isomerisation unit.
- Visbreaking unit.
- Oligomerisation unit.
- Diesel fuel hydrodesulfurisation unit.

where the following processes occur: hydrogenation, conversion of nitrogen and oxygen compounds, cracking of paraffin, olefinic and aromatic hydrocarbons with side chains into hydrocarbons with lower molecular mass, conversion of low-octane C_5-C_6 aliphatic hydrocarbons into higher-octane isomers, dearomatisation, and demetallisation.

Also, sulfur, benzene and lead are removed to achieve concentration levels ensuring the components meet the required quality standards.

Liquid fuels are made by blending appropriate components (also biocomponents in the case of some fuel types) and adding boosters and additives in accordance with the blending formula.

UNIPETROL RPA – Litvinov and Kralupy refineries

Crude oil is separated into fractions (distillates) in fractional distillation units.

At subsequent stages, the distillates are further processed in the following units:

- Cracking unit.
- Reforming unit.
- Isomerisation unit.
- Diesel fuel hydrodesulfurisation unit.
- Hydrocracking unit.
- Visbreaking unit.

where the following processes occur: hydrogenation, conversion of nitrogen and oxygen compounds, cracking of paraffin, olefinic and aromatic hydrocarbons with side chains into hydrocarbons with lower molecular mass, conversion of low-octane C_5-C_6 aliphatic hydrocarbons into higher-octane isomers, dearomatisation, and demetallisation.

Also, sulfur and benzene are removed to achieve concentration levels ensuring the components meet the required quality standards. The fuel components do not contain lead.

Liquid fuels are made by blending selected components (also biocomponents in the case of some fuel types) and adding boosters and additives according to the blending formula.

The **table** shows benzene, lead and sulfur content in liquid fuels, by Group company.

All liquid fuels made and marketed by PKN ORLEN and ORLEN Group companies as finished goods (final products ready for sale) meet the applicable legal and formal requirements and standards for benzene, lead and sulfur content.

Product and service labelling

GRI: 417-1

The obligations of the ORLEN Group companies to provide information on potential hazards associated with the chemicals they manufacture or import follow from international and EU laws. The scope and division of responsibilities at the Group companies are defined in internal regulations.

Safety data sheets, developed in accordance with the REACH Regulation, are the basic source of information on the classification and hazards for the chemicals manufactured or imported by the ORLEN Group companies.

Products are classified based on research and expert knowledge of their properties, and the classification makes it possible to label them correctly (in accordance with the CLP Regulation) and identify risks in transport, based on which the dispatchers prepare the ADR labels (hazard warning labels).

Safety data sheets are mainly a source of information on products intended for industrial and professional applications. In the case of products marketed directly for use by general consumers, the relevant information is provided by ORLEN Group companies by appropriate labelling of product packaging.

In addition to pictograms, labels on product packaging contain appropriate hazard and precautionary statements (H and P statements).

Given the wide range of applications of ORLEN Group products, information on product packaging is supplemented with detailed data required under specific legal provisions applicable to detergents, fertilizers, etc.

ENERGY MANAGEMENT

GRI indicators: 103-3, 302-4 , 302-1

Capitals:

For years now, the ORLEN Group has been consistently developing its power generation assets. Investments in low-carbon energy sources are one of the strategic development directions for the coming years.

GRI: 103-3

Currently, the ORLEN Group is **Poland's largest industrial electricity producer** and the **fourth largest electricity producer in Poland**. The ORLEN Group has approximately 1.8 GWe of installed capacity (as at the end of 2019): **two cutting-edge CCGT units located in Płock and Włocławek as well as the Płock CHP plant – the largest industrial facility of its kind in Poland and one of the largest in Europe.** Their output is sufficient to meet the requirements of the ORLEN Group's own plants, with surplus energy sold to external customers.

PKN ORLEN closely monitors worldwide and European trends on the energy market, adjusting its operations to respond to the resulting challenges. Within the next several years, PKN ORLEN plans to become a leading producer of clean energy, which is increasingly in demand. The Group is working on an offshore wind power project through its subsidiary Baltic Power, holder of a **licence to construct wind farms on the Baltic Sea** with a total capacity of up to 1,200 MWe.

In 2019, PKN ORLEN announced a **tender offer to buy up all shares in the Energa Group.** The transaction is in line with PKN ORLEN's strategy. The successful purchase of the shares in April 2020 will make it possible to expand its power generation business. As for the Energa Group, it owns more than 50 RES generation assets, mainly across the hydro, onshore wind and solar PV segments, as well as an extensive 188 thousand km distribution network, covering almost a quarter of Poland's territory. Thus, by acquiring the Energa Group, PKN ORLEN will gain a large distribution network spanning northern and central Poland as well as a sizeable renewables portfolio, which is of material significance to its planned offshore wind farm projects. If the transaction is closed, PKN ORLEN will also be able to effectively balance its conventional capacities with renewable sources, while its existing surplus output will be utilised by the Energa Group.

PKN ORLEN has consistently strengthened its position in electromobility. The Group's range of 39 fast charging stations for electric vehicles (as at the end of 2019) across Poland and chargers at 18 Benzina stations in the Czech Republic was expanded in October 2019 to include our German service stations in Berlin, Hamburg and Lübeck.

At the ORLEN Group, we are committed to continuous efforts towards operational excellence within such areas as production process optimisation, distribution losses and improved efficiency of process units. All measures aimed at achieving the stated objectives are carried out with due regard for the natural environment and local communities.

GRI: 302-4

Reducing energy consumption

In 2019, the completed investment projects enabled the ORLEN Group to reduce energy consumption as follows:

- Electricity – by 1,027 MWh, which corresponds to the energy volume consumed by approximately 500 households over a year
- Heat in steam – by 415,395 GJ, which corresponds to the energy volume necessary to bring water in 496 Olympic pools to a boil

including:

ORLEN Lietuva:

UNIPETROL

Płock CHP plant:

Electricity – 344 MWh

Electricity – 500 MWh

Heat in steam – 34,516 GJ

Trzebinia CHP plant (ORLEN Południe):

Heat in steam – 380,879 GJ

Electricity – 183 MWh

The savings were calculated based on data from PKN ORLEN, ORLEN Południe, Unipetrol and ORLEN Lietuva. The main criterion in selecting the reporting companies was their business materiality for the Power Generation area. The figures are for the Power Generation area only, i.e. CHP and CCGT units.

GRI: 302-1

The organisation’s energy consumption

	2019		2018	
	Value [GJ]	Value [MWh]	Value [GJ]	Value [MWh]
Energy consumption in fuels	98,769,007	27,435,835	84,187,991	23,385,553
Electricity consumption*	2,304,094	640,026	2,211,043	614,179
Heat consumption*	5,579,603	1,549,890	6,825,492	1,895,970
Electricity sold**	33,938,256	9,427,293	24,984,321	6,940,089
Heat sold**	36,321,662	10,089,351	34,012,153	9,447,820
Total consumption* **	**28,509,089**	**7,919,191**	**25,191,517**	**6,997,644**

** Energy consumption includes own consumption by energy generation units and internal transmission losses.*

*** Energy sales include sales to third parties and supply to the ORLEN Group’s internal units.*

**** Total consumption is calculated as the difference between each unit’s consumption of energy in fuel and energy sold to external and internal customers. The 2018 electricity consumption data has been updated.*

The basis for the calculations was data from tariff metering instruments. The figures above are for the Power Generation area only, i.e. CHP and CCGT units.

RISKS AND OPPORTUNITIES

RISK MANAGEMENT

GRI indicators: 102-15, 103-1, 103-2

Capitals:

In the course of its business, the ORLEN Group conducts ongoing monitoring and risk assessment and undertakes actions aimed at minimizing its impact on the financial situation.

GRI: 102-15, 103-1, 103-2

Enterprise Risk Management System

In 2019, the organisation and underlying principles of the Enterprise Risk Management System did not change relative to the previous year. Based on its **Enterprise Risk Management Policy and Procedure**, the ORLEN Group monitors and assesses its risk exposures on an ongoing basis and takes steps to minimise their impact and reducing probability of occurrence.

As required by these regulations, the Financial Control, Risk Management and Compliance Office was established at PKN ORLEN to coordinate the enterprise risk management (ERM) processes across all levels of the organisation. Management boards at each ORLEN Group company are responsible for risk management at individuals companies.

The Enterprise Risk Management System is a tool used to support effective delivery of the ORLEN Group's strategic and operational objectives. It ensures information identification about identified risks and support effective management for those risks.

Key roles in the Corporate Risk Management System

Management Board PKN ORLEN

- Monitoring of the Corporate Risk Management System
- Risk assessment acceptance for the Company / the ORLEN Group

Supervisory Board PKN ORLEN

- Monitoring of the Corporate Risk Management System

FINANCIAL CONTROLLING, RISK MANAGEMENT AND COMPLIANCE OFFICE

- Coordination of the process of corporate risk management as well as provision of tools and methodological support for the process participants

PROCESSES OWNERS

- Risk assessment on the process level.
- Coordination of the process of control mechanisms self-assessment.

RISK OWNERS

- Main risk elements management

CONTROL OWNERS

- Supervision over realization of control activities in processes in which they take part.
- Running self-assessment of control mechanisms.

↑

THE ORLEN GROUP EMPLOYEES

- Risk identification.
- Conveying information about potential risk to the Financial Controlling, Risk Management and Comliance Office.

Risks are assessed regularly by individual business areas of PKN ORLEN S.A. and the ORLEN Group as part of their self-assessment and risk controls testing. The key objective is to ensure that risk estimation is up to date, and that the risk controls are validated for adequacy and effectiveness. Process and risk owners and in charge of the assessment, based on their positions and remits.

In the risk asessment, the materiality of each risk is determined under three scenarios:

- where there are no risk-specific controls in place (gross risk assessment);
- where the existing risk-specific controls are in place (net risk assessment). The net risk assessment requires testing relevant risk mitigating controls, in line with the guidelines adopted by the Company as part of the ERM Procedure, prepared in accordance with the ERM Policy adopted by the Company's Management Board;
- where the risk is at a desired (acceptable) level – target risk assessment.

Once the risk assessment and risk controls testing processes are completed, the Company's Management Board and Supervisory Board receive a report highlighting the material risks.

Risks at PKN ORLEN S.A. and other ORLEN Group companies are defined based on a common model, and further detailed at the level of individual business processes or strategic objectives.

In 2019, as part of an annual risk self-assessment process and risk controls tests at PKN ORLEN, **552** risks were assessed based on tests of **999** control mechanisms in **176** business processes. The ORLEN Group companies evaluated **633** risks and **1 807** control mechanisms in **169** processes.

In 2019, the ERM system covered the following entities: PKN ORLEN S.A., Anwil S.A., Grupa ORLEN Lietuva, Grupa Unipetrol, ORLEN Deutschland GmbH, ORLEN Paliwa Sp. z o. o. and ORLEN Centrum Usług Korporacyjnych Sp. z o. o.

In the **Enterprise Risk Model** adopted by the ORLEN Group, all identified risks are classified into the following categories:

1. **STRATEGIC RISKS** – directly related to strategic objectives, specific actions and performance indicators.
2. **PROJECT RISKS –** events or circumstances which, if they materialise, may have an adverse effect on one or more project objectives. These risks are subject to ongoing assessment during project implementation.
3. **PROCESS / OPERATIONAL RISKS** – identified in the ordinary course of business; their identification facilitates effective process management. These risks are assessed by business owners annually in a self-assessment process.

Risks and processes classification along with control mechanisms within the ERM functioning

Strategic

Risks / processes	Risk description	Risk mitigation method
STRATEGIC		
Assumptions	inconsistent and unrealistic strategic goals and assumptions change of strategic goals/assumptions during the process	Systematic review of the key strategic goals to check if they are up to date and their ongoing monitoring against the changing environment (regulations, market, key suppliers, etc.)
Division of competences	inappropriate division of competences between the organisational units no decision-making centre	High degree of employee specialization, appropriate assignment of duties and responsibilities by developing precise scopes of tasks.
New regulations	entry into force of unfavourable legal regulations no effective action of the public administration in relation to enforcement of the law	Participation in public consultations for legislative drafts reducing the risk of unfavourable regulations.
Accidents at work and other threats	insufficient knowledge about work safety among contractors threats to work safety and fire safety related to the presence of third-party employees on the ORLEN Group's premises	Supervision and management of contractors' work by implementation of tools to monitor work safety. Providing appropriate mechanisms for continuous monitoring of threat and risk assessment Implementation of uniform requirements for contractors and subcontractors in line with the guidelines set forth in the 'ORLEN Group Safety Standard no. 9'.

Project

Risks / processes	Risk description	Risk mitigation method
PROJECT		
Budget overrun	■ inappropriate estimate of the project implementation costs ■ absence of including cost of additional work in project ■ unplanned costs arising during the implementation of the project	Current monitoring of the contractor's activities and potential delays in project realization. Systematic cost verification vs. planned budget.
Schedule overrun	■ inappropriate assumptions concerning the project completion time ■ underestimating the deadlines for completing the work carried out under the project	Constant supervision over the performance of the work in progress, systematic evaluation of the progress of implementation of successive stages of the project and enforcement of performance of the work.
Project scope modification	■ incomplete performance of the project ■ exceeding the project framework/scope ■ lack of including all project work ■ extending the scope of the project with additional works	Systematic analysis of the environment in which the project is being implemented. Depending on the circumstances arising, potential decision to change the scope of its implementation. Verification of planned and implemented works included in the scope of the project.
Division of competences	■ inappropriate division of competences between the organisational/substantive units involved in the project ■ unavailability of key decision makers	Preparation and implementation of methodology concerning competency division of project team members in order to avoid conflict of interests. Appropriate allocation of human resources during project preparation and implementation. Utilisation of dedicated IT tool supporting project implementation.
Systems	■ absence of IT systems supporting project implementation	Definition of alternative IT systems at the project planning stage or commencement of testing of other systems allowing project implementation.

Process / operational

Risks / processes	Risk description	Risk mitigation method
PROJECT		
Budget overrun	■ inappropriate estimate of the project implementation costs ■ absence of including cost of additional work in project ■ unplanned costs arising during the implementation of the project	Current monitoring of the contractor's activities and potential delays in project realization. Systematic cost verification vs. planned budget.
Schedule overrun	■ inappropriate assumptions concerning the project completion time ■ underestimating the deadlines for completing the work carried out under the project	Constant supervision over the performance of the work in progress, systematic evaluation of the progress of implementation of successive stages of the project and enforcement of performance of the work.

Project scope modification	incomplete performance of the project exceeding the project framework/scope lack of including all project work extending the scope of the project with additional works	Systematic analysis of the environment in which the project is being implemented. Depending on the circumstances arising, potential decision to change the scope of its implementation. Verification of planned and implemented works included in the scope of the project.
Division of competences	inappropriate division of competences between the organisational/substantive units involved in the project unavailability of key decision makers	Preparation and implementation of methodology concerning competency division of project team members in order to avoid conflict of interests. Appropriate allocation of human resources during project preparation and implementation. Utilisation of dedicated IT tool supporting project implementation.
Systems	absence of IT systems supporting project implementation	Definition of alternative IT systems at the project planning stage or commencement of testing of other systems allowing project implementation.

[1] *For detailed description of the financial risks as well as the methods applied to measure, manage and hedge the risks, see section 13 of the Consolidated Financial Statements for 2019.*

[2] *Process/operational risks – the table presents risks on an aggregated basis. The component risks they comprise are located in different organisational areas of the Company, so presenting their values and trends would involve excessive risk of error as a result of differences in the scope of the particular risks and the groups of companies exposed to them.*

[3] *For a detailed description of the financial risks and their measurement, management and hedging methods, see Section 13 of the Consolidated Financial Statements for 2019.*

[4] *The principal legislative acts regulating the oil sector include:*

Dictionary

- ***Biofuels** – in Poland, the process of achieving the National Indicative Target in 2019 is governed by the Act Amending the Act on Biofuel Components and Liquid Biofuels and Certain Other Acts of November 24th 2017, which entered into force on January 1st 2018 – the purpose of the amendment was to facilitate the achievement of the National Indicative Target (NIT) by fuel companies and to modify the structure of its achievement. In 2019, the NIT baseline value was 8.0%, and starting from 2020 – 8.5%. Also applicable is the Act Amending the Act on the Fuel Quality Monitoring and Control System and Certain Other Acts of May 27th 2011 (as amended), where under entities which can document the use of at least 70% of biofuel components produced in compliance with the requirements set out in the Act are eligible to reduce their NIT. In 2019, the reduction coefficient was 0.82, while the NIT was 5.576% (based on the energy value, after taking into account the reduction coefficient and a 15% 'buy-out' price). The National Reduction Target (NRT) was also introduced − an obligation to reduce GHG emissions relative to 2010 by 6% by the end of 2020. On July 19th 2019, the most recent amendment to the Biofuels Act was enacted. In 2020, the NIT was set at 5.576 (8.5% baseline level x 0.82 reduction coefficient x 0.8 'buy-out' price). Moreover, there are no provisions in the new Act that would limit the possibility of achieving the NIT through wholesale trade in B100 biofuels. The NIT baseline levels for 2021-2024 have been set at:7%, 8.8%, 8.9%, 9.1%, respectively. The reduction mechanism (reduction coefficient of 0.82) and the buy-out price mechanism (applicable when the NIT is met in 80% or more) were extended for the years 2020-2022, and the quarterly mandatory blending cycle was changed to an annual one. In addition, the Act contains a number of provisions not directly related to meeting the NIT, i.e. the obligation to mark fuel pumps and nozzles so as to clearly identify the type of liquid fuel distributed, as well as changes to biofuel reporting and to regulations applicable to the Low Emission Transport Fund.*
  Delivery of the National Indicative Target in other markets:
  – The Czech Republic: NIT is achieved by blending biocomponents into gasolines (blending level of 4.1%) and diesel oil (blending level of 6%). Mandatory blending is accounted for on a quarterly basis, and GHG emissions are to be reduced by 6% by the end of 2020. Work is currently under way to introduce E10 fuel, which may be brought to the market in 2020. E98 gasoline will contain a higher amount of ETBE than E95, and both types will become E10 fuel.
  – Lithuania: mandatory blending of biocomponents into E95 gasoline (blending level of 5% until 2019) and into diesel oil, with the exception of arctic diesel (blending level of 7%). Starting from January 2020, E95 gasoline is subject to mandatory blending at a level of 10% in Lithuania and Latvia. In Lithuania, A1 and A2 arctic diesel oils are exempt from blending obligations.
- ***Emergency stocks** – producers and traders must pay a 'stocks charge' for gradual reduction in the amount of physical stocks they are required to hold. Poland: fulfilment of the physical stocks target – from December 31st 2017: 53 days, the stocks charge maintained at its current level (PLN 43/t of oil equivalent and PLN 99/t of LPG). Czech Republic: emergency stocks are maintained by a state agency at a level of 90 days' net imports of crude oil and are financed from the state budget. Lithuania: maintaining stocks equivalent to the higher of 90 days' average daily net imports or 61 days' average daily domestic consumption. The amount equal to at least 30 days' average daily domestic consumption is accumulated and maintained by the state agency as earmarked stocks, with the balance held by businesses.*
- ***Reduced electricity costs** – a notification procedure is under way relating to a capacity surcharge reduction for energy-intensive*

industrial users (capacity surcharge reduction). If approved by the European Commission, the solution will make it possible to allocate the capacity surcharge to various end user groups, thus reducing the capacity market costs at the ORLEN Group. The Act on the Promotion of Electricity from High-Efficiency Cogeneration Plants provides for possible reductions in CHP surcharges for energy-intensive industries. A reduced CHP surcharge will apply to energy-intensive industrial users whose energy intensity is calculated as the quantity of grid electricity consumed in a given settlement period, taking into account the electricity produced by this entity in its own cogeneration sources. The quality surcharge is the tariff rate of the Transmission System Operator (TSO) which is passed on to end users through its distribution tariff. Ensuring continued application of reductions with respect to the RES surcharge and excise duty for energy-intensive industrial users.

- **Power generation support schemes**
  – Capacity market – securing the interests of industrial power plants in the capacity market.
  – The requirement to introduce to the grid and sell electricity, as well as the requirement to introduce at least 70% of generated heat to a public heating network. A new solution provides for the introduction of a unit CO_2 emissions ratio of less than or equal to 450 kg/MWh of electricity output, which will exclude from the support scheme all generation units other than gas-fired ones. The certificate-based support scheme is to be replaced by a scheme involving guaranteed bonuses for existing generation units and an auction system for new electricity generators.
  – Farm would be supported through a dedicated legal act governing the entire investment process from the pre-investment phase up to decommissioning, as well as a support scheme guaranteeing the project's economic viability throughout its lifecycle. A scheme regulating the share of local materials and services in the investment process would be an important part of that dedicated legal act. The current RES support scheme under the Act on Renewable Energy Sources of February 20th 2015 does not provide adequate support for Small Hydropower Plant (SHP) projects, mainly as a consequence of structural constraints related to the organisation of competitive auctions and the overall situation of the Polish RES sector (including SHP projects).

- **CO_2 emissions** – following a revision of Directive 2003/87/EC of the European Parliament and of the Council of October 13th 2003 establishing a scheme for greenhouse gas emission allowance trading, work is under way on EU ETS implementing measures for the next trading period (phase 4). In April 2018, Directive (EU) 2018/410 of the European Parliament and of the Council, introducing changes to the CO_2 emission allowance trading system (EU ETS 2021-2030), came into effect. The purpose of the amended ETS Directive is to reduce greenhouse gas emissions by at least 40% by 2030 compared with the 1990 levels and to meet the obligations under the Paris Agreement. In addition, pursuant to Commission Delegated Decision (EU) 2019/708 of February 15th 2019 concerning the determination of sectors and subsectors deemed at risk of carbon leakage for the period 2021-2030, ORLEN Group companies were included in the carbon leakage list, and thus became eligible to receive free emission allowances up to the benchmark values throughout the period 2021-2030. Following completion of the EU ETS reform, the price of emission allowances went sharply up, to reach the average level of EUR 25/UEA in 2019, which is reflected in the growing electricity prices.

- **Regulations on the liquid fuels market and combating informal fuel trade:**
  – The Act Amending the Value Added Tax Act and Certain Other Acts of July 7th 2016 (the fuel package) contains a list of conditions to be fulfilled by entities applying for energy licences and sets down rules governing intra-community acquisition of goods (fuels) – the so called 'VAT quick fixes'. The purpose is to streamline the liquid fuel market in Poland and guarantee legal production and imports of fuels.
  – The Act Amending the Energy Law and Certain Other Acts of July 22nd 2016 (the energy package) introduces a number of changes in the Polish liquid fuel market, including new licensing regulations, a register of liquid fuels infrastructure, and extended reporting obligations regarding imports and production of fuels, supervision powers, etc.
  – The Act Amending the Value Added Tax Act and Certain Other Acts of July 4th 2019 (amendments to the fuel package) modifies the definition of liquid fuel, introduces procedures for amending energy licences, and extends the catalogue of goods (fuels) eligible for 'VAT quick fixes' in intra-community acquisition transitions (when imported to Poland).

- The purpose of the Act is to further curtail the informal fuel trade in Poland, and the legislation supplements solutions introduced as part of the fuel package and the energy package. It imposes an obligation to register road and rail transport of goods considered sensitive and to establish a relevant supervision system. Also, new provisions governing the fuel package and the monitoring of LPG transport came into force as from September 1st 2019 and December 1st 2019, respectively, providing for relevant transition periods. Apart from obligations to monitor the carriage of fuel oils and LPG, there are also amendments applicable to the transactions themselves and to provisions of the Excise Duty Act relating to fuel oil trade.

- **Emission charge** – an emission charge is to be paid on motor fuels introduced to the Polish market. The obligation to pay the emission charge arises on the date of excise duty liability. An emission charge is calculated based on the quantity of motor fuels on which excise duty is payable. The rate for both motor gasolines and diesel oils is PLN 80 per 1,000 litres. The amount of an emission charge is to be reported and paid by the 25th day of the month following the month in which the payment obligation arose or, in the case of importers, by the payment date of customs charges. The emission charge regulations came into force on January 1st 2019 and will apply in the coming years.

- **Retail sales tax** – the tax is levied exclusively on retail sales to consumers, with the consumer understood as a natural person not engaged in any business activity and a natural person conducting business activity and purchasing goods without connection with that business activity, as well as farmers subject to lump-sum tax within the meaning of the VAT Act. A retail seller is to be understood as a natural person (entered in the Central Registration and Information on Business – CEiDG), a legal person (mainly companies operating under commercial law), and an unincorporated organisational unit, including civil-law companies which engage in retail sales in the course of their business. In the definition of retail sale, goods are understood as movables or parts of movables, and provision of services is excluded from the definition. The tax obligation arises when revenue earned in a given month exceeds PLN 17m (VAT exclusive), and tax is levied on the portion of revenue in excess of that amount earned from that *month exceeds PLN 17m (VAT exclusive), and tax is levied on the portion of revenue in excess of that amount earned from that moment. Monthly tax rates are as follows: 0.8% of the tax base, if revenue does not exceed PLN 170m (VAT exclusive); 1.4% of the excess over the tax base, if revenue exceeds PLN 170m (VAT exclusive). In November 2019, the Polish Council of Ministers extended the suspension of the Act of December 31st 2019 until July 1st 2020, when the General Court of the European Union is expected to issue a judgment concerning the appeal lodged by the European Commission.*

- ***Natural gas market** – the Act Amending the Energy Law and Certain Other Acts of November 30th 2016, which introduced a roadmap for the deregulation of gas prices in Poland as of October 2017 and imposed on importers the obligation to hold emergency gas stocks. The Act abolished the obligatory approval of gas tariffs for businesses by the President of URE (Polish Energy Regulation Authority) as of October 1st 2017 and imposed the obligation to reserve additional capacity on gas interconnectors (which cannot be used for commercial purposes) for the purpose of maintaining stocks abroad, which increases the cost of fulfilling the obligation.*
- ***Ban on Sunday Trading** – the Act on Restricted Trading on Sundays and Public Holidays and Certain Other Days of January 10th 2018 has been in effect from March 1st 2018, regulating retail trading. In 2019, retail trading was allowed on the last Sunday of each month and on three Sundays before public holidays (15 trading Sundays and 37 non-trading Sundays). Starting from January 1st 2020, retail trading will only be allowed on three Sundays before public holidays and on four additional Sundays throughout the year (7 trading Sundays and 45 non-trading Sundays). Pursuant to the Act, service stations are exempted from the trading ban.*
- ***Taxation of upstream activities in Poland** – tax on production of certain minerals, payable from December 2019, calculated individually for each well, at a rate of 1.5%–6% of revenue, depending on the type of deposits and hydrocarbons. Production royalty, depending on the volume and quality – for natural gas: PLN 5.34–PLN 24.73/1,000 Nm^3; for crude oil: PLN 38.0–PLN 51.5/tonne. Extraction charge – fixed component (determined on a case-by-case basis) and variable component of 50% of the mineral production royalty for the previous year. Special hydrocarbon tax – payable from 2020, at 0%–25% of net cash flows, depending on the ratio of accumulated revenue to accumulated expenses, real property tax of up to 2% of the initial value of fixed assets, CIT at the rate of 19%.*
- ***Taxation of upstream activities in Canada**: royalties – payable on wells spudded on or after January 1st 2017. Royalty rate from 5% to 40%, depending on the type of hydrocarbons, market prices, and well output. Exemption on account of incurred costs of drilling and completion – relief in the form of reduced tax liabilities with respect to all new qualifying wells. Royalty of up to 5% on a well's early production until the well's total revenue from all hydrocarbon products equals the drilling and completion cost allowance, CIT at the rate of 25%.*

Non-financial risks

Risks relating to social, employee, environmental, and occupational health and safety matters, respect for human rights, corruption and bribery may occur in the three main categories of risks (strategic, project, process/operational) in the ORLEN Group.

The risks, mitigation methods and risk development trends are described below.

RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
SOCIAL RISKS			
A. Corporate social responsibility	■ Lack of public awareness of the ORLEN Group's CSR activities	Implementation of a CSR strategy defining the ways of communicating CSR initiatives Implementation and supervision of the Responsible Care Framework Management System and appointment of the Responsible Care Framework Management System Officer.	↓

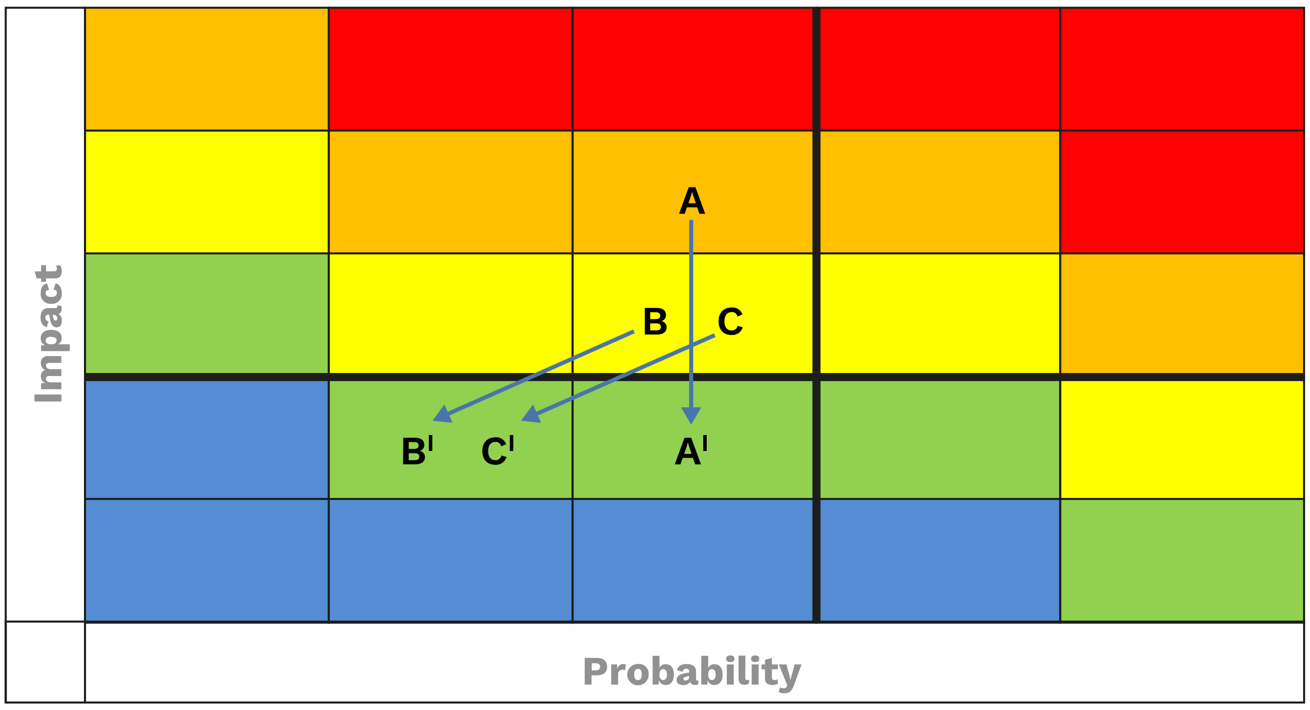
RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
B. Reputation, brand and marketing management	🟥 Use of the brand in connection with adverse, controversial activities 🟥 Activities with adverse effect on the image of PKN ORLEN S.A.	Supervision over the process of defining the methodology for conducting promotional campaigns; key activities subject to approval by relevant business areas.	⟷
C. Outsourcing and subcontractor risk	🟥 Limited control over the ORLEN Group's processes which are subcontracted or outsourced	Ensuring correctness, completeness and quality of documentation, including completion reports and checklists, in IT systems Regular assessments of service providers.	⟷

Background of the risk name – risk materiality for the organisation; critical, high, medium, low, very low
Background of the arrows – risk level after taking into account the control mechanisms; critical, high, medium, low, very low

Risk development trend year on year:

↓	***Falling***	↑	***Rising***	⟷	***Stable***

Effects of application of control mechanisms in risk management – positioning of risks on the risk map



A, B, C – social risks – risk materiality
A', B', C' – social risks – risk level after taking into account the control mechanisms

RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
EMPLOYEE RISKS			
A. Availability of employees and subcontractors	🟥 Loss of key personnel 🟥 Persistent shortage of experienced staff with relevant technical expertise	Monitoring and reviewing of job-specific training needs, oversight of the recruitment process to ensure employment of candidates with relevant qualifications. Supporting vocational education to develop practical skills.	↑
B. Allocation and development of human resources	🟥 Constraints in recruitment/employee turnover; lack of transparency of the recruitment/employment termination process	Identification of the key skills for a given position at the recruitment stage, supervision of the process of contract termination, control of the position change processes within the Company.	⟷

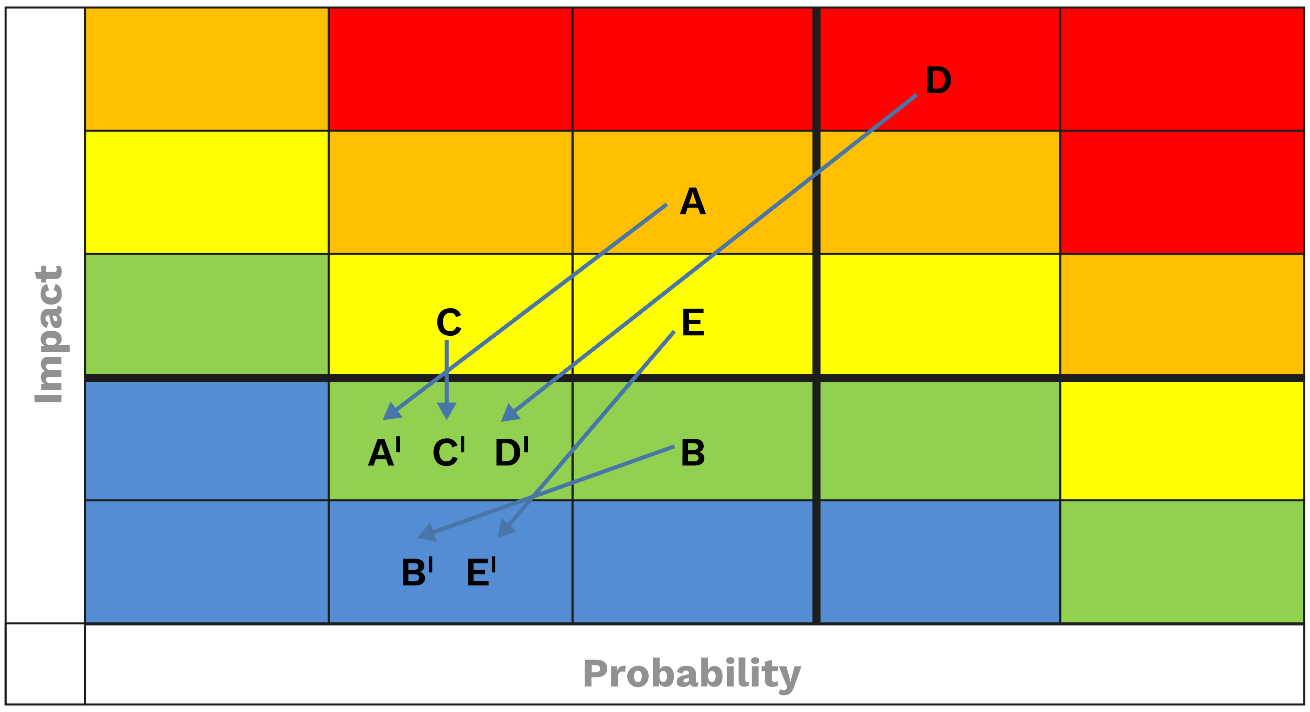
RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
C. Social security and other benefits	■ Miscalculation of social security payments and other employee benefits	Supervision of the process of calculation and verification of remuneration, social security and other employee benefits.	⟷
D. Workplace accidents and other hazards	■ Failure to identify material risks for particular jobs ■ Injury/death at a production plant	Introduction of a health and safety hazard reporting system, including division of responsibilities, supervision of the hazard identification process in the occupational risk assessment, introduction of procedures to follow in the event of an accident at work.	⟷
E. Employees and subcontractors' activities	■ Activities of employees and subcontractors resulting in violation of OHS regulations	Reviewing and issuing opinions on contracts with subcontractors in terms of security certificates and security clauses, implementation of the Comprehensive Prevention System.	⟷

Background of the risk name – risk materiality for the organisation; critical, high, medium, low, very low
Background of the arrows – risk level after taking into account the control mechanisms; critical, high, medium, low, very low

Risk development trend year on year:

↓	***Falling***	↑	***Rising***	⟷	***Stable***

Effects of application of control mechanisms in risk management – positioning of risks on the risk map



A, B, C, D, E – employee risks – risk materiality
A', B', C', D', E' – employee risks – risk level after taking into account the control mechanisms

RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
HUMAN RIGHTS RISKS			
A. Breach of ethical standards	■ Inadequate ethical standards for a given business environment ■ No support for employees in resolving conflicts of interest ■ Ineffective system of internal reporting of unethical or illegal practices	Keeping track and reviewing compliance with the value system set out in the Core Values and Standards of Conduct of PKN ORLEN, appointment of the Ethics Officer, introduction of the Anonymous Misconduct Reporting System.	⟷

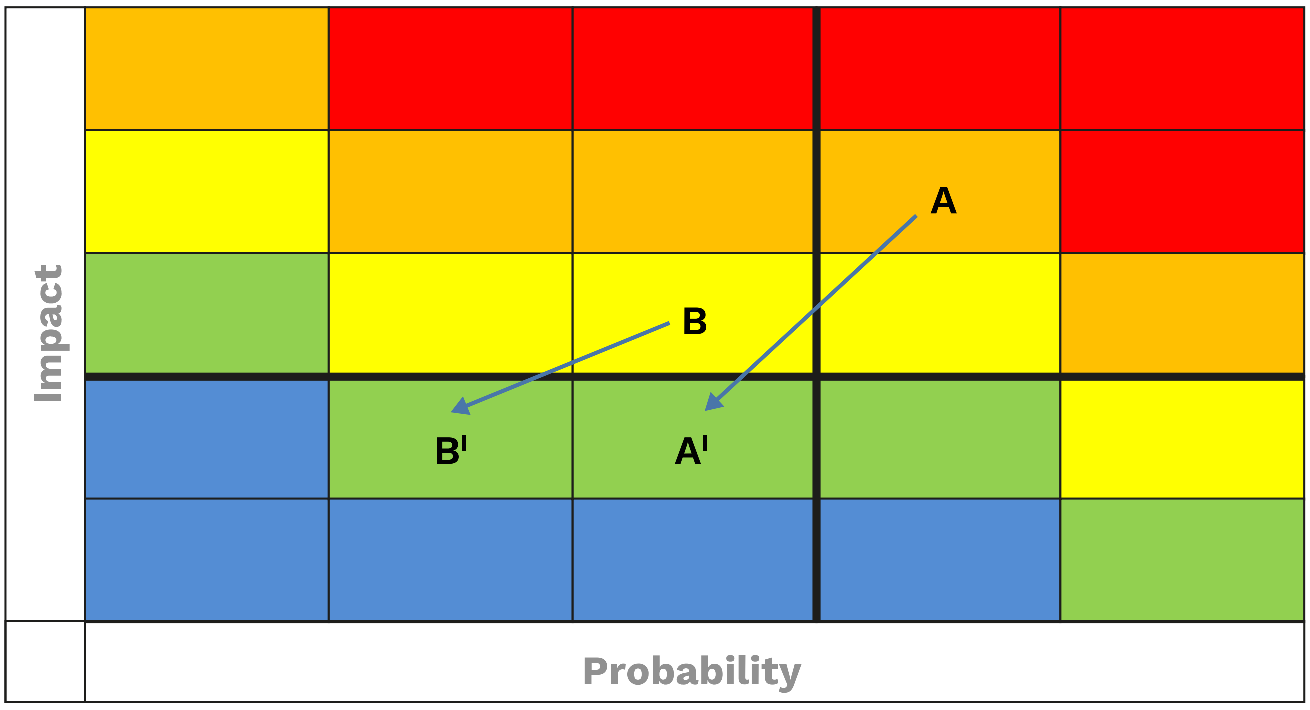
RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
B. Labour law	🟥 Violations of labour law 🟥 Penalties imposed as a result of court proceedings initiated by current or former employees	Obligatory knowledge of applicable laws and internal regulations governing employment relationships, i.e. the Work Rules, Core Values and Standards of Conduct of PKN ORLEN, etc. Agreement setting out the rules of cooperation between social partners in restructuring processes.	⟷

Background of the risk name – risk materiality for the organisation; critical, high, medium, low, very low
Background of the arrows – risk level after taking into account the control mechanisms; critical, high, medium, low, very low

Risk development trend year on year:

↓	***Falling***	↑	***Rising***	⟷	***Stable***

Effects of application of control mechanisms in risk management – positioning of risks on the risk map



A, B – human rights risk – risk materiality
A', B' – human rights risk – risk level after taking into account the control mechanisms

RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
ENVIRONMENTAL RISKS			
A. Climate changes	🟥 Ensuring low-carbon economy compliance 🟥 Development constraints resulting from the principles of sustainability and circular economy 🟥 Disrupted supply of water to production units	Marketing of bio-components or liquid biofuels Reducing the energy intensity of processes. Use of energy from renewable and low-carbon sources. Monitoring of water availability Water recirculation and wastewater reuse.	⟷
B. New trends	🟥 Growing market/public expectations regarding environmental investments 🟥 Little time to adapt to new environmental requirements	Regular reviews of the compliance of internal regulations with legal requirements and their ongoing monitoring against the changing environment (regulations, decisions of public administration authorities, etc.).	⟷

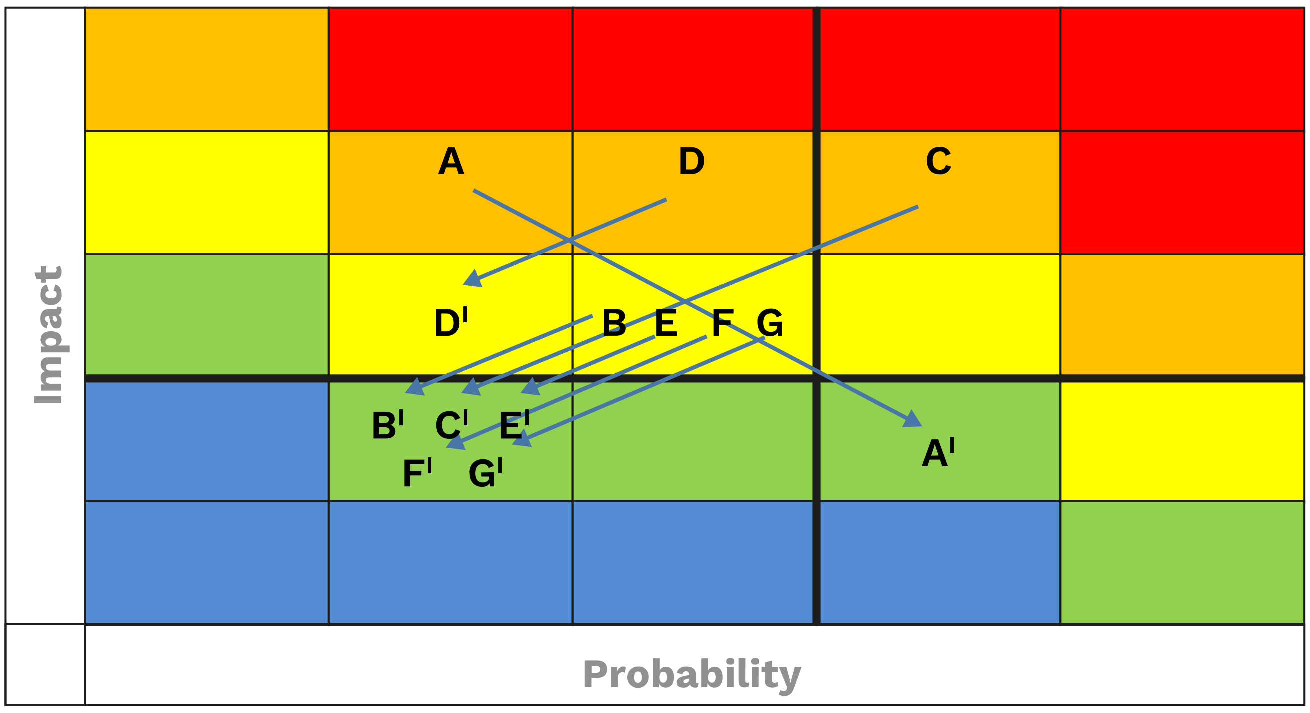
RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
C. Environmental protection regulations	New stricter requirements, standards, financial and technical safeguards Failure to identify material environmental aspects in the operations Unavailability of measurement results and data to prepare the required reports and/or failure to submit the reports to governmental authorities	Active participation in issuing opinions on new European and national legislation through professional organisations, working committees, etc. Monitoring the validity of decisions issued by governmental authorities, monitoring the process of computing fees for the economic use of the environment, delegation of precisely defined duties and responsibilities with regard to environmental aspects.	↔
D. Soil and water contamination	Environmental pollution as a result of accident or failure High site restoration costs	Monitoring of the technical condition of production units and their regular maintenance, ensuring compliance of reporting activities with applicable procedures, recognition of site restoration provisions.	↔
E. Managing CO_2 and other gas emission allowances	Failure to meet the requirements and guidelines for monitoring CO_2 and other greenhouse gas emissions Failure to obtain a permit for CO_2 and other greenhouse gas emissions Limits and rising price of CO_2 emission allowances	Updating internal regulations in line with legal requirements, keeping track of the validity of decisions issued by governmental authorities, environmental monitoring and reporting in accordance with applicable procedures. Continuous monitoring and balancing of CO_2 emissions.	↓
F. Environmental impact	Non-compliance of the production process with applicable environmental protection standards Lack of environmental capacity	Inspecting the technical condition of facilities and equipment Monitoring of production processes. Environmental projects Involvement in urban air quality control programmes Noise protection.	↔
G. Wastewater and waste management	Failure to comply with the conditions specified in relevant decisions as to the type and quantity of generated waste Circular economy Discharge of wastewater in violation of applicable permits	Delegating responsibilities in waste management processes in accordance with the applicable procedure, monitoring the amount and types of waste in order to apply for and secure required amendments to the relevant administrative decisions. Increasing the share of recovered and recycled waste in waste management processes (circular economy). Monitoring and adjustment of wastewater discharge parameters.	↔

Background of the risk name – risk materiality for the organisation; critical, high, medium, low, very low
Background of the arrows – risk level after taking into account the control mechanisms; critical, high, medium, low, very low

Risk development trend year on year:

↓	***Falling***	↑	***Rising***	↔	***Stable***

Effects of application of control mechanisms in risk management – positioning of risks on the risk map



A, B, C, D, E, F, G – environmental risks – risk materiality

A', B', C, D', E', F', G' – environmental risks – risk level after taking into account the control mechanisms

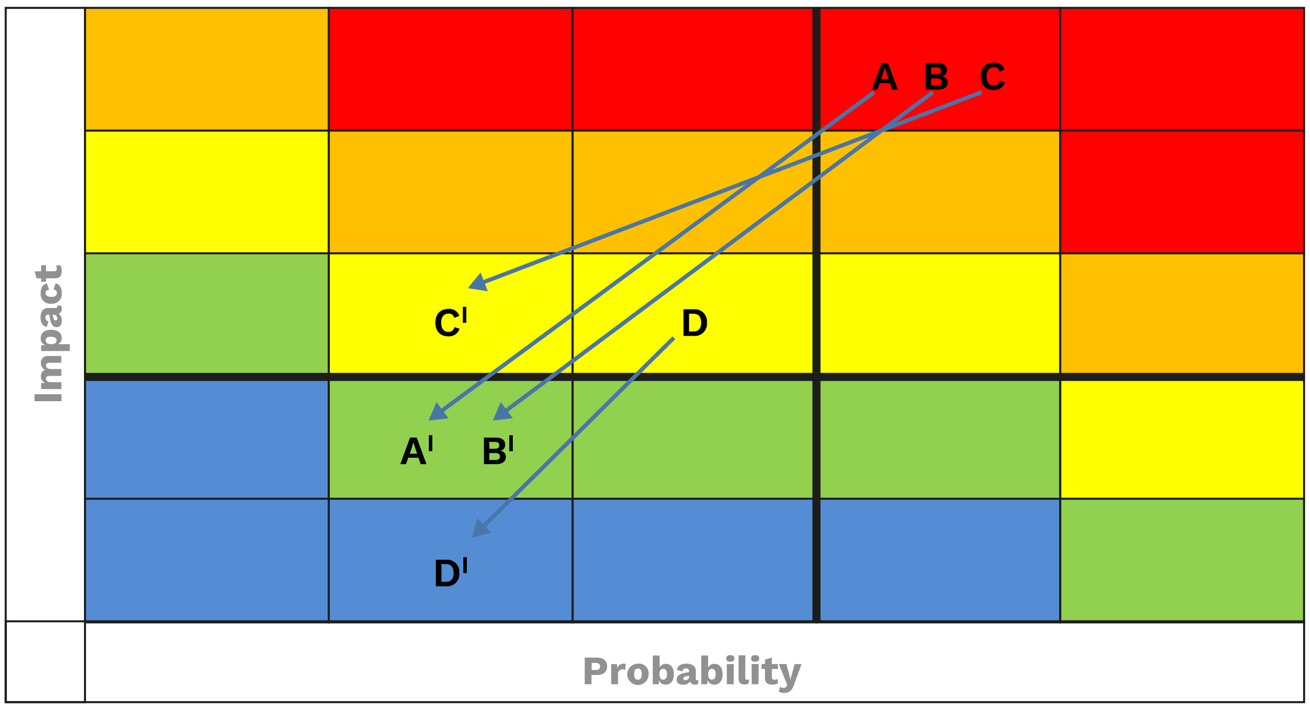
RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
OHS RISKS			
A. Workplace accidents and other hazards	■ Failure to identify material risks for particular jobs ■ Injury/death at a production plant	Introduction of a health and safety hazard reporting system, including division of responsibilities, supervision of the hazard identification process in the occupational risk assessment, introduction of procedures to follow in the event of an accident at work Introduction of a system for reporting near miss incidents and a procedure for handling such reports.	⟷
B. Fire safety	■ Fire ■ Injury/death as a result of fire	Introduction of OHS and fire safety manuals, performing fire safety inspections, setting up a Process Safety Committee.	⟷
C. Chemicals management	■ Accidents/failures during transport or handling of chemicals	Implementation of the provisions of the Comprehensive Prevention System, including delegation of responsibilities. Introduction of the Process Safety Management System at PKN ORLEN.	⟷
D. Employees and subcontractors' activities	■ Activities of employees and subcontractors resulting in violation of OHS regulations	Reviewing and issuing opinions on contracts with subcontractors in terms of security certificates and security clauses, implementation of the Comprehensive Prevention System Operation of an extensive training system, including the launch of the Training Centre at PKN ORLENDelivery of information, education and incentive schemes.	⟷

Background of the risk name – risk materiality for the organisation; critical, high, medium, low, very low
Background of the arrows – risk level after taking into account the control mechanisms; critical, high, medium, low, very low

Risk development trend year on year:

↓	***Falling***	↑	***Rising***	⟷	***Stable***

Effects of application of control mechanisms in risk management – positioning of risks on the risk map



A, B, C, D – OHS risks – risk materiality
A’, B’, C’, D’ – OHS risks – risk level after taking into account the control mechanisms

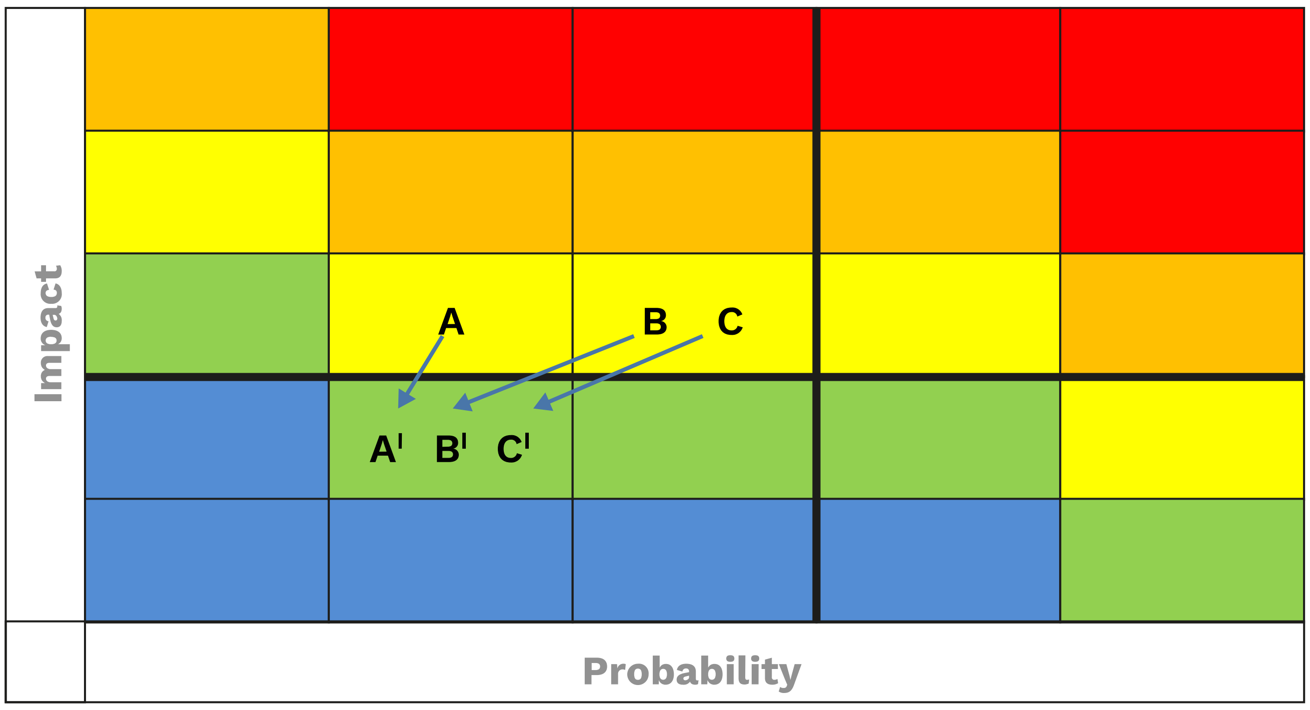
RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
ANTI-CORRUPTION AND ANTI-BRIBERY MEASURES			
A. Fraud and other misconduct	■ Accepting financial gains from potential suppliers ■ Conflicts of interest with respect to transactions ■ Disclosure of confidential information ■ Falsifying management information or other documents	Restricting access to supplier offers and the information they contain, monitoring impartiality towards potential suppliers, oversight of the supplier selection acceptance path. Access to Business Secrets and any confidential data regulated by internal policies, restricted to authorised personnel, and monitored on an ongoing basis. Procedures have been introduced for the verification of records and management information by the various Company departments.	⟷
B. Employees’ conduct resulting in violation of law	■ Involvement in illegal transactions or concealing information about illegal transactions by employees ■ Execution of contracts in circumstances where the law does not permit continuation of the process	Review of the correctness of contracted obligations against powers of attorney/authorisations, supervision by authorised employees of supplier contracts and protection of the ORLEN Group’s interests. Providing opinions on and approval of contracts by business functions in a dedicated system.	⟷
C. Misconduct on the part of customers or employees	■ Theft of fuel by employees or customers ■ Release of products to unauthorised persons, for unauthorised vehicles	Regular inspections of service stations and terminals, verification and monitoring of reports on service stations’ compliance with the requirements. Automatic process of blocking and unblocking sales orders for customers defaulting on payments and exceeding the trade credit limit, based on the applicable PKN ORLEN Instruction.	⟷

Background of the risk name – risk materiality for the organisation; critical, high, medium, low, very low
Background of the arrows – risk level after taking into account the control mechanisms; critical, high, medium, low, very low

Risk development trend year on year:

↓	***Falling***	↑	***Rising***	⟷	***Stable***

Effects of application of control mechanisms in risk management – positioning of risks on the risk map



A, B, C – corruption and bribery risks – risk materiality

A', B', C' – corruption and bribery risk – risk level after taking into account the control mechanisms

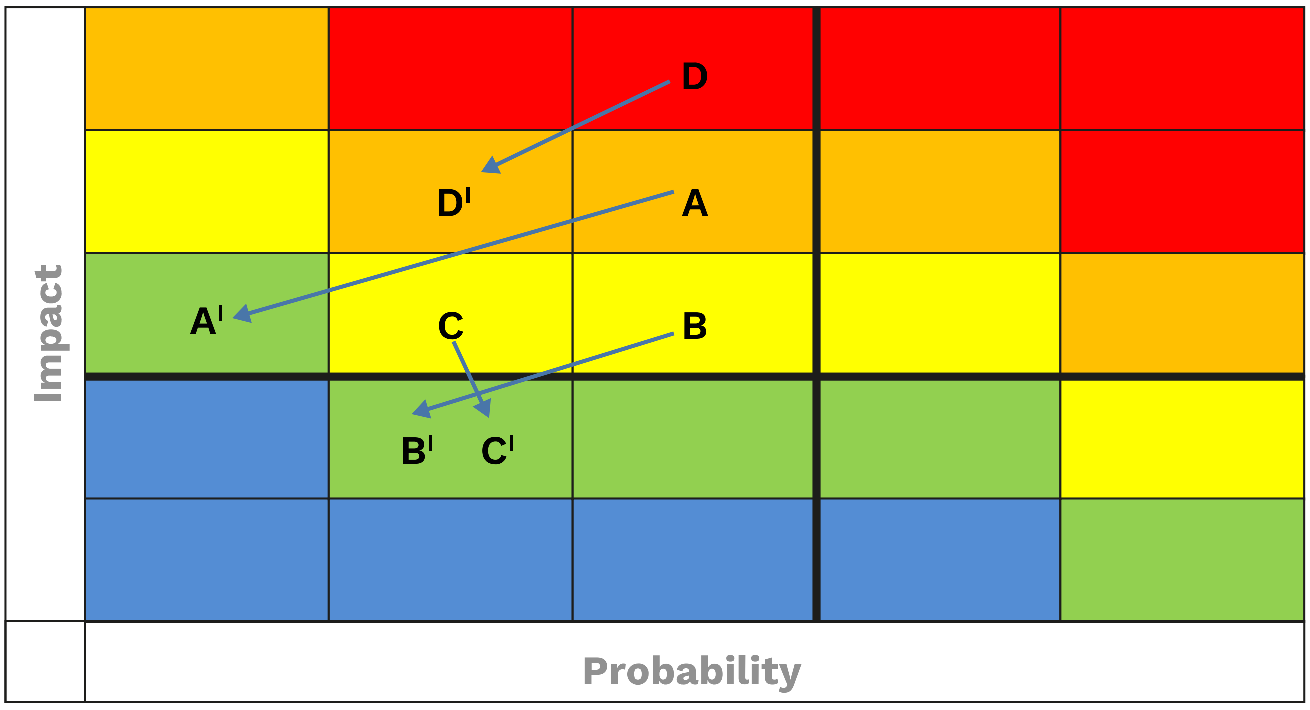
RISKS / PROCESSES	RISK DESCRIPTION	RISK MITIGATION METHODS	RISK DEVELOPMENT TREND
STRATEGIC			
A. Assumptions	🟥 Inconsistent, unrealistic strategic objectives and assumptions 🟥 Change of strategic objectives/assumptions in the course of a process	Regular checks of the validity of and monitoring of key strategic objectives against the changing environment (regulations, market, key suppliers, etc.).	⟷
B. Division of responsibilities	🟥 Inappropriate division of responsibilities among organisational units 🟥 No decision-making centre	High degree of employee specialisation, appropriate delegation of duties and responsibilities by precisely defining their scopes.	⟷
C. New regulations	🟥 Adverse legislative changes 🟥 Public administration unable to effectively enforce law	Participation in public consultations on draft legislation to limit the risk of unfavourable regulations coming into force.	⟷
D. Workplace accidents and other hazards	🟥 Insufficient knowledge of workplace safety standards among contractors 🟥 Threats to workplace safety and fire safety related to the presence of third-party contractors at the ORLEN Group's facilities	Oversight and management of contractors by implementing work safety monitoring tools. Implementation of uniform requirements for contractors and subcontractors in line with ORLEN Group Safety Standard No. 9.	⟷

Background of the risk name – risk materiality for the organisation; critical, high, medium, low, very low
Background of the arrows – risk level after taking into account the control mechanisms; critical, high, medium, low, very low

Risk development trend year on year:

↓	***Falling***	↑	***Rising***	⟷	***Stable***

Effects of application of control mechanisms in risk management – positioning of risks on the risk map



A, B, C, D – strategic risks – risk materiality

A’, B’, C’, D’ – strategic risks – risk level after taking into account the control mechanisms

OPPORTUNITIES

GRI indicators: 102-15, 103-1, 103-2

Capitals:

PKN ORLEN's vision reflects the global trends such as regulatory pressure on mitigating climate change, development of alternative fuels, and customers' rising expectations and purchasing awareness.

GRI: 102-15, 103-1, 103-2

Equally important for our business are the regulations and customers' expectations concerning the use of bio-derived components in refined and petrochemical products and the digitalisation of production, which helps to optimise plant operations.

We identify trends that will significantly change the fuel industry in the 2030+ perspective.

Climate policy

Climate change mitigation measures and promotion of low-carbon circular economy (EU ETS, IMO), affecting the entire production cycle.

Bio-derived fuels and plastics

External regulations (RED I and RED II) and consumer pressure to use bio-derived components in refined and petrochemical products.

Modern customer and service station of the future

Growing expectations and conscious buying behaviours of customers, digital commerce, big data, on-demand and sharing economy – driving change in the existing sales models.

Digitalization of production

Digitalisation of refining and petrochemical production helps to optimise plant operation and more accurately estimate future demand; continued increase in the competitiveness of integrated production.

Alternative fuels

Alternative fuels (electromobility, hydrogen, LPG/CNG/LNG), impacting the liquid fuels market.

Digitalisation of transport, autonomous cars, and economy of sharing, all of which are changing the mobility models.

Global changes, which have a growing, yet unpredictable impact on the world around us, have been gathering pace in recent years. To respond to those changes, the ORLEN Group is consistently adapting its business model across all segments, focusing on:

- **Growth of petrochemical production**
- **Further integration of refinery assets**
- **Development of low-carbon energy in the Downstream segment**

With integrated production assets in three Central European countries, over 30 million tonnes of various crude oil types processed every year, and a portfolio of more than 50 refined and petrochemical products, the ORLEN Group is perfectly placed to further expand its Downstream business.

Key activities in the Downstream segment over the period covered by the 2019–2022 strategy are aimed at ensuring security of feedstock supplies, further improvement of the operational excellence, and strengthening of the Group's market position.

In the area of feedstock supply security, the ORLEN Group seeks to further diversify its oil supply sources, secure natural gas supplies and build competitive advantage based on low-carbon energy. The Group's refineries in Poland, the Czech Republic and Lithuania are continuing their efforts to improve effectiveness, capture synergies through greater integration, and increase flexibility in response to market and regulatory challenges. Staying in the lead on home markets (e.g. by expanding the product range), implementation of an operational programme for biofuels (construction of production facilities, operational adjustments and development of R&D projects) and investment in extending the petrochemical value chain are the pillars for the reinforcement of the ORLEN Group's market position.

Expanding the service station network and strengthening customer relations in Retail

The Retail segment comprises more than 2,800 service stations, making up the largest retail chain in Central Europe. They handle around 1.6 million transactions daily. In Poland alone, they sell 7.7 billion litres of fuel every year, with substantial volumes bought by customers actively participating in the Vitay loyalty scheme and fleet customers.

The growth drivers in the Retail segment will be the modern service station chain, ensuring unique buying experience, and further operational excellence improvement.

PKN ORLEN is expanding its network of company-owned and franchise-operated service stations. The Group also plans to drive store and food sales and further upgrade its facilities, and is preparing to launch alternative fuel sales. In Poland, a charging stations project is being implemented, which is expected to enable electric vehicle drivers to cross the whole country by major communication routes. About 39 charging stations were put into operation by the end of 2019. A total of 150 locations have been selected along transit routes and in cities where charging stations are to be constructed by the end of 2021.

By undertaking a number of initiatives, the Retail segment is being transformed to provide customers with unique purchasing experience. We are launching new products and services and developing customer service channels by leveraging our competitive advantages and business experience (large and dense network of service stations and a sizeable customer base). In the coming years, we intend to further develop the upgraded Stop Cafe 2.0 food and beverage outlets. At the end of 2019, there were more than 558 in operation, and the concept was gaining popularity among customers. Tailored and flexible offering (based on big data) and development of the loyalty scheme towards e-commerce will help increase customer satisfaction. PKN ORLEN also seeks to retain its leading position in the home markets and enhance operational excellence by ensuring optimal management of its product range, food offering and services, as well as to improve cost efficiency, customer service processes and station management.

Cautious continuation strategy in the Upstream segment

Growth of the Upstream segment has helped us build an asset portfolio which may be further developed. In previous years, PKN ORLEN took a number of steps to increase its production potential in Poland (acquisition of two licences from Deutsche Erdoel AG, entering into a joint operating agreement with PGNiG, securing new licences from the Ministry of Environment, and acquisition of FX Energy) and Canada (acquisition of the first Canadian subsidiary TriOil Resources, followed by two other transactions: purchase of Birchill Exploration and Kicking Horse Energy). In 2019, the Group reported hydrocarbon production in excess of 18.2 thousand boe/day and 2P reserves of 197.4 mboe, having built assets that facilitate an effective, further increase in output and a constant improvement of the effectiveness of expenditures incurred.

Under the current 2019–2022 strategy, the ORLEN Group intends to build value in the Upstream segment through cautious continuation of the current efforts, i.e. increasing production in Poland and Canada and further improvement of operational excellence and financial strength. The ORLEN Group will closely watch and flexibly respond to developments in the oil and gas market. Consistent improvement of key performance indicators (e.g. better well economics, optimised scope of work) and synergies within the segment in Poland and Canada (e.g. transfer of know-how from Canada, one of the most technologically advanced oil and gas markets) are key elements for the operational excellence improvement in the Upstream business.

Innovations that create value

The ORLEN Group's innovation management model brings together all aspects of the Group's strategy and the innovations themselves are understood to mean much more than development and implementation of new products or services. We pay attention to product, process and sales innovations. Projects of crucial importance are those relating to our current value chain. Because of the role of intellectual capital in modern economy, we put strong focus on advancement of staff skills and competence. We consistently build our team of experts, especially in the area of R&D, and develop a system to support our leaders. In addition, as part of the strategic development directions we chose to follow, we decided to create a strategic research agenda, deploy innovation acquisition tools (accelerator and CVC fund) and begin closer cooperation with startups.

The innovation strategy relies on external and internal innovations supported with an advanced management model. To stimulate external innovation, the ORLEN Group carries out projects facilitating cooperation as part of an external ecosystem of innovations, successful application of state-of-the-art commercial solutions and use of special tools for project implementation. Internal innovations mean streamlining of the technological and organisational processes, developing the portfolio of R&D projects, and tapping synergies within the ORLEN Group. PKN ORLEN is consistently pursuing its R&D strategy through the construction of a Research and Development Centre, expected to serve as a a platform for collaboration with the scientific and business communities.

The ORLEN Group supports a culture of innovation to fully benefit from internal and external innovations. Innovation is promoted as the desired attitude across the organisation, and the dedicated decision-making process for innovative projects ensures ability to flexibly respond to market needs. What is more, in 2019 projects were under way to develop a knowledge-based organisation and unleash the internal potential in order to foster culture of innovation. Examples include the continued in-house programme to support innovation among employees, intended to encourage our staff to put forward their ideas and to enable identification of highly-innovative solutions (ORLEN Insight – a knowledge-sharing platform, Opportunities Market – a project platform, an in-house platform ORLEN Idea, and a competition for the most innovative project of the year).

FINANCIAL RESULTS

MANAGEMENT'S DISCUSSION AND ANALYSIS OF 2019 FINANCIAL RESULTS

GRI indicators: 103-1, 103-2

Capitals:

'In 2019, the world's economy growth rate markedly slowed down, driven by numerous factors, including declining global demand for crude oil and liquid fuels, customs wars interfering with international trade flows, the US-Iran conflict, and a deteriorated outlook for both emerging economies and the eurozone.

For another year running, the impact of macro variables on the entire Oil&Gas sector, in which the ORLEN Group operates, was far from favourable. As crude oil prices slid by more than USD 7/bbl bringing about even sharper declines in product prices, the model downstream margin reported by PKN ORLEN shrank by USD 1.5/bbl compared with the level in 2018. Another important factor was the extremely narrow price spread between the Urals crude and the Brent benchmark, of barely USD 0.8/bbl.

Those figures show that our earlier market assumptions and projections related to the entry into force of the new IMO regime were widely off the mark. I refer mainly to the Urals versus Brent price spread, as well as to high margins on middle distillates.

Despite these macro headwinds, in 2019 the ORLEN Group delivered a strong operating performance, with LIFO-based EBITDA coming in at PLN 9.2bn and net profit at PLN 4.3bn. The Group is on a stable financial footing, as its net debt was reduced by nearly PLN 3.2bn, to PLN 2.4bn, with the financial leverage of 6.3%. PKN ORLEN follows a policy of regular profit sharing – in 2019, we paid a total of PLN 1.5bn, that is PLN 3.5 per share, in dividends to our shareholders.'

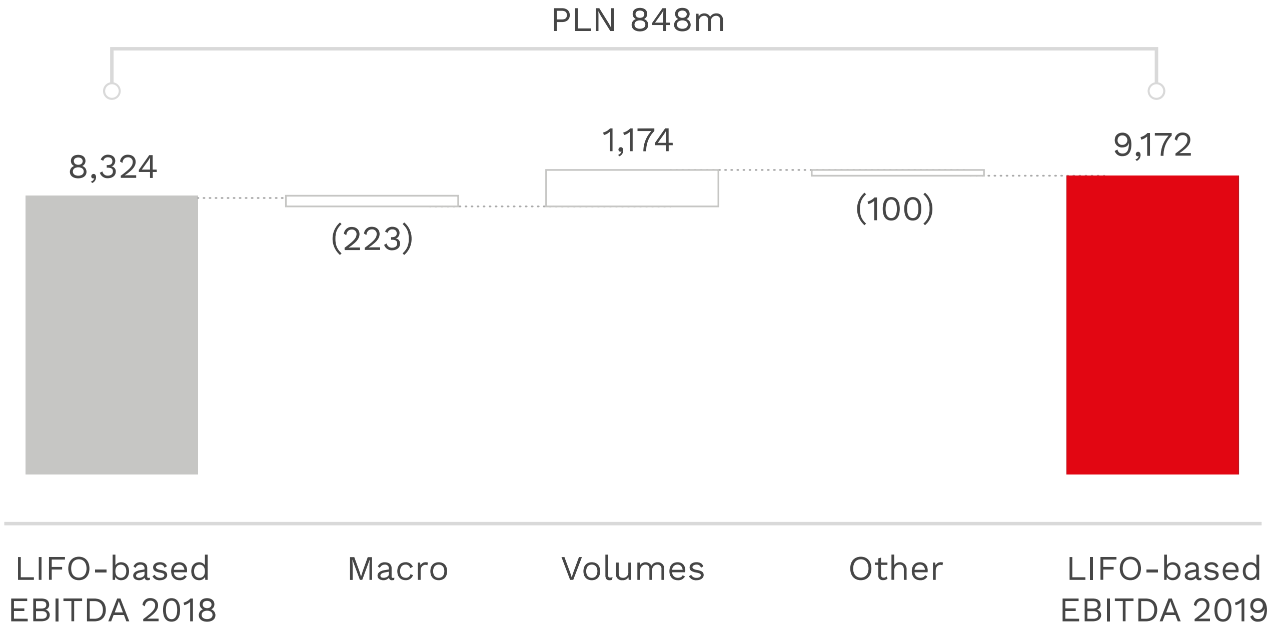
Jan Szewczak

Member of the PKN ORLEN Management Board, Finance

GRI: 103-1, 103-2

The ORLEN Group's **revenue came in at PLN 111,203m**, having grown 1.4% year on year, mainly on the back of a 0.9% increase in sales volumes reported across all operating segments. The revenue growth was partly attributable to a change in the sales structure, with reduced sales of low-margin heavy refining fractions. The higher revenue was earned despite lower prices of gasoline (down 9%), diesel oil (down 7%), heavy fuel oil (down 17%), ethylene (down 9%) and propylene (down 8%).

In 2019, earnings before depreciation and amortisation, net of the effect of crude price movements on the value of inventories (LIFO-based EBITDA) and net reversals of impairment losses on non-current assets[1] reached PLN 9,172m.



[1] Net impairment losses on property, plant and equipment and intangible assets:
– 2019: PLN (179)m, comprising chiefly impairment losses on the ORLEN Upstream Group's exploration assets in Poland,
– 2018: PLN 704m resulting mainly from the reversal of impairment losses on assets in the Unipetrol Group's Downstream segment (PLN 741m) and from the recognition of impairment losses on assets in Upstream (PLN 18m).

Profit earned in 2019 was **PLN 848m** higher year on year:

- and amounted to **PLN 1,171m**, an effect of improved downstream segment's sales structure as a result of reduced sales of heavy fractions, combined with higher sales volumes across all operating segments (up 0.9% year on year),
- **PLN (223)m year on year** – negative effect of macroeconomic volatility, which was mainly due to the negative impact of lower Urals/Brent differential (down USD (0.7)/bbl) and lower margins on light distillates, heavy fractions, olefins, PTA and PVC, partly offset by higher margins on middle distillates and fertilizers as well as the depreciation of the złoty against other currencies,
- **PLN (100)m yoy** – negative effect of other factors, including:
  - The effect of a change in net other income/(expenses) of PLN (586)m year on year (after elimination of the net effect of impairment losses on assets), due mainly to the absence of the compensation of PLN (264)m paid by insurers in 2018 in connection with the accident at the Unipetrol Group's ethylene unit, the measurement and net settlement of derivative financial instruments related to operating exposures, the net ineffective portion of the measurement and settlement of operating exposures of PLN (180)m year on year, and deficits of materials at third-party warehouses of PLN (156)m year on year.
  - The effect of net changes in inventory write-downs to net realisable values, of PLN 203m (y/y), caused by the negative effect of falling crude prices in 2018.
  - PLN 283m (y/y) – other factors, including mainly the effect of higher fuel wholesale and retail margins combined with higher overheads and labour costs.

Including the net effect of impairment reversals of PLN (179)m (mainly in respect of downstream assets at the Unipetrol Group, of PLN (131)m), the ORLEN Group's LIFO-based EBITDA for 2019 totalled **PLN 8,993m**.

The negative impact of changes in oil prices on inventory valuation which was reflected in EBITDA amounted to PLN (131)m. As a result, the ORLEN Group's EBITDA for 2019 came in at **PLN 8,862m.**

Earnings after depreciation and amortisation of PLN (3,497)m reached **PLN 5,365m.**

In 2019, net finance expenses were **PLN (11)m** and included mainly net interest expense calculated using the effective interest rate of PLN (241)m, as well as the settlement and measurement of net financial instruments of PLN 254m.

After tax expense of PLN (1,054)m, the ORLEN Group posted a net profit of **PLN 4,298m**, down by PLN (1,306)m year on year.

Equity amounted to **PLN 38,607m** as at the end of 2019 and was PLN 2,868m higher than at the end of 2018, chiefly as a result of recognition of a net profit of PLN 4,298m for 2019 and the effect of exchange gains/(losses) on translating the equity of foreign operations of PLN 138m, combined with a decline in equity following payment of PLN (1,497)m as dividend from retained earnings and the effect of hedging reserve of PLN (33)m.

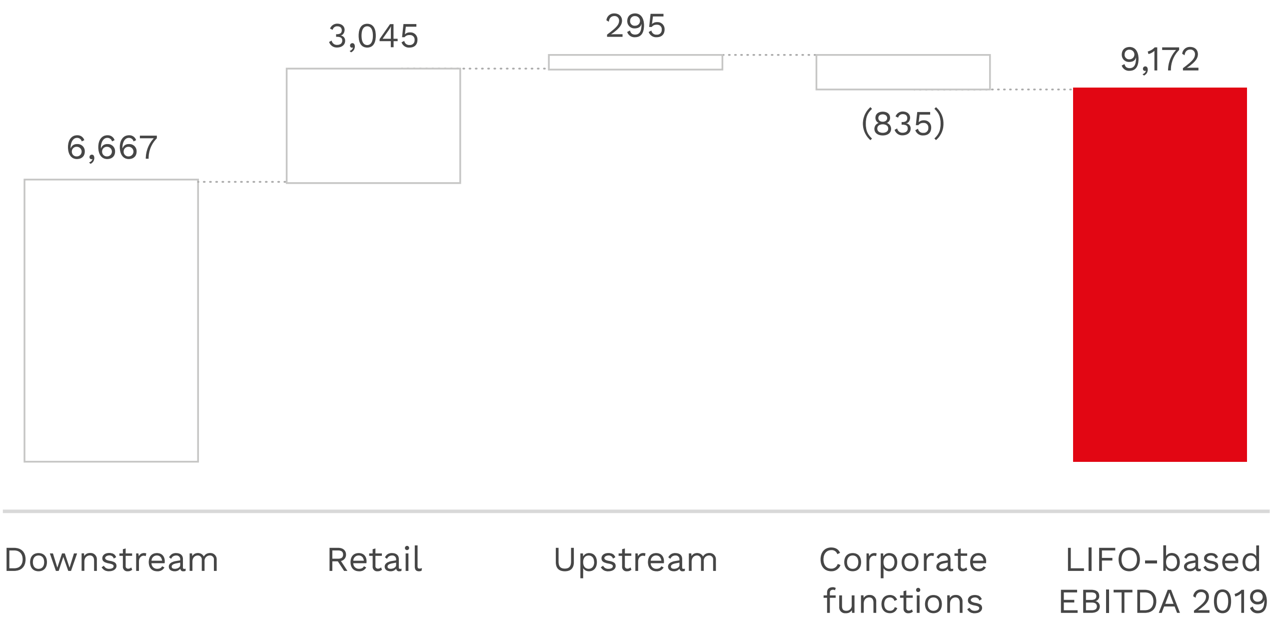
As at December 31st 2019, the Group reported a net debt of **PLN 2,448m**, down PLN (3,151)m year on year.

Expansion of the ORLEN Group's power generation, petrochemicals, maintenance services, IT and trade activities led to a 1,055 year-on-year increase in total workforce, to **22,337** employees.

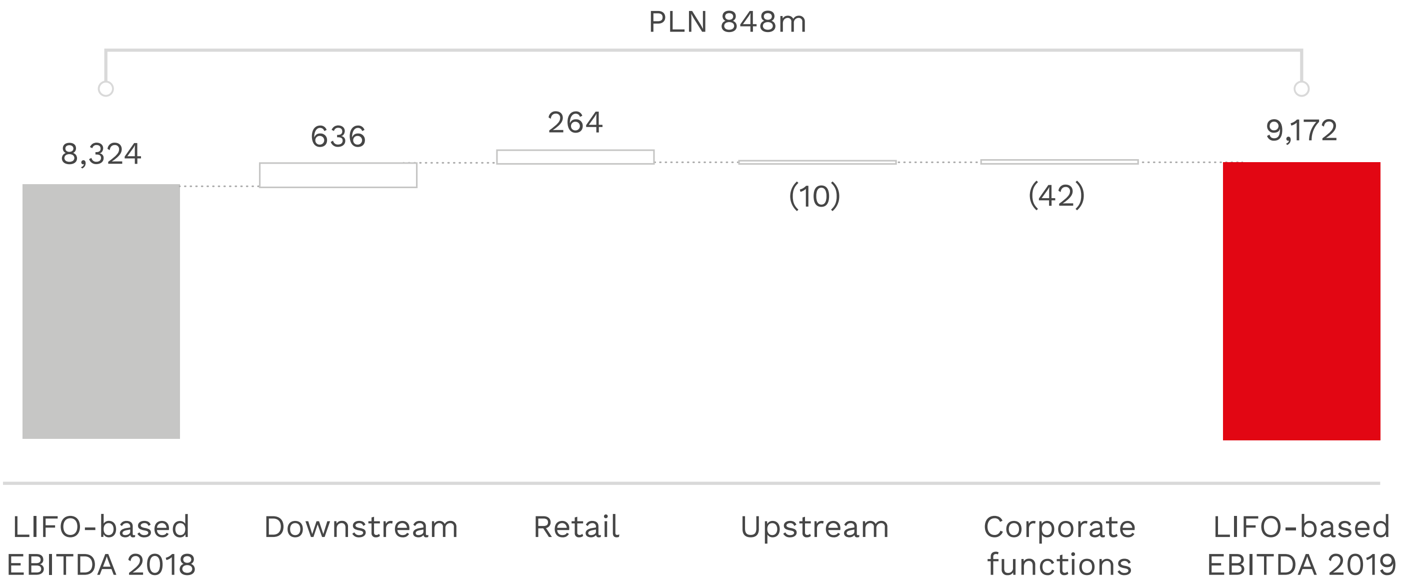
Segment results of the ORLEN Group

The ORLEN Group operates in three major business segments. Corporate functions provide support for business processes performed within the segments.

LIFO-based EBITDA by segment [PLNm]

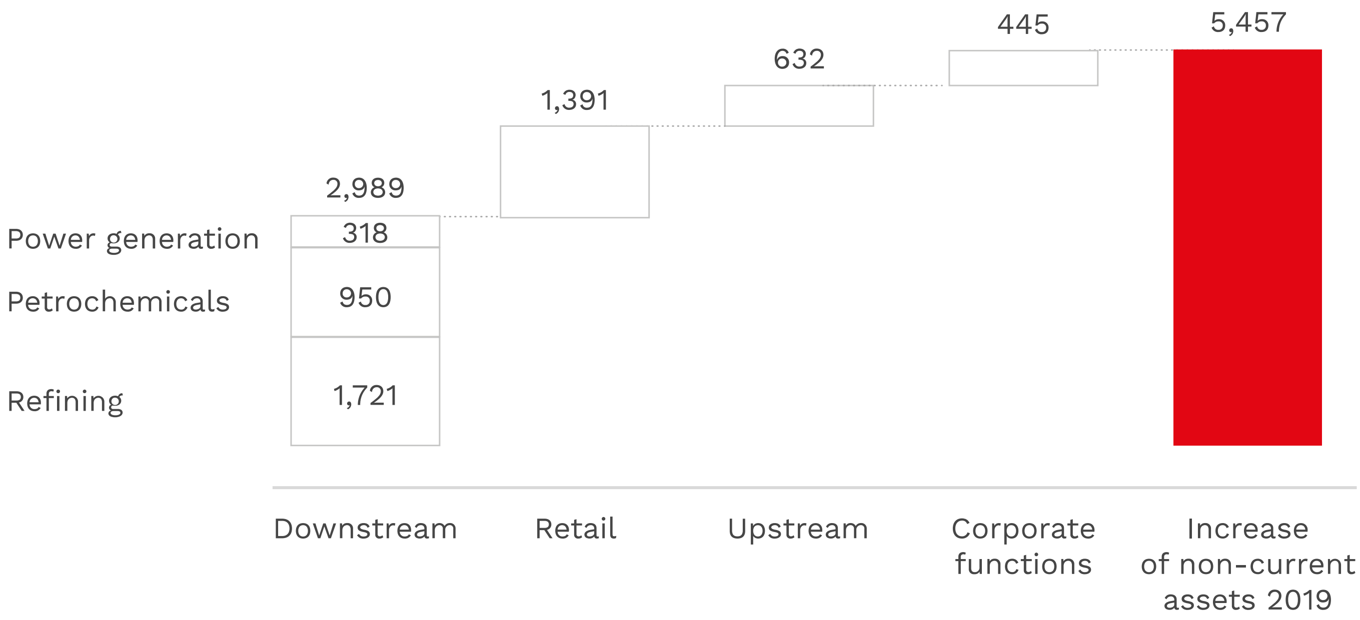


Change in segment performance [PLNm]

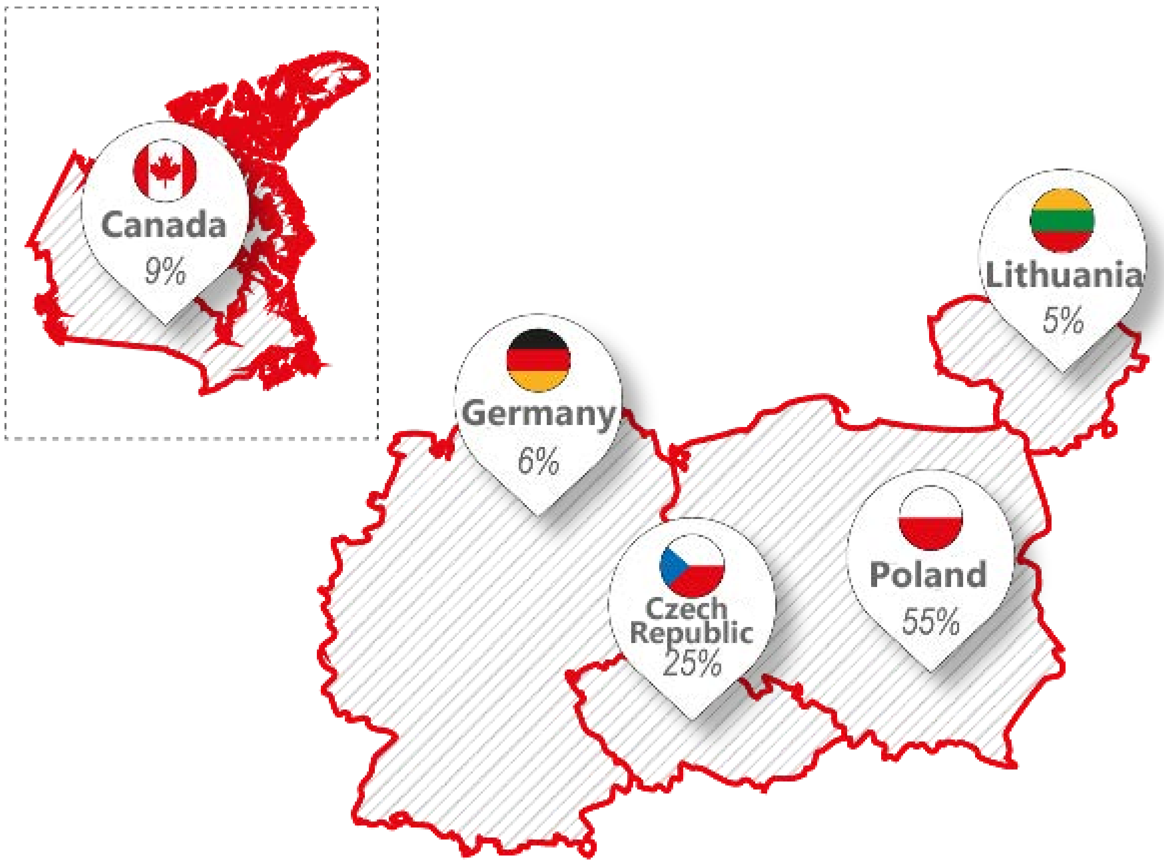


The ORLEN Group allocated **PLN 5,457m** for the 2019 investment programme (taking into account the impact of IFRS 16).

Capital expenditure by segment [PLNm]



Capital expenditure by market [%]



Major investment projects carried out in 2019 included:

Downstream

- Construction of a polyethylene unit in the Czech Republic
- Construction of a metathesis unit in Płock
- Construction of a PPF splitter unit in Lithuania
- Projects under the Cavern Strategy in Poland
- Expansion of fertilizer production capacities at Anwil
- Purchase of a licence and front-end-engineering design for a second generation bioethanol unit
- Construction of a glycol unit at ORLEN Południe
- Construction of a Research and Development Centre at Płock
- Construction of a boiler house for the steam cracker in the Czech Republic
- Construction of a unit for separation of paraffins from the MaxEne reforming feedstock at PKN ORLEN

Retail

- 64 new service stations opened (43 in Poland, 6 in Germany, 7 in the Czech Republic, and 8 in Slovakia)
- 132 service stations upgraded and rebranded (127 in Poland and 5 in the Czech Republic)
- 297 new Stop Cafe/Star Connect outlets opened (including O!SHOP convenience stores)

Upstream

- Canada – PLN 476m/Poland – PLN 158m

CONSOLIDATED FINACIAL STATEMENTS

Capitals:

1. Consolidated statement of profit or loss and other comprehensive income

	NOTE	2019	2018	change (y/y)	
				value	%
Sales revenues	9, 11.1, 11.2, 11.3	111,203	109,706	1,497	1.4
revenues from sales of finished goods and services		*93,009*	*91,014*	*1,995*	*2.2*
revenues from sales of merchandise and raw materials		*18,194*	*18,692*	*(498)*	*(2.7)*
Cost of sales	11.8	(97,301)	(97,265)	(36)	–
cost of finished goods and services sold		*(81,266)*	*(80,781)*	*(485)*	*0.6*
cost of merchandise and raw materials sold		*(16,035)*	*(16,484)*	*449*	*(2.7)*
Gross profit on sales		**13,902**	**12,441**	**1,461**	**11.7**
Distribution expenses		(6,355)	(4,745)	(1,610)	33.9
Administrative expenses		(1,806)	(1,590)	(216)	13.6
Other operating income	11.9	1,246	2,150	(904)	(42)
Other operating expenses	11.10	(1,717)	(1,152)	(565)	49
(Loss)/reversal of loss due to impairment of financial instruments	11.12	(41)	(16)	(25)	156.3
Share in profit from investments accounted for using the equity method	12.3	136	127	9	7.1
Profit from operations		**5,365**	**7,215**	**(1,850)**	**(25.6)**
Finance income	11.11.1	890	1,413	(523)	(37)
Finance costs	11.11.2	(901)	(1,517)	616	(40.6)
Net finance income and costs		**(11)**	**(104)**	**93**	**(89.4)**
(Loss)/reversal of loss due to impairment of financial instruments	11.12	(2)	(1)	(1)	100
Profit before tax		**5,352**	**7,110**	**(1,758)**	**(24.7)**
Tax expense	11.13	(1,054)	(1,506)	452	(30)

	NOTE	2019	2018	change (y/y)	
current tax		(1,000)	(1,181)	181	(15.3)
deferred tax		(54)	(325)	271	(83.4)
Net profit		4,298	5,604	(1,306)	(23.3)
Other comprehensive income:					
which will not be reclassified subsequently into profit or loss		(35)	(24)	(11)	45.8
actuarial gains and losses		(21)	(5)	(16)	320
gains/(losses) on investments in equity instruments at fair value through other comprehensive income		(20)	(23)	3	(13)
deferred tax	11.13.2	6	4	2	50
which will be reclassified into profit or loss		105	462	(357)	(77.3)
hedging instruments		(148)	12	(160)	–
hedging costs		115	38	77	202.6
exchange differences on translating foreign operations		138	415	(277)	(66.7)
deferred tax	11.13.2	–	(3)	3	–
		70	438	(368)	(84)
Total net comprehensive income		4,368	6,042	(1,674)	(27.7)
Net profit/(loss) attributable to		4,298	5,604	(1,306)	(23.3)
equity owners of the parent		4,300	5,556	(1,256)	(22.6)
non-controlling interest		(2)	48	(50)	–
Total net comprehensive income attributable to		4,368	6,042	(1,674)	(27.7)
equity owners of the parent		4,370	5,937	(1,567)	(26.4)
non-controlling interest		(2)	105	(107)	–
Net profit and diluted net profit per share attributable to equity owners of the parent (in PLN per share)		10.05	12.99	(2.94)	(22.63)

2. Consolidated statement of financial position

	NOTE	31/12/2019	31/12/2018	change (y/y)	
				value	%
ASSETS					
Non-current assets					
Property, plant and equipment	12.1	32,363	31,390	973	3.1
Intangible assets	12.2	1,600	1,323	277	20.9
Right-of-use asset	14.2.1	3,952	–	3,952	–
Investments accounted for using the equity method	12.3	678	650	28	4.3
Deferred tax assets	11.13.2	51	70	(19)	(27.1)
Derivatives	12.8	310	161	149	92.5

Long-term lease receivables	14.2.2	13	–	13	–
Other assets	12.8	310	338	(28)	(8.3)
		39,277	**33,932**	**5,345**	**15.8**
Current assets					
Inventories	12.5.1	15,074	14,362	712	5
Trade and other receivables	12.5.2	9,669	10,479	(810)	(7.7)
Current tax assets		262	114	148	129.8
Cash and cash equivalents	12.6.2	6,159	4,192	1,967	46.9
Derivatives	12.8	243	524	(281)	(53.6)
Short-term lease receivables	14.2.2	12	–	12	–
Other assets	12.8	468	336	132	39.3
Non-current assets classified as held for sale		38	202	(164)	(81.2)
		31,925	**30,209**	**1,716**	**5.7**
Total assets		**71,202**	**64,141**	**7,061**	**11**
EQUITY AND LIABILITIES					
EQUITY					
Share capital	12.7.1	1,058	1,058	–	–
Share premium	12.7.2	1,227	1,227	–	–
Hedging reserve	13.4	328	361	(33)	(9.1)
Revaluation reserve		(33)	(15)	(18)	120
Exchange differences on translating foreign operations		847	709	138	19.5
Retained earnings	12.7.3	35,169	32,387	2,782	8.6
Equity attributable to equity owners of the parent		**38,596**	**35,727**	**2,869**	**8**
Non-controlling interests	12.7.4	**11**	**12**	**(1)**	**(8.3)**
Total equity		**38,607**	**35,739**	**2,868**	**8**
LIABILITIES					
Non-current liabilities					
Loans and bonds	12.6.1	8,185	8,598	(413)	(4.8)
Provisions	12.9	1,113	1,055	58	5.5
Deferred tax liabilities	11.13.2	1,474	1,445	29	2
Derivatives	12.8	2	42	(40)	(95.2)
Lease liabilities	14.2.1	3,380	–	3,380	–
Other liabilities	12.8	161	366	(205)	(56)
		14,315	**11,506**	**2,809**	**24.4**
Current liabilities					
Trade and other liabilities	12.5.3	15,132	13,697	1,435	10.5
Lease liabilities	14.2.1	618	–	618	–

Liabilities from contracts with customers	12.5.4	246	231	15	24.4
Loans and bonds	12.6.1	422	1,193	(771)	(64.6)
Provisions	12.9	1,236	1,019	217	21.3
Current tax liabilities		124	473	(349)	(73.8)
Derivatives	12.8	266	193	73	37.8
Other liabilities	12.8	236	90	146	162.2
		18,280	16,896	1,384	8.2
Total liabilities		**32,595**	**28,402**	**4,193**	**14.8**
Total equity and liabilities		**71,202**	**64,141**	**7,061**	**11**

3. Consolidated statement of changes in equity

	Equity attributable to equity owners of the parent							
	Share capital and share premium	Hedging reserve	Revaluation reserve	Exchange differences on translating foreign operations	Retained earnings	Total	Non-controlling interests	Total equity
NOTE	12.7.1, 12.7.2	13.4			12.7.3		12.7.4	
01/01/2019 (approved data)	2,285	361	(15)	709	32,387	35,727	12	35,739
Impact of IFRS 16 adoption	–	–	–	–	(4)	(4)	–	(4)
01/01/2019 (converted data)	2,285	361	(15)	709	32,383	35,723	12	35,735
Net profit/(loss)	–	–	–	–	4,300	4,300	(2)	4,298
Components of other comprehensive income	–	(33)	(18)	138	(17)	70	–	70
Total net comprehensive income	**–**	**(33)**	**(18)**	**138**	**4,283**	**4,370**	**(2)**	**4,368**
Issuance of shares attributable to non-controlling interest	–	–	–	–	–	–	1	1
Dividends	–	–	–	–	(1,497)	(1,497)	–	(1,497)
31/12/2019	**2,285**	**328**	**(33)**	**847**	**35,169**	**38,596**	**11**	**38,607**
01/01/2018	2,285	331	5	334	29,233	32,188	3,014	35,202
Net profit	–	–	–	–	5,556	5,556	48	5,604
Components of other comprehensive income	–	30	(20)	375	(4)	381	57	438
Total net comprehensive income	**–**	**30**	**(20)**	**375**	**5,552**	**5,937**	**105**	**6,042**
Change in structure	–	–	–	–	(1,115)	(1,115)	(3,107)	(4,222)

	Equity attributable to equity owners of the parent							
Dividends	–	–	–	–	(1,283)	(1,283)	–	(1,283)
31/12/2018	**2,285**	**361**	**(15)**	**709**	**32,387**	**35,727**	**12**	**35,739**

4. Consolidated statement of cash flows

	NOTE	2019	2018	change (y/y)	
				value	%
Cash flows from operating activities					
Profit before tax		**5,352**	**7,110**	**(1,758)**	**(24.7)**
Adjustments for:					
Share in profit from investments accounted for using the equity method	12.3	(136)	(127)	(9)	7.1
Depreciation and amortisation	11.8	3,497	2,673	824	30.8
Foreign exchange (gain)/loss	11.11.4	(72)	319	(391)	–
Net interest	11.11.3	272	203	69	34.0
Dividends	11.11.1	(5)	(4)	(1)	25.0
(Profit)/Loss on investing activities		316	(1,100)	1,416	–
recognition/(reversal) of impairment allowances of property, plant and equipment, intangible assets and other non-current assets	11.9, 11.10	*179*	*(704)*	*883*	–
settlement and valuation of derivative financial instruments		*161*	*(434)*	*595*	–
Change in provisions	12.9	1,035	736	299	40.6
Change in working capital	12.5	1,182	(3,059)	4,241	–
inventories		*(709)*	*(1,729)*	*1,020*	*(59.0)*
receivables		*942*	*(1,069)*	*2,011*	–
liabilities		*949*	*(261)*	*1,210*	–
Other adjustments		(624)	(732)	108	(14.8)
rights received free of charge		*(683)*	*(494)*	*(189)*	*38.3*
security deposits		*(367)*	*(1)*	*(366)*	*36,600.0*
change in settlements of settled derivatives not designated for hedge accounting purposes		*268*	*(247)*	*515*	–
Income tax (paid)	11.13.3	(1,498)	(1,039)	(459)	44.2
Net cash from operating activities		**9,319**	**4,980**	**4,339**	**87.1**
Cash flows from investing activities					
Acquisition of property, plant and equipment, intangible assets and right-of-use asset		(4,450)	(4,454)	4	(0.1)
Acquisition of shares		–	(25)	25	–
Disposal of property, plant and equipment, intangible assets and right-of-use asset		245	161	84	52.2

	NOTE	2019	2018	change (y/y)	
Dividends received		112	196	(84)	(42.9)
Settlement of derivatives not designated as hedge accounting		82	339	(257)	(75.8)
Other		17	(15)	32	–
Net cash (used) in investing activities		**(3,994)**	**(3,798)**	**(196)**	**5.2**
Cash flows from financing activities					
Change in cash related to acquisition of non-controlling interest of UNIPETROL, a.s		190	(4,222)	4,412	–
Proceeds from loans received	12.6	381	2,232	(1,851)	(82.9)
Bonds issued		–	600	(600)	–
Repayment of loans	12.6	(492)	(97)	(395)	407.2
Redemption of bonds	12.6	(1,000)	(200)	(800)	400.0
Interest paid from loans and bonds	11.11.3, 12.6	(218)	(222)	4	(1.8)
Interest paid on lease	11.11.3, 12.6	(68)	(9)	(59)	655.6
Dividends paid		(1,497)	(1,284)	(213)	16.6
to equity owners of the parent	12.7.6	*(1,497)*	*(1,283)*	*(214)*	*16.7*
to non-controlling interest		–	*(1)*	*1*	–
Payments of liabilities under lease agreements	12.6	(656)	(32)	(624)	1,950.0
short-term and low-value lease payments		*(149)*	–	*(149)*	–
Other		(3)	(3)	–	–
Net cash (used) in financing activities		**(3,363)**	**(3,237)**	**(126)**	**3.9**
Net increase/(decrease) in cash and cash equivalents		**1,962**	**(2,055)**	**4,017**	–
Effect of changes in exchange rates		5	3	2	66.7
Cash and cash equivalents, beginning of the period		4,192	6,244	(2,052)	(32.9)
Cash and cash equivalents, end of the period		**6,159**	**4,192**	**1,967**	**46.9**
including restricted cash		*1,086*	*87*	*999*	*1,148.3*

BASIC INFORMATION

Capitals:

1. Principal activity of ORLEN Group

PRINCIPAL INFORMATION ABOUT ORLEN GROUP	
NAME OF THE PARENT COMPANY	Polski Koncern Naftowy ORLEN Spółka Akcyjna
REGISTERED OFFICE	ul. Chemików 7, 09-411 Płock, Poland
NATIONAL COURT REGISTER NUMBER (KRS)	0000028860
INDUSTRY IDENTIFICATION NUMBER (REGON)	610188201
TAX IDENTIFICATION NUMBER (NIP)	774-00-01-454
PRINCIPAL ACTIVITY	🟥 crude oil processing, 🟥 production of fuel, petrochemical and chemical goods, 🟥 retail and wholesale of fuel products, 🟥 exploration, recognition and extraction of hydrocarbons, 🟥 generates, distributes and trades of electricity and heat, 🟥 service-related activity: storage of crude oil and fuels, transportation, maintenance and overhaul services, 🟥 laboratory, security, design, administrative, insurance and financial services.

Polski Koncern Naftowy ORLEN Spółka Akcyjna ("Company", "PKN ORLEN", "Issuer", "Parent Company") was founded by incorporation of Petrochemia Płock S.A. with Centrala Produktów Naftowych S.A., on 7 September 1999.

PKN ORLEN along with the entities comprising the Capital Group of Polski Koncern Naftowy ORLEN S.A. ("ORLEN Group", "Group") is one of the biggest and most modern fuel and power companies in Central Europe, operating on the Polish, Lithuanian, Czech, German and Canadian markets. The Group also possesses entities located in Malta, Sweden, the Netherlands, Slovakia, Hungary, Estonia, Latvia and the USA.

Since 26 November 1999 PKN ORLEN shares are listed on the main market of the Warsaw Stock Exchange (WSE) in the continuous quotations system.

2. Basis of preparation of consolidated financial statements

The consolidated financial statements have been prepared in accordance with accounting principles contained in the International Financial Reporting Standards (IFRS), comprising International Accounting Standards (IAS) as well as Interpretations of Standing Interpretation Committee (SIC) and the International Financial Reporting Interpretations Committee (IFRIC), which were adopted by the European Union (EU). The accounting principles applied by the Group are based on standards and interpretations adopted by the European Union and applicable to the period beginning on 1 January 2019 or earlier periods.

The consolidated financial statements have been prepared on a historical cost basis, except derivatives measured at fair value and assets measured at fair value through other comprehensive income. This consolidated financial statements have been prepared using the accrual basis of accounting except from the consolidated financial statement of cash flows.

The scope of consolidated financial statements is compliant with the Minister of Finance Regulation of 29 March 2018 on current and periodical information to be published by issuers of securities and conditions of consideration of information required by the law of non-member country's law as equal (Official Journal 2018, item 757) and covers the annual reporting period from 1 January to 31 December 2019 and the comparative period from 1 January to 31 December 2018.

Presented consolidated financial statements present a true and fair view of the ORLEN Group's financial position as at 31 December 2019, results of its operations and cash flows for the year ended 31 December 2019.

The consolidated financial statements have been prepared on the assumption that the ORLEN Group will continue to operate as a going concern in the foreseeable future. As at the date of approval of this consolidated financial statements, there is no evidence indicating that ORLEN Group will not be able to continue its operations as a going concern. The Parent Company and the entities comprising ORLEN Group have unlimited period of operations.

3. Functional currency and presentation currency of financial statements and methods applied to translation of financial data for consolidation purposes

The functional currency of the Parent Company and presentation currency of this consolidated financial statements is Polish Złoty (PLN). Possible differences in the amount of PLN 1 million when summing up the items presented in the explanatory notes result from the adopted roundings. Translation into PLN of financial statements of foreign entities, for consolidation purposes:

- particular assets and liabilities – at spot exchange rate as at the end of the reporting period,
- items of the statement of profit or loss and other comprehensive income and the statement of cash flows – at the average exchange rate for the reporting period (arithmetic average of daily average exchange rates published by the National Bank of Poland („NBP") in a given period).

Foreign exchange differences resulting from the above recalculations are recognised in equity in the line exchange differences on translating foreign operations.

CURRENCY	Average exchange rate for the reporting period		Exchange rate as at the end of the reporting period	
	2019	2018	31/12/2019	31/12/2018
EUR/PLN	4.2987	4.2614	4.2585	4.3000
USD/PLN	3.8399	3.6113	3.7977	3.7597
CZK/PLN	0.1675	0.1662	0.1676	0.1673
CAD/PLN	2.8939	2.7861	2.9139	2.7620

4. Accounting principles

Significant accounting principles and significant values based on judgements and estimates are presented as a part of the specific explanatory notes to the consolidated financial statements. The Group applied the accounting principles consistently to all presented reporting periods, except for:

- the impact of new standards applied for the first time in 2019, described below (note 5),
- changes in accounting policy regarding the issue of CO_2 emission allowances and determining the value of the provision for CO_2 emission costs.

From 1 January 2019 the Group recognises cost flows of CO_2 emission allowances at weighted average method against FIFO method (First In, First Out) applied until 31 December 2018. The effect of changing the cost method for CO_2 allowances as at 31 December 2018 was immaterial and was recognised in the financial result of the current year and as a change in value of provision for CO_2 emission in the statement of financial position. In the opinion of the Management Board of PKN ORLEN, the change in cost method better reflects commercial substance of legal situation and economic conditions in terms of volatility of market prices for CO_2 emission rights.

The preparation of consolidated financial statements in accordance with IFRSs requires that the Management Board makes professional judgements, estimates and assumptions that affect the presented amounts. The estimates and related assumptions are based on historical expertise and other factors regarded as reliable in given circumstances and their effects provide grounds for professional judgment of the carrying amount of assets and liabilities which is not based directly on any other factors.

In the matters of considerable weight, the Management Board might base its judgments, estimates or assumptions on opinions of independent experts. The judgments, estimates and related assumptions are verified on a regular basis.

Selected accounting principles	Note
Investments in subsidiaries, jointly controlled entities and associates	7.1
Operating segments	8
Sales revenues	11.1
Costs	11.8
Income tax expenses (tax expense)	11.13
Property, plant and equipment	12.1
Exploration and extraction of mineral resources	12.1
Intangible assets	12.2
Investments accounted for under equity method	12.3
Impairment of property, plant and equipment and intangible assets	12.4
Inventories	12.5.1
Trade and other receivables	12.5.2
Trade and other liabilities	12.5.3
Cash, loans and bonds	12.6
Equity	12.7
Provisions	12.9
Financial instruments	13
Fair value measurement	13
Lease	14.2
Contingent assets and liabilities	14.4

5. Impact of IFRS changes on consolidated financial statements of ORLEN Group

IFRS 16 Lease (IFRS 16)

Application for the first time

IFRS 16 “Lease” issued on 13 January 2016 was adopted by the European Union on 31 October 2017.

Since 1 January 2019, the Group has applied the new Standard in the recognition, measurement, and presentation of lease agreements. The application of the new Standard was made in accordance with the transitional provisions contained in IFRS 16.

Implementation of IFRS 16 within the Group was carried out using the modified retrospective approach, and therefore, comparative data for the year 2018 was not converted and any cumulative effect of the first application of the new Standard was included as an adjustment to the opening balance of retained earnings on the first day of application. Application of IFRS 16 did not affect the recognition of lease contracts by the Group in which the Group is the lessor. Additional information regarding lease contracts is presented in note 14.2.

As at 1 January 2019 the Group has recognised right-of-use asset in the amount of PLN 3,316 million and lease liability in the amount of PLN 3,352 million, what resulted in a difference to be recognised in the position of retained earnings in the amount of PLN 4 million due to recognition of impairment losses as a result of impairment tests and the recognition of receivables from subleasing in the amount of PLN 32 million.

Reconciliation of future minimum lease payments disclosed as at 31 December 2018 with lease liabilities recognised in the statement of financial position as at 1 January 2019

Value of future minimum lease payments under operating lease	5,675
Value of future minimum lease payments under finance lease	286
Contractual lease liabilities as at 31/12/2018	**5,961**
Discount	(2,380)
Present value of lease liabilities as at 01/01/2019	**3,581**
Present value of contractual finance lease liabilities as at 31/12/2018	(229)
Value of contractual lease liabilities – impact of IFRS 16 adoption as at 01/01/2019	**3,352**

The weighted average incremental borrowing rate of the Group as a lessee applied to the lease liabilities recognised in the statement of financial position as at 1 January 2019 amounted to 2.62%

The Group as a lessee

Identifying a lease

The Group applies new guidelines for identifying a lease only for contracts that it has concluded (or amended) on the day of its first application, i.e. 1 January 2019 or after that date. Thereby, for all contracts concluded before 1 January 2019, the Group applied the practical exemption provided for in IFRS 16, according to which the entity is not required to reassess whether the contract is a lease or contains a lease on the date of first application. As at 1 January 2019 the Group applies IFRS 16 to contracts that were previously identified as leases in accordance with IAS 17 and IFRIC 4.

At the time of conducting a new contract, the Group assesses whether the contract is a lease or whether it contains a lease. An agreement is a lease or contains a lease if it transfers the right to control the use of an identified asset for a given period in exchange for remuneration. In order to assess if an agreement transfers the right to control the use of an identified asset for a given period, the Group shall determine whether throughout the entire period of use the customer enjoys the following rights:

1. the right to obtain substantially all economic benefits from the use of the identified asset and
2. the right to manage the use of the identified asset.

Should the Group have the right to control the use of an identified asset for part of the duration of an agreement only, the agreement contains a lease in respect of this part of the period.

Rights resulting from lease, rental, hire or other agreements which meet the definition of a lease as per IFRS 16 are recognised as right-of-use underlying assets within the framework of non-current assets with a corresponding lease liabilities.

Initial recognition and measurement

The Group recognises the right-of-use asset as well as the lease liability on the date of commencement of the lease.

On the date of commencement the Group measured the right-of-use asset at cost.

The cost of the right-of-use asset is inclusive of the following:

1. the amount of the initial measurement of the lease liability,
2. all lease payments made on or before the date of commencement, less any lease incentives received,
3. all initial costs directly incurred by the lessee, and
4. estimated costs to be incurred by the lessee in connection with the dismantling and removal of underlying assets, the refurbishment of premises within which they were located, or the refurbishment of underlying assets to the condition required by the terms and conditions of the lease, unless these costs are incurred with the aim of creating stocks.

Lease payments included in the evaluation of lease liability include:

- fixed lease payments;
- variable lease payments, which depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts that are expected to be paid by the lessee as part of the guaranteed residual value;
- the call exercise price, should it be assumed with reasonable certainty that the Group shall decide to exercise the call option;
- penalty payments for termination of a lease, unless it can be assumed with reasonable certainty that the Group shall not terminate the lease.

Variable payments, which do not depend on an index or a rate should not be taken into account when calculating lease liability. Such payments are recognised in the profit or loss in the period of the occurrence which renders them payable.

The lease liability on the commencement date shall be calculated on the basis of the current lease payments that are payable by that date and discounted by the incremental borrowing rates of the lessee.

The Group does not discount lease liabilities by the lease interest rate as the calculation of such rates requires information known only to the lessor (the non-guaranteed final value of the leased asset as well as the direct costs incurred by the lessor).

Determining the lessee's incremental borrowing rate

Lessee's incremental borrowing rates were specified as the sum of:

1. the risk free rate, based on the Interest Rate Swap (IRS) in accordance with the maturity of the discount rate, and the relevant basic rate for the given currency, as well as
2. the Group's credit risk premium based on the credit margin calculated inclusive of the credit risk segmentation of all companies which have entered into lease agreements.

Subsequent measurement

After the commencement date, the Group measures the right-of-use asset applying the cost model.

In applying the cost model, the Group shall measure the cost of the right-of-use asset:

1. less any accumulated depreciation and accumulated impairment losses; and
2. adjusted in respect of any updates to the measurement of lease liability not resulting in the necessity for recognition of a separate asset.

After the date of commencement the Group shall measure the lease liability by:

1. increasing the carrying amount to reflect interest on the lease liability,
2. decreasing the carrying amount to reflect any lease payments made, and
3. remeasuring the carrying amount to reflect any reassessment or lease modifications or to revise in-substance fixed lease payments.

The Group shall remeasure the lease liability in cases where there is a change in future lease payments as a result of a change in the index or rate used to determine lease payments (e.g. a change in payment associated with the right of perpetual use), in cases where there is a change in the amount expected by the Group to be payable under the residual amount guarantee, or if the Group reassesses the likelihood of the exercise of the call option, or the extension or termination of the lease.

Updating the lease liability also adjusts the value of the right-of-use asset. In a situation where the carrying amount of the right-of-use asset has been reduced to zero, further reductions in the measurement of the lease liability shall be recognised by the Group as profit or loss.

Depreciation

The right-of-use asset is depreciated linearly over the shorter of the following two periods: the period of lease or the useful life of the underlying asset. However in cases where the Group can be reasonably sure that it will regain ownership of the asset prior to the end of the lease term, right-of-use shall be depreciated from the day of commencement of the lease until the end of the useful life of the asset.

The useful life of right-of-use asset is determined in the same manner as for property, plant and equipment.

The Group has leases agreements regarding mainly:

1. Land, including:
    a. perpetual usufruct of land for a fixed period of up to 99 years,
    b. land for petrol stations and motorway service areas concluded for a specified period up to 30 years,
2. Buildings and construction, including petrol stations, storage tank, office spaces for a fixed period up to 30 years.
3. Vehicles and other, including:
    a. railway tank concluded for a specified period of 3 to 10 years,
    b. cars for a fixed period up to 3 years,
    c. locomotives for a fixed period up to 3 years.

Impairment

The Group applies IAS 36 Impairment of Assets to determine whether the right-of-use asset was impaired and to account for any impairment loss identified.

Exemptions, simplifications and practical solutions in the application of IFRS 16

Exemptions

Following agreements within the Group are not included within the scope of IFRS 16:

- lease for the exploration or use of natural resources,
- licences granted and recognised in accordance with IFRS 15 – "Revenue from Contracts with Customers", and
- lease of intangible assets in accordance with IAS 38 – Intangible Assets

The Group does not apply IFRS 16 to lease agreements or similar for intangible assets.

Simplifications and practical solutions

Short-term lease

The Group applies a practical solution for all asset classes in relation to short-term lease contracts, which are characterised by a maximum possible contract term of up to 12 months, including any options to extend.

Simplifications regarding these contracts involve the settlement of lease payments as costs:

- on a straight-line basis, for the duration of the lease agreement, or
- another systematic method, if it better reflects the way of spreading the benefits gained by the user in time.

Leases of low-value assets

The Group does not apply the rules concerning recognition, measurement and presentation outlined in IFRS 16 to lease agreements of low-value assets.

As low-value assets are considered assets which, when are new, have the value up to USD 5,000, which corresponds to the amount of PLN 18,799 at the time of first application, translated using the exchange rate as at 1 January 2019 or the equivalent in other currency at the average closing rate of the National Bank of Poland at the time of initial recognition for each concluded lease agreement.

Simplifications in respect of such contracts are due to the settlement of costs on:

- a straight-line basis for the term of the lease contract; or
- another systematic method basis should it be more representative of the time pattern of the user's benefit.

An asset covered by a lease must not be counted as a low-value asset if the asset would typically not be of low value when new. As low-value items, the Group includes for example: gas cylinders, coffee machines, and small items of furniture.

The underlying asset may have a low-value only if:

1. the Group may benefit from use of the underlying asset itself or in conjunction with other resources which are readily available to him, and
2. the underlying asset is not highly dependent on or related to other assets.

If the Group transfers asset into subleasing or expects the asset to be transferred to subleasing, then the main lease does not qualify as lease of a low-value asset.

Determining the lease term: indefinite contracts

When establishing the term for indefinite leases contracts, the Group determines the lease period, in which termination of the contract will not be justified by making professional judgment and taking into account, among others:

- expenditure incurred in connection with the contract or
- potential costs connected with the termination of the lease contract, including the costs involved in obtaining a new lease contracts, such as negotiation costs; reallocation costs, costs of identifying other underlying asset suitable for the lessee's needs; costs of integrating a new asset into the Group operations; or termination penalties and similar costs, including costs associated with returning the underlying asset in a contractually specified condition or to a contractually specified location or
- existing business plans and other existing contracts justifying the use of the leased item in the given period.

In cases where the costs connected with the termination of the lease contract are substantial, the lease term adopted is equal to that adopted for the depreciation period of a similar fixed asset with parameters similar to the subject of the lease.

In cases where expenditure incurred in connection with the contract is substantial, the lease term adopted is equal to that of the expected period of economic benefits derived from the incurred expenses.

The value of the incurred expenses represents a separate asset to the right-of-use asset.

Separating non-lease components

From contracts, that include lease and non-lease components, the Group separates and recognises non-lease components separately for all asset classes e.g. service of assets constituting the subject of the contract and allocates consideration based on the terms of the contract, unless all non-lease items are considered immaterial in the context of the whole contract.

PROFESSIONAL JUDGEMENT

Determining the lease term

In determining the lease term, the Group considers all important facts and events resulting in existence of the economic incentives to make use of the option to extend the lease or not to exercise the option of its termination. The Group also makes a professional judgment to determine the period of contract enforceability (lease term in which termination of the contract will not be justified) in the case of contracts concluded for an indefinite period. An assessment of a lease term is carried out on the date of commencement of the lease. A reassessment is made upon the occurrence of either a significant event or a significant change in circumstances, that the lessee controls, that impact such an assessment.

ESTIMATIONS

The useful life of right-of-use asset

The estimated useful life of right-of-use asset is determined in the same manner as for property, plant and equipment.

Determining the lessee's incremental borrowing rate

Due to the fact that the Group does not have information regarding the interest rate for lease contracts, it uses the incremental borrowing rate to measure lease liabilities, that the Group would have to pay, to borrow, over a similar term and with a similar security, the funds in a given currency necessary necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment.

Standards adopted by International Accounting Standards Board (IASB), approved by the European Union but not yet effective

- Amendments to IAS 1 – Presentation of financial statements and IAS 8 – Accounting policies, changes in accounting estimates and errors: Definition of Material
- Amendments to IFRS 9 – Financial Instruments, IAS 39 – Financial Instruments: Recognition and Measurement and IFRS 7 – Financial Instruments: Disclosures: Interest Rate Benchmark Reform
- Amendments to references to the conceptual framework in IFRS Standards, effective for annual periods beginning on or after 1 January 2020

Standards adopted by International Accounting Standards Board (IASB), waiting for approval by the European Union

- IFRS 17 – Insurance Contracts
- Amendment to IFRS 3 – Business combinations
- Amendments to IFRS 10 – Consolidated Financial Statements and IAS 28 – Investments in Associates and Joint Ventures: sale or contribution of assets between an investor and its associate or joint venture and further amendments
- Amendments to IAS 1 "Presentation of Financial Statements" – Classification of Liabilities as Current or Non-Current, effective for annual periods beginning on or after 1 January 2022

The Group expects that the above standards will have no material impact on consolidated financial statements of ORLEN Group.

The Group intends to adopt new IFRS standards listed above that are published by the International Accounting Standards Board, but not effective as at the date of publication of this consolidated financial statements, in accordance with their effective date.

6. Differences between data reported in the consolidated financial statements and previously prepared and published financial reports

Changes introduced to financial data as presented in the condensed financial statements for the 4th quarter of 2019 published on 30 January 2020 with an effect on total assets and net profit.

	Data disclosed in the quarterly financial information for the Q4 2019	Adjustment	Data disclosed in the consolidated financial statements for 2019
Assets, incl.:	**71,376**	**(174)**	**71,202**
Property, plant and equipment	32,351	12	32,363
Right-of-use asset	3,953	(1)	3,952
Deferred tax assets	79	(28)	51
Inventories	15,324	(250)	15,074
Current tax assets	264	(2)	262
Other assets, incl.:	215	95	310
investment property	124	95	219
Liabilities, incl.:	**71,376**	**(174)**	**71,202**
Retained earnings	35,358	(189)	35,169
Current and Non-curren Provisions	2,313	36	2,349
Deferred tax liabilities	1,508	(34)	1,474
Trade and other liabilities	15,125	7	15,132
Current tax liabilities	127	(3)	124
Non-current lease liabilities	3,371	9	3,380

	Data disclosed in the quarterly financial information for the Q4 2019	Adjustment	Data disclosed in the consolidated financial statements for 2019
Profit from operations, incl.:	**5,562**	**(197)**	**5,365**
Cost of sales	(97,218)	(83)	(97,301)
Administrative expenses	(1,804)	(2)	(1,806)
Other operating income	1,119	127	1,246
Other operating expenses	(1,478)	(239)	(1,717)
Income tax	(1,062)	8	(1,054)
Net profit	**4,487**	**(189)**	**4,298**

The above changes affecting the financial result concerned mainly:

- updating of inventories impairment allowances to net realizable value in the amount of PLN (93) million,
- reversal of impairment allowances of non-current assets in Retail and Upstream segment in the amount of PLN 72 million,
- recognition of impairment allowances on fixed assets in the Upstream segment in the amount of PLN (35) million,
- revaluation of the investment property to fair value of in the amoun of PLN 51 million,
- recognition of provisions for potential tax liabilities in the amount of PLN (36) million,
- shortages of materials in external warehouses in the amount of PLN (156) million.

7. ORLEN Group structure

Selected accounting principles

Basis of consolidation

The consolidated financial statements of the Group include assets, liabilities, equity, income, expenses and cash flows of the Parent Company and its subsidiaries that are presented as those of a single economic entity and are prepared as at the same reporting period as separate financial statements of the Parent Company and using uniform accounting principles in relation to similar transactions and other events in similar circumstances.

The subsidiaries are consolidated using full consolidation method, non-controlling interests shall be presented in the consolidated statement of financial position as non-controlling interest, separately from the equity of the owners of the Parent Company.

Joint operations are presented by recognition of respective share in assets, liabilities, revenues and cost.

The joint ventures as well as investments in associates are accounted for under equity method. The Group's share in net profit or loss of the investee is recognised in the Group's profit or loss as other operating activity. For investments in associates – the Group has a significant influence if it holds, directly or indirectly (i.e. through subsidiaries), from 20% to 49% of the voting rights of an entity, in which the Group invested, unless it can be clearly stated otherwise.

Professional judgement

Investments in subsidiaries and jointly controlled entities

The Group, regardless of the nature of its involvement in the entity (the entity in which it invested) defines its status by assessment, whether it controls the entity in which the investment was made, and whether it has a joint control in a joint venture, after consideration of all the facts and circumstances.

PKN ORLEN as the Parent Company is a multi-segment entity, appropriately allocated to all operating segments and corporate functions.

Name of entity	Parent company	Share in total voting rights		Consolidation method/ Valuation method
		31/12/2019	31/12/2018	
Downstream Segment				
Grupa ORLEN Lietuva				
AB ORLEN Lietuva	PKN ORLEN S.A.	*100%*	*100%*	*full*
UAB Mazeikiu Naftos prekybos namai	AB ORLEN Lietuva	–	*100%*	*full*
OU ORLEN Eesti	AB ORLEN Lietuva	*100%*	*100%*	*full*
SIA ORLEN Latvija	AB ORLEN Lietuva	*100%*	*100%*	*full*
UAB Emas	AB ORLEN Lietuva	–	*100%*	*full*
UNIPETROL Group				
PARAMO, a.s.	UNIPETROL, a.s.	*100%*	*100%*	*full*
UNIPETROL RPA, s.r.o.	UNIPETROL, a.s.	*100%*	*100%*	*full*
UNIPETROL Slovensko, s.r.o.	UNIPETROL RPA, s.r.o.	*100%*	*100%*	*full*
UNIPETROL Deutschland GmbH	UNIPETROL RPA, s.r.o.	*100%*	*100%*	*full*
UNIPETROL RPA Hungary Kft.	UNIPETROL RPA, s.r.o.	*100%*	*100%*	*full*
Spolana s.r.o.	UNIPETROL RPA, s.r.o.	*100%*	*100%*	*full*
UNIPETROL DOPRAVA, s.r.o.	UNIPETROL RPA, s.r.o.	*100%*	*100%*	*full*
PETROTRANS, s.r.o.	UNIPETROL RPA, s.r.o.	*100%*	*100%*	*full*
Butadien Kralupy a.s.	UNIPETROL, a.s.	*51%*	*51%*	*share in assets and liabilities*
Basell Orlen Polyolefins Group				
Basell ORLEN Polyolefins Sp. z o.o.	PKN ORLEN S.A.	*50%*	*50%*	*equity method*
Basell ORLEN Polyolefins Sprzedaż Sp. z o.o.	Basell ORLEN Polyolefins Sp. z.o.o.	*100%*	*100%*	*equity method*
ORLEN Południe Group				
ORLEN Południe S.A.	PKN ORLEN S.A.	*100%*	*100%*	*full*
Energomedia Sp. z o.o.	ORLEN POŁUDNIE S.A.	*100%*	*100%*	*full*
Euronaft Trzebinia Sp. z o.o.	ORLEN POŁUDNIE S.A.	–	*100%*	*full*
Konsorcjum Olejów Przepracowanych – Organizacja Odzysku S.A.	ORLEN POŁUDNIE S.A.	*89%*	*89%*	*full*
ORLEN Oil Group				
ORLEN Oil Sp. z o.o.	PKN ORLEN S.A.	*100%*	*100%*	*full*
Platinum Oil Wielkopolskie Centrum Dystrybucji S.A.	ORLEN Oil Sp. z o.o.	–	*90%*	*full*
ORLEN Asfalt Group				

ORLEN Asfalt Sp. z o.o.	PKN ORLEN S.A.	*100%*	*100%*	full
ORLEN Asfalt Ceska Republika s.r.o.	ORLEN ASFALT Sp. z o.o.	*100%*	*100%*	full
Anwil S.A.	PKN ORLEN S.A.	*100%*	100%	full
Inowrocławskie Kopalnie Soli „Solino” S.A.	PKN ORLEN S.A.	*100%*	100%	full
Kopalnia Soli Lubień Sp. z o.o.	PKN ORLEN S.A.	100%	100%	full
ORLEN Paliwa Sp. z o.o.	PKN ORLEN S.A.	100%	100%	full
ORLEN Aviation Sp. z o.o.	PKN ORLEN S.A.	100%	100%	full
ORLEN Eko Sp. z o.o.	PKN ORLEN S.A.	100%	100%	full
Baltic Power Sp. z o.o.	PKN ORLEN S.A.	100%	100%	full
ORLEN KolTrans S.A.	PKN ORLEN S.A.	100%	99.91%	full
Ship-Service S.A.	PKN ORLEN S.A.	60.86%	60.86%	full
ORLEN Serwis Group				
ORLEN Serwis S.A.	PKN ORLEN S.A.	100%	100%	full
UAB Emas	ORLEN Serwis S.A.	*100%*	–	*full*
ORLEN Service Česká Republika s.r.o.	ORLEN Serwis S.A.	*100%*	–	*full*
Retail Segment				
AB ORLEN Baltics Retail [1]	PKN ORLEN S.A.	100%	100%	full
ORLEN Deutschland Group				
ORLEN Deutschland GmbH	PKN ORLEN S.A.	100%	100%	full
ORLEN Detuschland Betriebsgesellschaft mbH	ORLEN Deutschland GmbH	*100%*	–	*full*
ORLEN Budonaft Sp .z o.o.	PKN ORLEN S.A.	100%	100%	full
ORLEN Centrum Serwisowe Sp. z o.o.	PKN ORLEN S.A.	99.33%	99.33%	full
UNIPETROL RPA, s.r.o.	UNIPETROL, a.s.	100%	100%	full
Upstream Segment				
ORLEN Upstream Group				
ORLEN Upstream Sp. z o.o.	PKN ORLEN S.A.	*100%*	*100%*	*full*
ORLEN Upstream Canada Ltd.	ORLEN Upstream Sp. z o.o.	*100%*	*100%*	*full*
1426628 Alberta Ltd.	ORLEN Upstream Canada Ltd.	*100%*	*100%*	*full*
OneEx Operations Partnership	ORLEN Upstream Canada Ltd.	*100%*	*100%*	*full*
Pieridae Production GP Ltd	ORLEN Upstream Canada Ltd.	*50%*	*50%*	*equity method*
671519 NB Ltd	Pieridae Production GP Ltd	*100%*	*100%*	*equity method*
KCK Atlantic Holdings Ltd.	ORLEN Upstream Canada Ltd.	*100%*	*100%*	*full*
*Pieridae Production LP**	KCK Atlantic Holdings Ltd.	*80%*	*80%*	*equity method*

FX Energy, Inc.	ORLEN Upstream Sp. z o.o.	*100%*	*100%*	*full*
Frontier Exploration, Inc.	FX Energy, Inc.	*100%*	*100%*	*full*
FX Energy Netherlands Partnership C.V.	FX Energy, Inc.	*100%*	*100%*	*full*
FX Energy Netherlands B.V.	FX Energy Netherlands Partnership C.V.	*100%*	*100%*	*full*
FX Energy Poland Sp. z o.o.	FX Energy Netherlands Partnership C.V.	*100%*	*100%*	*full*
Corporate Functions				
AB ORLEN Lietuva	PKN ORLEN S.A.	100%	100%	full
UNIPETROL Group				
UNIPETROL, a.s.	PKN ORLEN S.A.	*100%*	*100%*	*full*
UNIPETROL RPA, s.r.o.	UNIPETROL, a.s.	*100%*	*100%*	*full*
Unipetrol výzkumně vzdělávací centrum, a.s.	UNIPETROL, a.s.	*100%*	*100%*	*full*
HC Verva Litvinov, a.s.	UNIPETROL RPA, s.r.o.	70.95%	70.95%	full
ORLEN Usługi Finansowe Sp. z o.o.	PKN ORLEN S.A.	100%	–	full
Sigma BIS S.A.	PKN ORLEN S.A.	66%	–	full
ORLEN Administracja Sp. z o.o.	PKN ORLEN S.A.	100%	100%	full
ORLEN Capital AB	PKN ORLEN S.A.	100%	100%	full
ORLEN Centrum Usług Korporacyjnych Sp. z o.o.	PKN ORLEN S.A.	100%	100%	full
ORLEN Holding Malta Group				
ORLEN Holding Malta Ltd.	PKN ORLEN S.A.	*100%*	*100%*	*full*
Orlen Insurance Ltd.	ORLEN HOLDING MALTA Ltd.	*100%*	*100%*	*full*
ORLEN Ochrona Group				
ORLEN Ochrona Sp. z o.o.	PKN ORLEN S.A.	*100%*	*100%*	*full*
UAB Apsauga	ORLEN OCHRONA Sp. z o.o.	*100%*	*100%*	*full*
ORLEN Projekt S.A.	PKN ORLEN S.A.	100%	100%	full
ORLEN Laboratorium S.A.	PKN ORLEN S.A.	100%	100%	full
Płocki Park Przemysłowo-Technologiczny Group				
Płocki Park Przemysłowo-Technologiczny S.A. (PPPT S.A.)	PKN ORLEN S.A.	*50%*	*50%*	*equity method*
Centrum Edukacji Sp. z o.o.	PPPT S.A.	*69.43%*	*69.43%*	*equity method*

1) On 16 October 2019 the name of Akcinė bendrovė "Ventus Nafta" from the ORLEN Group was changed to Akcinė bendrovė ORLEN Baltics Retail and the change of company name was registered.

** Although 80% share in total voting rights, entity is accounted for using equity method. The investor does not control the entity (in accordance with IFRS 10), it cannot individually direct the significant activities, all decisions regarding financing, equity and production require unanimous consent of all shareholders in accordance with the company agreement.*

Activity of core companies belonging to ORLEN Group

Name of entity	Headquarters	Principal activity
AB ORLEN Lietuva (including its own Capital Group)	Lithuania – Juodeikiai	crude oil processing, production of refining products and wholesale
UNIPETROL a.s. (including its own Capital Group)	Czech Republic – Prague	crude oil processing as well as manufacture and distribution of refinery, petrochemical and chemical products
Anwil S.A.	Poland – Włocławek	production of nitrogen fertilizers, plastic and chemicals
ORLEN Południe S.A. (including its own Capital Group)	Poland – Trzebinia	crude oil processing, production and sale of biofuels, oils
ORLEN Oil Sp. z o.o.	Poland – Cracow	production, distribution and sale of grease oils, maintenance liquids
ORLEN Asfalt Sp. z o.o. (including its own Capital Group)	Poland – Płock	manufacture and sale of road bitumens and specific bitumen products
ORLEN Paliwa Sp. z o.o.	Poland – Płock	liquid fuels trade
Inowrocławskie Kopalnie Soli „SOLINO” S.A.	Poland – Inowrocław	storage of crude oil, fuels , extraction of brine and packaging of salt
ORLEN Upstream Sp. z o.o. (including its own Capital Group)	Poland – Warsaw	exploration and recognition of hydrocarbon deposits, extraction of crude oil and natural gas

Changes in shareholder structure of ORLEN Group

TYPE OF TRANSACTION / ENTITIES	TRANSACTION DATE	NUMBER OF AQUIRED / (SOLD) SHARES	SHARE IN TOTAL VOTING RIGHTS AFTER TRANSACTIONS
PURCHASE OF SHARES			
by PKN ORLEN in:			
ORLEN Usługi Finansowe sp. z o.o.	23 January 2019	1,000	100.00%
SIGMA BIS S.A.	3 October 2019	6,600	66.00%
ORLEN KolTrans S.A.	5 December 2019	325	100.00%
by ORLEN Deutschland GmbH in:			
Waterside XXXVII Vermögensverwaltungsgesellschaft mbH (ORLEN Deutschland Betriebsgesellschaft mbH)	6 November 2019	25,000	100.00%
by ORLEN Serwis S.A. in:			
UAB EMAS	31 May 2019	5,700,000	100.00%
ORLEN Service Česká republika s.r.o.	10 December 2019	300,000*	100.00%
SALE OF SHARES			
by AB ORLEN Lietuva:			
UAB EMAS	31 May 2019	5,700,000	0.00%
INCREASE IN SHARE CAPITAL AND SUBSCRIPTION OF SHARES			
by PKN ORLEN in:			
SIGMA BIS S.A.	15 October 2019	198,000	66.00%
Baltic Power Sp. z o.o.	23 October 2019	1,000	100.00%

TYPE OF TRANSACTION / ENTITIES	TRANSACTION DATE	NUMBER OF AQUIRED / (SOLD) SHARES	SHARE IN TOTAL VOTING RIGHTS AFTER TRANSACTIONS
by ORLEN Deutschland GmbH in:			
Waterside XXXVII Vermögensverwaltungsgesellschaft mbH (ORLEN Deutschland Betriebsgesellschaft mbH)	16 December 2019	125,000	100.00%
by Unipetrol a.s. in:			
UNIPETROL SLOVENSKO s.r.o.	10 July 2019	454,004**	13.00%
UNIPETROL SLOVENSKO s.r.o.	30 November 2019	1,013,105**	13.05%
by UNIPETROL RPA s.r.o. in:			
UNIPETROL SLOVENSKO s.r.o.	10 July 2019	3,038,361**	87.00%
UNIPETROL SLOVENSKO s.r.o.	30 November 2019	6,740,895**	86.95%
Spolana s.r.o.	19 December 2019	995,000,000*	86.95%
CHANGE OF LEGAL COMPANY'S FORM			
Transformation of Platinum Oil Wielkopolskie Centrum Dystrybucji from a limited liability company into a joint-stock company	15 January 2019	-	100.00%
Transformation of ORLEN KolTrans Sp. z o.o. from a limited liability company into a joint-stock company	1 March 2019	-	99.94%
CHANGE OF ENTITIES NAMES			
From AB Ventus Nafta to AB ORLEN Baltics Retail	16 October 2019	-	100.00%
From Waterside XXXVII Vermögensverwaltungsgesellschaft mbH to ORLEN Deutschland Betriebsgesellschaft mbH	16 December 2019	-	100.00%
OTHER CHANGES IN THE GROUP'S STRUCTURE			
ORLEN Południe Group			
Incorporation of Euronaft Trzebinia Sp. z o.o. to ORLEN Południe S.A.	2 February 2019	-	100.00%
ORLEN OIL Group			
Incorporation of Platinum Oil Wielkopolskie Centrum Dystrybucji S.A. to ORLEN Oil Sp. z o.o.	2 December 2019	-	100.00%
AB ORLEN Lietuva Group			
Incorporation of AB Mažeikių Nafta Trading House to AB ORLEN Lietuva.	9 December 2019	-	100.00%
Grupa ORLEN Upstream			
Gradual dilution of ORLEN Upstream Canada Ltd.'s share in Pieridae Energy Limited as a result of multiple issues of shares by the company throughout the year	2019	-	2.34%

** The nominal value expressed in CZK, the company's share capital was not divided into shares.*
*** The nominal value expressed in EUR, the company's share capital was not divided into shares.*

Changes in the Group structure are an element of the strategy, assuming a focus on core activities and allocating the released capital for development of the Group in the most prospective areas.

Structured entities

ORLEN Capital AB

The company's business is raising funds through the issuance of bonds and other financial instruments for institutional and private investors. ORLEN Capital AB specializes in granting borrowings or loans to Group companies and conducts any other activities related to the above financial instruments.

On 30 June 2014 and on 7 June 2016 ORLEN Capital AB issued Eurobonds with 7-year redemption of approximately of PLN 5,323 million translated using exchange rate as at 31 December 2019 (representing EUR 1,250 million).The funds obtained by ORLEN Capital through the issue of bonds were transferred to PKN ORLEN under the borrowing agreement. PKN ORLEN is the guarantor of both issued bonds by an irrevocable and unconditional guarantees issued to the bondholders of PLN 8,943 million translated using exchange rate as at 31 December 2019 (representing of EUR 2.1 billion). The guarantees were granted for the time of the Eurobonds issues, until 30 June 2021 and 7 June 2023, respectively.

ORLEN Insurance Ltd.

ORLEN Insurance is an internal insurance company (i.e. captive), which main purpose is insurance and reinsurance the Group's business, matching insurance to the individual needs of its property and the potential loss of margin.

SEGMENTS' DATA

Capitals:

8. Operating segments

Downstream

- Production
- Refining and petrochemical sales
- Power Industry

Retail

- Fuel station activities

Ustream

- Exploration and extraction of mineral resources

Corporate functions

- Management
- Administration
- Remaining activities, i.e. reconciling items

Selected accounting principles

Assessments of the operating segments' financial results and decisions on allocation of resources are performed mainly on the basis of EBITDA. EBITDA is one of a measure of the efficiency of the activity, which is not defined in the IFRS. The ORLEN Group defines EBITDA as net profit/(loss) for the reporting period before taking into account the impact of the income tax, effects of financing activities and depreciation and amortization costs.

Revenues from transactions with external customers and transactions with other segments are carried out on an arm's length basis.

9. Revenues, costs, financial results, increases in non-current assets

2019

	NOTE	Downstream Segment	Retail Segment	Upstream Segment	Corporate Functions	Adjustments	Total
External revenues	11.1, 11.2	71,604	38,910	608	81	–	111,203
Inter-segment revenues		19,099	179	–	444	(19,722)	–
Sales revenues		90,703	39,089	608	525	(19,722)	111,203
Operating expenses		(86,419)	(36,645)	(598)	(1,522)	19,722	(105,462)
Other operating income	11.9	861	167	122	96	–	1,246
Other operating expenses	11.10	(1,172)	(173)	(287)	(85)	–	(1,717)
(Loss)/reversal of loss due to impairment of financial instruments	11.12	(10)	(7)	–	(24)	–	(41)

	NOTE	Downstream Segment	Retail Segment	Upstream Segment	Corporate Functions	Adjustments	Total
Share in profit from investments accounted for using the equity method	12.3	136	–	–	–	–	136
Profit/(Loss) from operations		**4,099**	**2,431**	**(155)**	**(1,010)**	–	**5,365**
Net finance income and costs	11.11						(11)
(Loss)/reversal of loss due to impairment of financial instruments							(2)
Profit before tax							**5,352**
Tax expense							(1,054)
Net profit							**4,298**
Depreciation and amortisation	11.8	**2,380**	**630**	**319**	**168**	–	**3,497**
EBITDA		**6,479**	**3,061**	**164**	**(842)**	–	**8,862**
Increases in non-current assets, incl.:		**4,036**	**3,365**	**635**	**737**	–	**8,773**
impact of IFRS 16 adoption		1,047	1,974	3	292	–	**3,316**

2018

	NOTE	Downstream Segment	Retail Segment	Upstream Segment	Corporate Functions	Adjustments	Total
External revenues	11.1, 11.2	71,663	37,339	605	99	–	109,706
Inter-segment revenues		18,074	135	–	431	(18,640)	–
Sales revenues		89,737	37,474	605	530	(18,640)	109,706
Operating expenses		(85,204)	(35,139)	(570)	(1,327)	18,640	(103,600)
Other operating income	11.9	1,593	114	271	172	–	2,150
Other operating expenses	11.10	(456)	(141)	(327)	(228)	–	(1,152)
(Loss)/reversal of loss due to impairment of financial instruments	11.12	(5)	(2)	–	(9)	–	(16)
Share in profit from investments accounted for using the equity method	12.3	127	–	–	–	–	127
Profit/(Loss) from operations		**5,792**	**2,306**	**(21)**	**(862)**	–	**7,215**
Net finance income and costs	11.11						(104)
(Loss)/reversal of loss due to impairment of financial instruments							(1)
Profit before tax							**7,110**
Tax expense							(1,506)
Net profit							**5,604**
Depreciation and amortisation	11.8	**1,791**	**461**	**308**	**113**	–	**2,673**

	NOTE	Downstream Segment	Retail Segment	Upstream Segment	Corporate Functions	Adjustments	Total
EBITDA		7,583	2,767	287	(749)	-	9,888
Increases in non-current assets		2,451	832	740	257	-	4,280

Increase in non-current assets *includes increase of property, plant and equipment, intangible assets, investment property and right-of-use asset together with the capitalisation of borrowing costs and a decrease in received/due penalties for the improper execution of a contract.*

Impairment allowances of property, plant and equipment, intangible assets, right-of-use assets, other non-current assets and non-current assets classified as held for sale

	NOTE	Recognition		Reversal	
		2019	2018	2019	2018
Downstream Segment		(63)	(154)	6	845
Retail Segment		(112)	(86)	128	73
Upstream Segment		(241)	(272)	110	254
Impairment allowances in segments		**(416)**	**(512)**	**244**	**1,172**
Corporate Functions		(8)	(12)	1	56
	11.9, 11.10, 12.4	(424)	(524)	245	1,228

10. Assets by operating segments and by geographical area

10.1 Assets by operating segments

	31/12/2019	31/12/2018
Downstream Segment	47,199	46,129
Retail Segment	9,945	6,974
Upstream Segment	4,440	4,175
Segment assets	61,584	57,278
Corporate Functions	9,705	6,914
Adjustments	(87)	(51)
	71,202	64,141

Operating segments include all assets except for financial assets, tax assets and cash. Assets used jointly by the operating segments are allocated based on revenues generated by individual operating segments.

10.2 Non-current assets by geographical area

			% share	
	2019	2018	2019	2018
Poland	23,082	20,202	60.5%	61.3%
Germany	1,842	979	4.8%	3.0%
Czech Republic	8,491	7,663	22.3%	23.3%

			% share	
Lithuania, Latvia, Estonia	1,307	1,110	3.4%	3.4%
Canada	3,413	2,982	9.0%	9.0%
	38,134	**32,936**	**100.0%**	**100.0%**

Non-current assets by geographical area as at 31 December 2019 and 31 December 2018 include include property, plant and equipment (note 12.1), intangible assets (note 12.2), investment property (note 12.8), assets due to right-of-use (note 14.2.1) and perpetual usufruct of land (note 12.8).

EXPLANATORY NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

11. Explanatory notes to the statement of profit or loss and other comprehensive income

12. Explanatory notes to the statement of financial position

13. Explanatory notes to the financial instruments and financial risk

14. Other explanatory notes

11.1. SALES REVENUES

SELECTED ACCOUNTING PRINCIPLES

Sales revenues

Sales revenues of goods and services are recognised by the Group at a point in time (or over time) when a performance obligations are satisfied by transferring a promised good or service (i.e. an asset) to a customer in the amount reflecting the consideration, to which – as the Group expects – it will be entitled in exchange for these goods or services. This principle the Group also applies to consideration, which includes a variable amount. An asset is transferred when the customer obtains control of that asset. The following circumstances indicate the transfer of control in accordance with IFRS 15: the current right of the seller to consideration for an asset, the legal ownership of the asset by the customer, physical possession of the asset, transfer of risks and rewards and acceptance of the asset by the customer. Revenues include received and due payments for delivered finished goods, merchandise, raw materials and services, decreased by the amount of any trade discounts and value added tax (VAT), excise tax and fuel charges. The amount of revenues is determined at the fair value of the payment received or due. Revenues from the sale of finished goods and services are adjusted for profits or losses from settlement of cash flows hedging instruments related to the above mentioned revenues.

Revenues and costs from services, which beginning and end fall within different reporting periods, are recognised by reference to the stage of completion of the service, when the outcome of a contract can be valued reliably, in other cases, revenues are recognised only to the extent of costs incurred to the date, but not higher than the costs that the Group expects to recover. There is no significant financing component in contracts with customer concluded by the Group.

PROFESSIONAL JUDGMENT

Based on analyses of contractual clauses in sales contracts, the Group identified the agency model mainly in the area of LPG sales and non-fuel merchandise sales by ORLEN Deutschland to customers network.

The loyalty program VITAY liability, arises at the time of sales of goods and services at own and franchise petrol stations for each single sale transaction and in case of purchase by the Group's customers in partner's e-Shops and consists of calculating points entitling to discounts on future purchases. A ratio of 68.5% is adopted to recognise liability taking into account the probability of its on realisation, based on empirical data of points used compared to those issued to the customer in the last 36 months.

The Group provides marketing services to suppliers when purchasing merchandise. The Group assessed, that marketing services provided to suppliers are inseparably linked to the purchase of these merchandise, hence revenues from service reduce costs related to their purchase and release for sale.

				% share	
	NOTE	2019	2018	2019	2018
Revenues from sales of finished goods and services, net		93,009	91,014	83.6%	83.0%
revenues from contracts with customers		*92,690*	*90,792*	*83.3%*	*82.8%*
excluded from scope of IFRS 15		*319*	*222*	*0.3%*	*0.2%*
Revenues from sales of merchandise and raw materials, net		18,194	18,692	16.4%	17.0%
revenues from contracts with customers		*18,161*	*18,692*	*16.4%*	*17.0%*
excluded from scope of IFRS 15		*33*	*-*	*-*	*-*
Sales revenues, incl.:		**111,203**	**109,706**	**100.0%**	**100.0%**
revenues from contracts with customers	11.4 - 11.7	*110,851*	*109,484*	*99.7%*	*99.8%*

Revenues excluded from the scope of IFRS 15 refer to operating lease contracts and compensation for energy prices

Performance obligations

As part of the concluded contracts, the Group commits to transfer to customers mainly refining, petrochemical products and goods, energy, crude oil and gas. Under these agreements the Group acts as a principal. Transaction prices in existing contracts with customers are not constrained.

There are no significant contracts in force in the Group, which allow for obligations for returns, refunds and other similar obligations. The Group does not identify revenues for which the payment of consideration is contingent.

The warranties provided under the contracts are warranties that provide a customer with assurance that the related product complies with agreed-upon specification. They are not a distinct service.

In the Downstream segment, there are mainly sales with deferred payment. In the Retail segment, there are both cash sales as well as sales with deferred payment terms performed by using a fuel cards entitling customers to continuous purchase at the network of petrol stations. Settlements with customers take place mostly in two-week periods (so-called Fleet Cards).

Usually payment is due after transferring good or service. In contracts with customers in Downstream and Retail segments, in most cases payment terms not exceeding 30 days are used, while in the Upstream segment payment terms not exceeding 60 days are used.

The variability of consideration in contracts with customers is connected mainly with volume rebates.

Macroeconomic environment

ORLEN Group operates in the conditions of changing macroeconomic environment. The economic situation, the labour market and macroeconomic trends have a significant impact on the level of consumption of fuels and petrochemical products, and consequently on sales volume and sales prices. The Downstream segment margins are mainly affected by the quotation of refinery and petrochemical products and crude oil prices. Crude oil prices are shaped by factors such as changes in demand, the volume of extraction and global inventory of crude oil level and fuels quotation.

The main economic indicator – GDP (Gross Domestic Product), which is determined by consumption, capital expenditures and exports, allows to assess at what stage is the economy. The changes in the GDP index are usually correlated with changes in the unemployment rate and fuel consumption. The general condition of the economy, measured, among others, by the level of GDP, affects present and future consumer behaviour.

Breakdown of revenues from contracts with customers by different criteria

The Group divides revenues from contracts with customers by:

- type of good or service,
- geographical region,
- contract type,
- date of transfer,
- duration of the contract,
- sales channel.

In the Group's opinion the above breakdown allows at best to acquaint the reader with nature, amount, due dates and uncertainty related to revenues and cash flows resulting from contracts with customers.

11.2. SALES REVENUES BY OPERATING SEGMENTS IN DIVISION ON ASSORTMENTS

			% share	
	2019	2018	2019	2018
Downstream Segment				
Revenue from contracts with customers IFRS 15	**71,481**	**71,568**	**64.3%**	**65.2%**
Light distillates	12,098	12,925	10.9%	11.8%
Medium distillates	35,916	34,787	32.3%	31.7%
Heavy fractions	6,369	7,339	5.7%	6.7%
Monomers	3,585	3,260	3.2%	3.0%
Polymers	2,390	2,643	2.1%	2.4%
Aromas	1,080	1,096	1.0%	1.0%
Fertilizers	903	825	0.8%	0.8%
Plastics	1,218	1,409	1.1%	1.3%
PTA	1,893	1,528	1.7%	1.4%
Other*	6,029	5,756	5.5%	5.1%
Excluded from scope of IFRS 15	**123**	**95**	**0.1%**	**0.1%**
	71,604	**71,663**	**64.4%**	**65.3%**
Retail Segment				
Revenue from contracts with customers IFRS 15	**38,703**	**37,232**	**34.8%**	**33.9%**
Light distillates	14,659	14,266	13.2%	13.0%
Medium distillates	20,405	19,879	18.3%	18.1%
Other **	3,639	3,087	3.3%	2.8%
Excluded from scope of IFRS 15	**207**	**107**	**0.2%**	**0.1%**
	38,910	**37,339**	**35.0%**	**34.0%**
Upstream Segment				
Revenue from contracts with customers IFRS 15	**608**	**605**	**0.5%**	**0.6%**
NGL ***	314	337	0.3%	0.2%
Crude oil	126	95	0.1%	0.2%
Natural Gas	163	168	0.1%	0.2%

			% share	
Other	5	5	–	–
	608	605	0.5%	0.6%
Corporate Functions				
Revenue from contracts with customers IFRS 15	**59**	**79**	**0.1%**	**0.1%**
Excluded from scope of IFRS 15	**22**	**20**	–	–
	81	**99**	**0.1%**	**0.1%**
	111,203	**109,706**	**100.0%**	**100.0%**

** Others mainly include: brine, industrial salt, vacuum distillates, acetone, ammonia, butadiene, phenol, technical gases, caprolactam, soda lye and sulphur. In addition, they include revenues from sale of services and materials.*
*** Other includes mainly sale of non-fuel merchandise.*
**** NGL (Natural Gas Liquids).*

In 2019 and 2018 no leading customers were identified in the Group, whith whom turnover individually would exceed 10% of total ORLEN Group's sales revenues.

11.3. SALES REVENUE GEOGRAPHICAL DIVISION – DISCLOSED BY CUSTOMER'S PREMISES COUNTRIES

				% share	
	NOTE	**2019**	**2018**	**2019**	**2018**
Revenue from contracts with customers					
Poland		*51,672*	*49,800*	*46.5%*	*45.4%*
Germany		*16,102*	*16,776*	*14.5%*	*15.3%*
Czech Republic		*14,802*	*14,460*	*13.3%*	*13.2%*
Lithuania, Latvia, Estonia		*11,972*	*10,996*	*10.8%*	*10.0%*
Other countries		*16,303*	*17,452*	*14.6%*	*15.9%*
		110,851	109,484	99.7%	99.8%
excluded from scope of IFRS 15					
Poland		*141*	*117*	*0.1%*	*0.1%*
Germany		*88*	*–*	*0.1%*	*–*
Czech Republic		*123*	*105*	*0.1%*	*0.1%*
		352	222	0.3%	0.2%
	9, 11.1	**111,203**	**109,706**	**100.0%**	**100.0%**

Position Other countries comprises mainly sales to customers from Switzerland, Singapore, Ukraine, Slovakia, the United Kingdom and Hungary.

11.4. REVENUE FROM CONTRACTS WITH CUSTOMERS BY TYPE OF CONTRACT

	NOTE	Downstream Segment		Retail Segment		Upstream Segment		Corporate Functions		Total	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Based on fixed price contracts		67,803	68,010	38,516	37,228	608	605	47	40	106,974	105,883
Based on variable price contracts		3,570	3,528	184	–	–	–	4	–	3,758	3,528
Settled on the basis of time spent and materials		108	30	3	4	–	–	8	39	119	73
	11.1	71,481	71,568	38,703	37,232	608	605	59	79	110,851	109,484

The customer has the right to discounts, penalties, which constitute in accordance with IFRS 15 an element of variable consideration. The Group recognises revenue in the amount of consideration, to which – in line with expectations- will be entitled and which will not be reversed in the future. Consequently, it does not recognise revenue, that may change due to granted discounts and penalties imposed.

11.5. REVENUE FROM CONTRACTS WITH CUSTOMERS BY DATE OF TRANSFER

	NOTE	Downstream Segment		Retail Segment		Upstream Segment		Corporate Functions		Total	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
At a point in time		49,634	50,965	28,961	19,267	–	–	21	15	78,616	70,247
Over time		21,847	20,603	9,742	17,965	608	605	38	64	32,235	39,237
	11.1	71,481	71,568	38,703	37,232	608	605	59	79	110,851	109,484

As part of the Downstream segment, with respect to sales of petrochemical and refinery products, the Group recognises revenue from satisfaction of performance obligation, depending on the terms of delivery (Incoterms) used. In case of some deliveries the Group is obliged to organize transport and/or insurance. When the control of good passes to the customer before the transport is performed, the delivery of goods and transport (and possibly insurance) are separate performance obligation. The delivery of goods is an obligation satisfied at a point in time, while the transport is a continuous obligation (satisfied over time). In case of transport and insurance, the customer simultaneously receives and consumes the benefits from the service.

In the Retail segment, the moment of satisfaction of performance obligation and recognizing revenues is the moment of transfer of good, except for sales of fuels using Fleet Cards.

In case of sales satisfied over time the Group recognises revenues at least on a monthly basis, where settlements between parties to the contract take place periodically and reflect the amount of consideration that the Group is entitled to for transfer of goods and services to the customer. Revenue recognized over time mainly relate to sale of energy and heat within the Downstream segment, sale of fuels using Fleet cards within Retail segment and sale of gas and crude oil within Upstream segment.

11.6. REVENUE FROM CONTRACTS WITH CUSTOMERS BY DURATION OF CONTRACT

	NOTE	Downstream Segment		Retail Segment		Upstream Segment		Corporate Functions		Total	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Short-term		70,612	70,961	38,701	37,228	608	605	55	40	109,976	108,834
Long-term		869	607	2	4	–	–	4	39	875	650
	11.1	71,481	71,568	38,703	37,232	608	605	59	79	110,851	109,484

The duration of most contracts within the Group is short-term. Revenues on services for which start and end dates fall in different reporting periods (long-term contracts) are recognised based on the stage of service completion, if the result on the transaction can be reliably estimated. Long-term contracts that remain unfulfilled in full as at the balance sheet date relate i.a. to construction and assembly contracts, energy sales.

As at 31 December 2019 the Group analysed the value of the transaction price allocated to unsatisfied performance obligations at the end of the year. Unsatisfied or partially unsatisified performance obligations at the end of the year mainly concerned contracts for the sale of electricity and power media that will end within 2020 or are concluded for an indefinite period with notice period of up to 12 months. Due to the fact that the described performance obligations are part of the contracts, that can be considered short-term, or the revenues from satisfaction of performance obligation under these contracts are recognised in the amount that the Group has the right to invoice, the Group applied a practical exception, according to which it does not disclose information about the total amount of the transaction price allocated to the performance obligation.

11.7. REVENUE FROM CONTRACTS WITH CUSTOMERS BY SALES CHANNEL

	NOTE	Downstream Segment		Retail Segment		Upstream Segment		Corporate Functions		Total	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Direct sales		–	3	38,700	37,220	–	–	–	–	38,700	37,223
Other sales		71,481	71,565	3	12	608	605	59	79	72,151	72,261
	11.1	71,481	71,568	38,703	37,232	608	605	59	79	110,851	109,484

The Group realizes sales directly to end customers in the Retail segment managing the network nearly 2,836 fuel stations: 2,294 own stations and 542 stations operated under franchise agreements.

The Group's sales to customers in the Downstream segment are carried out using a network of complementary infrastructure components: fuel terminals, land transhipment bases, pipeline networks, as well as rail transport and tanker trucks.

11.8. COST BY NATURE

SELECTED ACCOUNTING PRINCIPLES

Costs

Cost of sales includes costs of finished goods, merchandise, services and raw materials sold and adjustments related to inventories written down to net realizable value. Costs are adjusted for profits or losses from settlement of cash flow hedging instruments related to the above mentioned costs. Distribution expenses include selling brokerage expenses, trading expenses, advertising and promotion expenses as well as distribution expenses.

Administrative expenses include expenses relating to management and administration of the Group as a whole.

			% share	
	2019	2018	2019	2018
Materials and energy	(75,468)	(75,789)	71.4%	72.7%
Cost of merchandise and raw materials sold	(16,035)	(16,484)	15.2%	15.8%
External services	(4,519)	(4,593)	4.3%	4.4%
Employee benefits, incl.:	2,942	(2,628)	2.8%	2.5%
payroll expenses	*(2,336)*	*(2,041)*	*2.3%*	*2.1%*
social security expenses	*(463)*	*(450)*	*0.4%*	*0.4%*
Depreciation and amortisation	(3,497)	(2,673)	3.3%	2.6%
Taxes and charges	(2,659)	(1,540)	2.5%	1.5%
Other	(647)	(543)	0.5%	0.5%
	(105,767)	**(104,250)**	**100.0%**	**100.0%**
Change in inventories	164	479		
Cost of products and services for own use	141	171		
Operating expenses	**(105,462)**	**(103,600)**		
Distribution expenses	6,355	4,745		
Administrative expenses	1,806	1,590		
Cost of sales	**(97,301)**	**(97,265)**		

In 2019 the position of taxes and charges includes the value of the emission charge effective from 1 January 2019 in the amount of PLN (1,200) million.

11.9. OTHER OPERATING INCOME

	NOTE	2019	2018
Profit on sale of non-current non-financial assets		21	17
Reversal of provisions		26	34
Reversal of impairment allowances of property, plant and equipment and intangible assets, right-of-use assets, other non-current assets, classified as held for sale	9, 12.4	245	1,228
Penalties and compensations		54	327
Settlement and valuation of derivative financial instruments related to operating exposure		466	204
Ineffective part related to valuation and settlement of operating exposure		120	99
Settlement of hedging costs	13.4	165	24
Other, incl.:		149	217
received/due energy certificates		*29*	*147*
		1,246	2,150

On 13 August 2015 the steam cracker unit accident in the Unipetrol Group took place. As a result of arrangements with insurers, the final amount of compensation was determined to cover reconstruction costs of installations and lost business profits, therefore in 2018 the Group recognised in the line penalties and compensation the amount PLN 264 million.

11.10. OTHER OPERATING EXPENSES

	NOTE	2019	2018
Loss on sale of non-current non-financial assets		(55)	(47)
Recognition of provisions		(104)	(54)
Recognition of impairment allowances of property, plant and equipment and intangible assets, right-of-use assets and other non-current assets	9, 12.4	(424)	(524)
Penalties, damages and compensations		(24)	(17)
Settlement and valuation of derivative financial instruments related to operating exposure		(692)	(215)
Ineffective part related to valuation and settlement of operating exposure		(92)	(106)
Settlement of hedging costs	13.4	(4)	–
Other, incl.:		(318)	(189)
donations		*(58)*	*(71)*
shortages of materials in external warehouses	14.4.1	*(156)*	–
		(1,717)	**(1,152)**

For 2019 and 2018 the net positions of valuation and settlement of derivative financial instruments related to operating exposure (non-designated instruments for hedge accounting purposes) amounted to PLN (226) million and PLN (11) million respectively, and mainly related to commodity swaps hedging time mismatch on crude oil purchases and future sales of products, including fixed prices.

The change in valuation and settlement of derivative financial instruments in 2019 was affected by the prices of crude oil and refinery products as well as exchange rates.

In 2019 and 2018 the net positions of ineffective part relating to operating exposure amounted to PLN 28 million and PLN (7) million, respectively and mainly related to commodity swaps hedging abnormal operating stocks, physical sales of products and foreign currency forwards hedging operating exposure.

11.11.1. FINANCE INCOME

	2019	2018
Interest calculated using the effective interest rate method	48	39
Dividends	5	4
Settlement and valuation of derivative financial instruments	801	1,287
Other	36	83
	890	1,413

11.11.2. FINANCE COSTS

	2019	2018
Interest calculated using the effective interest rate method	(187)	(195)
Interest on lease	(100)	(9)
Interest on tax liabilities	(2)	(3)
Net foreign exchange loss	–	(353)
Settlement and valuation of derivative financial instruments	(547)	(850)
Other	(65)	(107)
	(901)	(1,517)

In 2019 and 2018 the net positions of valuation and settlement of derivative financial instruments (non-designated instruments for hedge accounting purposes) amounted to PLN 254 million and PLN 437 million, respectively and related mainly to hedging the risk of changes in exchange rates with regard to payments of invoices in foreign currency, the currency hedge for liquidity transactions, and to hedging interest rates and payment of bonds interests.

The main impact on the change in valuation and settlement of derivative financial instruments in 2019 was affected by changes in exchange rates (the difference between the exchange rate as at the transaction date and the exchange rate as at the transaction settlement date or transaction valuation) and interest rates on financial markets.

11.11.3. INTEREST, NET

	NOTE	2019	2018
Finance income and costs of net interest presented in statement of profit or loss and other comprehensive income	11.11.1 11.11.2	**(241)**	**(165)**
Adjustments to profit before tax of net interest presented in statement of cash flows		**272**	**203**
interest received concerning investing activities		*(14)*	–
interest paid concerning financing activities		*286*	*231*
accrued interest concerning investing and financing activities		–	*(28)*
Net interest concerning operating activities not adjusting profit before tax		(31)	(38)

11.11.4. FOREIGN EXCHANGE GAIN/(LOSS)

	NOTE	2019	2018
Foreign exchange gain/(loss) surplus presented in statement of profit or loss and other comprehensive income	11.11.1 11.11.2	**-**	**(353)**
Adjustments to profit before tax of foreign exchange differences presented in statement of cash flows		**(72)**	**319**
realized foreign exchange differences concerning investing and financing activities		*46*	*44*
unrealized foreign exchange differences concerning investing and financing activities		*(108)*	*304*
foreign exchange differences on cash		*(10)*	*(29)*
Foreign exchange differences concerning operating activities not adjusting profit before tax		(72)	(34)

11.12. (LOSS)/REVERSAL OF LOSS DUE TO IMPAIRMENT OF FINANCIAL INSTRUMENTS

	2019	2018
(Loss) due to impairment of receivables	(199)	(76)
Reversal of loss due to impairment of receivables	158	60
(Loss) due to impairment of interest on receivables	(3)	(2)
Reversal of loss due to impairment of interest on receivables	1	1
	(43)	**(17)**

(Loss)/reversal of loss due to impairment of financial instruments presented in:

- other operating activities relates to impairment of trade and other receivables;
- financing activities relates to impairment of loans and interest.

11.13. TAX EXPENSE

SELECTED ACCOUNTING PRINCIPLES

Income tax expenses

Income tax expenses (tax expense) include current tax and deferred tax. Current tax expense is determined in accordance with the relevant tax law based on the taxable profit for a given period and is recognised as a liability, in the amount which has not been paid or as an asset, if the amount of the current and prior periods income tax paid exceeds the amount due.

Deferred tax assets and liabilities are accounted for as non-current and are not discounted. They are offset on the level of particular separate financial statements of the Group companies when there is a legally enforceable right to set off the recognised amounts.

	2019	2018
Tax expense in the statement of profit or loss		
Current tax expense	(1,000)	(1,181)
Deferred tax	(54)	(325)
	(1,054)	**(1,506)**
Deferred tax recognised in other comprehensive income		
Hedging instruments	–	(3)
Actuarial gains and losses	4	1
Gains/(losses) on investments in equity instruments at fair value through other comprehensive income	2	3
	6	**1**
	(1,048)	**(1,505)**

11.13.1. RECONCILIATION OF EFFECTIVE TAX RATE

	2019	2018
Profit before tax	**5,352**	**7,110**
Tax expense by the valid tax rate in Poland (19%)	(1,017)	(1,351)
Differences between tax rates	69	(35)
Lithuania (15%)	*16*	*6*
Germany (29%, 48%)	*(27)*	*(43)*
Canada (27%)	*80*	*2*
Deferred tax provision on capital gains in ORLEN Capital	(22)	(112)
Investments accounted for under equity method	26	24
Energy rights free of charge	(15)	–
Shortages of materials in external warehouses	(29)	–
Other	(66)	(32)
Tax expense	**(1,054)**	**(1,506)**
Effective tax rate	**20%**	**21%**

As at 31 December 2019 and as at 31 December 2018, the Group had unsettled tax losses in the total amount of PLN 1,251 million and PLN 1,057 million, respectively mainly relating to the ORLEN Upstream Group, for which no deferred tax asset was recognised due to the lack of certainty regarding possible utilization of those losses in the future.

11.13.2. DEFERRED TAX

	31/12/2018	Impact of IFRS 16 adoption	Deferred tax recognised in profit or loss	Deferred tax recognised in other comprehensive income	31/12/2019
Deferred tax assets					
Impairment allowances	123	–	66	–	189
Provisions and accruals	378	–	(50)	4	332
Tax losses	354	–	(29)	–	325
Valuation of derivative financial instruments	26	–	(16)	–	10
Lease liabilities	–	732	53	–	785
Other	109	(39)	203	2	275
	990	**693**	**227**	**6**	**1,916**
Deferred tax liabilities					
Temporary differences related to non-current assets	2,092	693	190	–	2,975
Unrealized foreign exchange differences	70	–	79	–	149
Valuation of derivative financial instruments	97	–	10	–	107
Other	106	–	2	–	108
	2,365	**693**	**281**	**–**	**3,339**
	(1,375)	**–**	**(54)**	**6**	**(1,423)**

	31/12/2017	Impact of IFRS 9 adoption	Deferred tax recognised in profit or loss	Deferred tax recognised in other comprehensive income	Exchange differences on translating foreign operations	31/12/2018
Deferred tax assets						
Impairment allowances	269	1	(156)	–	9	123
Provisions and accruals	317	–	58	1	2	378
Tax losses	322	–	31	–	1	354
Valuation of derivative financial instruments	19	–	7	–	–	26

	31/12/2017	Impact of IFRS 9 adoption	Deferred tax recognised in profit or loss	Deferred tax recognised in other comprehensive income	Exchange differences on translating foreign operations	31/12/2018
Other	109	–	(3)	3	–	109
	1,036	**1**	**(63)**	**4**	**12**	**990**
Deferred tax liabilities						
Temporary differences related to non-current assets	1,801	–	275	–	16	2,092
Unrealized foreign exchange differences	14	–	56	–	–	70
Valuation of derivative financial instruments	102	–	(8)	3	–	97
Other	165	–	(61)	–	2	106
	2,082	**–**	**262**	**3**	**18**	**2,365**
	(1,046)	**1**	**(325)**	**1**	**(6)**	**(1,375)**

As at 31 December 2019 deferred tax assets and liabilities amounted to PLN 51 million and PLN 1,474 million, respectively.

11.13.3. INCOME TAX (PAID)

	NOTE	2019	2018
Tax expense on profit before tax	11.13.1.	**(1,054)**	**(1,506)**
Change in deferred tax asset and liabilities		48	329
Change in current tax receivables and liabilities		(497)	149
Deferred tax recognised in other comprehensive income	11.13.2	6	1
Deferred tax as a result of adoption of IFRS 9	11.13.2	–	1
Foreign exchange differences		(1)	(13)
		(1,498)	**(1,039)**

12.1. PROPERTY, PLANT AND EQUIPMENT

SELECTED ACCOUNTING PRINCIPLES

Property, plant and equipment

Property, plant and equipment shall be measured initially at acquisition or production cost and shall be presented in the statement of financial position in its net carrying amount, including grants. Property, plant and equipment are presented in the statement of financial position at the net book value which is the amount at which an asset is initially recognised (cost) less accumulated depreciation and any accumulated impairment losses, as well as received grants for assets.

The costs of significant repairs and regular maintenance programs are recognised as property, plant and equipment.

Fixed assets are depreciated with straight-line method and in justified cases units of production method of depreciation (catalysts, assets arising from development and extraction of mineral resources).

Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item is depreciated separately over the period reflecting its useful lives.

The following standard useful lives are used for property, plant and equipment:

Buildings and constructions 10-40 years

Machinery and equipment 4-35 years

Vehicles and other 2-20 years

The method of depreciation, residual value and useful life of an asset are reviewed at least at the end of each year. When it is necessary adjustments of depreciation are carried out in subsequent periods (prospectively).

Grants

Grants are recognised if there is reasonable assurance that the grants will be received and the entity will comply with the conditions attaching to them.

Grants related to assets are recognised as a decrease of a carrying amount of an asset and as a result a decrease of depreciation and amortisation charges over its useful life.

Exploration and extraction of mineral resources

Within the framework of exploration and extraction of mineral resources, the following classification of stage was made:

Stage of exploration and assessment of mineral resources include:

- acquisition of rights to explore and extract, exploration and recognition of resources,
- expenditures for exploratory,
- other expenditures which are directly attributable to the phase of exploration and recognition – The Group capitalizes most of the costs incurred as part of this stage.

The Group shall review annually expenditures incurred in the stage of exploration and recognition of mineral resources in order to confirm the intention of further work. The analyzes are carried out at the level of projects, including works with a defined exploratory and/or prospective purpose, which are conducted in the assigned area. If the work is unsuccessful, resulting in a lack of intention to continue the work, the cost previously recognised as an asset are recognised as cost of a current period.

Expenditures incurred in the exploration and recognition of resources are recognised as assets related to development and extraction of mineral resources within property, plant and equipment at the moment of the conclusion of their technical feasibility and economic viability of mining which are tested for impairment.

Stage of site planning and of extraction of mineral resources

Expenditure incurred for mineral resource sites planning and extraction of resources are capitalized and amortised by unit of production method calculated proportionally to the amount of extraction of hydrocarbons based on unit of installation. The Group calculates the depreciation of all assets related to sites planning and extraction of mineral resources based on so called 2P proved plus probable reserves. In case of significant change in estimated mineral resources, at the reporting date potential impairment allowances are recognised or reversed. In case of performance of exploratory drillings on already extracted resource, the Group analyses, if costs incurred enable rising new boreholes. If not, the expenditures are recognised in costs of the current period.

PROFESSIONAL JUDGEMENT

Expenditures for exploration and evaluation of mineral resources

Application of the Group's accounting policy for expenditures for exploration and evaluation of mineral resources requires an assessment, whether future economic benefits resulting from future extraction or sale are probable or if indications allowing to estimate the resources does not yet exist. When estimating the resources, the Group assesses future events and circumstances, including the assessment whether the extraction will be economically feasible.

ESTIMATES

Useful lives of property, plant and equipment

The Group verifies useful lives of property, plant and equipment once at year end. The impact of verification of useful lives in 2019 resulted in a decrease of depreciation costs by PLN 81 million compared to depreciation costs that were recognised based on useful lives applied in 2018.

Exploration and evaluation of mineral resources

The Group estimates resources based on interpretation of available geological data and verifies then on the current basis, based on effects of further drills, trial exploitation, actual extraction and economic factors such as: hydrocarbons' prices, contractual terms or investment plans. At the end of each reporting period the Group analyses cost of removal of wells and supporting infrastructure.

Remediation of land – water environment

The Group estimates the level of provisions related to non-current assets, which to a significant probability are needed for land – water environment remediation of the territory of petrol stations, fuel depots and areas of production plants. Detailed information in note 12.9.1

	Land	Buildings and constructions	Machinery and equipment	Vehicles and other	Construction in progress	Exploration and evaluation of mineral resource assets	Assets related to development and extraction of mineral resources	Total
Net carrying amount at 01/01/2019								
Gross carrying amount	1,193	23,634	40,384	2,376	3,476	1,281	6,045	**78,389**
Accumulated depreciation	(11)	(10,505)	(21,601)	(1,420)	–	(31)	(1,696)	**(35,263)**
Impairment allowances	(34)	(1,702)	(8,227)	(95)	(145)	(608)	(736)	**(11,547)**
Grants	–	(48)	(138)	(3)	–	–	–	**(189)**
	1,148	**11,379**	**10,418**	**858**	**3,331**	**642**	**3,614**	**31,390**
increases/(decreases), net								
Investment expenditures	4	49	103	98	3,227	143	473	4,097
Depreciation	(1)	(752)	(1,548)	(231)	–	(7)	(323)	(2,862)
Borrowing costs	–	5	10	2	5	13	–	35
Net impairment allowances, incl.: *	5	50	2	1	15	(199)	72	(54)
Recognition	–	*(54)*	*(30)*	*(1)*	*(36)*	*(206)*	*(36)*	*(363)*
Reversal	–	*89*	*13*	*2*	–	–	*110*	*214*
Reclassifications	(14)	603	1,617	246	(2,675)	(56)	26	(253)
Grants	–	3	(14)	1	(1)	–	–	(11)
Foreign exchange differences, incl.:	(3)	(1)	7	2	7	3	163	178
foreign exchange differences of impairment allowances	*1*	*(7)*	*(73)*	–	*(1)*	–	*(35)*	*(115)*
Other	2	(17)	(59)	(10)	(50)	(5)	(18)	(157)
	1,141	**11,319**	**10,536**	**967**	**3,859**	**534**	**4,007**	**32,363**
Net carrying amount at 31/12/2019								
Gross carrying amount	1,182	24,208	41,732	2,599	3,991	1,379	6,757	**81,848**
Accumulated depreciation	(13)	(11,185)	(22,746)	(1,536)	–	(38)	(2,051)	**(37,569)**
Impairment allowances	(28)	(1,659)	(8,298)	(94)	(131)	(807)	(699)	**(11,716)**
Grants	–	(45)	(152)	(2)	(1)	–	–	**(200)**
	1,141	**1,1319**	**10,536**	**967**	**3,859**	**534**	**4,007**	**32,363**
Net carrying amount at 01/01/2018								
Gross carrying amount	1,166	21,838	37,489	2,152	4,267	1,049	5,666	**73,627**
Accumulated depreciation	(11)	(9,521)	(19,741)	(1,315)	–	(24)	(1,392)	**(32,004)**
Impairment allowances	(38)	(2,239)	(8,559)	(107)	(110)	(538)	(792)	**(12,383)**
Grants	–	(51)	(113)	(4)	(1)	–	–	**(169)**
	1,117	**10,027**	**9,076**	**726**	**4,156**	**487**	**3,482**	**29,071**
increases/(decreases), net								
Investment expenditures	–	142	79	58	3,156	237	503	4,175
Depreciation	(1)	(687)	(1,369)	(206)	–	(9)	(312)	(2,584)
Borrowing costs	–	22	26	(2)	(23)	–	–	23
Net impairment allowances, incl.: *	5	605	885	17	(31)	(69)	53	1,465
Recognition	*(1)*	*(102)*	*(68)*	*(5)*	*(69)*	*(114)*	*(158)*	*(517)*
Reversal	*6*	*505*	*410*	*7*	*14*	*44*	*210*	*1,196*
Reclassifications	12	1,236	1,685	287	(3,973)	–	(99)	(852)
Grants	–	3	(25)	1	1	–	–	(20)
Foreign exchange differences, incl.:	19	56	107	13	55	(3)	(12)	235
foreign exchange differences of impairment allowances	*(1)*	*(68)*	*(553)*	*(5)*	*(4)*	*(1)*	*3*	*(629)*
Other	(4)	(25)	(46)	(36)	(10)	(1)	(1)	(123)
Net carrying amount at 31/12/2018	**1,148**	**11,379**	**10,418**	**858**	**3,331**	**642**	**3,614**	**31,390**

In 2019 and 2018 investments expenditures were reduced by PLN 30 million and PLN 219 million received/due to penalties for delayed execution of the investment contracts.

In 2019 and 2018 the capitalization rate used to calculate capitalized borrowing costs amounted to 0.92% and 0.76%, respectively.

The gross carrying amount of all fully depreciated property, plant and equipment still in use as at 31 December 2019 and as at 31 December 2018 amounted to PLN 4,418 million and PLN 4,844 million, respectively.

12.2. INTANGIBLE ASSETS

SELECTED ACCOUNTING PRINCIPLES

Intangible assets

An intangible asset shall be measured initially at acquisition or production cost and shall be presented in the statement of financial position in its net carrying amount, including grants.

Intangible assets with the finite useful life are amortised using straight-line method. Amortization shall begin when the asset is available for use i.e. when it is in the location and condition necessary for it to be capable of operating in the manner intended by management.

Standard useful lives of intangible assets are from 2 to 10 for software and from 2 to 15 years for concessions, licenses, patents and similar.

The amortization method and useful life of intangible asset item are verified at least at the end of each year.

Goodwill

Goodwill acquired in a business combination from the acquisition date, shall be allocated to each of the acquirer's cash-generating units (CGU), that is expected to benefit from the synergies of the combination.

After combination the acquirer shall measure goodwill in the amount recognised at the acquisition date less any accumulated impairment allowances.

A cash-generating unit to which goodwill has been allocated shall be tested for impairment annually, and whenever there is an indication that the unit may be impaired.

Rights

The main item of rights is CO_2 emission rights, not amortised, tested for impairment.

Granted emission allowances are presented as intangible assets in correspondence with deferred income at fair value as at the date of registration. Purchased allowances are presented at purchase price.

For the estimated CO_2 emission during the reporting period, a provision is created in costs of operating activity (taxes and charges).

Grants are recognised on a systematic basis in each reporting period to ensure proportionality with the relevant costs of the created reserve.

The Group recognises cost flows of CO_2 emission allowances at weighted average method. Rights also include energy certificates, for which FIFO cost method (First In First Out) is used.

ESTIMATES

Useful lives of intangible assets

The Group verifies useful lives of intangible assets once at year end with effect from the beginning of next year. The impact of verification of useful lives in 2019 resulted in decrease of depreciation costs by PLN 13 million compared to depreciation costs that were recognised based on useful lives applied in 2018.

Change in internally generated intangible assets

As at 31 December 2019 and as at 31 December 2018 internally generated intangible assets amounted to PLN 112 million and PLN 101 million, respectively.

Change in other intangible assets

	Patents and licenses	Goodwill	Rights	Other	Total
Net carrying amount at 01/01/2019					
Gross carrying amount	1,717	374	749	105	2,945
Accumulated amortisation	(1,229)	(18)	–	(43)	(1,290)
Impairment allowances	(67)	(306)	(57)	–	(430)
Grants	(3)	–	–	–	(3)
	418	**50**	**692**	**62**	**1,222**
increases/(decreases), net					
Investment expenditures	135	–	–	68	203
Amortisation	(96)	–	–	(11)	(107)
Borrowing costs	–	–	–	3	3
Impairment allowances*	8	–	–	–	8
Grants	1	–	–	–	1
Foreign exchange differences	(1)	(1)	(1)	(2)	(5)
Other**	40	–	121	2	163
	505	**49**	**812**	**122**	**1,488**
Net carrying amount at 31/12/2019					
Gross carrying amount	1,899	373	869	172	3,313
Accumulated amortisation	(1,333)	(18)	–	(50)	(1,401)
Impairment allowances	(59)	(306)	(57)	–	(422)
Grants	(2)	–	–	–	(2)
	505	**49**	**812**	**122**	**1,488**
Net carrying amount at 01/01/2018					
Gross carrying amount	1,602	374	746	113	2,835
Accumulated amortisation	(1,112)	(19)	–	(38)	(1,169)

	Patents and licenses	Goodwill	Rights	Other	Total
Impairment allowances	(104)	(306)	(58)	(5)	(473)
Grants	(3)	–	–	–	(3)
	383	**49**	**688**	**70**	**1,190**
increases/(decreases), net					
Investment expenditures	10	–	–	39	49
Amortisation	(83)	–	–	(2)	(85)
Borrowing costs	–	–	–	1	1
Net impairment allowances, incl.: *	39	–	1	5	45
Reversal	*29*	–	–	*2*	*31*
Foreign exchange differences	7	1	1	(1)	8
foreign exchange differences of impairment allowances	*(2)*	–	–	–	*(2)*
Other **	62	–	2	(50)	14
Net carrying amount at 31/12/2018	**418**	**50**	**692**	**62**	**1,222**

** In 2019 and in 2018 increases/(decreases) net of impairment allowances include recognition, reversal, usage and reclassifications. Description of the reasons for changes in major impairment allowances is presented in the note 12.4.*
*** Other net increases/(decreases) of rights consist mainly rights granted free of charge for 2019 and 2018 and settlement of rights for 2018 and 2017 and relocation of colour energy allowances to non-current assets classified as held for sale.*

The gross carrying amount of all fully amortised intangible assets still in use as at 31 December 2019 and as at 31 December 2018 amounted to PLN 594 million and PLN 582 million, respectively.

12.2.1. RIGHTS

Changes in owned CO_2 emission rights for 2019

	Quantity (in ths. tonnes)	Value
01/01/2019	20,992	668
Received free of charge	7,606	684
Emission settlement for 2018	(14,354)	(772)
Purchase/(Sale),Others	2,147	207
Foreign exchange differences	–	(1)
Other	41	1
	16,432	**787**
Emission in 2019	15,823	939

The market value of owned EUA rights exceeds their total carrying amount, therefore the Group does not identify impairment indicators.

As at 31 December 2019 the market value of one EUA amounted to PLN 104.25 (representing EUR 24.48 at exchange rate as at 31 December 2019) (source: www.theice.com).

Change in owned rights to colorful energy for 2019

	Quantity (in ths. tonnes)	Value
01/01/2019	474	24
Received free of charge	741	59
Emission settlement for 2018	(797)	(51)
Purchase/(Sale),Others	(72)	(7)
	346	**25**
Emission in 2019	225	22

As at 31 December 2019 book value of 3 million of EUA rights and 160 thousands MWh colour energies was blocked within hedging deposits in the Warsaw Commodity Clearing House (WCCH) and amounted to PLN 148 million.

Additionally, as at 31 December 2019 and as at 31 December 2018 the Group recognised CO_2 emission rights in the amount PLN 18 million and PLN 25 million, respectively and rights to colour energy in the amount PLN 30 million and PLN 61 million, respectively in trade and other receivables (note 12.5.2).

12.3. INVESTMENTS IN JOINTLY CONTROLLED ENTITIES

PROFESSIONAL JUDGEMENT

Based on its own judgment, taking into account its rights, obligations, considering the structure, legal form and the terms of the agreement agreed by the parties, the Group assessed that BOP, PPPT and Pieridae Production constitute a joint contractual arrangement whereby PKN ORLEN exercises joint control over them.

The agreements give all shareholders a joint control over the companies, decisions related to significant operations require the unanimous approval of all shareholders, and the legal form of separate entities does not give shareholders the right to their assets and obligations to repay liabilities. In relation to above, the Group classified BOP, PPPT and Pieridae Production as joint ventures that are accounted for under equity method in the consolidated financial statements.

	Place of business	Principal activity	Valuation method
joint ventures			
Basell ORLEN Polyolefins Sp. z o.o. (BOP)	Płock/Poland	production, distribution and sales of poliolefins	equity method
Płocki Park Przemysłowo-Technologiczny (PPPT)	Płock/Poland	construction and renting real estate	equity method
Pieridae Production GP Ltd (ORLEN Upstream Group)	Calgary/Canada	exploration and extraction of minerals, storage, transport and logistics	equity method
joint operations			
Butadien Kralupy a.s. (Unipetrol Group)	Kralupy nad Vltavou/Czech Republic	manufacturing of butadien	share in assets and liabilities

The ORLEN Group in accordance with IFRS 11 classified Butadien Kralupy a.s. in as joint operations. Based on Statute of Butadien Kralupy a.s, the Group has the right to proportionate share of the income and bears a proportionate share in the costs of joint operations. As a result, the Group recognises its share (51%) in assets, liabilities, revenues and costs.

ORLEN Upstream Group has participated in the following joint operations:

- consortium (Blue Gas – Polish Shale Gas program) founded by ORLEN Upstream (OU), Polskie Górnictwo Naftowe i Gazownictwo (PGNIG), LOTOS Petrobaltic and University of Science and Technology (Akademia Górniczo-Hutnicza), Institue of Oil and Gas (Instytut Nafty i Gazu), Gdansk University of Technology, Warsaw University of Technology. Works under the Blue Gas program – Polish Shale Gas were completed, projects settled in both material and financial terms.The program aimed to manufacture and commercialize the technology and gain knowledge for the extraction of shale gas in Poland. The cooperation was summarized in all 6 of 10 notified projects. The total contribution of ORLEN Upstream in the implementation of the above projects amounted to PLN 24 million. Applications were collected that provides grounds for applying for patent rights for developed solutions, which have been submitted to the relevant authorities for an opinion;
- exploration – extraction projects carried out together with PGNiG (the search areas „Sieraków” – 49% share of ORLEN Upstream, “Bieszczady” – 49% share of ORLEN Upstream and the search areas “Płotki” – 49% share of ORLEN Upstream after incorporation of FX Energy Poland). The agreements provide the conduct of joint operations and activities in the field of exploration, prospection and extraction of crude oil and natural gas.

ORLEN Upstream Group has the right to proportionate share of the income and bears a proportionate share in the costs of joint operations.

Investments accounted for under equity method

	31/12/2019	31/12/2018
Joint ventures, incl.:	672	644
Basell ORLEN Polyolefins Group Sp. z o.o.	*640*	*612*
Associates	6	6
	678	**650**

Share in profit from investments accounted for under equity method

	2019	2018
Joint ventures	136	127
Basell ORLEN Polyolefins Group Sp. z o.o.	*136*	*127*
	136	**127**

Condensed financial information of Basell ORLEN Polyolefines Group

	31/12/2019	31/12/2018
Non-current assets	789	835
Current assets	1,259	1,234
cash	*366*	*345*
other current assets	*893*	*889*
Total assets	**2,048**	**2,069**
Total equity	1,324	1,269
Non-current liabilities	61	49
Current liabilities, incl.:	663	751
trade and other liabilities	*646*	*729*
Total liabilities	**724**	**800**
Total equity and liabilities	**2,048**	**2,069**
Net debt	**(366)**	**(345)**
Net assets	1,324	1,269
Group's share in joint ventures (50%)	662	635
Consolidation adjustments	(22)	(23)
Joint ventures investments accounted for under equity method	**640**	**612**

	2019	2018
Sales revenues	3,741	3,425
Cost of sales, incl.:	(3,271)	(2,981)
depreciation and amortisation	*(90)*	*(78)*
Gross profit on sales	**470**	**444**
Distribution expenses	(104)	(92)
Administrative expenses	(23)	(22)

	2019	2018
Other operating income and expenses, net	(5)	2
Profit from operations	**338**	**332**
Net finance income and costs	(4)	12
Profit before tax	**334**	**344**
Tax expense	(64)	(66)
Net profit	**270**	**278**
Total net comprehensive income	**270**	**278**
Net cash from operating activities	**292**	**503**
Net cash (used) in investing activities	**(50)**	**(102)**
Net cash (used) in financing activities	**(221)**	**(385)**
Dividends received from joint ventures	**107**	**192**
Net profit	270	278
Group's share in joint ventures (50%)	135	139
Consolidation adjustments	1	(12)
Group's share in result of joint ventures accounted for under equity method	**136**	**127**

In 2019 and 2018, there were no significant restrictions in associates and joint ventures resulting from loans agreements, regulatory requirements and other contractual agreements that would restrict access to assets and settlement of liabilities of the Group.

12.4. IMPAIRMENT OF PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND RIGHT-OF-USE ASSETS

SELECTED ACCOUNTING PRINCIPLES

Impairment of property, plant and equipment, intangible assets and right-of-use assets

At the end of the reporting period, the Group assesses whether there are indicators that an asset or cash-generating unit (CGU) may be impaired or any indicators that the previously recognised impairment should be reversed.

Assets that do not generate the independent cash flows are grouped on the lowest level on which cash flows, independent from cash flows from other assets, are generated (CGU). If such case occurs, the recoverable amount is determined on the CGU level, to which the asset belongs.

Recognition and reversal of impairment allowances of property, plant and equipment, intangible assets and right-of-use assets is recognised in other operating activity.

ESTIMATES AND JUDGMENTS

Impairment of property, plant and equipment, intangible assets and right-of-use assets

The Management Board assesses whether there is any indicator for impairment of an assets or cash generating unit. As part of the analysis of indications, both external factors – including primarily the macroeconomic environment as well as internal environment are analyzed – including strategic decisions, financial projections and operational plans. If there is any indicator for impairment, the estimation of recoverable amount of an asset is made

As at 31 December 2019, an impairment indicators were identified in the ORLEN Group in accordance with IAS 36 “Impairment allowances of assets” related to the approval on 19 December 2019 of The Financial Plan of PKN ORLEN S.A. and the ORLEN Group for the year 2020 by the Management Board and the Supervisory Board of PKN ORLEN and the update of discount rates for the valuation of non-current assets as at 31 December 2019.

The Financial Plan of PKN ORLEN S.A. and the ORLEN Group for 2020 has been prepared taking into account current macroeconomic assumptions, operational plans and investment plans.

The macroeconomic assumptions of The Financial Plan of PKN ORLEN S.A. and the ORLEN Group for 2020 were based on the analyses and recommendations of renowned global advisors, including IHS Markit, Nexant, JBC Energy, PVM, EIA, Platts, Continuum Economics, Wood Mackenzie Chemicals, observations of main competitors and expert knowledge of the ORLEN Group.

Production assets of the Upstream segment located both in Poland and Canada have been assessed by independent companies using current knowledge and geological techniques, engineering and computer software.

Decisions on impairment of expenditures incurred for individual exploration and recognition projects are made in case of a negative assessment of the perspectives of the area.

Due to the lack of a reliable estimate of the price, at which place a potential transaction to sale the assets of the Group would have taken place, as the recoverable value of its individual assets its value in use was taken, according to IAS 36.20. The Upstream segment assets test was performed by reference to the fair value reduced by the costs of recultivation.

The fair value is based on the expected discounted cash flows generated by a single CGU (Cash Generating Unit) until the end of extraction. The valuation is based largerly on non-market input data (valuation level 3, as defined in IFRS13 – Fair value measurement) – mainly these are forecasts of future oil and gas prices, and evaluation of the production potential of the reserves.

The impairment tests were performed on the basis of assets of the ORLEN Group as at 31 December 2019 and net cash flows projected in the approved Financial Plan for year 2020 and within Strategy the Mid-term Plan for years 2021-2022 or in the mentioned above Reserve Reports, discounted to their present value using the discount rates which reflect the current market value of money and the specific risks to the valued assets.

The discount rate structure used in the impairment tests of assets by cash-generating unit of ORLEN Group as at 31 December 2019

	Poland				Czech Republic			Lithuania		Canada	Germany
	Refining	Petrochemical	Retail	Upstream	Refining	Petrochemical	Retail	Refining	Retail	Upstream	Retail
Cost of equity	9.71%	9.52%	9.10%	10.56%	9.16%	8.98%	8.55%	11.13%	10.44%	9.45%	6.19%
Cost of debt after tax	2.38%	2.38%	2.38%	2.38%	1.98%	1.98%	1.98%	3.16%	3.16%	1.93%	0.43%
Capital structure	0.54	0.43	1.03	1.11	0.54	0.43	1.03	0.54	1.03	0.56	1.03
Nominal discount rate	**7.15%**	**7.39%**	**5.68%**	**6.26%**	**6.66%**	**6.88%**	**5.21%**	**8.35%**	**6.74%**	**6.74%**	**3.26%**
Long-term rate of inflation	2.48%	2.48%	2.48%	2.48%	2.16%	2.16%	2.16%	2.06%	2.06%	2.08%	1.50%

The discount rate structure used in the impairment tests of assets by cash-generating unit of ORLEN Group as at 31 December 2018

	Poland				Czech Republic			Lithuania		Canada	Germany
	Refining	Petrochemical	Retail	Upstream	Refining	Petrochemical	Retail	Refining	Retail	Upstream	Retail
Cost of equity	11.94%	10.56%	10.28%	12.49%	10.98%	9.61%	9.33%	14.08%	12.09%	10.56%	6.99%
Cost of debt after tax	3.00%	3.00%	3.00%	3.00%	2.27%	2.27%	2.27%	4.17%	4.17%	2.06%	0.78%
Capital structure	0.55	0.38	1.14	1.11	0.55	0.38	1.14	0.55	1.14	0.55	1.14
Nominal discount rate	**8.77%**	**8.46%**	**6.40%**	**7.51%**	**7.89%**	**7.57%**	**5.56%**	**10.56%**	**7.86%**	**7.54%**	**3.68%**
Long-term rate of inflation	2.50%	2.50%	2.50%	2.50%	2.0%	2.10%	2.10%	2.10%	2.10%	2.00%	1.80%

Discount rates were calculated as the weighted average cost of engaged equity and debt. Sources of macroeconomic indicators necessary to determine the discount rate were published by prof. Aswath Damodaran (source: http://pages.stern.nyu.edu) and government bonds quotation available as at 31 December 2019.

The Group identified significant drops in discount rates relative to the verification of the value of the ORLEN Group assets that took place on 31 December 2018 and when also the update of the ORLEN Group's Strategy for 2019-2022 adopted by the Management Board and Supervisory Board on December 20, 2018 was the indicator.

The Group observed that the reduction of the expected rates of return on investment is a consequence of structural changes taking place in the global economy and the fact that we are entering a group of developed markets. The sustainable business strategies characteristic for this group require extending the horizon of return on investment, which is consistent with the reduction of discount rates. The nominal risk free rate is reduced. This is the result of among others the maturing of economies, the developing process of better use of existing assets, the so-called sharing economy, as well as the growing share of the services in the entire GDP basket.

Net impairment allowances of property, plant and equipment, intangible assets and right-of-use assets

	NOTE	2019	2018
ORLEN Upstream		(131)	(18)
Unipetrol Group		(39)	741
Other		(9)	(19)
	9	(179)	704

As at the 31 December 2019, the ORLEN Upstream Group assessed the prospects of concessions located in Poland based of the Reserve Report prepared by a reputable European adviseor. The actual report revealed a decrease in the level of exploration reserves of crude oil and gas compared to the last resource verification by 15%.

The updated assumptions included in the Reserve Report and changes in discount rates constituted the indicator for the ORLEN Upstream Group to test the impairment of production assets in Poland. As a result, in 2019, the ORLEN Upstream Group recognized an impairment in the amount of PLN (147) million (in the Płotki project for upstream assets in the amount of PLN (7) million and exploration assets in the amount of PLN (135) million, in the Edge project for exploration assets in the amount of PLN (5) million) and a reversal of the impairment in the amount of PLN 27 million regarding upstream assets in the Płotki project.

In addition, the Group ORLEN Upstream received a report prepared as at 31 December 2019 allowing the estimation of the fair value of assets for the development and extraction of mineral resources in Canada, which was prepared by an independent company. The actual reports revealed a slight decrease in the level of production potential relative to the last resource verification by 6%.

As a result of tests based on the current Reserve Report and using the actual discount rate, the ORLEN Upstream Group recognized PLN (94) million (including cash-generating units: mainly Southern Alberta, Kaybob, Peace River Oil, Central Alberta Gas), and reversals of impairments of PLN 83 million (including cash generating unit Ferrier). The value of non-current assets of the segment in Canada has been updated in 2019 by a net value of PLN (11) million.

The total impact of recognised impairments and reversal of impairments on non-current assets of the ORLEN Upstream Group in 2019 amounted to PLN (131) million.

Fair value of the Upstream segment's assets in the Upstream Group

ORLEN Upstream Canada	6,525
FX Energy Poland	360
ORLEN Upstream Poland	217
	7,102

Other allowances of property, plant and equipment, intangible assets and right of use and intangible assets concerned mainly PKN ORLEN in Retail and Downstream segment amounted to PLN (8) million and Downstream segment in the Unipetrol Group amounted to PLN (39) million.

Sensitivity analysis of the upstream segment of the Upstream Group assets value in use within an impairment test performed as at 31 December 2019

	in PLN million	EBITDA		
DISCOUNT RATE	change	-5%	0%	5%
	– 1 p.p.	*increase in allowance*	*decrease in allowance*	*decrease in allowance*
		(14)	21	51
	0.0 p.p.	*increase in allowance*	–	*decrease in allowance*
		(56)		37
	+ 1 p.p.	*increase in allowance*	*decrease in allowance*	*decrease in allowance*
		(164)	(48)	5

In 2018, the Unipetrol Group reversed impairments on assets in the net amount of PLN 741 million resulting from the identification of a significant excess of the value in use of the downstream segment over its assets. As a result, the Unipetrol Group recorded the net reversal of impairment on the assets of the Refining segment in the amount of PLN 656 million, Petrochemical in the amount of PLN 85 million (including PLN 50 million which was alocated to other segments, mainly to Corporate Functions). As part of the tests, discount rates of 7.89% were applied for refining assets of the Unipetrol Group and 7.57% for the petrochemical assets of the Unipetrol Group, which in line with the general market trend were lower than the rates recognised as at 31 December 2017 by -0.97p.p. and -0.88p.p.

The value in use of the assets of the downstream segment in the Unipetrol Group as at 31 December 2018

Refining	4,179
Petrochemical	5,535
	9,714

In 2018, the ORLEN Upstream Group assessed the prospects of concessions located in Poland and identified the premises for carrying out a test for impairment of the value of production assets in Poland based on the Reserve Report prepared by an independent company. As a result, it recognised an impairment of PLN (207) million (including PLN 100 million relating to upstream assets in the Płotki project, of PLN 82 million due to the prospects for prospecting exploration licenses – mainly the Karbon project and PLN 25 million other exploration assets – materials) and reversals of impariment in the amount of PLN 45 million (mainly assets from exploration under the Płotki project). The value of non-current assets of the segment in Poland was updated with a net value of PLN (162) million.

In addition, the Group received a report prepared as at 31 December 2018 allowing the estimation of the fair value of assets for the development and extraction of mineral resources in Canada, which was prepared by an independent company. The ORLEN Upstream Group recognised impairments and reversals of imairments based on a reserve report, reversal of impairments in connection with the sale of upstream assets in Canada and impairments of assets from exploration. The total value of recognised impairments amounted to PLN (65) million (including cash-generating units: mainly Kaybob of PLN 53 million, Peace River Oil of PLN 3 million, Central Alberta Gas of PLN 2 million, other PLN 7 million exploration assets), and reversals of impairments PLN 209 million (including cash generating units: mainly Ferrier of PLN 145 million, Peace River Gas PLN 56 million and Southern Alberta PLN 8 million). The value of non-current assets of the segment in Canada has been updated with a net value of PLN 144 million.

The total effect of recognised allowances of impairments and reversals of impairment losses on the non-current assets of the ORLEN Upstream Group in 2018 is PLN (18) million.

Fair value of the Upstream segment's assets in the Upstream Group

ORLEN Upstream Canada	5,841
FX Energy Poland	539
ORLEN Upstream Poland	314
	6,694

The remaining impairments concerned the revaluation of assets mainly in the area of the retail segment by fuel stations.

The Group did not identify any impairment of other assets of the ORLEN Group.

As a result, in 2018, the Group recognised the total net reversal effect on impairment losses on assets in the amount of PLN 704 million.

Sensitivity analysis of the downstream segment of the Unipetrol Group assets value in use within an impairment test performed as at 31 December 2018

	in PLN million	**EBITDA**		
	change	**-5%**	**0%**	**5%**
DISCOUNT RATE	**– 1 p.p.**	*lack of impact*	*lack of impact*	*lack of impact*
		–	–	–
	0.0 p.p.	*decrease of reversal*	–	*lack of impact*
		(398)		–
	+ 1 p.p.	*decrease of reversal*	*decrease of reversal*	*lack of impact*
		(812)	(405)	–

Sensitivity analysis of the Upstream Group assets value in use within an impairment test performed as at 31 December 2018

	in PLN million	**EBITDA**

	in PLN million	EBITDA		
DISCOUNT RATE	change	-5%	0%	5%
	– 1 p.p.	*increase in allowance*	*decrease of reversal*	*decrease of reversal*
		(59)	81	214
	0.0 p.p.	*increase in allowance*	–	*decrease of reversal*
		(135)		136
	+ 1 p.p.	*increase in allowance*	*increase in allowance*	*decrease of reversal*
		(204)	(74)	56

12.5. NET WORKING CAPITAL

Net working capital

The Group defines net working capital as: inventories and trade and other receivables decreased by trade and other liabilities

	NOTE	Inventories	Trade and other receivables	Trade and other liabilities	Net working capital
31/12/2018		**14,362**	**10,479**	**13,697**	**11,144**
31/12/2019		**15,074**	**9,669**	**15,132**	**9,611**
Change in working capital in the statement of financial position		**(712)**	**810**	**1,435**	**1,533**
Adjustments		**3**	**132**	**(486)**	**(351)**
Change in rights and advances for non-financial non-current assets	12.5.2	–	*121*	–	*121*
Change in investment liabilities	12.5.3	–	–	*(295)*	*(295)*
VAT on investment liabilities		–	–	*(27)*	*(27)*
Foreign exchange differences		–	*18*	*(23)*	*(5)*
Other		*3*	*(7)*	*(141)*	*(145)*
Change in working capital in the statement of cash flows		**(709)**	**942**	**949**	**1,182**
incl.impairment		*(173)*	*(43)*	–	*(216)*

12.5.1. INVENTORIES

SELECTED ACCOUNTING PRINCIPLES

Inventories

Inventories, including mandatory reserves comprise products, semi-finished products and work in progress, merchandise and materials.

Finished goods, semi-finished products and work in progress are measured initially at production cost. Production costs include costs of materials and costs of conversion for the production period of finished goods, semi-finished products as well as work in progress and systematic allocation of fixed and variable production overheads estimated for its normal level.

Finished goods, semi-finished products and work in progress shall be measured at the end of the reporting period at the lower of cost or net realizable value. Cost flows of finished goods, semi-finished products and work in progress are determined based on the weighted average cost of production.

Merchandise and materials are measured initially at acquisition cost, while as at the end of the reporting period merchandise and raw materials are measured at the lower of cost or net realizable value. Cost flows of merchandise and raw materials are determined based on the weighted average acquisition cost.

The initial value of inventories is adjusted for their profits or losses from settlement of cash flow hedging instruments.

Impairment tests for specific items of inventories are carried out at the end of each month. Write-down to net realizable value concerns inventories that are damaged or obsolete and the selling price have fallen. Raw materials held for use in the production are not written down below acquisition or production cost if the products in which they will be incorporated are expected to be sold at or above cost.

However, when a decline in the price of materials indicates that the cost of the products exceeds net realizable value, the materials are written down to net realizable value. Recognition and reversal of impairment allowances of inventories is recognised in cost of sales.

ESTIMATES

Net realizable values from sale of inventories

The Group determines the inventory impairment allowances based on estimation of the net realizable values considering the most recent sales prices at the moment of estimations.

	31/12/2019	31/12/2018
Raw materials	8,673	8,330
Semi – finished goods and work in progress	1,245	1,403
Finished goods	4,474	4,012
Merchandise	682	617
Inventories, net	**15,074**	**14,362**
Impairment allowances of inventories to net realisable value	235	301
Inventories, gross	**15,309**	**14,663**

The main item of inventories, which turnover period is longer than 12 months after the end of the reporting period are mandatory reserves. As at 31 December 2019 and as at 31 December 2018 the value of mandatory reserves presented in consolidated financial statements amounted to PLN 6,133 million and PLN 5,607 million, respectively.

Change in impairment allowances of inventories to net realizable value

	2019	2018
At the beginning of the period	301	134
Recognition	284	215
Reversal	(111)	(26)
Usage	(240)	(29)
Foreign exchange differences	1	7
	235	**301**

In 2019 and 2018 the recognition and reversal of net impairment allowances of inventories to net realizable value related mainly to the downstream segment and amounted to PLN (173) million and PLN (189) million, respectively.

12.5.2. TRADE AND OTHER RECEIVABLES

SELECTED ACCOUNTING PRINCIPLES

Receivables

Receivables, excluding trade receivables, are recognised initially at a fair value and subsequently, at amortised cost using the effective interest rate including expected credit loss. On initial recognition, the Group measures trade receivables that do not have a significant financing component at their transaction price.

The Group applies simplified methods of valuation of receivables measured at amortized cost if it does not distort information included in the statement of financial position, in particular when the period until the repayment date is not long.

Receivables accounted at amortised cost, where the Group applies simplifications, are accounted at the initial recognition in the amount due, and later, including at the end of the reporting period, in the amount of the payment due less impairment allowances.

ESTIMATES

Impairment of trade and other receivables

As default the Group considers the event when the customer does not meet obligations after 90 days from maturity of receivables.

For the purpose of estimating the expected credit loss, the Group uses the provision matrix, which was estimated based on historical levels of repayment and recoveries from receivables from customers.

The Group includes information on the future in parameters used in the expected loss estimation model, through the management adjustment of the basic default probability rates.

The Group does not monitor changes in the credit risk during life of instrument. From 1 January 2018 the Group estimates the expected credit loss until maturity of instrument. The expected credit loss is calculated when the receivables are recognised in the statement of financial position and is updated on each subsequent day ending the reporting period

	NOTE	31/12/2019	31/12/2018
Trade receivables from contracts with customers		8,424	9,299
Other		132	128
Financial assets		**8,556**	**9,427**
Excise tax and fuel charge		123	131
Other taxation, duties, social security and other benefits		246	190
Advances for non-current non-financial assets		315	156

	NOTE	31/12/2019	31/12/2018
Rights		48	86
Advances for deliveries		54	99
Prepayments		327	390
Non-financial assets		**1,113**	**1,052**
Receivables, net		**9,669**	**10,479**
Expected credit loss	12.5.2.1	458	430
Receivables, gross		**10,127**	**10,909**

Division of financial assets denominated in foreign currencies is presented in note 13.5.2. PDivision of receivables from related parties is presented in note 14.6.2.

The Group expects that the trade and other receivables by contractors will be realized no later than twelve months after the end of the reporting period.

12.5.2.1. CHANGE IN EXPECTED CREDIT LOSS OF TRADE AND OTHER RECEIVABLES

	NOTE	2019	2018
At the beginning of the period		430	458
Recognition	11.12	202	78
Reversal	11.12	(159)	(71)
financial		*(159)*	*(61)*
non-financial		–	*(10)*
Usage		(11)	(39)
Foreign exchange differences		(4)	4
		458	**430**

12.5.2.2. AGEING ANALYSIS OF TRADE RECEIVABLES AND EXPECTED CREDIT LOSS AS AT 31 DECEMBER 2019

	Trade receivables, gross value	Expected credit loss (in horizon of whole life)	Weighted average rate of expected credit loss	Trade receivables, net value
current	6,456	17	0.0026	6,439
from 1 to 30 days	1,882	1	0.0005	1,881
from 31 to 60 days	13	2	0.1538	11
from 61 to 90 days	4	2	0.5000	2
more than 90 days past due	489	398	0.8139	91
	8,844	420		8,424

Detailed information about credit risk is presented in note 13.5.4.

12.5.3. TRADE AND OTHER LIABILITIES

SELECTED ACCOUNTING PRINCIPLES

Liabilities

Liabilities, including trade liabilities, are initially measured at fair value and subsequently, at amortised cost using the effective interest rate method.

The Group applies simplified methods of valuation of liabilities measured at amortized cost if it does not distort information included in the statement of financial position, in particular when the period until settlement of the liability is not long.

	31/12/2019	31/12/2018
Trade liabilities	7,889	7,275
Investment liabilities	1,362	1,067
Finance lease*	–	36
Other	615	321
Financial liabilities	**9,866**	**8,699**
Payroll liabilities	403	331
Excise tax and fuel charge	2,910	2,858
Value added tax	1,501	1,516
Other taxation, duties, social security and other benefits	303	197
Holiday pay accruals	93	76
Other	56	20
Non-financial liabilities	**5,266**	**4,998**
	15,132	**13,697**

** In 2019, the line finance lease was reclassified in accordance with IFRS 16 to the lease liabilities.*

Division of financial liabilities denominated in foreign currencies is presented in note 13.5.2. Division of liabilities from related parties is presented in note 14.6.2.

As at 31 December 2019 and as at 31 December 2018 in the Group there were no material overdue liabilities.

The Group expects that the payment of trade liabilities to contractors will take place no later than twelve months after the end of the reporting period.

12.5.4. CHANGE IN LIABILITIES FROM CONTRACTS WITH CUSTOMERS

	2019	2018
At the beginning of the period	231	198
Revenues recognised in a given reporting period, included in the balance of liabilities from contracts at the beginning of the period	(120)	(132)
Revenue adjustments	79	75
Advances received, prepayments	58	106
Others	(2)	(16)
	246	231

The Group fulfils its liabilities from contracts with customers with respect to advance payments received, prepayments up to one year. Revenues adjustments are related to deferred part of revenue related to the loyalty program VITAY, according to which the customer is entitled to future benefits (so-called VITAY points). Points are valid for 3 years from the date they were obtained. During this period, the Group expects to satisfy a performance obligation by exchanging collected points for transfered goods /services to customers and recognise revenues.

12.6. NET DEBT AND EQUITY MANAGEMENT

SELECTED ACCOUNTING PRINCIPLES

Cash, loans and bonds

Cash comprises cash on hand and in bank accounts as well as cash in transit. Cash equivalents are short-term, highly liquid investments (of initial maturity up to three months), that are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value. Valuation and outflows of cash and cash equivalents in foreign currencies are based on FIFO (First In First Out) method.

The Group classifies its loans and bonds to financial liabilities measured at amortized cost.

The Group uses simplified methods of the valuation of loans measured at amortized cost if it does not distort the information contained in the statement of financial position, in particular when the period until the repayment date is not long.

Loans for which the Group applies simplifications, are accounted at initial recognition and at the later date, including at the end of the reporting period, at the amount of payment due.

Changes in liabilities from financing activities

	Loans	Bonds	Cash and cash equivalents	Net debt	Lease	Change in liabilities from financing activities
	(A)	(B)	(C)	(A + B – C)	(D)	(A + B + D)
01/01/2019 (approved data)	2,263	7,528	4,192	5,599	229	10,020
Impact of IFRS 16 adoption	–	–	–	–	3,352	3,352
01/01/2019 (converted data)	2,263	7,528	4,192	5,599	3,581	13,372
Cash changes						
net proceeds/(outflows)	(111)	(1,000)	1,962	(3,073)	(656)	(1,767)
interest paid	(33)	(185)	–	(218)	(68)	(286)
Non-cash changes						
foreign exchange differences	(42)	(53)	5	(100)	2	(93)
valuation of debt	59	181	–	240	34	274
new finance lease agreements, increase in leasing remuneration	–	–	–	–	993	993

	Loans	Bonds	Cash and cash equivalents	Net debt	Lease	Change in liabilities from financing activities
*other **	–	–	–	–	*112*	*112*
31/12/2019	**2,136**	**6,471**	**6,159**	**2,448**	**3,998**	**12,605**
Net financial gearing						6.3%
Net debt /EBITDA before net impairment allowances						0.27

** Other non-cash changes include mainly liquidation and accrued lease payments, most of which have been paid and recognised in cash changes in net outflows.*

	Loans	Bonds	Cash and cash equivalents	Net debt	Lease	Change in liabilities from financing activities
	(A)	(B)	(C)	(A + B – C)	(D)	(A + B + D)
01/01/2018	**48**	**6,957**	**6,244**	**761**	**198**	**7,203**
Cash changes						
net proceeds/(outflows)	*2,135*	*400*	*(2,055)*	*4,590*	*(32)*	*2,503*
interest paid	*(27)*	*(195)*	–	*(222)*	*(9)*	*(231)*
Non-cash changes						
foreign exchange differences	*(4)*	*164*	*3*	*157*	–	*160*
valuation of debt	*111*	*202*	–	*313*	*8*	*321*
new finance lease agreements	–	–	–	–	*64*	*64*
31/12/2018	**2,263**	**7,528**	**4,192**	**5,599**	**229**	**10,020**
Net financial gearing						15.7%
Net debt /EBITDA before net impairment allowances						0.61

The Group defined net debt as: non-current and current loans, borrowings and bonds lower by cash and cash equivalents.

The Group to assess the level of debt used ratios: net financial gearing (net debt /equity (calculated as at the end of the period) x 100%) and net debt /EBITDA before net impairment allowances due to property, plant and equipment, intangible assets, right-of-use assets, other non-current assets and non-current assets classified as held for sale.

12.6.1. LOANS AND BONDS

	Non-current		Current		Total	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Loans	1,884	2,151	252	112	2,136	2,263
Bonds	6,301	6,447	170	1,081	6,471	7,528
	8,185	8,598	422	1,193	8,607	9,791

As at 31 December 2019 indebtedness due to loans relates to a loan reimbursed by PKN ORLEN from a consortium of banks under the Agreement for a multi-currency revolving loan of 25 April 2014 in the amount of PLN 2,130 million translated using the exchange rate as at 31 December 2019 (which corresponds to EUR 500 million).

The ORLEN Group bases its financing on fixed and floating interest rates. Depending on the currency of financing these are relevant interbank rates increased by margin. The margin reflects risk of the Group and in case of some long-term contracts depends on net debt/EBITDA ratio.

12.6.1.1. LOANS

– by currency (translated into PLN)/by interest rate

	31/12/2019	31/12/2018
PLN - WIBOR	2	–
EUR - EURIBOR	2,132	2,152
USD - LIBOR USD	–	5
CAD - LIBOR CAD	2	106
	2,136	2,263

As at 31 December 2019 unused credit lines (note 13.5.4) increased by trade and other receivables (note 12.5.2) and cash and cash equivalents exceeded trade and other liabilities (note 12.5.3) by PLN 7,438 million.

The Group hedges partially cash flows related to interest payments regarding external financing in EUR and USD, by using interest rate swaps (IRS).

In the period covered by this consolidated financial statements as well as after the reporting date there were no cases of violations of loans or interests repayment.

In case of operating loans agreements, the ORLEN Group entities have obligation to maintain selected financial ratios within specified ranges. In 2019 these ratios assessed by the creditor banks were at a safe level. The value of covenant as at 31 December 2019 included in the loan agreement of PKN ORLEN (the ratio „consolidated net debt /EBITDA before net impairment allowances due to property, plant and equipment, intangible assets, right-of-use assets, other non-current assets and non-current assets classified as held for sale" calculated based on the definition of individual components from loan agreements) amounted to 0.27 and met the obligations contained in loan agreements.

12.6.1.2. BONDS

– by currency (translated into PLN)

	31/12/2019	31/12/2018
PLN	1,102	2,116
EUR	5,369	5,412
	6,471	**7,528**

– by interest rate

	Fixed rate bonds		Floating rate bonds		Total	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Nominal value	5,549	5,549	1,000	2,000	6,549	7,549
Carrying amount	5,469	5,513	1,002	2,015	6,471	7,528

	Nominal value		Subscription date	Maturity date	Base rate	Margin	Rating
	PLN	EUR					
Bond issue program 2017-2018							
A Series	200	–	19.09.2017	19.09.2021	6M WIBOR	1.00%	A(pol)
B Series	200	–	08.12.2017	08.12.2022	6M WIBOR	1.00%	A(pol)
C Series	200	–	10.05.2018	05.06.2022	6M WIBOR	1.20%	A(pol)
D Series	200	–	06.06.2018	19.06.2022	6M WIBOR	1.20%	A(pol)
E Series	200	–	27.06.2018	13.07.2022	6M WIBOR	1.20%	A(pol)
Bond issue program 2013-2014							
F Series	100	–	09.04.2014	09.04.2020	Fixed interest rate 5%		A(pol)
Retail bonds	**1,100**	**–**					
Eurobonds	2,131 *	500	30.06.2014	30.06.2021	Fixed interest rate 2.5%		BBB-, Baa2
Eurobonds	3,318 **	750	07.06.2016	07.06.2023	Fixed interest rate 2.5%		BBB-, Baa2
Eurobonds	**5,449**	**1,250**					
	6,549	**1,250**					

** Translated into PLN using the exchange rate as at 31 December 2014.*
*** Translated into PLN using the exchange rate as at 31 December 2016.*

The difference between the nominal value and carrying amount of bonds results from measurement of bonds at amortized cost using the effective interest method.

In the 1st quarter of 2019, PKN ORLEN redeemed long-term bonds with a nominal value of PLN 1 billion issued in 2012 under the Bond Issue Program Agreement of 27 November 2006.

Under the first public bond issue program, F Series remains open with a nominal value of PLN 100 million and under the second public bond issue program, A-E Series with a total nominal value of PLN 1 billion.

12.6.2. CASH AND CASH EQUIVALENTS

	31/12/2019	31/12/2018
Cash	6,037	3,886
Other cash	122	306
	6,159	4,192
incl. restricted cash	1,086	87

In 2019, restricted cash increased by PLN 999 million and amounted to PLN 1,086 million, mainly due to collateral established in 4th quarter for the tender offer announced by PKN ORLEN to subscribe for the sale of all shares of ENERGA S.A.in the amount of PLN 1 billion.

12.6.3. EQUITY MANAGEMENT POLICY

Equity management conducted across the Group is performed to protect the Group's financial security in the process of continuing operations while maximizing the profitability to shareholders, in particular by:

- providing access to liquidity for the Group entities and development of effective liquidity distribution structures within the Group;
- diversification of sources of external financing and maintaining their long-term maturity, taking into account banking and non-banking sources.

The above actions are performed based on the constant monitoring of:

- net financial gearing of the Group – as at 31 December 2019 and as at 31 December 2018 amounted to 6.3% and 15.7% respectively;
- net debt to EBITDA ratio before net impairment allowances;
- PKN ORLEN rating.

Dividend paid per ordinary shares – depends on the financial position of the Group, including maintaining financial ratios at the safe level. Dividend for the previous years paid in 2019 and in 2018 amounted to PLN 3,5 an PLN 3 per share.

12.7. EQUITY

SELECTED ACCOUNTING PRINCIPLES

Share capital

Equity paid by shareholders and presented at nominal value in accordance with the Parent Company's articles of association and the entry in the National Court Register.

Share capital as at 31 December 1996, in accordance with IAS 29, § 24 and 25, was revalued based on monthly price indices of consumer goods and services.

Share premium

Equity created by the surplus of the issuance value in excess of the nominal value of shares decreased by issuance costs. Capital from issue of shares above their nominal value as at 31 December 1996, in accordance with IAS 29, § 24 and 25, was revalued based on monthly price indices of consumer goods and services.

Hedging reserve

Equity including valuation and settlement of hedging instruments that meet the criteria of cash flow hedge accounting.

Exchange differences on translating foreign operations

Result mainly from translation of the financial statements of the foreign companies into PLN under consolidation procedures.

Retained earnings

include:

- reserve capital created and used in accordance with the Commercial Companies Code,
- actuarial gains and losses from post-employment benefits,
- the current reporting period profit/loss,
- other capitals created and used according to the rules prescribed by law.

12.7.1. SHARE CAPITAL

	31/12/2019	31/12/2018
Share capital	535	535
Share capital revaluation adjustment	523	523
	1,058	**1,058**

In accordance with the National Court Register, the share capital of Polski Koncern Naftowy ORLEN S.A. as at 31 December 2019 and as at 31 December 2018 was divided into 427,709,061 ordinary shares with nominal value of PLN 1.25 each.

Number of shares issued				
A Series	B Series	C Series	D Series	Total
336,000,000	6,971,496	77,205,641	7,531,924	**427,709,061**

In Poland, each new issue of shares is labelled as a new series of shares. All of the above series have the same rights.

Shareholders' structure

	Number of shares / voting rights	Nominal value of shares (in PLN)	Share in share capital
State Treasury	117,710,196	147,137,745	27.52%
Nationale-Nederlanden OFE*	30,000,000	37,500,000	7.01%
Aviva OFE*	26,000,000	32,500,000	6.08%
Other	253,998,865	317,498,581	59.39%
	427,709,061	**534,636,326**	**100.00%**

** according to the information from the Exrtraordinary General Shareholders' Meeting of PKN ORLEN of 5 March 2020*

12.7.2. SHARE PREMIUM

	31/12/2019	31/12/2018
Nominal share premium	1,058	1,058
Share premium revaluation adjustment	169	169
	1,227	1,227

12.7.3. RETAINED EARNINGS

	31/12/2019	31/12/2018
Reserve capital	30,052	25,993
Other capital	875	884
Actuarial gains and losses	(54)	(37)
Net profit for the period attributable to equity owners of the parent	4,300	5,556
Impact of IFRS 16 and 9	(4)	(9)
	35,169	32,387

12.7.4. EQUITY ATTRIBUTABLE TO NON-CONTROLLING INTEREST

	31/12/2019	31/12/2018
Unipetrol Group	1	1
Ship Service S.A.	8	10
Other	2	1
	11	12

	31/12/2019	31/12/2018
At the beginning of the period	12	3,014
Share in profit net, incl.:	(2)	48
Unipetrol Group	*–*	*49*
other	*(2)*	*(1)*
Share in items of other comprehensive income	–	57
hedging reserve, net	*–*	*17*
exchange differences on translating foreign operations	*–*	*40*
Change in the structure of non-controlling interest	1	(3,107)
	11	12

In 2019 and 2018, there were no significant restrictions in subsidiaries with significant share of non-controlling interest resulting from loans agreements, regulatory requirements and other contractual agreements that would restrict access to assets and settlement of liabilities of the Group.

12.7.5. PROPOSAL FOR DISTRIBUTION OF THE PARENT COMPANY'S PROFIT FOR 2019

The Management Board of PKN ORLEN, after considering the liquidity situation and achievement of strategic financial objectives, recommends to distribute the net profit of PKN ORLEN for the year 2019 in the amount of PLN 4,813,592,019.09 PLN as follows: PLN 1,283,127,183.00 will be allocated as a dividend payment (PLN 3 per 1 share) and the remaining amount of PLN 3,530,464,836.09 as reserve capital. The Management Board of PKN ORLEN proposes 14 July of 2020 as the dividend date and 28 July of 2020 as the dividend payment date. This recommendation of the Management Board will be presented to the General Shareholders' Meeting of PKN ORLEN, which will make a conclusive decision in this matter.

12.7.6. DISTRIBUTION OF THE PARENT COMPANY’S PROFIT FOR 2018

The Ordinary General Meeting of Shareholders of PKN ORLEN S.A. on 14 June 2019 distributed the net profit of PKN ORLEN for 2018 in the amount of PLN 5,434,149,842.17 as follows: the amount of PLN 1,496,981,713.50 was allocated as a dividend payment (PLN 3.5 per 1 share) and the remaining amount of net profit of PLN 3,937,168,128.67 as reserve capital.

12.8. DERIVATIVES AND OTHER ASSETS AND LIABILITIES

Derivatives and other assets

	Non-current		Current		Total	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Cash flow hedging instruments	291	143	174	483	465	626
currency forwards	*291*	*143*	*169*	*209*	*460*	*352*
commodity swaps	*–*	*–*	*5*	*274*	*5*	*274*
Derivatives not designated as hedge accounting	19	16	65	39	84	55
currency forwards	*–*	*–*	*27*	*5*	*27*	*5*
commodity swaps	*–*	*–*	*38*	*34*	*38*	*34*
currency interest rate swaps	*19*	*11*	*–*	*–*	*19*	*11*
interest rate swaps	*–*	*5*	*–*	*–*	*–*	*5*
Fair value hedging instruments	–	2	4	2	4	4
commodity swaps	*–*	*2*	*4*	*2*	*4*	*4*
Derivatives	**310**	**161**	**243**	**524**	**553**	**685**
Other financial assets	72	95	468	336	540	431
receivables on settled derivatives	*–*	*–*	*110*	*306*	*110*	*306*
financial assets measured at fair value through other comprehensive income	*66*	*86*	*–*	*–*	*66*	*86*
hedged item adjustment	*–*	*4*	*4*	*21*	*4*	*25*
security deposits	*–*	*–*	*354*	*–*	*354*	*–*
other	*6*	*5*	*–*	*9*	*6*	*14*
Other non-financial assets	238	243	–	–	238	243
investment property	*219*	*108*	*–*	*–*	*219*	*108*
perpetual usufruct of land	*–*	*115*	*–*	*–*	*–*	*115*
other	*19*	*20*	*–*	*–*	*19*	*20*
Other assets	**310**	**338**	**468**	**336**	**778**	**674**

As at 31 December 2019 Investment property includes mainly social and office buildings, as well as land. Depending on the characteristics of the property, its fair value was estimated based on the comparative method of appraisal reports prepared by independent experts using observable market information (hierarchy level 2 – value PLN 149 million) or by the income method based on planned future cash flows (hierarchy level 3 – value of PLN 70 million). Comparative method was applied assuming, that the value of assessed property was equal to the market price of a similar property.

As at 31 December 2019, the position investment property includes right-of-use asset in the amount of PLN 42 million.

As at 31 December 2019, the Group has security deposits that do not meet the definition of cash equivalents concerning mainly hedging of settlement of transactions on the Intercontinental Exchange Inc. (ICE) and the Commodity Clearing House Inc. (IRGIT).

Derivatives and other liabilities

	Non-current		Current		Total	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Cash flow hedging instruments	1	–	82	105	83	105
currency forwards	*1*	–	–	–	*1*	–
commodity swaps	–	–	*82*	*105*	*82*	*105*
Derivatives not designated as hedge accounting	1	38	180	66	181	104
currency forwards	*1*	–	*42*	*18*	*43*	*18*
commodity swaps	–	–	*119*	*21*	*119*	*21*
interest rate swaps	–	*38*	*19*	–	*19*	*38*
currency interest rate swaps	–	–	–	*27*	–	*27*
Fair value hedging instruments	–	4	4	22	4	26
commodity swaps	–	*4*	*4*	*22*	*4*	*26*
Derivatives	**2**	**42**	**266**	**193**	**268**	**235**
Other financial liabilities	152	357	223	79	375	436
liabilities on settled derivatives	–	–	*209*	*67*	*209*	*67*
investment liabilities	*94*	*102*	–	–	*94*	*102*
*finance lease**	–	*193*	–	–	–	*193*
hedged item adjustment	–	*3*	*4*	*1*	*4*	*4*
refund liabilities	–	–	*10*	*11*	*10*	*11*
*other***	*58*	*59*	–	–	*58*	*59*
Other non-financial liabilities	9	9	13	11	22	20
deferred income	*9*	*9*	*13*	*11*	*22*	*20*
Other liabilities	**161**	**366**	**236**	**90**	**397**	**456**

** In 2019, the line finance lease was reclassified in accordance with IFRS 16 to the lease liabilities*
*** In 2019 and 2018, the line other in other financial liabilities relates mainly liabilities due to donations in the amount of PLN 18 million and PLN 21 million and a guarantees in the amount of PLN 39 million and PLN 29 million, respectively.*

12.8.1. FINANCIAL ASSETS MEASURED AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

Investments in equity instruments measured at fair value through other comprehensive income	Fair value of asset	Dividends recognised during the reporting period, relating to investments held at the end of the reporting period	Indication of the reason for applying particular variant of presentation
Naftoport Sp. z o.o.	40	5	Instruments not acquired for trading, without impact of reclassification of profit/loss on financial result
Bank Ochrony Środowiska S.A.	18	–	
Pieridae Energy Limited	7	–	
Wodkan S.A.	1	–	
	66	**5**	

12.9. PROVISIONS

SELECTED ACCOUNTING PRINCIPLES

Provisions

Provisions are recognised in the amount reflecting the best estimate of the expenditure required to settle the present obligation as at the reporting date.

Environmental provision

The Group creates provisions for future liabilities due to reclamation of contaminated land or water or elimination of harmful substances if there is such a legal or constructive obligation. Environmental provision for reclamation is periodically reviewed on the basis of the degree of contamination. Changes of provision increase or decrease the value of asset causing the obligation of reclamation in the current period. In case decrease of provision is higher than carrying amount of the asset, the amount of that excess is recognised in profit or loss.

Jubilee bonuses and post-employment benefits

Under the remuneration plans employees of the Group are entitled to jubilee bonuses, paid to employees after an elapse of a defined number of years in service as well as retirement and pension benefits, paid once at retirement or pension. The amount of above benefits and jubilee bonuses depends on the number of years in service and an employee's remuneration.

The jubilee bonuses are other long-term employee benefits, whereas retirement and pension benefits are classified as post-employment defined benefit plans.

Provisions are determined by an independent actuary and revalued if there are any indications impacting their value, taking into account the staff turnover and planned change in wages.

Actuarial gains and losses from post-employment benefits are recognised in components of other comprehensive income and from other employment benefits are recognised in profit or loss.

CO_2 emissions, energy certificates

The Group recognises the estimated CO_2 emissions costs during the reporting period in operating activity costs (taxes and charges). Provision is recognised based on the value of allowances taking into account the weighted average method. In case of a shortage of allowances, the provision is created based on the purchase price of allowance concluded in forward contracts or market quotations of allowances at the reporting date.

Energy certificates are property rights to energy and energy efficiency certificates. The Group recognises provisions for the estimated volume of energy rights and energy efficiency certificates for depreciation in the reporting period, which is recognised as a reduction of revenues from sales of energy or as operating costs in case of purchase of electricity for own needs.

The obligation to submit energy certificates for depreciation or to pay a substitute fee or obtain a statement together with an energy efficiency audit is regulated on the basis of separate regulations.

Other provisions

Other provisions include mainly provisions for on-going legal proceedings and are recognised after consideration of available information, including the opinions of independent experts.

The Group recognises provisions if at the end of the reporting period the Group has an obligation arising from past events that can be reliably estimated and it is probable that fulfilment of this obligation will cause an outflow of resources embodying economic benefits.

ESTIMATES

Recognition of provisions requires estimates of the probable outflow of resources embodying economic benefits and making the best estimate of the expenditure required to settle the present obligation at the end of the reporting period. Provisions are recognised when the probability of outflow of resources embodying economic benefits is higher than 50%.

Provisions

	Non-current		Current		Total	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Environmental	817	782	42	64	859	846
Jubilee bonuses and post-employment benefits	256	233	49	56	305	289
CO_2 emissions, energy certificates	–	–	961	784	961	784
Other	40	40	184	115	224	155
	1,113	1,055	1,236	1,019	2,349	2,074

Changes in provisions

	Environmental provision	Jubilee bonuses and post-employment benefits provision	CO_2 emissions, energy certificates	Other	Total
01/01/2019	846	289	784	155	2,074
Recognition	52	44	1,027	97	1,220
Reversal	(4)	–	(30)	(22)	(56)
Usage	(43)	(29)	(821)	(6)	(899)
Foreign exchange differences	8	1	1	–	10
	859	305	961	224	2,349
01/01/2018	693	277	376	229	1,575
Recognition	198	32	800	15	1,045
Reversal	(4)	–	(4)	(30)	(38)
Usage	(46)	(20)	(395)	(53)	(514)
Foreign exchange differences	5	–	7	(6)	6
	846	289	784	155	2,074

	2019	2018

	2019	2018
Change in provisions presented in the statement of financial position	**275**	**499**
Usage of prior year provision for CO_2 emissions, energy certificates from previous year	821	395
Capitalization of environmental provision	(32)	(137)
Actuarial gains and losses	(21)	(5)
Foreign exchange differences	(8)	(16)
Change in provisions in the statement of cash flows	**1,035**	**736**

12.9.1. ENVIRONMENTAL PROVISION

The Group has legal obligation to clean contaminated land – water environment in the area of production plants, fuel stations, fuel terminals and warehouses.

The Group estimated the provision for environmental risk related to the removal of pollution based on analyses provided by independent expert or own analysis taking into account the expected costs of remediation. Depending on the type of facility generating the pollution, the provision is estimated by taking into account the frequency of remediation, the scale of environmental pollution and the achieved ecological effects. The decommissioning of most facilities will take place in the more distant future and the precise requirements that will have to be met when the removal event occurs are uncertain. The level of uncertainty is burdened with potential change in regulations concerning, among others environmental and social expectations. At the same time, technological progress is an important factor that will determine future decommissioning costs.

At the stage of development and extraction of hydrocarbon deposits, the Group recognises provisions for the cost of removal of drillings and supporting infrastructure.

The line environmental provision mainly concerns entities operating in Poland, the Czech Republic and Canada. In the Czech Republic, obligations arising from pollution of soil-cum-water environment arising before the date of privatization of individual entities lies with the Czech state. In case of pollutants, arising after this date, this is the obligation of the Group companies.

In 2019 the assumptions adopted to calculate the value of the environmental provision have not changed compared to the previous year.

The calculations were discounted based on the risk-free rate set on the level of bond yields (10,20 or 30-years depending on the expected maturity of the provision). The discount rate was adjusted by the inflation effect, which has not changed in comparison with the previous year.

As at 31 December 2019 and as at 31 December 2018 the average discount rate amounted to 2.26% and 2.85% (Poland), 1.68% and 2.15% (Canada) and 1.9% and 1.9% (the Czech Republic), respectively.

12.9.2. PROVISION FOR JUBILEE BONUSES AND POST-EMPLOYMENT BENEFITS

Change in employee benefits obligations

	NOTE	Jubilee bonuses provision		Post-employment benefits		Total	
		31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018
At the beginning of the period		144	145	145	132	289	277
Current service costs		6	14	8	6	14	20
Interest expenses		4	4	4	4	8	8
Actuarial gains and losses arising from changes in assumptions:		16	9	21	5	37	14
demographic		*3*	–	*1*	*1*	*4*	*1*
financial		*8*	*7*	*20*	*4*	*28*	*11*
other		*5*	*2*	–	–	*5*	*2*
Past employment costs		(12)	(13)	(2)	3	(14)	(10)
Payments under programme		(21)	(14)	(8)	(7)	(29)	(21)
Other		–	(1)	–	2	–	1
	12.9	137	144	168	145	305	289

The carrying amount of employee benefits liabilities is equal to their present value as at 31 December 2019 and 31 December 2018.

Employee benefits liabilities divided into active and retired employees

	Active employees		Retired employees		Total	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Poland	202	196	64	56	266	252
Czech Republic	22	19	–	–	22	19
Lithuania, Latvia, Estonia	17	18	–	–	17	18
	241	233	64	56	305	289

	Jubilee bonuses provision		Post-employment benefits		Total	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018

	Jubilee bonuses provision		Post-employment benefits		Total	
Employee benefits liabilities divided into geographical structure						
Poland	131	139	135	114	266	253
Czech Republic	6	5	17	14	23	19
Lithuania, Latvia, Estonia	–	–	16	17	16	17
	137	144	168	145	305	289
Maturity of employee benefits analysis						
up to 1 year	21	32	28	24	49	56
above 1 to 5 years	52	50	28	26	80	76
above 5 years	64	62	112	95	176	157
	137	144	168	145	305	289

The weighted average duration of liabilities for post-employment benefits in 2019 and in 2018 amounted to: Poland 9 and 8 years, the Czech Republic 9 and 9 and Lithuania, Latvia, Estonia 9 and 14 years, respectively.

In 2019 the amount of provision for employee benefits changed as the result of update of assumptions, mainly in relation to discount rate, projected inflation and expected remuneration increase ratio. Should the 2018 assumptions be used, the provision for the employee benefits would be lower by PLN (30) million.

Sensitivity analysis to changes in actuarial assumptions

As at 31 December 2019, the Group used the following actuarial assumptions that had an impact on the level of actuarial provisions for the Polish entities: discount rate 2.0%, expected inflation 2.8% in 2020, 2.6% in 2021 and 2.5% in subsequent years, the remuneration increase rate: 4% in 2020 and 3% in 2021 and 2.5% in subsequent years. In the Group's foreign entities the main impact had value of discount rate: from 0.3% to 1.4%.

The Group analysed the impact of the financial and demographic assumptions and calculated that the changes of ratios: remuneration ratio by +/- 0.5 p.p., the discount rate by +/- 0.5 p.p. and the rate of turnover by +/- 0.5 p.p. in Poland, Czech, Lithuania, Latvia and Estonia are no higher than PLN 7 million. Therefore, the Group does not present any detailed information.

The Group carries out the employee benefit payments from current resources. As part of employee benefits, the Group also has additional defined contribution programs, where the obligation is met by paying contributions to separate funds (Employee Pension Plan and Employee Capital Plan). Costs related to this are presented in the position Employee benefits.

12.9.3. PROVISION FOR CO$_2$ EMISSIONS, ENERGY CERTIFICATES

Provision for CO$_2$ emissions and energy certificates comprises mainly recognition of the provisions for the cost of CO$_2$ emissions estimated in the reporting period. As at 31 December 2019 and as at 31 December 2018 the value of the provision amounted to PLN 939 million and PLN 728 million, respectively.

12.9.4. OTHER PROVISIONS

As at 31 December 2019 and as at 31 December 2018 other provisions mainly comprise provisions for the risk of unfavourable decisions of pending administrative or court and tax proceedings in the amount of PLN 182 million and PLN 114 million, respectively.

13.1. FINANCIAL INSTRUMENTS BY CATEGORY AND CLASS

	Financial instruments by category	NOTE	31/12/2019	31/12/2018
ASSETS				
Measured at fair value through other comprehensive income	Measured at fair value through other comprehensive income	12.8	66	86
Cash flow hedging instruments	Hedging financial instruments	12.8	465	626
Derivatives not designated as hedge accounting	Measured at fair value through profit or loss	12.8	84	55
Fair value hedging instruments	Measured at fair value through profit or loss	12.8	4	4
Lease	*Excluded from the classification and measurement of IFRS 9*		25	–
	Measured at amortized cost – assets		15,189	13,964
Trade receivables	*Measured at amortized cost – assets*	12.5.2	*8,424*	*9,299*
Cash and cash equivalents	*Measured at amortized cost – assets*		*6,159*	*4,192*
Receivables on settled derivatives	*Measured at amortized cost – assets*	12.8	*110*	*306*
Security deposits	*Measured at amortized cost – assets*	12.8	*354*	*–*
Hedged item adjustment	*Measured at amortized cost – assets*	12.8	*4*	*25*
Other	*Measured at amortized cost – assets*	12.5.2, 12.8	*138*	*142*
			15,833	**14,735**
LIABILITIES				
Cash flow hedging instruments	Hedging financial instruments	12.8	83	105
Derivatives not designated as hedge accounting	Measured at fair value through profit or loss	12.8	181	104
Fair value hedging instruments	Measured at fair value through profit or loss	12.8	4	26
Lease	*Excluded from the classification and measurement of IFRS 9*	12.5.3, 12.8, 14.2.1	3,998	229
	Measured at amortised cost		18,848	18,697
Trade liabilities	*Measured at amortised cost*	12.5.3	7,889	7,275
Refund liabilities	*Measured at amortised cost*	12.8	10	11
Loans	*Measured at amortised cost*	12.6.1	2,136	2,263
Bonds	*Measured at amortised cost*	12.6.1	6,471	7,528

	Financial instruments by category	NOTE	31/12/2019	31/12/2018
Investment liabilities	*Measured at amortised cost*	12.5.3, 12.8	1,456	1,169
Liabilities on settled derivatives	*Measured at amortised cost*	12.8	209	67
Hedged item adjustment	*Measured at amortised cost*	12.8	4	4
Other	*Measured at amortised cost*	12.5.3, 12.8	673	380
			23,114	**19,161**

13.2. INCOME, EXPENSES, PROFIT AND LOSS AND OTHER COMPREHENSIVE INCOME

	Financial instruments by category	NOTE	2019	2018
Interest income			48	39
from financial assets measured at amortisated cost	*Measured at amortized cost – assets*	11.11.1	*48*	*39*
Interest costs			(287)	(204)
from financial liabilities measured at amortisated cost	*Measured at amortized cost – assets*	11.11.2	*(187)*	*(195)*
from lease	*Excluded from the classification and measurement of IFRS 9*		*(100)*	*(9)*
(Loss)/reversal of loss due to impairment of financial instruments	Measured at amortised cost	11.12	(43)	(17)
Financial instruments gains/(losses)			222	94
	Measured at amortized cost – assets	11.11.1	(8)	*470*
	Measured at amortized cost – liabilities	11.11.1	8	*(823)*
	Measured at fair value through profit or loss	11.9, 11.10	28	*426*
	Cash flow hedging financial instruments (ineffective part)	11.11.1, 11.11.2	28	*(7)*
	Hedging financial instruments (settlement of hedging costs)	11.9, 11.10	161	*24*
	Measured at fair value through other comprehensive income	11.11.1	5	*4*
Other finance income/costs	*Measured at amortized cost – assets*	11.11.1, 11.11.2	(25)	*(16)*
			(85)	(104)
other, excluded from the scope of IFRS 7			**(6)**	**(11)**
Provisions discounting			(4)	(8)
Interest on tax liabilities		11.11.2	(2)	(3)

The above table presents items of profit or loss in which the result on the valuation and settlement of financial instruments is recognised.

In 2019 and 2018 gains/(losses) on investments in equity instruments at fair value through other comprehensive income amounted to PLN (20) million and PLN (23) million, respectively.

13.3. FAIR VALUE MEASUREMENT

31/12/2019

				Fair value hierarchy		
	NOTE	Carrying amount	Fair value	Level 1	Level 2	Level 3
Financial assets						
Financial assets measured at fair value through other comprehensive income	12.8.1	66	66	26	–	40
Derivatives	12.8	553	553	–	553	–
		619	619	26	553	40
Financial liabilities						
Loans	12.6.1.1	2,136	2,135	–	2,135	–
Bonds	12.6.1.2	6,471	6,745	6,745	–	–
Derivatives	12.8	268	268	–	268	–
		8,875	9,148	6,745	2,403	–

31/12/2018

				Fair value hierarchy		
	NOTE	Carrying amount	Fair value	Level 1	Level 2	Level 3
Financial assets						
Financial assets measured at fair value through other comprehensive income		86	86	46	–	40
Derivatives	12.8	685	685	–	685	–
		771	771	46	685	40
Financial liabilities						
Loans	12.6.1.1	2,263	2,263	–	2,263	–
Bonds	12.6.1.2	7,528	7,788	7,788	–	–
Lease	12.5.3, 12.8	229	236	–	236	–
Derivatives	12.8	235	235	–	235	–
		10,255	10,522	7,788	2,734	–

For other classes of financial assets and liabilities fair value represents their carrying amount.

13.3.1. METHODS APPLIED IN DETERMINING FAIR VALUE (FAIR VALUE HIERARCHY)

Financial liabilities due to loans, bonds, liabilities and receivables for borrowings are measured at fair value using discounted cash flows method. Discount rates are calculated based on market interest rates according to quotations of 1- month, 3-months and 6-months interest rates increased by proper margins for individual financial instruments.

In the item financial assets measured at fair value through other comprehensive income, quoted/unquoted shares not held for trading are included. For shares unquoted on active market for which there are no observable inputs, fair value determined on the basis of expected discounted cash flows was applied.

During the reporting period and the comparative period there were no reclassifications of financial instruments in the Group between Level 1 and 2 of fair value hierarchy.

13.4. HEDGE ACCOUNTING

The ORLEN Group applies cash flow and fair value hedge accounting.

Cash flow hedge accounting concerns:

- forward sales and purchase of foreign currency operating activity hedging,
- hedging the change in margins on refinery and petrochemical products sold,
- hedging the periodic increase in operating inventories,
- hedging the timing mismatches due to sales of refinery products.

Fair value hedge accounting concerns:

- hedging the sales of bitumen and aviation fuel at a fixed price.

Currently, the sources of ineffectiveness in case of hedge accounting for currency risk is the difference between the maturity date for hedging instrument, falling on the last business days of the M-1 month and maturity of the hedged item, where the revenues from sale of petrochemical products are realized in the first consecutive days of the given M month .

However, in case of commodity risk, sources of ineffectiveness result from the risk components designated for the hedged item, which are a part of the probable planned future purchase of oil and hedging instruments based solely on commodity indices of refinery products sold.

There is partially natural hedging for USD/PLN exchange rate, as revenues from sales of products depending on USD exchange rate are offset by the cost of buying crude oil in the same currency. Due to the fact that PKN ORLEN has a long position in EUR and the relatively low interest rates for EUR (as compared to PLN rates), it was considered reasonable to strive for a situation in which the Group has debt obligations in foreign currency (currency conversion debt from PLN to debt in EUR through the execution of currency interest rate swaps transactions).

Information on hedging instruments – maturity structure

2019

Risk type / type of instrument	Unit of measure	up to 1 year	above 1 to 3 years	above 3 to 5 years	above 5 years
Cash flow hedge					
Foreign exchange risk					
Currency forwards -long position hedge (buy)					
Nominal value	EUR	460,000,000	910,000,000	395,000,000	–
Average exchange rate EUR/CZK		26.68	27.15	27.3	–
Nominal value	EUR	47,000,000	10,000,000	28,081,676	1,532,625
Average exchange rate EUR/PLN		4.4	4.61	4.73	4.76
Nominal value	USD	15,979,876	2,026,170	–	–

Risk type / type of instrument	Unit of measure	up to 1 year	above 1 to 3 years	above 3 to 5 years	above 5 years
Average exchange rate USD/PLN		3.61	3.93	–	–
Currency forwards – short position hedge (sell)					
Nominal value	EUR	409,000,000	816,000,000	384,000,000	–
Average exchange rate EUR/PLN		4.52	4.6	4.69	–
Commodity risk					
Commodity swaps – future revenues hedge (sell)					
Petrol					
Volume	MT	41,000	–	–	–
Average price		603.67	–	–	–
Diesel					
Volume	MT	101,901	–	–	–
Average price		565.13	–	–	–
Crude oil					
Volume	BBL	2,065,000	–	–	–
Average price		57.05	–	–	–
Aviation fuel					
Volume	MT	4,000	–	–	–
Average price		616.39			–
Commodity swaps – inventories (buy)					
Petrol					
Volume	MT	8,000	–	–	–
Average price		599	–	–	–
Commodity swaps – future manufacturing costs hedge (buy)					
Diesel					
Volume	MT	24,000	–	–	–
Average price		569.52	–	–	–
Fair value hedge					
Commodity risk					
Commodity swaps – future revenues hedge (buy)					
Heating oil					
Volume	MT	43,793	–	–	–
Average price		260.85	–	–	–
Crude oil					
Volume	BBL	141,750	36,130	–	–
Average price		57.02	56.08	–	–

Risk type / type of instrument	Unit of measure	up to 1 year	above 1 to 3 years	above 3 to 5 years	above 5 years
Commodity swaps – future revenues hedge (sell)					
Heating oil					
Volume	MT	4,379	–	–	–
Average price		580.92	–	–	–

2018

Risk type / type of instrument	Unit of measure	up to 1 year	above 1 to 3 years	above 3 to 5 years
Cash flow hedge				
Foreign exchange risk				
Currency forwards –long position hedge (buy)				
Nominal value	EUR	600,000,000	830,000,000	455,000,000
Average exchange rate EUR/CZK		26.57	26.83	27.28
Nominal value	USD	21,237,178	12,992,248	–
Average exchange rate USD/PLN		3.57	3.56	–
Currency forwards – short position hedge (sell)				
Nominal value	USD	1,205,565	–	–
Average exchange rate USD/CZK		22.68	–	–
Nominal value	EUR	495,000,000	600,000,000	–
Average exchange rate EUR/PLN		4.64	4.57	–
Commodity risk				
Commodity swaps – future revenues hedge (sell)				
Petrol				
Volume	MT	15,000	–	–
Average price		725.76	–	–
Diesel				
Volume	MT	27,100	–	–
Average price		661.7	–	–
Crude oil				
Volume	BBL	8,148,400	–	–
Average price		61.4	–	–
Commodity swaps – inventories (buy)				
Crude oil				
Volume		3,813,200	–	–
Average price		59.98	–	–
Commodity swaps – future manufacturing costs hedge (buy)				
Crude oil				

Risk type / type of instrument	Unit of measure	up to 1 year	above 1 to 3 years	above 3 to 5 years
Volume	BBL	996,000	–	–
Average price		54.89	–	–
<u>**Fair value hedge**</u>				
Commodity risk				
Commodity swaps – future revenues hedge (buy)				
Heating oil				
Volume	MT	47,812	43,793	–
Average price		300.47	260.85	–
Diesel				
Volume	MT	411	–	–
Average price		625.54	–	–
Crude oil				
Volume	BBL	181,250	72,040	–
Average price		59.76	57.09	–
Jet				
Volume	MT	46,000	–	–
Average price		656.31	–	–
Commodity swaps – future revenues hedge (sell)				
Diesel				
Volume	MT	4,371	4,379	–
Average price		571.57	580.91	–

Planned realization date of hedged cash flow and fair value which will be recognised in the profit or loss

	31/12/2019	31/12/2018
Currency operating exposure	2020-2025	2019-2022
Commodity risk exposure	2020-2021	2018-2020

Hedge accounting effects on financial situation and results

2019

Link type / risk type / type of instrument	Buy (B) / Sell (S)	Hedging strategies within the cash flow hedge	Unit of measure	Nominal value / volume 31/12/2019	Assets 31/12/2019	Liabilities 31/12/2019	Changes in fair value (as basis for determining an ineffective part in a given period)
Cash flow hedge							
Foreign exchange risk							
FX_EUR.PLN	S	sales of goods denominated in foreign currencies/indexed to foreign currencies	EUR	1,695,614,301	277	–	74
FX_EUR.CZK	S		EUR	1,765,000,000	180	1	35

Link type / risk type / type of instrument	Buy (B) / Sell (S)	Hedging strategies within the cash flow hedge	Unit of measure	Nominal value / volume 31/12/2019	Assets 31/12/2019	Liabilities 31/12/2019	Changes in fair value (as basis for determining an ineffective part in a given period)
FX_USD.PLN	B	deliveries for purchases denominated in foreign currency or indexed to exchange rate of foreign currency	USD	18,006,046	3	–	(2)
					460	**1**	**107**
Commodity risk							
Crude oil	S	time mismatch on crude oil purchases	BBL	2,065,000	–	64	(308)
Crude oil	B		BBL	–	–	–	103
Petrol	S	oversize inventories hedge	MT	41,000	1	1	(12)
Petrol	B	oversize inventories hedge	MT	8,000	–	–	–
Diesel	B	oversize inventories hedge	MT	24,000	4	–	4
Diesel	S	crack margin hedge, oversize inventories hedge	MT	101,901	–	16	(32)
Aviation fuel	S	oversize inventories hedge	MT	4,000	–	1	(1)
					5	**82**	**(246)**
					465	**83**	**(139)**
Fair value hedge							
Commodity risk							
Crude oil	B	bitumen sale at fixed price	BBL	177,880	3	–	7
Heating oil	S	bitumen sale at fixed price	MT	4,379	–	–	(2)
Heating oil	B	bitumen sale at fixed price	MT	43,793	1	4	4
Jet	B	JET fuel sale at fixed price	MT	–	–	–	13
					4	**4**	**22**
					469	**87**	**(117)**

Carrying amount was recognised in statement of financial position in Derivatives and other assets and liabilities

2018

Link type / risk type / type of instrument	Buy (B) / Sell (S)	Hedging strategies within the cash flow hedge	Unit of measure	Nominal value /volume 31/12/2018	Assets 31/12/2018	Liabilities 31/12/2018	Changes in fair value (as basis for determining an ineffective part in a given period)
Cash flow hedge							
Foreign exchange risk							
FX_EUR.PLN	S	sales of goods denominated in foreign currencies/indexed to foreign currencies	EUR	1,095,000,000	203	–	(112)
FX_EUR.CZK	S		EUR	1,885,000,000	144	–	(70)
FX_USD.PLN	B		USD	34,229,425	5	–	13
FX_USD/CZK	B		USD	1,205,565	–	–	–

Link type / risk type / type of instrument	Buy (B) / Sell (S)	Hedging strategies within the cash flow hedge	Unit of measure	Nominal value /volume 31/12/2018	Assets 31/12/2018	Liabilities 31/12/2018	Changes in fair value (as basis for determining an ineffective part in a given period)
					352	**–**	**(169)**
Commodity risk							
Crude oil	S	time mismatch on crude oil purchases	BBL	8,148,400	243	–	299
Crude oil	B		BBL	4,809,200	3	105	(141)
Petrol	S	oversize inventories hedge	MT	15,000	12	–	17
Petrol	B	oversize inventories hedge	MT	–	–	–	(5)
Diesel	B	oversize inventories hedge	MT	–	–	–	(3)
Diesel	S	crack margin hedge, oversize inventories hedge	MT	27,100	16	–	50
					274	**105**	**217**
					626	**105**	**48**
Fair value hedge							
Commodity risk							
Crude oil	B	bitumen sale at fixed price	BBL	253,290	–	4	(4)
Heating oil	B	bitumen sale at fixed price	MT	91,605	2	8	(6)
Diesel	S	bitumen sale at fixed price	MT	9,161	2	–	2
Jet	B	JET fuel sale at fixed price	MT	46,000	–	14	(14)
					4	**26**	**(22)**
					630	**131**	**26**

Carrying amount was recognised in statement of financial position in Derivatives and other assets and liabilities

Cash flow hedge

2019

Risk type / position type	Changes in fair value of the hedged item (as basis for determining an ineffective part in a given period)	Hedging reserve (gross value) for relationships remains in hedge accounting
Cash flow hedge		
Foreign exchange risk (EUR)		
Future sales revenues	(87)	55
Foreign exchange risk (USD)		
Future manufacturing costs	2	4
Foreign exchange risk (CZK)		
Future sales revenues	–	239
	(85)	**298**
Commodity risk		
Inventories	(93)	–

Risk type / position type	Changes in fair value of the hedged item (as basis for determining an ineffective part in a given period)	Hedging reserve (gross value) for relationships remains in hedge accounting
Future sales revenues	212	(40)
Future manufacturing costs	(5)	–
	114	**(40)**
	29	**258**

2018

Risk type / position type	Changes in fair value of the hedged item (as basis for determining an ineffective part in a given period)	Hedging reserve (gross value) for relationships remains in hedge accounting
Foreign exchange risk (EUR)		
Future sales revenues	172	316
Foreign exchange risk (USD)		
Future manufacturing costs	(4)	5
	168	**321**
Commodity risk		
Inventories	102	(98)
Future sales revenues	(265)	257
	(163)	**159**
	5	**480**

Fair value hedge

2019

Risk type / position type	Accumulated balance sheet adjustment due to fair value		Item in statement of financial position in which carrying amount was recognised	Change in value of hedged item adjustment in a given period	Changes in fair value (as basis for determining an ineffective part in a given period)	Difference between profit or loss due to hedge on hedging instrument and hedged item
	Assets	**Liabilities**				
Commodity risk						
Future sales revenues	4	4	Derivatives and other assets and liabilities	(21)	22	1

2018

Risk type / position type	Accumulated balance sheet adjustment due to fair value		Item in statement of financial position in which carrying amount was recognised	Change in value of hedged item adjustment in a given period	Changes in fair value (as basis for determining an ineffective part in a given period)	Difference between profit or loss due to hedge on hedging instrument and hedged item
	Assets	**Liabilities**				
Commodity risk						
Future sales revenues	25	4	Derivatives and other assets and liabilities	21	(22)	(1)

Impact of cash flow hedge accounting on the statement of profit or loss and other comprehensive income

2019

Risk type / position type	Profits or losses from hedge for the reporting period recognised in other comprehensive income	Ineffectiveness of hedge recognized in profit or loss in the period	Item in the statement, where ineffectiveness of hedge was recognised	Amount reclassified from other comprehensive income to profit or loss as adjustment due to reclassification, because:	
				Implementation of hedged item in the period (continued relationships)	Item in profit or loss, that includes reclassification adjustment
Foreign exchange risk (EUR/PLN)					
currency forwards	(4)	–		84	Sales revenues
currency forwards	–	–		–	Manufacturing costs (operational)
currency forwards	115	–		167	Other operating income/expenses
Foreign exchange risk (USD/PLN)					
currency forwards	(1)	–		–	Manufacturing costs (operational)
currency forwards	(1)	–		–	Other operating income/expenses
	109	**–**		**251**	
Commodity risk					
commodity swaps	102	2	Other operating income and costs	130	Inventories
commodity swaps	–	–		36	Manufacturing costs (operational)
commodity swaps	(260)	(10)	Other operating income and costs	(77)	Sales revenues
	(158)	**(8)**		**89**	
	(49)	**(8)**		**340**	

In other comprehensive income related to gross hedging reserve in the amount of PLN (33) million, the Group recognises profir or loss in the amount of PLN (49) million recognised in the 12 month period of 2019 and settled derivatives awaiting hedged item in the amount of PLN 16 million, including PLN 32 million from 2019 and PLN (16) million settled from the previous year.

2018

Risk type / position type	Profits or losses from hedge for the reporting period recognised in other comprehensive income	Ineffectiveness of hedge recognized in profit or loss in the period	Item in the statement, where ineffectiveness of hedge was recognised	Amount reclassified from other comprehensive income to profit or loss as adjustment due to reclassification, because:	
				Implementation of hedged item in the period (continued relationships)	Item in profit or loss, that includes reclassification adjustment
Foreign exchange risk (EUR/PLN)					
currency forwards	(281)	–		(179)	Sales revenues
currency forwards	98	–		(15)	Other operating income/expenses
Foreign exchange risk (USD/PLN)					

Risk type / position type	Profits or losses from hedge for the reporting period recognised in other comprehensive income	Ineffectiveness of hedge recognized in profit or loss in the period	Item in the statement, where ineffectiveness of hedge was recognised	Amount reclassified from other comprehensive income to profit or loss as adjustment due to reclassification, because:	
currency forwards	12	–		1	Manufacturing costs (operational)
	(171)	–		**(193)**	
Commodity risk					
commodity swaps	108	2	Other operating income and costs	(67)	Inventories
commodity swaps	(20)	(8)	Other operating income and costs	(22)	Manufacturing costs (operational)
commodity swaps	133	4	Other operating income and costs	269	Sales revenues
	221	**(2)**		**180**	
	50	**(2)**		**(13)**	

Reconciliation of equity from hedge accounting

2019

	Hedging reserve by			
	Effective part of change in fair value	Effective part due to settlement of instruments	Cost of hedging related to occurrence of transaction	Total
Foreign exchange risk				
01/01/2019	**298**	**6**	**32**	**336**
Cash flow hedge	**–**	**10**	**115**	**125**
Impact of valuation of hedging transactions (effective part)	*84*	*–*	*260*	*344*
Reclassification to profit or loss in connection with realization of hedged item, incl:	*(84)*	*(6)*	*(161)*	*(251)*
reclassification of instruments from the previous year – no hedged item	*–*	*(6)*	*(10)*	*(16)*
Instruments for settlement	*–*	*16*	*16*	*32*
31/12/2019	**298**	**16**	**147**	**461**
Commodity risk				
01/01/2019	**118**	**–**	**–**	**118**
Cash flow hedge	***(158)***	**–**	**–**	***(158)***
Impact of valuation of hedging transactions (effective part)	*(33)*	*–*	*n/a*	*(33)*
Reclassification to profit or loss in connection with realization of hedged item	*(89)*	*–*	*n/a*	*(89)*
Settlement of ineffective part	*(36)*	*–*	*n/a*	*(36)*
31/12/2019	**(40)**	**–**	**–**	**(40)**
Hedging reserve, gross 01/01/2019	416	6	32	454

	Hedging reserve by			
	Effective part of change in fair value	Effective part due to settlement of instruments	Cost of hedging related to occurrence of transaction	Total
Deferred tax from hedging instruments settlement and valuation	(86)	(1)	(6)	(93)
Hedging reserve, net 01/01/2019	**330**	**5**	**26**	**361**
Hedging reserve, gross 31/12/2019	**258**	**16**	**147**	**421**
Deferred tax from hedging instruments settlement and valuation	*(62)*	*(3)*	*(28)*	*(93)*
Hedging reserve, net 31/12/2019	**196**	**13**	**119**	**328**

2018

	Hedging reserve by			
	Effective part of change in fair value	Effective part due to settlement of instruments	Cost of hedging related to occurrence of transaction	Total
Foreign exchange risk				
01/01/2018	**519**	**–**	**–**	**519**
Cash flow hedge	***(198)***	***6***	***32***	***(160)***
Impact of valuation of hedging transactions (effective part)	*(5)*	–	*34*	*29*
Reclassification to profit or loss in connection with realization of hedged item	*(193)*	–	–	*(193)*
Instruments for settlement	–	*6*	*(2)*	*4*
31/12/2018	**321**	**6**	**32**	**359**
Commodity risk				
01/01/2018	**(51)**	**–**		**(51)**
Cash flow hedge	**210**	**–**		**210**
Impact of valuation of hedging transactions (effective part)	*50*	–	*n/a*	*50*
Reclassification to profit or loss in connection with realization of hedged item	*180*	–	*n/a*	*180*
Settlement of ineffective part	*(20)*	–	–	*(20)*
31/12/2018	**159**	**–**	**–**	**159**
Hedging reserve, gross 01/01/2018	**468**	**–**	**–**	**468**
Deferred tax from hedging instruments settlement and valuation	*(90)*	–	–	*(90)*
Settlement of ineffective part	*(47)*	–	–	*(47)*
Hedging reserve, net 01/01/2018	**331**	**–**	**–**	**331**
Hedging reserve, gross 31/12/2018	**480**	**6**	**32**	**518**
Deferred tax from hedging instruments settlement and valuation	*(86)*	*(1)*	*(6)*	*(93)*
Settlement of ineffective part	*(64)*	–	–	*(64)*

	Hedging reserve by			
Hedging reserve, net 31/12/2018	330	5	26	361

13.5. RISK IDENTIFICATION

Risk management is mainly focused on the unpredictability of markets and aims to reduce the impact of volatility on the Group's financial results.

Type of risk		Exposure	Measurement of exposure	Management/Hedging
MARKET RISK	**Commodity**	– risk of changes in refining and petrochemical margins on sale of products and Brent differential fluctuations; – risk of changes in crude oil and products prices related to the time mismatch; – risk of changes in CO_2 emission rights prices; – risk of changes in crude oil and refinery product prices related to the obligation to maintain mandatory reserves of crude oil and fuels; – risk arising from firm liabilities and receivables, including the provision of pricing formulas based on a fixed price over time to selected customers	Based on planned cash flows.	Market risk management policy and hedging strategies, which define principles of measurement of individual exposure, parameters and the time horizon of risk hedging and hedging instruments. Market risk management is performed using derivatives, which are used only to reduce the risk of changes in fair value and the risk of changes in cash flows. By setting the market valuation of instruments, the Group uses its own recording systems and valuation of derivatives as well as relies on information obtained from market-leading banks and brokerage companies or information services. Transactions are concluded only with reliable partners, allowed to participate in transactions as a result of the application of appropriate procedures and signing of appropriate documentation.
	Exchange rates changes	– economic currency exposure resulting from inflows decrease by expenses indexed to or denominated in other than the functional currency; – currency exposure resulting from investment or probable liabilities and receivables in foreign currencies; – balance sheet exposure resulting from assets and liabilities denominated in foreign currency	Based on planned cash flows. Based on analysis of balance sheet positions.	
	Interest rates changes	exposure resulting from owned assets and liabilities for which interest gains or losses are dependent on floating interest rates	Based on total gross debt to positions for which interest costs are dependent on floating interest rate.	
Liquidity		Risk of unforeseen shortage of cash or lack of access to financing sources, both in the horizon of short and long-term, leading to temporary or permanent loss of ability to pay financial liabilities or the need to obtain funds on unfavourable terms.	Based on planned cash flows in short and long-term horizon.	Liquidity risk management policy, which defines rules of reporting and consolidation of liquidity of PKN ORLEN and ORLEN Group entities. Group carries out a policy of its financing sources diversification and uses range of tools for effective liquidity management.

Type of risk	Exposure	Measurement of exposure	Management/Hedging
Losing cash and deposits	Risk of bankruptcy of domestic or foreign banks, in which accounts are kept or in which cash is invested.	Regular review of credit rating of banks and setting limits on concentration of funds.	Management based on principles of surplus cash management, which determine possibility of granting quotas for individual banks made on the basis of, among others, ratings and reporting data. Cooperation mainly with crediting banks.
Credit	Risk of unsettled receivables for delivered products and services by customers with whom trade transactions are concluded with deferred payment.	Analysis of creditability and solvency of customers.	Management based on procedures and policies adopted for management of trade credit and debt recovery including the determination of limits and hedging.

Hedging strategies within hedge accounting as at 31.12.2019	Component	Type of relationship
Bitumen sales at fixed price	Brent risk component, which is a part of an unconditional and binding commercial commitment from concluded sale transaction at a fixed price	fair value hedge
Aviation fuel sales at fixed price	Jet fuel risk component, which is a part of an unconditional and binding commercial commitment from concluded sale transaction at a fixed price	fair value hedge
Bitumen sales at fixed price	Fuel Oil risk component, which is a part of an unconditional and binding commercial commitment from concluded sale transaction at a fixed price	fair value hedge
Time mismatch on crude oil purchases, which is hedged to the planned period of crude oil processing and sales of products of oversize inventories	Brent risk component, which is a part of diesel oil sales; an item identified based on sales invoices issued in the month of execution/delivery of hedging transaction in the order in which they were issued	cash flow hedge
Oversize inventories	Brent DTd risk component, which is part of future crude oil purchase; an item identified based on crude oil deliveries from the month of execution/delivery of hedging transaction in the order in which they were received	cash flow hedge
Oversize inventories and crack margin	EBOB/ULSD risk component, which is a part of diesel oil sales; an item identified based on sales invoices issued in the month of execution/delivery of hedging transaction in the order in which they were issued	
Sales of goods denominated in foreign currencies/indexed to foreign currencies	Invoices for sales denominated in foreign currency or indexed to exchange rate of foreign currency issued on the day of Forward transaction and subsequent days in the order in which they were issued; nominal value in foreign currency up to the nominal value of hedging instrument in foreign currency	cash flow hedge
	Deliveries for sales denominated in foreign currency or indexed to exchange rate of foreign currency received on the day of Forward transaction and subsequent days in the order in which they were delivered; nominal value in foreign currency up to the nominal value of hedging instrument in foreign currency	

The ORLEN Group applies a consistent financial risk hedging policy based on market risk management policy and strategies supported and supervised by the Financial Risk Committee, the Management Board and the Supervisory Board of PKN ORLEN.

Standard hedge against currency economic exposure is done in a rolling and recurring basis, covering a period of the next 12 months.

Opportunistic hedge against currency economic exposure in EUR (due to its stability and predictability) for periods of over 48 months is allowed.

A dedicated hedging strategy determines the optimal heeding levels for the standard period and acceptable deviations.

Exposure to balance sheet currency risk is hedged up to 100% of the amount exposed to this currency risk.

In case of commodity risk, the hedged level for particular exposures is in line with the recommendations for individual companies approved by the Financial Risk Committee.

Exposure to commodity price risk related to time mismatches on non-normative operating inventories is hedged for 100% of the volume of inventories exposed to the risk concerned.

Exposure to commodity price risk related to probable liabilities or receivables in PKN ORLEN is 100% hedged on the volume exposed to this risk (offering customers the price formulas based on a fixed price over time).

Exposure to commodity price risk related to time mismatch on crude oil purchases is hedged on the volume corresponding to 90% of sold products made from the purchased crude oil, exposed to this risk.

Exposure due to the refining margin is hedged opportunistically. In line with the strategies adopted in this respect, the refining margin is hedged in the horizon of up to 12 months in advance on the volume of planned production not exceeding 30% in PKN ORLEN, and 50% in Unipetrol and in ORLEN Lietuva.

All transactions hedging the commodity and currency exposure in Unipetrol and ORLEN Lietuva are performed on the PKN ORLEN balance sheet and then transferred to the companies on the basis of intercompany transactions.

13.5.1 COMMODITY RISK

The impact of commodity risk hedging instruments on the Group's financial statements

Type of hedged raw material/product	Unit of measure	31/12/2019	31/12/2018
Crude oil	bbl	26,370,730	13,775,890
Diesel	t	130,280	36,261
Heating oil	t	43,793	91,605
Gas	gj	6,420,000	–
Other	t	53,000	52,000

The net carrying amount of commodity risk hedging instruments as at 31 December 2019 and as at 31 December 2018 amounted to PLN (158) million and PLN 160 million, respectively.

Sensitivity analysis for changes in prices of products and raw materials

Analysis of the influence of changes in the carrying amount of financial instruments on result before tax and hedging reserve to a hypothetical change in prices of products and raw materials:

	Assumed variations		Influence on result before tax		Influence on hedging reserve		Total	
	2019	2018	2019	2018	2019	2018	2019	2018
			Increase of prices		Increase of prices		Total influence	
Crude oil USD/bbl; CAD/bbl	32%	29%	(415)	(46)	(96)	(266)	(511)	(312)
Diesel USD/t	26%	24%	–	–	(47)	(12)	(47)	(12)
Gasoline USD/t	31%	24%	–	–	(23)	(7)	(23)	(7)
Heating oil USD/t	–	28%	–	–	24	–	24	–
Gas CAD/Gj	27%	23%	11	–	–	–	11	–
JET fuel USD/t	25%	–	–	–	(2)	–	(2)	–
			(404)	(46)	(144)	(285)	(548)	(331)

Applied for the sensitivity analysis of commodity risk hedging instruments variations of crude oil, gas and products prices were calculated based on their historical volatility in 2019 and 2018. The influence of changes in prices was presented on annual basis.

In case of derivatives, the influence of crude oil, gas and products prices variations on fair value were examined at constant level of currency rates.

13.5.2. THE RISK OF EXCHANGE RATES CHANGES

Currency structure of financial instruments

Financial instruments by class	EUR		USD		CZK		CAD		Other currencies after translation to PLN		Total after translation to PLN	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Financial assets												
Financial assets measured at fair value through other comprehensive income	–	–	–	–	–	–	2	10	–	–	7	27
Trade receivables	634	581	156	211	6,719	8,260	30	17	31	51	4,536	4,772
Lease	–	–	–	–	143	–	–	–	–	–	25	–
Derivatives	118	83	13	87	–	–	–	–	–	–	553	685
Cash and cash equivalents	728	555	209	202	5,216	1,360	1	1	14	17	4,787	3,393
Security deposits	–	–	79	–	–	–	2	–	–	–	304	–
Receivables on settled derivatives	–	–	29	81	–	–	–	–	–	–	110	306
Hedged item adjustment	–	–	1	7	–	–	–	–	–	–	4	25
Other	10	8	79	3	124	26	2	–	2	1	373	48
	1,490	**1,227**	**566**	**591**	**12,202**	**9,646**	**37**	**28**	**47**	**69**	**10,699**	**9,256**
Financial liabilities												
Loans	501	500	–	1	–	–	1	38	–	–	2,134	2,263
Bonds	1,261	1,259	–	–	–	–	–	–	–	–	5,369	5,412
Lease	341	–	–	–	2,371	–	–	–	–	–	1,852	–
Trade liabilities	368	315	1,072	994	3,708	3,442	20	24	5	10	6,326	5,742
Investment liabilities	81	70	14	8	1,422	1,224	50	31	–	–	783	620
Derivatives	6	16	48	44	305	–	4	–	–	–	268	235
Liabilities on settled derivatives	–	–	55	18	–	–	–	–	–	–	209	67
Hedged item adjustment	–	–	1	1	–	–	–	–	–	–	4	4
Other	3	1	73	54	1,494	263	2	–	–	–	551	253
	2,561	**2,161**	**1,263**	**1,120**	**9,300**	**4,929**	**77**	**93**	**5**	**10**	**17,496**	**14,596**

Sensitivity analysis for changes in the exchange rates

	EUR /PLN		USD /PLN		CZK /PLN		CAD /PLN		Razem	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
	variation of exchange rates +15%									
Influence on result before tax (A)	(1,526)	(1,665)	60	57	11	4	4	1	(1,451)	(1,603)

	EUR /PLN		USD /PLN		CZK /PLN		CAD /PLN		Razem	
Influence on hedging reserve (B)	(1,036)	(686)	1	42	–	–	–	–	(1,035)	(644)
Influence on foreign exchange differences on subsidiaries from consolidation (C)	(11)	165	(129)	4	69	114	(20)	(28)	(91)	255
Total influence (A+B+C)	**(2,573)**	**(2,186)**	**(68)**	**103**	**80**	**118**	**(16)**	**(27)**	**(2,577)**	**(1,992)**
Sensitivity of net investment in foreign operations including hedging reserve (D)	112	119	363	322	1,480	1,458	318	295	2,273	2,194
Total influence on profit or loss and other comprehensive income (A+B+D)	**(2,450)**	**(2,232)**	**424**	**421**	**1491**	**1,462**	**322**	**296**	**(213)**	**(53)**

At variation of currency rates by (-)15% the sensitivity analysis states variations of the same value as in the above table but with the opposite sign.

Variations of currency rates described above were calculated based on average volatility of particular currency rates in 2019 and 2018.

The influence of currency rate variations on fair value of derivatives was examined at constant level of interest rates.

13.5.3. THE RISK OF INTEREST RATES CHANGES

Structure of financial instruments subject to risk of interest rates changes as at 31 December 2019

Financial instruments by class	NOTE	WIBOR	EURIBOR	LIBOR USD	PRIBOR	LIBOR CAD	Total
Financial assets							
Derivatives	12.8	19*	504*	49	–	–	553**
		19	**504**	**49**	**–**	**–**	**553**
Financial liabilities							
Loans	12.6.1.1	2	2,132	–	–	2	2,136
Bonds	12.6.1.2	1,002	–	–	–	–	1,002
Derivatives	12.8	–	24*	181	51	12	268**
		1,004	**2,156**	**181**	**51**	**14**	**3,406****

** In financial assets– net derivatives include cross interest rate swaps (CIRS) valuated at the amount of PLN 19 million was recognised, which are sensitive to both WIBOR and EURIBOR interest rates changes.*
*** Total assets on derivatives include CIRS valuation of PLN 19 million.*

Structure of financial instruments subject to risk of interest rates changes as at 31 December 2018

Financial instruments by class	NOTE	WIBOR	EURIBOR	LIBOR USD	LIBOR CAD	Total
Financial assets						
Derivatives	12.8	11*	357*	328	–	685**
		11	**357**	**328**	**–**	**685**
Financial liabilities						
Loans	12.6.1.1	–	2,152	5	106	2,263
Bonds	12.6.1.2	2,015	–	–	–	2,015
Derivatives	12.8	27*	70*	165	–	235**
		2,042	**2,222**	**170**	**106**	**4,513****

** In financial assets and liabilities – net derivatives include cross interest rate swaps (CIRS) valuated at the amount of PLN 16 million which are sensitive to both WIBOR and EURIBOR interest rates changes.*
*** Total assets and liabilities on derivatives include CIRS valuation of PLN 11 million and PLN 27 million, respectively.*

The ORLEN Group is exposed to risk of cash flows changes in interest rates arising from owned assets and liabilities, for which interest gains or losses are depend on floating interest rates.

The ORLEN Group hedges the consolidated exposure to volatility of cash flows due to changes in interest rates. For this purpose, interest rate swap and currency swap are used.

Measurement of risk is based on total gross debt to positions for which interest costs are depend on floating interest rates.

Sensitivity analysis for the interest rates changes

Interest rate	Assumed variations		Influence on result before tax		Influence on hedging reserve		Total	
	31/12/2019	31/12/2018	2019	2018	2019	2018	2019	2018
WIBOR	+0.5p.p.	+0.5p.p.	(5)	(10)	-	-	(5)	(10)
LIBOR USD	+0.5p.p.	+0.5p.p.	1	4	-	-	1	4
EURIBOR	+0.5p.p.	+0.5p.p.	(8)	(1)	(1)	-	(9)	(1)
			(12)	(7)	(1)	-	(13)	(7)

At variation of interest rates by (-) 0,5% the sensitive analysis presents variations of the same value as in the above table but with the opposite sign.

The above interest rates variations were calculated based on observations of average interest rates fluctuations in 2019 and 2018.

The influence of interest rates changes was presented on annual basis.

For derivatives in sensitivity analysis for the risk of interest rates changes interest rate curve displacement due to potential reference rate change was used, provided that other risk factors remain constant.

Sensitivity analysis to commodity risk, exchange rates changes and to the risk of interest rates changes was carried out based on the same methodology.

13.5.4. LIQUIDITY AND CREDIT RISK

Liquidity risk

Maturity analysis for financial liabilities as at 31 December 2019

	NOTE	up to 1 year	above 1 to 3 years	above 3 to 5 years	above 5 years	Total	Carrying amount
Loans	12.6.1.1	252	1,884	–	–	2,136	2,136
Bonds	12.6.1.2	201	1,047	5,299	–	6,547	6,471
floating-rate bonds – undiscounted value		*29*	*1,047*	–	–	*1,076*	*1,002*
fixed rate bonds – undiscounted value		*172*	–	*5,299*	–	*5,471*	*5,469*
Trade liabilities	12.5.3	7,889	–	–	–	7,889	7,889
Investment liabilities	12.5.3, 12.8	1,362	18	14	62	1,456	1,456
Derivatives – undiscounted value	12.8	263	4	2	–	269	268
gross exchange amounts, incl.:		*54*	–	*2*	–	*56*	*56*
currency forwards	12.8	*42*	–	*2*	–	*44*	*44*
commodity swaps	12.8	*12*	–	–	–	*12*	*12*
net exchange amounts, incl.:		*209*	*4*	–	–	*213*	*212*
interest rate swaps	12.8	*19*	–	–	–	*19*	*19*
commodity swaps	12.8	*190*	*4*	–	–	*194*	*193*
Liabilities on settled derivatives	12.8	209	–	–	–	209	209
Hedged item adjustment	12.8	4	–	–	–	4	4
Other	12.5.3, 12.8	611	22	7	43	683	683
		10,791	2,975	5,322	105	19,193	19,116

The maturity analysis of financial liabilities related to lease was presented in note 14.2.1

Maturity analysis for financial liabilities as at 31 December 2018

	NOTE	up to 1 year	above 1 to 3 years	above 3 to 5 years	above 5 years	Total	Carrying amount
Loans	12.6.1.1	112	2,151	–	–	2,263	2,263
Bonds	12.6.1.2	1,051	361	2,983	3,246	7,641	7,528
floating-rate bonds – undiscounted value		*1,046*	*258*	*818*	–	*2,122*	*2,015*
fixed rate bonds – undiscounted value		*5*	*103*	*2,165*	*3,246*	*5,519*	*5,513*
Trade liabilities	12.5.3	7,275	–	–	–	7,275	7,275
Investment liabilities	12.5.3, 12.8	1,067	19	14	69	1,169	1,169
Derivatives – undiscounted value	12.8	180	50	–	–	230	235
gross exchange amounts, incl.:		*39*	–	–	–	*39*	*45*
currency forwards	12.8	*15*	–	–	–	*15*	*18*
currency interest rate swaps	12.8	*24*	–	–	–	*24*	*27*
commodity swaps	12.8	–	–	–	–	–	–
net exchange amounts, incl.:		*141*	*50*	–	–	*191*	*190*
currency forwards	12.8	–	–	–	–	–	–
interest rate swaps	12.8	–	*38*	–	–	*38*	*38*
commodity swaps	12.8	*141*	*12*	–	–	*153*	*152*
Liabilities on settled derivatives	12.8	67	–	–	–	67	67
Hedged item adjustment		1	3	–	–	4	4
Other	12.5.3, 12.8	368	63	31	158	620	620
		10,121	2,647	3,028	3,473	19,269	19,161

A financial liquidity risk is the loss of ability to settle current liabilities on time.

The ORLEN Group is exposed to liquidity risk resulting from the relation between current assets and current liabilities. As at 31 December 2019 and 31 December 2018, the current liquidity indicator amounted to 1.8 for both dates.

The objective of the liquidity risk management process is to ensure the Group's financial security and financial stability, and the basic tool limiting the above risk is the ongoing review of matching maturities of assets and maturity of liabilities. Moreover, the ORLEN Group carries out a policy of its financing sources diversification and uses range of tools for effective liquidity management.

The ORLEN Group uses systems of cash concentration („cash-pool systems") to effectively manage current financial liquidity and to optimize financial costs within the ORLEN Group. At the end of 2019, the following cash-pool systems existed operated by PKN ORLEN:

- cash-pool systems dedicated to Polish companies of the ORLEN Group. As at 31 December 2019 systems included a total of 24 ORLEN Group entities,
- international cash-pool system dedicated to foreign companies of the ORLEN Group. As at 31 December 2019 the system comprised 8 ORLEN Group foreign companies.

PKN ORLEN may issue bonds within the settled limits as well as purchase bonds issued by the ORLEN Group entities when managing liquidity. Additional information about bonds in note 12.6.1.2.

In 2019, the ORLEN Group invested cash in bank deposits. Decisions regarding bank deposits are based on maximization of the rate of return and assessment of the financial condition of banks requiring a short-term rating by the bank for investment-grade deposits.

As at 31 December 2019 and as at 31 December 2018 the maximum possible indebtedness due to loans amounted to PLN 9,160 million and PLN 10,025 million, respectively. As at 31 December 2019 and as at 31 December 2018 PLN 6,742 million and PLN 7,181 million, respectively, remained unused.

The value of guarantees regarding liabilities to third parties granted during ongoing operations as at 31 December 2019 and as at 31 December 2018 amounted to PLN 2,586 million and PLN 579 million, respectively. The amount of PLN 2 billion is a bank guarantee for liabilities under the call issued by PKN ORLEN to subscribe for the sale of all shares of ENERGA S.A. Other guarantees concerned mainly: civil-law guarantees of contract performance and public-law guarantees resulting from generally applicable regulations secured regularity of business licensed in the liquid fuels sector and resulting from this activity tax and customs receivables, etc. In addition, guarantees and sureties granted in the Group on behalf of related parties as at 31 December 2019 and as at 31 December 2018 amounted to PLN 9,946 million and PLN 10,570 million, respectively. They were mainly related to secure of ORLEN Capital future liabilities due to these transactions of Eurobonds issuance and timely payment of liabilities by related parties.

Based on analysis and forecasts as at the end of the reporting period, the Group recognised the probability of payment of above amounts as low.

Credit risk

The Group assess that the risk of unsettled receivables by customer in the field of undue receivables and due receivables not covered by allowance is negligible, due to effective management of trade credit and debt recovery. The Group, among others, sets limits for particular customers and establishes hedges, has the possibility to compensate of mutual debts. The Group uses non-recourse factoring, as well as reverse factoring solution.

Limits are set based on financial analysis of customers (on basis of provided financial statements and history of cooperation) or the current report from the business information agency.

Separate group are customers for whom an insurance limit is issued e.g.: fleet, micro fleet, export contractors.

Some contractors make a deposit on account. In case of the absence of credit limit, contractors are obliged to make a prepayment.

The measure of credit risk is the maximum credit risk for each class of financial instruments, which is equal to their carrying amount (note 12.5.2. i 12.8).

As at 31 December 2019 and as at 31 December 2018 the Group received bank and insurance guarantees of PLN 3,301 million and PLN 2,793 million, respectively. The Group additionally receives from its customers collateral in the form of sureties, voluntary submission to execution (Article 777 of the Code of Civil Procedure), deposits, registered pledges, mortgages, bills of exchange, guarantees and letters of credit.

14.1. CONCESSIONS HELD

The Group's operations require concessions, due to their importance to the public interest.

31/12/2019	Remaining concessions periods (in years)
Electrical energy: manufacturing, distribution, trade	6-11
Heating energy: manufacturing, transmission, distribution, trade	6-11
Natural gas: distribution, trade in Poland and abroad	6-11
Liquid fuels: manufacturing, transmission, storage, transhipment, trade in Poland and abroad	2-11
Non-reservoir storage of crude oil and liquid fuels	10
Rock salt: exploitation	13
Exploration and recognition of crude oil and natural gas deposits	1-5
Marine Wind Farms: preparation, implementation, operation	22
Personal and property security services	indefinitely

As at 31 December 2019 and as at 31 December 2018 the Group had no liabilities related to concession services in scope of IFRIC 12 – Service concession arrangements.

14.2. LEASES

SELECTED ACCOUNTING PRINCIPLES

Lease

Detailed accounting principles are described in note 5 Impact of IFRS changes on consolidated financial statements.

PROFESSIONAL JUDGMENT

In the field of contracts in which the Group is a lessee, when the assessment or the contract contains a lease is not clear, the Group makes a professional judgment whether the definition of lease in accordance with IFRS 16 is fulfilled.

In the field of contracts in which the Group is a lessor, the Group makes a judgment classified lease contracts as finance lease or operating lease based on the analysis of the economic content of the transaction.

14.2.1. GROUP AS A LESSEE

Change in assets due to right-of-use

	Land	Buildings and constructions	Machinery and equipment	Vehicles and other	Total
Net carrying amount at 01/01/2019 – Impact of IFRS 16 adoption					
Gross carrying amount	1,544	984	95	697	3,320
Impairment allowances	–	–	(2)	(2)	(4)
	1,544	**984**	**93**	**695**	**3,316**
increases/(decreases), net					
New lease agreements, increase in leasing remuneration	160	514	7	312	993
Depreciation	(54)	(135)	(15)	(321)	(525)
Impairment allowances	(24)	(5)	–	–	(29)
Recognition	*(52)*	*(4)*	–	*(1)*	*(57)*
Reversal	*24*	*4*	–	–	*28*
Reclassifications *	97	150	19	49	315
Other	(33)	(33)	(5)	(47)	(118)
	1,690	**1,475**	**99**	**688**	**3,952**
Net carrying amount at 31/12/2019					
Gross carrying amount	1,795	1,685	125	1,012	4,617
Accumulated depreciation	(81)	(205)	(24)	(322)	(632)
Impairment allowances	(24)	(5)	(2)	(2)	(33)
	1,690	**1,475**	**99**	**688**	**3,952**

** The line reclassification includes gross values, depreciation of property, plant and equipment and perpetual usufruct of land which were recognised as at 31 December 2018 as finance lease under IAS 17.*

The total value of expenses from lease agreements presented in financing activities in the statement of cash flows in 2019 amounted to PLN 724 million.

Maturity analysis of lease liabilities

	31/12/2019
up to 1 year	618
from 1 to 2 years	1,135
from 2 to 3 years	279
from 3 to 4 years	222
from 4 to 5 years	193
above 5 years	3,416
	5,863
Discount	(1,865)
	3,998

Amounts from lease contracts recognised in the statement of profit or loss and other comprehensive income

		2019
Costs due to:		**(251)**
interest on lease	Finance costs	(100)
short-term lease	Cost by nature: External Services	(112)
lease of low-value assets that are not short-term lease	Cost by nature: External Services	(6)
variable lease payments not recognised in valuation of lease liabilities	Cost by nature: External Services	(33)

14.2.2. GROUP AS A LESSOR

The Group as at the initial date, classifies leases as finance or operating lease. In order to make the above classification the Group assesses whether the entire risk and benefits resulting from ownership of the underlying asset were transferred to a lessee. If the entire risk and benefits were transferred to a lessee, the lease is classified as a financial lease, in the opposite situation – as operating lease.

Financial lease

Maturity analysis for financial lease payments

	31/12/2019
up to 1 year	12
from 1 to 3 years	12
from 3 to 5 years	1
	25

The Group as a lessor in finance lease, recognised as at 1 January 2019, in accordance with IFRS 16 subleasing agreements in the Unipetrol Group for which the value of lease payments due as at 31 December 2019 amounted to PLN 25 million.

Operating lease

Maturity analysis for operating lease payments

	31/12/2019
up to 1 year	89
from 1 to 2 years	41
from 2 to 3 years	39
from 3 to 4 years	37
from 4 to 5 years	33
above 5 years	336
	575

As at 31 December 2019, the net carrying amount of the Company's non-current assets leased to other entities under operating lease agreements amounted to PLN 150 million and related mainly to own land (PLN 46 million) as well as buildings and construction (PLN 94 million). Lease payments under operating leases are recognised on a straight-line basis over the lease period as revenues from the sale of products and services. Revenues from operating lease for 2019 amounted to PLN 257 million.

14.3. INVESTMENT EXPENDITURES INCURRED AND FUTURE COMMITMENTS RESULTING FROM SIGNED INVESTMENT CONTRACTS

The total amount of investment expenditures together with borrowing costs incurred in 2019 and in 2018 amounted to PLN 8,773 million and PLN 4,280 million, respectively, including PLN 198 million and PLN 204 million of investments relating to environmental protection. The total amount of investment expenditures together with borrowing costs incurred in 2019 takes into account the impact of IFRS 16 implementation in the amount of PLN 3,316 million.

As at 31 December 2019 and as at 31 December 2018 the value of future commitments resulting from contracts signed until this date amounted to PLN 5,100 million and PLN 1,281 million, respectively.

14.4. CONTINGENT ASSETS AND LIABILITIES

SELECTED ACCOUNTING PRINCIPLES

Contingent assets and liabilities

The Group discloses at the end of reporting period information on contingent assets if the inflow of resources embodying economic benefits is probable. If it is practicable the Group estimates the financial impact of contingent assets valuing them according to the principles of valuation provisions.

At the end of reporting period the Group discloses information on contingent liabilities if:

- it has a possible obligation, which arose as a result of past events, the existence of which will be confirmed only when one or more uncertain future events occur that are not fully controlled by the Group, or
- it has a current obligation, which arose as a result of past events, but an outflow of funds have economic benefits in it, is not probable or the Group is not able to valuate liabilities reliably enough.

The Group does not disclose the contingent liability when the probability of outflow of funds included economic benefits is remote.

ESTIMATES

Contingent assets

The Group makes estimations with respect to financial effects of disclosed contingent assets based on the value of previously recognized related costs that the Group expects to recover (e.g. under insurance contracts signed) or the value of subjects to proceedings in which the ORLEN Group entities act as plaintiff.

Contingent liabilities

The Group estimates possible future liabilities constituting contingent liabilities based on the value of claims under ongoing proceedings in which the ORLEN Group entities act as the defendant.

14.4.1. CONTINGENT ASSETS

On 5 March 2020 PERN S.A. informed PKN ORLEN that due to the stock count of crude oil delivered by the tank farm in Adamów, carried out by PERN S.A. as a pipeline system operator, the Company's operating stock of crude oil REBCO-type (Russian Export Blend Crude Oil) is lower by 89,653 net metric tons due to differences in the methodology for calculating the quantity of this stock. Consequently, according to PERN S.A. as at 31 December 2019, the Company's operating stock of REBCO-type crude oil amounted to 535,812 net metric tons.

PKN ORLEN does not agree with PERN S.A. position, because in the opinion of PKN ORLEN it remains without merit, unproven and inconsistent with the binding agreements between PKN ORLEN and PERN S.A., and the current methodology used for calculating the quantity of REBCO-type crude oil sent by PERN S.A. to PKN ORLEN is correct and has never been questioned before. PKN ORLEN is currently analysing the possibilities of taking appropriate legal steps related to the information provided by PERN S.A. and reserves the right to take all actions aimed at protecting the legitimate interests of PKN ORLEN, including pursuing claims related to infromation shared by PERN S.A. on the quantity of PKN ORLEN's operating stock of REBCO-type crude oil. Regardless of this, being the most cautious, PKN ORLEN adjusted the stock by the amount of PLN (156) million in correspondence with other operating expenses. In the opinion of PKN ORLEN, the amount of the allowance on stock is also a contingent asset of PKN ORLEN.

14.4.2. CONTINGENT LIABILITIES

Information concerning significant proceedings in front of court, body appropriate for arbitration proceedings or in front of administration bodies in which the companies of the ORLEN Group act as the defendant:

I.P.-95 s.r.o. compensation claim against Unipetrol RPA s.r.o.

On 23 May 2012, Unipetrol RPA s.r.o. received from the District Court in Ostrava a claim brought by I.P.-95 s.r.o. for compensation related to the filing by Unipetrol RPA s.r.o. a motion for bankruptcy of I.P.-95 s.r.o. in November 2009. The total amount of the claim is approximately PLN 300 million, translated using the exchange rate as at 31 December 2019 (representing CZK 1,789 million). Unipetrol RPA s.r.o. is one of eight defendants which were jointly and severally claimed. At the request of the I.P.-95 s.r.o proceeding was pending concerning the accession to the claim as plaintiff NESTARMO TRADING LIMITED. The court refused the Company permission to enter to the case. In February 2018, the court dismissed in entirety claim ruling in favour of Unipetrol RPA s.r.o. On 3 April 2018, I.P.-95 s.r.o. appealed against the decision of the court of first instance. On 22 May 2018, the District Court in Ostrava obliged I.P. – 95 s.r.o. to pay the appeal fee. On 11 December 2018, the court of second instance dismissed the appeal of I.P.-95 s.r.o. from the judgment of the District Court in Ostrava. The judgment is binding. On 20 March 2019 I.P. – 95 s.r.o. filed a cassation appeal against the judgment of the court of second instance. According to Unipetrol RPA s.r.o. the claim is without merit.

Claim of Warter Fuels S.A. (before: OBR S.A.) against PKN ORLEN for compensation

On 5 September 2014 , OBR S.A. (currently: Warter Fuels S.A.) filled an action against PKN ORLEN with the District Court in Łódź for a claim for payment in respect of an alleged breach by PKN ORLEN of patent rights. The amount of the claim in the lawsuit was estimated by Warter Fuels S.A. in the amount of approximately PLN 84 million. The claim covers the adjudged sum of money from PKN ORLEN for Warter Fuels S.A. in the amount corresponding to the value of the license fee for the use of the solution under the above patent and adjudge the obligation to repay the benefits derived from the use of this solution. On 16 October 2014 PKN ORLEN responded to the lawsuit. By the procedural document from 11 December 2014 the value of the dispute was referred to by the plaintiff in the amount of approximately PLN 247 million. So far, several hearings have been held (last on 28 September 2018), during which witnesses submitted by the parties were heard by the court . On 19 December 2018, a hearing took place, during which the Court heard the parties' position in the scope of the grounds for any repeal of the freezing order. By a decision of 2 January 2019 the Regional Court set aside the order granting security for claims. Warter Fuels S.A. submitted a complaint against this decision on 5 February 2019. PKN ORLEN submitted a response to the complaint. The matter of complaint consideration is at the stage of secondary proceedings, i.e. before the Court of Appeal in Łódź. The freezing order has been legally repealed.

The PKN ORLEN attorney submitted a request to suspend the proceedings due to parallel proceedings for determining the right to the disputed patent, the outcome of which will have significance for the resolution in the case of breach. The request has not been considered yet. The court is currently looking for an expert or institute to issue an opinion. In the opinion of PKN ORLEN the above claims are without merit.

Polocktransneft Druzhba claim against AB ORLEN Lietuva

On 21 September 2017, AB ORLEN Lietuva received from the court a claim brought by the Belarusian company Polocktransneft Druzhba (operator of the Belarus section of the Druzhba pipeline) for payment of compensation for crude oil (so-called 'technological oil') which from 1992 was located in Lithuanian section of the Druzhba pipeline and used by ORLEN Lietuva after operation of this section was stopped in 2006. Polocktransneft Druzhba believes that this oil was its property. The value of the claim is approximately PLN 319 million, translated using the exchange rate as at 31 December 2019 (representing USD 84 million). The claim also includes a request for procedural interest and litigation cost. ORLEN Lietuva responded to the claim. On 15 March 2018 a hearing took place. On 29 March 2018, the court dismissed the plaintiff's claim.

Polocktransneft Druzhba appealed against the judgment dismissing the claim. ORLEN Lietuva responded to the appeal. The hearing took place on 6 May 2019. The witness, the former chief representative of the Druzhba Polocktransneft in Lithuania, was heard. On 4 September 2019, another hearing was held, at which the Court decided several procedural issues, including admitted evidence from expert opinions appointed by the parties, refused to attach to the case documents from other criminal cases requested by Polocktransneft Druzhba. The court appealed the plaintiff and the defendant to submit documents and information to the case file by 22 October 2019. On 6 November 2019, on 22 January 2020 and on 7 February 2020 subsequent hearings were held at which documentary evidence was submitted and witness was questioned. On 9 March 2020 the Court of Appeal dismissed the plaintiff's appeal. Polocktransneft Druzbha has the right to lodge a cassation appeal within 3 months from the date of delivery of the judgment of the Court of Appeal. In the opinion of ORLEN Lietuva, the above claim is without merit. According to ORLEN Lietuva, the above claim is without merit.

UAB Baltpool claim against ORLEN Lietuva

In May 2019, UAB Baltpool (an entity administering the funds and responsible for collecting fees for so-called Public Service Obligation in Lithuania) filed a claim against ORLEN Lietuva for payment of system fees (so–called PSO fees) related to electricity consumption for the period from February 2013 to March 2019 (excluding May 2017). The claim relates to unpaid by ORLEN Lietuva system fees on the amount of electricity generated and consumed by ORLEN Lietuva for own needs. ORLEN Lietuva believes, that such system fees (self-producer fees) are not due. The value of the dispute together with interest was included in the books of ORLEN Lietuva and amounted to PLN 64.8 million, translated using the exchange rate as at 31 December 2019 (representing EUR 15.2 million).

The case is connected with 7 administrative cases brought by ORLEN Lietuva (since 2013), in which ORLEN Lietuva challenges the legality of charging PSO on electricity generated and consumed for own needs. All these administrative cases are suspended in connection with proceedings pending before the Court of Justice of the EU. The outcome of the case brought by UAB Baltpool depends on a large extent on the outcome of these administrative proceedings and proceedings before the Court of Justice of the EU. The Court of Justice of the EU decided, that the Lithuanian PSO program constitutes the nature of state aid. In the opinion of the ORLEN Lietuva the claims are without merit.

POLWAX S.A. – ORLEN Projekt S.A. dispute

On 19 April 2019 ORLEN Projekt filed a claim against POLWAX with the District Court in Rzeszów for payment of the amount of PLN 6.7 million together with due statutory interest for delay in commercial transactions in respect of remuneration for performed and received by POLWAX construction works in connection with the Agreement concluded on 7 April 2017 for „Construction and start-up of the paraffin wax solvent deoiling installation together with auxiliary installations for POLWAX .S.A.". On 23 May 2019 the Court issued a warrant for payment to ORLEN Projekt in a writ of payment proceedings covering the entire amount claimed, thanks to which ORLEN Projekt obtained subsequently a bailiff's security for this amount on the POLWAX bank account. The motion submitted by POLWAX for overturning the warrant of payment was dismissed by the decision of the Court of First Instance. Currently, the lawsiut is in the process of considering POLWAX's complaint against the indicated decision of the Court of First Instance by the Court of Appeal. The planned deadline for considering the POLWAX's complaint is mid-March 2020. After consideration, the lawsuit's files will be transferred back to the District Court in order to carry on evidence proceeding.

On 31 May 2019 ORLEN Projekt filed another claim against POLWAX with the District Court in Rzeszów for payment of further PLN 6.5 million together with due statutory interest for delay in commercial transactions in respect of further part of remuneration for performed and received by POLWAX construction works.This claim was then extended twice – the extension of the claim as of 20 September 2019 by the amount of PLN 13.9 million for groundless reimbursement of a performance guarantee and covering the costs of its execution, and the extension of the claim as of 6 November 2019 by the amount of PLN 25 million for other claims related to withdrawal from the Agreement by ORLEN Projekt due to POLWAX's fault, up to the total amount of PLN 45 million. The case is pending.

On 25 February 2020 ORLEN Projekt received from POLWAX a request for payment of PLN 132 million, consisting of the following: PLN 84 million for damages incurred by POLWAX as a real loss and PLN 48 million for lost benefits resulting from improper performance and failure to perform the Agreement by ORLEN Projekt. According to the information held by ORLEN Projekt, on 2 March 2020, the District Court in Rzeszów received a lawsuit of POLWAX against ORLEN Projekt for payment of PLN 132 million together with interest due for delay. The case is currently at the stage of examining the formal requirements of the lawsuit filed by POLWAX and the Court has not issued any judgements within it so far, in particular it has not yet ordered the delivery of a copy of the lawsuit to ORLEN Projekt. In the opinion of ORLEN Projekt, POLWAX claims covered by the request for payment and a lawsuit are without merit and immediately after the delivery of a copy of a lawsuit, ORLEN Projekt will take measures provided for by law to show their groundlessness. According to the information held by ORLEN Projekt, before filing the lawsuit, POLWAX filed a request to the District Court in Rzeszów for securing the claims it intended to pursue from ORLEN Projekt, however, the Court entirely dismissed the request by the order as of 6 February 2020. On 10 March 2020 POLWAX published current report no. 7/2020 informing about filing a lawsuit with the court for payment of PLN 10 million due to: (i) removal and utilization of waste of contaminated soil from the Investment area, and (ii) non-contractual land storage outside the investment area on plot no. 3762/70. In the opinion of ORLEN Projekt, the above claims of POLWAX are without merit and immediately after delivery of a copy of the lawsuit, ORLEN Projekt will take measures provided for by law to show their groundlessness. Except of described above proceedings, the Group has not identified any other significant contingent liabilities.

14.5. EXCISE TAX GUARANTEES

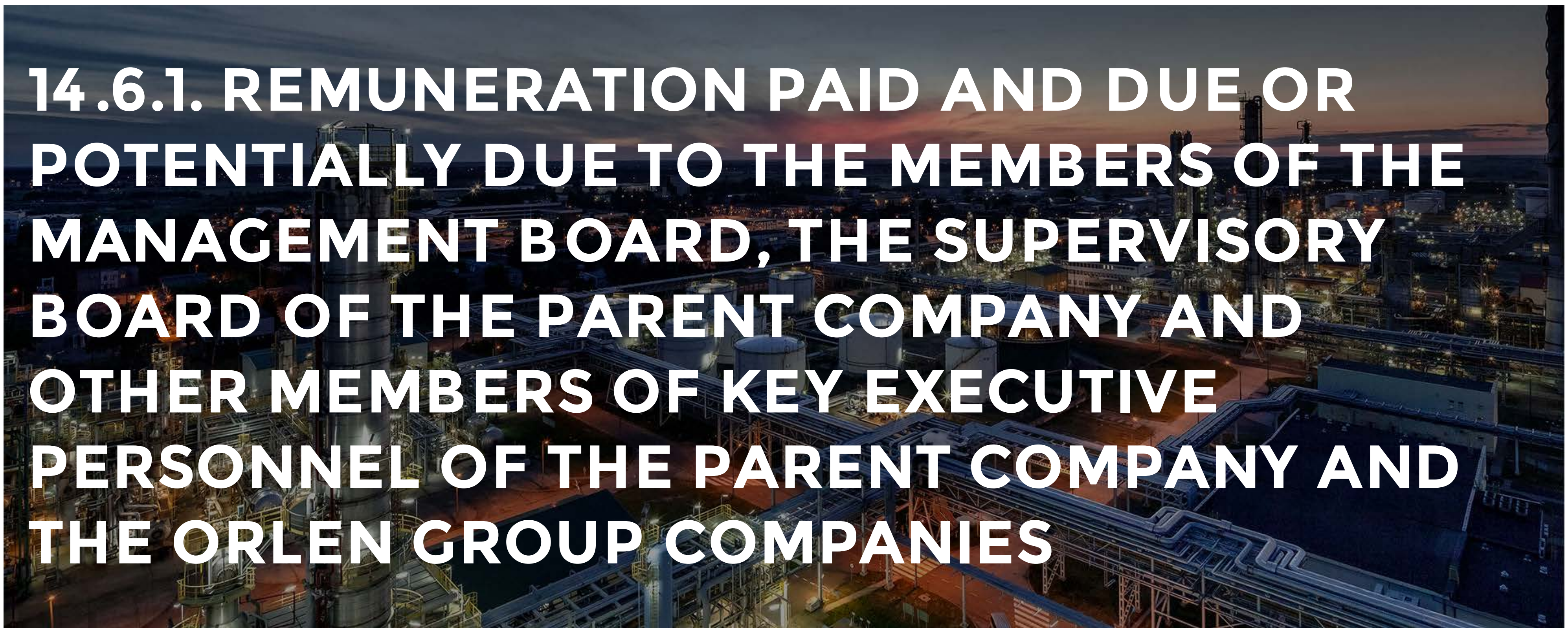
Excise tax guarantees and excise tax on goods and merchandise under the excise tax suspension procedure as at 31 December 2019 and as at 31 December 2018 amounted to PLN 2,826 million and PLN 2,626 million, respectively.

14.6. RELATED PARTY TRANSACTIONS

In 2019 and 2018 and as at 31 December 2019 and as at 31 December 2018 the based on submitted declarations, there were no transactions of related parties of the ORLEN Group with the Members of the Management Board and the Supervisory Board of the Parent Company.

In 2019 on the basis of submitted declarations there were no transactions of close relatives with the other key executive personnel of the Parent Company and key executive personnel of the ORLEN Group companies with related parties.

In 2018 on the basis of submitted declarations, there were transactions of close relatives with the other key executive personnel of the Parent Company and key executive personnel of the ORLEN Group companies with related parties in the amount of PLN 0.3 million; main amounts related to purchase of legal services and tax consultancy.



14.6.1. REMUNERATION PAID AND DUE OR POTENTIALLY DUE TO THE MEMBERS OF THE MANAGEMENT BOARD, THE SUPERVISORY BOARD OF THE PARENT COMPANY AND OTHER MEMBERS OF KEY EXECUTIVE PERSONNEL OF THE PARENT COMPANY AND THE ORLEN GROUP COMPANIES

	2019	2018
Parent Company		
Short-term employee benefits	42.8	40.3
Management Board	*13.0*	*9.5*
Supervisory Board	*1.1*	*1.2*
Other key executive personnel	28.7	29.6
Post-employment benefits	0.1	-
Other key executive personnel	*0.1*	-
Termination benefits	2.1	11.1
Management Board	*0.2*	*1.2*
Other key executive personnel	*1.9*	*9.9*
Subsidiaries		
Short-term employee benefits	145.7	130.8
Post-employment benefits	0.3	0.4
Other long term employee benefits	0.6	0.2
Termination benefits	8.5	7.6
	200.1	**190.4**

The above table presents remuneration paid and due or potentially due to the key management personnel of the Parent Company and subsidiaries in the reporting period.

Moreover, as at 31 December 2019 and 31 December 2018 PKN ORLEN has provisions for post-employment benefits in the amount of PLN 0.3 million and PLN 0.2 million, respectively and other long term employee benefits in the amount of PLN 0.5 million for both dates.

Bonus systems for key executive personnel of the ORLEN Group

The bonus regulations applicable to the Management Board of PKN ORLEN, directors directly reporting to the Management Board of PKN ORLEN and other key positions of the ORLEN Group have certain common features. The persons subject to the above mentioned systems are remunerated for the accomplishment of specific goals set at the beginning of the bonus period, by the Supervisory Board for the Management Board Members and by the Management Board for the key executive personnel. The Bonus Systems are consistent with the Concern's Values, so as to promote the cooperation between individual employees in view to achieve the best possible results for the ORLEN Group. The targets set are qualitative as well as quantitative and are settled after the end of the year for which they were set.

Remuneration regarding non-competition clause and dissolution of the contract as a result of dismissal from the position held

Pursuant to the contracts, the Management Board Members of PKN ORLEN and the Management Board Members of the ORLEN Group companies are obliged to refrain from competitive activities for a period of 6 months, after the date of termination of the contract. During this period, they receive a remuneration (compensation) of 50% or 100% of the six-month basic salary, payable in 6 equal monthly instalments. Non-competition clauses in contracts after termination of the function of the Management Board Member shall enter into force only after 3 or 6 months as the Management Board Member.

In addition, contracts provide for the payment of severance pay in the event of termination or cancelation of the contract by the Company, for reasons other than a breach of basic, essential obligations under the contract, provided fulfilling the function of the Management Board Member for a period of at least 12 months. In this case, the severance pay is three times monthly basic salary.

Directors directly reporting to the PKN ORLEN Management Board are normally required to refrain from competitive activities for a period of 6 months. During this time, they receive a remuneration of 50% of the six-month basic salary, payable in 6 equal monthly instalments. The severance pay for terminating the contract by the Employer is normally six times monthly basic salary.

14.6.2. ORLEN GROUP COMPANIES' TRANSACTIONS AND BALANCES OF SETTLEMENTS WITH RELATED PARTIES

	Sales		Purchases	
	2019	2018	2019	2018
Jointly-controlled entities	**3,119**	**2,956**	**(136)**	**(143)**
joint ventures	*2,982*	*2,794*	*(54)*	*(45)*
joint operations	*137*	*162*	*(82)*	*(98)*
	3,119	**2,956**	**(136)**	**(143)**

	Trade and other receivables		Trade and other liabilities	
	31/12/2019	31/12/2018	31/12/2019	31/12/2018
Jointly-controlled entities	**540**	**614**	**16**	**16**
joint ventures	*529*	*593*	*10*	*5*
joint operations	*11*	*21*	*6*	*11*
	540	**614**	**16**	**16**

The above transactions with related parties include mainly sales and purchases of refinery and petrochemicals products and of services.

In 2019 and in 2018 there were no related party transactions in the Group concluded on other than an arm's length basis.

Additionally, in 2019, based on submitted declarations, there were transactions between entities, in which key positions were held by close relatives with the other key management personnel of the Parent Company and entities of the ORLEN Group.

In 2019 and as at 31 December 2019, the Group identified the following transactions:

- sale and purchase amounted to PLN 0.9 million and PLN (2.3) million, respectively;
- balance of liabilities amounted to PLN 0.4 million.

The above transactions concerned mainly the purchases and sales of fuels and diesel oil.

14.6.3. TRANSACTIONS WITH ENTITIES RELATED TO THE STATE TREASURY

As at 31 December 2019 and 31 December 2018 the State Treasury owned 27.52% of the ORLEN Group Parent Company's shares – PKN ORLEN and has ability to exert a significant influence on it.

The Group identified related party transactions with the State Treasury on the basis of „Regulation of the Council of Ministers of 27 March 2019 on the list of companies in which the rights of the State Treasury shares carry other than the President Council of Ministers members of the Council of Ministers', Government Plenipotentiaries or state legal entities including single-member companies of the State Treasury" with subsequent updates).

In 2019 and in 2018 and as at 31 December 2019 and as at 31 December 2018, the Group identified the following transactions:

	2019	2018
Sales	2,083	1,943
Purchases	(4,406)	(5,126)
	31/12/2019	**31/12/2018**
Trade and other receivables	339	230
Trade and other liabilities	683	189

Above transactions were concluded on an arm's length basis, were related to the ORLEN Group current operating activities and concerned mainly fuel sales, purchase and sales of natural gas, energy, transport and storage services.

Additionally, there were also financial transactions (loans, guarantees, bank fees, commission) with Bank PKO BP, Bank Pekao S.A. and Bank Gospodarstwa Krajowego (bank fees, commission).

14.7. REMUNERATION ARISING FROM THE AGREEMENT WITH THE ENTITY AUTHORIZED TO CONDUCT AUDIT OF THE FINANCIAL STATEMENTS

	2019	2018
Parent Company	**1.8**	**1.6**
Audit of financial statements	1.4	0.9
Other assurance services	0.4	0.7
reviews of financial statements	*0.4*	*0.5*
other services	*-*	*0.2*
Subsidiaries of the Capital Group	**4.2**	**3.8**
Audit of financial statements	3.9	3.5
Other assurance services	0.3	0.3
reviews of financial statements	*0.2*	*0.2*
other services	*0.1*	*0.1*
	6.0	**5.4**

In the period covered by this consolidated financial statements the entity authorized to conduct audit of the Company's financial statements was Deloitte Audyt spółka z ograniczoną odpowiedzialnością spółka komandytowa.

Deloitte Audyt spółka z ograniczoną odpowiedzialnością spółka komandytowa beginning from the 1st quarter of 2017 conduct the interim reviews and audit of separate financial statements of PKN ORLEN and consolidated financial statements of the Group. Deloitte Audyt spółka z ograniczoną odpowiedzialnością spółka komandytowa was selected to conduct reviews of interim financial statements and audit separate financial statements of PKN ORLEN and consolidated financial statements of the Group for the years 2019-2021 by resolution of the Supervisory Board No. 2071/18 of 20 December 2018 as amended by resolution No. 2103 /19 of 25 January 2019.

EVENTS AFTER THE END OF THE REPORTING PERIOD

As at the date of approval of these consolidated financial statements, the Group is in the process of analysing the potential effects of Coronavirus COVID-19. The Group has implemented appropriate internal procedures to ensure continuity of operating activities. Currently, the Group observes a decrease in global demand for crude oil, including a decrease in demand for jet fuel, diesel oil and gasoline. The Group also expects a slowdown in the global economy and monitors the situation on the financial markets on an ongoing basis, including the quotations on the WSE. The Group is in the process of estimating the qualitative and quantitative impact of a pandemic on the financial position and future financial results of the Group and plans to complete this analysis before publishing the interim data for the first quarter of 2020.

After the end of the reporting period, no other events occurred than disclosed in this consolidated financial statements, which would require recognition or disclosure.

This consolidated financial statements were approved by the Management Board of the Parent Company on 18 March 2020.

Daniel Obajtek
President of the Board

Zbigniew Leszczyński
Member of the Board

Józef Węgrecki
Member of the Board

Patrycja Klarecka
Member of the Board

Michał Róg
Member of the Board

Armen Artwich
Member of the Board

Jan Szewczyk
Member of the Board

Adam Burak
Member of the Board

OUTLOOK 2020+

Unprecedented. This is the word first coming to mind when describing the situation that has unfolded in the wake of the current pandemic in all areas of life, including the economy. Unprecedented events send game-changing ripples across the economy, raising immediate questions about their near- and longer-term consequences. ‘We don’t know’ is neither a correct nor a constructive answer, especially in the case of companies in the process of expanding their asset base. As it is, responsible investors seeking to develop a business venture are driven by a vision of the future to which they aspire and which they are shaping. The more uncertain the future, the stronger the expectations that we present a vision of changes underlying our investment directions.

We are a group in the process of transformation. From an oil and gas operator, we are developing into a multi-utility business.

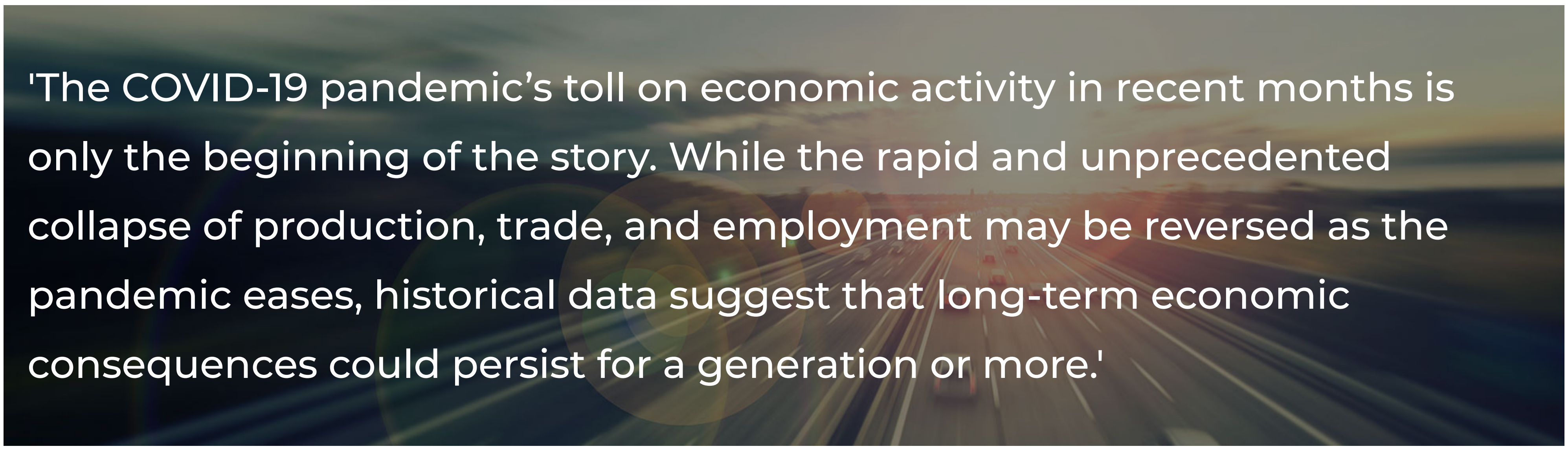
This development direction is aligned with a global mega-trend of energy transformation linked to digitisation, with electric transition at the end of that road. The world is becoming increasingly digital, and all digital is bound to eventually become electric. Electricity is a zero-emission form of usable energy. Emissions are generated in the process of its production from fossil sources, but their share in the global energy mix is declining in favour of renewables. The power of this mega-trend can be seen clearly in social preferences and the regulatory regimes, relating to both carbon dioxide reduction and investment financing. The transition to a low-carbon economy is a necessity, and technologies to achieve it are being developed at an exponential pace. The share of electricity in total secondary energy is on the rise, as it effectively enters the transport sector, where alongside hybrid vehicle drive trains (on-board power plant, mechanical power supply) and alternative fuels, it is dethroning oil. Hydrogen is an important fuel of the future, becoming part of the current transport ecosystem (fast refuelling points at service stations and long range) and of the energy system – where it is used to store surplus renewable energy. In the world towards which we are progressing, power generation holds a huge growth potential, which cannot be said of the traditional oil sector. This is not yet reflected in the market return on capital, but given the technology advances as well as the social and regulatory pressures, such shift is only a matter of time. It will be sealed by investor sentiment, especially of a long-term nature, turning slowly away from the oil and gas sector. Changes in business models and development of new technologies will be supported by capital inflows into companies respecting he Principles for Responsible Investing. This involves adherence to the ESG (**E**nvironmental, **S**ocial, **G**overnance) criteria in the practice of business decision making.

Consequences of the COVID-19 pandemic will not affect the existing developmental challenges, which are underpinned by demographic processes, driving an increase in demand for energy, food and materials. Meeting these needs on a linear (open) basis leads to excessive consumption of natural resources, environmental degradation and a rise in greenhouse gas emissions at a pace posing a threat to further development. The world is trying to tackle these challenges, but so far without much success. The recession, coming as an aftermath of the lockdown of economies, has brought about a steep decline in greenhouse gas emissions, particularly of CO_2 emitted by vehicles. In fact, this is the only benefit of measures introduced to contain the pandemic. Unfortunately, the economies cannot be kept frozen forever – we must produce to make a living. There are many signals that production levels will be significantly lower in the coming years relative to pre-pandemic projections, which entails a slower rate of emissions growth. Will this lessen the pressure on reducing emissions? Such scenario cannot be ruled out, but in our opinion intensity gains and efficiency improvements in these areas will be a priority for both the public sector (governments, supranational institutions and public organisations) and its private counterpart (mainly businesses and financial institutions). The pandemic period has witnessed an increase in government intervention and commitment of public funds in financial shields, designed to protect firms and jobs at risk. Does it make sense to channel public funds into projects intended to unlock old outstanding potential? Or would such funds be better allocated to initiatives speeding up the necessary transformation? There is much to indicate that the latter angle of thinking will prevail.

The relationship between primary production factors – labour and capital – will shift, triggering structural adjustments at the international (globalisation shape), national (development drivers) and sectoral (leading technologies) levels. For the first time in more than a century, the impending global economic crisis will have labour rather than capital as its root cause. Given the biological nature of the pandemic, its economic implications for different sectors will depend on whether they are more labour- or more capital-intensive. Therefore, long-term consequences of the COVID-19 crisis should be viewed by sector. The most affected sectors are those providing services that involve direct human contact, such as air travel, public transport, mass events, cinemas, theatres and galleries. In the energy sector, the knock-on effects of transport restrictions have taken their toll on the refining industry and crude oil production. Restrictions on physical contact between people have not affected the utilities sector. The decline in electricity consumption reflects a decrease in manufacturing output. Social distancing, which mitigates the risk of a new pandemic wave and the emergence of new ones, will prompt an adjustment or change in business models across all sectors of the economy, creating new relations between the capital and labour inputs. Changing consumer behaviours will make demand for transport services recover at a slower pace, with a concurrent shift in its structure (public vs private transport, car and ride sharing vs vehicles for personal use). Changes in consumer behaviours due to the pandemic will have no adverse impact on utilities. An analysis of the potential after-effects of the pandemic should best be carried out at the level of economic and industrial sectors. But before we proceed to such analysis, let us first take a look at the global economic impacts.

Consequences of the pandemic for the global economy – directions of change

According to the spring economic forecasts by the European Commission, released on May 6th 2020, most EU countries are likely to see two-digit GDP declines in the second quarter of 2020. The deepest declines will be felt by France (-18.4%), Italy (-18.2%) and Spain (-17.5%). Germany's economy was shrink by -11.8%, while Poland's will recede by -4.5%. The EU-wide GDP will fall by -14.2%, and the US recession will reach -12.9%. Throughout 2020, the global economy is likely to contract by -3.5%, relative to the previously forecast growth of 3.0%. In the EU, a recession of -7.4% will set in instead of the previously predicted 1.4% economic growth. France's economy will shrink by -8.2% (instead of the 1.3% increase), Italy's – by -9.5% (vs the expected growth of 0.4%), Spain's – by -9.4% (instead of the 1.5% growth), and Germany's – by -6.5% (vs the previously forecast growth of 1.0%). Against this background, Poland's recession will be relatively mild (-4.3% vs the forecast increase of 3.3%).



> 'The COVID-19 pandemic's toll on economic activity in recent months is only the beginning of the story. While the rapid and unprecedented collapse of production, trade, and employment may be reversed as the pandemic eases, historical data suggest that long-term economic consequences could persist for a generation or more.'

(https://www.imf.org/external/pubs/ft/fandd/2020/06/long-term-economic-impact-of-pandemics-jorda.htm)

- The fallout of the COVID-19 pandemic is an economic crisis, which for the first time in more than a century began on the labour market. Past crises were capital-related and started on the financial markets.
- The absence of tools to combat the biological factor led to a situation where the only measure available to contain the pandemic spread was social distancing, whose effects cascaded to the economy, deeply hurting demand.
- The fall in demand has led to overcapacity within a number of industries.
- Within the next two to three years, demand should progressively recover in parallel with supply adjustments, as both sides of the market have suffered from the pandemic. However, this will not be a straightforward recovery, involving a change in both the structure and scale of demand. Excess capacity will be weighing on various sectors of the economy, giving rise to strong consolidation pressures, which will eventually transform them: the weak will drop off, whereas the strong will grow stronger. The structure of the economy is set to change, as new technologies emerge.
- There has been an increase in the engagement of governments and commitment of public funds in financial shields, designed to protect firms and jobs at risk. Sovereign debts have risen in nominal terms. The debt to GDP ratios have deteriorated dramatically, a development that will be difficult to reverse.
- One long-term consequence of the pandemic will be a shrinking of the global economy. The GWP rate over the next 10 to 15 years will be lower than previously predicted,
  - Not only in the wake of the 2020 recession.
  - Demand for products and services will grow at a slower pace within a number of sectors, and is even likely to dwindle in some areas.
  - The availability of investment capital will be constrained.
  - The ESG criteria will gain in prominence in the financing of investment projects.

- The probability that another wave of the pandemic strikes or that further pandemics emerge is significantly greater than zero. This awareness will prompt a change in individual and social behaviours.
- The IMF studies of the long-term effects of 15 pandemics going back to 1300 suggest that a prolonged period of depressed real interest rates is ahead of us (https://www.imf.org/external/pubs/ft/fandd/2020/06/long-term-economic-impact-of-pandemics-jorda.htm). There are two reasons:
  - Excess capital (capacities) relative to labour (effective demand)
  - Increased desire to save (out of caution or to rebuild depleted wealth).
- There will be an increase in business costs, attributable to a slowdown in globalisation and setting up of provisions
  - One benefit of globalisation was a reduction in costs, which means that its slowdown will drive costs back up.
  - Transition from ‘just in time’ to ‘just in case’ delivery model.
  - Increased attractiveness of local suppliers.
- There will be a labour-related increase in business costs. This trend is best seen in the case of services requiring direct contact with customers.
  - Customer service costs will go up (to equip workstations, ensure hygiene measures, and buy disposable materials)
  - Higher real wages (lower number of customers served)
- The cost of business activities related to the maintenance of office space will go down.
- Competition in the market of labour that can be provided on a remote basis will intensify.
  - As the efficiency of remote work (Home Office) is tested and proven, it will lower labour mobility barriers, especially in the case of white-collar professions. I can work from anywhere for my company (any location and country).
  - Employers able to exploit this potential will bring down their labour costs, and widespread switch to remote work will equalise such costs across the globe:
  - They will grow in cheaper areas and the other way around.
- With the passage of time, the balance of long-term costs and benefits of the pandemic-induced transformation will tilt towards positive.
  - Profound economic shocks tend to be followed by periods when technological advances accelerate and innovations emerge giving rise to a step change in efficiency.
  - The digitisation process will gain momentum, delivering significant efficiency gains
  - Enhanced efficiency of the healthcare sector.
- Changes in business models and development of new technologies will be supported by capital inflows into companies respecting the Principles for Responsible Investing. The ESG criteria will feature more prominently in investment rankings.

Consequences of the pandemic for PKN ORLEN’s business activities

Summary

- Consequences of the pandemic will not slow the pace of the ongoing energy transformation, but may steer it into different paths.
- The upstream production and refining segments are holding less and less appeal for investors (although they were quite attractive before the pandemic outbreak).
- Investor appetites are shifting towards utilities, and low-carbon power generation associated with RES.
- Petrochemicals are still viewed as an attractive investment opportunity – improved competitiveness.
- Retail – the test bed of digitisation – extensive opportunities.
- Innovation, Research & Development – long-term competitive advantages are developed in house, by experimenting with new technologies and business models in reliance on one’s own resources and at one’s own risk.

The upstream and refining sector will remain under the pressure of damaged demand for crude oil and liquid fuels, as well as the accelerated peak demand date:

- The sector was prepared to accommodate an increase in demand following adoption of the new IMO regulations. Many costly investment projects were undertaken, currently being put into service and adding more capacities.
- A shrunk global economy over the coming decade spells weaker demand for transport services, which will recover with concurrent shifts in fuel demand
  - Improved ICE performance
  - Increasing substitution of crude oil as a transport fuel by its alternative counterparts, electricity, and in the future also by hydrogen
  - Likely drop in demand for (air) travel and (international) journeys
- The impact of these factors will vary by fuel type (badly impairing especially the demand for aviation fuel, with the demand for diesel relatively least affected; as regards gasoline – it will be absorbed as feedstock by the petrochemical industry).

On the supply side, excess production and refining capacities will persist, putting pressure on both prices and margins.

- The damaged demand will push down oil prices in the long term (eliminating the need to extract it from more costly sources).
- Fast depletion of producing fields, coupled with reduced investor interest in upstream projects, will lead to short-lived, widely fluctuating price cycles.

Global excess of refining capacities will prompt the sector to consolidate. The consolidation pressure will be felt strongly in Europe.

- In the European Union, demand for crude oil and liquid fuels has fallen steadily, save for a short interval, since 2007
- Oil price fluctuations are reflected in volatile refining margins, posing a threat to independent refineries. For more information, go to: https://ffbk.orlen.com/blog/patterns-governing-the-oil-market

Investment appetite for oil and gas companies will be drying up:

- Widespread acceptance of ESG principles, especially in Europe
- Lower returns due to the capacity overhang and weakening demand (declining sector)

Worldwide growth in demand for petrochemicals set to outpace GDP, giving a strong edge to refineries integrated with petrochemical assets.

- The world needs materials and fertilizers, which are least harmful to the environment and climate if produced from crude oil and natural gas.
- The growing role of recycling will add to this advantage, preventing an increase in demand for disposable products from drawing on natural raw materials. For more information, go to: https://ffbk.orlen.com/reports/petrochemicals-challenges-solutions-and-the-future
- ‘Just in case’ strategies will boost demand for petrochemical products made locally in Europe.
- The oversupply of crude oil will enhance its competitiveness as a production feedstock versus natural gas.

Power generation will experience a progressive shift towards renewable sources and its wide use (including in transport) will give it a value advantage over the traditional fuel segment.

- As opposed to crude oil and liquid fuels, demand for electricity (and heat) will be on the rise.
- The role of energy distribution (utilities), as a stand-alone segment intermediating between energy producers and end users, will become more pronounced. The growing role of end users and their preferences regarding the ‘colour’ of energy consumed is turning utilities from passive distributors into active market players accelerating the energy transformation, which boosts the segment’s market value.
- Considerable growth opportunities will be found in renewable energy, including offshore wind power generation and selective development of conventional energy sources based on natural gas (especially as an alternative to coal). Gas-based generation will provide a perfect back-up once the related capital costs are amortised.

Retail continues to offer a number of opportunities:

- Traditional motorist services linked to vehicle refuelling with various types of fuel, electricity and hydrogen.
- Development of a modern non-fuel offering and digitised customer relations.

- Long-term competitive advantages are developed in house, by experimenting with new technologies and business models in reliance on one's own resources and at one's own risk.
- In this context, we can see significant potential in green hydrogen (obtained by electrolysis), both for the purposes of energy storage and as an alternative fuel for public services (buses), freight (locomotives), in-plant transport (handling trucks) and passenger cars.
- Major areas of research and innovation experiments include various sources of and applications of bio-components, which can meaningfully reduce emissions from transport and petrochemical production.
- Along with the development of oil-based petrochemicals, a crucial thing will be to explore business models and technologies that can accelerate the closing of plastic loops.

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